



# National STEPS Survey for Non-communicable Diseases Risk Factors in Bangladesh 2018

National Institute of Preventive and Social Medicine (NIPSOM)  
Mohakhali, Dhaka1212



Ministry of Health and Family Welfare



**National STEPS Survey for  
Non-communicable Diseases Risk Factors  
in Bangladesh 2018**



## **PREFACE**

The STEPS survey of non-communicable disease (NCD) is the first ever population based national survey in Bangladesh. It is the first ever STEPS survey in the world to be done using digital technology, Bangladesh society is a proud part of this history.

I gratefully admire and acknowledge the attitude of DGHS and Ministry of Health and Family Welfare towards us for their wholehearted support to the investigators. I also acknowledge and sincerely express my gratitude to the WHO, for its technical support to the investigators team for smooth completion of the project. Especially I can't help mentioning Dr M Mostafa Zaman, without active support of him and his team it wouldn't be possible to complete the task in time.

I must convey my gratitude to the investigators team, field supervisors and enumerators, the IT specialists and above all the participants who spent their valuable time to provide data. I would like to extend my gratitude to the Advisory Committee for guiding the study.

Because this survey has given nationally representative data on NCD risk factors, this report will help in formulating the prevention strategy on NCDs in Bangladesh.

Professor Dr Baizid Khorshid Riaz  
Director  
NIPSOM, Mohakhali, Dhaka



NCDs are major causes of preventable deaths and disabilities. The second National Survey on NCD Risk Factors provides information on the prevalence of important risk factors comparable across countries.

I am pleased to see that National Survey on NCD Risk Factor in Bangladesh was completed successfully even in spite of various limitations. I commend the Ministry of Health and Family Welfare for their leadership in conducting the survey. NIPSOM has done a good job to generate evidences.

This survey used electronic data capture machines, which has contributed substantially to capacity building of the country to conduct large and standardized surveys using information technology. The same machines are now can be used in any further national surveys.

The National Survey on NCD Risk Factors report has gathered important data on various aspects of the non-communicable diseases and their risk factors in Bangladesh. I am confident that this report will be useful in designing and implementing effective NCD control policies and interventions in Bangladesh. This will also help reporting to the Global NCD Monitoring Framework.

WHO Representative to Bangladesh

## Research Team

### Principal Investigator:

- Prof Dr Baizid Khoorshid Riaz, Director and Head, Dept of Public Health and Hospital Administration, NIPSOM

### Co-Principal Investigators:

- Prof Dr Md. Ziaul Islam, Head, Dept of Community Medicine, NIPSOM
- Dr ANM Shamsul Islam, Program Coordinator and Associate Professor, Dept of Public Health and Hospital Administration, NIPSOM

### Co-Investigators:

- Prof M A Hafez, Head, Dept of Biostatistics, BUHS, Mirpur, Dhaka.
- Prof Dr Emdadul Haque, Head, Dept of Nutrition & Biochemistry, NIPSOM
- Dr Nirmeen Rifat Khan, Associate Professor, Dept of Community Medicine, NIPSOM
- Dr Hafiza Sultana, Associate Professor and Head, Dept of Health Education, NIPSOM
- Dr Shaheda Hamid, Assistant Professor, Dept of Maternal & Child Health, NIPSOM
- Dr Fahmida Khanam, Assistant Professor, Dept of Parasitology, NIPSOM
- Dr Monira Akhter Moni, Assistant Professor, Dept of Epidemiology, NIPSOM
- Dr KM Bayzid Amin, Lecturer, NIPSOM
- Dr Irfan Nowroze Noor, Lecturer, NIPSOM
- Dr Mahfuzur Rahman Bhuiya, Grants Manager, Campaign for Tobacco Free Kids, Dhaka.

## Advisory Committee

|     |                                                                                                              |                  |
|-----|--------------------------------------------------------------------------------------------------------------|------------------|
| 1.  | Ms Roxana Quader, Additional Secretary (Public Health and WHO), Ministry of Health & Family Welfare (MoH&FW) | Chairperson      |
| 2.  | Prof AHM Enayet Hussain, Additional Director General (Planning & Development) and Line Director, NCDC, DGHS  | Member           |
| 3.  | Prof Liaquat Ali, Vice Chancellor, Bangladesh University of Health Sciences (BUHS)                           | Member           |
| 4.  | Prof Dr Md Mujibur Rahman, Prof of Medicine, Dhaka Medical College Hospital (DMCH) Dhaka                     | Member           |
| 5.  | Prof Dr Md Ridwanur Rahman, Prof of Medicine, Universal Medical College, Dhaka                               | Member           |
| 6.  | Mr Ruhul Quddus, Coordinator, National Tobacco Control Cell (NTCC), MoH&FW                                   | Member           |
| 7.  | Dr Md Faruk Ahmed Bhuiya, Senior Scientist, IEDCR                                                            | Member           |
| 8.  | Dr M Mostafa Zaman, Adviser–Research and Publication, World Health Organization, Bangladesh                  | Member           |
| 9.  | Prof Dr Sohel Reza Chowdhury, Dept of Epidemiology and Research, National Heart Foundation (NHF)             | Member           |
| 10. | Mr Md Motaher Hossain, Deputy Secretary (WHO), MoH&FW                                                        | Member           |
| 11. | Dr Md Masud Alam, Director, Demography and Health Wing, Bangladesh Bureau of Statistics (BBS)                | Member           |
| 12. | Dr Sk Md Mahbubus Sobhan, Program Officer, NTCC                                                              | Member           |
| 13. | ProfDr Baizid Khorshid Riaz, Director, NIPSOM                                                                | Member Secretary |

## Contributors to the Research Protocol

1. Professor Dr Md. Ziaul Islam, Head, Department of Community Medicine, NIPSOM
2. Dr Manju Rani, Regional Adviser, NCD and Tobacco Surveillance
3. Dr M Mostafa Zaman, Adviser, Research and Publication, WHO Bangladesh

## Contributors to the Report

### NIPSOM

1. Professor Dr Md. Ziaul Islam, Head, Department of Community Medicine, NIPSOM
2. Dr Irfan Nowroze Noor, Lecturer, NIPSOM

### WHO

3. Dr M Mostafa Zaman, Adviser, Research and Publication, WHO Bangladesh
4. Dr Manju Rani, Regional Adviser, NCD and Tobacco Surveillance
5. Ms Yvonne Yiru Xu, Consultant, SEARO
6. Mr Naveen Agarwal, Surveillance Management Associate
7. Dr Ferdous Hakim, National Consultant - EIP, WHO Bangladesh
8. Mr Rijwan Bhuiyan, Data Assistant, WHO Bangladesh

## List of Acronyms

---

|        |                                                      |
|--------|------------------------------------------------------|
| BBS    | Bangladesh Bureau of Statistics                      |
| BMI    | Body Mass Index                                      |
| BP     | Blood Pressure                                       |
| COPD   | Chronic Obstructive Pulmonary Disease                |
| CVD    | Cardiovascular Disease                               |
| DBP    | Diastolic Blood Pressure                             |
| DM     | Diabetes Mellitus                                    |
| HHQ    | Household Questionnaire                              |
| MET    | Metabolic Equivalent                                 |
| NCD    | Non-communicable Disease                             |
| NIPSOM | National Institute of Preventive and Social Medicine |
| PSU    | Primary Sampling Unit                                |
| SBP    | Systolic Blood Pressure                              |
| FCTC   | Framework Convention on Tobacco Control              |
| STEPS  | STEP wise Surveillance                               |
| WHO    | World Health Organization                            |

---

## ACKNOWLEDGEMENTS

The support, suggestions comments, and guidance, as applicable, provided by the following organization/ persons are duly appreciated and acknowledged.

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sampling frame for the survey</b>     | Bangladesh Bureau of Statistics<br>Professor Dr Md. Ziaul Islam, Head, Department of Community Medicine, NIPSOM                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Accommodation for the field team</b>  | Civil Surgeons and UHFPOs of 64 districts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Technical reviewers of the report</b> | Professor Dr Abul Kalam Azad, DG, DGHS<br>Professor Dr Enayet Hussain, ADG, DGHS<br>Dr Meher Parveen, Director - PMR, DGHS<br>Dr Ridwanur Rahman Shamim, NCDC, DGHS<br>Dr Manju Rani, Regional Adviser - NCD and Tobacco Surveillance, WHO-SEARO<br>Dr Tara Kessaram, MO- NCD, WHO Bangladesh                                                                                                                                                                                                                                                       |
| <b>Data Management and Analysis</b>      | Dr M Mostafa Zaman, Adviser–Research and Publication, WHO Bangladesh<br>Dr Ferdous Hakim, National Consultant–EIP, Research and Publication, WHO Bangladesh<br>Mr Rijwan Bhuiyan, Data Assistant, WHO Bangladesh<br>Dr Stefan Savin, WHO–HQ<br>Dr Leanne Riley, WHO–HQ<br>Mr Naveen Agarwal, Surveillance Management Associate, WHO-SEARO<br>Mst. Khaleda Akter, Team Assistant–Research and Publication, WHO Bangladesh<br>Professor Dr Md. Ziaul Islam, Head, Department of Community Medicine, NIPSOM<br>Dr Irfan Nowroze Noor, Lecturer, NIPSOM |
| <b>Training of Investigators</b>         | Dr M Mostafa Zaman, Adviser–Research and Publication, WHO Bangladesh<br>Dr Manju Rani, Regional Adviser– NCD and Tobacco Surveillance, WHO-SEARO<br>Dr Leanne Riley, WHO–HQ                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Production Associate</b>              | Mst. Khaleda Akter, Team Assistant–Research and Publication, WHO Bangladesh                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

# **STEPS Bangladesh 2018 Report**

## Contents

|                                                                                         |    |
|-----------------------------------------------------------------------------------------|----|
| Executive Summary .....                                                                 | 5  |
| Bangladesh at a Glance .....                                                            | 11 |
| Chapter 1 Introduction.....                                                             | 12 |
| 1.1 Background .....                                                                    | 12 |
| 1.2 STEP survey and NCD surveillance .....                                              | 13 |
| 1.3 Objectives .....                                                                    | 13 |
| Chapter 2 Survey Methodology .....                                                      | 15 |
| 2.1 Survey design .....                                                                 | 15 |
| 2.2 Survey population .....                                                             | 15 |
| 2.3 Sampling design.....                                                                | 15 |
| 2.4 Data collection tools .....                                                         | 19 |
| 2.5 Data collection technique .....                                                     | 20 |
| 2.6 Physical measurements: Anthropometry and blood pressure .....                       | 21 |
| Results .....                                                                           | 29 |
| Chapter 3 Characteristics of respondents and households .....                           | 29 |
| Key findings.....                                                                       | 29 |
| Introduction.....                                                                       | 29 |
| 3.1 Basic characteristics of survey respondents.....                                    | 29 |
| 3.2 Education .....                                                                     | 30 |
| 3.3 Employment .....                                                                    | 30 |
| 3.4 Household characteristics and assets (Table 3.3) .....                              | 31 |
| 3.5 Household wealth index .....                                                        | 31 |
| Chapter 4 Tobacco.....                                                                  | 38 |
| Key findings.....                                                                       | 38 |
| Introduction.....                                                                       | 39 |
| 4.1 Tobacco use.....                                                                    | 40 |
| 4.2 Types of Tobacco products use .....                                                 | 47 |
| 4.3 Age at initiation of tobacco use .....                                              | 53 |
| 4.4 Tobacco cessation .....                                                             | 55 |
| 4.5 Electronic cigarettes.....                                                          | 57 |
| Chapter 5 Alcohol.....                                                                  | 68 |
| Key findings.....                                                                       | 68 |
| Introduction.....                                                                       | 68 |
| 5.1 Alcohol consumption – life-time abstainers, former drinks, and current drinks ..... | 70 |
| 5.2 Heavy episodic drinking .....                                                       | 72 |
| 5.3 Unrecorded Alcohol use.....                                                         | 75 |
| Chapter 6 Diet .....                                                                    | 81 |
| Key findings.....                                                                       | 81 |
| Introduction.....                                                                       | 81 |

|                                                                                              |     |
|----------------------------------------------------------------------------------------------|-----|
| 6.1 Consumption of fruits and vegetables.....                                                | 82  |
| 6.2 Knowledge on recommended fruits and vegetable intakes .....                              | 83  |
| 6.3 Fats and oils used for cooking and outside-of-home food consumption (Table 6.4) .....    | 84  |
| 6.4 Consumption of outside-of-home meals and snacks (Table 6.5) .....                        | 85  |
| Chapter 7 Dietary Salt.....                                                                  | 91  |
| Key findings.....                                                                            | 93  |
| Introduction.....                                                                            | 91  |
| 7.1 Mean population 24-hour salt intake.....                                                 | 92  |
| 7.2 Behaviour around dietary salt intake:.....                                               | 93  |
| 7.3. Perceptions about levels of salt intake.....                                            | 95  |
| 7.4 Knowledge on salt intake, recommendations and health consequences .....                  | 96  |
| 7.5 Practices and methods to reduce salt intake .....                                        | 97  |
| Chapter 8 Physical activity Key findings .....                                               | 107 |
| Key findings.....                                                                            | 109 |
| Introduction.....                                                                            | 107 |
| 8.1 Time spent on physical activity .....                                                    | 109 |
| 8.2 Insufficient levels of physical activity.....                                            | 111 |
| 8.3. Percent contribution to physical activity from each domain. ....                        | 111 |
| 8.4 Time spent on sedentary activities.....                                                  | 112 |
| Chapter 9 Anthropometry.....                                                                 | 118 |
| Key findings.....                                                                            | 118 |
| Introduction.....                                                                            | 118 |
| 9.1 Nutritional Status.....                                                                  | 119 |
| 9.2 Waist Circumference and Waist-Hip Ratio.....                                             | 120 |
| 9.3 Disease risk based on body-mass index and waist circumference .....                      | 121 |
| Chapter 10 Blood Pressure: screening, prevalence and treatment .....                         | 127 |
| Key findings.....                                                                            | 127 |
| Introduction.....                                                                            | 128 |
| 10.1. Prevalence of raised blood pressure based on measurement and medications history ..... | 129 |
| 10.2. Diagnosis and treatment gap .....                                                      | 130 |
| 10.3. Screening coverage .....                                                               | 132 |
| 10.4. Prescription of medications and compliance with treatment (Table 10.2) .....           | 133 |
| 10.5. Sources of care for treatment and advice and medications for raised BP .....           | 134 |
| 10.6. Consultation with traditional healers and use of herbal remedies .....                 | 136 |
| 10.7. Reasons for not on treatment .....                                                     | 137 |
| Chapter 11 Diabetes: screening, prevalence and treatment .....                               | 145 |
| Key findings.....                                                                            | 145 |
| Introduction.....                                                                            | 146 |
| 11.1. Prevalence of raised blood glucose based on measurement and medications history .....  | 147 |
| 11.2. Diagnosis and treatment gap (Table 11.1) .....                                         | 148 |

|                                                                                                   |     |
|---------------------------------------------------------------------------------------------------|-----|
| 11.3. Screening coverage (Table 11.2).....                                                        | 150 |
| Chapter 12 Cholesterol: screening, prevalence and treatment .....                                 | 162 |
| Key findings.....                                                                                 | 162 |
| Introduction.....                                                                                 | 163 |
| 12.1. Prevalence of raised blood cholesterol based on measurement and medications history ....    | 163 |
| 12.2. Diagnosis and treatment gap .....                                                           | 164 |
| 12.3. Screening coverage .....                                                                    | 166 |
| 12.4. Prescription of medications and compliance with treatment (Table 12.2) .....                | 166 |
| 12.5. Sources of care for treatment and advice and medications for raised blood cholesterol ..... | 166 |
| 12.6. Consultation with traditional healers and use of herbal remedies .....                      | 168 |
| 12.7. Reasons for not on treatment .....                                                          | 169 |
| Chapter 13 Cardiovascular diseases history, predicted CVD risk and life-style advice .....        | 177 |
| Key findings.....                                                                                 | 177 |
| Introduction.....                                                                                 | 177 |
| 13.1 History of Cardiovascular disease .....                                                      | 179 |
| 13.2 Predicted 10-year cardiovascular disease risk .....                                          | 180 |
| 13.3 Lifestyle advice.....                                                                        | 180 |
| Chapter 14 Cervical Cancer: Screening and Treatment.....                                          | 187 |
| Key findings.....                                                                                 | 187 |
| Introduction.....                                                                                 | 187 |
| 14.1 Testing for cervical cancer .....                                                            | 190 |
| 14.2 Sources of care for cervical cancer.....                                                     | 191 |
| 14.3 Treatment for cervical cancer .....                                                          | 192 |
| Chapter 15 Oral health.....                                                                       | 196 |
| Key findings.....                                                                                 | 198 |
| Introduction.....                                                                                 | 197 |
| 15.1 Oral hygiene practices .....                                                                 | 198 |
| 15.2 Care seeking for oral health issues with dentist .....                                       | 198 |
| 15.3 Self-reported oral health issues .....                                                       | 199 |
| 15.4 Sources of care for oral health issues.....                                                  | 199 |
| 15.5 Reasons for not seeking care for oral health issues.....                                     | 201 |
| Chapter 16 Policy Recommendations.....                                                            | 208 |

## Annexure

|                                                                 |     |
|-----------------------------------------------------------------|-----|
| A. Map of Bangladesh showing data collection areas (PSUs) ..... | 211 |
| B. Questionnaire: English .....                                 | 212 |
| C. Questionnaire: Bangla .....                                  | 242 |
| D. Template of Report on blood glucose and lipid levels .....   | 283 |
| E. Picture show cards .....                                     | 284 |

## Executive Summary

Non-communicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioral factors. Globally, more than seventy percent deaths occurred due to these pandemic NCDs. Most of the NCDs are preventable if the risk factors can be minimized. So information regarding distribution and determinants of those diseases and their risk factors is essential for launching appropriate community programs to reduce death and disabilities from NCDs. Current nationwide survey was conducted to get the distribution of NCD risk factors among Bangladeshi adult population both in urban and rural areas.

## METHODS

A cross-sectional survey was carried out from February to May 2018 among adult population aged 18-69 years including men and women residing in the households in all the divisions of Bangladesh. Sampling was done by multistage, geographically stratified probability based sampling on the basis of Primary Sampling Unit (PSU) developed by Bangladesh Bureau of Statistics (BBS) for census 2011. The sample size was calculated considering prevalence of different NCD risk factors, relative precision rate and feasibility of the survey.

To calculate the final sample size, the design effect and non-response rate at the household and individual level were considered. Considering the findings of Demographic Health survey and previous BBS surveys, the person non-response rate and household non-coverage rate and design effect, security issue and non-clearance of local administration, the final adjusted sample size was 9,900 adults of 495 PSUs. However, based-on eligibility, refusal etc. finally, out of 9900 complete data were gotten from 8185 respondents, physical measurements could be done in 7208 participants, and blood and urine sample was collected from 7065 and 7028 respondents respectively. Both the blood and urine samples were given by 6901 participants.

## RESULTS

### 1. Population characteristics

Among the total 8185 respondents 3804 were men and 4381 were women. Response ratio men: women was 1:1.15. Mean age was 39.3 years. They had a mean 5.5 years of education (5.9 years in men and 5.2 years in women). Mean number of years of education was found to be higher in both men (7.0 years) and women (6.3 years) residing in urban area than in rural (men 4.7 years, women 4.2 years) area. By occupation, most of the women were homemakers whereas, businessmen, farmers, day laborer and service holders were dominant among the men respondents.

## 2. Tobacco use

Current tobacco consumption in any form was found in 59.6% men and 28.3% women. Smoking was habit of 46.6% men and 1.0% women among the respondents. Daily smoker was 44.4% of men and 0.9% of women. Smoking prevalence was higher among 33-59 years aged men (51%), and 60-69 years aged women. On an average people started smoking at 17.7 years. The average duration of smoking in the survey population was 23.7 years. Cigarettes were being smoked by 83.0% and 33.8% responded smoked bidi. Frequencies of manufactured cigarettes were 7.3 per day and bidi smoking was 13 per day. Overall prevalence of smokeless tobacco consumption was 27.5% and daily user was 23.9%. There was no substantial difference between prevalence of smokeless tobacco consumption of men and women. Consumption of smokeless tobacco was increased with age. Among the smokeless tobaccos, jarda by 77.3%, sadapata by 28.9% and gul was used by 15% survey population.

The prevalence of smoking was slightly higher in rural areas (23.0%) than the urban areas (21.7%). Smokeless tobacco use was slightly more in rural area (31.3%) than urban area (26.0%). Any form of tobacco consumption smoking or smokeless was done by 65% men and 32.4% women. However, both forms of tobacco were consumed by 12.8% men and 0.4% women.

## 3. Diet

### a. Fruit and vegetables intake

On an average, fruits were being taken by the survey population 1.6 days a week. Men consumed fruits more days (1.7 days/week) than women (1.6 days/week). Frequency of vegetables consumption was 5.9 days a week. Consumption of vegetable was higher in women (6.1 days/week) than men (5.6 days/week). Among the survey population, consumption of both fruit and vegetables was higher in urban respondents (2 days/ week, 5.9 days/week respectively) than rural (1.3 days/ week, 5.8 days/week respectively).

Regarding quantity of intake, per capita mean consumptions of fruit and vegetables were 0.4 and 2.3 servings per day respectively. Mean number of servings of fruits and/or vegetables on average per day was 2.6. Considering the minimum requirement of servings of fruits or vegetables (at least 5 servings per day), 89.6% respondents did not consume adequately on an average day.

### b. Salt Intake

Overall, 48.2% (men 44.9% and women 51.5%) of the respondents were used to always or often add salt to their food before eating or as they are eating. Usage of salty sauce to their food was found among 1.8% and processed foods high in salt was taken by 13.5% respondents. Mean intake of salt was 16.5 grams per day.

#### 4. Physical activity

Insufficient physical activity (<150 minutes of moderate-intensity activity per week, or equivalent) was done by 12.3% respondents (men 9.6% and women 14.8%). Among the respondents, high level physical activities and moderate level physical activities were reported by 57.7% and 27.2% people. High level physical activity was reported by more men (66.3%) than women (50.2%) but more women (32.5%) than men (21.2%) were in moderate level physical activity. Mean total activity time was 193.4 minutes (men 258.7 minutes and women 136.9 minutes). All types of activity time such as work related, transports related etc. were higher in men compared to women.

#### 5. Alcohol consumption

Alcohol consumption was very low as only 1.5% respondents drank within last 30 days and 3.7% consumed within past 12 months. Alcohol consumption was found more among urban population than rural in both the respondent who drank within last 30 days (urban 1.6% vs rural 1%) and among those who consumed within past 12 months (urban 5.0% vs rural 2.5%). However, 91.4% survey participants were lifetime abstainer of alcohol. This percentage was higher in rural (94.5%) than urban (90.1%). Among the alcohol users, only 4.2% were daily drinker. Current drinkers consumed at least one standard drink in each occasion of average 4.8 occasions in past 30 days. Percentage who engaged in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days) was only 0.5%. Appreciating that, 13.7% respondents did not consume within last 12 months ago due to health reasons.

#### 6. Obesity

Body mass index (BMI) was  $\geq 25.0$  kg/m<sup>2</sup> among 25.9% respondents. Based on BMI 5.4% people were obese (BMI  $\geq 30$  kg/m<sup>2</sup>) and the proportion was much higher among women (9.8%) than men (3.3%). About 13% respondents were underweight (BMI < 18.5). Men (15.3%) were found more in underweight category than women.

Among the survey population 31.4% population had increased waist circumference (men  $\geq 94$  cm, women  $\geq 80$  cm) and 15.2% had substantially increased (men  $\geq 102$  cm, women  $\geq 88$  cm) waist circumference. Percentage of women (increased 48.3%, substantially increased 25.9%) in both cases were much higher than men (increased 12.6%, substantially increased 3.4%). So, both BMI and central adiposity (waist circumference) was higher among women which increases risk of NCDs among them.

## 7. Blood pressure

Prevalence of self-reported hypertension was 14% in men and 20.0% in women and one-third (32.9%) of the population never measured their blood pressure. About 26% survey participants never measured blood pressure (BP). Antihypertensive drugs were being taken by 45.7% respondents. Reduction of salt was the most common advice of the physicians to the self-reported hypertensive patients (60.3%).

On spot measurement, 17.3% men and 24.4% women of the survey participants were having stage I hypertension (BP>140/90 mmHg) and 7.8% had stage II hypertension (BP>160/100 mmHg). Prevalence of hypertension tended to increase with age irrespective of medication and age. Even with medication 18.2% respondents were hypertensive. Among the hypertensive 63.2% respondents were not taking any medication.

## 8. Diabetes mellitus

Around 75% survey population never measured their blood glucose level in lifetime. Self-reported diabetic patients were 6.6% but only 2.8% were taking medication. Oral medication was being taken by 57.1% (men 65.0% and women 50.7% and insulin was being taken by 20.3% (men 23.8%) and women 17.4%) respondents. Again 2.2% diabetic people were taking medication from traditional healer during data collection.

On spot measurement, 8.4% of the respondents were found having raised blood glucose ( $\geq 126$ mg/dl) and impaired fasting glucose ( $>110$  to  $126$  mg/dl) was found among 6.2% respondents. Among the population 1.7 % respondents were having raised blood glucose those were not diagnosed previously. Again, 2.9 % of the survey population with diagnosed raised blood glucose previously was not on medication and women (3.5%) were found higher in proportion than men (2.2%).

## 9. Total cholesterol

About 94% of the survey population never measured their serum cholesterol level but 3.6% of them were found to have self-reported raised total cholesterol. Among those with raised total cholesterol level, 40.8% (men 46.5% and women 34.7%) were taking medications. Again 2.0% people with raised total cholesterol were taking medication from traditional healer.

On measurement, the mean total cholesterol among the survey population was found 4.4 mmol/L. blood cholesterol  $\geq 190$ mg/dl was found in 29.4% and  $\geq 240$ mg/dl was found in 5.6% of the respondents. High density lipid level  $<40$  mg/dl was found in 74.7% respondents (men 88.6%, women 62.8%). Triglyceride level  $>180$  mg/dl was found 39.8% of the survey population (men 46.8% and women 33.8%).

#### 10. Cardiovascular diseases

Cardiovascular diseases were reported by about 11% respondents and women (11.1%) were found more than men (9.8%). Among the patients, 2.7% (men 3.3% and women 2.2%) were taking aspirin and 2.1% (men 2.4% and women 1.8%) were taking statin.

#### 11. Oral health

About 39.5% of the respondents had pain or discomfort caused by their teeth or mouth during the past 12 months. Forty nine percent respondents were used to clean their teeth at least once a day and the proportion was higher among the 18-29 years age group. Toothpaste was used by 55.7% respondents, of which 47.7% respondents used fluoride containing toothpaste.

#### 12. Cervical Cancer Screening

Cervical cancer screening test was ever done by 6.1% of 30-49 years aged women.

#### Summary of Combined Risk Factors

Following risk factors were identified in the survey

- Current daily smokers
- Less than 5 servings of fruits & vegetables per day
- Insufficient physical activity
- Overweight (BMI  $\geq 25$  kg/m<sup>2</sup>)
- Raised BP (SBP  $\geq 140$  and/or DBP  $\geq 90$  mmHg or currently on medication for raised BP)

About 1.9% men and 4% women had none of the above risk factors. Overall, 26.2% people of 18-69 years age had three or more of the above risk factors. The proportion was higher among the 60-69 years aged people (40.1%) than the 18-29 years aged people (16.5%).

#### POLICY RECOMMENDATIONS

This second nationally representative survey provides essential information on key indicators of NCD risk factors and creates an opportunity for policy makers, program managers, academicians, development partners and researchers to adopt necessary interventions to combat the burden of NCDs in Bangladesh. Inadequate intake of fruit and vegetables, use of tobacco, low physical activity, obesity (especially central), high blood pressure, diabetes mellitus, extra salt intake, dyslipidemia and binge drinking among drinkers are identified risk factors for NCDs in Bangladeshi adults. Majority (70.9%) has at least one risk factor and substantial proportion of people have two or more risk factors. Based on these findings, the specific recommendations are:

1. To build mass awareness on the risk factors of NCDs, multidimensional and multilateral collaborative health education interventions are warranted through mass media, campaigns and school curricula.
2. To raise awareness of the people on non-communicable diseases, comprehensive population-based approach using community-oriented health care system for NCD prevention is essential to in Bangladesh.
3. Effective strategies to promote accessibility and availability of fruits and vegetables round the year for all people should be devised and implemented.
4. To promote empowering environment for physical activity in both urban and rural settings, appropriate measures should be undertaken, with emphasis on physical activity, leisure time physical activity in particular,
5. For early detection and treatment of hypertension or high blood pressure, initiatives and health programs for periodic checkup of blood pressure should be launched throughout the country.
6. To reduce the prevalence of diabetes mellitus, early diagnosis and prompt treatment through primary health care system should be established throughout the country.
7. To establish national database on NCD risk factors, digital NCD surveillance system must be developed under the leadership of relevant public health institute.
8. To reduce tobacco consumption behavior of the people, adequate enforcement of the Act is necessary. Necessary amendment of the Act is also required to match with the provisions of WHO Framework Convention on Tobacco Control and close all the loop holes in the tobacco control program.
9. To prevent obesity and dyslipidemia, relevant health information communication and health education interventions are indispensable to implement throughout the country with special emphasis on the urban people.
10. Diseases specific screening programs also should be launched for early detection NCDs like cervical cancer among the females.
11. To improve oral health status of the people, awareness building interventions on dental care, oral hygiene and healthcare utilization should be commenced in the country with special emphasis on the rural people.
12. To reduce the risk of NCDs, drug abuse, alcohol addiction, special measures and interventions focused on lifestyle modification and behavior change communication are necessary to be portrayed in the country.

## Bangladesh at a Glance

Bangladesh, officially the People's Republic of Bangladesh is one of the world's most densely populated countries. Bangladesh is situated in a delta of rivers that empty into the Bay of Bengal and sharing borders with India and Myanmar. Bangladesh has an estimated total population of 161.4 million people<sup>1</sup> with steadily decreasing rural population of 63.4% in 2018<sup>2</sup>. Estimated Gross National Income per capita (GNI) was 1750 (current USD) in 2018<sup>3</sup> and ranked 136 globally in United Nation's Human Development Index (0.608) in 2017<sup>4</sup>. The majority of Bangladeshis are Muslim followed by Hindus and some Buddhist and Christians.

The average life expectancy at birth in Bangladesh is 72 years in 2017 (74 for women, 70 for men)<sup>5</sup>. Administratively, Bangladesh is divided into 8 divisions. Each division is further sub-divided into progressively smaller units: districts, sub-districts (Upazila), unions, wards, and villages. Current existing government health services include community clinics, union health and family welfare centers, Upazila health complex, district sadar hospitals, medical college hospitals and specialized hospitals.



**Map of Bangladesh showing divisions**

Source: <https://www.mapsofworld.com/bangladesh/bangladesh-political-map.html>

<sup>1</sup> United Nations. United nations world population prospects 2019. Available from: <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=BD> Accessed on Dec 4, 2019.

<sup>2</sup> The World Bank. Rural population % of total population – estimates based on the United Nations Population Divisions: World Urbanization Prospects. Available from:

<https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=BD> Accessed on Dec 4, 2019.

<sup>3</sup> The World Bank. World Bank national accounts data, and OECD National Accounts data files. Available from: <https://data.worldbank.org/indicator/NY.GNP.PCAP.CD?locations=BD>. Accessed on Dec 4, 2019

<sup>4</sup> United Nations Human Development Programme. Human development index and its components. Available from: <http://hdr.undp.org/en/indicators/137506> Accessed on Dec 4, 2019.

<sup>5</sup> The World Bank. United Nations Population Division. World Population Prospects: 2019 Revision. Available from: <https://data.worldbank.org/indicator/SP.DYN.LE00.MA.IN?locations=BD> . Accessed on Dec 4, 2019.

## Chapter 1 Introduction

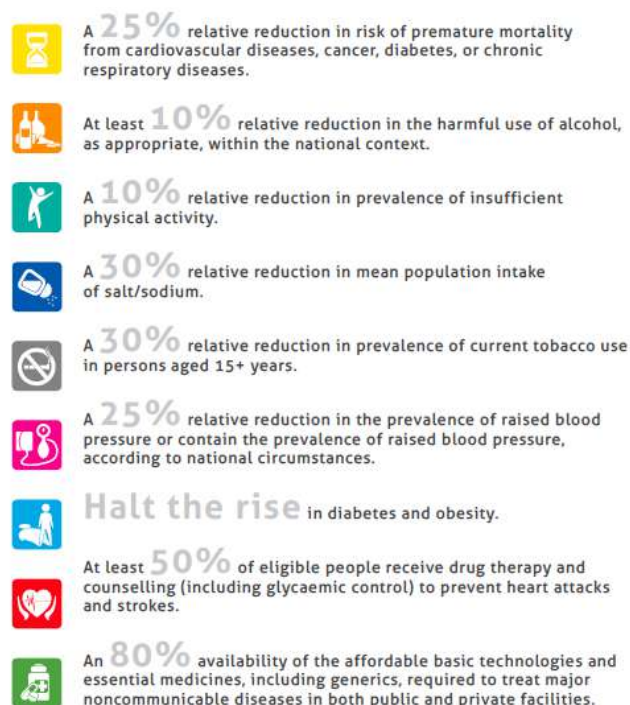
### 1.1 Background

The global burden of non-communicable diseases (NCDs) continues to increase, accounting for 73.4% (41 million) of all deaths in 2017 with the greatest burden occurring in developing countries with significant health, social and economic consequences<sup>6</sup>. In Bangladesh, NCDs are estimated to account for 73.2% of all deaths in 2017. Four main groups of NCDs – CVD (36.1%), cancers (11.2%), chronic respiratory diseases (9.3%), and diabetes mellitus (5.8%) – are responsible for majority of these NCD related deaths<sup>7</sup>.

The Sustainable Development Goals 3.4 targets to reduce by one-third premature mortality from NCDs and promote mental health and well-being<sup>8</sup>. This is further supplemented by the Global Action Plan for the Prevention and Control of NCDs 2013-2020 with 9 voluntary global targets to be attained by 2025 with 2010 as the reference year (**Figure 1.1**)<sup>9</sup>. Bangladesh has incorporated all 9 targets in its 3-year multisectoral action plan for 2018-2025<sup>10</sup>.

The key to controlling the global epidemics of NCDs is primary prevention based on comprehensive population-wide programmes. This requires the identification and surveillance of the most common NCD risk factors identified by the World Health Organization (WHO) which are shared between most common NCDs: tobacco use,

**Figure 1.1 Nine targets in Bangladesh Multisectoral Action Plan for the Prevention and Control of NCDs 2014–2020**



<sup>6</sup> Roth GA, Abate D, Abate KH, et al. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. 2018;392(10159):1736-1788. doi:10.1016/S0140-6736(18)32203-7

<sup>7</sup> Noncommunicable diseases country profiles 2018. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO.

<sup>8</sup> United Nations General Assembly. Transforming our world: the 2030 Agenda for Sustainable Development [Internet] 2015 [Accessed on 2019 Oct 22] Available from:

<https://sustainabledevelopment.un.org/post2015/transformingourworld>

<sup>9</sup> World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva.

<sup>10</sup> Multi-sectorial action plan for prevention and control of non-communicable diseases 2018-2025 (2018). Dhaka: Non-communicable Disease Control Programme, Directorate General of Health Services.

harmful use of alcohol, unhealthy diet (low fruits and vegetables consumption, high salt intake), physical inactivity, overweight and obesity, raised blood pressure, raised blood glucose and cholesterol.

The WHO STEP-wise approach to noncommunicable disease risk factor surveillance facilitates countries to track national NCDs status including the 25 key indicators (except the indicator on NCD mortality and per capital alcohol consumption) highlighted in the NCD Global Monitoring Framework which will help Bangladesh track progress and guide policy and program planning in NCD prevention and control<sup>11</sup>.

### **1.2 STEP survey and NCD surveillance**

STEP surveys are an integral part of nationwide NCD surveillance to track trends in key NCD risk factors and health system response including service coverage and utilization. As part of this surveillance system, this is Bangladesh's 2nd national STEPs survey. The first national STEP survey conducted in 2010 did not include biochemical measurements. This second nationwide STEP survey along with biochemical measurement for blood glucose and lipid profile will help to assess change in key indicators and provide Information that will guide appropriate programs to reduce death and disabilities from NCDs. National Institute of Preventative and Social Medicine in Bangladesh implemented the survey with technical supports of WHO.

### **1.3 Objectives**

#### **General Objective**

- To assess the prevalence of selected NCD risk factors among 18-69 years old population in Bangladesh

#### **Specific Objectives**

- To measure the prevalence of behavioral risk factors (tobacco use, harmful use of alcohol, low fruits and vegetable consumptions, average population salt consumption, and physical inactivity)
- To measure the prevalence of biological risk factors (raised blood pressure, overweight, obesity, raised blood glucose and total cholesterol and abnormal blood lipids)

---

<sup>11</sup> World Health Organization (2017). WHO STEPS Surveillance Manual: The WHO STEPwise approach to chronic disease risk factor surveillance. Geneva, World Health Organization.

- To assess responses of national health system in terms of coverage with early detection and treatment of key physiological risk factors (ie. diabetes, hypertension, tobacco cessation) and cervical cancer screening and source of care.
- To assess the oral health practices of the adult population.
- To assess the coverage, availability and use of cervical cancer screening/testing services and reasons for not getting screened or treated.

## **Chapter 2 Survey Methodology**

### **2.1 Survey design**

STEPS- 2018 is a national cross-sectional population-based survey that used multi-stage cluster sampling design to sample households and eligible adult men and women (18-69 years of age) for interview and physical examination (anthropometry, blood pressure measurement, blood glucose and cholesterol an urine sample for salt) was adopted.

### **2.2 Survey population**

Survey population included men and women aged 18-69 years who have been the usual residents of the household for at least six months and have stayed in the household the night before the survey regardless of citizenship. People with the following characteristics were not included:

- Those whose primary place of residence was in a military base or group quarters
- Those residing in hospitals, prisons, nursing homes and other institutions
- Those too frail and mentally unfit to participate in the study
- those with any physical disability or were severely ill.
- those unable or unwilling to give informed consent

### **2.3 Sampling design**

Samples were collected by multistage, geographically stratified probability based sampling on the basis of Primary Sampling Unit (PSU) developed by Bangladesh Bureau of Statistics (BBS) for census 2011. To ensure generalization and reliability of the survey results to the entire target population in Bangladesh, the sample size calculator as recommended by WHO (sample size calculator STEPS) was used to derive a sample size. The sample size was calculated that is sufficient to produce reliable estimates for all the indicators for men and women and for 4 age-groups (18-24, 25-39, 40-54, 55-69).

#### **2.3.1 Sample size**

The sample size was calculated considering prevalence of different NCD risk factor, relative precision rate (20%) and feasibility of the survey. Using the prevalence of obesity (based on BMI), 472 people was required for effective analysis for each group (8 groups: 4 age-groups and 2 gender categories). To calculate the final sample size, the design effect and non-response rate at the household and individual level were considered. Considering the findings of Demographic Health survey and previous BBS surveys, the person non-response rate shared around 10% and household non-coverage rate around 10%. So, in the proposed survey, overall 20% non-response rate and design effect of 2 were considered. Initially the survey considered 496 Primary Sampling Units (PSUs) (248 each from rural and urban area)

as updated by BBS for GATS survey 2017. But during field work, one PSU was excluded due to inaccessibility. As a result, the final adjusted sample size is 9,900 adults of 495 PSUs.

**1<sup>st</sup> STEP:** sample size by risk factor/condition per group (8 groups: 4 age group, 2 gender group)

Sample size was calculated<sup>12</sup> as follows:  $n = (z^2)q/(d^2)p$

Where,

p = Proportion of population having events, (here, p=16.9%)

q = Proportion of population having events (1-p) =q (here q=0.831)

z = The value of standard normal variety at a given level (here, 1.96)

r = Relative Precision (Here, r= 20% = 0.20)

**Table 2.1: Calculation of initial sample size**

| Risk Factors/<br>Conditions     | z2   | Prevalence (p) | q     | Relative<br>Precision<br>(r =20%) | n =<br>(z <sup>2</sup> *q)/r <sup>2</sup> *p | Margin of<br>error (e) | Roundin<br>g | Reference for prevalence                                            |
|---------------------------------|------|----------------|-------|-----------------------------------|----------------------------------------------|------------------------|--------------|---------------------------------------------------------------------|
| Hypertension                    | 3.84 | 0.208          | 0.792 | 0.20                              | 365.5384615                                  | 3.7                    | 366          | NCD risk factor survey Bangladesh 2010                              |
| Diabetes mellitus               | 3.84 | 0.056          | 0.944 | 0.20                              | 864                                          | 2.7                    | 1618         | Bulletin of the World Health Organization 2014;92:204-213           |
| Fruit/Veg. <5<br>Serving        | 3.84 | 0.918          | 0.082 | 0.20                              | 8.575163399                                  | 2.5                    | 9            | NCD risk factor survey Bangladesh 2010                              |
| Low physical activity           | 3.84 | 0.345          | 0.655 | 0.20                              | 182.2608696                                  | 4.3                    | 182          | NCD risk factor survey Bangladesh 2010                              |
| Overweight<br>(BMI≥25)          | 3.84 | 0.169          | 0.831 | 0.20                              | 472.0473373                                  | 3.4                    | 472          | NCD risk factor survey Bangladesh 2010                              |
| Central Obesity                 | 3.84 | 0.211          | 0.789 | 0.20                              | 358.9763033                                  | 3.7                    | 360          | NCD risk factor survey Bangladesh 2010                              |
| Tobacco use                     | 3.84 | 0.510          | 0.490 | 0.20                              | 125.7090069                                  | 4.5                    | 92           | NCD risk factor survey Bangladesh 2010                              |
| High Cholesterol<br>(≥200mg/dl) | 3.84 | 0.013          | 0.987 | 0.20                              | 7288.615385                                  | 1.1                    | 7290         | Zaman MM, Choudhury SR, Ahmed J. Blood Glucose....STEPS 2006 survey |

$n = (( [1.96]^2 ) * 0.831) / (( [0.2]^2 ) * 0.169)$ , for each group without taking into account the non-response and design effect

**2<sup>nd</sup> Step:** adjusting for design effect of 2, response rate of 80%, and 8 groups, sample size was calculated.

$$n = (472 * 2 * 8) / 0.8 = 9440$$

One adult was sampled from each sampled household. Twenty households were selected by systematic random sampling on the basis of estimated sampling interval from each out of 495 PSU. So, the calculated final sample size was = 495\*20= **9,900. (sample size a national level)**

<sup>12</sup> Lwanga SK, Lemeshow S, World Health Organization. Sample size determination in health studies: a practical manual. Geneva: World Health Organization; 1991..

The final sample size of the survey was 9,900 adults of Bangladesh, which allows national estimated disaggregates by gender and 4 main age groups.

### 2.3.2 Sampling Frame and primary sampling unit

The sampling frame for the survey was the complete list of Primary Sampling Unit (PSU) i.e. Enumeration Areas (EAs) (about 293,533) covering the whole country prepared by the BBS for the 2011 Population and Housing Census of the People's Republic of Bangladesh. A PSU is a geographic area covering 100 to 220 households with an average of 113 households. The sampling frame contained information about the PSU location, type of residence (urban or rural), and the estimated number of residential households. A sketch map that delineates the PSU geographic boundaries was available for each PSU. The population coverage rate of this Census 2011 was around 95.85% of the total population. **(Annexure A)**

A special zonal operation was carried out by BBS before 2011 census in 2010 whereby both the urban and rural areas were subdivided with updating of *mauzas (rural)* and *mahallas(urban)* maps with demarcation of PSU boundaries comprising of 100 to 120 (average) houses. Thus based on 2011 census, the sampling frame for the survey was about 293,533 PSUs for both rural and urban areas. The urban stratum included urban and city corporation areas. In Bangladesh, 23.3% of the households are in urban areas; 8.2% are in city corporations, and 15.1% are in other than city corporations.

A new division has been added in 2014 after conclusion of census 2011. So, all the PSUs in the 2011 census were mapped out as per the latest divisions. Thus the sampling frame for STEPS survey 2018 in Bangladesh comprised of 293,533 PSUs: 65,193 urban and 228,340 rural PSUs. Table 2 describes the complete sampling frame by division and by urban and rural areas.

**Table 2.2: Sampling frame used for 2017 STEPS NCD Risk Factor Survey based on Census 2011**

| Name of Division | Rural  |          | Urban |         | Total  |          |
|------------------|--------|----------|-------|---------|--------|----------|
|                  | PSU    | HHs      | PSU   | HH      | PSU    | HH       |
| Barishal         | 14812  | 1561303  | 2688  | 301538  | 17500  | 1862841  |
| Chattogram       | 40019  | 4211325  | 12241 | 1411240 | 52260  | 5622565  |
| Dhaka            | 41249  | 4600373  | 27377 | 3133637 | 68626  | 7734010  |
| Khulna           | 27485  | 3072496  | 5646  | 664774  | 33131  | 3737270  |
| Mymensingh       | 25064  | 2668255  | 3650  | 427080  | 28714  | 3095335  |
| Rajshahi         | 34101  | 3712882  | 6599  | 772370  | 40700  | 4485252  |
| Rangpur          | 29388  | 3333437  | 4273  | 482940  | 33661  | 3816377  |
| Sylhet           | 16222  | 1511519  | 2719  | 278890  | 18941  | 1790409  |
| Bangladesh       | 228340 | 24671590 | 65193 | 7472469 | 293533 | 32144059 |

PSU: Primary sampling unit  
HH: Household

Households in this survey was defined according to BBS as “A dwelling in which persons either related or unrelated living together and taking food from the same kitchen”.

### 2.3.3 Sampling strategy

This survey used the same 496 PSUs which were sampled and used during a recently concluded GATS-II survey. In GATS Bangladesh 2017 these PSUs were equally allocated to each division (62 each), and within each division, were equally allocated to urban and rural stratum (248 PSUs each to both urban and rural strata). The rural and urban PSUs were arranged by population size in terms of household numbers for both urban and rural stratum in each division. In each stratum (rural and urban), 31 PSUs were selected independently in each division by probability proportional to size (PPS) sampling

**Table 2.3: Number of sampled PSUs\* and households by division for 2018 STEPS NCD risk factor survey based on Census 2011 sampling frame**

| Division     | Rural      |             | Urban      |             | Total      |             |
|--------------|------------|-------------|------------|-------------|------------|-------------|
|              | PSUs       | HHs         | PSUs       | HHs         | PSUs       | HHs         |
| Barishal     | 31         | 620         | 31         | 620         | 62         | 1240        |
| Chattogram   | 30         | 600         | 31         | 620         | 61         | 1240        |
| Dhaka        | 31         | 620         | 31         | 620         | 62         | 1240        |
| Khulna       | 31         | 620         | 31         | 620         | 62         | 1240        |
| Mymensingh   | 31         | 620         | 31         | 620         | 62         | 1240        |
| Rajshahi     | 31         | 620         | 31         | 620         | 62         | 1240        |
| Rangpur      | 31         | 620         | 31         | 620         | 62         | 1240        |
| Sylhet       | 31         | 620         | 31         | 620         | 62         | 1240        |
| <b>Total</b> | <b>248</b> | <b>4800</b> | <b>248</b> | <b>4800</b> | <b>496</b> | <b>9900</b> |

\*Same sampled PSUs as used in Global adult Tobacco Survey Bangladesh 2017, no fresh sampling of PSUs was carried out for this survey

A household listing operation was carried out in all the selected PSUs by BBS during GATS-II survey in July 2017 was used and no new household listing was carried out for this survey. As the survey used the same PSUs as used during GATS-II survey, HHs lists prepared by BBS during GATS-II survey in July 2017 served as sampling frame for the selection of households in the second stage.

A fixed number of 20 households were systematically selected from each sampled PSU with an equal probability using a fractional interval technique. Selected households in all the selected PSUs were randomly assigned as “male” or “female” in a ratio that produced equal numbers of male and female households. The 20 selected HHs in a PSU were divided into two groups as 1) male HHs for interview of a male member and 2) female HHs for interview

of a female member. All the sampled HHs from each PSU were listed sequentially, and alternate house was assigned as female or male household, with the first household in the list assigned as female household.

Finally, one individual was sampled randomly from all the eligible adults in a participating household using the survey app in android tablets. No replacements and no changes of the pre-selected households were allowed at the implementing stage to prevent bias.

## **2.4 Data collection tools**

The survey was conducted using the WHO NCD STEPS instrument version 3.2<sup>13</sup>. The questionnaire consisted of three STEPS for measuring the NCD risk factors. Each step consisted of a number of core, expanded and country specific questions that were modified to suit local needs. Bangladesh included all core modules and optional modules: oral health and cervical cancer screening. The questionnaire was translated into Bengali. Validation of the translated questionnaire was done by back translation. **(Annexure B and Annexure C)**

### **STEP I (questionnaire) included:**

- Demographic information: date of birth/age, sex, religion, marital status, years at school, primary occupation, possession of specific household assets ( to compute household wealth index as a proxy for economic status in place of income/expenditure).
- Fruit and vegetable consumption
- Dietary salt
- Physical activity
- Tobacco use
- Alcohol consumption, practices, knowledge and perceptions
- Oral health status and care seeking behaviour
- Cervical cancer screening
- History of raised blood pressure, raised blood glucose, and sources of care and reasons, for non-treatment.
- History of cardiovascular diseases
- Lifestyle advice from health workers

---

<sup>13</sup> World Health Organization. WHO STEPS instrument (core and expanded). Geneva, Switzerland: WHO URL: [https://www.who.int/ncds/surveillance/steps/instrument/STEPS\\_Instrument\\_V3.2.pdf](https://www.who.int/ncds/surveillance/steps/instrument/STEPS_Instrument_V3.2.pdf)

**STEP II** included physical measurements: weight, height, waist/hip circumference and blood pressure.

**STEP III** included biochemical measurements: fasting blood glucose, total cholesterol, lipid profile and urine sample for testing of sodium and creatinine levels. (**Annexure D**)

## **2.5 Data collection technique**

Based on the sampling frame outlined above (2.3 Sampling design), field workers visited the sampled households with the assistance of registrars from 495 BBS PSU's to in finding the selected household . The appointed person was remunerated on daily basis including per diem and travel allowance. Each household was followed up at least twice in case of non-availability of the respondents during the first visit. A respondent who could not be contacted even after the second attempt was counted as a non-response. An interview tracking form was completed to record brief information about the respondents. If the sampled household member was present on the first visit, s/he was requested to participate in the study and written consent was obtained. If s/he was not available at home during the first visit, a second visit was made. Once the consent was obtained, the STEP I and II questionnaire were completed, urine container with QR code was assigned. After completing STEPS I and II. participants were given a feedback form. This form included information on their height, weight, hip and waist circumference, blood pressure (third reading) and heart rate (third reading).

An appointment/clinic card was also given to every participant for biochemical measurement containing fasting instructions. This card contained the appointment date, time and place for blood glucose and lipid measurement. On the given date and time, the enumerators made biochemical assessment (Fasting blood glucose and lipid) using cardio-check.

Participants were instructed to fast overnight for 12 hours and diabetic patients on medication were requested to bring their medicine/insulin with them and take their medicine after providing the blood sample. To ensure high response rate for STEP3, the enumerators called the respondents on the day of testing if he/she failed to come as per the appointment. Similarly, for the purpose of population salt estimation, urine containers with QR code pasted on them were provided to participants to collect spot urine. The instruction for sport urine collection was given and asked them to bring the urine sample with them to the appointment for blood testing the next morning.

The questionnaire was administered by trained interviewers through face to face interviews and responses as well as physical measurement were recorded in the survey app (ODK software) on android tablets. Data from the tablets were submitted to cloud-based server after completing the data collection.

Assistive pictorial show cards were shown to the participants during the interview to provide visual references including various tobacco, alcohol products, servings sizes of different fruits and vegetables (one standard serving of fruit or vegetable equals 80 grams), various salty sauces and processed foods, various levels of physical activity and sedentary activities (Annexure E)

## **2.6 Physical measurements: Anthropometry and blood pressure**

### **2.6.1 Anthropometry**

Height, weight, hip and waist circumference were measured for all sampled individuals who gave their consent for STEP 2.

Height was measured with a portable stadiometer (Seca Measuring Scale 213®). For the height measurement, respondents were asked to remove footwear (shoes, slippers, sandals) and any hat or hair ties. Respondents were requested to stand on the stadiometer facing the interviewer with their feet together and knees straight. They were asked to look straight ahead and not tilt their head up, making sure that their eyes are at the same level as their ears. Height was recorded in centimeters.

Weight was measured with portable digital weighing scale (Tanita). The instrument was place on a firm, flat surface. Participants were requested to remove their footwear and socks, wear light clothes, stand on the scale with one foot on each side of the scale, face forward, place arms idly at their side and wait until asked to step off. Weight was recorded in kilograms.

Waist and hip circumference were measured using a constant tension tape (Seca, Germany). A private area, such as separate room with in the house, was used and the measurement was taken over light clothing. Waist circumference was taken at the end of a normal expiration with the arms relaxed at the sides at the midpoint between the lower margin of the last palpable rib and the top of the iliac crest of hip bone). Hip circumference was taken at the maximum circumference over the buttocks. Participants were requested to wrap the tape around them. The measurement was read at the level of the tape to the nearest 0.1 cm, making sure to keep the measuring tape snug.

## **2.6.2 Blood Pressure**

Blood pressure and pulse was measured with a digital, automated blood pressure monitor (BP–BOSO–Medicus Control with universal cuff®) with uniform cuff-size. Before taking the measurements, participants were asked to sit quietly and rest for 15 minutes with legs uncrossed. Three readings of the systolic and diastolic blood pressure were obtained. Participants were requested to rest for three minutes between each reading. The mean of the second and third readings was calculated. The sphygmomanometer cuff was placed on the left arm while the participant rests their forearm on a table with the palm facing upward. Participants were requested to remove or rollup clothing on the arm. The cuff was kept above the elbow aligning the mark for artery on the cuff with the brachial artery and making sure the lower edge of the cuff is placed 1.2 to 2.5 cm above the inner side of the elbow joint and with the level of the cuff at the same level as the heart.

## **2.7 Biochemical measurements**

### **2.7.1 Blood glucose and lipids**

After STEP 1 and STEP 2 of data collection at sampled households, biochemical assessments were performed the next day at a designated place for each PSU for blood glucose and total cholesterol, measured in venous blood samples. Concentrations of glucose, total cholesterol and HDL cholesterol were measured in plasma samples. Fasting samples were taken to measure raised blood glucose.

Participants were instructed to fast overnight for 12 hours at the time of household visit for Step I and II. During the appointment, participant was asked to sit in comfortable position with exposing forearm in a table or if patient could not sit in that case at supine position. If the technician was not able to collect blood despite two attempts, he/she didn't try to attempt the 3<sup>rd</sup> prick, and just recorded the reason for non-collection of sample in laboratory and interview tracking sheet. Each participant was given 50 taka and made him / her rest and then allowed to go).

The ante-cubital fossa was cleaned with disinfectant (70% alcohol) and identified the ante-cubital vein. Then 5ml of blood will be collected by disposable syringe. 2 ml of this blood was transferred to Fluoride-oxalate vacutainer (brown top) for serum glucose testing and 3 ml of the blood was kept in a normal tube and allowed to stand for separation of plasma (for lipid profile) with proper labeling. The sample for blood glucose was left in upright position in vacutainer rack and then centrifuged and separated serum was keep in the cold box (2–8°C) surrounded by ice packs and sent to the NIPSOM Lab within 24 hours.

Each sample tube was labeled with the participant identification number using autogenerated ID tablet, as automatically generated during the questionnaire administration. The medical technologist labeled the laboratory ID (Based on PSU and HH number) against the corresponding participant ID on the appointment card following their lists.

Disposable sterile gloves in multiple sizes: The medical technologist and lab staffs used sterile gloves during blood collection from the participant. Each time the medical technologist washed his/her hands including gloves with Chlorhexidine Gluconate (0.5%) and Isopropyl alcohol (70%) (Hexisol®) and collect blood sample with sterile syringes and needles. A single-use disposable needles, and syringes or lancing devices were in sufficient numbers to ensure that each patient has a sterile needle and collection device or equivalent for each blood sampling. All the used syringes and all other used materials were collected in a supplied biohazard bag. The needles were stored in hard plastic container/box. All the medical wastes created for sample collections were sent within biohazard bag to NIPSOM. Finally all the medical wastes were disposed centrally scientifically by PRISM<sup>14</sup>, the specific agency concerned with management of biomedical wastes. NIPSOM had an agreement with PRISM for management of all laboratory and biomedical wastes. Sufficient laboratory sample tubes were supplied to prevent reuse and manual washing.

Immediately after reaching to the NIPSOM laboratory, the samples were properly registered with lab ID and sent for measuring blood glucose, lipid profile with biochemistry auto analyzer (Selectrao Pro M) for blood glucose, Human®, Germany; for HDL with control, Elitech®; TG, Elitech®; with control, Humatrol/ serodos®; cholesterol, Elitech® with control Humatrol®, Germany.

### **2.7.2 Spot urine testing for estimation of 24-hour salt intake**

Spot urine collection was done to identify the level of sodium (Na), potassium (K) and creatinine.

Spot urine sample collection process

Urine sample were collected from all respondents age 18–69 who consented to STEP 3- biochemical measures component of the survey. Respondents were excluded if they were pregnant; were fasting before collecting the urine sample; have contaminated urine samples

---

<sup>14</sup> PRISM Bangladesh Foundation. Aims and Objectives. [Internet].2020. [Cited: 22 March 2020] Available from: <http://pbf.org.bd/>

with blood. Urine samples were self-collected by respondents the night of the survey interview at home before fasting for blood sample collection the next day during their scheduled appointment. The respondents were requested to void into the urine containers provided, fill half of the container and record time of collection. Instructions were given to store the sample in a cool, dark place without direct sunlight before they brought the sample container to the collection centre the next morning during their appointment. Urine analysis was conducted at NIPSOM using reagent: Easylyte plus® 400mL solution pack® with the analyzer: Easylyte plus Na/K/Cl analyzer® by Medica Corporation, USA. Urine samples were matched with respondents using identification number attached to each urine sample that corresponds to respondent's unique identification number. Sodium data was received in units of mmol/L, while creatinine was received in mg/dl.

#### 24-h salt intake estimation

The STEPs survey utilizes spot urine sample as a proxy to 24h urine samples for the estimation of mean population salt intake. WHO has long supported the use of 24 hour urine sample as the preferred method for the assessment of population mean salt intake, despite so, the challenges faced during sample collection due to high participant burden has significantly reduced the use of the tool. The relative convenience of spot urine samples have provided a more appealing alternative. Current literature supports the use of spot urine samples to estimating mean population salt intake<sup>1</sup>. Three main studies developed the estimation of 24-h urinary sodium intake from spot urine samples that are used in our STEP survey: Kawasaki<sup>2</sup>, INTERSALT<sup>3</sup> and Tanaka<sup>4</sup>. However, limited evidence support the preferential use of one equation over another in a given population/context. Hence, to facilitate comparison of results and assessment of trends, equations used in previous survey rounds was maintained in current survey round. This is the first year urinary salt was measured in the Bangladesh STEPs Survey and the Tanaka equation was used.

#### Tanaka equation

$$21.98 \times (N_{\text{spot}}(\text{mmol/L}) / (C_{\text{spot}}(\text{mg/dL}) * 10) \times PrUXr24h(\text{mg/day}))^{0.392}$$

$$PrUCr24h = 14.89 \times Weight(\text{kg}) + 16.14 \times Height(\text{cm}) - 2.04 \times Age(\text{year}) - 2244.45$$

Additional information that are required by the equations include respondent weight, height, age, sex. When conversion of creatinine from mg/dl to mmol/L was called for, creatinine in mg/dl was multiplied with a conversion factor of 0.00884. The equations above derive 24 hour sodium intake, which is then converted to salt intake by the division of 17.1 (or multiplication of 2.54/1000\*23) as a conversion factor to obtain the final estimated salt intake of interest in grams.

## **2.8 Quality assurance and pretest**

This study adopted the validated WHO STEPs instrument version 3.2.<sup>13</sup> The survey protocol development followed standard format of WHO with explicit explanations of all scientific issues. Extensive literature review was done to develop the survey protocol. The protocol was finalized through workshop presentation and reviewing with WHO. All members of the field team were extensively trained on the research objectives, research design and methods, data collection instruments and techniques (see below). Data collection instruments were pre-tested and corrected as per requirements. The instruments were translated into Bangla and was back translated and validated among the adults of similar urban and rural communities. The android devices were programmed with the help of WHO technical advisors and were used for data collection after extensive pretesting.

## **2.9 Staff and Field work**

### **Staff**

The technical committee of the survey was composed of one coordinator, two co-principal investigators and ten co-investigators. In addition to that one finance and budget officer, one IT-cum data manger, one data analyst was recruited in the survey. Investigators were involved in planning and conduction of the study. Field supervisors, responsible for coordination and supervision of field work, all had previous experience in conducting community based surveys with a minimum of a graduate degree that were selected by written tests and interviews. Enumerators who had a minimum of a graduate degree, and qualified laboratory technologist were recruited. In whole, the field staff body included 30 field supervisor, 60 enumerator, and 30 laboratory technologist forming a total of 30 field teams.

All field staff undergone an extensive 3-day-training at NIPSON on survey protocol questionnaire, field procedure manual, interview technique, physical measurements, aseptic collection, storage and transportation of blood and urine samples, super vision of field activities, safety of subjects, privacy, confidentiality and data collection by WHO technical experts between Feb 17-22, 2018.

### **Field work**

Field work was carried out between March to May in 2018. Each field team comprised of 1 field supervisor, 2 enumerators (one male and one female) and one laboratory technologist. Each team surveyed 16–17 PSU and visited on average 330 households and conducted the similar number of surveys. Each team was supplied with 2 android tablets. Each team

completed field work in 1 PSU within 4 days with interview/visit of 5 households per day. Two recall visits were done for each participant for Step1 and Step2.

## **2.10 Quality control**

To ensure quality of data, quality control procedures were put in place through regular field supervision of interviews and daily review of collected data. Trained medical technologist collected the biomedical samples for the participant following standard guidelines. On the day before sample collection, the enumerator/medical technologist provided detailed instructions regarding urine sample collection and fasting blood sample and provide urine container to each participant. They motivated the participant to collect the samples following standard procedure and instruments.

Laboratory instruments were calibrated following standard procedure and the findings were validated with the same sample findings of other standard national laboratory. The blood and urine samples were tested in the NIPSOM central laboratory dividing the sample samples into multiple samples and same samples in multiples times to compare the findings and to validate the instruments and procedure.

To ensure accurate findings of the biochemical samples; pretesting was done in both urban and rural areas from where samples were sent to NIPSOM laboratory. Accordingly samples were received at different time's interval after collection and were tested in different time period. The findings of different times were also be compared and on the basis of this; samples were sent at the NIPSOM laboratory within short possible time (Within 24 hours).

## **2.11 Data processing and analysis**

### **2.11.1 Data management and processing**

The survey data was entered directly in the ODK software on the PDAs. As soon as data entry for STEPS 1 and 2 and STEPs 3 was completed, data were sent electronically and stored in ONA data base server. The same applied to urine test results. Frequent monitoring and supervision was done during data collection period. Furthermore, field team uploaded the data on daily basis to the server and the data were downloaded at central office for consistency check. The central data management team checked the data for any inconsistencies and incompleteness. The enumerators were alerted and advice in every steps of data collection and provide guidance if any inconsistency persist. The data stored were downloaded into Microsoft Excel® format. Each survey participants had a unique identifier QR-code and personal identification number (PID) which was used for merging data for steps 1,2,3 and urine data. Once the survey was completed the data were cleaned and analyzed according to

guidelines of WHO STEP wise approach to surveillance. For the validity of study, all steps were followed as per the guideline of WHO STEP wise approach to surveillance.

### 2.11.2 Data analysis

Data analysis was primarily performed using STATA version 15.0 and Epi Info version 3.4 was used as a reference for programming purposes and cross-validation of STATA outputs, with appropriate methods for the complex sample design of the survey. The prevalence and measures of central tendency of NCD risk factors were estimated. Outcome measures (prevalence and mean variance) and differences between groups were calculated with a 95% confidence interval. Data analysis and report writing was carried out by the NIPSOM team.

### 2.12 Response rates

Survey could be done in 495 PSUs. One PSU could not be visited due to movement restrictions imposed by the local authority. A total of 9162 households out of 9353 eligible households participated (response proportion: 0.98). In next step, 8185 individuals completed the step-1 and 2 out of 8423 eligible subjects (response proportion: (0.972)). Finally, 7065 completed step-3 (response proportion: 0.863). Therefore, the overall response rate was  $(0.98 \times 0.863)$  84.6%.

**Table 2.4: Disposition codes for household roster, steps 1, 2 and 3.**

| Level/Step               | Number |
|--------------------------|--------|
| <b>Household level:</b>  |        |
| Roster completed         | 9162   |
| Not a household          | 11     |
| Group accommodation      | 40     |
| Locked/vacant            | 431    |
| Broken household         | 65     |
| Others                   | 104    |
| Refused                  | 87     |
| Total                    | 9900   |
| <b>Individual level:</b> |        |
| <i>Step 1 and 2 -</i>    |        |
| Completed                | 8185   |
| No eligible respondent   | 739    |
| Incomplete Refused       | 39     |
| Refused                  | 199    |
| <i>Step 3 -</i>          |        |
| Blood collection         | 7056   |

### 2.13 Ethical considerations

The survey was conducted maintaining all possible ethical considerations. Ethical approval for the study was obtained from Bangladesh Medical Research Council (BMRC). Informed written

consent form was obtained from all participants prior to collection of survey data or specimens. Detailed study related information were read out and explained in the local language from a printed handout including information on objectives, methods of the study, duration, frequency, physical measurement and biochemical measurements, risks & benefits of the study. Finger impressions were obtained from the participant who can't sign.

The information were dealt with highest confidentiality and was used only for this study. Privacy of the respondents was maintained during data collection and no physical harm or risk on the study population occurred as no hazardous procedure were involved in the survey. Before data collection, formal permission was also obtained from the respective community leaders.

Additionally, every participant was provided 50 taka, after the fasting blood collection to buy breakfast. The participants were offered due respect and they were given full freedom to withdraw their consent of participation at any stage of the study.

Respondents were also informed about their anthropometry and test results (BMI, BP, fasting blood glucose and total cholesterol). Respondents with out of range values were advised and referred to nearby health facilities for further evaluation and necessary care in writing through a courier/mail. An educational sheet on the best practices on diet, salt consumption, tobacco and alcohol use, and physical activity was given to each participant after completion of data collection in all steps. It was given to raise their awareness of the participants regarding major NCD risk factors and to encourage healthy lifestyle.

## Results

### Chapter 3 Characteristics of respondents and households

#### Key findings

- 
- **Age:** two-thirds of all respondents were less than 40 years of age.
  - **Marital status:** 85.5% of women and 79.8% of men were currently married, while 4.9% of women and 20.0% of men have never married.
  - **Education:** 44.1% of respondents have either no education or less than primary followed by 34.8% have completed primary level, more than one-tenth (12.1%) have attained secondary, and 8.7% completed higher secondary education or university level.
  - **Occupation:** 9.1% of women and 63.5% of men were currently employed either in government or private jobs.
  - **Religion:** 87.3% of respondents belonged to Islam and 11.9% were Hindu.
  - **Household wealth:** A vast majority (89.4%) of households in the country have access to electricity and own a mobile phone (96.7%). Dhaka division have the highest proportion of individuals in the wealthiest quintile and lowest proportion was observed in Rangpur division.
- 

#### Introduction

This chapter presents information on demographic and socioeconomic characteristics of the survey respondents such as age, education, place of residence, marital status, occupation and wealth status; and of household characteristics (in terms of household possessions). This information is useful in understanding the epidemiology of NCD risk factors and factors that affect health care seeking and other behaviors as well prevalence of health inequities.

#### 3.1 Basic characteristics of survey respondents

The 2018 STEPS Survey interviewed 4,381 women and 3,804 men age 18-69 years. Nearly two-thirds (63.7%) of the respondents were less than 40 years of age. A majority of women (85.5%) and men (79.8%) were currently married, while 4.9% of women and 20.0% of men were never married. 9.6% of women and 0.3% of men were divorced, separated or widowed. More than three-fourth (78.5%) of respondent lived in rural areas whereas 21.5% of them from urban (**Table 3.1**).

Most of the respondents belonged to Islam (87.3%) religion, 11.9% were Hindu followed by 0.3% Christian and 0.6% Buddhist respondents (**Table 3.5**)

### 3.2 Education

Nearly half (44.1%) of adults reported that they haven't had formal schooling or not completed primary level, more than one-third (34.8%) had completed primary-level of education whereas more than one-tenth (12.1%) of adults completed secondary level of education while only 8.7% were having higher than secondary education (**Table 3.1**).

#### Patterns by background characteristics (Table 3.2)

- *Age and educational level:* An inverse relationship was seen between level of education and age, with younger age-cohorts less likely to report no education or less than primary education (18.5% in 18-24 years versus 64.4% in 40-54 years and 72.8% in 55-69 years age group).
- *Household wealth and educational level:* The likelihood of no formal schooling or less than primary education decreased with increasing wealth from 70.2% of respondents in lowest wealth quintile to 16.8% in the highest wealth quintile. The reverse relationship was seen with secondary and more than secondary education as well as.
- *Residence and educational level:* Adults who lived in rural were more likely report lower education levels. Nearly half (47%) of adults in rural areas reported no education or incomplete primary-level compared to 32.9% in urban areas. The similar inverse difference was seen in the secondary and more than secondary level education in these areas.

### 3.3 Employment

More than half of men (63.5%) and 9.1% of women - overall 35.9% - were currently employed either as government, non-governmental or self-employed. Overall 10.9% of respondents (21.8% men and 0.3% women) were businessman either small or big. 0.8% of women and 3.5% of men were unemployed. Overall 43.7% (85.9% of women and 0.3% of men) reported as homemakers. (Table 3.2)

#### Patterns by background characteristics (Table 3.2)

- *Age, sex and occupational status:* Respondents at the lowest of age group (18-24 years) were less likely to be report being employed. Highest proportion of respondents reported being employed in two age groups (25-39 and 40-54 years). More men reported as being employed (63.5%) than women (9.1%).
- *Household wealth and occupation status:* Overall, the likelihood of being employed increased with increasing wealth from 39.3% of respondents in lowest wealth quintile to 42.8% in the middle wealth quintile, however then decreased from 32.1% in fourth

wealth quantile to 25.4% in highest wealth quintile. The likelihood of being a businessman increased with household wealth index. The reverse relationship was seen with being a home-maker.

- *Residence and occupational status:* There was no significant different in being employed by rural/urban residence (36.6% in rural and 36.7% in urban). By division, the likelihood of being employed varied from 29.4% in Barishal to 40.0% in Rajshahi and Sylhet.

### 3.4 Household characteristics and assets (Table 3.3)

The survey collected data on type of household roof, access to electricity, and selected household durable goods (mobile phones, televisions, radio) and means of transportation to assess the overall household wealth. In addition to this survey also collected data on family type. Nearly three-fourth (71.6%) of respondent reported living as nuclear family and 28.5% of respondents in joint family. A vast majority (89.4%) of households in the country have access to electricity (96.3% in urban and 87.4% in rural). A variety of roofing materials are used in households - the most common being Tin/Tiles (81.3%), cement/concrete (16.4%) and *katcha* - Bamboo/Thatched/Straw/Gunny (2.3%).

#### *Household consumer goods:*

Almost all household (96.7%) have at least one mobile phone, however only 0.5% of households have fixed land-line telephones (0.1% in rural and 1.9% in urban). Overall more than half (52.7%) of households reported to own a TV, while the ownership of TV is much higher among urban compared to rural households (78.9% versus 45.9%). The ownership pattern of TV increased with increasing wealth from 6.6% of respondents in lowest wealth quintile to 93.1% in the highest wealth quintile. Only 6.7% of households reported having a computer/laptop/tablet, much higher in the urban (15.5%) than in the rural households(4.1%).

### 3.5 Household wealth index

Household wealth assessed on the basis of selected household characteristics (e.g. type of roof, access to electricity), mean of transportation used and possession of selected consumer good was used as indicator of economic status rather than direct assessment of household income or other traditional measures of income--consumption/expenditure levels, as the former is easier to assess in household surveys and was found to be valid marker of

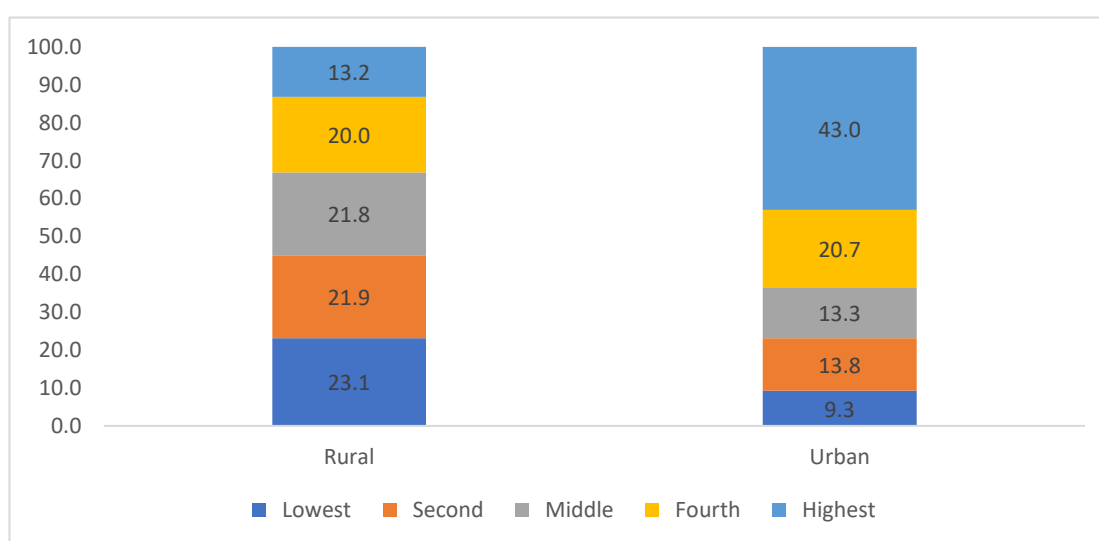
economic status<sup>15</sup>. Household wealth index has been used as a key stratifier to assess socio-economic differentials in prevalence of NCD risk factors and care-seeking behaviors.

*Computation of household wealth index:*

Households were given scores based on the number and kind of consumer goods they own ranging from a television to a bicycle or a car and housing roof characteristic. These scores are derived using principle component analysis. National wealth quintiles are compiled by assigning the household score to sample individuals, ranking them by his/her household score, and then dividing the distribution into five equal categories, each comprising 20% of the population.

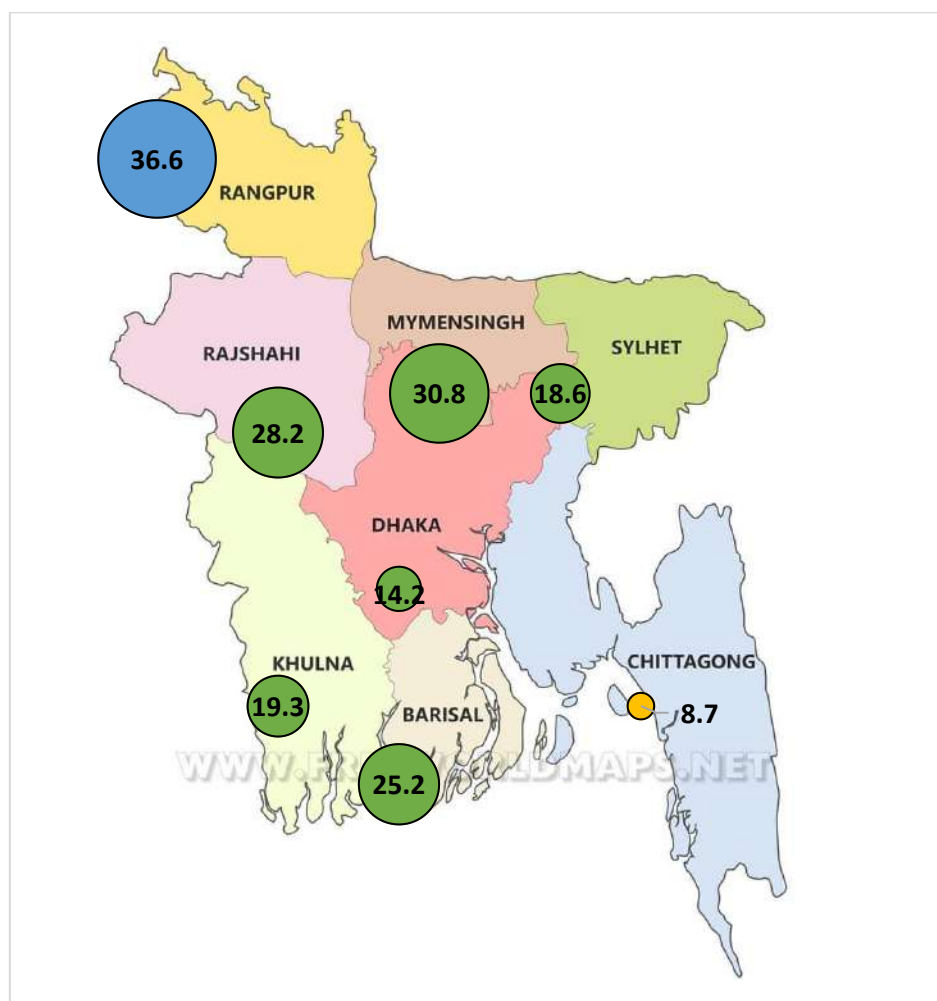
While 43% of individuals living in urban areas were categorized under the wealthiest quintile, only 13.2% from rural were in the fifth wealthiest quintile. Dhaka division (30%) have the highest proportion of individuals in the wealthiest quintile and lowest proportion was observed in Mymensingh (7.4%) followed by Rangpur (8.3%). **(Table 3.4).**

**Figure 3.1: Distribution of sampled individuals by wealth quintile and residence**



<sup>15</sup> Filmer, D. and L. Pritchett. 1988. "Estimating wealth effects without expenditure data—or Tears: An application of education enrollments in States of India." World Bank Policy Research Working Paper No 1994. Washington DC: World Bank Development Economics Research Group.

**Figure 3.2: Percent of households in the poorest quintile by division.**



### List of Tables:

For more information on background characteristics, see the following tables:

Table 3.1 Percent distribution of respondents age 18-69 by selected background characteristics and sex.

Table 3.2 Educational and occupational status of respondents by selected background characteristics.

Table 3.3 household characteristics based on roofing material and other household assets by residence and household wealth quintile.

Table 3.4 Percent distribution of sampled individual in different wealth quintiles by residence and province

Table 3.5 Percent distribution of households by religion

**Table 3.1 Background characteristics of respondents by sex**

Percent distribution of respondents age 18-69 by selected background characteristics, [Bangladesh STEPs, 2018]

| Background characteristic      | Women      |             | Men        |             | Total      |             |
|--------------------------------|------------|-------------|------------|-------------|------------|-------------|
|                                | Weighted % | n           | weighted % | n           | weighted % | n           |
| <b>Age</b>                     |            |             |            |             |            |             |
| 18-24                          | 25.8       | 621         | 22.1       | 405         | 23.9       | 1026        |
| 25-39                          | 40.1       | 2019        | 39.4       | 1470        | 39.7       | 3489        |
| 40-54                          | 19.5       | 1284        | 19.9       | 1219        | 19.7       | 2503        |
| 55-69                          | 14.7       | 457         | 18.7       | 710         | 16.6       | 1167        |
| <b>Residence</b>               |            |             |            |             |            |             |
| Rural                          | 78.5       | 2264        | 76.5       | 1919        | 77.5       | 4183        |
| Urban                          | 21.5       | 2117        | 23.5       | 1885        | 22.5       | 4002        |
| <b>Division</b>                |            |             |            |             |            |             |
| Barishal                       | 5.7        | 540         | 5.5        | 446         | 5.6        | 986         |
| Chattogram                     | 22.0       | 552         | 18.8       | 501         | 20.4       | 1053        |
| Dhaka Rural                    | 23.8       | 520         | 25.5       | 477         | 24.6       | 997         |
| Khulna                         | 11.1       | 560         | 11.9       | 480         | 11.5       | 1040        |
| Mymensingh                     | 9.1        | 552         | 7.9        | 469         | 8.5        | 1021        |
| Rajshahi                       | 12.0       | 569         | 14.0       | 497         | 13.0       | 1066        |
| Rangpur                        | 9.6        | 543         | 10.1       | 466         | 9.9        | 1009        |
| Sylhet                         | 6.7        | 545         | 6.3        | 468         | 6.5        | 1013        |
| <b>Marital status</b>          |            |             |            |             |            |             |
| Never married                  | 4.9        | 125         | 20.0       | 410         | 12.3       | 535         |
| Currently married              | 85.5       | 3865        | 79.8       | 3385        | 82.7       | 7250        |
| Ever married <sup>1</sup>      | 9.6        | 391         | 0.3        | 9           | 5.0        | 400         |
| <b>Education</b>               |            |             |            |             |            |             |
| No education/less than primary | 44.1       | 1960        | 43.5       | 1718        | 43.8       | 3678        |
| Primary                        | 34.8       | 1525        | 27.2       | 1008        | 31.0       | 2533        |
| Secondary                      | 12.1       | 434         | 13.1       | 454         | 12.6       | 888         |
| More than secondary            | 8.7        | 441         | 16.3       | 624         | 12.5       | 1065        |
| <b>Wealth quintile</b>         |            |             |            |             |            |             |
| Lowest                         | 22.4       | 978         | 17.6       | 661         | 20.0       | 1639        |
| Second                         | 20.3       | 912         | 19.9       | 758         | 20.1       | 1670        |
| Middle                         | 17.1       | 725         | 22.8       | 726         | 19.9       | 1451        |
| Fourth                         | 19.2       | 718         | 21.1       | 788         | 20.1       | 1506        |
| Highest                        | 21.1       | 1048        | 18.7       | 871         | 19.9       | 1919        |
| <b>Total (18-69)</b>           |            | <b>4381</b> |            | <b>3804</b> |            | <b>8185</b> |

<sup>1</sup> Separated/Divorced/Widowed

**Table 3.2 Educational and occupation status of respondents**

Percent distribution of educational and occupational status of respondents age 18-69 by selected background characteristics, [Bangladesh STEPs, 2018]

| Background characteristic | Education                       |             |             |                     | Occupation            |                          |            |             |                         |                     | n    |
|---------------------------|---------------------------------|-------------|-------------|---------------------|-----------------------|--------------------------|------------|-------------|-------------------------|---------------------|------|
|                           | No education/ less than primary | Primary     | Secondary   | More than secondary | Employed <sup>1</sup> | Businessman <sup>2</sup> | Student    | Homemaker   | Unemployed <sup>3</sup> | Others <sup>4</sup> |      |
| <b>Age</b>                |                                 |             |             |                     |                       |                          |            |             |                         |                     |      |
| 18-24                     | 18.5                            | 36.2        | 23.2        | 22.2                | 24.0                  | 5.9                      | 23.8       | 44.3        | 2.0                     | 0.0                 | 1026 |
| 25-39                     | 36.7                            | 39.5        | 11.9        | 11.8                | 40.4                  | 13.0                     | 1.0        | 44.2        | 1.0                     | 0.4                 | 3489 |
| 40-54                     | 64.4                            | 21.9        | 6.0         | 7.3                 | 40.1                  | 13.4                     | 0.0        | 44.8        | 1.0                     | 0.7                 | 2503 |
| 55-69                     | 72.8                            | 14.3        | 6.7         | 6.2                 | 37.2                  | 9.8                      | 0.0        | 40.3        | 6.5                     | 6.1                 | 1167 |
| <b>Sex</b>                |                                 |             |             |                     |                       |                          |            |             |                         |                     |      |
| Women                     | 44.1                            | 34.8        | 12.1        | 8.7                 | 9.1                   | 0.3                      | 3.5        | 85.9        | 0.8                     | 0.6                 | 4381 |
| Men                       | 43.5                            | 27.2        | 13.1        | 16.3                | 63.5                  | 21.8                     | 8.8        | 0.3         | 3.5                     | 2.1                 | 3804 |
| <b>Residence</b>          |                                 |             |             |                     |                       |                          |            |             |                         |                     |      |
| Rural                     | 47.0                            | 32.0        | 10.8        | 10.1                | 35.6                  | 10.1                     | 5.4        | 45.7        | 2.1                     | 1.0                 | 4183 |
| Urban                     | 32.9                            | 27.8        | 18.6        | 20.7                | 36.7                  | 13.3                     | 8.4        | 36.9        | 2.3                     | 2.3                 | 4002 |
| <b>Division</b>           |                                 |             |             |                     |                       |                          |            |             |                         |                     |      |
| Barishal                  | 39.0                            | 35.2        | 13.4        | 12.5                | 29.4                  | 9.6                      | 8.8        | 47.2        | 3.3                     | 1.7                 | 986  |
| Chattogram                | 43.5                            | 31.7        | 13.3        | 11.5                | 32.5                  | 11.2                     | 3.8        | 48.8        | 3.2                     | 0.5                 | 1053 |
| Dhaka Rural               | 39.5                            | 29.4        | 17.5        | 13.6                | 37.6                  | 12.4                     | 6.1        | 39.5        | 2.3                     | 2.1                 | 997  |
| Khulna                    | 38.6                            | 37.7        | 11.4        | 12.4                | 35.6                  | 11.3                     | 8.4        | 42.2        | 1.5                     | 1.1                 | 1040 |
| Mymensingh                | 57.1                            | 25.2        | 4.9         | 12.4                | 35.4                  | 8.7                      | 5.5        | 47.5        | 1.3                     | 1.5                 | 1021 |
| Rajshahi                  | 47.6                            | 26.5        | 12.2        | 13.7                | 40.0                  | 10.7                     | 6.7        | 40.6        | 1.1                     | 0.7                 | 1066 |
| Rangpur                   | 49.5                            | 29.9        | 9.3         | 11.3                | 40.0                  | 9.5                      | 5.9        | 44.0        | 0.1                     | 0.6                 | 1009 |
| Sylhet                    | 40.8                            | 38.1        | 8.8         | 10.8                | 32.3                  | 9.2                      | 6.6        | 44.4        | 4.8                     | 2.9                 | 1013 |
| <b>Marital status</b>     |                                 |             |             |                     |                       |                          |            |             |                         |                     |      |
| Never married             | 14.7                            | 25.2        | 22.9        | 37.1                | 31.2                  | 12.5                     | 45.3       | 5.9         | 5.0                     | 0.1                 | 535  |
| Currently married         | 46.2                            | 32.7        | 11.5        | 9.5                 | 37.9                  | 11.2                     | 0.6        | 47.2        | 1.7                     | 1.4                 | 7250 |
| Ever married <sup>5</sup> | 75.4                            | 17.6        | 5.4         | 1.0                 | 14.9                  | 0.8                      | 0.3        | 78.8        | 3.0                     | 2.3                 | 400  |
| <b>Wealth quintile</b>    |                                 |             |             |                     |                       |                          |            |             |                         |                     |      |
| Lowest                    | 70.2                            | 20.8        | 5.6         | 3.2                 | 39.3                  | 6.0                      | 2.3        | 50.3        | 1.3                     | 0.7                 | 1639 |
| Second                    | 58.4                            | 28.5        | 8.6         | 4.2                 | 39.8                  | 7.4                      | 4.5        | 45.6        | 2.0                     | 0.7                 | 1670 |
| Middle                    | 38.9                            | 40.3        | 11.0        | 9.7                 | 42.8                  | 11.6                     | 6.6        | 35.0        | 3.0                     | 1.0                 | 1451 |
| Fourth                    | 34.5                            | 35.4        | 15.2        | 14.9                | 32.1                  | 14.9                     | 6.8        | 42.8        | 2.3                     | 1.1                 | 1506 |
| Highest                   | 16.8                            | 30.2        | 22.5        | 30.6                | 25.4                  | 14.4                     | 10.3       | 44.7        | 2.1                     | 3.1                 | 1919 |
| <b>Total (18-69)</b>      | <b>43.8</b>                     | <b>31.0</b> | <b>12.6</b> | <b>12.5</b>         | <b>35.9</b>           | <b>10.9</b>              | <b>6.1</b> | <b>43.7</b> | <b>2.1</b>              | <b>1.3</b>          |      |

<sup>1</sup> Government/Non-Government/Self-Employed/Labourer;

<sup>2</sup> Small/Large business;

<sup>3</sup> Able to work/Unable to work;

<sup>4</sup> Retried, Others;

<sup>5</sup> Separated/Divorced/Widowed

**Table 3.3 Characteristics of sampled households**

Percentage of households having different roof types and household possessions by residence and household wealth quintile, [Bangladesh STEPs, 2018]

| Household characteristic                  | Residence |       | Wealth quintile |        |        |        |         | Total      |      |
|-------------------------------------------|-----------|-------|-----------------|--------|--------|--------|---------|------------|------|
|                                           | Rural     | Urban | Lowest          | Second | Middle | Fourth | Highest | Weighted % | n    |
| <b>Roofing material</b>                   |           |       |                 |        |        |        |         |            |      |
| Katcha <sup>1</sup>                       | 2.7       | 1.1   | 3.0             | 4.0    | 2.8    | 1.3    | 0.6     | 2.3        | 185  |
| Tin/Tiles                                 | 87.6      | 59.4  | 96.6            | 95.4   | 94.8   | 89.1   | 30.2    | 81.3       | 6411 |
| Cement/Concrete                           | 9.7       | 39.5  | 0.4             | 0.6    | 2.4    | 9.6    | 69.2    | 16.4       | 1589 |
| <b>Family type</b>                        |           |       |                 |        |        |        |         |            |      |
| Nuclear family                            | 70.3      | 75.9  | 77.1            | 75.6   | 72.4   | 69.4   | 63.2    | 71.6       | 6653 |
| Joint family                              | 29.7      | 24.1  | 22.9            | 24.4   | 27.6   | 30.6   | 36.8    | 28.5       | 1532 |
| <b>Household possessions</b>              |           |       |                 |        |        |        |         |            |      |
| Electricity                               | 87.4      | 96.3  | 64.3            | 88.4   | 95.5   | 99.0   | 99.8    | 89.4       | 7400 |
| Flush toilet                              | 20.7      | 30.3  | 2.9             | 8.2    | 19.6   | 29.6   | 54.2    | 22.8       | 1700 |
| Land Phone                                | 0.1       | 1.9   | 0.1             | 0.1    | 0.2    | 0.2    | 2.0     | 0.5        | 69   |
| Mobile phone                              | 96.6      | 97.3  | 87.5            | 98.1   | 99.1   | 99.5   | 99.5    | 96.7       | 7846 |
| Television                                | 45.9      | 75.9  | 6.6             | 25.1   | 54.8   | 83.9   | 93.1    | 52.7       | 4552 |
| Refrigerator                              | 24.5      | 52.4  | 0.3             | 1.0    | 9.4    | 54.5   | 88.7    | 30.7       | 2729 |
| Washing machine                           | 0.2       | 1.7   | 0.0             | 0.0    | 0.0    | 0.1    | 2.4     | 0.5        | 61   |
| Sewing machine                            | 12.4      | 18.8  | 1.7             | 5.4    | 12.8   | 17.5   | 31.8    | 13.8       | 1166 |
| Almirah / wardrobe                        | 56.4      | 70.8  | 8.6             | 35.1   | 69.9   | 88.5   | 96.5    | 59.6       | 4673 |
| Table                                     | 84.7      | 85.4  | 49.9            | 86.7   | 91.7   | 97.2   | 98.7    | 84.8       | 6990 |
| Khat/ Chowki                              | 98.8      | 98.6  | 94.9            | 99.4   | 99.8   | 99.8   | 100.0   | 98.8       | 8063 |
| Chair or Bench                            | 93.5      | 89.9  | 76.7            | 93.8   | 96.1   | 97.8   | 99.2    | 92.7       | 7571 |
| Watch or Clock                            | 37.4      | 57.2  | 3.3             | 17.8   | 44.3   | 60.4   | 84.0    | 41.9       | 3504 |
| Computer/ Laptop/Tab                      | 4.1       | 15.5  | 0.1             | 0.1    | 1.5    | 4.0    | 28.0    | 6.7        | 694  |
| <b>Means of transport</b>                 |           |       |                 |        |        |        |         |            |      |
| Bicycle                                   | 34.6      | 20.1  | 28.5            | 31.8   | 38.3   | 31.5   | 26.6    | 31.3       | 2377 |
| Moped/scooter/motorcycle/Auto-Rickshaw    | 10.9      | 12.8  | 0.5             | 5.5    | 10.4   | 15.1   | 25.4    | 11.4       | 953  |
| Car                                       | 0.3       | 1.4   | 0.0             | 0.0    | 0.1    | 0.2    | 2.3     | 0.5        | 51   |
| Shallow Machine/Power Tiller/Tractor      | 9.4       | 2.4   | 7.0             | 5.5    | 10.6   | 8.1    | 8.2     | 7.9        | 448  |
| Rickshaw                                  | 1.3       | 1.6   | 3.6             | 1.0    | 1.8    | 0.2    | 0.3     | 1.4        | 152  |
| Ownership of domestic animal <sup>2</sup> | 51.0      | 15.2  | 62.2            | 41.7   | 52.9   | 35.5   | 22.5    | 43.0       | 2874 |

<sup>1</sup> Bamboo/Thatched/Straw/Gunny

<sup>2</sup> Cow/ Buffalo/ Goat

**Table 3.4: Household Wealth quintiles**

Percentage distribution of the sampled individuals in different wealth quintiles by residence and division, [Bangladesh STEPs, 2018]

| <b>Residence/<br/>Division</b> | <b>Wealth quintile</b> |               |               |               |                |
|--------------------------------|------------------------|---------------|---------------|---------------|----------------|
|                                | <b>Lowest</b>          | <b>Second</b> | <b>Middle</b> | <b>Fourth</b> | <b>Highest</b> |
| <b>Residence</b>               |                        |               |               |               |                |
| Rural                          | 23.1                   | 21.9          | 21.8          | 20.0          | 13.2           |
| Urban                          | 9.3                    | 13.8          | 13.3          | 20.7          | 43.0           |
| <b>Division</b>                |                        |               |               |               |                |
| Barishal                       | 25.2                   | 30.5          | 14.5          | 13.7          | 16.1           |
| Chattogram                     | 8.7                    | 19.3          | 21.5          | 29.4          | 21.0           |
| Dhaka Rural                    | 14.2                   | 13.9          | 18.7          | 23.3          | <b>30.0</b>    |
| Khulna                         | 19.3                   | 18.3          | 22.4          | 19.5          | 20.5           |
| Mymensingh                     | 30.8                   | 26.1          | 19.9          | 15.8          | 7.4            |
| Rajshahi                       | 28.2                   | 21.1          | 18.2          | 16.3          | 16.3           |
| Rangpur                        | <b>36.6</b>            | 25.2          | 19.6          | 10.3          | 8.3            |
| Sylhet                         | 18.6                   | 22.9          | 23.5          | 13.9          | 21.1           |

**Table 3.5: Religion**

Percentage distribution of the sampled individuals by religion, residence and division [Bangladesh STEPs, 2018]

| <b>Residence/<br/>Division</b> | <b>Religion</b> |              |                  |                 |              |
|--------------------------------|-----------------|--------------|------------------|-----------------|--------------|
|                                | <b>Islam</b>    | <b>Hindu</b> | <b>Christian</b> | <b>Buddhist</b> | <b>Total</b> |
| <b>Residence</b>               |                 |              |                  |                 |              |
| Rural                          | 87.2            | 11.9         | 0.3              | 0.6             | 100.0        |
| Urban                          | 87.5            | 11.9         | 0.2              | 0.4             | 100.0        |
| <b>Division</b>                |                 |              |                  |                 |              |
| Barishal                       | 88.1            | 11.8         | 0.2              | 0.0             | 100.0        |
| Chattogram                     | 81.0            | 16.3         | 0.0              | 2.7             | 100.0        |
| Dhaka Rural                    | 91.4            | 8.6          | 0.1              | 0.0             | 100.0        |
| Khulna                         | 83.3            | 16.5         | 0.2              | 0.0             | 100.0        |
| Mymensingh                     | 92.6            | 7.3          | 0.2              | 0.0             | 100.0        |
| Rajshahi                       | 93.2            | 6.8          | 0.0              | 0.0             | 100.0        |
| Rangpur                        | 78.7            | 19.1         | 2.0              | 0.2             | 100.0        |
| Sylhet                         | 92.3            | 7.7          | 0.0              | 0.0             |              |
| Total (%)                      | 87.3            | 11.9         | 0.3              | 0.6             | 100.0        |
| Total (n)                      | 7124            | 994          | 33               | 34              | 8185         |

## Chapter 4 Tobacco

### Key findings

#### Tobacco use

- In 2018, 43.7% of adults aged 18-69 years (59.6 % men, 28.3% women) currently used any tobacco product (smoked or smokeless).
- 23.5% of adults (46.6 % men, 1% women) were current tobacco smokers and 27.5% (26.9 % men, 28.1% women) were current users of any smokeless tobacco product and 7.2% of adults used both smoke and smokeless tobacco products

#### Tobacco use status

- In the overall population, 69.6% adults never smoked tobacco, 7% smoked formerly (5.8%-daily and 1.2%-non-daily) and 23.5% were current smokers (22.3%-daily and 1.2%-non-daily). 69.9% of the adults never used smokeless tobacco, 2.7% used formerly and 27.49% were current users of smokeless tobacco (23.9% daily and 3.6% non-daily).

#### Type of Tobacco products used

##### Smoked tobacco products

- In the overall population, 23.3% of adults smoked cigarettes, 7.6% smoked bidis, and less than 1% smoked products like pipes, cigars, *hookah*/dhaba and shisha. (0.8% smoked pipes/cigars/cigarettes and 0.3% smoked *hookah*/dhaba/shisha).
- Amongst the current users, cigarettes and bidis were the most commonly used smoked tobacco products reported by 99.3% and 32.5% of current tobacco smokers, respectively.

##### Smokeless tobacco products

- In the overall population, 20.2% adults use betel quid with *zarda* (bqz), 7.8% reported using betel quid with *sadapata* (bqs), 2.5% reported using pan masala with tobacco, 3.8% reported using *gul* and about 3.2% reported using other smokeless tobacco products (*khoinee*, *sadapata* chewing and *nossi*).
- Amongst the current users of smokeless tobacco, 73.4% reported using bqz, followed by 28.2% of the users consuming bqs, 13.7% using *gul* and 9.2% using pan masala with tobacco.

#### Age at initiation of tobacco use

- The average age at initiation of smoking tobacco in Bangladesh was 18 years (men-17.9 years, and women- 24.5 years).

#### Tobacco cessation and cessation methods

- Among the current users of tobacco (18-69 years) - 46% of smokers (men -46% and women-44.4%) tried to stop smoking during the past 12 months.
- 60.5% of current smokers of tobacco (men -60.3% and women-65.8%) received advice to quit smoking during any visit to a doctor or a health worker in the past 12 months.



**Figure 4. 1 MPOWER Policy Package**

Source 1: Report of Fifth Global Youth Tobacco Survey (GYTS) Myanmar-2016

### *Electronic cigarettes*

- 9.3% of all adults (18-69 years) reported that they have heard of e-cigarette and among them 13.2% had ever used an e-cigarette and 6.7% of were currently using the product.
- 

### **Introduction**

Tobacco use is a leading modifiable behavioral risk factor contributing to NCDs. Tobacco use kills more than 8 million people each year. More than 7 million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke.<sup>16</sup> In 2003, WHO Framework Convention on Tobacco Control (WHO FCTC) was the first evidence based treaty developed for tobacco control and currently there are 180 signatories, including Bangladesh, to the convention. In 2007, MPOWER (**Figure 4. 1**)-- a policy package---was developed and adopted by the countries to end the tobacco epidemic and to enable implementation of WHO FCTC. As a signatory to FCTC, Bangladesh has also taken steps to monitor the use of tobacco, protect people from further or continued use, offer assistance in quitting, raise awareness about the dangers of tobacco and curtail the creation of new demand by enforcing bans on promotions and by raising taxes on various tobacco products.

Strengthening the implementation of WHO FCTC is recognized as an important means to achieve SDG 3 – Good health and well-being. Furthermore, Bangladesh has also set a target of 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years by 2025 in its current multisectoral action plan (2018-2025) aligned with target set in WHO's Global Action plan for the prevention and control of NCDs. Furthermore, it has set a vision of a tobacco-free Bangladesh by 2040.<sup>17</sup>

This chapter focuses on indicators related to tobacco use in Bangladesh. This data will help Bangladesh to analyze the differentials across different population groups defined by age, gender, residence, education, administrative divisions and wealth quintile, which can then strengthen the various programs designed for the implementation of the tobacco control programs and policies.

---

<sup>16</sup> World Health Organization. WHO report on the global tobacco epidemic 2019 [Internet]. 2020. [cited 25 Mar 2020]. Available from: [https://www.who.int/tobacco/global\\_report/en/](https://www.who.int/tobacco/global_report/en/)

<sup>17</sup> Multi-sectoral action plan for prevention and control of non-communicable diseases 2018-2025. 2018. Dhaka: Non-communicable Disease Control Programme, Directorate General of Health Services

## Current relevant policies and programs in Bangladesh for tobacco control

- Smoking and Usage of Tobacco Products (Control) act, first enacted in 2005, and amended in 2013 with new rules in 2015 that prohibited all forms of tobacco advertising (except in Internet), prohibited tobacco smoking in public transportation and public places (but allowed smoking in designated areas) and prohibited sales of all tobacco products to or by people younger than 18 years of age.
- National Tobacco Control Policy; and the Policy to Curb Tobacco Cultivation
- Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases (2018-2025)
- In March 2016, introduced pictorial health warnings on all tobacco products covering at least 50% of the package surface area.

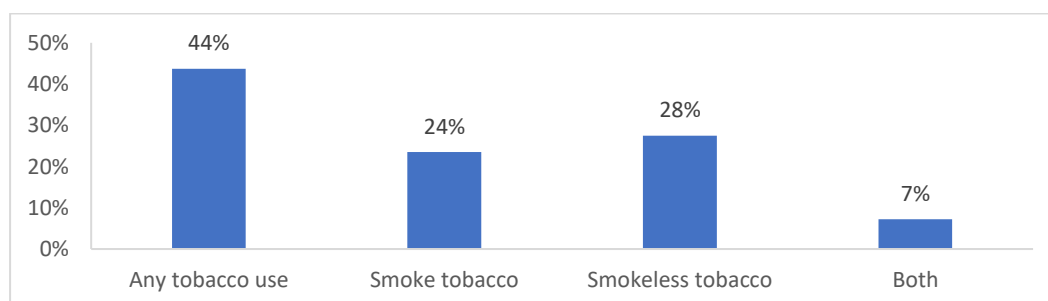
### 4.1 Tobacco use

The tobacco-related questions used in the survey were based on the core tobacco module of STEP Survey (Version 3.2)<sup>13</sup> and were aligned with the Tobacco Questions for Surveys (TQS) developed by CDC and WHO. The respondents were men and women between the ages of 18-69 years, and the analysis has been presented for the said age group, unless otherwise stated.

#### 4.2.1 Tobacco use, smoked tobacco, smokeless tobacco use

The prevalence of tobacco use has been estimated by asking all adults if they currently smoked any tobacco products (cigarettes- manufactured and hand-rolled, bidis, cigars/cigarellos pipes, hookah, shisha or any other) or used any smokeless tobacco products (betel quid with *zarda*, *zarda* only or *zarda* with supari, betel quid with *sadapata*, pan masala with tobacco, *sadapata* chewing, *gul*, *khoinnee*, *nossi*)

**Figure 4.2 Percent of all adults (18-69 years) that currently use any tobacco product, smoke tobacco, smokeless tobacco and use both smoked and smokeless tobacco, Bangladesh STEP Survey 2018**



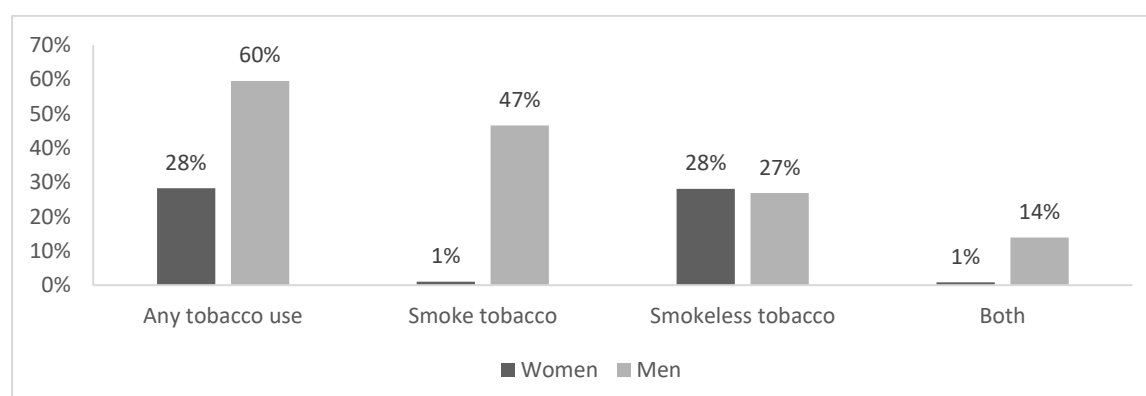
- In 2018, the prevalence of tobacco use (tobacco product of any kind) amongst all adults was 43.7%;

- 23.5% of all adults reported current use of any smoked tobacco product and 27.5% reported current use of any smokeless tobacco product;
- 7.2% of respondents used both smoke and smokeless tobacco products.

### Patterns by background characteristics

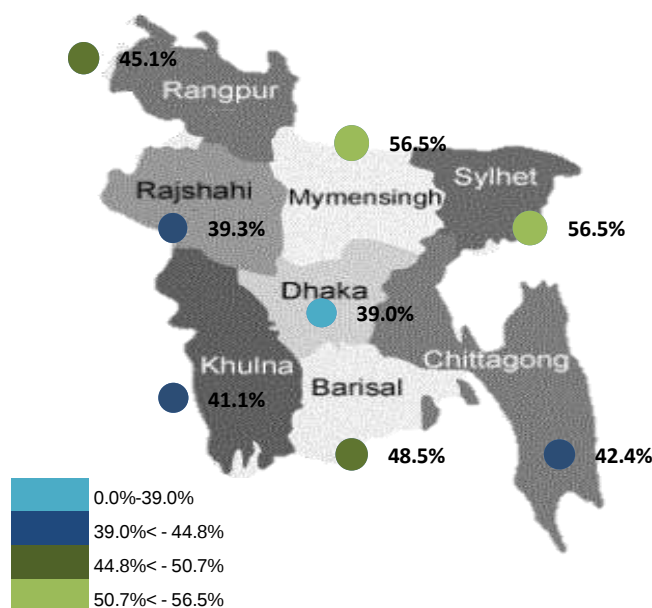
- The reported current tobacco use increased with age, lowest among 18-24 years of age (22.3%) and increasing to 68.4% among 55-69 years of age. Similar patterns were seen with use of both smoked and smokeless tobacco.
- Prevalence of any tobacco use was significantly higher among men (59.6%) than women (28.3%). However, different patterns were seen for smoked and smokeless tobacco. While differential was much wider for smoked tobacco (1% women and 26.9% men), no significant differentials were seen for smokeless tobacco (28.1% for women and 26.9% for men). Accordingly, the dual use was much higher among men (13.9%) than women (0.8%). (**Figure 4.3**).
- Residents of rural areas had a higher prevalence of any tobacco use (45.2%) as compared to urban residents (38.8%), with much wider difference for smokeless tobacco than for smoked tobacco.

**Figure 4.3 Prevalence of tobacco use amongst all men and women aged 18-69 years**



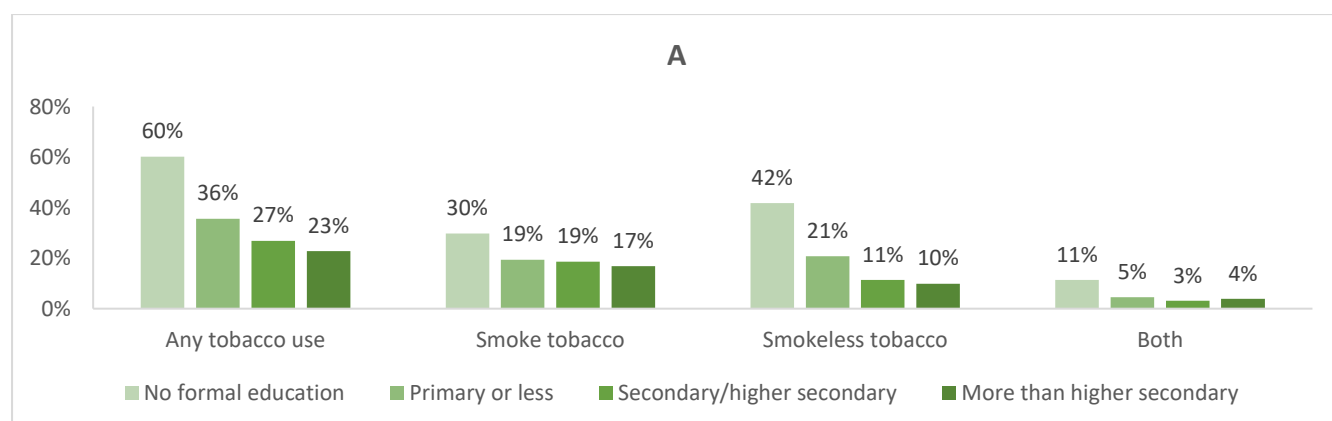
- Dhaka Rural had the lowest prevalence of any tobacco use, compared to the national average of 43.7%. Mymensingh and Sylhet had the highest prevalence of any tobacco use, 56.5%.

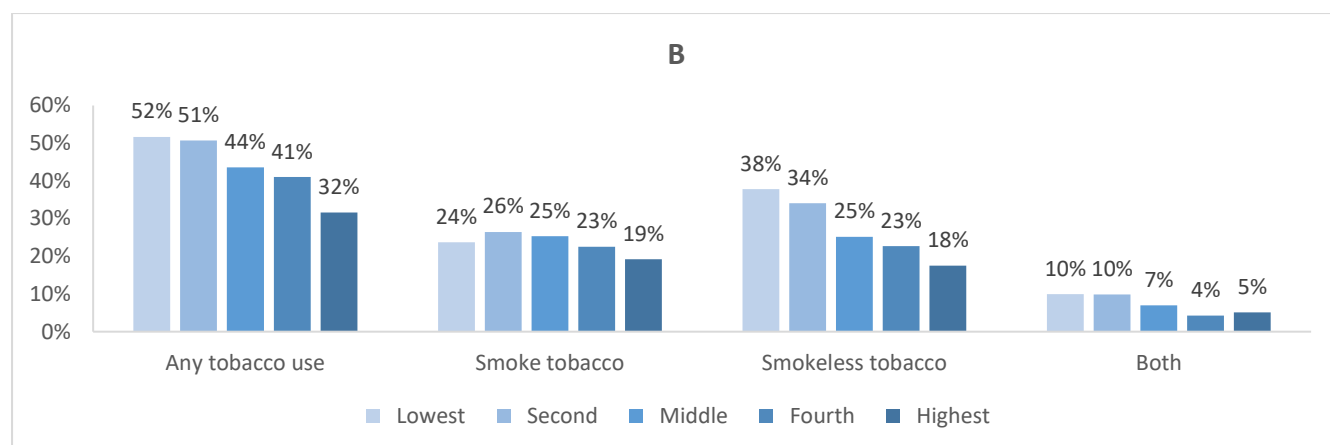
**Figure 4. 4 Variation in tobacco use amongst all adults, aged 18-69 years, by division, Bangladesh STEPs survey, 2018**



- The reported tobacco use decreased with increase in education levels, with highest usage amongst people with no or less than primary education (60.2%), decreasing to 22.8% for people with more than secondary education. The declining gradient is much stronger for smokeless tobacco than smoked tobacco.
- The reported tobacco use decreased with an increase in wealth, the highest amongst those belonging to the lowest wealth quintile (51.6%) and lowest amongst those in highest wealth quintile (31.6%). This declining pattern was more due to pattern of smokeless tobacco use, much less differentials were observed for smoked tobacco, with no consistent declining pattern (though tobacco smoking was still the lowest in the highest wealth quintile). (Figure 4.5).

**Figure 4.5 Differentials in tobacco use amongst all adults, aged 18-69 years, by levels of education (A) and by wealth (B), Bangladesh STEPs survey, 2018**



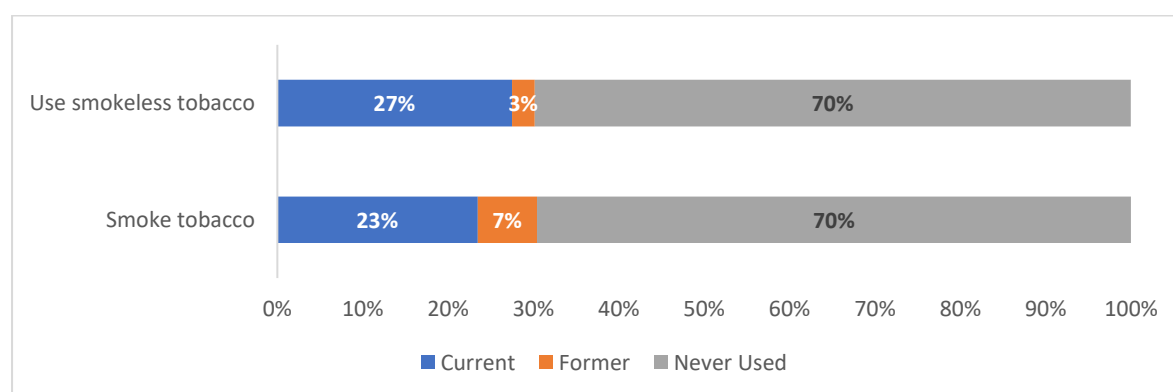


#### 4.2.2 Tobacco use status - current, former, and never

All adults, aged 18-69 years were asked if they were current users of smoked tobacco and of smokeless tobacco products, respectively. Those that answered in the affirmative were then further enquired if they smoked tobacco or used smokeless tobacco products on a daily basis. The adults who were not current users, were asked about their former tobacco use status (separately for smoked and smokeless products) and the frequency of use in the past (daily or non-daily for smoked tobacco).

69.6% adults never smoked tobacco, 7% smoked formerly (5.8%-daily and 1.2%-non-daily) and 23.5% were current smokers (22.3%-daily and 1.2%-non-daily). 69.9% of the adults never used smokeless tobacco, 2.7% used formerly and 27.5% were current users of smokeless tobacco (23.9% daily and 3.6% non-daily).

**Figure 4.6 Tobacco use status in the overall population - current, former and never, by smoke and smokeless tobacco product**



#### 4.2.3 Tobacco smoking status – current, former, and never (Figure 4.6)

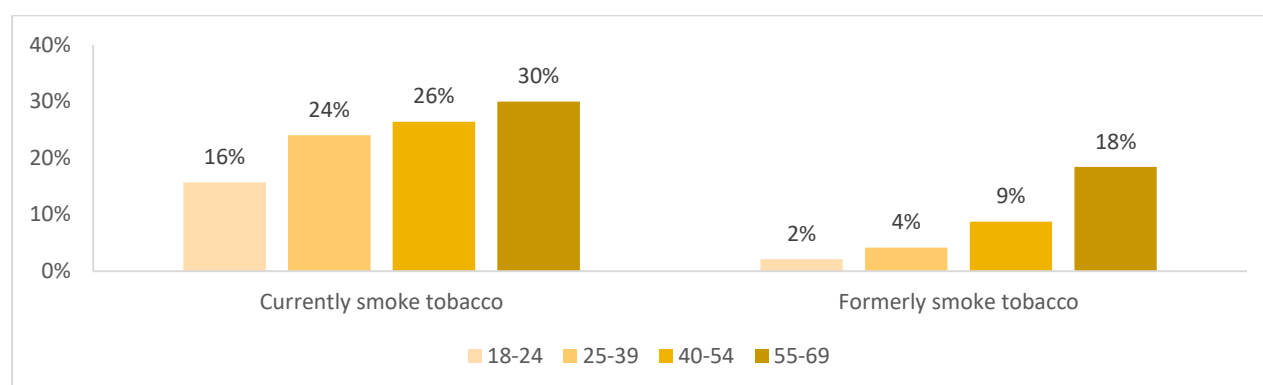
##### Patterns by background characteristics

- With an increase in age, the proportion of adults that currently smoked or were former smokers increased - 30% of adults in age group 55-69 years currently smoked tobacco,

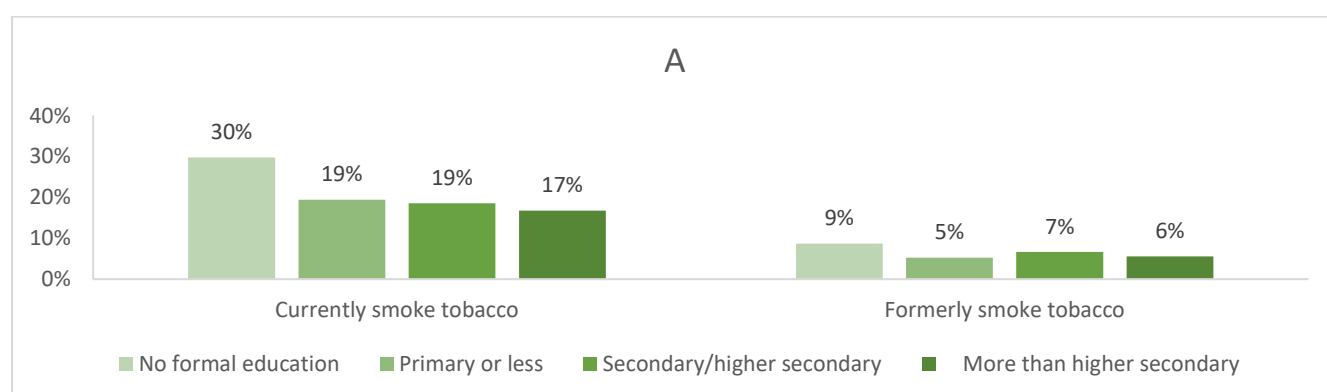
whereas 15.7% of adults in age group 18-24 years currently smoked tobacco; the proportion of adults who never smoked decreased with increasing age, 82.2% of adults in the age group 18-24 years had never smoked tobacco, as compared to 51.6% in the older age group of 55-69 years. **Figure 4.7**

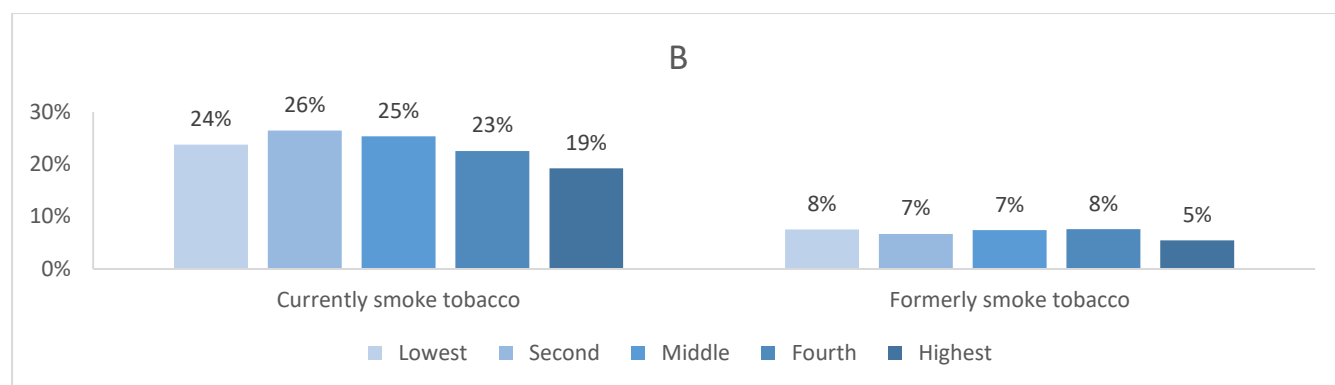
- 98% of women never smoked, compared to 40.3% of men. There was no significant difference in the proportion of adults smoking tobacco in urban and rural areas and also, no significant variations across different divisions.
- With increasing levels of education and wealth, there was a decline in the proportion of adults who currently smoked daily or formerly smoked (daily and non-daily), correspondingly the percentage of adults who never smoked increased with an increase in levels of education and wealth. **Figure 4.8**

**Figure 4.7 Differentials in prevalence of current and former smoking, amongst all adults age 18-69 years - by age, Bangladesh STEP Survey, 2018**



**Figure 4.8 Differentials in prevalence of current and former smoking, amongst all adults age 18-69 years– by levels of education (A) and by wealth (B), Bangladesh STEP Survey 2018**





#### 4.2.4 Smokeless tobacco use status – current former and never. (Figure 4.6)

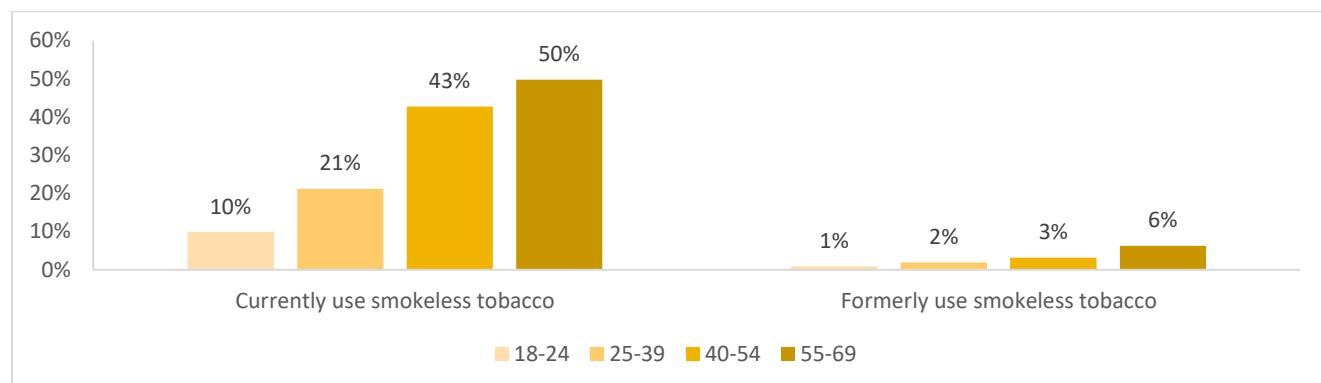
##### Patterns by background characteristics

- With increasing age, the percentage of smokeless tobacco users increased, with lowest proportion of users being in the age group age group of 18-24 years, 9.9% and highest being 49.7% (43.2% daily and 6.6% non-daily) in the older age group of 55-69 years.

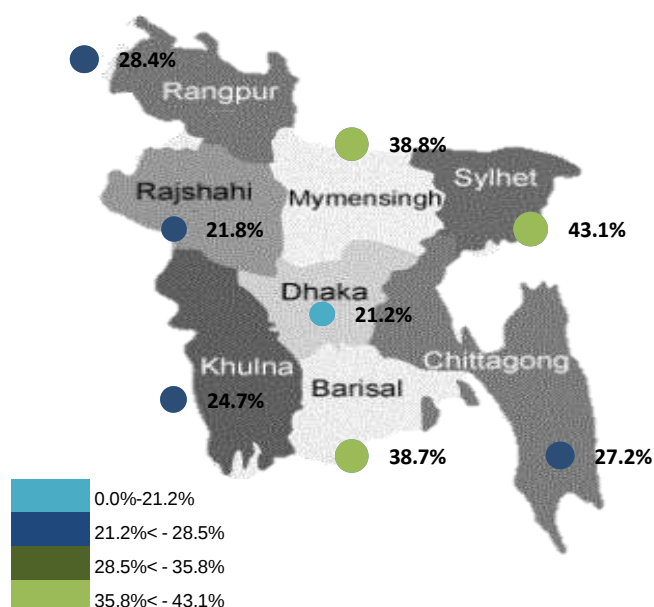
##### Figure 4.9

- The current use of smokeless tobacco wasn't very different for women and men (28.1% versus 26.9%) and was higher in rural areas (29.1%) compared to urban areas (21.8%).
- The proportion of adults who used smokeless tobacco was lowest in Dhaka (21.2%). However, in divisions like Mymensingh, Barishal it was much higher than the national average of 27.5%; the highest proportion of adults using smokeless tobacco products resided in Sylhet (43.1%). **Figure 4.10**
- With an increase in levels of education, the proportion of adults who used smokeless tobacco declined, 41.8%% of adults with no or less than primary education used smokeless tobacco (37% daily), whereas only 9.9% of adults (8.2% daily) with more than secondary education, used it regularly.
- **Figure 4.11.** Similar, yet less pronounced patterns were observed for former use of smokeless tobacco amongst adults with an increase in level of education.
- The proportion of adults, using smokeless tobacco, declined with an increase in household wealth. 37.8% of adults, in the lowest wealth quintile, used smokeless tobacco products on daily and non-daily basis, however only 17.5% of adults, in the highest wealth quintile were smokeless tobacco users.

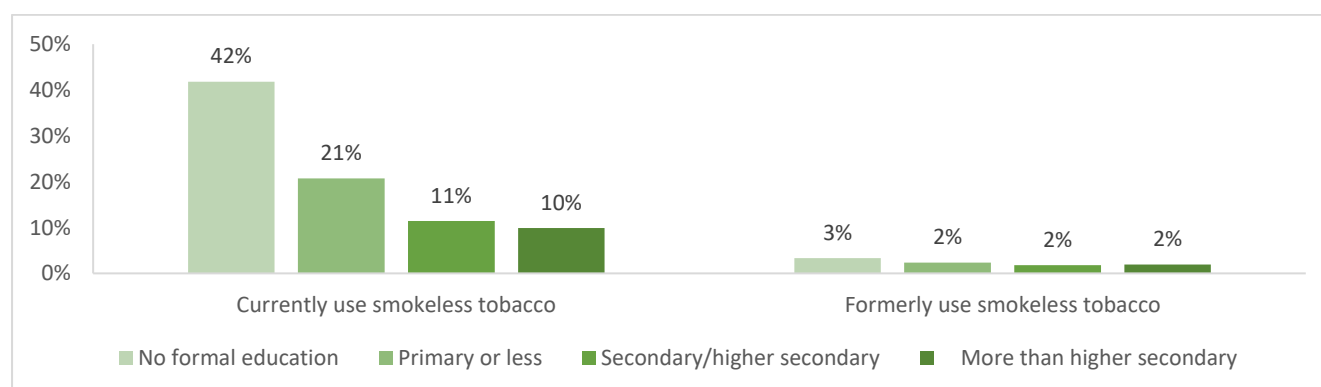
**Figure 4.9 Differentials in current and former use of smokeless tobacco, amongst all adults age 18-69 years - by age, Bangladesh STEP survey 2018**

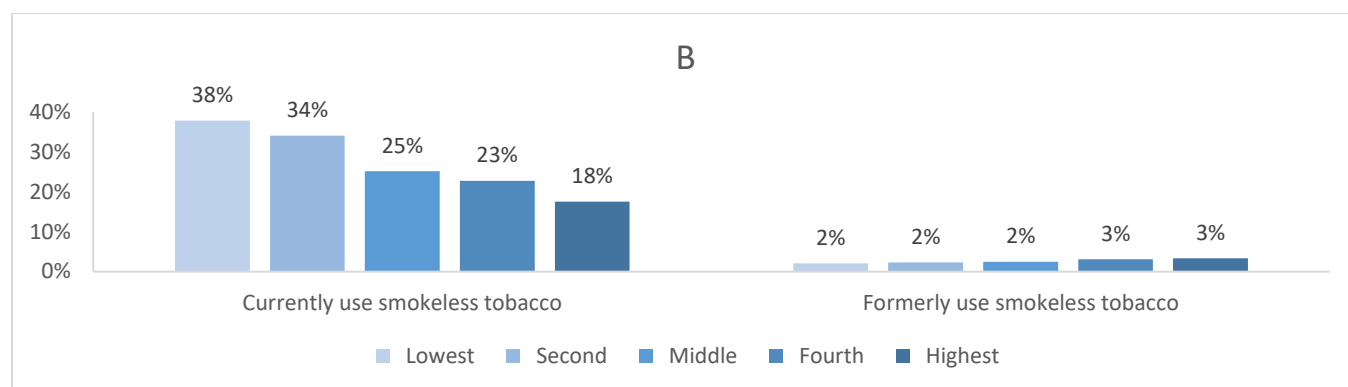


**Figure 4.10 Variation in current use of smokeless tobacco amongst all adults, aged 18-69 years, by division, Bangladesh STEPs survey, 2018**



**Figure 4.11 Differentials in current and former use of smokeless tobacco, amongst all adults age 18-69 years– by levels of education (A) and by wealth (B), Bangladesh STEP Survey 2018**





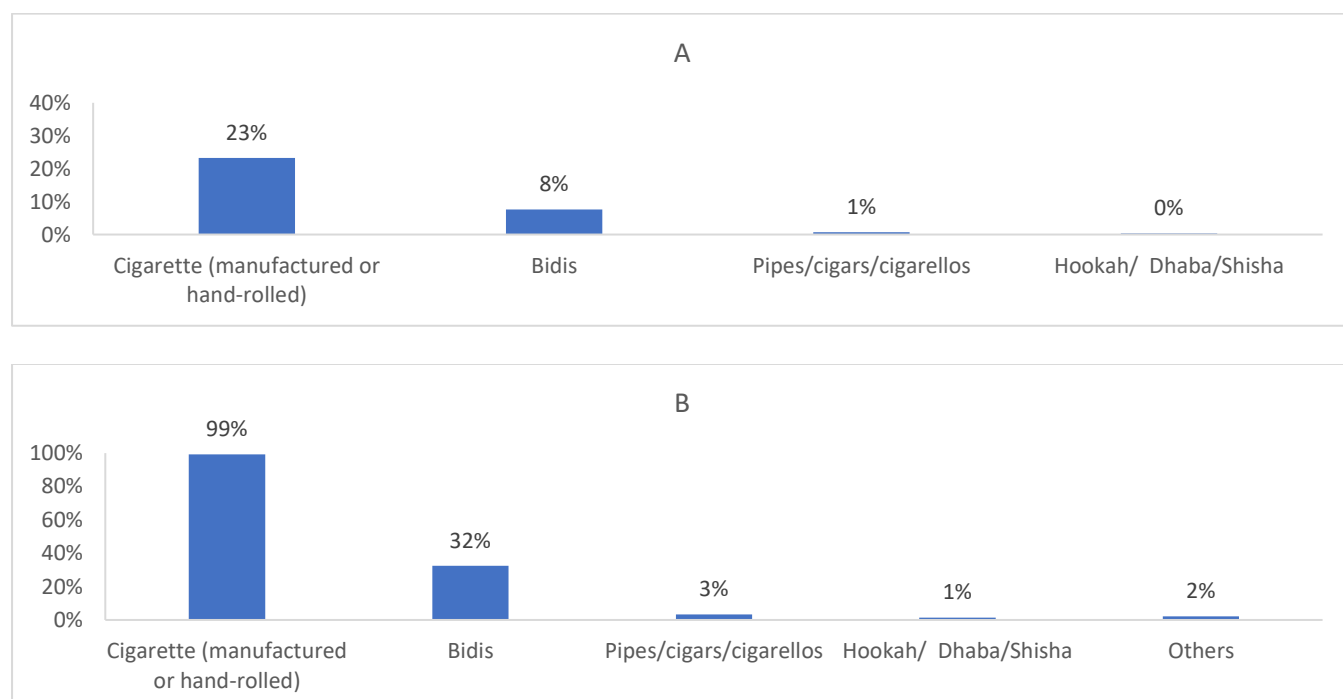
## 4.2 Types of Tobacco products use

STEPS Survey collected the data on different types of tobacco products used (smoke and smokeless) on a daily or a weekly basis. The product mix was analyzed both for all adults and amongst the current tobacco users. See **Table 4.3.1 and 4.3.2**.

### 4.3.1 Tobacco products smoked

Information was elicited on daily/weekly use of cigarettes (manufactured and hand rolled), pipes, cigars, *bidis*, and *hookah/ dhaba, shisha*. In the overall population, 23.3% of adults smoked cigarettes, 7.6% smoked *bidis*, and less than 1% smoked products like pipes, cigars, *hookah/ dhaba* and *shisha*. (0.8% smoked pipes/ cigars/ cigarillos and 0.3% smoked *hookah/ dhaba/ shisha*). Amongst the current users, cigarettes and bidis were the most commonly used smoked tobacco products reported by 99.3% and 32.5% of current tobacco smokers, respectively. **Figure 4.12**

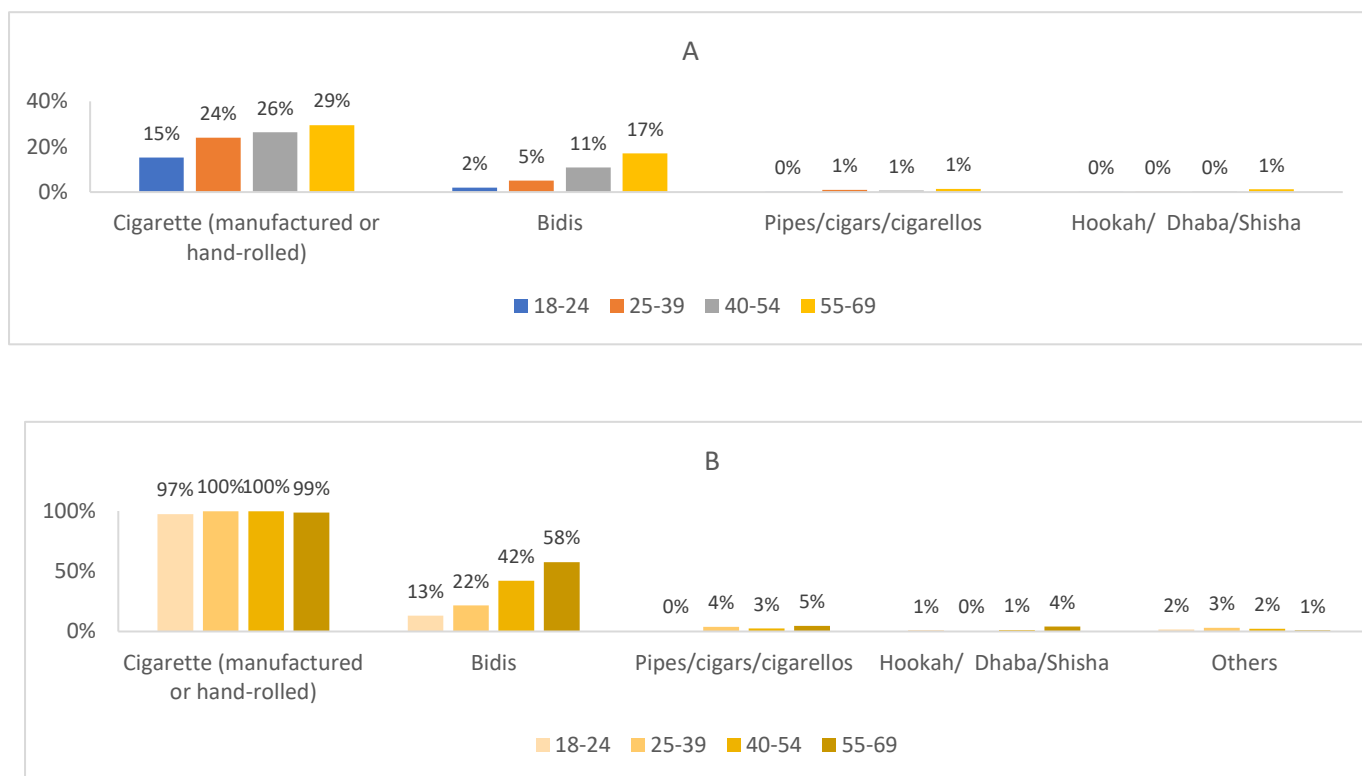
**Figure 4.12 Use of different tobacco smoking products amongst all adults (A) and current smokers (B), aged 18-69 years, Bangladesh STEP Survey, 2018**



### Patterns by background characteristics

- Across the population, the usage of cigarettes and bidis and other products increased with an increase in age.
- However, amongst the current smokers, cigarettes were the most commonly smoked tobacco product reported by almost ~99% of the smokers, across all ages. Usage of bidis increased with increasing age – 57.6% of adults in the age group 55-69 years smoked bidis, whereas 13.3% of smokers in the age group 18-24 years used it. Usage of hookah was also much higher in older age group (4.1% among 55-69 years old) compared to in the younger age group (1.1% among 18-24 years old). **Figure 4.13**

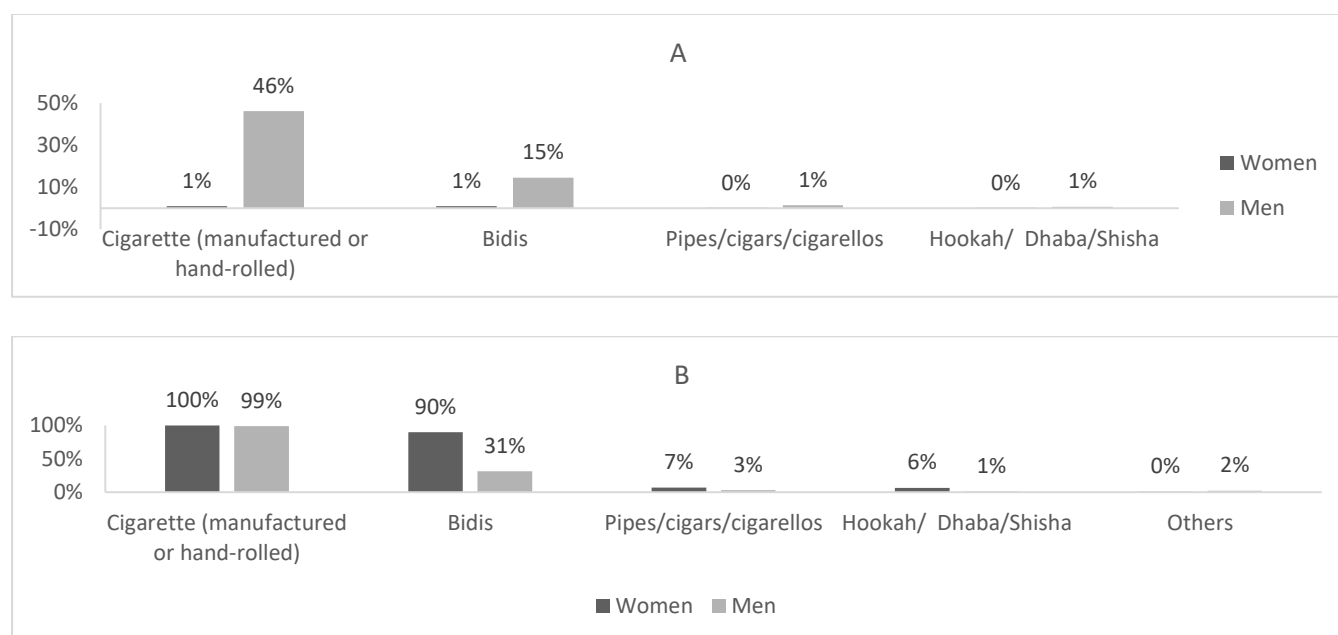
**Figure 4.13 Differentials in use of different smoking tobacco products, amongst all adults (A) and current tobacco smokers B), aged 18-69 years - by age, Bangladesh STEP Survey, 2018**



Note 1: The total across different products may not add to 100% due to dual use

- In the overall population only 1% of women reported using cigarettes and bidis, compared to 46.2% and 14.5% of men, respectively.
- Amongst the smokers, while cigarettes were the most popular smoking tobacco products used by both men and women smokers (99.2% and 100% respectively), 89.9% of women smokers used bidis compared to only 30.5% of men smokers. **Figure 4.14 B**

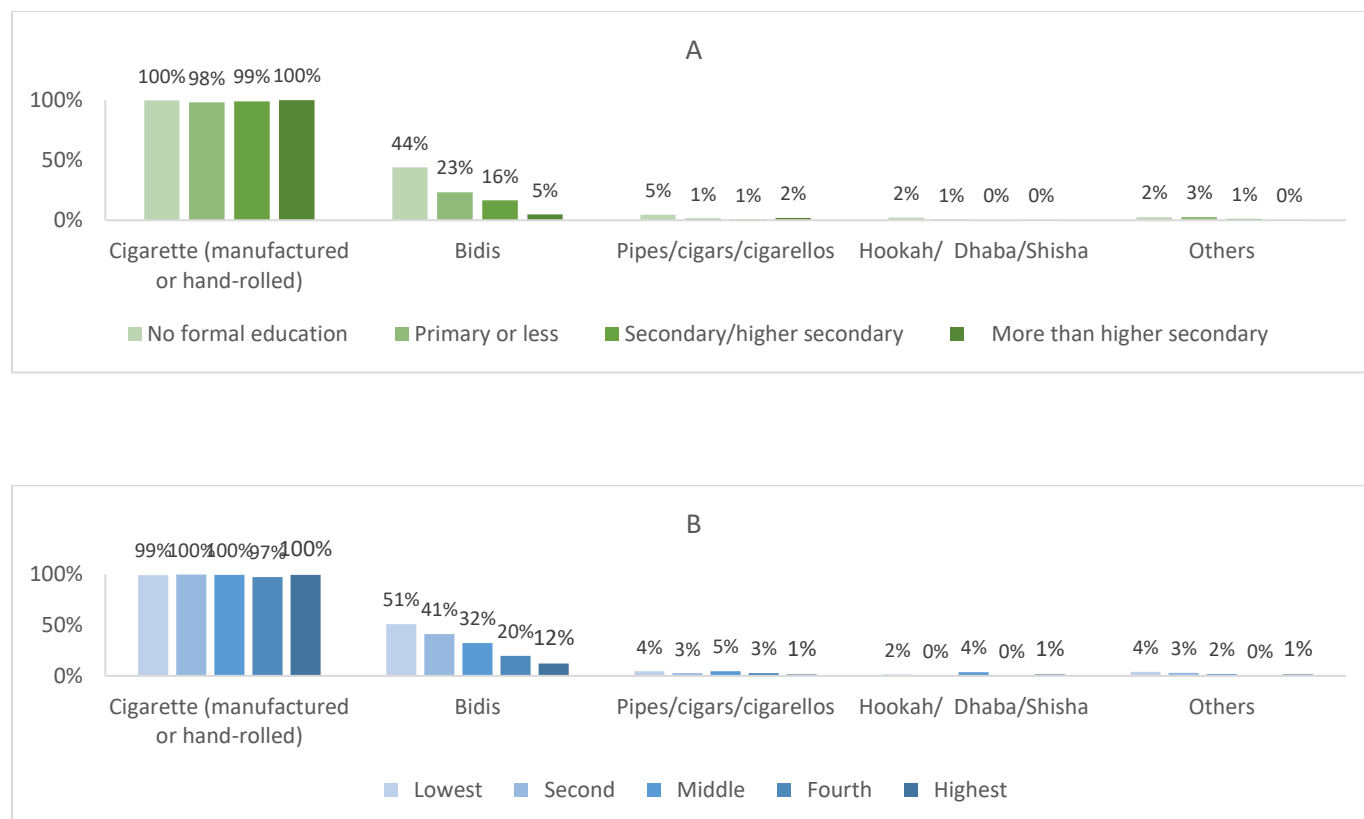
**Figure 4.14 Differentials in use of different smoking tobacco products among all adults (A) and current tobacco smokers (B), aged 18-69 years - by sex, Bangladesh STEPS survey 2018**



*Note 2: The total across different products may not add to 100% due to dual use*

- There was no significant difference in usage of cigarettes by residence areas for the overall population and amongst smokers. However, 8.8% of the population reported using bidis in rural areas, compared to only 3.4% of the population in urban areas.
  - Amongst the current smokers, 37.2% of smokers in rural areas used bidis, compared to 15.2% of smokers in urban area.
- In the overall population, with increasing levels of education and household wealth, there was a decline in the use of cigarettes and bidis.
- Amongst the current smokers, while cigarettes were the most commonly used product (>97% of smokers) across all wealth quintiles and levels of education, the use of bidis, pipes, hookahs declined with increasing levels of education and wealth. **Figure 4. 15**

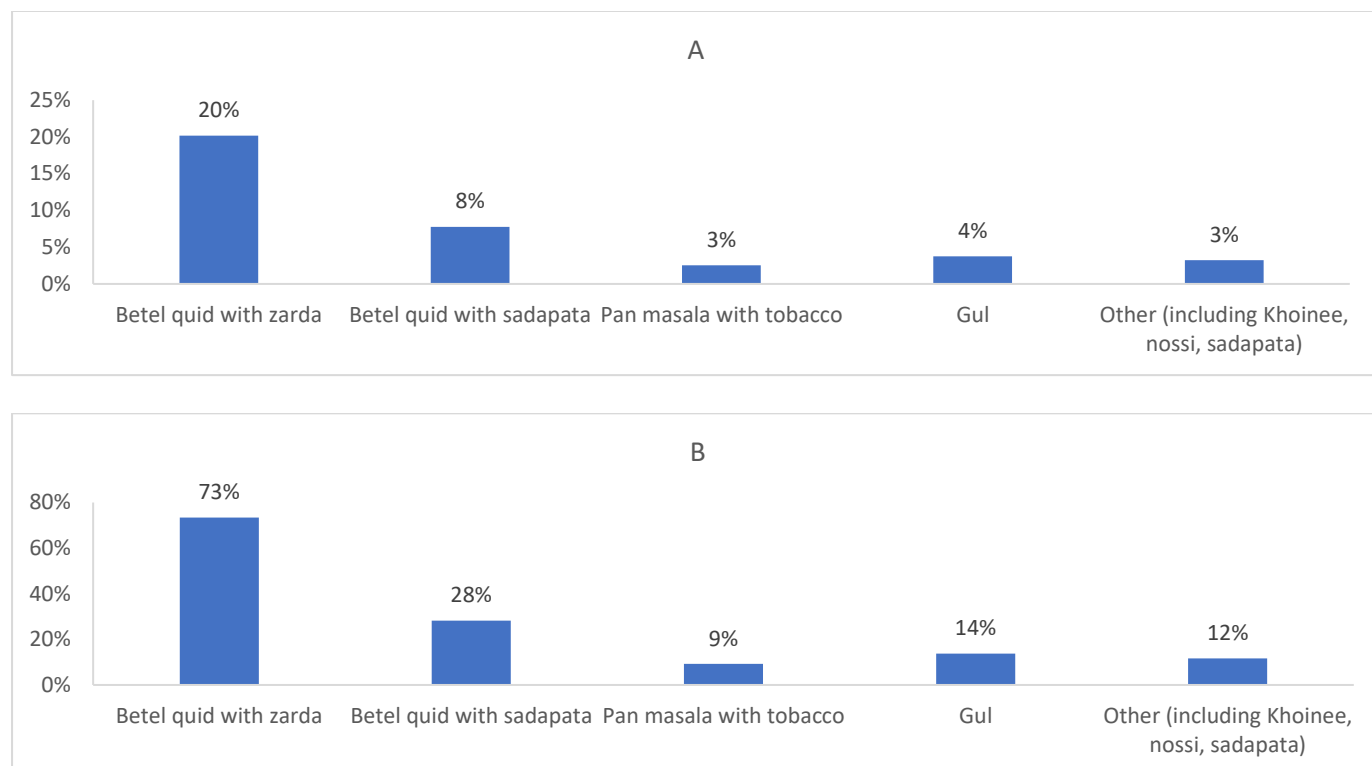
**Figure 4.15 Differentials in use of different smoking tobacco products, amongst current tobacco smokers, age 18-69 years, by levels of education (A) and wealth (B), Bangladesh STEPS Survey, 2018**



### 4.3.2 Smokeless Tobacco products

Information was elicited on use of betel quid with *zarda*, (*zarda* only or *zarda* with *supari*), betel quid with *sadapata*, *pan masala* with tobacco, *gul* and other (*sadapata* chewing, *khoinee*, and *nossi*). In the overall population, 20.2% adults use betel quid with *zarda* (bqz), 7.8% reported using betel quid with *sadapata* (bqs), 2.5% reported using pan masala with tobacco, 3.8% reported using *gul* and about 3.2% reported using other smokeless tobacco products (*khoinee*, *sadapata* chewing and *nossi*). Amongst the current users of smokeless tobacco, 73.4% reported using bqz, followed by 28.2% of the users consuming bqs, 13.7% using *gul* and 9.2% using pan masala with tobacco. **Figure 4.16**

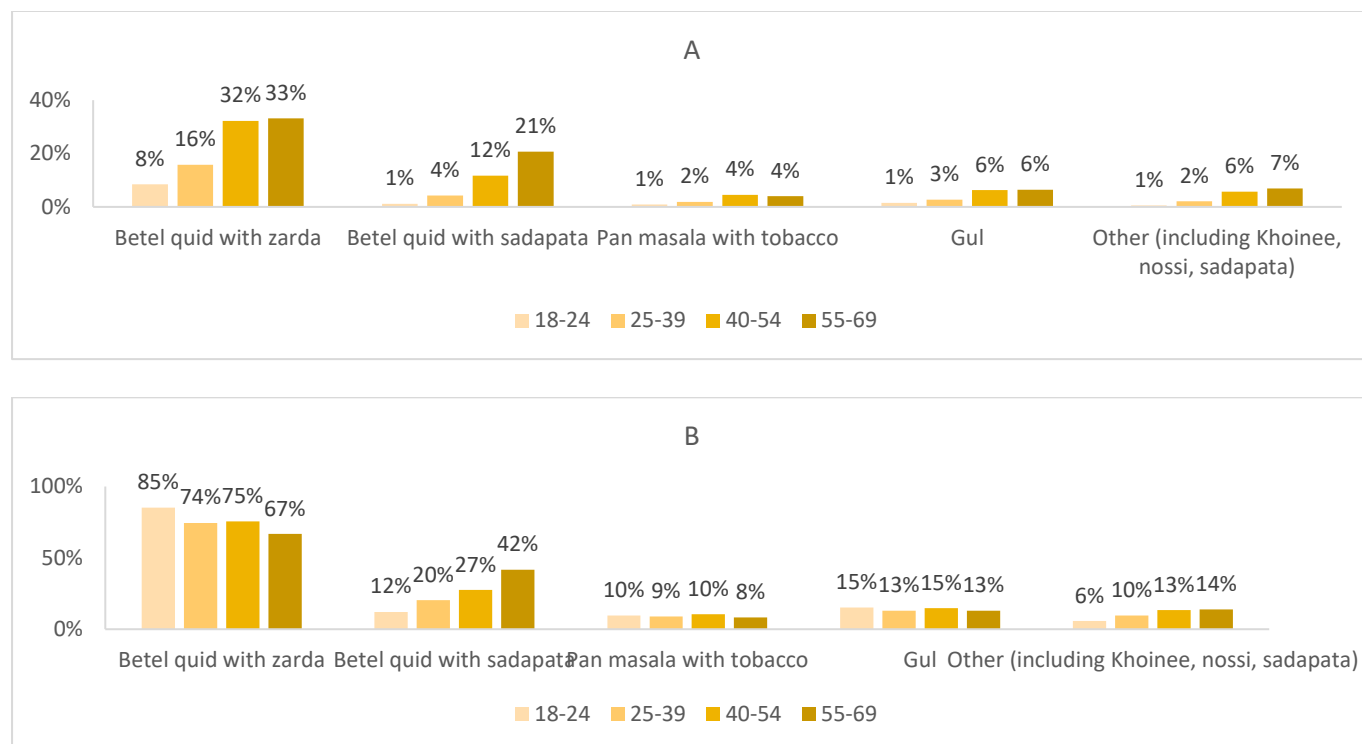
**Figure 4.16 Use of different smokeless tobacco products amongst all adults (A) and current users of smokeless tobacco (B), aged 18-69 years, Bangladesh STEP Survey, 2018**



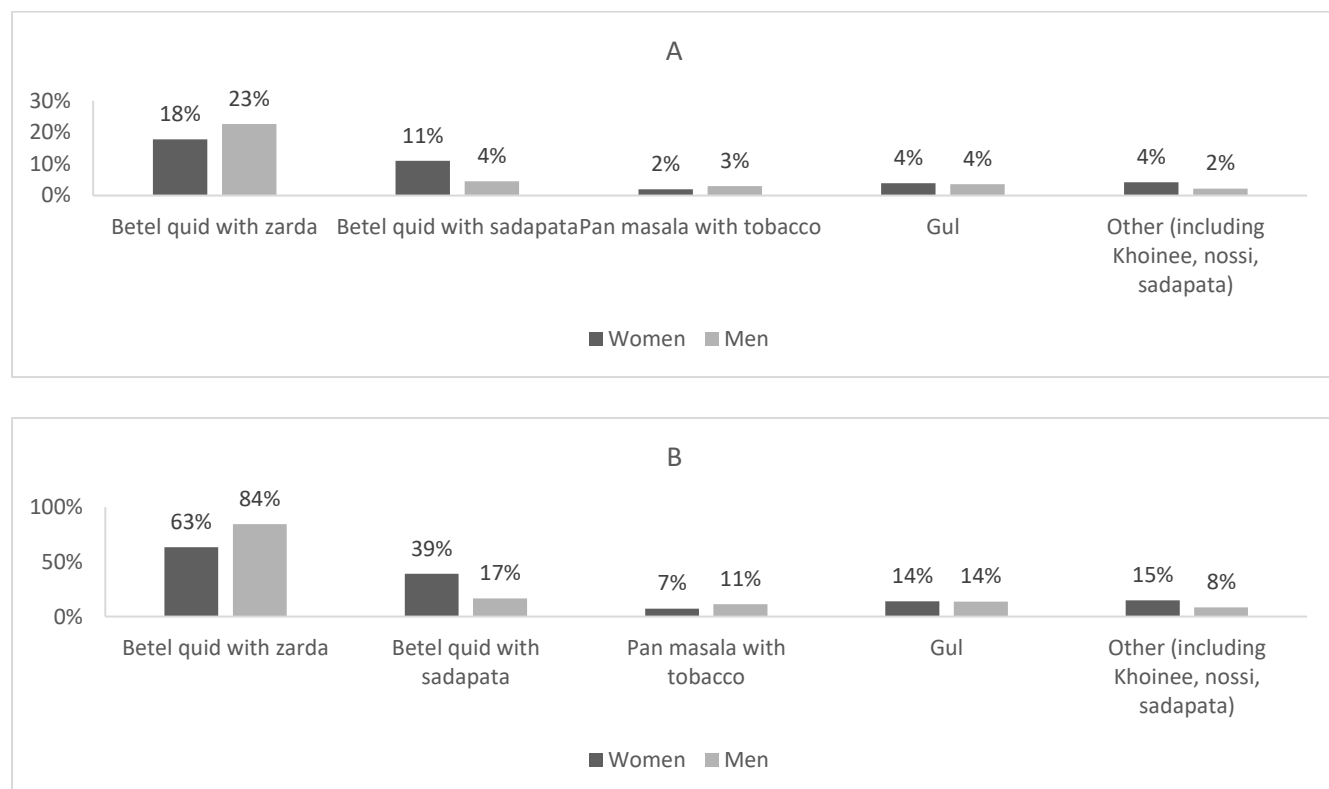
### Patterns by background characteristics

- Across the population, the usage of bqz and bqs, pan masala with tobacco, *gul* and other products (including *khoinee*, *nossi* and *sadapata* chewing) increased with an increase in age. **Figure 4.17 A**
- However, amongst the current users of smokeless tobacco, the use of bqz decreased with an increase in age - 85.3% of adults, in age group 18-24 years, reported using bqz, whereas 66.8% of adults, in the age group 55-69 years reported using the product. No significant differentials by age existed for use of pan masala with tobacco and *gul*. For remaining products, the differentials by age followed the same patterns amongst current users as they did for all the population. **Figure 4.17 B**
- In the overall population, men reported a higher user of bqz as compared to women (22.7% versus 17.8%), however, 11% of women reported using bqs as compared to 4.5% of men. The same pattern emerged when considering the current users of smokeless tobacco - 84.3% of men used bqz, compared to 63.3% of women and 39% of women used bqs compared to only 16.7% of men. **Figure 4.18 A & B.**
- Both, amongst the overall population and amongst current users, adults in rural areas reported a higher use of bqz, bqs and other smokeless tobacco products, compared to urban areas.

**Figure 4.17 Differentials in use of different smokeless tobacco products, amongst all adults (A) and current smokeless tobacco users (B), age 18-69 years - by age, Bangladesh STEP Survey, 2018**

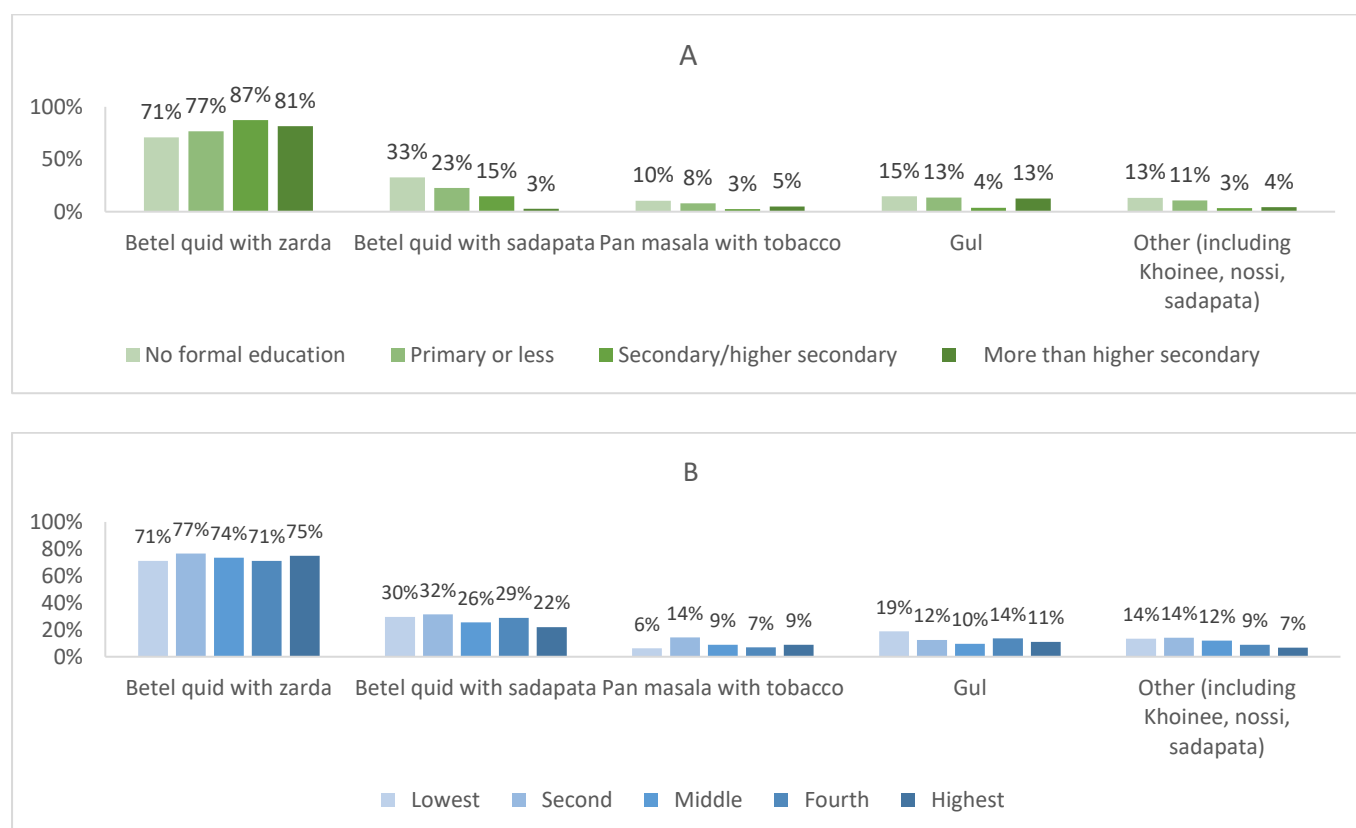


**Figure 4.18 Differentials in use of different smokeless tobacco products among all adults (A) and among current tobacco smokeless product users (B), aged 18-69 years - by sex, Bangladesh STEPS survey 2018**



- In the overall population, with an increase in levels of education and wealth, the use of all smokeless tobacco products declined, in particular, the decline was more pronounced for bqs and even more so for bqz.
- Amongst the current users, with an increase in levels of education, the use of bwz increased, with the usage being lowest amongst adults with no or less than primary education (70.7%) and highest amongst people with secondary or more than secondary education (>80%). **Figure 4. 19 A**
- There were no clear differentials in use of smokeless tobacco products and increase in household wealth, other than for *khoinee*, *nossi* and *sadapata*, which declined with increase in wealth. **Figure 4. 19 B**

**Figure 4. 19 Differentials in use of different smokeless tobacco products, amongst current smokeless tobacco users, aged 18-69 years, by levels of education (A) and wealth (B), Bangladesh STEP Survey, 2018**



### 4.3 Age at initiation of tobacco use

Reducing initiation in adolescents is critical to reducing the prevalence of tobacco, since youngsters are particularly vulnerable to nicotine addiction and tobacco adverse effects<sup>18</sup>. In LMIC, about 90% of smokers begin to consume tobacco before the age of 18 years and

<sup>18</sup> Marcon A, Pesce G, Calciano L, Bellisario V, Dharmage SC, Garcia-Aymerich J, Gislason T, Heinrich J, Holm M, Janson C, Jarvis D. Trends in smoking initiation in Europe over 40 years: A retrospective cohort study. PloS one. 2018 Aug 22;13(8):e0201881

because of the strongly addictive nature of tobacco use, smoking during adolescence tends to track into adulthood<sup>19</sup>.

In addition to long-term consequences of tobacco use in terms of increased risk of different non-communicable diseases, smoking at a young age also increases the risk of many diseases among adolescents including respiratory illness, asthma, and reduced pulmonary function<sup>19</sup>. Article 16 of FCTC requires parties to prohibit the sales of tobacco products to or by persons under the age set by domestic law, national law or 18 years, as well as other measures limiting the access of underage persons to tobacco products.

In STEP Survey, all adults, 18-69 years that reported currently smoking any tobacco product were asked about the age at which they started smoking. The average age at initiation of smoking tobacco in Bangladesh was 17.9 years (17.9 years for men and 24.5 years for women). The median age, or the age by which 50% of current smokers started smoking was 17 years (17 years for men and 20 years for women).

#### **Patterns by background characteristics**

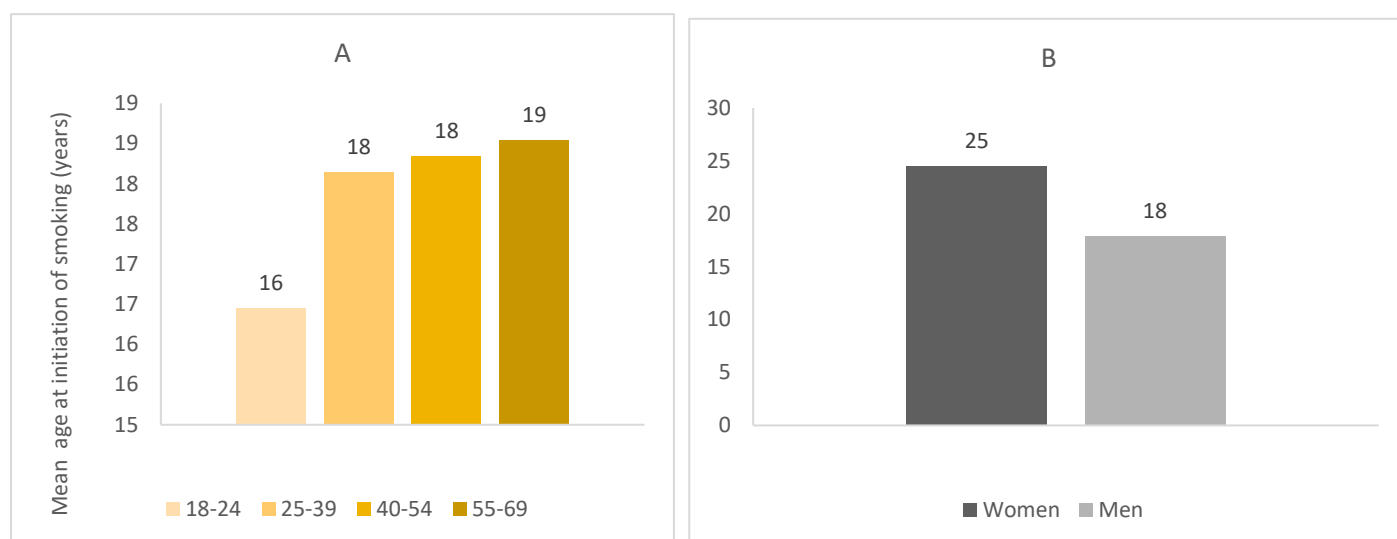
- With an increase in age, the average age at initiation of smoking increased, with 16.5 years being average age amongst adults, aged 18-24 years, and 18.5 years for adults in the age group 55-69. **Figure 4.20 A.**
- Average age at initiation of smoking for women was 25 years, compared to 18 years for men.
- There weren't significant differences in age at initiation of smoking for adults residing in rural or urban areas or with an increase in level of household wealth.
- However, with an increase in levels of education, there was a slight increase in the average age at initiation of smoking for adults. Amongst the existing smokers, those with primary or higher level of education started to smoke at or after turning 18 years of age.

#### **Figure 4.21**

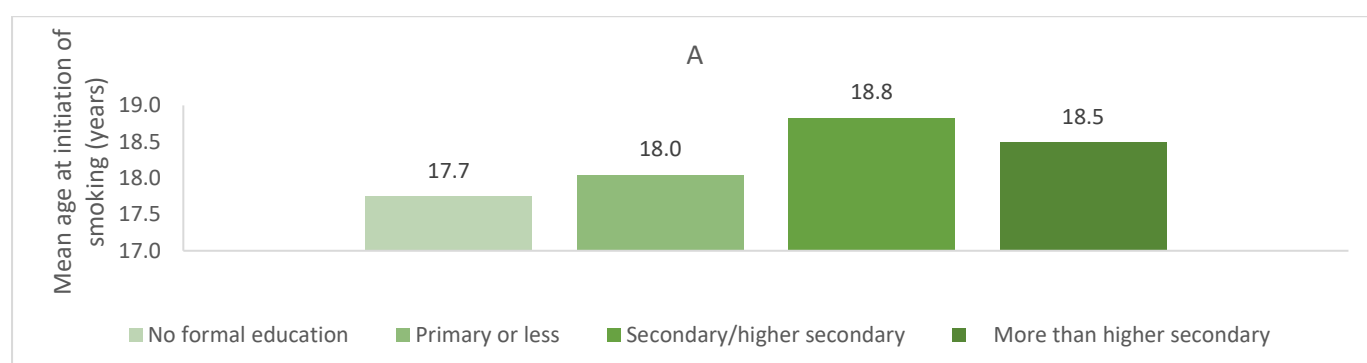
---

<sup>19</sup> Xi B, Liang Y, Liu Y, Yan Y, Zhao M, Ma C, Bovet P. Tobacco use and second-hand smoke exposure in young adolescents aged 12–15 years: data from 68 low-income and middle-income countries. *The Lancet Global Health*. 2016 Nov 1;4(11):e795-805

**Figure 4.20 Differential in mean age at initiation of smoking among adult age 18-69 years, who currently smoke any tobacco products - by age (A) and by sex (B), Bangladesh STEP Survey, 2018**



**Figure 4.21 Differential in median age at initiation of smoking among adult age 18-69 years, who currently smoke any tobacco products, by levels of education (A) and wealth (B), Bangladesh STEP Survey, 2018**



#### 4.4 Tobacco cessation

Article 14 of FCTC concerns the provision of support for reducing tobacco dependence and cessation, including counselling, psychological support, nicotine replacement, and education programmes. To assist the population in quitting smoking, the most effective combination of interventions is face-to-face behavioral support together with combination nicotine replacement therapy (NRT).<sup>20</sup> Nonetheless, a brief advice from a health-care worker, telephone helplines, automated text messaging, printed self-help materials are recommended health-care interventions to promote and assist smoking cessation.<sup>20</sup> Among the current users of tobacco, the survey asked if they tried to stop smoking in the past 12

<sup>20</sup> West R, Raw M, McNeill A, Stead L, Aveyard P, Bitton J, Stapleton J, McRobbie H, Pokhrel S, Lester-George A, Borland R. Health-care interventions to promote and assist tobacco cessation: a review of efficacy, effectiveness and affordability for use in national guideline development. *Addiction*. 2015 Sep;110(9):1388-403

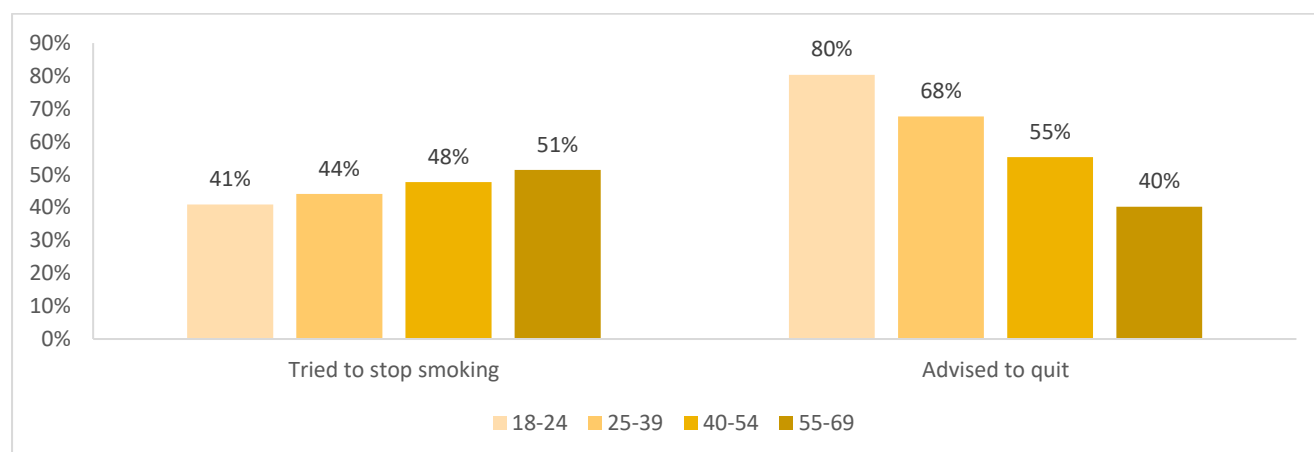
months, and if yes, during any visit to a doctor or health worker, in the past 12 months, were they advised to quit smoking tobacco.

Among the current users of tobacco - 46% of smokers had tried to stop smoking and 60.5% of the adults were advised to quit smoking if they visited a doctor or health worker.

### Patterns by background characteristics

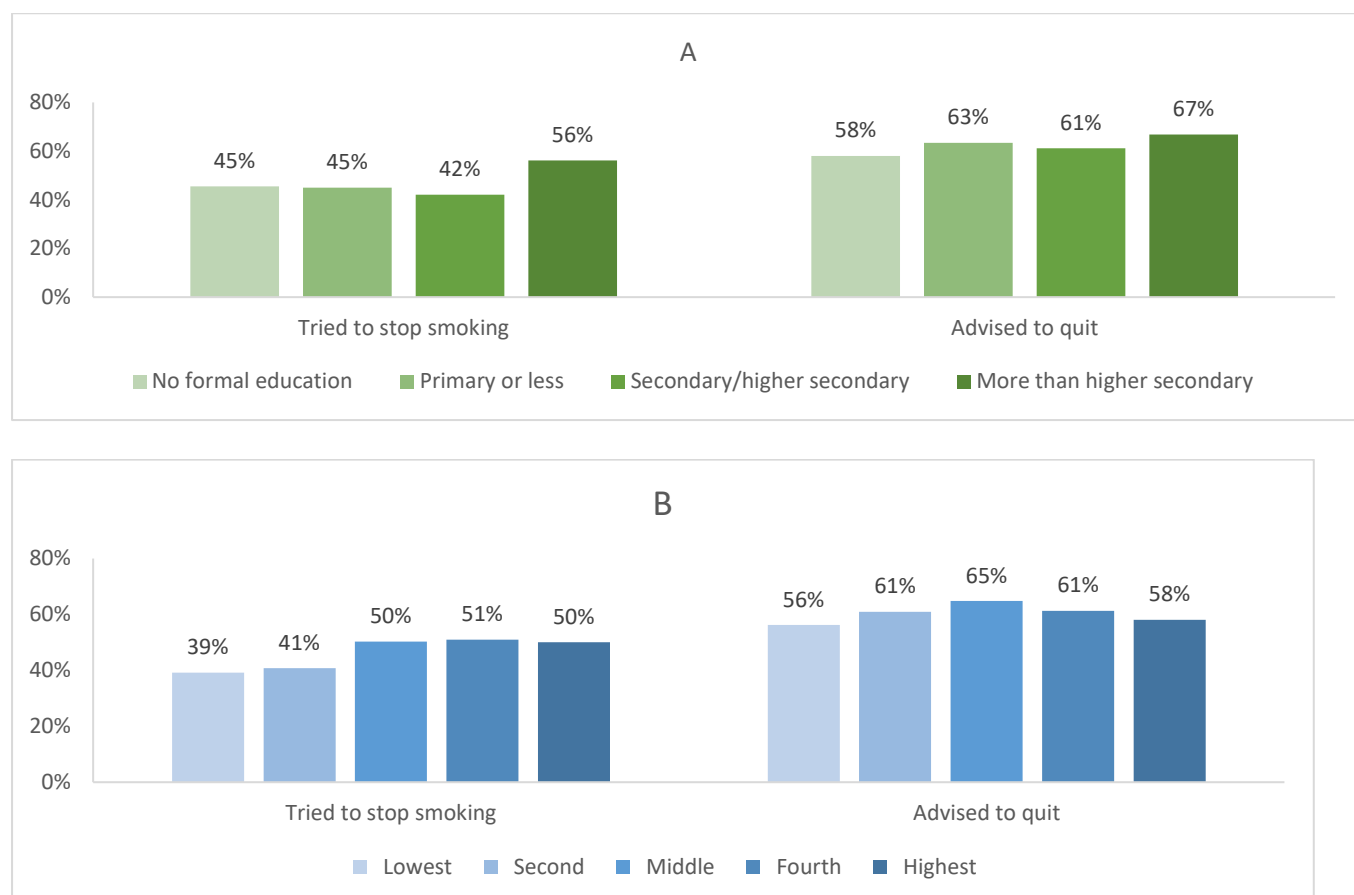
- The percentage of current tobacco smokers, who tried to quit, increased with increasing age. However, with an increase in age, a decreasing proportion of current tobacco smokers received advise to quit smoking, the lowest being 40.2% of current tobacco smokers in the age group 55-69 years and the highest being 80.3% of smokers in age group 18-24 years. **Figure 4.22**

**Figure 4.22 Differentials in tobacco cessation (attempt to stop and advise received to quit), by age, Bangladesh STEP Survey 2018**



- The percentage of current tobacco smokers, who tried to quit, increased with increasing levels of education and wealth. **Figure 4.23 A**. The proportion of current smokers, who were advised to quit smoking during any medical check-up increased with increase in levels of education. 58.1% of current smokers with no or less than primary level of education were advised to quit, the proportion going up to 66.8% for current smokers with more than higher secondary level of education. Similar differentials were observed with an increase in wealth. **Figure 4.23 B**

**Figure 4.23 Differentials in tobacco cessation (attempt to stop and advise received to quit), by levels of education (A) and wealth (B), Bangladesh STEP Survey 2018**



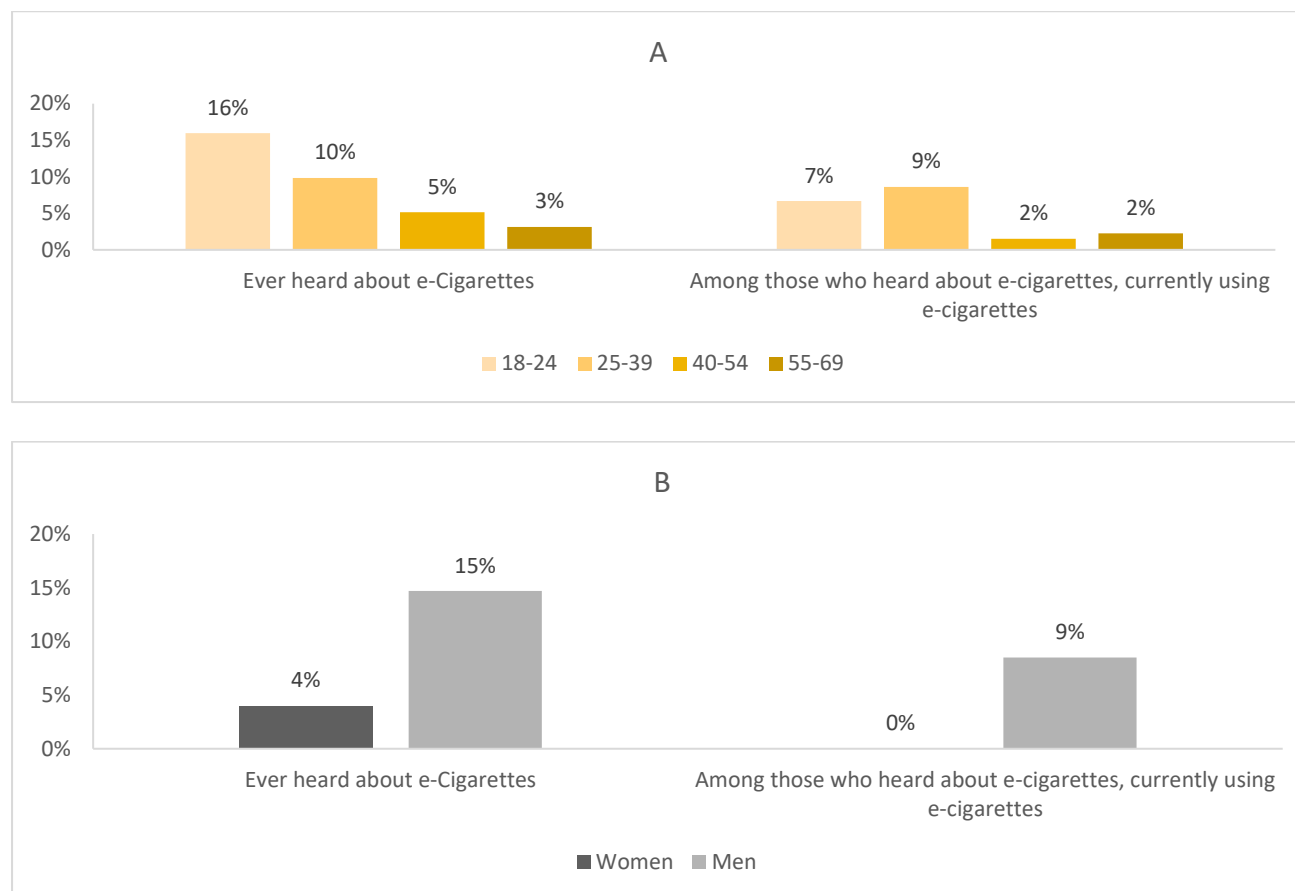
#### 4.5 Electronic cigarettes

Electronic cigarettes include any product that uses batteries or other methods to produce a vapor which contains nicotine. They have various other names such as e-cigarette, vape-pen, e-shisha, e-pipes. All adults were asked if they had heard of e-cigarette, and if they had, they were asked if they have ever used it or were using it at the time regularly. 9.3% of all adults (18-69 years) reported that they have heard of e-cigarette and 6.7% amongst them were using the product.

#### Patterns by background characteristics

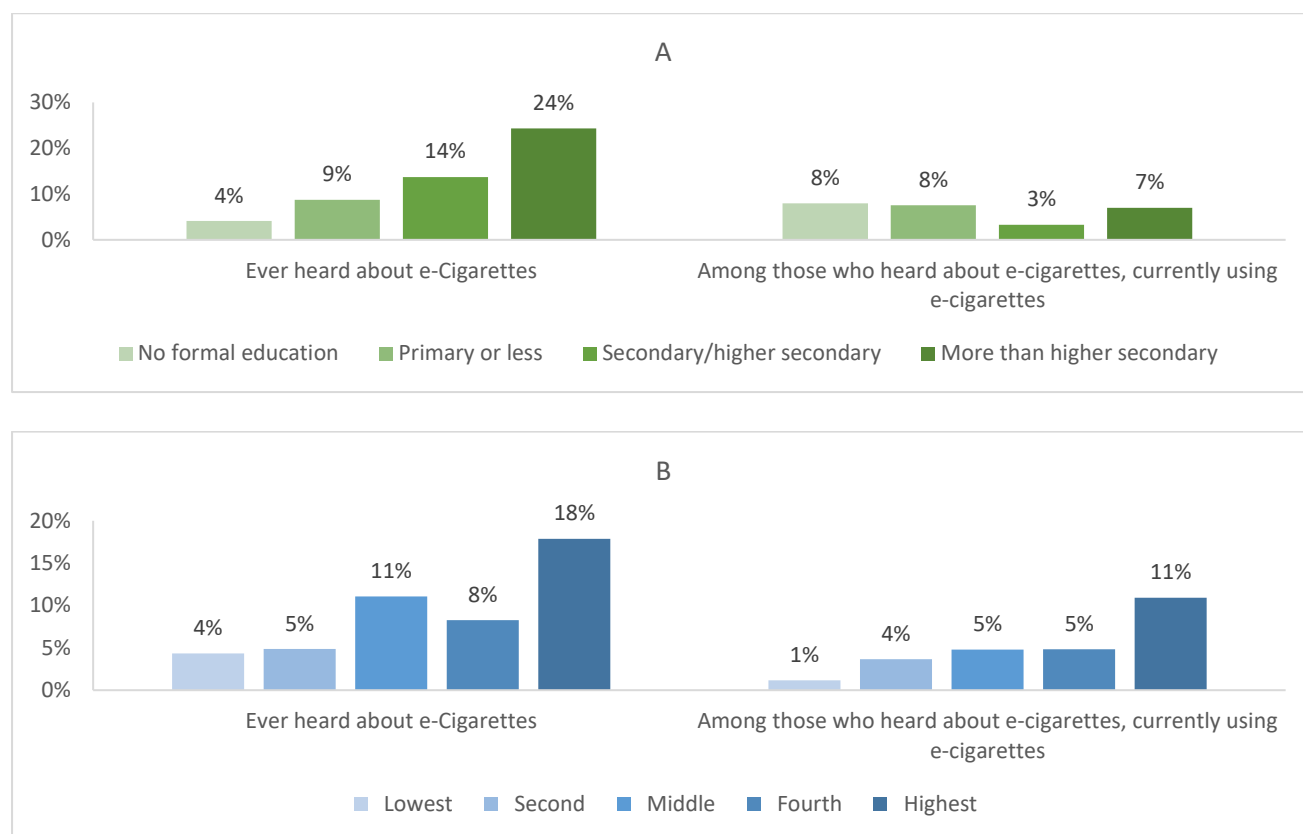
- Awareness and usage of e-cigarettes declined with an increase in age. While 16% of 18-24 years old had heard about e-cigarettes, only 3.1% of 55-69 years had heard about them. Similar pattern was observed with use of e-cigarettes. **Figure 4.24 A**
- Awareness and usage were much higher amongst men (14.7%, 8.5%), compared to women (4%, 0%). Awareness about cigarettes was much higher in urban areas (14.3%) as compared to rural areas (7.8%). **Figure 4.24 B**

**Figure 4.24 Differentials in awareness and usage of electronic cigarettes, by age (A) and sex (B), Bangladesh STEP survey, 2018**



- While there was an increase in the awareness about e-cigarettes with an increase in levels of education, there wasn't a significant differential in its usage with higher levels of education
- With an increase in wealth, the awareness and usage of e-cigarettes increased as well – 17.9% of all adults belonging to the highest wealth quintiles had heard of e-cigarettes, and of them, 10.9% were using the product. While, 4.3% of the adults belonging to the lowest wealth quintile had ever heard about e-cigarettes and only 1.2% of them were using the product. See **Figure 4.25 B**

**Figure 4.25 Differentials in awareness and usage of electronic cigarettes, by levels of education (A) and wealth (B), Bangladesh STEP Survey, 2018**



## List of tables

For more information, please see the following tables

Table 4.1 Tobacco use: All Respondents

Table 4.2.1 Tobacco smoking status (current, former, never)

Table 4.2.2 Smokeless tobacco use: current, former, never

Table 4.3.1 Use of different smoking tobacco products: Among all respondents and current smokers

Table 4.3.2 Use of different smokeless tobacco products: all respondents and current users

Table 4.4 Age at initiation of smoking: all respondents

Table 4.5 Tobacco cessation

Table 4.6 Electronic cigarettes: all respondents

**Table 4.1 Tobacco use: All Respondents**

Percentage of adults age 18-69 years who currently use any tobacco product, currently smoke any tobacco product, currently use any smokeless tobacco product and currently using both smoking and smokeless tobacco products by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Currently using any of the products... |                 |                   |                                    | n           |
|----------------------------|----------------------------------------|-----------------|-------------------|------------------------------------|-------------|
|                            | tobacco                                | smoking tobacco | smokeless tobacco | both smoking and smokeless tobacco |             |
| <b>Age</b>                 |                                        |                 |                   |                                    |             |
| 18-24                      | 22.3                                   | 15.7            | 9.9               | 3.3                                | 1026        |
| 25-39                      | 38.7                                   | 24.0            | 21.2              | 6.5                                | 3489        |
| 40-54                      | 59.1                                   | 26.4            | 42.7              | 10.0                               | 2503        |
| 55-69                      | 68.4                                   | 30.0            | 49.7              | 11.3                               | 1167        |
| <b>Sex</b>                 |                                        |                 |                   |                                    |             |
| Women                      | 28.3                                   | 1.0             | 28.1              | 0.8                                | 4381        |
| Men                        | 59.6                                   | 46.6            | 26.9              | 13.9                               | 3804        |
| <b>Residence</b>           |                                        |                 |                   |                                    |             |
| Rural                      | 45.2                                   | 23.7            | 29.1              | 7.7                                | 4183        |
| Urban                      | 38.8                                   | 22.6            | 21.8              | 5.5                                | 4002        |
| <b>Division</b>            |                                        |                 |                   |                                    |             |
| Barishal                   | 48.5                                   | 20.0            | 38.7              | 10.2                               | 986         |
| Chattogram                 | 42.4                                   | 21.4            | 27.2              | 6.2                                | 1053        |
| Dhaka                      | 39.0                                   | 22.8            | 21.2              | 5.0                                | 997         |
| Khulna                     | 41.1                                   | 23.3            | 24.7              | 6.8                                | 1040        |
| Mymensingh                 | 56.5                                   | 27.1            | 38.8              | 9.4                                | 1021        |
| Rajshahi                   | 39.3                                   | 24.3            | 21.8              | 6.8                                | 1066        |
| Rangpur                    | 45.1                                   | 24.0            | 28.4              | 7.3                                | 1009        |
| Sylhet                     | 56.5                                   | 28.4            | 43.1              | 15.1                               | 1013        |
| <b>Education*</b>          |                                        |                 |                   |                                    |             |
| None/less than primary     | 60.2                                   | 29.7            | 41.8              | 11.3                               | 2476        |
| Primary                    | 35.6                                   | 19.4            | 20.7              | 4.5                                | 3735        |
| Secondary                  | 26.9                                   | 18.6            | 11.4              | 3.1                                | 1397        |
| More than secondary        | 22.8                                   | 16.8            | 9.9               | 3.9                                | 556         |
| <b>Wealth quintile</b>     |                                        |                 |                   |                                    |             |
| Lowest                     | 51.6                                   | 23.8            | 37.8              | 9.9                                | 1639        |
| Second                     | 50.7                                   | 26.5            | 34.1              | 9.9                                | 1670        |
| Middle                     | 43.6                                   | 25.3            | 25.2              | 6.9                                | 1451        |
| Fourth                     | 41.0                                   | 22.6            | 22.7              | 4.3                                | 1506        |
| Highest                    | 31.6                                   | 19.2            | 17.5              | 5.1                                | 1919        |
| Total (18-39)              | 32.5                                   | 20.9            | 17.0              | 5.3                                | 4515        |
| Total (40-69)              | 63.3                                   | 28.0            | 45.9              | 10.6                               | 3670        |
| Total (25-69)              | 50.5                                   | 25.9            | 33.0              | 8.5                                | 7159        |
| <b>Total (18-69)</b>       | <b>43.7</b>                            | <b>23.5</b>     | <b>27.5</b>       | <b>7.2</b>                         | <b>8185</b> |

\* 21 respondents excluded who refused to answer highest level of education completed

**Table 4.2.1 Tobacco smoking status (current, former, never)**

Percentage of adults age 18-69 years who currently smoke tobacco, formerly smoked tobacco, daily or non-daily; percentage smoked among all respondents, among current smokers and among former smokers by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Among all respondents   |           |                         |           |                      | Number of respondents | Among current smokers |       | Number of respondents | Among former smokers |      | Number of respondents |
|----------------------------|-------------------------|-----------|-------------------------|-----------|----------------------|-----------------------|-----------------------|-------|-----------------------|----------------------|------|-----------------------|
|                            | Currently smoke tobacco |           | Formerly smoked tobacco |           | Never smoked tobacco |                       |                       |       |                       |                      |      |                       |
|                            | Daily                   | Non-daily | Daily                   | Non-daily |                      |                       |                       |       |                       |                      |      |                       |
| Age                        |                         |           |                         |           |                      |                       |                       |       |                       |                      |      |                       |
| 18-24                      | 13.6                    | 2.1       | 1.3                     | 0.8       | 82.2                 | 1026                  | 86.8                  | 13.2  | 153                   | 62.2                 | 37.9 | 22                    |
| 25-39                      | 23.1                    | 0.9       | 2.6                     | 1.6       | 71.8                 | 3489                  | 96.2                  | 3.8   | 782                   | 62.0                 | 38.0 | 156                   |
| 40-54                      | 25.9                    | 0.5       | 7.6                     | 1.2       | 64.9                 | 2503                  | 98.1                  | 1.9   | 638                   | 86.7                 | 13.3 | 211                   |
| 55-69                      | 28.8                    | 1.1       | 17.8                    | 0.6       | 51.6                 | 1167                  | 96.2                  | 3.8   | 350                   | 96.6                 | 3.4  | 234                   |
| Sex                        |                         |           |                         |           |                      |                       |                       |       |                       |                      |      |                       |
| Women                      | 0.9                     | 0.1       | 0.7                     | 0.3       | 98.0                 | 4381                  | 86.1                  | 13.9  | 37                    | 72.5                 | 27.5 | 30                    |
| Men                        | 44.4                    | 2.2       | 11.0                    | 2.1       | 40.3                 | 3804                  | 95.3                  | 4.7   | 1886                  | 84.3                 | 15.7 | 593                   |
| Residence                  |                         |           |                         |           |                      |                       |                       |       |                       |                      |      |                       |
| Rural                      | 22.7                    | 1.1       | 5.8                     | 1.1       | 69.4                 | 4183                  | 95.4                  | 4.6   | 1006                  | 84.5                 | 15.5 | 312                   |
| Urban                      | 21.2                    | 1.4       | 5.6                     | 1.4       | 70.4                 | 4002                  | 93.8                  | 6.2   | 917                   | 79.7                 | 20.3 | 311                   |
| Division                   |                         |           |                         |           |                      |                       |                       |       |                       |                      |      |                       |
| Barishal                   | 18.5                    | 1.6       | 7.8                     | 2.7       | 69.5                 | 986                   | 92.2                  | 7.8   | 188                   | 74.5                 | 25.5 | 102                   |
| Chattogram                 | 19.9                    | 1.5       | 6.4                     | 1.2       | 71.0                 | 1053                  | 92.8                  | 7.2   | 237                   | 84.2                 | 15.8 | 87                    |
| Dhaka Rural                | 22.0                    | 0.8       | 5.5                     | 0.9       | 70.8                 | 997                   | 96.6                  | 3.4   | 234                   | 86.1                 | 13.9 | 70                    |
| Khulna                     | 22.4                    | 0.9       | 6.5                     | 0.9       | 69.3                 | 1040                  | 96.3                  | 3.7   | 223                   | 87.4                 | 12.6 | 80                    |
| Mymensingh                 | 26.2                    | 0.9       | 3.6                     | 0.6       | 68.7                 | 1021                  | 96.8                  | 3.2   | 277                   | 85.6                 | 14.4 | 58                    |
| Rajshahi                   | 23.0                    | 1.3       | 5.5                     | 0.7       | 69.5                 | 1066                  | 94.6                  | 5.4   | 233                   | 87.9                 | 12.1 | 71                    |
| Rangpur                    | 22.6                    | 1.4       | 6.6                     | 2.0       | 67.5                 | 1009                  | 94.2                  | 5.8   | 240                   | 77.0                 | 23.0 | 88                    |
| Sylhet                     | 27.3                    | 1.1       | 4.5                     | 1.4       | 65.6                 | 1013                  | 96.0                  | 4.0   | 291                   | 76.4                 | 23.6 | 67                    |
| Education                  |                         |           |                         |           |                      |                       |                       |       |                       |                      |      |                       |
| None/less than primary     | 28.8                    | 1.0       | 8.0                     | 0.6       | 61.6                 | 2476                  | 96.76                 | 3.238 | 734                   | 92.7                 | 7.3  | 224                   |
| Primary                    | 18.3                    | 1.2       | 4.0                     | 1.2       | 75.3                 | 3735                  | 94.06                 | 5.937 | 823                   | 76.9                 | 23.1 | 241                   |
| Secondary                  | 17.6                    | 0.9       | 4.5                     | 2.1       | 74.8                 | 1397                  | 94.94                 | 5.064 | 276                   | 68.0                 | 32.1 | 110                   |
| More than secondary        | 14.7                    | 2.0       | 3.7                     | 1.9       | 77.7                 | 556                   | 87.89                 | 12.11 | 89                    | 66.3                 | 33.7 | 48                    |
| Wealth quintile            |                         |           |                         |           |                      |                       |                       |       |                       |                      |      |                       |
| Lowest                     | 22.9                    | 0.9       | 6.7                     | 0.8       | 68.7                 | 1639                  | 96.4                  | 3.6   | 381                   | 89.7                 | 10.3 | 111                   |
| Second                     | 25.6                    | 0.9       | 5.6                     | 1.1       | 66.8                 | 1670                  | 96.5                  | 3.5   | 441                   | 83.2                 | 16.8 | 120                   |
| Middle                     | 24.2                    | 1.1       | 6.1                     | 1.3       | 67.2                 | 1451                  | 95.6                  | 4.4   | 381                   | 82.4                 | 17.6 | 124                   |
| Fourth                     | 20.6                    | 1.9       | 6.7                     | 0.9       | 69.8                 | 1506                  | 91.5                  | 8.5   | 374                   | 87.8                 | 12.2 | 130                   |
| Highest                    | 18.3                    | 0.9       | 3.9                     | 1.6       | 75.3                 | 1919                  | 95.1                  | 4.9   | 346                   | 70.3                 | 29.7 | 138                   |
| Total (18-39)              | 19.5                    | 1.4       | 2.1                     | 1.3       | 75.7                 | 4515                  | 93.5                  | 6.5   | 935                   | 62.0                 | 38.0 | 178                   |
| Total (40-69)              | 27.2                    | 0.8       | 12.3                    | 0.9       | 58.8                 | 3670                  | 97.1                  | 2.9   | 988                   | 93.1                 | 6.9  | 445                   |
| Total (25-69)              | 25.1                    | 0.9       | 7.2                     | 1.3       | 65.6                 | 7159                  | 96.7                  | 3.3   | 1770                  | 85.1                 | 14.9 | 601                   |
| Total (18-69)              | 22.3                    | 1.2       | 5.8                     | 1.2       | 69.6                 | 8185                  | 95.1                  | 4.9   | 1923                  | 83.4                 | 16.6 | 623                   |

**Table 4.2.2 Smokeless tobacco use: current, former, never**

Percentage of adults age 18-69 years who currently use smokeless tobacco products daily or non-daily; percentage former user and never user of smokeless tobacco; among all respondents and current users by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Among all respondents           |           |                                |                              |                       | Among current users |           | Number of respondents |
|----------------------------|---------------------------------|-----------|--------------------------------|------------------------------|-----------------------|---------------------|-----------|-----------------------|
|                            | Currently use smokeless tobacco |           | Formerly use smokeless tobacco | Never used smokeless tobacco | Number of respondents |                     |           |                       |
|                            | Daily                           | Non-daily |                                |                              |                       | Daily               | Non-daily |                       |
| Age                        |                                 |           |                                |                              |                       |                     |           |                       |
| 18-24                      | 6.9                             | 3.0       | 0.9                            | 89.2                         | 1026                  | 70.0                | 30.1      | 119                   |
| 25-39                      | 18.2                            | 3.0       | 1.9                            | 76.8                         | 3489                  | 85.8                | 14.2      | 902                   |
| 40-54                      | 39.5                            | 3.2       | 3.2                            | 54.1                         | 2503                  | 92.4                | 7.6       | 1053                  |
| 55-69                      | 43.2                            | 6.6       | 6.3                            | 44.0                         | 1167                  | 86.8                | 13.2      | 548                   |
| Sex                        |                                 |           |                                |                              |                       |                     |           |                       |
| Women                      | 25.4                            | 2.7       | 2.2                            | 69.7                         | 4381                  | 90.3                | 9.7       | 1412                  |
| Men                        | 22.3                            | 4.6       | 3.2                            | 69.9                         | 3804                  | 82.9                | 17.1      | 1210                  |
| Residence                  |                                 |           |                                |                              |                       |                     |           |                       |
| Rural                      | 25.4                            | 3.7       | 2.8                            | 68.1                         | 4183                  | 87.2                | 12.8      | 1456                  |
| Division                   |                                 |           |                                |                              |                       |                     |           |                       |
| Barishal                   | 34.6                            | 4.1       | 1.7                            | 59.7                         | 986                   | 89.5                | 10.5      | 394                   |
| Chattogram                 | 22.2                            | 4.9       | 1.3                            | 71.6                         | 1053                  | 81.9                | 18.1      | 291                   |
| Dhaka Rural                | 17.9                            | 3.3       | 2.5                            | 76.4                         | 997                   | 84.5                | 15.5      | 257                   |
| Khulna                     | 21.4                            | 3.3       | 6.1                            | 69.2                         | 1040                  | 86.6                | 13.4      | 261                   |
| Mymensingh                 | 33.7                            | 5.1       | 2.1                            | 59.1                         | 1021                  | 86.9                | 13.1      | 423                   |
| Rajshahi                   | 18.6                            | 3.2       | 3.3                            | 74.9                         | 1066                  | 85.3                | 14.7      | 226                   |
| Rangpur                    | 26.2                            | 2.2       | 2.2                            | 69.4                         | 1009                  | 92.4                | 7.6       | 326                   |
| Sylhet                     | 40.6                            | 2.5       | 2.5                            | 54.4                         | 1013                  | 94.3                | 5.7       | 444                   |
| Education                  |                                 |           |                                |                              |                       |                     |           |                       |
| None/less than primary     | 37.0                            | 4.8       | 3.3                            | 54.9                         | 2476                  | 88.6                | 11.4      | 1148                  |
| Primary                    | 17.7                            | 3.0       | 2.4                            | 76.9                         | 3735                  | 85.6                | 14.4      | 1159                  |
| Secondary                  | 8.3                             | 3.1       | 1.8                            | 86.8                         | 1397                  | 72.8                | 27.2      | 226                   |
| More than secondary        | 8.2                             | 1.7       | 1.9                            | 88.2                         | 556                   | 82.5                | 17.5      | 72                    |
| Wealth quintile            |                                 |           |                                |                              |                       |                     |           |                       |
| Lowest                     | 33.6                            | 4.3       | 2.0                            | 60.1                         | 1639                  | 88.7                | 11.3      | 687                   |
| Second                     | 30.9                            | 3.2       | 2.3                            | 63.6                         | 1670                  | 90.7                | 9.3       | 637                   |
| Middle                     | 20.6                            | 4.6       | 2.5                            | 72.3                         | 1451                  | 81.9                | 18.1      | 478                   |
| Fourth                     | 18.9                            | 3.8       | 3.1                            | 74.2                         | 1506                  | 83.1                | 16.9      | 417                   |
| Highest                    | 15.2                            | 2.4       | 3.3                            | 79.1                         | 1919                  | 86.6                | 13.4      | 403                   |
| Total (18-39)              | 14.0                            | 3.0       | 1.6                            | 81.5                         | 4515                  | 82.3                | 17.7      | 1021                  |
| Total (40-69)              | 41.2                            | 4.8       | 4.6                            | 49.5                         | 3670                  | 89.7                | 10.4      | 1601                  |
| Total (25-69)              | 29.2                            | 3.8       | 3.2                            | 63.8                         | 7159                  | 88.4                | 11.7      | 2503                  |
| Total (18-69)              | 23.9                            | 3.6       | 2.7                            | 69.9                         | 8185                  | 86.8                | 13.2      | 2622                  |

**Table 4.3.1 Use of different smoking tobacco products: Among all respondents and current smokers**

Percentage of adult age 18-69 years who currently use different smoking tobacco products among all respondents and among current smokers by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Among all respondents                   |            |                         |                     |                      |                       | Among current smokers                   |             |                         |                     |            |                       |
|----------------------------|-----------------------------------------|------------|-------------------------|---------------------|----------------------|-----------------------|-----------------------------------------|-------------|-------------------------|---------------------|------------|-----------------------|
|                            | Cigarette (manufactured or hand-rolled) | Bidis      | Pipes/cigars/cigarellos | Hookah/Dhaba/Shisha | Any smoking products | Number of respondents | Cigarette (manufactured or hand-rolled) | Bidis       | Pipes/cigars/cigarellos | Hookah/Dhaba/Shisha | Others     | Number of respondents |
| <b>Age</b>                 |                                         |            |                         |                     |                      |                       |                                         |             |                         |                     |            |                       |
| 18-24                      | 15.3                                    | 1.9        | 0.1                     | 0.2                 | 15.3                 | 1026                  | 97.4                                    | 13.3        | 0.5                     | 1.1                 | 1.8        | 153                   |
| 25-39                      | 24.0                                    | 5.0        | 0.9                     | 0.1                 | 24.0                 | 3489                  | 99.9                                    | 21.5        | 3.9                     | 0.3                 | 2.9        | 782                   |
| 40-54                      | 26.3                                    | 10.9       | 0.7                     | 0.3                 | 26.4                 | 2503                  | 99.9                                    | 42.2        | 2.5                     | 1.2                 | 2.3        | 638                   |
| 55-69                      | 29.5                                    | 17.1       | 1.4                     | 1.2                 | 29.8                 | 1167                  | 98.8                                    | 57.6        | 4.7                     | 4.1                 | 1.0        | 350                   |
| <b>Sex</b>                 |                                         |            |                         |                     |                      |                       |                                         |             |                         |                     |            |                       |
| Women                      | 1.0                                     | 0.9        | 0.1                     | 0.1                 | 1.0                  | 4381                  | 100.0                                   | 89.9        | 6.9                     | 6.5                 | 0.5        | 37                    |
| Men                        | 46.2                                    | 14.5       | 1.5                     | 0.6                 | 46.3                 | 3804                  | 99.2                                    | 31.2        | 3.1                     | 1.3                 | 2.2        | 1886                  |
| <b>Residence</b>           |                                         |            |                         |                     |                      |                       |                                         |             |                         |                     |            |                       |
| Rural                      | 23.5                                    | 8.8        | 0.6                     | 0.4                 | 23.6                 | 4183                  | 99.2                                    | 37.2        | 2.6                     | 1.7                 | 2.3        | 1006                  |
| Urban                      | 22.4                                    | 3.4        | 1.3                     | 0.1                 | 22.5                 | 4002                  | 99.5                                    | 15.2        | 5.6                     | 0.4                 | 1.9        | 917                   |
| <b>Division</b>            |                                         |            |                         |                     |                      |                       |                                         |             |                         |                     |            |                       |
| Barishal                   | 20.0                                    | 11.0       | 0.6                     | 0.4                 | 20.0                 | 986                   | 100.0                                   | 55.1        | 3.2                     | 1.8                 | 0.6        | 188                   |
| Chattogram                 | 21.3                                    | 5.4        | 1.1                     | 0.9                 | 21.4                 | 1053                  | 99.7                                    | 25.4        | 5.3                     | 4.2                 | 1.3        | 237                   |
| Dhaka Rural                | 22.3                                    | 4.3        | 1.2                     | 0.1                 | 22.4                 | 997                   | 97.8                                    | 19.1        | 5.1                     | 0.5                 | 5.7        | 234                   |
| Khulna                     | 23.2                                    | 6.4        | 0.1                     | 0.1                 | 23.2                 | 1040                  | 99.5                                    | 27.6        | 0.6                     | 0.4                 | 0.3        | 223                   |
| Mymensingh                 | 27.1                                    | 17.0       | 0.6                     | 0.3                 | 27.1                 | 1021                  | 100.0                                   | 62.6        | 2.3                     | 1.2                 | 2.9        | 277                   |
| Rajshahi                   | 24.2                                    | 8.6        | 0.7                     | 0.1                 | 24.2                 | 1066                  | 99.5                                    | 35.5        | 3.0                     | 0.5                 | 0.0        | 233                   |
| Rangpur                    | 24.0                                    | 7.8        | 0.3                     | 0.0                 | 24.0                 | 1009                  | 99.8                                    | 32.3        | 1.2                     | 0.1                 | 0.6        | 240                   |
| Sylhet                     | 28.1                                    | 11.5       | 0.2                     | 0.8                 | 28.4                 | 1013                  | 100.0                                   | 40.5        | 0.6                     | 2.9                 | 2.3        | 291                   |
| <b>Education</b>           |                                         |            |                         |                     |                      |                       |                                         |             |                         |                     |            |                       |
| None/less than primary     | 29.8                                    | 15.1       | 1.2                     | 0.4                 | 30.0                 | 2476                  | 99.7                                    | 44.0        | 4.7                     | 2.3                 | 2.5        | 1058                  |
| Primary                    | 22.2                                    | 5.9        | 0.7                     | 0.5                 | 22.2                 | 3735                  | 98.1                                    | 23.4        | 1.4                     | 0.7                 | 2.7        | 499                   |
| Secondary                  | 17.7                                    | 2.3        | 0.3                     | 0.0                 | 17.7                 | 1397                  | 99.1                                    | 16.5        | 0.6                     | 0.0                 | 1.2        | 184                   |
| More than secondary        | 17.3                                    | 0.7        | 0.0                     | 0.0                 | 17.3                 | 556                   | 100.0                                   | 4.9         | 2.0                     | 0.1                 | 0.1        | 181                   |
| <b>Wealth quintile</b>     |                                         |            |                         |                     |                      |                       |                                         |             |                         |                     |            |                       |
| Lowest                     | 23.6                                    | 12.1       | 1.1                     | 0.4                 | 23.8                 | 1639                  | 99.4                                    | 51.1        | 4.5                     | 1.6                 | 4.0        | 381                   |
| Second                     | 26.4                                    | 10.9       | 0.7                     | 0.1                 | 26.5                 | 1670                  | 99.9                                    | 41.3        | 2.6                     | 0.5                 | 3.0        | 441                   |
| Middle                     | 25.3                                    | 8.2        | 1.2                     | 0.9                 | 25.3                 | 1451                  | 99.8                                    | 32.3        | 4.6                     | 3.6                 | 1.9        | 381                   |
| Fourth                     | 21.9                                    | 4.4        | 0.6                     | 0.0                 | 22.0                 | 1506                  | 97.5                                    | 19.6        | 2.6                     | 0.0                 | 0.5        | 374                   |
| Highest                    | 19.1                                    | 2.4        | 0.3                     | 0.3                 | 19.1                 | 1919                  | 99.6                                    | 12.3        | 1.5                     | 1.5                 | 1.3        | 346                   |
| Total (18-39)              | 20.7                                    | 4.0        | 0.6                     | 0.1                 | 20.7                 | 4515                  | 99.2                                    | 19.2        | 2.9                     | 0.6                 | 2.6        | 935                   |
| Total (40-69)              | 27.8                                    | 14.0       | 1.0                     | 0.7                 | 27.9                 | 3670                  | 99.4                                    | 49.8        | 3.6                     | 2.6                 | 1.6        | 988                   |
| Total (25-69)              | 25.8                                    | 9.4        | 1.0                     | 0.4                 | 25.9                 | 7159                  | 99.6                                    | 36.1        | 3.7                     | 1.5                 | 2.3        | 1770                  |
| <b>Total (18-69)</b>       | <b>23.3</b>                             | <b>7.6</b> | <b>0.8</b>              | <b>0.3</b>          | <b>23.3</b>          | <b>8185</b>           | <b>99.3</b>                             | <b>32.5</b> | <b>3.2</b>              | <b>1.5</b>          | <b>2.2</b> | <b>1923</b>           |

**Table 4.3.2 Use of different smokeless tobacco products: all respondents and current users**

Percentage of people age 18-69 who currently use different smokeless tobacco products -among all respondents and among current smokeless tobacco users by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Among all respondents |                          |                         |            |                                            |                               |                       | Among current users   |                          |                         |             |                                            |                       |                       |
|----------------------------|-----------------------|--------------------------|-------------------------|------------|--------------------------------------------|-------------------------------|-----------------------|-----------------------|--------------------------|-------------------------|-------------|--------------------------------------------|-----------------------|-----------------------|
|                            | Betel quid with zarda | Betel quid with sadapata | Pan masala with tobacco | Gul        | Other (including Khoinee, nossi, sadapata) | Any smokeless tobacco product | Number of respondents | Betel quid with zarda | Betel quid with sadapata | Pan masala with tobacco | Gul         | Other (including Khoinee, nossi, sadapata) | Any smokeless product | Number of respondents |
| <b>Age</b>                 |                       |                          |                         |            |                                            |                               |                       |                       |                          |                         |             |                                            |                       |                       |
| 18-24                      | 8.4                   | 1.2                      | 0.9                     | 1.5        | 0.6                                        | 9.1                           | 1026                  | 85.3                  | 12.2                     | 9.5                     | 15.2        | 5.7                                        | 91.9                  | 119                   |
| 25-39                      | 15.8                  | 4.3                      | 1.9                     | 2.8        | 2.1                                        | 19.9                          | 3489                  | 74.5                  | 20.4                     | 8.8                     | 13.0        | 9.7                                        | 93.6                  | 902                   |
| 40-54                      | 32.2                  | 11.7                     | 4.5                     | 6.3        | 5.7                                        | 41.1                          | 2503                  | 75.5                  | 27.4                     | 10.4                    | 14.8        | 13.4                                       | 96.2                  | 1053                  |
| 55-69                      | 33.2                  | 20.7                     | 4.1                     | 6.4        | 6.9                                        | 48.4                          | 1167                  | 66.8                  | 41.6                     | 8.1                     | 12.9        | 13.8                                       | 97.4                  | 548                   |
| <b>Sex</b>                 |                       |                          |                         |            |                                            |                               |                       |                       |                          |                         |             |                                            |                       |                       |
| Women                      | 17.8                  | 11.0                     | 2.0                     | 3.9        | 4.2                                        | 26.8                          | 4381                  | 63.3                  | 39.0                     | 7.3                     | 13.9        | 14.9                                       | 95.5                  | 1412                  |
| Men                        | 22.7                  | 4.5                      | 3.0                     | 3.6        | 2.2                                        | 25.6                          | 3804                  | 84.3                  | 16.7                     | 11.2                    | 13.6        | 8.3                                        | 95.3                  | 1210                  |
| <b>Residence</b>           |                       |                          |                         |            |                                            |                               |                       |                       |                          |                         |             |                                            |                       |                       |
| Rural                      | 21.3                  | 8.9                      | 2.7                     | 3.9        | 3.6                                        | 27.9                          | 4183                  | 72.9                  | 30.4                     | 9.2                     | 13.3        | 12.4                                       | 95.9                  | 1456                  |
| Urban                      | 16.5                  | 4.0                      | 2.0                     | 3.4        | 1.9                                        | 20.3                          | 4002                  | 75.6                  | 18.2                     | 9.0                     | 15.5        | 8.7                                        | 93.1                  | 1166                  |
| <b>Division</b>            |                       |                          |                         |            |                                            |                               |                       |                       |                          |                         |             |                                            |                       |                       |
| Barishal                   | 30.4                  | 21.2                     | 10.2                    | 0.8        | 8.7                                        | 37.0                          | 986                   | 78.6                  | 54.9                     | 26.4                    | 2.1         | 22.4                                       | 95.5                  | 394                   |
| Chattogram                 | 20.5                  | 11.9                     | 3.9                     | 0.7        | 2.8                                        | 26.7                          | 1053                  | 75.5                  | 43.8                     | 14.4                    | 2.6         | 10.3                                       | 98.5                  | 291                   |
| Dhaka Rural                | 16.2                  | 3.0                      | 0.2                     | 1.7        | 4.0                                        | 18.9                          | 997                   | 76.6                  | 14.2                     | 1.1                     | 7.9         | 18.7                                       | 89.4                  | 257                   |
| Khulna                     | 14.2                  | 6.9                      | 1.5                     | 6.5        | 0.8                                        | 22.6                          | 1040                  | 57.4                  | 27.9                     | 6.2                     | 26.5        | 3.3                                        | 91.8                  | 261                   |
| Mymensingh                 | 28.9                  | 8.0                      | 2.3                     | 5.8        | 4.9                                        | 36.7                          | 1021                  | 74.4                  | 20.7                     | 5.9                     | 15.1        | 12.6                                       | 94.7                  | 423                   |
| Rajshahi                   | 18.2                  | 3.3                      | 1.9                     | 5.7        | 1.3                                        | 21.5                          | 1066                  | 83.4                  | 15.3                     | 8.7                     | 26.3        | 6.0                                        | 98.4                  | 226                   |
| Rangpur                    | 19.5                  | 4.0                      | 1.9                     | 11.4       | 1.8                                        | 28.0                          | 1009                  | 68.8                  | 14.2                     | 6.6                     | 40.3        | 6.3                                        | 98.7                  | 326                   |
| Sylhet                     | 29.6                  | 17.0                     | 4.5                     | 0.7        | 5.1                                        | 42.4                          | 1013                  | 68.7                  | 39.5                     | 10.4                    | 1.6         | 11.9                                       | 98.3                  | 444                   |
| <b>Education</b>           |                       |                          |                         |            |                                            |                               |                       |                       |                          |                         |             |                                            |                       |                       |
| None/less than primary     | 29.6                  | 13.7                     | 4.4                     | 6.1        | 5.5                                        | 40.2                          | 2476                  | 70.7                  | 32.9                     | 10.5                    | 14.7        | 13.2                                       | 96.3                  | 1619                  |
| Primary                    | 15.9                  | 4.7                      | 1.6                     | 2.8        | 2.2                                        | 19.5                          | 3735                  | 76.8                  | 22.6                     | 7.9                     | 13.5        | 10.6                                       | 94.2                  | 688                   |
| Secondary                  | 10.0                  | 1.7                      | 0.3                     | 0.4        | 0.4                                        | 10.5                          | 1397                  | 87.3                  | 14.8                     | 2.6                     | 3.7         | 3.4                                        | 91.9                  | 148                   |
| More than secondary        | 8.1                   | 0.3                      | 0.5                     | 1.2        | 0.4                                        | 9.1                           | 556                   | 81.5                  | 2.7                      | 5.0                     | 12.6        | 4.3                                        | 92.3                  | 150                   |
| <b>Wealth quintile</b>     |                       |                          |                         |            |                                            |                               |                       |                       |                          |                         |             |                                            |                       |                       |
| Lowest                     | 26.9                  | 11.2                     | 2.4                     | 7.1        | 5.1                                        | 35.8                          | 1639                  | 71.2                  | 29.5                     | 6.3                     | 18.8        | 13.5                                       | 94.8                  | 687                   |
| Second                     | 26.1                  | 10.8                     | 4.9                     | 4.3        | 4.8                                        | 33.5                          | 1670                  | 76.6                  | 31.5                     | 14.3                    | 12.5        | 14.1                                       | 98.3                  | 637                   |
| Middle                     | 18.5                  | 6.4                      | 2.2                     | 2.4        | 3.0                                        | 23.9                          | 1451                  | 73.5                  | 25.5                     | 8.9                     | 9.6         | 11.9                                       | 94.9                  | 478                   |
| Fourth                     | 16.1                  | 6.6                      | 1.6                     | 3.1        | 2.0                                        | 21.8                          | 1506                  | 71.0                  | 28.9                     | 6.9                     | 13.7        | 8.9                                        | 96.0                  | 417                   |
| Highest                    | 13.1                  | 3.9                      | 1.5                     | 1.9        | 1.2                                        | 15.9                          | 1919                  | 74.9                  | 22.0                     | 8.8                     | 11.0        | 6.7                                        | 90.9                  | 403                   |
| Total (18-39)              | 13.0                  | 3.2                      | 1.5                     | 2.3        | 1.5                                        | 15.8                          | 4515                  | 76.9                  | 18.6                     | 9.0                     | 13.5        | 8.8                                        | 93.2                  | 1021                  |
| Total (40-69)              | 32.7                  | 15.8                     | 4.3                     | 6.4        | 6.2                                        | 44.5                          | 3670                  | 71.2                  | 34.5                     | 9.3                     | 13.9        | 13.6                                       | 96.8                  | 1601                  |
| Total (25-69)              | 23.9                  | 9.8                      | 3.0                     | 4.5        | 4.1                                        | 31.6                          | 7159                  | 72.3                  | 29.7                     | 9.1                     | 13.6        | 12.3                                       | 95.7                  | 2503                  |
| <b>Total (18-69)</b>       | <b>20.2</b>           | <b>7.8</b>               | <b>2.5</b>              | <b>3.8</b> | <b>3.2</b>                                 | <b>26.2</b>                   | <b>8185</b>           | <b>73.4</b>           | <b>28.2</b>              | <b>9.2</b>              | <b>13.7</b> | <b>11.7</b>                                | <b>95.4</b>           | <b>2622</b>           |

**Table 4.4 Age at initiation of smoking: all respondents**

Mean and median age at initiation of smoking among adult age 18-69 years who currently smoke any tobacco products by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Mean age at initiation of smoking | Median age at initiation of smoking | Number of respondents |
|----------------------------|-----------------------------------|-------------------------------------|-----------------------|
| <b>Age</b>                 |                                   |                                     |                       |
| 18-24                      | 16.45                             | 16                                  | 153                   |
| 25-39                      | 18.14                             | 17                                  | 782                   |
| 40-54                      | 18.34                             | 17                                  | 638                   |
| 55-69                      | 18.54                             | 16                                  | 350                   |
| <b>Sex</b>                 |                                   |                                     |                       |
| Women                      | 24.50                             | 20                                  | 37                    |
| Men                        | 17.90                             | 17                                  | 1886                  |
| <b>Residence</b>           |                                   |                                     |                       |
| Rural                      | 18.10                             | 17                                  | 1006                  |
| Urban                      | 17.80                             | 17                                  | 917                   |
| <b>Division</b>            |                                   |                                     |                       |
| Barishal                   | 17.78                             | 18                                  | 188                   |
| Chattogram                 | 18.33                             | 17                                  | 237                   |
| Dhaka Rural                | 17.96                             | 18                                  | 234                   |
| Khulna                     | 17.07                             | 16                                  | 223                   |
| Mymensingh                 | 16.70                             | 16                                  | 277                   |
| Rajshahi                   | 18.57                             | 18                                  | 233                   |
| Rangpur                    | 19.91                             | 18                                  | 240                   |
| Sylhet                     | 17.03                             | 15                                  | 291                   |
| <b>Education</b>           |                                   |                                     |                       |
| None/less than primary     | 17.75                             | 16                                  | 734                   |
| Primary                    | 18.04                             | 17                                  | 823                   |
| Secondary                  | 18.83                             | 18                                  | 276                   |
| More than secondary        | 18.50                             | 18                                  | 89                    |
| <b>Wealth quintile</b>     |                                   |                                     |                       |
| Lowest                     | 17.80                             | 16                                  | 381                   |
| Second                     | 18.01                             | 16                                  | 441                   |
| Middle                     | 18.21                             | 17                                  | 381                   |
| Fourth                     | 17.91                             | 17                                  | 374                   |
| Highest                    | 18.05                             | 18                                  | 346                   |
| Total (18-39)              | 17.67                             | 17                                  | 935                   |
| Total (40-69)              | 18.43                             | 17                                  | 988                   |
| Total (25-69)              | 18.29                             | 17                                  | 1770                  |
| <b>Total (18-69)</b>       | <b>18.0</b>                       | <b>17</b>                           | <b>1923</b>           |

**Table 4.5 Tobacco cessation**

Percentage of adults age 18-69 years who tried to stop smoking in the past 12 months and who were advised to quit smoking during a visit to a health worker in the past 12 months by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| <b>Background characteristics</b> | <b>Tried to stop smoking</b> | <b>Number of respondents</b> | <b>Advised to quit smoking</b> | <b>Number of respondents</b> |
|-----------------------------------|------------------------------|------------------------------|--------------------------------|------------------------------|
| <b>Age</b>                        |                              |                              |                                |                              |
| 18-24                             | 40.9                         | 53                           | 80.3                           | 95                           |
| 25-39                             | 44.1                         | 348                          | 67.7                           | 551                          |
| 40-54                             | 47.8                         | 305                          | 55.3                           | 472                          |
| 55-69                             | 51.4                         | 163                          | 40.2                           | 264                          |
| <b>Sex</b>                        |                              |                              |                                |                              |
| Women                             | 44.4                         | 37                           | 65.8                           | 29                           |
| Men                               | 46.0                         | 1886                         | 60.3                           | 1353                         |
| <b>Residence</b>                  |                              |                              |                                |                              |
| Rural                             | 45.6                         | 1006                         | 60.1                           | 731                          |
| Urban                             | 47.4                         | 917                          | 61.6                           | 651                          |
| <b>Division</b>                   |                              |                              |                                |                              |
| Barishal                          | 36.0                         | 188                          | 72.1                           | 145                          |
| Chattogram                        | 44.0                         | 237                          | 58.8                           | 151                          |
| Dhaka Rural                       | 53.2                         | 234                          | 56.7                           | 191                          |
| Khulna                            | 53.8                         | 223                          | 67.8                           | 188                          |
| Mymensingh                        | 55.5                         | 277                          | 76.1                           | 250                          |
| Rajshahi                          | 41.5                         | 233                          | 49.6                           | 132                          |
| Rangpur                           | 29.6                         | 240                          | 54.2                           | 174                          |
| Sylhet                            | 40.2                         | 291                          | 51.8                           | 151                          |
| <b>Education</b>                  |                              |                              |                                |                              |
| None/less than primary            | 45.5                         | 1058                         | 58.1                           | 755                          |
| Primary                           | 45.0                         | 499                          | 63.4                           | 361                          |
| Secondary                         | 42.2                         | 184                          | 61.2                           | 131                          |
| More than secondary               | 56.1                         | 181                          | 66.8                           | 134                          |
| <b>Wealth quintile</b>            |                              |                              |                                |                              |
| Lowest                            | 39.1                         | 381                          | 56.2                           | 260                          |
| Second                            | 40.8                         | 441                          | 60.9                           | 318                          |
| Middle                            | 50.3                         | 381                          | 64.8                           | 279                          |
| Fourth                            | 50.9                         | 374                          | 61.3                           | 283                          |
| Highest                           | 50.0                         | 346                          | 58.1                           | 242                          |
| Total (18-39)                     | 43.2                         | 935                          | 71.0                           | 646                          |
| Total (40-69)                     | 49.6                         | 988                          | 47.8                           | 736                          |
| Total (25-69)                     | 46.9                         | 1770                         | 57.1                           | 1287                         |
| <b>Total (18-69)</b>              | <b>46.0</b>                  | <b>1923</b>                  | <b>60.5</b>                    | <b>1382</b>                  |

**Table 4.6 Electronic cigarettes: all respondents**

Percentage of adults age 18–69 years who heard about electronics cigarettes, ever used, currently using or correctly identified an e-cig by background characteristics, WHO STEP Survey for NCD Risk Factors, Bangladesh 2018

| Background characteristics | Ever heard about e-Cigarettes | Number of respondents | Among those who heard about e-cigarettes |                              |                               |
|----------------------------|-------------------------------|-----------------------|------------------------------------------|------------------------------|-------------------------------|
|                            | users                         |                       | Ever used e-cigarettes                   | Currently using e-cigarettes | Correctly identified an e-cig |
| <b>Age</b>                 |                               |                       |                                          |                              |                               |
| 18-24                      | 16.0                          | 1026                  | 15.9                                     | 6.7                          | 78.7                          |
| 25-39                      | 9.8                           | 3482                  | 13.0                                     | 8.6                          | 92.3                          |
| 40-54                      | 5.1                           | 2498                  | 8.9                                      | 1.5                          | 86.2                          |
| 55-69                      | 3.1                           | 1164                  | 2.7                                      | 2.3                          | 93.0                          |
| <b>Sex</b>                 |                               |                       |                                          |                              |                               |
| Women                      | 4.0                           | 4367                  | 0.0                                      | 0.0                          | 60.9                          |
| Men                        | 14.7                          | 3803                  | 16.8                                     | 8.5                          | 93.1                          |
| <b>Residence</b>           |                               |                       |                                          |                              |                               |
| Rural                      | 7.8                           | 4171                  | 9.5                                      | 4.9                          | 83.3                          |
| Urban                      | 14.3                          | 3999                  | 20.1                                     | 10.1                         | 90.3                          |
| <b>Division</b>            |                               |                       |                                          |                              |                               |
| Barishal                   | 6.1                           | 986                   | 3.3                                      | 0.0                          | 87.8                          |
| Chattogram                 | 8.6                           | 1053                  | 5.7                                      | 3.5                          | 90.0                          |
| Dhaka Rural                | 13.0                          | 997                   | 18.0                                     | 8.2                          | 92.9                          |
| Khulna                     | 4.9                           | 1038                  | 8.4                                      | 0.4                          | 79.3                          |
| Mymensingh                 | 10.7                          | 1020                  | 2.9                                      | 1.4                          | 75.1                          |
| Rajshahi                   | 9.5                           | 1066                  | 20.3                                     | 8.6                          | 72.3                          |
| Rangpur                    | 6.1                           | 1006                  | 17.7                                     | 15.6                         | 73.7                          |
| Sylhet                     | 10.2                          | 1004                  | 15.9                                     | 12.6                         | 94.3                          |
| <b>Education</b>           |                               |                       |                                          |                              |                               |
| None/less than primary     | 4.1                           | 3670                  | 8.9                                      | 8.0                          | 84.8                          |
| Primary                    | 8.7                           | 2530                  | 20.7                                     | 7.5                          | 87.2                          |
| Secondary                  | 13.7                          | 888                   | 6.3                                      | 3.3                          | 75.1                          |
| More than secondary        | 24.3                          | 1064                  | 13.0                                     | 7.0                          | 91.8                          |
| <b>Wealth quintile</b>     |                               |                       |                                          |                              |                               |
| Lowest                     | 4.3                           | 1633                  | 4.0                                      | 1.2                          | 86.6                          |
| Second                     | 4.9                           | 1669                  | 3.4                                      | 3.6                          | 72.3                          |
| Middle                     | 11.1                          | 1448                  | 14.8                                     | 4.8                          | 78.4                          |
| Fourth                     | 8.3                           | 1504                  | 11.3                                     | 4.8                          | 94.0                          |
| Highest                    | 17.9                          | 1916                  | 17.9                                     | 10.9                         | 90.0                          |
| Total (18-39)              | 12.1                          | 4508                  | 14.4                                     | 7.7                          | 85.4                          |
| Total (40-69)              | 4.2                           | 3662                  | 6.8                                      | 1.8                          | 88.3                          |
| Total (25-69)              | 7.2                           | 7144                  | 11.3                                     | 6.7                          | 91.2                          |
| <b>Total (18-69)</b>       | <b>9.3</b>                    | <b>8170</b>           | <b>13.2</b>                              | <b>6.7</b>                   | <b>85.9</b>                   |

## Chapter 5 Alcohol

### Key findings

---

#### ***Alcohol Consumption***

- In 2018, the prevalence of current alcohol consumption (people who consumed alcohol in the past 12 months) amongst all the adults was 4.4%. In addition, 1.5% of all adults were current drinkers (consumed alcohol in the past 30 days). 91.4% of adults were life-time abstainers and 4.4% were former drinks.

#### ***Heavy Episodic Drinking***

- In the total population 0.8% of adults engaged in HED and amongst the current drinkers (past 30 days), 52.5% adults engaged in HED<sup>21</sup>.

#### ***Unrecorded alcohol use***

- In the total population, 0.3% of adults consumed unrecorded alcohol and amongst the current drinkers<sup>22</sup>, 17.5% consumed unrecorded alcohol. Amongst the current drinkers, the proportion of unrecorded alcohol consumed as a fraction of overall alcohol was only 0.15%.
- 

### Introduction

In 2016, the harmful use of alcohol resulted in some 3 million deaths (5.3% of all deaths) worldwide and 5.1% of all DALYs in that year. Harmful use of alcohol caused some 1.7 million deaths from noncommunicable diseases in 2016, including some 1.2 million deaths from digestive and cardiovascular diseases (0.6 million for each condition) and 0.4 million deaths from cancers. Globally an estimated 0.9 million injury deaths were attributable to alcohol, including around 370 000 deaths due to road injuries, 150 000 due to self-harm and around 90 000 due to interpersonal violence. Of the road traffic injuries, 187 000 alcohol-attributable deaths were among people other than drivers. In the World Health Organization (WHO) South-East Asia Region, home to 1.9 billion people (29% of world's population), 1 in 20 deaths were attributed to alcohol consumption<sup>23</sup>.

In 2018, WHO launched a SAFER initiative to reduce death, disease and injuries caused by the harmful use of alcohol using high-impact, evidence-based, cost-effective interventions.

---

<sup>21</sup> Even though the prevalence of HED in general population is low, often, the adults who engage in HED are at high risk of dependency.

<sup>22</sup> For section 5.3, current drinkers are people who consumed alcohol in the past 30 days, unless specified otherwise.

<sup>23</sup> Global status report on alcohol and health 2018. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO

### The SAFER action package

- |          |                                                                                               |
|----------|-----------------------------------------------------------------------------------------------|
| <b>S</b> | Strengthen restrictions on alcohol availability                                               |
| <b>A</b> | Advance and enforce drink driving counter measures                                            |
| <b>F</b> | Facilitate access to screening, brief interventions and treatment                             |
| <b>E</b> | Enforce bans or comprehensive restrictions on alcohol advertising, sponsorship, and promotion |
| <b>R</b> | Raise prices on alcohol through excise taxes and pricing policies                             |

---

### Current relevant policies and programs in Bangladesh for alcohol<sup>24</sup>

- Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases (2018–2025)<sup>10</sup>
- Bangladesh has had the intoxicant control act since the 1990s. The current policies entail a total ban on alcohol advertisement, promotions and sponsorships. There is provision for detection and penalties for marketing infringements. To restrict physical availability the country uses tools like licensing at different levels of alcohol market ((imports, production, distribution, retail sales), restriction on the days/hours of sale, and places and events where alcohol can be sold. Additionally, there is a ban on alcohol consumption in public places, and a total prohibition of alcohol sales and consumption (hence there is no legal minimum purchase age regulation).<sup>19</sup> Moreover, it has drunk-driving countermeasures such as specifying blood alcohol concentration limit (zero tolerance) for general population and drivers, random breath testing and penalties for drink driving. It also levies excise taxes on alcohol to reduce the affordability of alcoholic beverages.
- SDG Goal 3.5 aims for a relative reduction of 10% in per capita alcohol consumption by 2025. The same goal has been part of nine global NCD indicators as well and has been adopted in the Bangladesh's multisectoral action plan as well.

---

This chapter focuses on indicators related to patterns of alcohol consumption, incidence of heavy episodic drinking, including consumption of unrecorded alcohol. The survey used the whole core module related to alcohol included in WHO STEPs questionnaire version 3.2.<sup>13</sup> This information will help Bangladesh assess trends and progress towards alcohol control targets specified in its multisectoral action plan as well as evaluation of current policies and programs in place to reduce population alcohol consumption. These will also guide future policy and programs to reduce alcohol intake at population level.

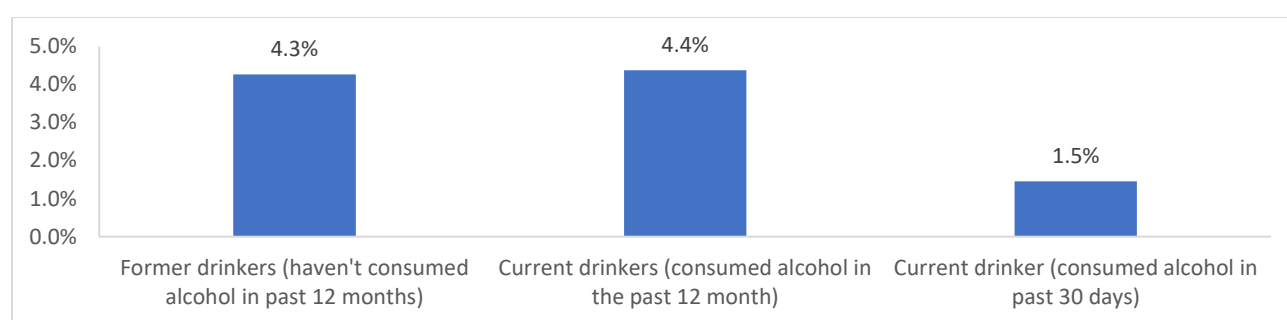
---

<sup>24</sup> World Health Organization. 2019. Making South-East Asia SAFER from alcohol-related harm: Current status and way forward.

### 5.1 Alcohol consumption – life-time abstainers, former drinks, and current drinks<sup>25</sup>

The prevalence of alcohol consumption has been calculated by asking all the adults if they have ever consumed alcohol (beer, wine, spirits, *tari, chulai, ram, bangla, chuani, keru*, vodka, gin, whisky) and if they have consumed in the past 12 months and in the past 30 days. In 2018, the prevalence of current alcohol consumption (people who consumed alcohol in the past 12 months) amongst all the adults was 4.4% and that of life-time abstainers was 91.4%. 4.4% were former drinkers. 1.5% of all adults reported consuming alcohol in the past 30 days.

**Figure 5.26 Proportion of all adults (18-69 years) that consumed alcohol (former, current – consumption in past 12 months and 30 days), Bangladesh STEP Survey 2018**



#### Patterns by background characteristics

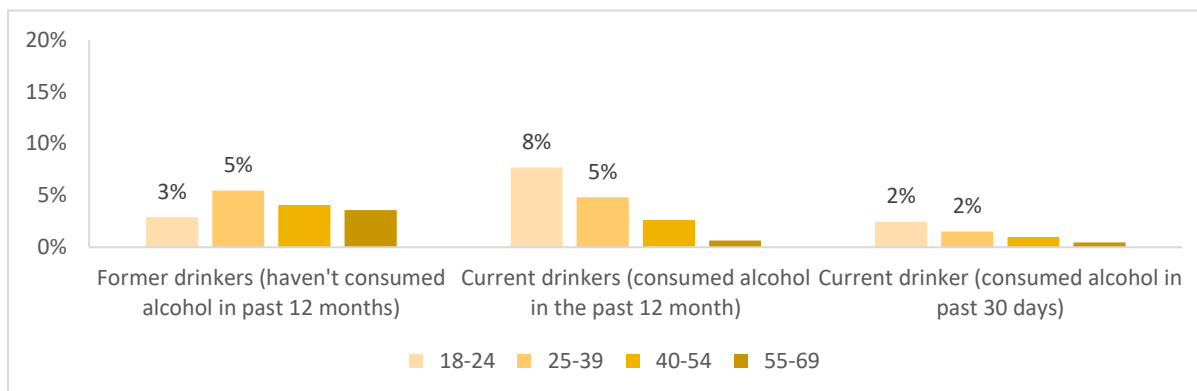
- With an increase in age, the proportion of current drinkers (those who consumed in the past 12 months and 30 days) declined. 7.7% adults in the age group 18-24 years were current drinkers<sup>26</sup>, and this proportion declined with an increase in age, going down to 0.6% for adults in 55-69 years of age. Correspondingly, the proportion of life time abstainers increased with an increase in age (not shown in graph<sup>27</sup>). See **Figure 5.27**

<sup>25</sup> Alcohol use referenced includes current drinks who consumed alcohol in the past 12 months, unless otherwise stated)

<sup>26</sup> (consumed alcohol in the past 12 months. For the purpose of section 5.1 current drinkers would refer to people who consumed alcohol in the past 12 months, unless otherwise stated)

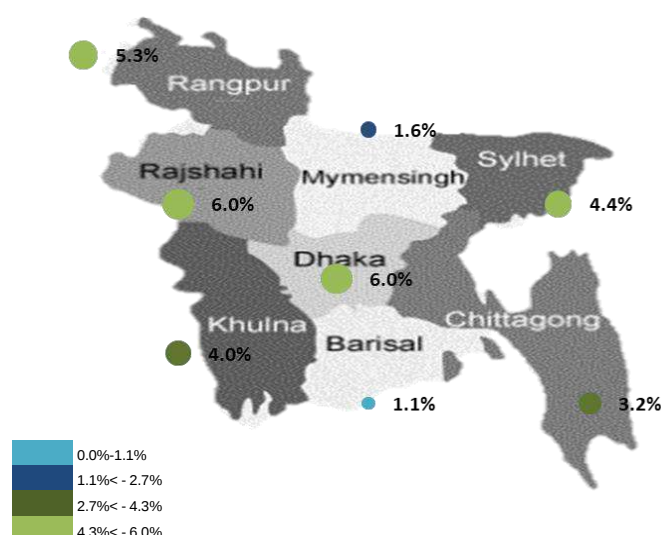
<sup>27</sup> See Table 5.1

**Figure 5.27 Differentials in proportion of current and former drinkers, amongst all adults age 18-69 years - by age, Bangladesh STEP Survey, 2018**



- Men were significantly more likely to consume alcohol than women. 0.2% of women were current drinkers<sup>28</sup>, compared to 8.7% of men.
- Urban areas had a higher current use of alcohol in the past 12 months as compared to rural areas (6.5% versus 3.8%).
- Dhaka and Rajshahi had the highest prevalence of current alcohol consumption in the country (6% for both), compared to the national average of 4.4%. Barishal had the highest prevalence of current alcohol consumption, 1.1%. See
- **Figure 5.28**

**Figure 5.28 Variations in proportion of current drinkers, amongst all adults age 18-69 years - by division, Bangladesh STEP Survey, 2018**



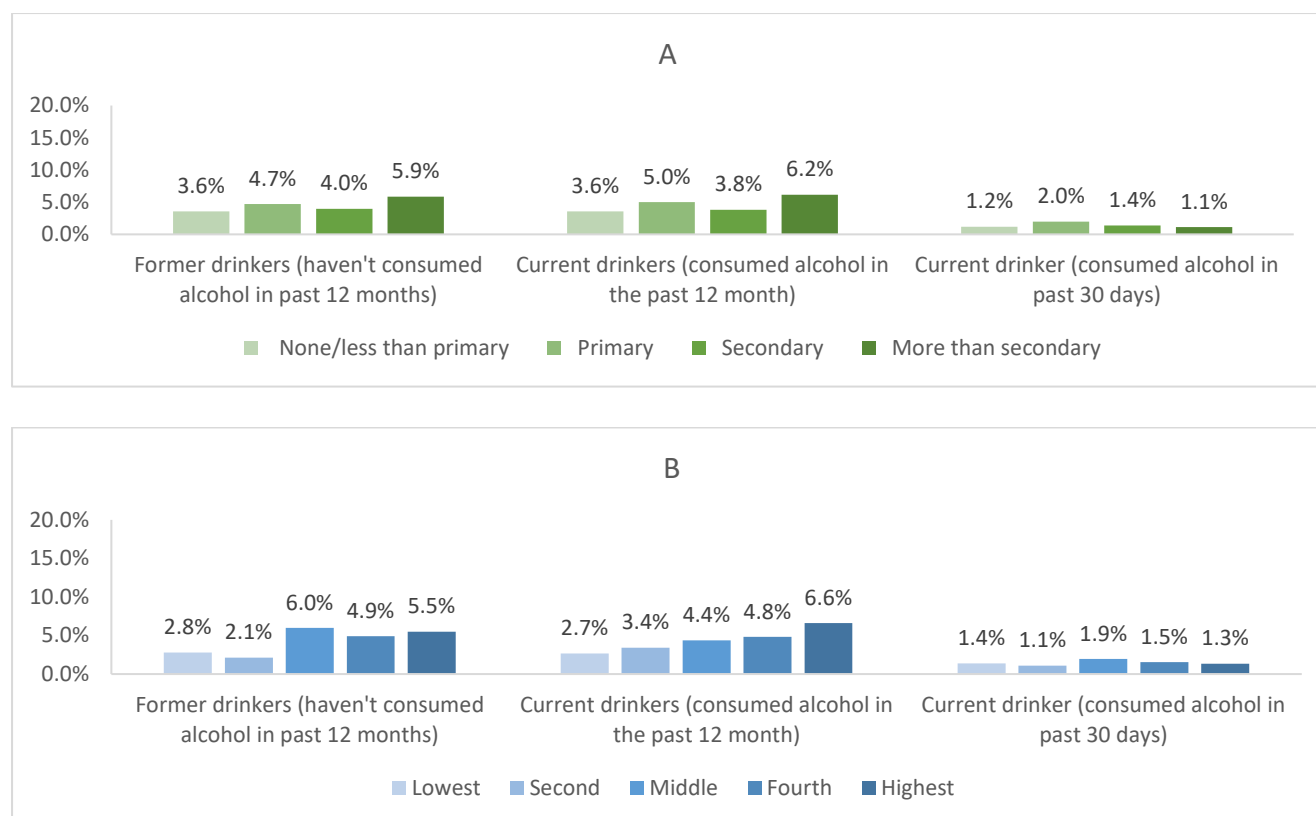
- Proportion of current drinkers increased with an increase in the level of education and increased with household wealth. The highest proportion of current drinkers (6.2%) had

<sup>28</sup> Consumed alcohol in the past 12 months.

more than secondary level of education and 6.6%, belonged to the highest wealth quintile.

- Correspondingly though, the proportion of former drinkers also increased with an increase in levels of education and wealth. see
- **Figure 5.29 A & B.**

**Figure 5.29 Differentials in proportion of former and current drinkers, amongst all adults age 18-69 years - by levels of education (A) and wealth (B), Bangladesh STEP Survey, 2018**



## 5.2 Heavy episodic drinking

Heavy episodic drinking (HED) is defined as consumption of 60 or more grams of pure alcohol (6+ standard drinks in most countries) on at least one single occasion in the 30 days prior to survey<sup>29</sup>. The indicator is presented in the overall population (among all adults irrespective of their drinking status ) as well as among current drinkers only (those who consumed any alcohol within the past 30 days). In the total population 0.8% of adults engaged in HED and amongst the current drinkers, 52.5% adults engaged in HED<sup>30</sup>.

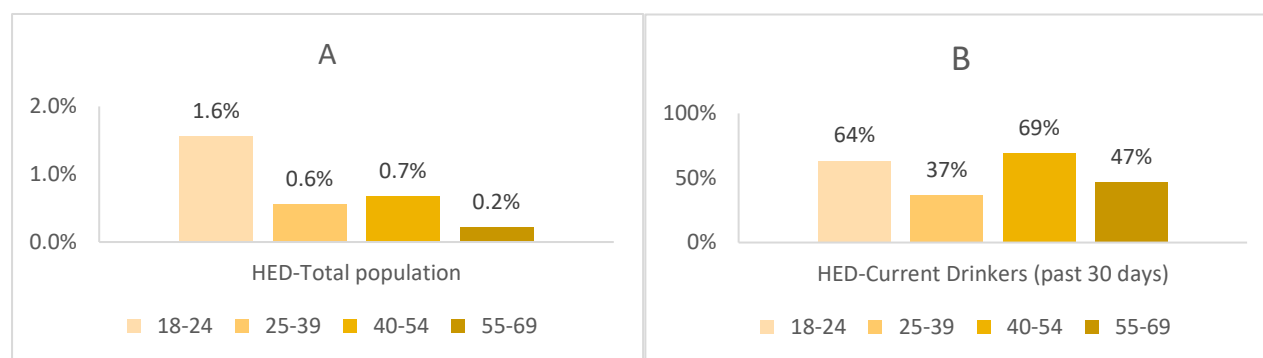
<sup>29</sup> For section 5.2, current drinkers would refer to people who consumed alcohol in the past 30 days, unless otherwise specified. The denominator for the proportions of adults would be total population and current drinkers who consumed alcohol in the past 30 days.

<sup>30</sup> Even though the prevalence of HED in general population is low, often, the adults who engage in HED are at high risk of dependency.

### Patterns by background characteristics

- The incidence of HED drinking decreased with increasing age in the total population. However, there was no significant pattern in HED amongst current drinkers. In the total population, 1.6% of adults in the age group 18-24 years indulged in HED, which declined to 0.2% among 55-69-year olds. Amongst current drinkers, the variation in incidence of HED ranged from 46.5% to 63.6%.

**Figure 5.30 Differentials in incidence of HED, amongst all adults (A) and amongst current drinkers (B), aged 18-69 years - by age, Bangladesh STEP Survey, 2018**

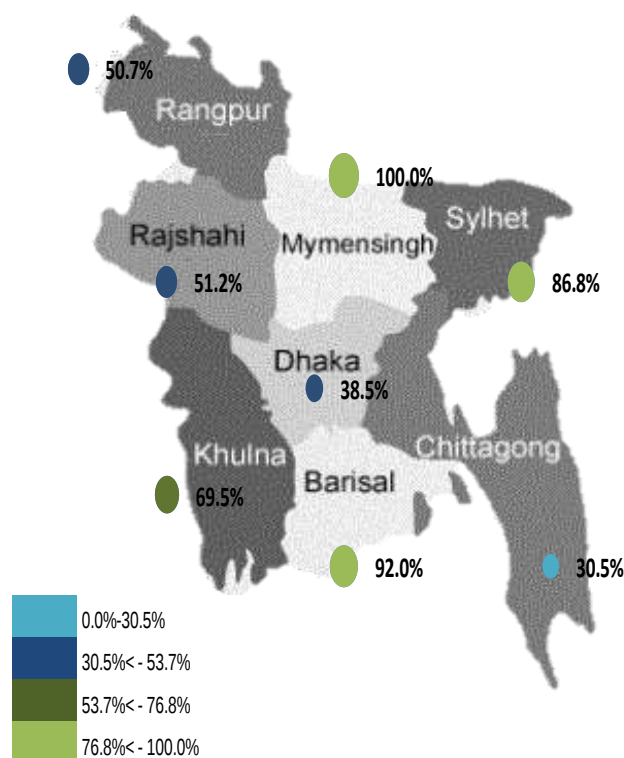


- A higher proportion of men engaged in HED than women. 1.5% of men (in total population) engaged in HED compared to 0.02% of women. However, amongst the current drinkers, 55.1% of women engaged in HED, compared to 52.2% of men.
- Amongst the current drinkers, HED was higher in rural areas compared to urban areas (55.1% versus 44.7%). There wasn't any difference in prevalence of HED in urban and rural areas, for the entire population.
- Barring Rajshahi (1.2%) and Sylhet (2.3%), the incidence of HED in all the other divisions was less than 1% for the total population<sup>31</sup>. However, amongst the current drinkers, there were massive variations in incidence of HED across divisions. The highest being in Mymensingh (100%), Sylhet (86.8%) and Barishal (92%).<sup>32</sup> **Figure 5.31**

<sup>31</sup> See Table 5.2

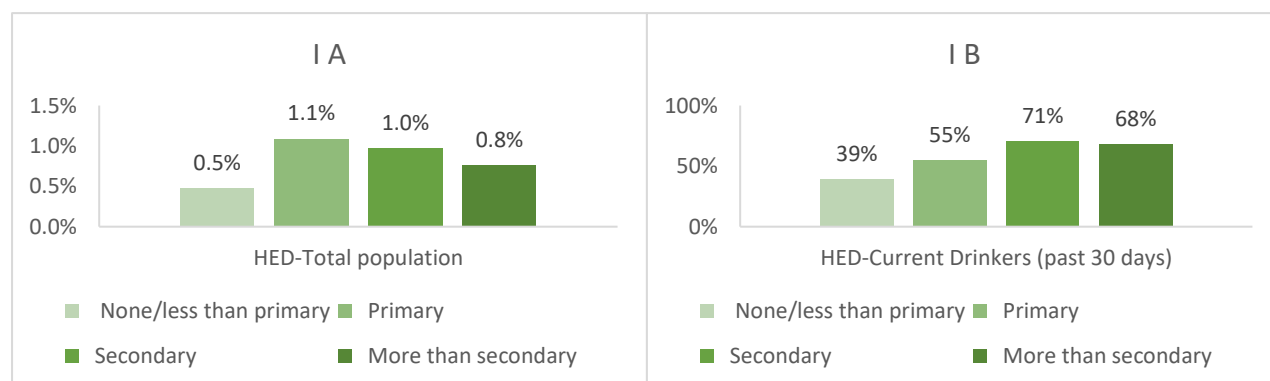
<sup>32</sup> HED in total population See Table 5.2

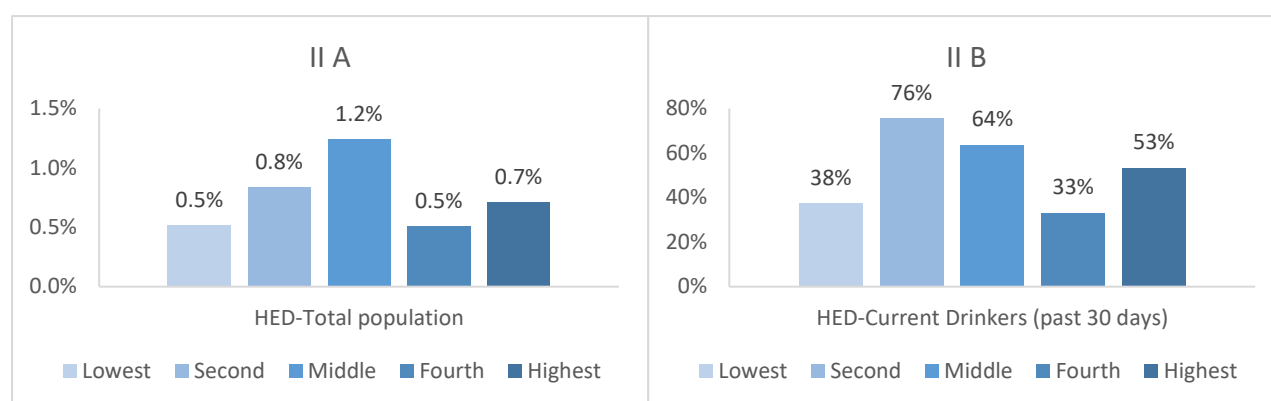
**Figure 5.31 Variations in incidence of HED amongst current drinkers, aged 18-69 years - by division, Bangladesh STEP Survey, 2018**



- While the engagement in HED drinking had no significant patterns with increase in levels of education and wealth in the total population, the incidence of HED did follow a slight u-shaped. There is no consistent trend of HED with household wealth.
- Amongst the current drinkers, there was a clear increase in incidence of HED with an increase in education. The incidence of HED followed a similar slight u-shaped pattern with an increase in wealth. **Figure 5.32**

**Figure 5.32 Differentials in incidence of HED, amongst all adults (A) and amongst current drinkers (B), aged 18-69 years - by levels of education (IA and IB) and wealth (IIA and IIB), Bangladesh STEP Survey, 2018**





### 5.3 Unrecorded Alcohol use

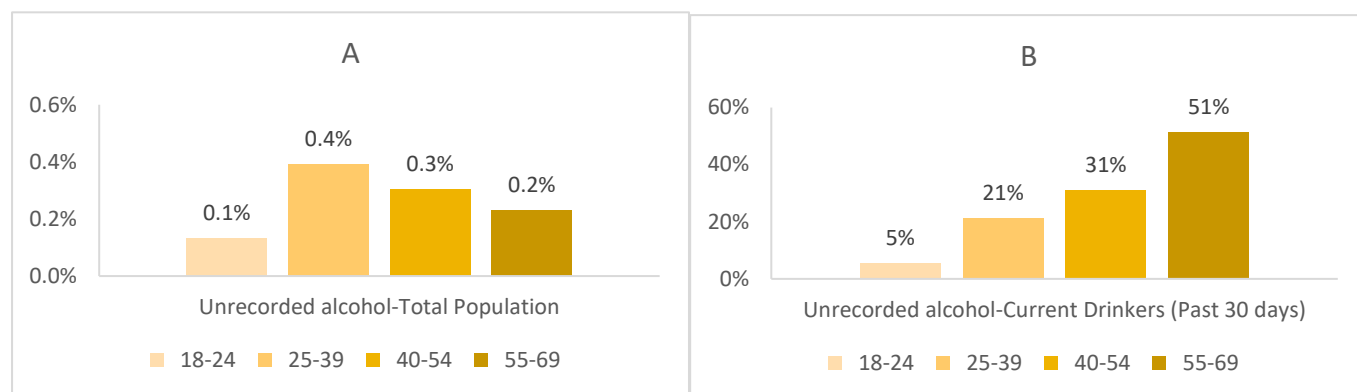
Unrecorded alcohol refers to alcohol that is not taxed in the country where it is consumed because it is usually produced, distributed and sold outside the formal channels under government control. Unrecorded alcohol consumption in a country includes consumption of home-made or informally produced alcohol (legal or illegal), smuggled alcohol, alcohol intended for industrial or medical uses and alcohol obtained through cross-border shopping (which is recorded under a different jurisdiction). Sometimes, these alcoholic beverages are traditional drinks that are produced and consumed in the community or in homes. Home-made or informally produced alcoholic beverages are mostly fermented products made from sorghum, millet, maize, rice, wheat or fruits. All adults who ever consumed alcohol were asked if they consumed unrecorded alcohol (homebrewed, untaxed, cross-border or alcohol not intended for drinking) in the past 7 days and the number of standard drinks of unrecorded alcohol. In the total population, 0.3% of adults consumed unrecorded alcohol.

#### Patterns by background characteristics

- In the total population, the consumption of unrecorded alcohol was less than 0.5% across all age groups, and followed a u-shaped pattern. Amongst the current drinkers, the proportion of adults consuming unrecorded alcohol increased with an increase in age. Mean percentage of unrecorded alcohol consumed as a fraction of total alcohol consumption amongst current drinkers follows the same trend<sup>33</sup>. **Figure 5.33.**

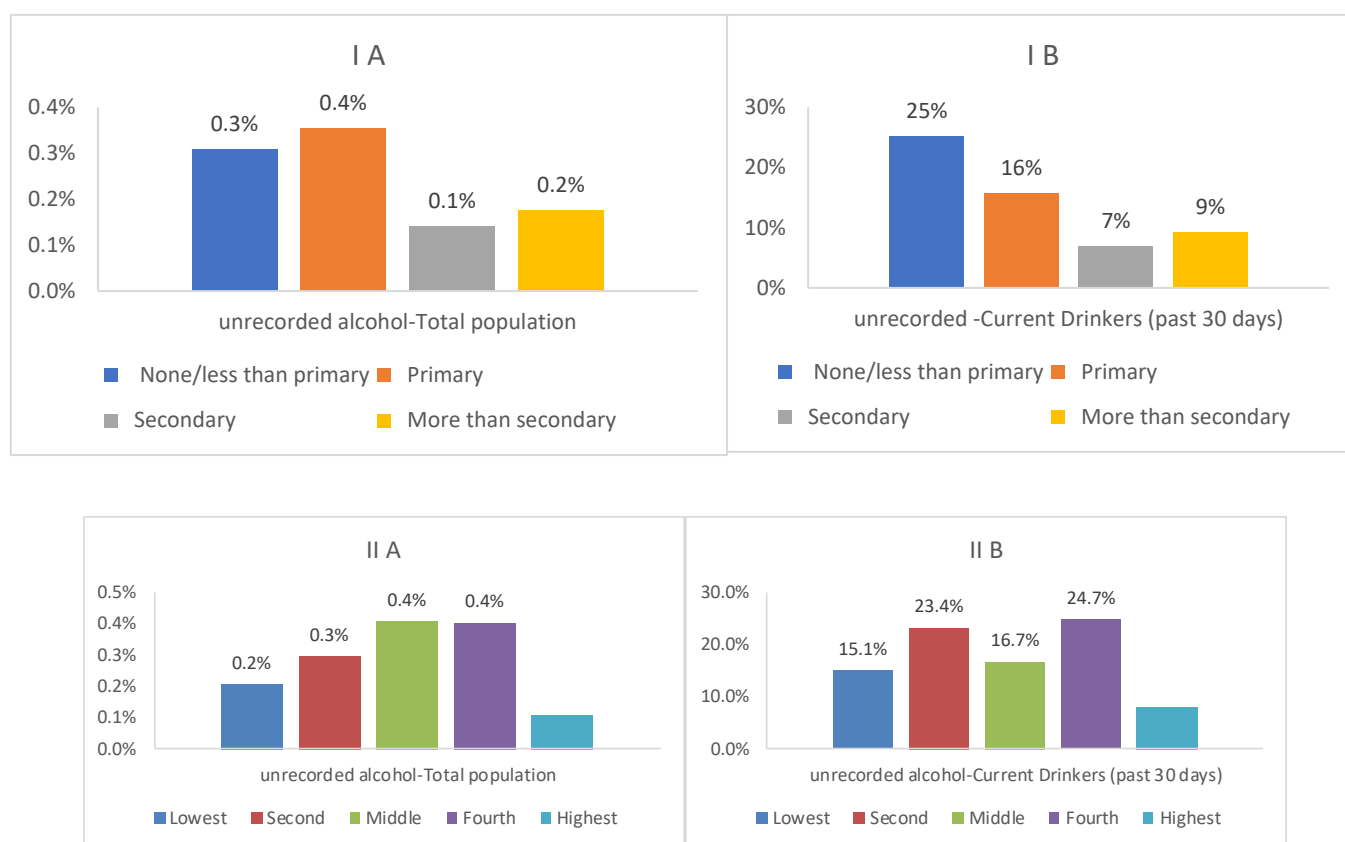
<sup>33</sup> See Table 5.3

**Figure 5.33 Differentials in consumption of unrecorded alcohol, amongst all adults (A) and amongst current drinkers (B), aged 18-69 years - by age, Bangladesh STEP Survey, 2018**



- 0.6% of men consumed unrecorded alcohol in the total population and 17.7% of men consumed it amongst the current drinkers. No women reported any consumption of unrecorded alcohol.
- There weren't significant differentials in consumption of unrecorded alcohol in urban-rural areas– both in the total population and amongst current drinkers.
- In the total population, the consumption of unrecorded alcohol was less than 0.5% across all levels of education and wealth, and followed a slightly skewed u-shaped pattern.
- Amongst the current drinkers, with increasing levels of education, there was a decrease in consumption of unrecorded alcohol. 25.1% of adults with no or less than primary education were the highest consumers of unrecorded alcohol, whereas only 6.9% and 9.2% of current drinkers, with secondary or more than secondary education reported consuming unrecorded alcohol.
- There was no significant pattern in consumption of unrecorded alcohol and increase in wealth.

**Figure 5.34 Differentials in consumption of unrecorded alcohol, amongst all adults (A) and amongst current drinkers (B), aged 18-69 years - by levels of education (IA and IB) and wealth (IIA and IIB), Bangladesh STEP Survey, 2018**



For more information on diet, see the following tables:

Table 5.1 Alcohol consumption: all participants: Percentage of people age 18-69 who are life abstainers, former drinkers and current drinkers; by background characteristics

Table Alcohol 5.2 Heavy episodic drinking: in total population and among current drinkers

Table Alcohol 5.3 Consumption of unrecorded alcohol

**Table 5.1 alcohol consumption: all participants**

Percentage of people age 18-69 who are life abstainers, former drinkers and current drinkers; by background characteristics, [Bangladesh, 2018]

| Background characteristic | Life-time abstainers<br>(Never consumed alcohol) | Former drinkers (haven't consumed alcohol in past 12 months) | Current drinkers (consumed alcohol in the past 12 month) | Consumed alcohol in past 12 months |                |                                   | Current drinker (consumed alcohol in past 30 days) | No. of People |
|---------------------------|--------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|------------------------------------|----------------|-----------------------------------|----------------------------------------------------|---------------|
|                           |                                                  |                                                              |                                                          | Daily or almost daily              | 1-4 days/ week | 1-3 days/months or < than a month |                                                    |               |
| <b>Age</b>                |                                                  |                                                              |                                                          |                                    |                |                                   |                                                    |               |
| 18-24                     | 89.4                                             | 2.9                                                          | 7.7                                                      | 0.0                                | 0.388          | 7.296                             | 2.4                                                | 1026          |
| 25-39                     | 89.7                                             | 5.5                                                          | 4.8                                                      | 0.4                                | 0.520          | 3.890                             | 1.5                                                | 3489          |
| 40-54                     | 93.3                                             | 4.1                                                          | 2.6                                                      | 0.1                                | 0.252          | 2.297                             | 1.0                                                | 2503          |
| 55-69                     | 95.8                                             | 3.6                                                          | 0.6                                                      | 0.0                                | 0.207          | 0.385                             | 0.4                                                | 1167          |
| <b>Sex</b>                |                                                  |                                                              |                                                          |                                    |                |                                   |                                                    |               |
| Women                     | 99.6                                             | 0.2                                                          | 0.2                                                      | 0.0                                | 0.020          | 0.139                             | 0.0                                                | 4381          |
| Men                       | 82.9                                             | 8.4                                                          | 8.7                                                      | 0.4                                | 0.758          | 7.587                             | 2.9                                                | 3804          |
| <b>Residence</b>          |                                                  |                                                              |                                                          |                                    |                |                                   |                                                    |               |
| Rural                     | 92.5                                             | 3.7                                                          | 3.8                                                      | 0.2                                | 0.411          | 3.164                             | 1.4                                                | 4183          |
| Urban                     | 87.4                                             | 6.1                                                          | 6.5                                                      | 0.2                                | 0.287          | 6.032                             | 1.8                                                | 4002          |
| <b>Division</b>           |                                                  |                                                              |                                                          |                                    |                |                                   |                                                    |               |
| Barishal                  | 96.4                                             | 2.5                                                          | 1.1                                                      | 0.0                                | 0.000          | 1.063                             | 0.3                                                | 986           |
| Chattogram                | 93.9                                             | 2.9                                                          | 3.2                                                      | 0.5                                | 0.538          | 2.185                             | 1.5                                                | 1053          |
| Dhaka Rural               | 86.0                                             | 8.1                                                          | 6.0                                                      | 0.0                                | 0.187          | 5.796                             | 1.3                                                | 997           |
| Khulna                    | 92.2                                             | 3.8                                                          | 4.0                                                      | 0.0                                | 0.000          | 4.013                             | 1.3                                                | 1040          |
| Mymensingh                | 96.5                                             | 1.9                                                          | 1.6                                                      | 0.0                                | 0.161          | 1.432                             | 0.6                                                | 1021          |
| Rajshahi                  | 90.9                                             | 3.2                                                          | 6.0                                                      | 0.3                                | 0.427          | 5.285                             | 2.3                                                | 1066          |
| Rangpur                   | 91.7                                             | 3.0                                                          | 5.3                                                      | 0.3                                | 0.577          | 4.408                             | 1.5                                                | 1009          |
| Sylhet                    | 92.0                                             | 3.7                                                          | 4.4                                                      | 0.2                                | 1.554          | 2.621                             | 2.7                                                | 1013          |
| <b>Education</b>          |                                                  |                                                              |                                                          |                                    |                |                                   |                                                    |               |
| None/less than primary    | 92.8                                             | 3.6                                                          | 3.6                                                      | 0.4                                | 0.3154         | 2.888                             | 1.2                                                | 3678          |
| Primary                   | 90.3                                             | 4.7                                                          | 5.0                                                      | 0.1                                | 0.5357         | 4.424                             | 2.0                                                | 2533          |
| Secondary                 | 92.2                                             | 4.0                                                          | 3.8                                                      | 0.0                                | 0.3104         | 3.511                             | 1.4                                                | 888           |
| More than secondary       | 88.0                                             | 5.9                                                          | 6.2                                                      | 0.0                                | 0.32           | 5.846                             | 1.1                                                | 1065          |
| <b>Wealth quintile</b>    |                                                  |                                                              |                                                          |                                    |                |                                   |                                                    |               |
| Lowest                    | 94.5                                             | 2.8                                                          | 2.7                                                      | 0.7                                | 0.171          | 1.845                             | 1.4                                                | 1639          |
| Second                    | 94.5                                             | 2.1                                                          | 3.4                                                      | 0.1                                | 0.267          | 3.039                             | 1.1                                                | 1670          |
| Middle                    | 89.7                                             | 6.0                                                          | 4.4                                                      | 0.1                                | 0.479          | 3.817                             | 1.9                                                | 1451          |
| Fourth                    | 90.3                                             | 4.9                                                          | 4.8                                                      | 0.0                                | 0.444          | 4.356                             | 1.5                                                | 1506          |
| Highest                   | 87.9                                             | 5.5                                                          | 6.6                                                      | 0.0                                | 0.558          | 5.997                             | 1.3                                                | 1919          |
| Total (18-39)             | 89.6                                             | 4.5                                                          | 5.9                                                      | 0.2                                | 0.470          | 5.171                             | 1.9                                                | 4515          |
| Total (40-69)             | 94.4                                             | 3.9                                                          | 1.7                                                      | 0.1                                | 0.231          | 1.422                             | 0.7                                                | 3670          |
| Total (25-69)             | 92.0                                             | 4.7                                                          | 3.3                                                      | 0.2                                | 0.382          | 2.710                             | 1.1                                                | 7159          |
| <b>Total 18-69</b>        | <b>91.4</b>                                      | <b>4.3</b>                                                   | <b>4.4</b>                                               | <b>0.2</b>                         | <b>0.4</b>     | <b>3.8</b>                        | <b>1.5</b>                                         | <b>8185</b>   |

**Table alcohol.5.2 Heavy episodic drinking: total**

Percentage of population aged 18-69 years who engaged in heavy episodic drinking (drank 6 or more standard drinks in a single occasion) in the past 30 days, by background characteristics, [Bangladesh, 2018]

| Background characteristic | In total population |             | Among current drinkers |            |
|---------------------------|---------------------|-------------|------------------------|------------|
| <b>Age</b>                |                     |             |                        |            |
| 18-24                     | 1.6                 | 1026        | 63.6                   | 20         |
| 25-39                     | 0.6                 | 3489        | 36.5                   | 50         |
| 40-54                     | 0.7                 | 2503        | 69.2                   | 27         |
| 55-69                     | 0.2                 | 1167        | 46.9                   | 9          |
| <b>Sex</b>                |                     |             |                        |            |
| Women                     | 0.0                 | 4381        | 55.1                   | 3          |
| Men                       | 1.5                 | 3804        | 52.2                   | 103        |
| <b>Residence</b>          |                     |             |                        |            |
| Rural                     | 0.8                 | 4183        | 55.1                   | 43         |
| Urban                     | 0.8                 | 4002        | 44.7                   | 63         |
| <b>Division</b>           |                     |             |                        |            |
| Barishal                  | 0.2                 | 986         | 92.0                   | 2          |
| Chattogram                | 0.4                 | 1053        | 30.5                   | 18         |
| Dhaka Rural               | 0.5                 | 997         | 38.5                   | 11         |
| Khulna                    | 0.9                 | 1040        | 69.5                   | 12         |
| Mymensingh                | 0.6                 | 1021        | 100.0                  | 7          |
| Rajshahi                  | 1.2                 | 1066        | 51.2                   | 15         |
| Rangpur                   | 0.7                 | 1009        | 50.7                   | 17         |
| Sylhet                    | 2.3                 | 1013        | 86.8                   | 24         |
| <b>Education</b>          |                     |             |                        |            |
| None/less than primary    | 0.5                 | 3678        | 39.2                   | 42         |
| Primary                   | 1.1                 | 2533        | 54.5                   | 41         |
| Secondary                 | 1.0                 | 888         | 70.9                   | 15         |
| More than secondary       | 0.8                 | 1065        | 67.9                   | 8          |
| <b>Wealth quintile</b>    |                     |             |                        |            |
| Lowest                    | 0.5                 | 1639        | 37.5                   | 19         |
| Second                    | 0.8                 | 1670        | 75.6                   | 16         |
| Middle                    | 1.2                 | 1451        | 63.7                   | 22         |
| Fourth                    | 0.5                 | 1506        | 33.1                   | 26         |
| Highest                   | 0.7                 | 1919        | 53.4                   | 23         |
| Total (18-39)             | 0.9                 | 4515        | 49.8                   | 70         |
| Total (40-69)             | 0.5                 | 3670        | 63.0                   | 36         |
| Total (25-69)             | 0.5                 | 7159        | 44.64                  | 86         |
| <b>Total 18-69</b>        | <b>0.8</b>          | <b>8185</b> | <b>52.2</b>            | <b>106</b> |

**Table Alcohol 5.3 Consumption of unrecorded alcohol**

Percentage of population aged 18-69 years who reporting consuming unrecorded alcohol\* in the past 7 days in the past 30 days, by background characteristics, [Bangladesh, 2018]

| Background characteristic | In total population |      | Percentage of current drinkers who drank unrecorded alcohol in the past 7 days |     |                                                                                           |
|---------------------------|---------------------|------|--------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------|
|                           | All %               | n    | All %                                                                          | N   | Mean percentage of total unrecorded alcohol out of total alcohol drank in the last 7 days |
| <b>Age</b>                |                     |      |                                                                                |     |                                                                                           |
| 18-24                     | 0.1                 | 1026 | 5.3                                                                            | 20  | 0.1                                                                                       |
| 25-39                     | 0.4                 | 3489 | 21.1                                                                           | 45  | 0.2                                                                                       |
| 40-54                     | 0.3                 | 2503 | 30.8                                                                           | 26  | 0.2                                                                                       |
| 55-69                     | 0.2                 | 1167 | 51.3                                                                           | 9   | 0.2                                                                                       |
| <b>Sex</b>                |                     |      |                                                                                |     |                                                                                           |
| Women                     | 0.0                 | 4381 | 0.0                                                                            | 3   | 0.0                                                                                       |
| Men                       | 0.6                 | 3804 | 17.7                                                                           | 97  | 0.2                                                                                       |
| <b>Residence</b>          |                     |      |                                                                                |     |                                                                                           |
| Rural                     | 0.3                 | 4183 | 18.4                                                                           | 42  | 0.2                                                                                       |
| Urban                     | 0.4                 | 4002 | 15.2                                                                           | 58  | 0.1                                                                                       |
| <b>Division</b>           |                     |      |                                                                                |     |                                                                                           |
| Barishal                  | 0.0                 | 986  | 8.0                                                                            | 2   | 0.0                                                                                       |
| Chattogram                | 0.1                 | 1053 | 8.5                                                                            | 18  | 0.0                                                                                       |
| Dhaka Rural               | 0.2                 | 997  | 14.4                                                                           | 11  | 0.1                                                                                       |
| Khulna                    | 0.6                 | 1040 | 33.9                                                                           | 9   | 0.3                                                                                       |
| Mymensingh                | 0.1                 | 1021 | 13.6                                                                           | 7   | 0.1                                                                                       |
| Rajshahi                  | 0.1                 | 1066 | 4.0                                                                            | 14  | 0.0                                                                                       |
| Rangpur                   | 0.5                 | 1009 | 35.4                                                                           | 16  | 0.4                                                                                       |
| Sylhet                    | 1.0                 | 1013 | 38.1                                                                           | 23  | 0.3                                                                                       |
| <b>Education</b>          |                     |      |                                                                                |     |                                                                                           |
| None/less than primary    | 0.3                 | 3678 | 25.1                                                                           | 41  | 0.2                                                                                       |
| Primary                   | 0.4                 | 2533 | 15.7                                                                           | 39  | 0.1                                                                                       |
| Secondary                 | 0.1                 | 888  | 6.9                                                                            | 13  | 0.1                                                                                       |
| More than secondary       | 0.2                 | 1065 | 9.2                                                                            | 7   | 0.1                                                                                       |
| <b>Wealth quintile</b>    |                     |      |                                                                                |     |                                                                                           |
| Lowest                    | 0.2                 | 1639 | 15.1                                                                           | 19  | 0.2                                                                                       |
| Second                    | 0.3                 | 1670 | 23.4                                                                           | 15  | 0.2                                                                                       |
| Middle                    | 0.4                 | 1451 | 16.7                                                                           | 19  | 0.1                                                                                       |
| Fourth                    | 0.4                 | 1506 | 24.7                                                                           | 24  | 0.2                                                                                       |
| Highest                   | 0.1                 | 1919 | 8.2                                                                            | 23  | 0.1                                                                                       |
| Total (18-39)             | 0.3                 | 4515 | 13.1                                                                           | 65  | 0.1                                                                                       |
| Total (40-69)             | 0.3                 | 3670 | 36.6                                                                           | 35  | 0.2                                                                                       |
| Total (25-69)             | 0.3                 | 7159 | 26.1                                                                           | 27  | 0.2                                                                                       |
| Total 18-69               | 0.3                 | 8185 | 17.5                                                                           | 100 | 0.15                                                                                      |

Current drinkers who consumed alcohol in the past 30 days

## Chapter 6 Diet

### Key findings

---

#### **Consumption of fruits and vegetables and knowledge:**

- Average servings of fruits and vegetables consumed per day: 2.6 servings (0.4 servings of fruit and 2.3 servings of vegetables per day).
- Prevalence of insufficient fruits and vegetables intake (< 5 servings a day): 89.6% in adults (89.3% women, 90.0% men).

#### **Knowledge on recommended intake for fruits and vegetables:**

- *Knowledge on recommended intake: Only 11.3% of adults reported the correct servings for recommended fruits and vegetables intake per day (12.5% women; 10.1% men).*

#### **Fats and oils used for cooking:**

- *Cooking oil/fats: Soybean oil (89.4%) is the most commonly used cooking oil for food preparation followed mustard oil (8.9%) and palm oil (1.2%).*

#### **Consumption of outside-of-home meals and snacks:**

- Meals eaten at a restaurant or takeaway per week: 1.2 times
  - Snacks eaten per day: 0.8 times
- 

### Introduction

An unhealthy diet is one of the 5 main risk factors for NCDs and the promotion of a healthy diet is one of the recommended components for policies and programs in the Global Action Plan against NCDs<sup>34</sup>. WHO recommends mean population intake of least 5 servings (400g) of fruits and vegetables as part of a healthy balanced diet which provides a rich mix of nutrients and bioactive substances for the prevention of diet-related non-communicable diseases<sup>35</sup>.

This chapter summarizes average fruits and vegetables consumption levels to reflect national average intake as well as populational knowledge on dietary recommendations on servings of fruits and vegetables to be consumed. Additionally, information on oils and fats used for meal preparation and average number of meals per day eaten that were not prepared at home were also summarized. The indicators presented will help Bangladesh

---

<sup>34</sup> World Health Organization. The Updated Appendix of 3 of the Global Action Plan for the Prevention and Control of NCDs 2013-2020. World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva.

<sup>35</sup> Joint WHO/FAO Consultation on Diet, Nutrition and the Prevention of Chronic Diseases (2002: Geneva, Switzerland) Diet, nutrition and the prevention of chronic diseases: report of a joint WHO/FAO expert consultation, Geneva, 28 January – 1 February 2002.

assess current trends in dietary patterns and guide policy and programs targeting the improvement of population dietary intake. Salt intake is summarized in Chapter-6.

---

### **Summary of current national policy and programs<sup>10</sup>:**

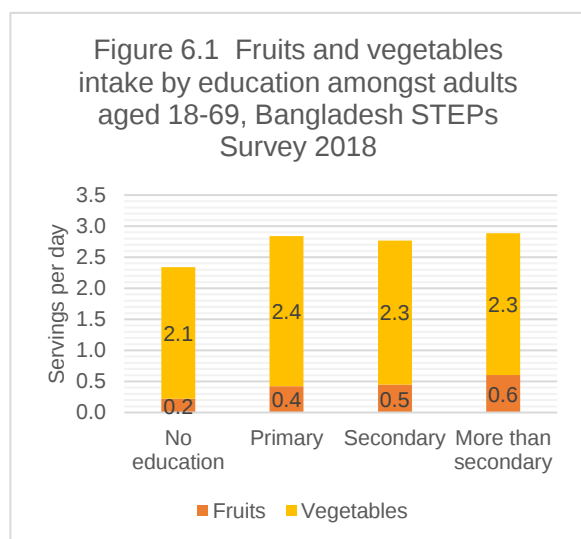
- Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases 2018-2025
  - The Food Safety Act 2013 of Bangladesh provides basis to ensure safe food products including content labeling. Promote nutritional labeling, according to but not limited to international standards, in particular the Codex Alimentarius, for all pre-packaged foods including those for which nutrition or health claims are made.
  - Disseminate the Bangladesh national dietary recommendations in mass media and through other channels.
  - Conduct public campaigns through mass media and social media to inform consumers about a healthy diet that is high in fruits and vegetables and low in saturated fats, sugars and salt.
  - Implement national salt reduction campaigns in mass media, schools and institutions.
  - Support consumer protection groups in Bangladesh to advocate and discourage marketing of unhealthy foods and non-alcoholic beverages to children.
  - Increase collaboration between salt/sodium reduction programmes and salt iodization programmes for increased public health gains and higher programme efficiency.
  - Place a higher tax on sugar-sweetened beverages.
  - Conduct counter advertisement to regulate marketing of unhealthy foods.
  - Ban advertising, promotion and sponsorship of unhealthy diet.
- 

### **6.1 Consumption of fruits and vegetables**

Information on consumption levels of fruits and vegetables amongst adults was elicited by asking number of days fruits and vegetables are consumed and usual number of servings consumed each of these days.

Average daily consumption of fruits and vegetables was 2.6 servings amongst adults. Average daily fruit consumption was 0.4 servings compared with average daily vegetable consumption of 2.3 servings. The prevalence of inadequate intake of fruits and vegetables per day (i.e. less than 5 servings a day) was 89.6% (**Table 6.1 and Table 6.2**).

## Patterns by background characteristics (Table 6.1 and Table 6.2):

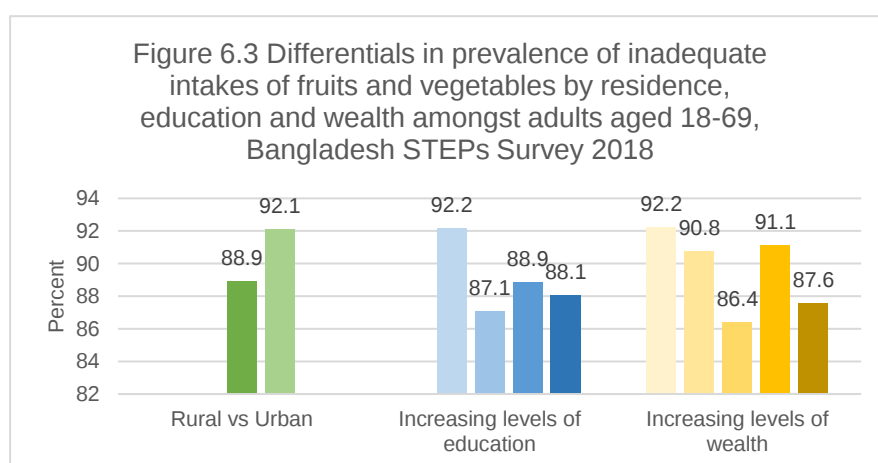
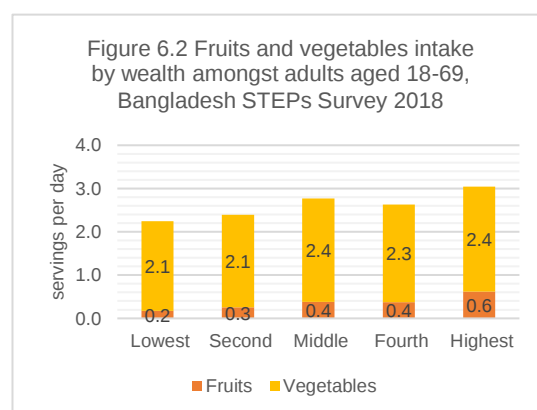


- Younger adults, urban residents, and those who are more educated (**Figure 6.1**) and wealthier (**Figure 6.2**) have higher average fruit consumption than their counterparts.
- Vegetable intake did not vary significantly by age, sex, level of education (**Figure 6.1**) or household wealth (**Figure 6.2**).
- Adults aged 25-39 had the lowest prevalence of inadequate fruits and vegetables intake and the highest prevalence was amongst adults aged 55-69.

- Prevalence of inadequate fruits and vegetables intakes are higher amongst adults who are urban residents, with lower education and are less wealthy (**Figure 6.3**)
- Highest prevalence of inadequate consumption of fruits and vegetable was in Rangpur (95.6%), and lowest was in Khulna (72.1%).

## 6.2 Knowledge on recommended fruits and vegetable intakes

Only 11.3% of adults reported the correct amount of servings for recommended intake of fruits and vegetables. This question is included in the Bangladesh survey for the first time.



### Patterns by background characteristics (Table 6.3):

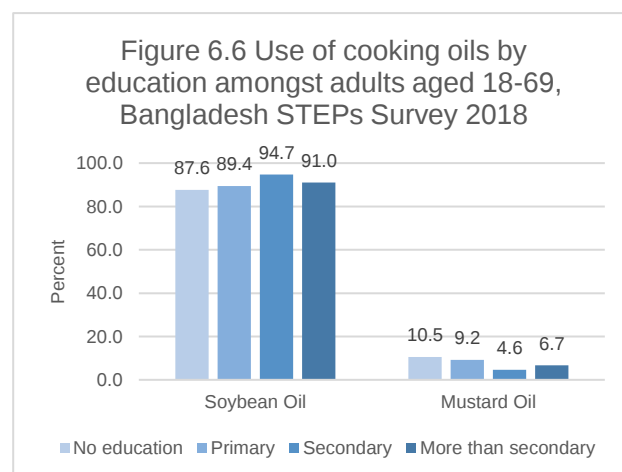
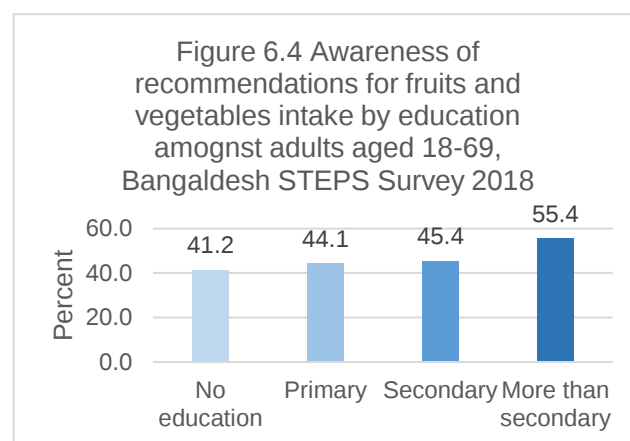
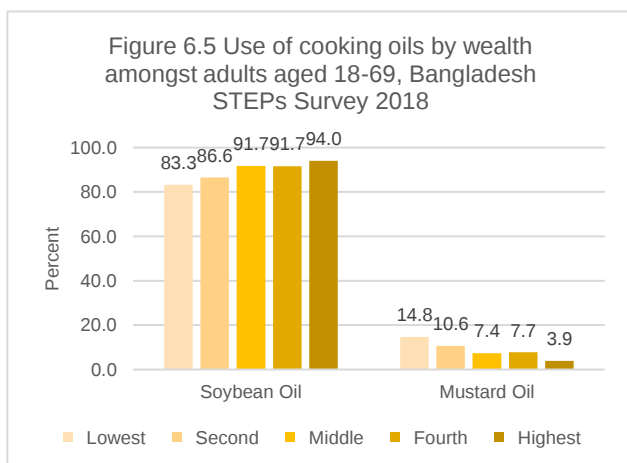
- The proportion of adults with correct knowledge is low across all age groups.
- Adults who are women, rural residents and more educated (**Figure 6.4**) are more aware of the recommendation.
- Adults with the highest household wealth are most aware of recommendations however large variation exists across other wealth quintiles.
- Awareness is high in Khulna (33.4%), Mymensingh (16.6%) and Sylhet (26.3%), which are also the divisions with the highest prevalence of adequate fruits and vegetables intakes as noted before. ( **Figure 6.6**)

### 6.3 Fats and oils used for cooking and outside-of-home food consumption (Table 6.4)

Most commonly used cooking oil for food preparation is soybean oil (89.4%) followed by mustard oil (8.9%) and palm oil (1.2%).

#### Patterns by background characteristics (Table 5.4):

- Use of soybean oil increases with increased wealth and education level, while the opposite occurs with mustard oil (**Figure 6.5** and **Figure 6.6**).



#### **6.4 Consumption of outside-of-home meals and snacks (Table 6.5)**

Adults eat on average 1.2 times per week meals from a restaurant or takeaway and eat snacks such as *singara*, *samucha*, *puri*, chips and *chanachur* 0.8 times per day.

##### **Patterns by background characteristics (Table 6.5):**

- Adults who are men, younger and urban residents consume meals from outside-of-home significantly and snacks more often than their counterpart.
- Consumption of outside-of-home meals did not differ by education or household wealth.
- Consumption of snacks increased with increased household wealth

##### **List of Tables:**

For more information on diet, see the following tables:

Table Diet 6.1 Mean Servings of fruit and vegetable consumption.

Table Diet 6.2 Prevalence of adequate consumption of fruits and vegetable

Table Diet 6.3 Knowledge on adequate fruits and vegetable recommendations

Table Diet 6.4 Types of oil or fat most often used for meal preparation

Table Diet 6.5 Frequency of eating meals not prepared at a home

**Table Diet.6.1 Mean Servings of fruit and vegetable consumption: Total**

Mean number of servings of fruit and vegetable intake per day of adults aged 18-69, according to background characteristics [Bangladesh 2018]

| Background characteristic | Mean servings of fruit intake per day: |        |     |                  | Mean servings of vegetable intake per day: |        |     |                  | Mean servings of fruit and vegetable intake per day*: |        |     |                  |
|---------------------------|----------------------------------------|--------|-----|------------------|--------------------------------------------|--------|-----|------------------|-------------------------------------------------------|--------|-----|------------------|
|                           | Mean                                   | 95% CI |     | Number of adults | Mean                                       | 95% CI |     | Number of adults | Mean                                                  | 95% CI |     | Number of adults |
| <b>Age</b>                |                                        |        |     |                  |                                            |        |     |                  |                                                       |        |     |                  |
| 18-24                     | 0.4                                    | 0.4    | 0.5 | 1016             | 2.3                                        | 2.1    | 2.5 | 1020             | 2.7                                                   | 2.5    | 2.9 | 1026             |
| 25-39                     | 0.4                                    | 0.3    | 0.4 | 3396             | 2.4                                        | 2.2    | 2.5 | 3456             | 2.7                                                   | 2.6    | 2.9 | 3483             |
| 40-54                     | 0.3                                    | 0.3    | 0.3 | 2413             | 2.2                                        | 2.1    | 2.3 | 2485             | 2.5                                                   | 2.3    | 2.6 | 2499             |
| 55-69                     | 0.3                                    | 0.2    | 0.3 | 1106             | 2.1                                        | 1.9    | 2.2 | 1151             | 2.3                                                   | 2.1    | 2.5 | 1161             |
| <b>Sex</b>                |                                        |        |     |                  |                                            |        |     |                  |                                                       |        |     |                  |
| Women                     | 0.4                                    | 0.3    | 0.4 | 4336             | 2.4                                        | 2.2    | 2.5 | 4342             | 2.7                                                   | 2.6    | 2.8 | 4379             |
| Men                       | 0.4                                    | 0.3    | 0.4 | 3595             | 2.2                                        | 2.0    | 2.3 | 3779             | 2.5                                                   | 2.3    | 2.7 | 3790             |
| <b>Residence</b>          |                                        |        |     |                  |                                            |        |     |                  |                                                       |        |     |                  |
| Rural                     | 0.3                                    | 0.3    | 0.4 | 4034             | 2.4                                        | 2.2    | 2.5 | 4148             | 2.7                                                   | 2.5    | 2.8 | 4173             |
| Urban                     | 0.5                                    | 0.4    | 0.5 | 3897             | 1.9                                        | 1.8    | 2.1 | 3973             | 2.4                                                   | 2.2    | 2.5 | 3996             |
| <b>Division</b>           |                                        |        |     |                  |                                            |        |     |                  |                                                       |        |     |                  |
| Barishal                  | 0.3                                    | 0.3    | 0.4 | 976              | 1.7                                        | 1.5    | 1.9 | 983              | 2.0                                                   | 1.7    | 2.3 | 986              |
| Chattogram                | 0.3                                    | 0.2    | 0.3 | 1037             | 2.0                                        | 1.7    | 2.2 | 1052             | 2.3                                                   | 2.0    | 2.5 | 1052             |
| Dhaka Rural               | 0.4                                    | 0.3    | 0.5 | 992              | 2.0                                        | 1.8    | 2.2 | 996              | 2.4                                                   | 2.2    | 2.6 | 997              |
| Khulna                    | 0.6                                    | 0.5    | 0.7 | 1025             | 3.4                                        | 2.9    | 3.9 | 1005             | 3.9                                                   | 3.4    | 4.4 | 1039             |
| Mymensingh                | 0.3                                    | 0.2    | 0.3 | 969              | 2.6                                        | 2.3    | 3.0 | 1016             | 2.9                                                   | 2.5    | 3.3 | 1017             |
| Rajdhani                  | 0.3                                    | 0.3    | 0.4 | 1038             | 2.2                                        | 2.0    | 2.4 | 1053             | 2.5                                                   | 2.2    | 2.8 | 1060             |
| Rangpur                   | 0.3                                    | 0.2    | 0.3 | 939              | 1.8                                        | 1.6    | 1.9 | 1005             | 2.0                                                   | 1.8    | 2.2 | 1006             |
| Sylhet                    | 0.3                                    | 0.2    | 0.3 | 955              | 3.2                                        | 2.8    | 3.7 | 1011             | 3.5                                                   | 3.0    | 3.9 | 1012             |
| <b>Education</b>          |                                        |        |     |                  |                                            |        |     |                  |                                                       |        |     |                  |
| No education              | 0.2                                    | 0.2    | 0.2 | 3517             | 2.1                                        | 2.0    | 2.3 | 3639             | 2.3                                                   | 2.2    | 2.5 | 3668             |
| Primary                   | 0.4                                    | 0.4    | 0.5 | 2473             | 2.4                                        | 2.3    | 2.6 | 2517             | 2.8                                                   | 2.7    | 3.0 | 2530             |
| Secondary                 | 0.5                                    | 0.4    | 0.5 | 874              | 2.3                                        | 2.1    | 2.5 | 883              | 2.7                                                   | 2.5    | 3.0 | 886              |
| More than secondary       | 0.6                                    | 0.5    | 0.7 | 1047             | 2.3                                        | 2.1    | 2.5 | 1061             | 2.9                                                   | 2.7    | 3.1 | 1064             |
| <b>Wealth quintile</b>    |                                        |        |     |                  |                                            |        |     |                  |                                                       |        |     |                  |
| Lowest                    | 0.2                                    | 0.1    | 0.2 | 1565             | 2.1                                        | 2.0    | 2.3 | 1612             | 2.3                                                   | 2.1    | 2.5 | 1631             |
| Second                    | 0.3                                    | 0.2    | 0.3 | 1606             | 2.1                                        | 2.0    | 2.3 | 1657             | 2.4                                                   | 2.2    | 2.5 | 1668             |
| Middle                    | 0.4                                    | 0.3    | 0.4 | 1400             | 2.4                                        | 2.3    | 2.7 | 1443             | 2.9                                                   | 2.7    | 3.1 | 1450             |
| Fourth                    | 0.4                                    | 0.3    | 0.4 | 1471             | 2.3                                        | 2.1    | 2.4 | 1497             | 2.6                                                   | 2.4    | 2.8 | 1501             |
| Highest                   | 0.6                                    | 0.6    | 0.7 | 1889             | 2.4                                        | 2.1    | 2.5 | 1912             | 2.9                                                   | 2.7    | 3.1 | 1919             |
| Total (18-39)             | 0.4                                    | 0.4    | 0.4 | 4412             | 2.3                                        | 2.2    | 2.4 | 4485             | 2.7                                                   | 2.6    | 2.8 | 4509             |
| Total (40-69)             | 0.3                                    | 0.3    | 0.3 | 3519             | 2.1                                        | 2.0    | 2.3 | 3636             | 2.4                                                   | 2.3    | 2.5 | 3660             |
| Total (25-69)             | 0.3                                    | 0.3    | 0.4 | 6915             | 2.3                                        | 2.1    | 2.4 | 7101             | 2.6                                                   | 2.5    | 2.7 | 7143             |
| <b>Total (18-69)</b>      | 0.4                                    | 0.3    | 0.4 | 7931             | 2.3                                        | 2.2    | 2.4 | 8121             | 2.6                                                   | 2.5    | 2.7 | 8169             |

\*Respondents who's response was missing or who's response was "don't know" to one of either fruit or vegetable intake questions were assumed to be 0 and summed to produce mean fruits and vegetables intake. Respondents who's response was either missing or who's response was "don't know" to both fruits and vegetables intake questions were excluded from the total sample.

**Table Diet.6.2 Prevalence of adequate consumption of fruits and vegetable\***

| Background characteristic | Total           |                   |                           | Women           |                   |                     | Men             |                   |                   |
|---------------------------|-----------------|-------------------|---------------------------|-----------------|-------------------|---------------------|-----------------|-------------------|-------------------|
|                           | <5 servings/day | >= 5 servings/day | Number of respondents (N) | <5 servings/day | >= 5 servings/day | Number of women (N) | <5 servings/day | >= 5 servings/day | Number of men (N) |
| <b>Age</b>                |                 |                   |                           |                 |                   |                     |                 |                   |                   |
| 18-24                     | 90.5            | 9.5               | 1026                      | 89.7            | 10.3              | 621                 | 91.4            | 8.6               | 405               |
| 25-39                     | 87.3            | 12.7              | 3483                      | 86.6            | 13.4              | 2017                | 88.0            | 12.1              | 1466              |
| 40-54                     | 91.1            | 8.9               | 2499                      | 91.6            | 8.4               | 1284                | 90.6            | 9.4               | 1215              |
| 55-69                     | 92.3            | 7.7               | 1161                      | 93.1            | 7.0               | 457                 | 91.7            | 8.3               | 704               |
| <b>Sex</b>                |                 |                   |                           |                 |                   |                     |                 |                   |                   |
| Women                     | 89.3            | 10.7              | 4379                      | N/A             | N/A               | N/A                 | N/A             | N/A               | N/A               |
| Men                       | 90.0            | 10.1              | 3790                      | N/A             | N/A               | N/A                 | N/A             | N/A               | N/A               |
| <b>Residence</b>          |                 |                   |                           |                 |                   |                     |                 |                   |                   |
| Rural                     | 88.9            | 11.1              | 4173                      | 88.7            | 11.3              | 2263                | 89.1            | 10.9              | 1910              |
| Urban                     | 92.1            | 7.9               | 3996                      | 91.5            | 8.5               | 2116                | 92.7            | 7.3               | 1880              |
| <b>Division</b>           |                 |                   |                           |                 |                   |                     |                 |                   |                   |
| Barishal                  | 94.9            | 5.1               | 986                       | 93.1            | 6.9               | 540                 | 96.9            | 3.1               | 446               |
| Chattogram                | 94.9            | 5.1               | 1052                      | 98.3            | 1.7               | 552                 | 90.8            | 9.2               | 500               |
| Dhaka                     | 94.0            | 6.0               | 997                       | 94.1            | 5.9               | 520                 | 93.9            | 6.1               | 477               |
| Khulna                    | 72.1            | 27.9              | 1039                      | 80.8            | 19.3              | 559                 | 63.8            | 36.2              | 480               |
| Mymensingh                | 83.0            | 17.1              | 1017                      | 69.9            | 30.1              | 552                 | 98.5            | 1.5               | 465               |
| Rajdhani                  | 92.8            | 7.2               | 1060                      | 91.0            | 9.1               | 569                 | 94.4            | 5.6               | 491               |
| Rangpur                   | 95.6            | 4.4               | 1006                      | 93.6            | 6.4               | 542                 | 97.6            | 2.4               | 464               |
| Sylhet                    | 76.5            | 23.5              | 1012                      | 71.3            | 28.7              | 545                 | 82.2            | 17.8              | 467               |
| <b>Education</b>          |                 |                   |                           |                 |                   |                     |                 |                   |                   |
| No education              | 92.2            | 7.8               | 3668                      | 92.8            | 7.2               | 1958                | 91.5            | 8.5               | 1710              |
| Primary                   | 87.1            | 12.9              | 2530                      | 86.9            | 13.1              | 1525                | 87.3            | 12.7              | 1005              |
| Secondary                 | 88.9            | 11.1              | 886                       | 89.3            | 10.7              | 434                 | 88.4            | 11.6              | 452               |
| More than secondary       | 88.1            | 11.9              | 1064                      | 82.1            | 17.9              | 441                 | 91.4            | 8.6               | 623               |
| <b>Wealth quintile</b>    |                 |                   |                           |                 |                   |                     |                 |                   |                   |
| Lowest                    | 92.2            | 7.8               | 1631                      | 91.0            | 9.1               | 977                 | 93.9            | 6.1               | 654               |
| Second                    | 90.8            | 9.2               | 1668                      | 91.3            | 8.7               | 911                 | 90.2            | 9.8               | 757               |
| Middle                    | 86.4            | 13.6              | 1450                      | 85.5            | 14.5              | 725                 | 87.1            | 12.9              | 725               |
| Fourth                    | 91.1            | 8.9               | 1501                      | 90.2            | 9.8               | 718                 | 92.0            | 8.0               | 783               |
| Highest                   | 87.6            | 12.4              | 1919                      | 88.0            | 12.0              | 1048                | 87.1            | 12.9              | 871               |
| Total (18-39)             | 88.5            | 11.5              | 4509                      | 87.8            | 12.2              | 2638                | 89.2            | 10.8              | 1871              |
| Total (40-69)             | 91.7            | 8.3               | 3660                      | 92.2            | 7.8               | 1741                | 91.1            | 8.9               | 1919              |
| Total (25-69)             | 89.4            | 10.6              | 7143                      | 89.2            | 10.8              | 3758                | 89.5            | 10.5              | 3385              |
| <b>Total (18-69)</b>      | <b>89.6</b>     | <b>10.4</b>       | <b>8169</b>               | <b>89.3</b>     | <b>10.7</b>       | <b>4379</b>         | <b>90.0</b>     | <b>10.1</b>       | <b>3790</b>       |

\*Respondents who's response was missing or who's response was "don't know" to one of either fruit or vegetable intake questions were assumed to be 0 and summed to produce mean fruits and vegetables intake. Respondents who's response was either missing or who's response was "don't know" to both fruits and vegetables intake questions were excluded from the total sample.

**Table Diet.6.3 Knowledge on adequate fruits and vegetable recommendations**

Percent of men and women aged 18-69 who are aware of adequate fruits and vegetables intake recommendations, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Total              |                    |            |                      | Women              |                    |            |                     | Men                |                    |            |                   |
|---------------------------|--------------------|--------------------|------------|----------------------|--------------------|--------------------|------------|---------------------|--------------------|--------------------|------------|-------------------|
|                           | <5 servings / day) | >= 5 servings/ day | Don't know | Number of adults (N) | <5 servings / day) | >= 5 servings/ day | Don't know | Number of women (N) | <5 servings / day) | >= 5 servings/ day | Don't know | Number of men (N) |
| <b>Age</b>                |                    |                    |            |                      |                    |                    |            |                     |                    |                    |            |                   |
| 18-24                     | 47.3               | 11.9               | 40.8       | 1026                 | 50.6               | 12.9               | 36.5       | 621                 | 43.2               | 10.7               | 46.1       | 405               |
| 25-39                     | 45.2               | 11.7               | 43.1       | 3489                 | 50.1               | 14.1               | 35.8       | 2019                | 40.1               | 9.3                | 50.7       | 1470              |
| 40-54                     | 44.4               | 11.5               | 44.1       | 2503                 | 51.0               | 11.5               | 37.5       | 1284                | 37.7               | 11.6               | 50.7       | 1219              |
| 55-69                     | 38.0               | 9.2                | 52.8       | 1167                 | 42.8               | 8.5                | 48.7       | 457                 | 34.1               | 9.7                | 56.2       | 710               |
| <b>Sex</b>                |                    |                    |            |                      |                    |                    |            |                     |                    |                    |            |                   |
| Women                     | 49.4               | 12.5               | 38.2       | 4381                 | N/A                | N/A                | N/A        | N/A                 | N/A                | N/A                | N/A        | N/A               |
| Men                       | 39.2               | 10.1               | 50.7       | 3804                 | N/A                | N/A                | N/A        | N/A                 | N/A                | N/A                | N/A        | N/A               |
| <b>Residence</b>          |                    |                    |            |                      |                    |                    |            |                     |                    |                    |            |                   |
| Rural                     | 44.2               | 12.2               | 43.7       | 4183                 | 49.6               | 13.5               | 36.9       | 2264                | 38.5               | 10.8               | 50.8       | 1919              |
| Urban                     | 44.9               | 8.3                | 46.7       | 4002                 | 48.5               | 8.7                | 42.7       | 2117                | 41.5               | 8.0                | 50.5       | 1885              |
| <b>Division</b>           |                    |                    |            |                      |                    |                    |            |                     |                    |                    |            |                   |
| Barishal                  | 43.8               | 2.2                | 54.0       | 986                  | 28.5               | 2.5                | 68.9       | 540                 | 60.0               | 1.8                | 38.2       | 446               |
| Chattogram                | 61.0               | 5.0                | 34.1       | 1053                 | 73.8               | 3.6                | 22.6       | 552                 | 45.5               | 6.6                | 47.9       | 501               |
| Dhaka Rural               | 37.9               | 7.8                | 54.3       | 997                  | 30.3               | 6.5                | 63.2       | 520                 | 45.1               | 9.2                | 45.7       | 477               |
| Khulna                    | 22.7               | 33.4               | 43.8       | 1040                 | 25.6               | 34.8               | 39.6       | 560                 | 20.0               | 32.1               | 47.9       | 480               |
| Mymensingh                | 56.6               | 16.6               | 26.8       | 1021                 | 43.0               | 24.9               | 32.1       | 552                 | 72.7               | 6.8                | 20.5       | 469               |
| Rajdhani                  | 47.2               | 7.4                | 45.4       | 1066                 | 68.6               | 4.0                | 27.3       | 569                 | 28.3               | 10.4               | 61.4       | 497               |
| Rangpur                   | 43.9               | 3.2                | 52.9       | 1009                 | 71.7               | 5.6                | 22.8       | 543                 | 16.8               | 0.9                | 82.3       | 466               |
| Sylhet                    | 34.2               | 26.3               | 39.4       | 1013                 | 35.9               | 42.2               | 21.9       | 545                 | 32.4               | 8.9                | 58.7       | 468               |
| <b>Education</b>          |                    |                    |            |                      |                    |                    |            |                     |                    |                    |            |                   |
| No education              | 41.2               | 10.2               | 48.6       | 3678                 | 47.7               | 10.6               | 41.8       | 1960                | 34.4               | 9.9                | 55.7       | 1718              |
| Primary                   | 44.1               | 12.6               | 43.3       | 2533                 | 49.3               | 15.6               | 35.1       | 1525                | 37.2               | 8.6                | 54.2       | 1008              |
| Secondary                 | 45.4               | 10.0               | 44.6       | 888                  | 47.7               | 9.9                | 42.4       | 434                 | 43.3               | 10.2               | 46.6       | 454               |
| More than secondary       | 55.4               | 13.4               | 31.2       | 1065                 | 61.6               | 13.4               | 25.0       | 441                 | 52.0               | 13.4               | 34.7       | 624               |
| <b>Wealth quintile</b>    |                    |                    |            |                      |                    |                    |            |                     |                    |                    |            |                   |
| Lowest                    | 42.4               | 9.7                | 48.0       | 1639                 | 50.9               | 11.9               | 37.2       | 978                 | 31.2               | 6.7                | 62.2       | 661               |
| Second                    | 42.4               | 11.8               | 45.8       | 1670                 | 49.6               | 14.3               | 36.1       | 912                 | 34.8               | 9.2                | 56.0       | 758               |
| Middle                    | 46.0               | 12.5               | 41.5       | 1451                 | 54.0               | 13.6               | 32.5       | 725                 | 39.9               | 11.6               | 48.5       | 726               |
| Fourth                    | 43.4               | 9.3                | 47.3       | 1506                 | 46.7               | 10.8               | 42.5       | 718                 | 40.2               | 7.9                | 51.9       | 788               |
| Highest                   | 47.7               | 13.3               | 39.0       | 1919                 | 46.2               | 11.8               | 42.0       | 1048                | 49.4               | 15.1               | 35.6       | 871               |
| Total (18-39)             | 46.0               | 11.8               | 42.2       | 4515                 | 50.3               | 13.6               | 36.1       | 2640                | 41.2               | 9.8                | 49.0       | 1875              |
| Total (40-69)             | 41.5               | 10.4               | 48.1       | 3670                 | 47.5               | 10.2               | 42.3       | 1741                | 36.0               | 10.6               | 53.4       | 1929              |
| Total (25-69)             | 43.4               | 11.1               | 45.5       | 7159                 | 48.9               | 12.3               | 38.8       | 3760                | 38.0               | 9.9                | 52.0       | 3399              |
| <b>Total (18-69)</b>      | 44.3               | 11.3               | 44.3       | 8185                 | 49.4               | 12.5               | 38.2       | 4381                | 39.2               | 10.1               | 50.7       | 3804              |

**Table Diet.6.4 Types of oil or fat most often used for meal preparation**

Percent of adults (18-69) who responded to using different types of oils/fat for meal preparation, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Percent of adults who responded to using different types of oils/fat for meal preparation: |            |             |                                       | Total (%)    | Number of respondents (N) |
|---------------------------|--------------------------------------------------------------------------------------------|------------|-------------|---------------------------------------|--------------|---------------------------|
|                           | Soybean Oil                                                                                | Palm Oil   | Mustard Oil | Sunflower oil/Rice bran/ Ghee/ Others |              |                           |
| <b>Age</b>                |                                                                                            |            |             |                                       |              |                           |
| 18-24                     | 91.8                                                                                       | 1.0        | 7.0         | 0.2                                   | 100.0        | 1026                      |
| 25-39                     | 89.6                                                                                       | 1.0        | 8.9         | 0.5                                   | 100.0        | 3489                      |
| 40-54                     | 87.9                                                                                       | 2.0        | 9.4         | 0.7                                   | 100.0        | 2503                      |
| 55-69                     | 87.5                                                                                       | 0.9        | 11.1        | 0.5                                   | 100.0        | 1167                      |
| <b>Sex</b>                |                                                                                            |            |             |                                       |              |                           |
| Women                     | 90.2                                                                                       | 1.1        | 8.2         | 0.5                                   | 100.0        | 4381                      |
| Men                       | 88.7                                                                                       | 1.4        | 9.6         | 0.4                                   | 100.0        | 3804                      |
| <b>Residence</b>          |                                                                                            |            |             |                                       |              |                           |
| Rural                     | 88.0                                                                                       | 1.2        | 10.5        | 0.2                                   | 100.0        | 4183                      |
| Urban                     | 94.3                                                                                       | 1.1        | 3.4         | 1.1                                   | 100.0        | 4002                      |
| <b>Division</b>           |                                                                                            |            |             |                                       |              |                           |
| Barishal                  | 79.5                                                                                       | 11.5       | 8.9         | 0.1                                   | 100.0        | 986                       |
| Chattogram                | 92.5                                                                                       | 0.4        | 7.0         | 0.1                                   | 100.0        | 1053                      |
| Dhaka Rural               | 92.3                                                                                       | 0.6        | 6.1         | 1.0                                   | 100.0        | 997                       |
| Khulna                    | 91.7                                                                                       | 0.8        | 7.2         | 0.3                                   | 100.0        | 1040                      |
| Mymensingh                | 85.2                                                                                       | 0.4        | 14.4        | 0.0                                   | 100.0        | 1021                      |
| Rajshahi                  | 83.7                                                                                       | 0.7        | 15.5        | 0.1                                   | 100.0        | 1066                      |
| Rangpur                   | 87.5                                                                                       | 0.7        | 11.6        | 0.2                                   | 100.0        | 1009                      |
| Sylhet                    | 93.7                                                                                       | 0.9        | 3.8         | 1.6                                   | 100.0        | 1013                      |
| <b>Education</b>          |                                                                                            |            |             |                                       |              |                           |
| No education              | 87.6                                                                                       | 1.8        | 10.5        | 0.1                                   | 100.0        | 3678                      |
| Primary                   | 89.4                                                                                       | 1.1        | 9.2         | 0.3                                   | 100.0        | 2533                      |
| Secondary                 | 94.7                                                                                       | 0.3        | 4.6         | 0.4                                   | 100.0        | 888                       |
| More than secondary       | 91.0                                                                                       | 0.5        | 6.7         | 1.8                                   | 100.0        | 1065                      |
| <b>Wealth quintile</b>    |                                                                                            |            |             |                                       |              |                           |
| Lowest                    | 83.3                                                                                       | 1.8        | 14.8        | 0.1                                   | 100.0        | 1639                      |
| Second                    | 86.6                                                                                       | 2.5        | 10.6        | 0.2                                   | 100.0        | 1670                      |
| Middle                    | 91.7                                                                                       | 0.8        | 7.4         | 0.1                                   | 100.0        | 1451                      |
| Fourth                    | 91.7                                                                                       | 0.5        | 7.7         | 0.1                                   | 100.0        | 1506                      |
| Highest                   | 94.0                                                                                       | 0.2        | 3.9         | 1.8                                   | 100.0        | 1919                      |
| Total (18-39)             | 90.4                                                                                       | 1.0        | 8.2         | 0.4                                   | 100.0        | 4515                      |
| Total (40-69)             | 87.7                                                                                       | 1.5        | 10.2        | 0.6                                   | 100.0        | 3670                      |
| Total (25-69)             | 88.7                                                                                       | 1.3        | 9.5         | 0.5                                   | 100.0        | 7159                      |
| <b>Total (18-69)</b>      | <b>89.4</b>                                                                                | <b>1.2</b> | <b>8.9</b>  | <b>0.5</b>                            | <b>100.0</b> | <b>8185</b>               |

**Table Diet 6.5 Frequency of eating meals not prepared at a home**

Mean number of times adults aged 18-69 eat in a restaurant or take away per week; mean number of times eat snacks per day, according to background characteristics [Bangladesh,2018]

| Background characteristic | Mean number of times eat in a restaurant or take away per week: |            |            |                           | Mean number of times eat snacks* per day |            |            |                           |
|---------------------------|-----------------------------------------------------------------|------------|------------|---------------------------|------------------------------------------|------------|------------|---------------------------|
|                           | Mean                                                            | 95%CI      |            | Number of respondents (n) | Mean                                     | 95%CI      |            | Number of respondents (n) |
| <b>Age</b>                |                                                                 |            |            |                           |                                          |            |            |                           |
| 18-24                     | 1.3                                                             | 1.1        | 1.6        | 999                       | 1.0                                      | 0.9        | 1.1        | 1014                      |
| 25-39                     | 1.4                                                             | 1.3        | 1.6        | 3394                      | 0.9                                      | 0.8        | 1.0        | 3422                      |
| 40-54                     | 1.2                                                             | 1.1        | 1.4        | 2397                      | 0.6                                      | 0.6        | 0.7        | 2416                      |
| 55-69                     | 0.7                                                             | 0.5        | 0.8        | 1116                      | 0.4                                      | 0.3        | 0.5        | 1122                      |
| <b>Sex</b>                |                                                                 |            |            |                           |                                          |            |            |                           |
| Women                     | 0.3                                                             | 0.2        | 0.4        | 4339                      | 0.6                                      | 0.5        | 0.7        | 4343                      |
| Men                       | 2.2                                                             | 2.0        | 2.4        | 3567                      | 0.9                                      | 0.8        | 1.0        | 3631                      |
| <b>Residence</b>          |                                                                 |            |            |                           |                                          |            |            |                           |
| Rural                     | 1.1                                                             | 1.0        | 1.2        | 4025                      | 0.7                                      | 0.6        | 0.8        | 4084                      |
| Urban                     | 1.7                                                             | 1.5        | 2.0        | 3881                      | 1.0                                      | 0.9        | 1.1        | 3890                      |
| <b>Division</b>           |                                                                 |            |            |                           |                                          |            |            |                           |
| Barishal                  | 0.9                                                             | 0.7        | 1.1        | 983                       | 0.6                                      | 0.5        | 0.8        | 985                       |
| Chattogram                | 1.6                                                             | 1.2        | 2.0        | 1038                      | 0.8                                      | 0.6        | 0.9        | 1041                      |
| Dhaka                     | 1.0                                                             | 0.8        | 1.3        | 991                       | 0.8                                      | 0.6        | 0.9        | 993                       |
| Khulna                    | 0.7                                                             | 0.5        | 0.9        | 1036                      | 1.1                                      | 0.9        | 1.2        | 1039                      |
| Mymensingh                | 0.9                                                             | 0.7        | 1.1        | 912                       | 0.6                                      | 0.4        | 0.8        | 929                       |
| Rajshahi                  | 1.5                                                             | 1.2        | 1.8        | 1059                      | 0.5                                      | 0.3        | 0.7        | 1059                      |
| Rangpur                   | 1.7                                                             | 1.4        | 2.1        | 967                       | 1.0                                      | 0.8        | 1.3        | 972                       |
| Sylhet                    | 1.3                                                             | 1.0        | 1.6        | 920                       | 0.8                                      | 0.7        | 0.9        | 956                       |
| <b>Education</b>          |                                                                 |            |            |                           |                                          |            |            |                           |
| No education              | 1.3                                                             | 1.1        | 1.5        | 3548                      | 0.6                                      | 0.6        | 0.7        | 3573                      |
| Primary                   | 1.2                                                             | 1.0        | 1.4        | 2450                      | 0.9                                      | 0.8        | 0.9        | 2469                      |
| Secondary                 | 1.2                                                             | 0.9        | 1.4        | 859                       | 0.9                                      | 0.8        | 1.0        | 877                       |
| More than secondary       | 1.2                                                             | 0.9        | 1.4        | 1029                      | 0.9                                      | 0.8        | 1.0        | 1034                      |
| <b>Wealth quintile</b>    |                                                                 |            |            |                           |                                          |            |            |                           |
| Lowest                    | 1.0                                                             | 0.8        | 1.2        | 1586                      | 0.6                                      | 0.5        | 0.7        | 1593                      |
| Second                    | 1.3                                                             | 1.1        | 1.6        | 1606                      | 0.7                                      | 0.6        | 0.8        | 1628                      |
| Middle                    | 1.3                                                             | 1.1        | 1.5        | 1390                      | 0.9                                      | 0.8        | 1.0        | 1407                      |
| Fourth                    | 1.3                                                             | 1.1        | 1.5        | 1460                      | 0.7                                      | 0.7        | 0.8        | 1470                      |
| Highest                   | 1.2                                                             | 1.0        | 1.5        | 1864                      | 0.9                                      | 0.8        | 1.0        | 1876                      |
| Total (18-39)             | 1.4                                                             | 1.2        | 1.5        | 4393                      | 0.9                                      | 0.8        | 1.0        | 4436                      |
| Total (40-69)             | 1.0                                                             | 0.8        | 1.1        | 3513                      | 0.5                                      | 0.5        | 0.6        | 3538                      |
| Total (25-69)             | 1.2                                                             | 1.1        | 1.3        | 6907                      | 0.7                                      | 0.7        | 0.8        | 6960                      |
| <b>Total (18-69)</b>      | <b>1.2</b>                                                      | <b>1.1</b> | <b>1.4</b> | <b>7906</b>               | <b>0.8</b>                               | <b>0.7</b> | <b>0.8</b> | <b>7974</b>               |

\*snacks suggested include: *singara, samucha, puri, chips, chanachur, fuchka, chotpoti, jhal muri*, salted biscuits etc.

## Chapter 7 Dietary Salt

### Key findings

---

#### ***Estimated salt intake***

- Estimated average population salt intake based on spot urine testing is 9.0 grams per day (9.0g/d women, 9.0 g/d men)

#### ***Behaviors around dietary salt intake***

- Adding salt to foods while eating: 48.2% of adults (51.5% of women, 44.9% of men) reported adding salt often or always to food right before or while eating.
- Adding salty sauces to foods while eating: 1.8% of adults (1.3% of women, 2.3% of men) reported adding salty sauce often or always to food right before or while eating.
- Consumption of processed foods: 13.5% of adults (16.0% of women, 10.9% of men) reported consuming processed foods often or always that are high in salt.

#### ***Perceptions about levels of salt intake***

- Perception of salt intake: 61.2% of adults perceived their salt intake to be “just right” and only 13.5% of adults perceived it to be ‘far too much or too much’.
- Importance of salt reduction: 69.6 % of adults (70.0% of women, 69.2% of men) think that lowering salt is very important or somewhat important.

#### ***Knowledge on salt intake, recommendations and health consequences***

- Knowledge on recommended intake: 73.9% of adults (73.6% of women, 74.2% of men) had incorrect knowledge on or did not know of the maximum amount of salt recommended for optimum health.
- Knowledge on health consequences: 36.8% of adults (32.6% of women, 41.2% of men) correctly identified the health consequences related to excessive salt or salty sauce intake.

#### ***Practices and methods to reduce salt intake***

- 10.8% of adults (14.4% of women, 7.1% of men) reported currently doing something to reduce salt intake.
  - The most common method reported to reduce salt intake was stopping or reducing added salt (93.3%); avoid eating foods prepared outside of home (66.2%); avoiding or minimizing consumption of processed foods (60.2%).
- 

### Introduction

Excessive salt intake is a major risk factor for hypertension, which is a major cause of premature deaths worldwide. WHO recommends consuming less than 2 grams of sodium or 5 grams of salt per day amongst adults to reduce blood pressure and the risk of cardiovascular disease,

stroke and coronary heart disease<sup>36</sup>. Policies to reduce salt intake (food product reformulation; establishing supportive environment in public institutions; communication and mass media campaigns; front-of-pack labelling) at population-level are one of the most cost-effective interventions or 'best buys' to prevent and control non-communicable diseases<sup>37</sup>.

A 30% relative reduction in mean population intake of salt/sodium by 2025 relative to 2010 levels is one of the nine voluntary global targets set under WHO global action plan<sup>38</sup>. Bangladesh has also incorporated it as one of the key targets in its 3-year multisectoral action plan for 2018-2025<sup>10</sup> and its predecessor<sup>39</sup>.

This chapter focuses on indicators related to dietary sodium intake by estimating average population 24-hour salt intake based on spot urine sodium and creatinine levels; assessing the knowledge, behaviours, perceptions and practice around salt intake. This information will help Bangladesh assess trends and progress towards salt intake targets specified in its multisectoral action plan as well as evaluation of current policies and programs in place to reduce population salt-intake. These will also guide future policy and programs to reduce salt intake at population level.

---

#### **Current relevant policies and programs in Bangladesh for control of salt intake<sup>4</sup>:**

- Food Item Based Dietary Guidelines (in development)
  - Food labelling required based under The Food Safety Act 2013
  - Regulation of salt content through Bangladesh Standards and Testing Institute (BSTI) and Bangladesh Food Safety Authority (BFSA)
- 

### **7.1 Mean population 24-hour salt intake**

Population mean salt intake can be assessed using 24-h urinary sodium excretion, however STEPs survey has, instead, adopted spot urine sodium as a proxy due to ease of collection of spot urine samples lower cost and higher response rates vis-à-vis 24-hour urine samples, in population-based household surveys. Three main studies investigated the estimation of 24-h urinary sodium excretion from spot urine samples in the literature: Kawasaki<sup>40</sup>, INTERSALT<sup>41</sup>

---

<sup>36</sup> WHO. Guideline: Sodium intake for adults and children. Geneva, World Health Organization (WHO), 2012.

<sup>37</sup> WHO. The Updated Appendix of 3 of the Global Action Plan for the Prevention and Control of NCDs 2013-2020.

<sup>38</sup> World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva.

<sup>39</sup> Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases in Bangladesh 2011-2015. Dhaka: Non-communicable Disease Unit, Directorate General of Health Services.

<sup>40</sup> Kawasaki T, Itoh K, Uezono K, Sasaki H. A simple method for estimating 24 h urinary sodium and potassium excretion from second morning voiding urine specimen in adults. *Clin Exp Pharmacol Physiol*. 1993;20(1):7-14.

<sup>41</sup> Brown IJ, Dyer AR, Chan Q, et al. Estimating 24-Hour Urinary Sodium Excretion From Casual Urinary Sodium Concentrations in Western Populations. *American Journal of Epidemiology*. 2013;177(11):1180-1192. doi:10.1093/aje/kwt066

and Tanaka<sup>42</sup> (Refer to section 2.6 under Survey Methodology). So far, there is no scientific consensus on equation to be used in a given population/context. The estimation in this survey maintained the use of the same equation as in previous survey rounds to facilitate comparison of results and assessment of trends.

Using the Tanaka equation, the mean population salt intake was estimated to be 9.0 g per day amongst all adults (9.0 g/d for women, 9.0 g/d for men) (**Table 7.1**).

#### Patterns by background characteristics:

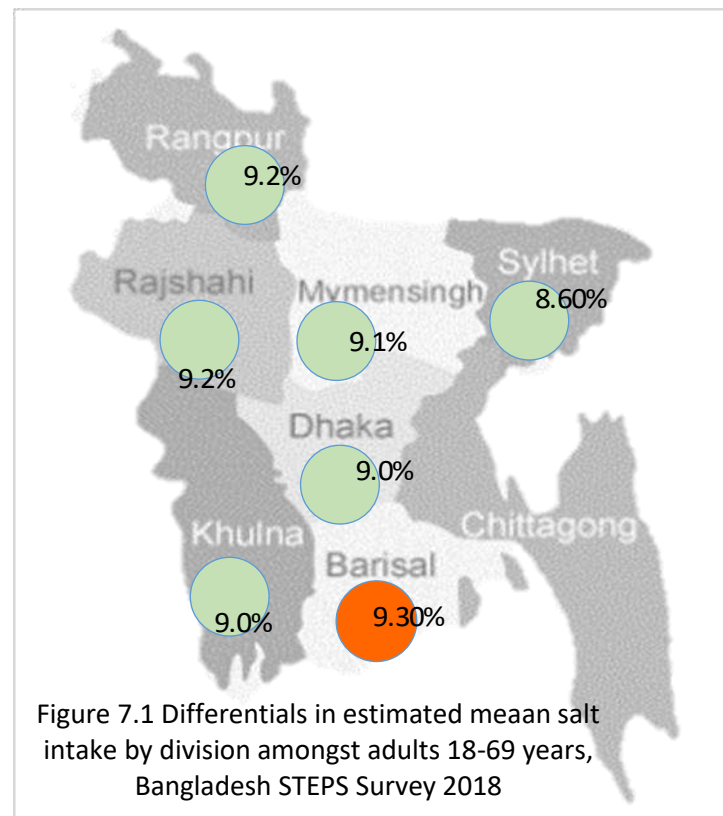
- Estimated salt intake generally did not vary by age, sex, education and household wealth quintile.
- Rural populations have higher mean salt intake compared to urban populations (9.0g/day versus 8.9g/day).
- Highest average salt intake was observed in Barisal division of 9.3g/day and lowest average (8.6 g/day) was observed in Sylhet (**Figure 7.1**).

#### 7.2 Behaviour around dietary salt intake:

48.2% of adults reported adding salt often or always while only 1.8% adults reported so for adding salty sauces (**Table 7.2**). This shows that salty sauces are not an important source of salt intake in Bangladesh.

13.5% of adults report often or always consuming processed foods high in salt (16.0% women, 10.9% men) (**Table 7.4**).

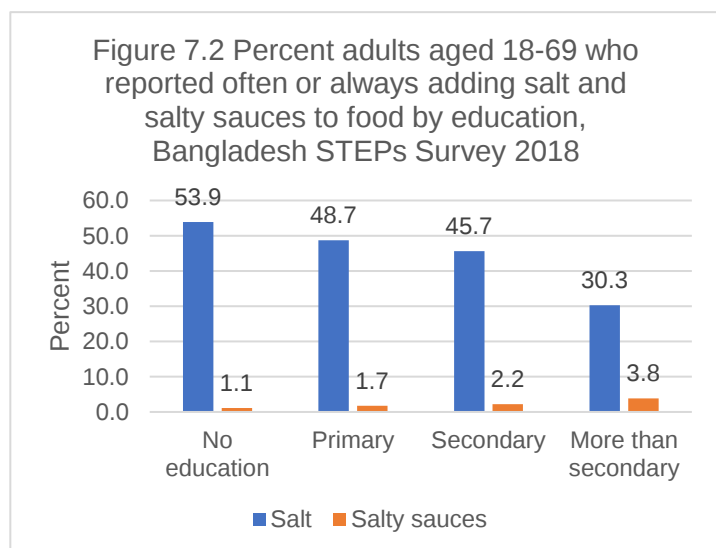
An average of 1.1 teaspoon of extra salt is added to food based on self-reporting by adults (1.1 tsp women, 1.1 tsp men) (**Table 7.8**)



<sup>42</sup> Tanaka T, Okamura T, Miura K, et al. A simple method to estimate populational 24-h urinary sodium and potassium excretion using a casual urine specimen. *J Hum Hypertens*. 2002;16(2):97-103. doi:10.1038/sj.jhh.1001307

### Patterns for adding salt and salty sauces by background characteristic (Table 7.2):

- A higher percentage of women 51.5% reported adding salt often or always compared to 44.9% of men. Though a reverse trend was seen for consumption of salty sauce (2.3% men vs 1.3% of women).
- Older adults, rural population, people from lower education levels and lower wealth quintile (**Figure 7.2 and Figure 7.3**) reported adding salt more frequently than their counterparts. The reverse relationship is seen for adding salty sauces.



- Barishal (78.5%), and Rangpur (28.1%) had the highest and lowest proportion of adults, respectively, that reported adding salt often or always while eating.

### Patterns for consumption of processed foods by background characteristic (Table 7.4):

- The percentage of adults who often or always consume processed foods increases with younger age, urban

living, higher education and higher household wealth (**Figure 7.4, 7.5, 7.6**).

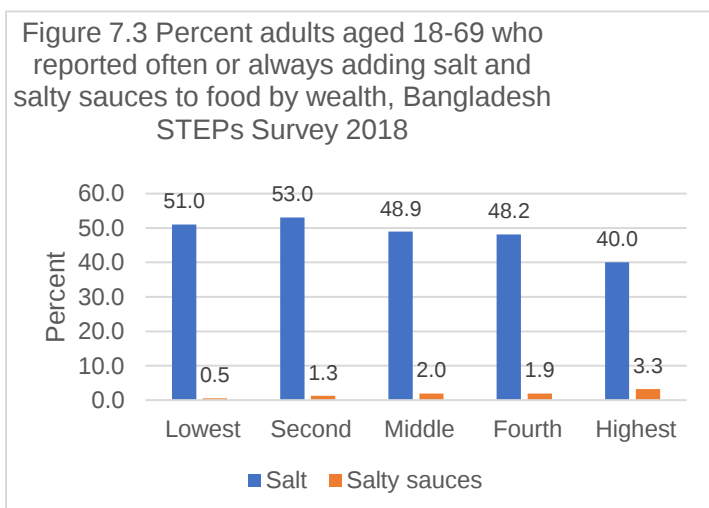


Figure 7.4 Differentials in percent adults aged 18-69 who report always or often consuming processed food by age group, Bangladesh STEPs Survey 2018

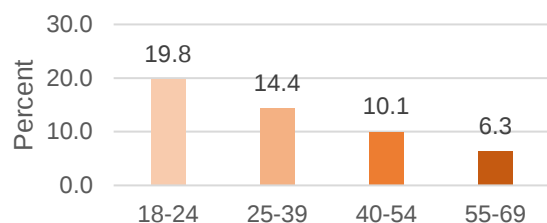


Figure 7.5 Differentials in percent adults aged 18-69 who often or always consume processed foods by education, Bangladesh STEPs Survey 2018

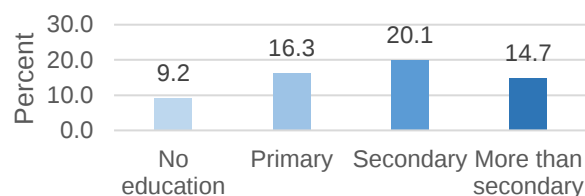
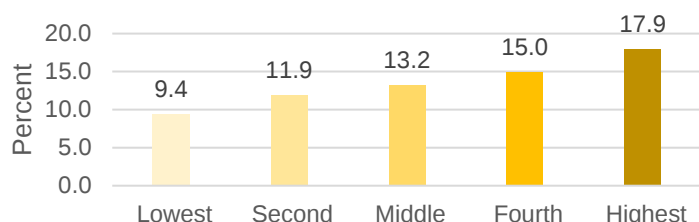


Figure 7.6 Differentials in percent adults aged 18-69 who reported always or often consuming processed food by wealth, Bangladesh STEPs Survey 2018



### 7.3. Perceptions about levels of salt intake

In contrast to relatively high estimated population mean salt intake reported earlier, majority of adults (61.2%) think they consume 'just the right amount of salt', with only 13.5% reporting consuming 'far too much or too much'

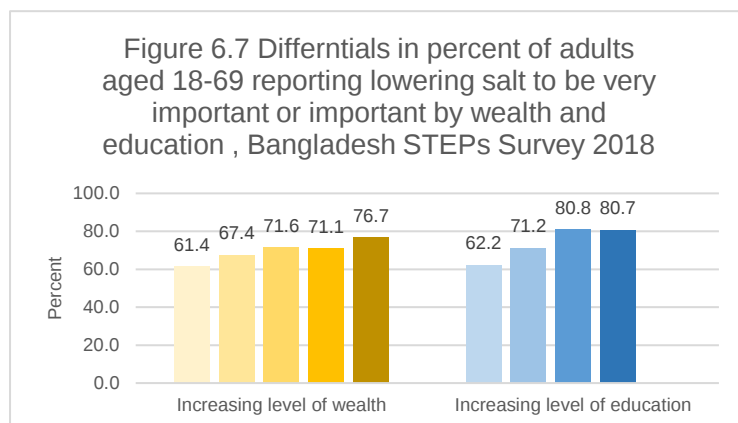
salt. 60.3% reported never consuming salty sauces Therefore, only a small percentage (0.7%) of adults perceived salty sauces intake to be 'far too much or too much' and 27.6% of adults perceived it to be 'far too little or too little' (**Table 7.3**). However, when asked about the importance of lowering dietary salt, 69.6% of adults find it 'very important or somewhat important' (**Table 7.5**).

#### Patterns by background characteristics (Table 7.3 and Table 7.5):

- Perception of salt intake does not vary much by age, sex and household wealth.
- More urban residents and men perceived their salt intake to be 'just right' compared to their counterparts.
- Rangpur (76.2%), Khulna (68.9%) and Rajshahi (68.1%) have notably higher percentage of adults who perceive their salt intake to be 'just right'.
- Percentage of adults who perceive salt intake to be 'just right' increases as education level increases.
- Younger adults and urban residents were more likely to report lowering salt to be important.
- Barishal has the highest percentage of adults, who find importance in lowering salt (82.6%), followed by Sylhet (78.9%).

- Increased levels of education and wealth quintile lead to a higher tendency to report importance on lowering dietary salt intake (**Figure 7.7**).

#### 7.4 Knowledge on salt intake, recommendations and health consequences

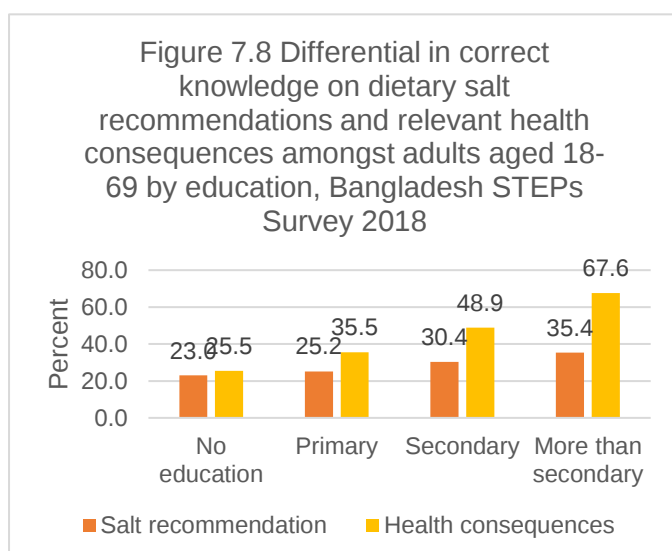


Only 26.1% of adults correctly stated the of maximum amount of salt recommended per day for optimum health (**Table 7.5**). More than half of all adults (55.0%) reported not knowing the specific health consequences related to excessive salt intake and only 36.8% of adults correctly identified

relevant health consequences (**Table 7.6**).

#### Patterns by background characteristics (**Table 7.5 and Table 7.6**):

- More men are aware of relevant health consequences due to excessive salt intake than women, but do not differ in knowledge on recommended dietary salt intakes.
- A higher percentage of younger adults and urban residents have knowledge on recommended salt intakes and relevant health consequences than their counterparts.
- Barishal has the highest percentage of adults with correct knowledge on salt recommendations and relevant health consequences (36.7% and 40.2%).

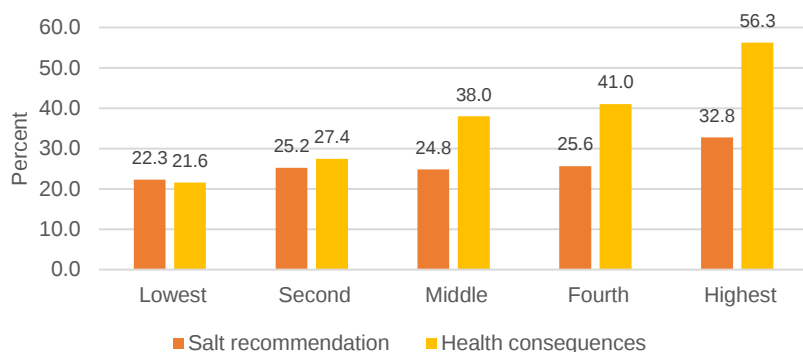


- Percent of adults with correct knowledge on dietary salt recommendations and relevant health consequences increased with increasing levels of education and household wealth (**Figure 7.8 and Figure 7.9**).

## 7.5 Practices and methods to reduce salt intake

Only 10.8% of adults reported currently doing something to control salt intake. Amongst those

Figure 7.9 Differentials in correct knowledge on dietary salt recommendations and relevant health consequences amongst adults aged 18-69 by wealth, Bangladesh STEPs Survey 2018

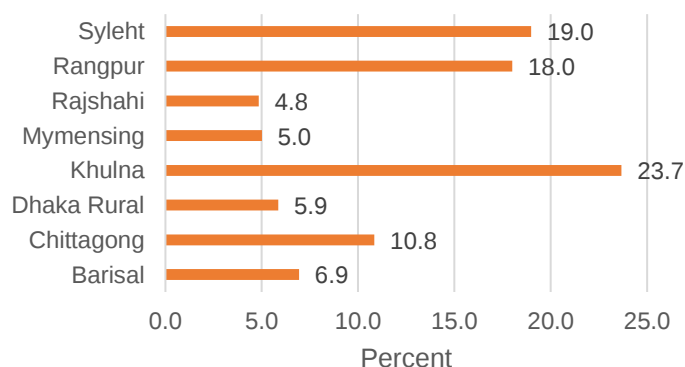


who are currently doing something to control their salt intake, the most common methods were: stopping or reducing added salt (93.3%) ; avoiding eating foods prepared outside of home (66.2%); avoiding and minimizing consumption of processed foods (60.2%) (Table 7.7).

### Patterns by background characteristics (Table 7.7):

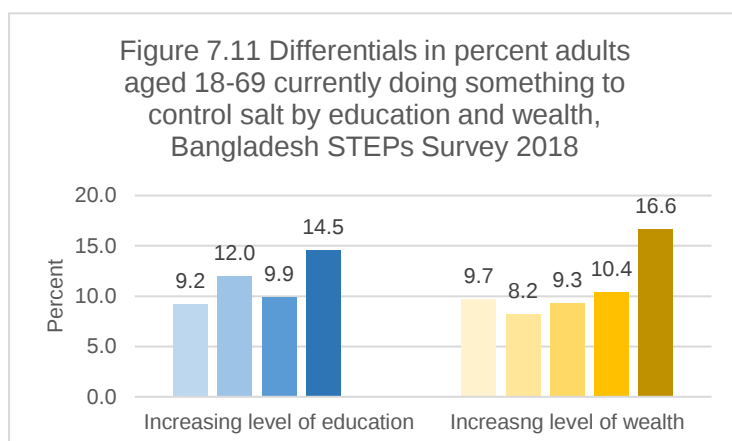
- Women were twice more likely to report currently doing something to control their salt intake compared to men (14.4% vs7.1%).
- The age group 40-54 had the highest percentage of adults who are currently doing something to control their salt intake (11.2%) and lowest amongst 55-69-year age-group (9.8%).

Figure 7.10 Percent adults aged 18-69 who are currently doing something to reduce salt by division, Bangladesh STEPs Survey 2018



Notable difference in salt controlling behavior exist across divisions. Khulna had the highest percentage (23.7%) of adults currently trying to reduce salt and Mymensingh the lowest (5.0%). Stopping and reducing added salt is consistently the most common method across all divisions. (Figure 7.10)

- The percentage of adults reporting salt reducing behaviors increase with as education and household wealth increases. (Figure 7.11)



For more information on dietary salt intake, see the following tables:

Table Salt. 7.1 Estimated average population salt intake

Table Salt. 7.2 Practice of adding salt and salty sauces to food while eating

Table Salt. 7.3 Perceived intake of salt and salty sauce

Table Salt. 7.4 Consumption of processed food high in salt

Table Salt. 7.5 Attitude and knowledge on salt intake and recommendations

Table Salt. 7.6 Knowledge on salt intake and health consequences

Table Salt. 7.7 Currently controlling salt intake and methods

Table Salt. 7.8 Self-reported amount of added salt to foods

**Table Salt. 7.1 Estimated average population salt intake**

Estimated average population salt intake amongst adults aged 18-69 based on spot urinary sodium, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Average daily salt intake (g/day) |        |     | Number of respondents (N) |
|---------------------------|-----------------------------------|--------|-----|---------------------------|
|                           | Mean                              | 95% CI |     |                           |
| <b>Age</b>                |                                   |        |     |                           |
| 18-24                     | 9.1                               | 8.9    | 9.3 | 765                       |
| 25-39                     | 9.0                               | 8.9    | 9.1 | 2901                      |
| 40-54                     | 9.0                               | 8.9    | 9.1 | 2186                      |
| 55-69                     | 8.9                               | 8.8    | 9.1 | 1042                      |
| <b>Sex</b>                |                                   |        |     |                           |
| Women                     | 9.0                               | 8.9    | 9.2 | 3665                      |
| Men                       | 9.0                               | 8.9    | 9.1 | 3229                      |
| <b>Residence</b>          |                                   |        |     |                           |
| Rural                     | 9.0                               | 8.9    | 9.1 | 3670                      |
| Urban                     | 8.9                               | 8.7    | 9.0 | 3224                      |
| <b>Division</b>           |                                   |        |     |                           |
| Barishal                  | 9.3                               | 9.1    | 9.5 | 829                       |
| Chattogram                | 8.9                               | 8.6    | 9.1 | 815                       |
| Dhaka Rural               | 9.0                               | 8.8    | 9.1 | 752                       |
| Khulna                    | 9.0                               | 8.8    | 9.2 | 940                       |
| Mymensingh                | 9.0                               | 8.8    | 9.2 | 902                       |
| Rajshahi                  | 9.2                               | 8.9    | 9.4 | 959                       |
| Rangpur                   | 9.2                               | 9.0    | 9.5 | 883                       |
| Sylhet                    | 8.6                               | 8.4    | 8.8 | 814                       |
| <b>Education</b>          |                                   |        |     |                           |
| No education              | 8.9                               | 8.8    | 9.0 | 3221                      |
| Primary                   | 9.2                               | 9.0    | 9.3 | 2133                      |
| Secondary                 | 9.0                               | 8.7    | 9.2 | 697                       |
| More than secondary       | 9.1                               | 8.9    | 9.3 | 827                       |
| <b>Wealth quintile</b>    |                                   |        |     |                           |
| Lowest                    | 8.9                               | 8.8    | 9.1 | 1442                      |
| Second                    | 9.1                               | 8.9    | 9.2 | 1463                      |
| Middle                    | 9.1                               | 9.0    | 9.3 | 1233                      |
| Fourth                    | 8.9                               | 8.7    | 9.1 | 1254                      |
| Highest                   | 9.0                               | 8.8    | 9.2 | 1502                      |
| Total (18-39)             | 9.0                               | 8.9    | 9.1 | 3,666                     |
| Total (40-69)             | 9.0                               | 8.9    | 9.1 | 3,228                     |
| Total (25-69)             | 9.0                               | 8.9    | 9.1 | 6,129                     |
| <b>Total (18-69)</b>      | 9.0                               | 8.9    | 9.1 | 6,894                     |

\*Estimations derived from Tanaka equation:

$$PrUCr24h = 14.89 \times Weight(kg) + 16.14 \times Height(cm) - 2.04 \times Age(year) - 2244.45$$

$$21.98 \times \left( \frac{Naspot \left( \frac{mmol}{L} \right)}{Crspot \left( \frac{mg}{dL} \right) \times 10} \times PrUCr24h \left( \frac{mg}{day} \right) \right)^{0.392}$$

**Table Salt.7.2 Practice of adding salt and salty sauces to food while eating**

Percent distribution of adults aged 18-69 by frequency of adding salt or salty sauces to food while eating, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Percent of adults who add salt to food while eating |            |                |                       | Percent of adults who add salty sauces to food while eating |            |                |                       | Percent of adults who always or often add either salt or salty sauces to food while eating |                       |
|---------------------------|-----------------------------------------------------|------------|----------------|-----------------------|-------------------------------------------------------------|------------|----------------|-----------------------|--------------------------------------------------------------------------------------------|-----------------------|
|                           | Often / always                                      | Some-times | Rarely / never | Number of respondents | Often / always                                              | Some-times | Rarely / never | Number of respondents | Often / always                                                                             | Number of respondents |
| <b>Age</b>                |                                                     |            |                |                       |                                                             |            |                |                       |                                                                                            |                       |
| 18-24                     | 46.8                                                | 13.7       | 39.5           | 1026                  | 2.4                                                         | 24.8       | 72.8           | 1026                  | 48.2                                                                                       | 1026                  |
| 25-39                     | 46.5                                                | 10.8       | 42.7           | 3486                  | 2.2                                                         | 20.4       | 77.4           | 3484                  | 47.4                                                                                       | 3489                  |
| 40-54                     | 51.1                                                | 11.5       | 37.5           | 2503                  | 1.6                                                         | 15.7       | 82.7           | 2493                  | 51.8                                                                                       | 2503                  |
| 55-69                     | 51.3                                                | 14.3       | 34.4           | 1167                  | 0.4                                                         | 13.0       | 86.6           | 1160                  | 51.5                                                                                       | 1167                  |
| <b>Sex</b>                |                                                     |            |                |                       |                                                             |            |                |                       |                                                                                            |                       |
| Women                     | 51.5                                                | 12.3       | 36.1           | 4380                  | 1.3                                                         | 15.4       | 83.3           | 4370                  | 52.1                                                                                       | 4381                  |
| Men                       | 44.9                                                | 12.1       | 43.0           | 3802                  | 2.3                                                         | 23.3       | 74.4           | 3793                  | 46.1                                                                                       | 3804                  |
| <b>Residence</b>          |                                                     |            |                |                       |                                                             |            |                |                       |                                                                                            |                       |
| Rural                     | 49.5                                                | 12.7       | 37.7           | 4181                  | 1.3                                                         | 17.0       | 81.7           | 4170                  | 50.1                                                                                       | 4183                  |
| Urban                     | 43.8                                                | 10.4       | 45.7           | 4001                  | 3.4                                                         | 27.2       | 69.3           | 3993                  | 45.8                                                                                       | 4002                  |
| <b>Division</b>           |                                                     |            |                |                       |                                                             |            |                |                       |                                                                                            |                       |
| Barishal                  | 78.5                                                | 7.4        | 14.2           | 986                   | 1.2                                                         | 14.5       | 84.4           | 985                   | 78.9                                                                                       | 986                   |
| Chattogram                | 48.3                                                | 14.9       | 36.8           | 1053                  | 3.3                                                         | 26.7       | 70.0           | 1049                  | 49.8                                                                                       | 1053                  |
| Dhaka Rural               | 55.0                                                | 12.9       | 32.0           | 995                   | 1.6                                                         | 25.0       | 73.4           | 997                   | 56.0                                                                                       | 997                   |
| Khulna                    | 51.3                                                | 8.3        | 40.4           | 1040                  | 2.4                                                         | 13.7       | 83.9           | 1038                  | 52.4                                                                                       | 1040                  |
| Mymensingh                | 45.0                                                | 14.5       | 40.5           | 1021                  | 0.7                                                         | 11.9       | 87.4           | 1015                  | 45.4                                                                                       | 1021                  |
| Rajshahi                  | 39.3                                                | 9.5        | 51.2           | 1066                  | 0.2                                                         | 13.8       | 86.0           | 1064                  | 39.5                                                                                       | 1066                  |
| Rangpur                   | 28.1                                                | 14.8       | 57.1           | 1008                  | 0.9                                                         | 15.3       | 83.9           | 1002                  | 28.7                                                                                       | 1009                  |
| Sylhet                    | 43.7                                                | 10.7       | 45.6           | 1013                  | 3.1                                                         | 15.4       | 81.5           | 1013                  | 45.4                                                                                       | 1013                  |
| <b>Education</b>          |                                                     |            |                |                       |                                                             |            |                |                       |                                                                                            |                       |
| No education              | 53.9                                                | 12.8       | 33.3           | 3677                  | 1.1                                                         | 12.8       | 86.1           | 3661                  | 54.2                                                                                       | 3,678                 |
| Primary                   | 48.7                                                | 11.3       | 40.0           | 2533                  | 1.7                                                         | 18.6       | 79.7           | 2529                  | 49.5                                                                                       | 2,533                 |
| Secondary                 | 45.7                                                | 12.3       | 42.0           | 887                   | 2.2                                                         | 27.7       | 70.1           | 887                   | 46.9                                                                                       | 888                   |
| More than secondary       | 30.3                                                | 12.2       | 57.5           | 1064                  | 3.8                                                         | 35.6       | 60.6           | 1065                  | 33.0                                                                                       | 1065                  |
| <b>Wealth quintile</b>    |                                                     |            |                |                       |                                                             |            |                |                       |                                                                                            |                       |
| Lowest                    | 51.0                                                | 11.2       | 37.8           | 1639                  | 0.5                                                         | 7.9        | 91.5           | 1628                  | 51.2                                                                                       | 1639                  |
| Second                    | 53.0                                                | 13.8       | 33.1           | 1669                  | 1.3                                                         | 11.2       | 87.5           | 1666                  | 53.3                                                                                       | 1670                  |
| Middle                    | 48.9                                                | 11.5       | 39.6           | 1451                  | 2.0                                                         | 22.4       | 75.7           | 1448                  | 50.0                                                                                       | 1451                  |
| Fourth                    | 48.2                                                | 12.4       | 39.5           | 1504                  | 1.9                                                         | 22.4       | 75.7           | 1503                  | 49.1                                                                                       | 1506                  |
| Highest                   | 40.0                                                | 12.2       | 47.8           | 1919                  | 3.3                                                         | 32.8       | 64.0           | 1918                  | 42.0                                                                                       | 1919                  |
| Total (18-39)             | 46.6                                                | 11.9       | 41.5           | 4512                  | 2.2                                                         | 22.1       | 75.7           | 4510                  | 47.7                                                                                       | 4515                  |
| Total (40-69)             | 51.2                                                | 12.8       | 36.1           | 3670                  | 1.0                                                         | 14.5       | 84.5           | 3653                  | 51.7                                                                                       | 3670                  |
| Total (25-69)             | 48.7                                                | 11.7       | 39.5           | 7156                  | 1.6                                                         | 17.6       | 80.8           | 7137                  | 49.5                                                                                       | 7159                  |
| <b>Total (18-69)</b>      | 48.2                                                | 12.2       | 39.5           | 8182                  | 1.8                                                         | 19.3       | 78.9           | 8163                  | 49.2                                                                                       | 8185                  |

**Table Salt. 7.3 Perceived intake of salt and salty sauce.**

Percent of adults aged 18-69 who perceive their salt or salty sauce intake to be far too much/too much; just right; far too little/too little, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Perceived salt intake   |            |                            |        |            | Perceived salty sauces intake |            |                            |        |            | Number of respondents |
|---------------------------|-------------------------|------------|----------------------------|--------|------------|-------------------------------|------------|----------------------------|--------|------------|-----------------------|
|                           | Far too much / too much | Just right | Far too little/ too little | Never* | Don't know | Far too much / too much       | Just right | Far too little/ too little | Never* | Don't know |                       |
| <b>Age</b>                |                         |            |                            |        |            |                               |            |                            |        |            |                       |
| 18-24                     | 13.7                    | 62.3       | 19.6                       | 4.2    | 0.3        | 1.0                           | 13.0       | 33.8                       | 52.0   | 0.2        | 1026                  |
| 25-39                     | 13.8                    | 60.7       | 20.3                       | 4.8    | 0.5        | 0.5                           | 12.1       | 29.0                       | 57.9   | 0.5        | 3489                  |
| 40-54                     | 13.6                    | 62.2       | 18.8                       | 5.0    | 0.4        | 1.0                           | 8.8        | 24.3                       | 65.4   | 0.5        | 2503                  |
| 55-69                     | 12.3                    | 59.7       | 20.1                       | 7.0    | 0.9        | 0.6                           | 7.7        | 19.2                       | 71.8   | 0.6        | 1167                  |
| <b>Sex</b>                |                         |            |                            |        |            |                               |            |                            |        |            |                       |
| Women                     | 14.5                    | 62.6       | 18.3                       | 4.2    | 0.3        | 0.8                           | 9.1        | 21.7                       | 68.1   | 0.3        | 4381                  |
| Men                       | 12.5                    | 59.7       | 21.3                       | 5.9    | 0.7        | 0.7                           | 12.8       | 33.7                       | 52.2   | 0.5        | 3804                  |
| <b>Residence</b>          |                         |            |                            |        |            |                               |            |                            |        |            |                       |
| Rural                     | 13.7                    | 60.5       | 20.4                       | 5.0    | 0.6        | 0.5                           | 8.6        | 26.5                       | 63.9   | 0.5        | 4183                  |
| Urban                     | 12.9                    | 63.8       | 17.8                       | 5.4    | 0.2        | 1.5                           | 18.9       | 31.4                       | 47.9   | 0.2        | 4002                  |
| <b>Division</b>           |                         |            |                            |        |            |                               |            |                            |        |            |                       |
| Barishal                  | 15.0                    | 63.4       | 17.6                       | 3.8    | 0.3        | 0.6                           | 6.2        | 30.1                       | 62.3   | 0.8        | 986                   |
| Chattogram                | 13.0                    | 45.7       | 26.0                       | 14.7   | 0.5        | 1.3                           | 15.2       | 23.0                       | 60.2   | 0.4        | 1053                  |
| Dhaka Rural               | 17.5                    | 64.6       | 15.8                       | 2.0    | 0.1        | 1.0                           | 18.6       | 37.9                       | 42.5   | 0.0        | 997                   |
| Khulna                    | 15.9                    | 68.9       | 12.3                       | 1.9    | 0.9        | 0.6                           | 6.7        | 19.3                       | 72.6   | 0.9        | 1040                  |
| Mymensingh                | 13.6                    | 51.1       | 27.2                       | 7.8    | 0.2        | 0.2                           | 2.5        | 23.6                       | 73.4   | 0.4        | 1021                  |
| Rajshahi                  | 8.4                     | 68.1       | 22.2                       | 0.6    | 0.6        | 0.4                           | 1.9        | 31.2                       | 65.8   | 0.6        | 1066                  |
| Rangpur                   | 6.8                     | 76.2       | 16.2                       | 0.4    | 0.3        | 0.1                           | 12.0       | 20.9                       | 66.2   | 0.9        | 1009                  |
| Sylhet                    | 14.0                    | 58.0       | 21.4                       | 4.9    | 1.6        | 0.8                           | 7.8        | 24.2                       | 67.2   | 0.0        | 1013                  |
| <b>Education</b>          |                         |            |                            |        |            |                               |            |                            |        |            |                       |
| No education              | 14.0                    | 62.7       | 18.9                       | 3.9    | 0.6        | 0.8                           | 7.4        | 21.6                       | 69.6   | 0.6        | 3678                  |
| Primary                   | 13.9                    | 59.3       | 20.4                       | 6.1    | 0.3        | 0.7                           | 10.9       | 28.2                       | 59.8   | 0.4        | 2533                  |
| Secondary                 | 14.8                    | 59.5       | 20.4                       | 5.3    | 0.0        | 0.9                           | 16.3       | 34.4                       | 48.4   | 0.0        | 888                   |
| More than secondary       | 9.6                     | 62.4       | 20.7                       | 6.3    | 1.1        | 0.6                           | 18.2       | 40.7                       | 40.3   | 0.3        | 1065                  |
| <b>Wealth quintile</b>    |                         |            |                            |        |            |                               |            |                            |        |            |                       |
| Lowest                    | 12.8                    | 63.1       | 21.0                       | 2.4    | 0.7        | 0.1                           | 4.7        | 18.8                       | 75.9   | 0.6        | 1639                  |
| Second                    | 12.7                    | 63.3       | 19.0                       | 4.4    | 0.6        | 1.1                           | 6.5        | 22.3                       | 69.4   | 0.7        | 1670                  |
| Middle                    | 13.6                    | 59.0       | 21.3                       | 5.7    | 0.4        | 0.7                           | 10.5       | 29.2                       | 59.1   | 0.5        | 1451                  |
| Fourth                    | 15.8                    | 56.2       | 21.2                       | 6.5    | 0.3        | 0.6                           | 12.2       | 30.9                       | 55.9   | 0.3        | 1506                  |
| Highest                   | 12.5                    | 64.4       | 16.4                       | 6.2    | 0.6        | 1.2                           | 20.9       | 36.9                       | 40.9   | 0.1        | 1919                  |
| Total (18-39)             | 13.8                    | 61.3       | 20.0                       | 4.6    | 0.4        | 0.7                           | 12.4       | 30.8                       | 55.7   | 0.4        | 4515                  |
| Total (40-69)             | 13.0                    | 61.1       | 19.4                       | 5.9    | 0.7        | 0.8                           | 8.3        | 22.0                       | 68.3   | 0.5        | 3670                  |
| Total (25-69)             | 13.4                    | 60.9       | 19.8                       | 5.3    | 0.6        | 0.6                           | 10.3       | 25.7                       | 62.9   | 0.5        | 7159                  |
| <b>Total (18-69)</b>      | 13.5                    | 61.2       | 19.8                       | 5.0    | 0.5        | 0.7                           | 10.9       | 27.6                       | 60.3   | 0.4        | 8185                  |

\* Category 'Never' was added as an option due to considerations for Ramadan for this round of survey

**Table Salt.7.4 Consumption of processed food high in salt.: men and women**

Percent of men and women aged 18-69 who often to always, sometimes, never to rarely eat processed foods high in salt, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Total            |                |                  |                              | Women             |                |                  |                        |
|---------------------------|------------------|----------------|------------------|------------------------------|-------------------|----------------|------------------|------------------------|
|                           | Often/<br>always | Some-<br>times | Rarely/<br>never | Number of<br>respondents (N) | Often /<br>always | Some-<br>times | Rarely/<br>never | Number of<br>women (N) |
| <b>Age</b>                |                  |                |                  |                              |                   |                |                  |                        |
| 18-24                     | 19.8             | 63.6           | 16.7             | 1,025                        | 21.3              | 64.0           | 14.7             | 621                    |
| 25-39                     | 14.4             | 60.8           | 24.8             | 3,482                        | 17.6              | 60.2           | 22.2             | 2016                   |
| 40-54                     | 10.1             | 51.6           | 38.4             | 2,498                        | 12.7              | 49.8           | 37.5             | 1282                   |
| 55-69                     | 6.3              | 46.5           | 47.2             | 1,166                        | 6.7               | 48.4           | 44.9             | 457                    |
| <b>Residence</b>          |                  |                |                  |                              |                   |                |                  |                        |
| Rural                     | 12.9             | 56.7           | 30.5             | 4,176                        | 15.5              | 57.5           | 27.0             | 2261                   |
| Urban                     | 15.7             | 59.2           | 25.1             | 3,995                        | 17.8              | 57.0           | 25.2             | 2115                   |
| <b>Division</b>           |                  |                |                  |                              |                   |                |                  |                        |
| Barishal                  | 18.2             | 40.2           | 41.6             | 986                          | 17.3              | 32.0           | 50.8             | 540                    |
| Chattogram                | 15.6             | 59.6           | 24.8             | 1,052                        | 22.9              | 59.5           | 17.6             | 552                    |
| Dhaka Rural               | 14.6             | 66.0           | 19.4             | 995                          | 11.0              | 73.4           | 15.6             | 518                    |
| Khulna                    | 11.8             | 46.7           | 41.6             | 1,038                        | 18.9              | 46.7           | 34.4             | 560                    |
| Mymensingh                | 12.7             | 56.8           | 30.6             | 1,021                        | 13.1              | 61.5           | 25.4             | 552                    |
| Rajshahi                  | 8.1              | 55.1           | 36.8             | 1,065                        | 11.6              | 44.7           | 43.8             | 569                    |
| Rangpur                   | 11.5             | 60.8           | 27.7             | 1,007                        | 12.4              | 52.2           | 35.4             | 541                    |
| Sylhet                    | 16.6             | 49.4           | 34.0             | 1,007                        | 22.4              | 57.7           | 19.8             | 544                    |
| <b>Education</b>          |                  |                |                  |                              |                   |                |                  |                        |
| No education              | 9.2              | 55.1           | 35.6             | 3669                         | 10.0              | 54.8           | 35.2             | 1957                   |
| Primary                   | 16.3             | 55.9           | 27.8             | 2532                         | 18.3              | 57.8           | 23.9             | 1525                   |
| Secondary                 | 20.1             | 60.5           | 19.4             | 887                          | 27.0              | 58.3           | 14.7             | 434                    |
| More than secondary       | 14.7             | 65.0           | 20.3             | 1062                         | 21.9              | 68.7           | 9.4              | 439                    |
| <b>Wealth quintile</b>    |                  |                |                  |                              |                   |                |                  |                        |
| Lowest                    | 9.4              | 52.0           | 38.6             | 1,636                        | 8.6               | 54.9           | 36.5             | 976                    |
| Second                    | 11.9             | 56.8           | 31.3             | 1,669                        | 12.8              | 55.4           | 31.8             | 912                    |
| Middle                    | 13.2             | 57.7           | 29.0             | 1,450                        | 20.5              | 55.7           | 23.8             | 725                    |
| Fourth                    | 15.0             | 61.2           | 23.9             | 1,501                        | 17.7              | 60.9           | 21.4             | 717                    |
| Highest                   | 17.9             | 58.5           | 23.6             | 1,915                        | 21.8              | 60.3           | 17.9             | 1046                   |
| Total (18-39)             | 16.4             | 61.8           | 21.8             | 4,507                        | 19.1              | 61.7           | 19.3             | 2637                   |
| Total (40-69)             | 8.3              | 49.2           | 42.4             | 3,664                        | 10.1              | 49.2           | 40.7             | 1739                   |
| Total (25-69)             | 11.5             | 55.3           | 33.2             | 7,146                        | 14.2              | 55.1           | 30.7             | 3755                   |
| <b>Total (18-69)</b>      | <b>13.5</b>      | <b>57.2</b>    | <b>29.3</b>      | <b>8,171</b>                 | <b>16.0</b>       | <b>57.4</b>    | <b>26.6</b>      | <b>4376</b>            |

**Table Salt.7.5 Attitude and knowledge on salt intake and recommendations: Total**

Percent of adults aged 18-69 who find importance in lowering salt intake; percentage who's knowledge on maximum salt intake per day is within WHO recommendations; percent who think too much salt relate to health consequence, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Percent who think lowering salt intake to be: |                          | Percent who's knowledge on maximum salt intake per day is within WHO recommendations |                                         |             | Number of respondents (N) |
|---------------------------|-----------------------------------------------|--------------------------|--------------------------------------------------------------------------------------|-----------------------------------------|-------------|---------------------------|
|                           | Very important/<br>somewhat important         | Not important or unaware | Within recommendations (<=1 tsp or 5 g/day)                                          | Above recommendation (> 1tsp or 5g/day) | Don't know  |                           |
| <b>Age</b>                |                                               |                          |                                                                                      |                                         |             |                           |
| 18-24                     | 72.0                                          | 28.0                     | 26.1                                                                                 | 33.5                                    | 40.4        | 1026                      |
| 25-39                     | 72.3                                          | 27.7                     | 28.3                                                                                 | 30.6                                    | 41.1        | 3489                      |
| 40-54                     | 68.0                                          | 32.0                     | 24.9                                                                                 | 30.0                                    | 45.1        | 2503                      |
| 55-69                     | 61.6                                          | 38.4                     | 22.4                                                                                 | 27.9                                    | 49.7        | 1167                      |
| <b>Sex</b>                |                                               |                          |                                                                                      |                                         |             |                           |
| Women                     | 70.0                                          | 30.0                     | 26.4                                                                                 | 37.1                                    | 36.5        | 4381                      |
| Men                       | 69.2                                          | 30.8                     | 25.8                                                                                 | 24.2                                    | 50.0        | 3804                      |
| <b>Residence</b>          |                                               |                          |                                                                                      |                                         |             |                           |
| Rural                     | 69.1                                          | 30.9                     | 24.3                                                                                 | 33.2                                    | 42.6        | 4183                      |
| Urban                     | 71.4                                          | 28.6                     | 32.5                                                                                 | 22.2                                    | 45.3        | 4002                      |
| <b>Division</b>           |                                               |                          |                                                                                      |                                         |             |                           |
| Barishal                  | 82.6                                          | 17.4                     | 36.7                                                                                 | 10.1                                    | 53.2        | 986                       |
| Chattogram                | 61.1                                          | 38.9                     | 29.3                                                                                 | 36.1                                    | 34.5        | 1053                      |
| Dhaka Rural               | 70.8                                          | 29.2                     | 32.3                                                                                 | 19.2                                    | 48.5        | 997                       |
| Khulna                    | 60.6                                          | 39.4                     | 12.1                                                                                 | 40.0                                    | 47.8        | 1040                      |
| Mymensingh                | 77.7                                          | 22.3                     | 28.0                                                                                 | 42.3                                    | 29.7        | 1021                      |
| Rajshahi                  | 69.5                                          | 30.5                     | 20.2                                                                                 | 37.9                                    | 41.9        | 1066                      |
| Rangpur                   | 74.4                                          | 25.6                     | 22.9                                                                                 | 21.7                                    | 55.4        | 1009                      |
| Sylhet                    | 78.9                                          | 21.1                     | 22.8                                                                                 | 42.4                                    | 34.8        | 1013                      |
| <b>Education</b>          |                                               |                          |                                                                                      |                                         |             |                           |
| No education              | 62.2                                          | 37.8                     | 23.0                                                                                 | 32.1                                    | 44.9        | 3,678                     |
| Primary                   | 71.2                                          | 28.8                     | 25.2                                                                                 | 32.6                                    | 42.2        | 2,533                     |
| Secondary                 | 80.8                                          | 19.2                     | 30.4                                                                                 | 24.1                                    | 45.5        | 888                       |
| More than secondary       | 80.7                                          | 19.4                     | 35.4                                                                                 | 27.8                                    | 36.8        | 1,065                     |
| <b>Wealth quintile</b>    |                                               |                          |                                                                                      |                                         |             |                           |
| Lowest                    | 61.4                                          | 38.6                     | 22.3                                                                                 | 31.9                                    | 45.8        | 1639                      |
| Second                    | 67.4                                          | 32.6                     | 25.2                                                                                 | 30.6                                    | 44.2        | 1670                      |
| Middle                    | 71.6                                          | 28.4                     | 24.8                                                                                 | 34.9                                    | 40.3        | 1451                      |
| Fourth                    | 71.1                                          | 28.9                     | 25.6                                                                                 | 27.0                                    | 47.4        | 1506                      |
| Highest                   | 76.7                                          | 23.3                     | 32.8                                                                                 | 29.2                                    | 38.1        | 1919                      |
| Total (18-39)             | 72.2                                          | 27.8                     | 27.5                                                                                 | 31.7                                    | 40.9        | 4515                      |
| Total (40-69)             | 65.0                                          | 35.0                     | 23.8                                                                                 | 29.0                                    | 47.2        | 3670                      |
| Total (25-69)             | 68.9                                          | 31.1                     | 26.1                                                                                 | 29.8                                    | 44.0        | 7159                      |
| <b>Total (18-69)</b>      | <b>69.6</b>                                   | <b>30.4</b>              | <b>26.1</b>                                                                          | <b>30.7</b>                             | <b>43.2</b> | <b>8185</b>               |

**Table Salt.7.6 Knowledge on salt intake and health consequences: Total**

Percent of adults aged 18-69 who think too much salt is related to health consequence, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Percent who correctly identified that salt intake is related to increased blood pressure or kidney diseases: |             |              | Percent who think that too much salt is related to: |                                           |                                                             |             |                           |
|---------------------------|--------------------------------------------------------------------------------------------------------------|-------------|--------------|-----------------------------------------------------|-------------------------------------------|-------------------------------------------------------------|-------------|---------------------------|
|                           | Correct                                                                                                      | Incorrect   | Total (%)    | No health consequences                              | Increased blood pressure / kidney disease | Other consequences: asthma / cancer / tuberculosis / others | Don't know  | Number of respondents (N) |
| <b>Age</b>                |                                                                                                              |             |              |                                                     |                                           |                                                             |             |                           |
| 18-24                     | 41.6                                                                                                         | 58.4        | 100.0        | 2.1                                                 | 41.6                                      | 4.2                                                         | 49.7        | 1026                      |
| 25-39                     | 37.3                                                                                                         | 62.7        | 100.0        | 2.1                                                 | 37.3                                      | 4.5                                                         | 54.4        | 3489                      |
| 40-54                     | 34.3                                                                                                         | 65.7        | 100.0        | 2.7                                                 | 34.3                                      | 3.0                                                         | 57.0        | 2503                      |
| 55-69                     | 32.0                                                                                                         | 68.0        | 100.0        | 2.3                                                 | 32.0                                      | 3.7                                                         | 61.8        | 1167                      |
| <b>Sex</b>                |                                                                                                              |             |              |                                                     |                                           |                                                             |             |                           |
| Women                     | 32.6                                                                                                         | 67.4        | 100.0        | 2.1                                                 | 32.6                                      | 3.5                                                         | 55.7        | 4381                      |
| Men                       | 41.2                                                                                                         | 58.8        | 100.0        | 2.4                                                 | 41.2                                      | 4.5                                                         | 54.3        | 3804                      |
| <b>Residence</b>          |                                                                                                              |             |              |                                                     |                                           |                                                             |             |                           |
| Rural                     | 34.0                                                                                                         | 66.0        | 100.0        | 2.4                                                 | 34.0                                      | 4.1                                                         | 57.2        | 4183                      |
| Urban                     | 46.7                                                                                                         | 53.3        | 100.0        | 1.9                                                 | 46.7                                      | 3.5                                                         | 47.3        | 4002                      |
| <b>Division</b>           |                                                                                                              |             |              |                                                     |                                           |                                                             |             |                           |
| Barishal                  | 40.2                                                                                                         | 59.8        | 100.0        | 9.8                                                 | 40.2                                      | 2.7                                                         | 48.9        | 986                       |
| Chattogram                | 40.3                                                                                                         | 59.7        | 100.0        | 0.4                                                 | 40.3                                      | 6.5                                                         | 48.8        | 1053                      |
| Dhaka Rural               | 44.1                                                                                                         | 55.9        | 100.0        | 0.3                                                 | 44.1                                      | 3.9                                                         | 51.3        | 997                       |
| Khulna                    | 34.4                                                                                                         | 65.6        | 100.0        | 1.1                                                 | 34.4                                      | 2.3                                                         | 62.9        | 1040                      |
| Mymensingh                | 32.6                                                                                                         | 67.4        | 100.0        | 0.6                                                 | 32.6                                      | 5.7                                                         | 49.5        | 1021                      |
| Rajshahi                  | 33.8                                                                                                         | 66.2        | 100.0        | 0.8                                                 | 33.8                                      | 2.1                                                         | 64.4        | 1066                      |
| Rangpur                   | 25.2                                                                                                         | 74.8        | 100.0        | 4.8                                                 | 25.2                                      | 3.8                                                         | 64.9        | 1009                      |
| Sylhet                    | 28.7                                                                                                         | 71.3        | 100.0        | 12.3                                                | 28.7                                      | 2.3                                                         | 53.3        | 1013                      |
| <b>Education</b>          |                                                                                                              |             |              |                                                     |                                           |                                                             |             |                           |
| No education              | 25.5                                                                                                         | 74.5        | 100.0        | 3.0                                                 | 25.5                                      | 2.9                                                         | 64.9        | 3678                      |
| Primary                   | 35.5                                                                                                         | 64.5        | 100.0        | 2.0                                                 | 35.5                                      | 3.8                                                         | 55.8        | 2533                      |
| Secondary                 | 48.9                                                                                                         | 51.1        | 100.0        | 1.4                                                 | 48.9                                      | 4.9                                                         | 44.3        | 888                       |
| More than secondary       | 67.6                                                                                                         | 32.4        | 100.0        | 1.0                                                 | 67.6                                      | 7.4                                                         | 29.1        | 1065                      |
| <b>Wealth quintile</b>    |                                                                                                              |             |              |                                                     |                                           |                                                             |             |                           |
| Lowest                    | 21.6                                                                                                         | 78.4        | 100.0        | 3.1                                                 | 21.6                                      | 3.6                                                         | 66.4        | 1639                      |
| Second                    | 27.4                                                                                                         | 72.6        | 100.0        | 3.1                                                 | 27.4                                      | 2.9                                                         | 61.1        | 1670                      |
| Middle                    | 38.0                                                                                                         | 62.0        | 100.0        | 3.1                                                 | 38.0                                      | 5.0                                                         | 54.8        | 1451                      |
| Fourth                    | 41.0                                                                                                         | 59.0        | 100.0        | 1.2                                                 | 41.0                                      | 3.7                                                         | 53.7        | 1506                      |
| Highest                   | 56.3                                                                                                         | 43.7        | 100.0        | 0.7                                                 | 56.3                                      | 4.9                                                         | 38.9        | 1919                      |
| Total (18-39)             | 38.9                                                                                                         | 61.1        | 100.0        | 2.1                                                 | 38.9                                      | 4.4                                                         | 52.6        | 4515                      |
| Total (40-69)             | 33.2                                                                                                         | 66.8        | 100.0        | 2.5                                                 | 33.2                                      | 3.3                                                         | 59.2        | 3670                      |
| Total (25-69)             | 35.3                                                                                                         | 64.7        | 100.0        | 2.3                                                 | 35.3                                      | 3.9                                                         | 56.7        | 7159                      |
| <b>Total (18-69)</b>      | <b>36.8</b>                                                                                                  | <b>63.2</b> | <b>100.0</b> | <b>2.3</b>                                          | <b>36.8</b>                               | <b>4.0</b>                                                  | <b>55.0</b> | <b>8185</b>               |

**Table Salt 7.7 Currently controlling salt intake and methods: Total**

Percent of adults aged 15-69 who often to always, sometimes, never to rarely eat processed foods high in salt, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Percent who are currently doing something to control salt intakes: |                           | Amongst adults who are currently doing anything to controlling salt intake, percent of adults that use the method of: |                                                  |                                   |                                         |                                             |                        |                           |
|---------------------------|--------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------|-----------------------------------------|---------------------------------------------|------------------------|---------------------------|
|                           | Percent                                                            | Number of respondents (N) | Avoid/ minimize consumption of processed foods                                                                        | Look at the salt or sodium content on food label | Buy low salt/ sodium alternatives | Use spices other than salt when cooking | Avoid eating foods prepared outside of home | Stop/Reduce added salt | Number of respondents (N) |
| <b>Age</b>                |                                                                    |                           |                                                                                                                       |                                                  |                                   |                                         |                                             |                        |                           |
| 18-24                     | 10.9                                                               | 1014                      | 65.6                                                                                                                  | 39.6                                             | 41.3                              | 20.2                                    | 69.4                                        | 93.4                   | 110                       |
| 25-39                     | 10.9                                                               | 3443                      | 54.6                                                                                                                  | 28.7                                             | 38.8                              | 22.1                                    | 62.3                                        | 91.2                   | 418                       |
| 40-54                     | 11.2                                                               | 2463                      | 65.7                                                                                                                  | 39.6                                             | 39.7                              | 28.8                                    | 74.4                                        | 94.8                   | 314                       |
| 55-69                     | 9.8                                                                | 1136                      | 58.7                                                                                                                  | 28.7                                             | 35.6                              | 18.7                                    | 59.9                                        | 96.6                   | 123                       |
| <b>Sex</b>                |                                                                    |                           |                                                                                                                       |                                                  |                                   |                                         |                                             |                        |                           |
| Women                     | 14.4                                                               | 4343                      | 52.3                                                                                                                  | 30.6                                             | 37.7                              | 22.2                                    | 65.3                                        | 95.7                   | 703                       |
| Men                       | 7.1                                                                | 3713                      | 76.8                                                                                                                  | 39.9                                             | 42.0                              | 23.2                                    | 68.0                                        | 88.2                   | 262                       |
| <b>Residence</b>          |                                                                    |                           |                                                                                                                       |                                                  |                                   |                                         |                                             |                        |                           |
| Rural                     | 10.7                                                               | 4125                      | 58.4                                                                                                                  | 30.8                                             | 37.8                              | 22.2                                    | 68.7                                        | 93.3                   | 462                       |
| Urban                     | 11.2                                                               | 3931                      | 66.1                                                                                                                  | 42.9                                             | 43.6                              | 23.5                                    | 57.7                                        | 93.1                   | 503                       |
| <b>Division</b>           |                                                                    |                           |                                                                                                                       |                                                  |                                   |                                         |                                             |                        |                           |
| Barishal                  | 6.9                                                                | 978                       | 48.2                                                                                                                  | 26.9                                             | 21.7                              | 21.7                                    | 38.1                                        | 83.1                   | 77                        |
| Chattogram                | 10.8                                                               | 1016                      | 30.1                                                                                                                  | 12.2                                             | 15.4                              | 10.6                                    | 37.5                                        | 97.3                   | 119                       |
| Dhaka Rural               | 5.9                                                                | 988                       | 69.5                                                                                                                  | 42.5                                             | 46.0                              | 16.9                                    | 57.5                                        | 88.6                   | 57                        |
| Khulna                    | 23.7                                                               | 1023                      | 60.6                                                                                                                  | 23.3                                             | 15.1                              | 6.4                                     | 84.9                                        | 92.2                   | 230                       |
| Mymensingh                | 5.0                                                                | 992                       | 27.3                                                                                                                  | 11.7                                             | 9.6                               | 17.4                                    | 46.3                                        | 99.2                   | 59                        |
| Rajshahi                  | 4.8                                                                | 1062                      | 47.4                                                                                                                  | 30.5                                             | 24.3                              | 9.0                                     | 29.5                                        | 89.0                   | 62                        |
| Rangpur                   | 18.0                                                               | 1007                      | 95.4                                                                                                                  | 82.8                                             | 91.2                              | 85.6                                    | 97.1                                        | 98.1                   | 204                       |
| Sylhet                    | 19.0                                                               | 990                       | 71.7                                                                                                                  | 23.1                                             | 73.3                              | 3.0                                     | 75.1                                        | 90.4                   | 157                       |
| <b>Education</b>          |                                                                    |                           |                                                                                                                       |                                                  |                                   |                                         |                                             |                        |                           |
| No education              | 9.2                                                                | 3609                      | 58.8                                                                                                                  | 31.6                                             | 35.5                              | 29.1                                    | 65.4                                        | 94.3                   | 352                       |
| Primary                   | 12.0                                                               | 2492                      | 59.5                                                                                                                  | 29.8                                             | 39.4                              | 17.4                                    | 72.9                                        | 92.5                   | 318                       |
| Secondary                 | 9.9                                                                | 878                       | 59.3                                                                                                                  | 42.9                                             | 42.8                              | 23.6                                    | 58.8                                        | 92.8                   | 117                       |
| More than secondary       | 14.5                                                               | 1056                      | 65.5                                                                                                                  | 39.3                                             | 44.1                              | 17.8                                    | 59.5                                        | 93.0                   | 177                       |
| <b>Wealth quintile</b>    |                                                                    |                           |                                                                                                                       |                                                  |                                   |                                         |                                             |                        |                           |
| Lowest                    | 9.7                                                                | 1609                      | 71.8                                                                                                                  | 41.6                                             | 41.8                              | 38.0                                    | 74.7                                        | 95.0                   | 165                       |
| Second                    | 8.2                                                                | 1649                      | 64.1                                                                                                                  | 38.1                                             | 49.7                              | 32.6                                    | 69.6                                        | 94.8                   | 163                       |
| Middle                    | 9.3                                                                | 1431                      | 52.6                                                                                                                  | 25.9                                             | 31.8                              | 15.1                                    | 70.7                                        | 87.6                   | 133                       |
| Fourth                    | 10.4                                                               | 1481                      | 57.2                                                                                                                  | 31.6                                             | 32.6                              | 19.6                                    | 61.4                                        | 96.1                   | 147                       |
| Highest                   | 16.6                                                               | 1886                      | 57.6                                                                                                                  | 32.2                                             | 40.5                              | 14.4                                    | 59.9                                        | 92.9                   | 357                       |
| Total (18-39)             | 10.9                                                               | 4457                      | 58.8                                                                                                                  | 32.8                                             | 39.8                              | 21.4                                    | 65.0                                        | 92.0                   | 528                       |
| Total (40-69)             | 10.6                                                               | 3599                      | 62.8                                                                                                                  | 35.0                                             | 38.0                              | 24.6                                    | 68.3                                        | 95.6                   | 437                       |
| Total (25-69)             | 10.8                                                               | 7042                      | 58.5                                                                                                                  | 31.7                                             | 38.4                              | 23.3                                    | 65.1                                        | 93.2                   | 855                       |
| <b>Total (18-69)</b>      | 10.8                                                               | 8056                      | 60.2                                                                                                                  | 33.6                                             | 39.1                              | 22.5                                    | 66.2                                        | 93.3                   | 965                       |

**Table Salt. 7.8 Self-reported amount of added salt to foods**

Self-reported amount of extra salt (in teaspoons) added to food amongst adults aged 15-69 , according to background characteristics [Bangladesh, 2018]

| Background characteristic | Extra Salt added to food |        |     | Number of respondents (n) |
|---------------------------|--------------------------|--------|-----|---------------------------|
|                           | Mean                     | 95% CI |     |                           |
| <b>Age</b>                |                          |        |     |                           |
| 18-24                     | 1.1                      | 1.1    | 1.1 | 651                       |
| 25-39                     | 1.1                      | 1.1    | 1.1 | 2166                      |
| 40-54                     | 1.1                      | 1.1    | 1.1 | 1590                      |
| 55-69                     | 1.1                      | 1.1    | 1.1 | 777                       |
| <b>Sex</b>                |                          |        |     |                           |
| Women                     | 1.1                      | 1.1    | 1.1 | 2913                      |
| Men                       | 1.1                      | 1.1    | 1.1 | 2271                      |
| <b>Residence</b>          |                          |        |     |                           |
| Rural                     | 1.1                      | 1.1    | 1.1 | 2860                      |
| Urban                     | 1.1                      | 1.1    | 1.1 | 2324                      |
| <b>Division</b>           |                          |        |     |                           |
| Barishal                  | 1.1                      | 1.1    | 1.1 | 822                       |
| Chattogram                | 1.1                      | 1.0    | 1.1 | 692                       |
| Dhaka Rural               | 1.1                      | 1.1    | 1.1 | 732                       |
| Khulna                    | 1.1                      | 1.0    | 1.1 | 658                       |
| Mymensingh                | 1.1                      | 1.1    | 1.2 | 659                       |
| Rajdhani                  | 1.1                      | 1.1    | 1.2 | 538                       |
| Rangpur                   | 1.0                      | 1.0    | 1.0 | 469                       |
| Sylhet                    | 1.0                      | 1.0    | 1.1 | 614                       |
| <b>Education</b>          |                          |        |     |                           |
| No education              | 1.1                      | 1.1    | 1.1 | 2532                      |
| Primary                   | 1.1                      | 1.1    | 1.1 | 1645                      |
| Secondary                 | 1.1                      | 1.1    | 1.1 | 486                       |
| More than secondary       | 1.1                      | 1.0    | 1.1 | 505                       |
| <b>Wealth quintile</b>    |                          |        |     |                           |
| Lowest                    | 1.1                      | 1.1    | 1.1 | 1107                      |
| Second                    | 1.1                      | 1.1    | 1.1 | 1157                      |
| Middle                    | 1.1                      | 1.1    | 1.1 | 963                       |
| Fourth                    | 1.1                      | 1.1    | 1.1 | 966                       |
| Highest                   | 1.1                      | 1.1    | 1.1 | 991                       |
| Total (18-39)             | 1.1                      | 1.1    | 1.1 | 2817                      |
| Total (40-69)             | 1.1                      | 1.1    | 1.1 | 2367                      |
| Total (25-69)             | 1.1                      | 1.1    | 1.1 | 4533                      |
| <b>Total (18-69)</b>      | 1.1                      | 1.1    | 1.1 | 5184                      |

## Chapter 8 Physical activity

### Key findings

---

#### Time spent on physical activity

- *Total physical activity (in moderate-intensity minutes):*
  - On average 247.9 minutes per day
  - Half of the population spent 132.0 or more minutes (median) per day.

#### Insufficient levels of physical activity

- *Among adults aged 18-69 years: 12.3% of adults (14.8% in women, and 9.6% men) have insufficient levels of physical activity defined as <150 minutes of moderate-intensity activity per week.*

#### Percent contribution to total physical activity from each domain:

- *Work: 73.4%.*
- *Travelling from and to places: 22.1%*
- *Recreational activities: 4.6% of total physical activity minutes*

#### Time spent on sedentary activities

- *On average adults (15-69 years) spend 174.8 minutes per day sitting or reclining.*
  - *Half of the population spent 140.0 minutes or more per day (median) sitting or reclining*
- 

### Introduction

Insufficient physical activity and sedentary behaviour is a leading risk factor for NCD related mortality and has major implications for the rising prevalence of NCDs<sup>43</sup>. Additionally, it accrues staggering economic cost through increased health-care expenditure and loss of productivity<sup>44</sup>. Participation in regular physical activity and reducing sedentary behaviours has substantial effects on increasing life expectancy and the primary prevention of several chronic

---

<sup>43</sup> Lee I-M, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The Lancet*. 2012;380(9838):219-229. doi:10.1016/S0140-6736(12)61031-9.

<sup>44</sup> Ding D, Lawson KD, Kolbe-Alexander TL, et al. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. *The Lancet*. 2016;388(10051):1311-1324. doi:10.1016/S0140-6736(16)30383-X

diseases such as, cardiovascular diseases, diabetes, hypertension, cancer, obesity and mental health at a population level<sup>45,46,47</sup>.

The 2025 global physical activity target aims for a 10% reduction in prevalence of insufficient physical activity relative to 2010<sup>38</sup>. Bangladesh has also incorporated it as one of the key targets in its 3-year multisectoral action plan for 2018-2025<sup>10</sup> and its predecessor<sup>39</sup>. Policies to promote physical activity (mass media campaigns combined with community-based education, motivational and environmental programmes aimed at supporting behavioral change) are one of the recommended interventions to prevent and control non-communicable diseases<sup>48</sup>.

This chapter focuses on indicators related to physical activity and sedentary behavior. This information will help Bangladesh assess trends and progress towards physical activity targets specified in its multisectoral action plan as well as evaluation of current policies and programs in place.

---

### **Current relevant policies and programs in Bangladesh for promoting physical activity:**

- Healthy city project, 1990<sup>49</sup>
  - Health promoting model schools
- 

Current WHO physical activity guidelines (**Figure 8.1**) for adults are expressed in minutes of physical activity throughout the week at two levels of intensities for ease of understanding amongst the public. The underlying standardized measurement to assess both quantity and intensity of physical activity is MET, metabolic equivalent of task, which is assigned to each domain of activity and levels of intensity as shown in **Figure 8.2** which is based on the Global Physical Activity Questionnaire (GPAQ)<sup>50</sup>. An example is given on the calculations for standardized conversion between regular minutes of varying intensity -level and MET minutes.

---

<sup>45</sup> Reiner M, Niermann C, Jekauc D, Woll A. Long-term health benefits of physical activity – a systematic review of longitudinal studies. *BMC Public Health*. 2013;13(1):813. doi:10.1186/1471-2458-13-813

<sup>46</sup> Ekelund U, Steene-Johannessen J, Brown WJ, et al. Does physical activity attenuate, or even eliminate, the detrimental association of sitting time with mortality? A harmonised meta-analysis of data from more than 1 million men and women. *The Lancet*. 2016;388(10051):1302-1310. doi:10.1016/S0140-6736(16)30370-1

<sup>47</sup> Warburton DER. Health benefits of physical activity: the evidence. *Canadian Medical Association Journal*. 2006;174(6):801-809. doi:10.1503/cmaj.051351

<sup>48</sup> WHO. The Updated Appendix of 3 of the Global Action Plan for the Prevention and Control of NCDs 2013-2020.

<sup>49</sup> Burton S. Evaluation of healthy city projects: Stakeholder analysis of two projects in Bangladesh. *Environment and Urbanization*. 1999 Apr;11(1):41-52.

<sup>50</sup> Armstrong T, Bull F. Development of the World Health Organization Global Physical Activity Questionnaire (GPAQ). *J Public Health* 2006; 14:66-70.

**Figure 8.1.** WHO Physical activity guidelines 2010<sup>51</sup>:

|                    |                                                                                                                                                                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5-17 years         | ▪ at least 60 minutes of moderate- to vigorous-intensity physical activity daily for children and adolescents aged 5-17.                                                                                                                                                         |
| 18 years and above | ▪ at least 150 minutes of moderate-intensity physical activity per week<br>OR<br>▪ 75 minutes of vigorous-intensity physical activity per week OR<br>▪ an equivalent combination of moderate- and vigorous intensity physical activity which equates to 600 MET-minutes per week |

\*refer to guidelines for more detailed guidelines.

**Figure 8.2** Metabolic equivalent of task per domain and intensity

| <u>Domain</u>                      | <u>Intensity level and MET value per minute</u>                                |
|------------------------------------|--------------------------------------------------------------------------------|
| Work                               | Moderate-intensity = 4 MET per minute<br>Vigorous-intensity = 8 MET per minute |
| Transport<br>(Cycling and walking) | Moderate-intensity = 4 MET                                                     |
| Recreation                         | Moderate-intensity = 4 MET per minute<br>Vigorous-intensity = 8 MET per minute |

**Example:**

**Activity:** 30 minutes of moderate-intensity physical activity and 60 min of vigorous-intensity physical activity in one day.

**MET value per day:**

(30 min x 4) METs + (60 min x 8) METs = 600 METs /day

**8.1 Time spent on physical activity**

Total minutes of physical activity were obtained by inquiring respondents about time spent on physical activity in three key domains (work, transport, and recreational) at moderate and vigorous intensity level on a typical day each week. The vigorous intensity minutes were converted into moderate intensity minutes using a multiplication factor of 2 and 'total' physical activity minutes were expressed as moderate-intensity minutes per day.

On average, adults aged 18-69 in Bangladesh spent 247.9 minutes on moderate-intensity or equivalent level physical activity per day while the median was 132.0 minutes. In other words, 50% of the population engaged in 132.0 or less minutes of moderate-intensity physical activity each day which is insufficient according to current WHO recommendations (**Table 8.1**).

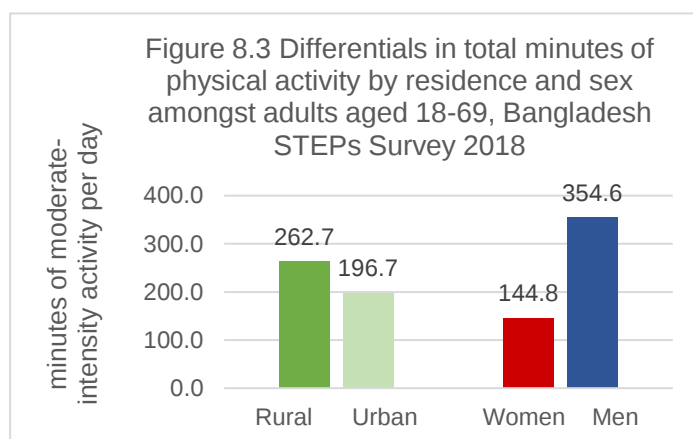
In terms of intensity, the population average minutes per day for vigorous- and moderate-intensity physical activity were 55.6 and 136.9 minutes, respectively. More than half of the

<sup>51</sup> WHO. Global recommendations on physical activity for health. Geneva, World Health Organization (WHO), 2010

population did not engage (0.0 minute) in any vigorous-intensity physical activity per day while the median for moderate-intensity activity was 90.0 minutes (**Table 8.1**).

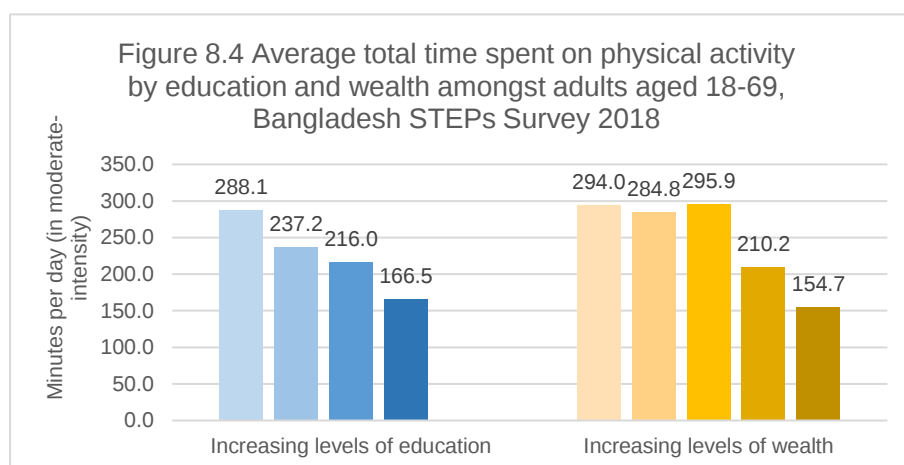
### Patterns by background characteristics (**Table 8.1**):

- Total average minutes of physical activity is consistently higher than the median, which suggest the average is influenced by a number of adults that reported very long hours of engagement in physical activity.
- Average total minutes of physical activity was highest amongst 25-39 and 40-54 age groups, 272.2 min and 291.8 min respectively (**Table 8.1**).



- Women had lower average total minutes of physical activity than men (144.8 min vs 354.6 min), as well as lower average minutes of vigorous-intensity and moderate intensity physical activity (**Figure 8.3**).
- Engagement in physical activity was higher amongst rural residents than urban residents (**Figure 8.3**)

- Rajshahi had the highest average total minutes of physical activity (322.1 min) and Khulna had the highest median (202.1 min), while the lowest average (203.7 min) and median minutes (93.4 min) of total physical activity was in Dhaka Rural (**Table 8.1**).



- Total minutes of physical activity decreased with increasing levels of education and household wealth (**Figure 8.4**).

## 8.2 Insufficient levels of physical activity

Figure 8.5 Prevalence of insufficient levels of physical activities by age group amongst women and men aged 18-69, Bangladesh STEPs Survey 2018

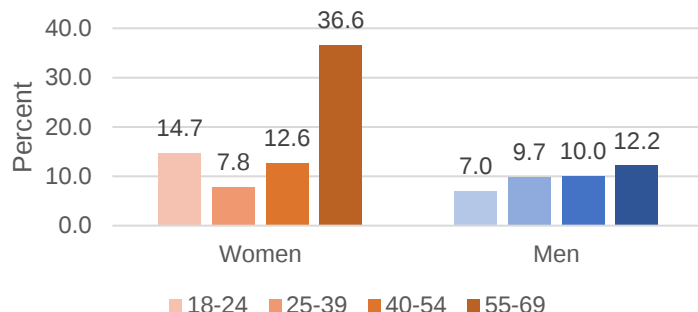


Figure 8.6 Differentials in percent of women and men aged 18-69 who have insufficient levels of physical activity by residence, Bangladesh STEPs Survey 2018

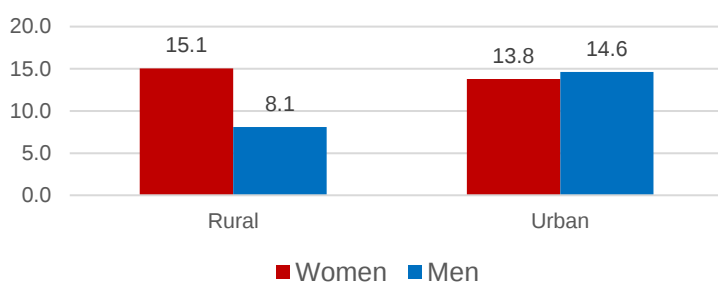
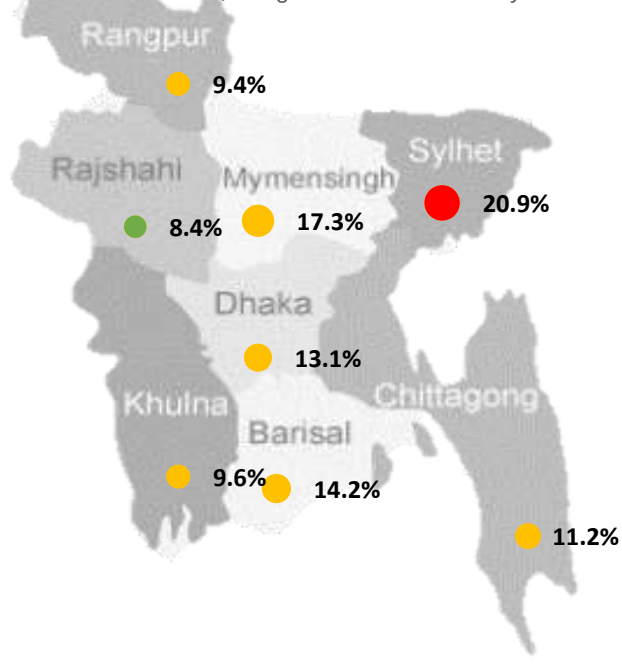


Figure 8.7 Prevalence of insufficient levels of physical activity amongst adults aged 18-69 by division, Bangladesh STEPs Survey 2018



The prevalence of insufficient levels of physical activity was 12.3% amongst adults aged 18-69 years (Table 8.2).

### Patterns by background characteristic (Table 8.2):

- The highest proportion of adults with insufficient levels of physical activity was in the oldest age group for both men and women. However, a much higher proportion of women aged 55-69 had insufficient levels of physical activity compared to all other groups (Figure 8.5)
- Prevalence of insufficient physical activity is higher amongst urban residents than rural residents (11.7% vs 14.2%), however this

relation is differential across sex (Table 8.2). A higher percentage of women who are rural residents had insufficient levels of physical activity, while the opposite is seen amongst men (Figure 8.6 and Table 8.2).

- Sylhet and Mymensingh have the highest prevalence of insufficient physical activity, while the lowest prevalence is seen in Rajshahi (Figure 8.7)

### 8.3. Percent contribution to physical activity from each domain.

Amongst adults who engaged in some level of physical activity, 73.4% of the total physical activity minutes contributed from

work, 22.1% from travel, and only 4.6% were from recreational activities.

### Patterns by background characteristics (Table 8.3):

- Adults aged 18-24 were most likely to engage in recreational activities (10.4%) as part

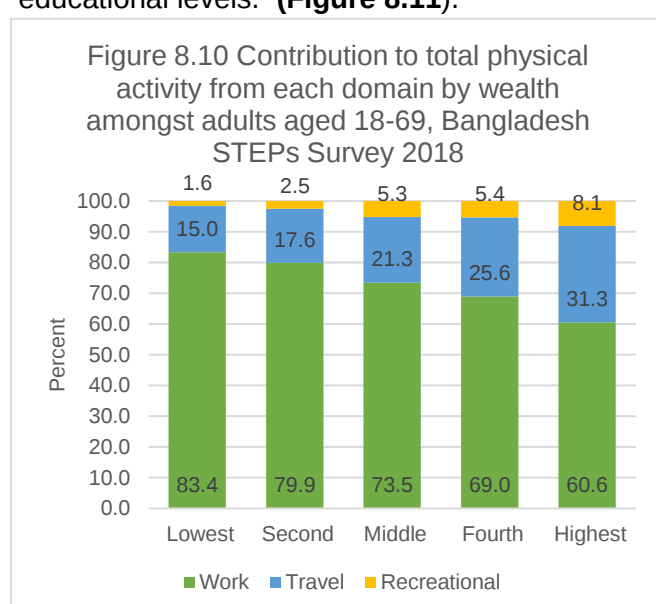
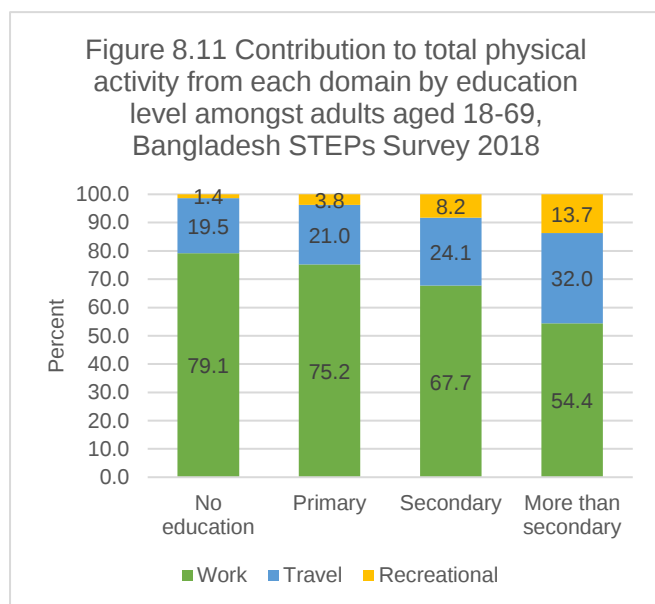
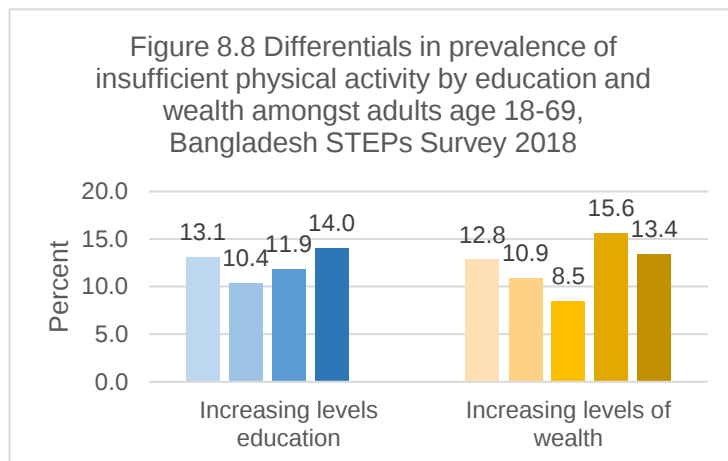
of their physical activity while adults aged 40-54 were mostly engaged in physical activity through work (76.0%).

- Women engaged in less recreational physical activities and more work-related activities compared to men. Much of men's physical activity came from travelling to and from the places (31.5%).

- Rural residents engaged in more physical activities that were work-related or travel-related compared to urban residents.

- The proportional contribution from work to the total physical activity declines with increasing household wealth (**Figure 8.10**), while the reverse is true for physical activity from travel and recreational activities. Similar patterns were observed with increasing

educational levels. (**Figure 8.11**).

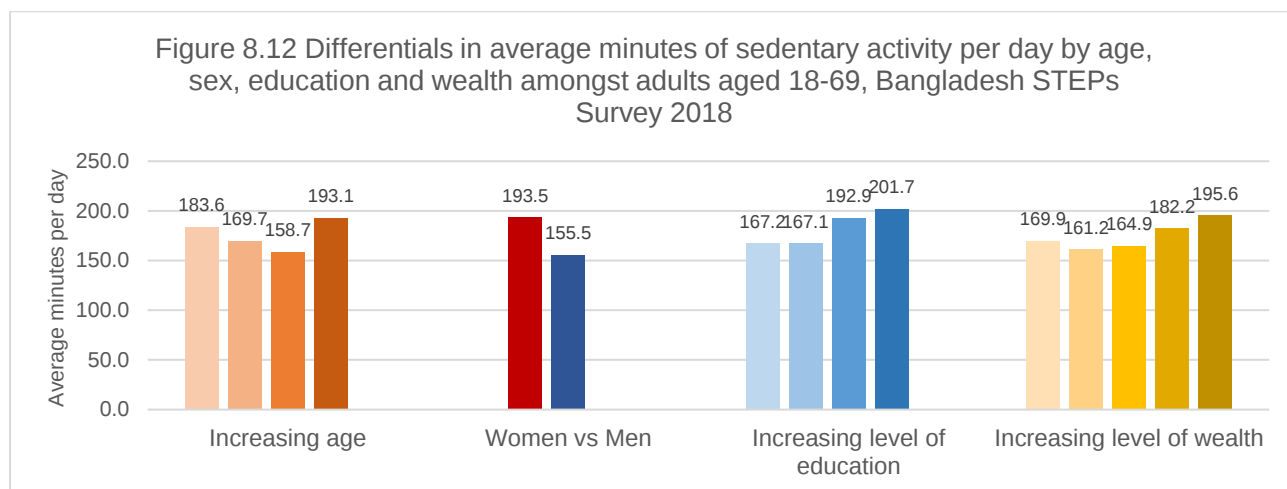


## 8.4 Time spent on sedentary activities

On average, adults spend 174.8 minutes per day on sedentary activities such as sitting or reclining excluding sleep time. Fifty percent of adults spent 140.0 minutes or more per day on sedentary activities.

**Patterns by background characteristics (Table 8.4):**

- Adults who aged 40-54, men, lower levels of education and lower household wealth quintiles are least sedentary (**Figure 8.12 and Table 8.4**)



**List of Tables:**

For more information on physical activity, see the following tables:

Table 8.1 Average and median time spent on physical activity per day by intensity level: all respondents

Table 8.2 Percent not meeting physical activity recommendations: all respondents

Table 8.3 Proportional contribution of each domain to total physical activity: all respondents

Table 8.4 Average and median time spent on sedentary activity on a typical day: all respondents

**Table 8.1 Average and median time spent on physical activity per day by intensity level: All respondents.**

Average and median time (minutes per day) spent on vigorous- and moderate-intensity physical activity amongst adults (18-69 years), according to background characteristics [Bangladesh, 2018]

| Background characteristic | Vigorous intensity physical activity (min. per day) |        |     |       | Total (N) | Moderate intensity physical activity (min. per day) |        |      |       | Total (N) | Total physical activity in minutes of moderate- intensity activity (min. per day)** |        |      |       | Total respondents (N) |
|---------------------------|-----------------------------------------------------|--------|-----|-------|-----------|-----------------------------------------------------|--------|------|-------|-----------|-------------------------------------------------------------------------------------|--------|------|-------|-----------------------|
|                           | Average                                             | Median | IQR |       |           | Average                                             | Median | IQR  |       |           | Average                                                                             | Median | IQR  |       |                       |
|                           |                                                     |        | p25 | p75   |           |                                                     |        | p25  | p75   |           |                                                                                     |        | p25  | p75   |                       |
| Age                       |                                                     |        |     |       |           |                                                     |        |      |       |           |                                                                                     |        |      |       |                       |
| 18-24                     | 45.0                                                | 0.0    | 0.0 | 25.7  | 1023      | 122.8                                               | 80.0   | 33.6 | 160.0 | 1019      | 213.3                                                                               | 114.3  | 51.4 | 265.7 | 1017                  |
| 25-39                     | 60.7                                                | 0.0    | 0.0 | 38.6  | 3482      | 151.7                                               | 111.4  | 45.0 | 200.0 | 3460      | 272.2                                                                               | 150.0  | 64.3 | 374.3 | 3454                  |
| 40-54                     | 72.0                                                | 0.0    | 0.0 | 68.6  | 2500      | 147.9                                               | 105.7  | 40.0 | 200.0 | 2487      | 291.8                                                                               | 158.6  | 60.0 | 400.0 | 2484                  |
| 55-69                     | 39.5                                                | 0.0    | 0.0 | 17.1  | 1165      | 108.7                                               | 60.0   | 17.1 | 150.0 | 1165      | 187.7                                                                               | 90.0   | 25.7 | 255.7 | 1163                  |
| Sex                       |                                                     |        |     |       |           |                                                     |        |      |       |           |                                                                                     |        |      |       |                       |
| Women                     | 11.2                                                | 0.0    | 0.0 | 0.0   | 4379      | 122.3                                               | 90.0   | 38.6 | 171.4 | 4349      | 144.8                                                                               | 100.0  | 42.9 | 180.0 | 4347                  |
| Men                       | 101.6                                               | 17.1   | 0.0 | 154.3 | 3791      | 151.9                                               | 94.3   | 30.0 | 222.9 | 3782      | 354.6                                                                               | 235.0  | 68.6 | 557.1 | 3771                  |
| Residence                 |                                                     |        |     |       |           |                                                     |        |      |       |           |                                                                                     |        |      |       |                       |
| Rural                     | 61.2                                                | 0.0    | 0.0 | 51.4  | 4713      | 140.6                                               | 96.4   | 37.1 | 188.6 | 4159      | 262.7                                                                               | 147.9  | 60.0 | 360.0 | 4151                  |
| Urban                     | 36.4                                                | 0.0    | 0.0 | 0.0   | 3997      | 124.0                                               | 72.9   | 30.0 | 150.0 | 3792      | 196.7                                                                               | 98.6   | 38.6 | 231.4 | 3967                  |
| Division                  |                                                     |        |     |       |           |                                                     |        |      |       |           |                                                                                     |        |      |       |                       |
| Barishal                  | 49.9                                                | 0.0    | 0.0 | 25.7  | 986       | 111.3                                               | 85.7   | 40.7 | 150.0 | 983       | 211.2                                                                               | 115.7  | 60.0 | 265.7 | 983                   |
| Chattogram                | 48.2                                                | 0.0    | 0.0 | 21.4  | 1053      | 129.0                                               | 94.3   | 51.4 | 147.9 | 1051      | 224.9                                                                               | 120.0  | 60.0 | 244.3 | 1051                  |
| Dhaka Rural               | 45.8                                                | 0.0    | 0.0 | 17.1  | 995       | 111.7                                               | 60.0   | 25.7 | 141.4 | 996       | 203.7                                                                               | 94.3   | 38.6 | 241.4 | 994                   |
| Khulna                    | 50.2                                                | 0.0    | 0.0 | 21.4  | 1040      | 176.8                                               | 128.6  | 42.1 | 282.9 | 1015      | 278.2                                                                               | 202.1  | 60.0 | 428.6 | 1015                  |
| Mymensingh                | 55.1                                                | 0.0    | 0.0 | 42.9  | 1018      | 175.4                                               | 120.0  | 30.0 | 270.0 | 1015      | 285.1                                                                               | 180.0  | 50.0 | 420.0 | 1012                  |
| Rajshahi                  | 82.2                                                | 0.0    | 0.0 | 102.9 | 1065      | 160.3                                               | 121.4  | 60.0 | 222.9 | 1060      | 322.1                                                                               | 186.4  | 90.0 | 497.1 | 1059                  |
| Rangpur                   | 60.1                                                | 0.0    | 0.0 | 51.4  | 1004      | 135.7                                               | 98.6   | 32.1 | 201.4 | 1003      | 256.4                                                                               | 154.3  | 55.7 | 360.0 | 999                   |
| Sylhet                    | 71.4                                                | 0.0    | 0.0 | 40.0  | 1009      | 114.4                                               | 88.6   | 28.6 | 150.0 | 1008      | 257.1                                                                               | 114.3  | 30.0 | 276.4 | 1005                  |
| Education                 |                                                     |        |     |       |           |                                                     |        |      |       |           |                                                                                     |        |      |       |                       |
| No education              | 75.1                                                | 0.0    | 0.0 | 80.0  | 3670      | 138.8                                               | 90.0   | 30.0 | 182.1 | 3655      | 288.1                                                                               | 160.0  | 59.3 | 407.1 | 3648                  |
| Primary                   | 45.9                                                | 0.0    | 0.0 | 17.1  | 2527      | 145.2                                               | 92.1   | 45.0 | 197.1 | 2515      | 237.2                                                                               | 120.0  | 60.0 | 301.4 | 2510                  |
| Secondary                 | 42.8                                                | 0.0    | 0.0 | 17.1  | 888       | 129.6                                               | 88.6   | 30.7 | 175.0 | 879       | 216.0                                                                               | 120.0  | 45.0 | 240.0 | 879                   |
| More than secondary       | 24.8                                                | 0.0    | 0.0 | 17.1  | 1064      | 116.9                                               | 74.3   | 30.0 | 154.3 | 1061      | 166.5                                                                               | 105.0  | 37.1 | 201.4 | 1060                  |
| Wealth quintile           |                                                     |        |     |       |           |                                                     |        |      |       |           |                                                                                     |        |      |       |                       |
| Lowest                    | 77.5                                                | 0.0    | 0.0 | 102.9 | 1636      | 140.5                                               | 90.0   | 31.4 | 210.0 | 1625      | 294.0                                                                               | 171.4  | 60.0 | 430.0 | 1623                  |
| Second                    | 71.9                                                | 0.0    | 0.0 | 72.9  | 1667      | 141.5                                               | 94.3   | 35.7 | 195.0 | 1659      | 284.8                                                                               | 150.0  | 60.0 | 397.1 | 1656                  |
| Middle                    | 73.4                                                | 0.0    | 0.0 | 68.6  | 1445      | 148.3                                               | 102.9  | 40.0 | 185.7 | 1438      | 295.9                                                                               | 167.1  | 64.3 | 415.7 | 1433                  |
| Fourth                    | 35.7                                                | 0.0    | 0.0 | 8.6   | 1504      | 138.5                                               | 90.0   | 30.0 | 180.0 | 1499      | 210.2                                                                               | 120.0  | 45.0 | 270.0 | 1497                  |
| Highest                   | 19.8                                                | 0.0    | 0.0 | 0.0   | 1918      | 115.4                                               | 77.1   | 30.0 | 150.0 | 1910      | 154.7                                                                               | 90.0   | 40.0 | 184.3 | 1909                  |
| Total (25-69)             | 59.0                                                | 0.0    | 0.0 | 38.6  | 7147      | 141.3                                               | 94.3   | 34.3 | 187.1 | 7112      | 258.7                                                                               | 141.4  | 57.1 | 360.0 | 7101                  |
| Total (18-69)             | 55.6                                                | 0.0    | 0.0 | 34.3  | 8,170     | 136.9                                               | 90.0   | 34.3 | 180.0 | 8131      | 247.9                                                                               | 132.0  | 53.6 | 330.0 | 8118                  |

\*MET( Metabolic equivalent of task): for vigorous activity 1 minute equate to 8 units of MET; for moderate activity 1 minute equate to 4 units of MET. \*\*Minutes spent on vigorous-intensity activities per day are multiplied by 2, to derive equivalent minutes of moderate-intensity activities, which is then summed up to derive total physical activity in minutes of moderate-intensity activity per day.

**Table Physical activity.8.2 Percent not meeting physical activity recommendations: All respondents**

Percent of men and women (18-69 years) not meeting physical activity recommendations\*, according to background characteristics [Bangladesh, 2018]

| Background characteristic | Total       |             | Women       |             | Men        |             |
|---------------------------|-------------|-------------|-------------|-------------|------------|-------------|
|                           | Percent     | n           | Percent     | n           | Percent    | n           |
| <b>Age</b>                |             |             |             |             |            |             |
| 18-24                     | 11.2        | 1017        | 14.7        | 615         | 7.0        | 402         |
| 25-39                     | 8.8         | 3454        | 7.8         | 2000        | 9.7        | 1454        |
| 40-54                     | 11.3        | 2484        | 12.6        | 1276        | 10.0       | 1208        |
| 55-69                     | 23.1        | 1163        | 36.6        | 456         | 12.2       | 707         |
| <b>Residence</b>          |             |             |             |             |            |             |
| Rural                     | 11.7        | 4151        | 15.1        | 2252        | 8.1        | 1899        |
| Urban                     | 14.2        | 3967        | 13.8        | 2095        | 14.6       | 1872        |
| <b>Division</b>           |             |             |             |             |            |             |
| Barishal                  | 14.2        | 983         | 18.4        | 538         | 9.7        | 445         |
| Chattogram                | 11.2        | 1051        | 14.2        | 552         | 7.6        | 499         |
| Dhaka Rural               | 13.1        | 994         | 13.1        | 518         | 13.1       | 476         |
| Khulna                    | 9.6         | 1015        | 9.2         | 535         | 10.0       | 480         |
| Mymensingh                | 17.3        | 1012        | 25.6        | 547         | 7.4        | 465         |
| Rajshahi                  | 8.4         | 1059        | 10.9        | 569         | 6.0        | 490         |
| Rangpur                   | 9.4         | 999         | 6.8         | 543         | 12.1       | 456         |
| Sylhet                    | 20.9        | 1005        | 32.6        | 545         | 7.8        | 460         |
| <b>Education</b>          |             |             |             |             |            |             |
| No education              | 13.1        | 3648        | 17.9        | 1948        | 8.1        | 1700        |
| Primary                   | 10.4        | 2510        | 10.3        | 1512        | 10.4       | 998         |
| Secondary                 | 11.9        | 879         | 14.5        | 427         | 9.4        | 452         |
| More than secondary       | 14.0        | 1060        | 16.5        | 439         | 12.6       | 621         |
| <b>Wealth quintile</b>    |             |             |             |             |            |             |
| Lowest                    | 12.8        | 1623        | 16.9        | 973         | 7.5        | 650         |
| Second                    | 10.9        | 1656        | 12.4        | 903         | 9.3        | 753         |
| Middle                    | 8.5         | 1433        | 12.7        | 717         | 5.2        | 716         |
| Fourth                    | 15.6        | 1497        | 18.3        | 712         | 13.0       | 785         |
| Highest                   | 13.4        | 1909        | 13.3        | 1042        | 13.6       | 867         |
| Total (25-69)             | 12.6        | 7101        | 14.8        | 3732        | 10.4       | 3369        |
| <b>Total (18-69)</b>      | <b>12.3</b> | <b>8118</b> | <b>14.8</b> | <b>4347</b> | <b>9.6</b> | <b>3771</b> |

\*WHO physical activity recommendations per age group: [15-17 years] At least 60 minutes of moderate- to vigorous-intensity physical activity daily; [18-64] At least 600 METs (metabolic equivalent of tasks) of physical activity throughout the week or 150 minutes of moderate-intensity physical activity per week or 75 minutes of vigorous-intensity physical activity per week; [65 years and above] same as age group 18-64 years. (For complete recommendation, please refer to Global recommendation on physical activity for health, 2010).

**Table Physical Activity.8.3 Proportional contribution of each domain to total physical activity: all respondents**

Proportional share of total physical activity from work, travel and recreational activities amongst adults (18-69) who participate in some level of physical activity, according to background characteristics\*  
[Bangladesh, 2018]

| Background characteristic | Average percent contribution to overall physical activity from: |                           |                         | Total (%) | Total respondents (n)** |
|---------------------------|-----------------------------------------------------------------|---------------------------|-------------------------|-----------|-------------------------|
|                           | Work                                                            | Travel from and to places | Recreational activities |           |                         |
| <b>Age</b>                |                                                                 |                           |                         |           |                         |
| 18-24                     | 71.6                                                            | 18.1                      | 10.4                    | 100.0     | 954                     |
| 25-39                     | 75.9                                                            | 21.0                      | 3.1                     | 100.0     | 3292                    |
| 40-54                     | 76.0                                                            | 22.2                      | 1.9                     | 100.0     | 2319                    |
| 55-69                     | 65.9                                                            | 31.6                      | 2.5                     | 100.0     | 1028                    |
| <b>Sex</b>                |                                                                 |                           |                         |           |                         |
| Women                     | 85.9                                                            | 12.8                      | 1.3                     | 100.0     | 4,021                   |
| Men                       | 60.7                                                            | 31.5                      | 7.8                     | 100.0     | 3,572                   |
| <b>Residence</b>          |                                                                 |                           |                         |           |                         |
| Rural                     | 75.6                                                            | 20.4                      | 4.0                     | 100.0     | 3,934                   |
| Urban                     | 65.6                                                            | 28.1                      | 6.3                     | 100.0     | 3,659                   |
| <b>Division</b>           |                                                                 |                           |                         |           |                         |
| Barishal                  | 71.1                                                            | 23.4                      | 5.5                     | 100.0     | 908                     |
| Chattogram                | 71.1                                                            | 26.1                      | 2.8                     | 100.0     | 999                     |
| Dhaka Rural               | 70.3                                                            | 22.7                      | 7.0                     | 100.0     | 957                     |
| Khulna                    | 76.4                                                            | 18.7                      | 5.0                     | 100.0     | 964                     |
| Mymensingh                | 74.8                                                            | 22.8                      | 2.4                     | 100.0     | 932                     |
| Rajshahi                  | 78.6                                                            | 17.4                      | 4.0                     | 100.0     | 1007                    |
| Rangpur                   | 77.6                                                            | 18.3                      | 4.1                     | 100.0     | 972                     |
| Sylhet                    | 69.6                                                            | 26.9                      | 3.5                     | 100.0     | 854                     |
| <b>Education</b>          |                                                                 |                           |                         |           |                         |
| No education              | 79.1                                                            | 19.5                      | 1.4                     | 100.0     | 3426                    |
| Primary                   | 75.2                                                            | 21.0                      | 3.8                     | 100.0     | 2364                    |
| Secondary                 | 67.7                                                            | 24.1                      | 8.2                     | 100.0     | 826                     |
| More than secondary       | 54.4                                                            | 32.0                      | 13.7                    | 100.0     | 962                     |
| <b>Wealth quintile</b>    |                                                                 |                           |                         |           |                         |
| Lowest                    | 83.4                                                            | 15.0                      | 1.6                     | 100.0     | 1540                    |
| Second                    | 79.9                                                            | 17.6                      | 2.5                     | 100.0     | 1585                    |
| Middle                    | 73.5                                                            | 21.3                      | 5.3                     | 100.0     | 1357                    |
| Fourth                    | 69.0                                                            | 25.6                      | 5.4                     | 100.0     | 1393                    |
| Highest                   | 60.6                                                            | 31.3                      | 8.1                     | 100.0     | 1718                    |
| Total (25-69)             | 73.9                                                            | 23.4                      | 2.7                     | 100.0     | 6,639                   |
| <b>Total (18-69)</b>      | 73.4                                                            | 22.1                      | 4.6                     | 100.0     | 7,593                   |

\*proportion calculation based on amount of METs per activity among total amount of METs of total physical activity \*\*  
Adults who reported no participation in any type of physical activities were excluded.

**Table Physical Activity.8.4 Average and median time spent on sedentary activity on a typical day: all respondents**

Average time (minutes per day) spent sitting or reclining among adults (18-69 years), according to background characteristics [Bangladesh, 2018]

| Background characteristic | Average | 95% CI      | Median | Interquartile range |       | Total respondents (n) |
|---------------------------|---------|-------------|--------|---------------------|-------|-----------------------|
|                           |         |             |        | p25                 | p75   |                       |
| <b>Age</b>                |         |             |        |                     |       |                       |
| 18-24                     | 183.6   | 170.6 196.6 | 150.0  | 90.0                | 240.0 | 1026                  |
| 25-39                     | 169.7   | 158.5 180.9 | 120.0  | 60.0                | 240.0 | 3489                  |
| 40-54                     | 158.7   | 146.2 171.1 | 120.0  | 60.0                | 210.0 | 2503                  |
| 55-69                     | 193.1   | 176.3 210.0 | 150.0  | 80.0                | 270.0 | 1167                  |
| <b>Sex</b>                |         |             |        |                     |       |                       |
| Women                     | 193.5   | 181.1 205.8 | 150.0  | 90.0                | 270.0 | 4381                  |
| Men                       | 155.5   | 143.9 167.0 | 120.0  | 60.0                | 205.0 | 3804                  |
| <b>Residence</b>          |         |             |        |                     |       |                       |
| Rural                     | 173.7   | 162.0 185.4 | 135.0  | 60.0                | 240.0 | 4183                  |
| Urban                     | 178.4   | 162.9 193.8 | 150.0  | 60.0                | 240.0 | 4002                  |
| <b>Division</b>           |         |             |        |                     |       |                       |
| Barishal                  | 146.7   | 134.8 158.6 | 120.0  | 60.0                | 180.0 | 986                   |
| Chattogram                | 156.1   | 144.4 167.9 | 120.0  | 90.0                | 205.0 | 1053                  |
| Dhaka Rural               | 214.8   | 182.9 246.6 | 185.0  | 60.0                | 300.0 | 997                   |
| Khulna                    | 186.6   | 158.6 214.6 | 150.0  | 90.0                | 240.0 | 1040                  |
| Mymensingh                | 166.7   | 126.9 206.5 | 120.0  | 60.0                | 240.0 | 1021                  |
| Rajshahi                  | 186.9   | 173.3 200.5 | 155.0  | 90.0                | 300.0 | 1066                  |
| Rangpur                   | 110.6   | 88.5 132.8  | 80.0   | 30.0                | 150.0 | 1009                  |
| Sylhet                    | 168.3   | 153.9 182.7 | 150.0  | 90.0                | 220.0 | 1013                  |
| <b>Education</b>          |         |             |        |                     |       |                       |
| No education              | 167.2   | 155.0 179.4 | 120.0  | 60.0                | 240.0 | 3678                  |
| Primary                   | 167.1   | 156.1 178.1 | 121.0  | 60.0                | 240.0 | 2533                  |
| Secondary                 | 192.9   | 175.2 210.7 | 150.0  | 90.0                | 240.0 | 888                   |
| More than secondary       | 201.7   | 184.7 218.8 | 180.0  | 90.0                | 300.0 | 1065                  |
| <b>Wealth quintile</b>    |         |             |        |                     |       |                       |
| Lowest                    | 169.9   | 152.6 187.3 | 120.0  | 60.0                | 240.0 | 1639                  |
| Second                    | 161.2   | 145.6 176.9 | 120.0  | 60.0                | 210.0 | 1670                  |
| Middle                    | 164.9   | 150.7 179.1 | 120.0  | 60.0                | 210.0 | 1451                  |
| Fourth                    | 182.2   | 170.1 194.4 | 150.0  | 90.0                | 240.0 | 1506                  |
| Highest                   | 195.6   | 183.8 207.3 | 180.0  | 90.0                | 270.0 | 1919                  |
| Total (25-69)             | 172.0   | 161.8 182.1 | 120.0  | 60.0                | 240.0 | 7159                  |
| <b>Total (18-69)</b>      |         |             |        |                     |       |                       |

## Chapter 9 Anthropometry

### Key findings

---

#### Nutritional status:

- *Underweight*: 13.7% of adults (11.6% women, 15.7% men)
- *Overweight*: 20.5% of adults (25.1% women, 16.0% men)
- *Obesity*: 4.3% of adults (8.6% women, 2.3% men)
- *Mean population Body-mass Index (BMI)*: 22.7 kg/m<sup>2</sup> (23.5 kg/m<sup>2</sup> in women, 21.9 kg/m<sup>2</sup> in men)

#### Waist circumference and waist-hip ratio:

- *High waist circumference (>88cm for women, >104 for men)*: 10.9% (20.1% in women, 1.8% in men)
- *High waist-hip ratio (>= 0.85 for women, >=0.90 for men)*: 42.7% (42.2% in women, 43.2% in men)

#### Disease risk based on body-mass index and waist circumference:

- *Increased risk*: 18.6% (18.9% women, 18.2% men)
  - *High risk*: 7.8% (13.2% women, 8.5% men)
  - *Very high risk*: 4.9% (8.5% women, 1.3% men)
- 

### Introduction

The global epidemic of overweight and obesity is rapidly becoming a major public health problem that paradoxically coexists with undernutrition in many developing countries. The increasing prevalence of overweight and obesity is associated with many chronic diseases including type 2 diabetes mellitus, cardiovascular disease (CVD), stroke, hypertension, non-alcoholic fatty liver disease, and certain cancers<sup>52,53</sup>. One of the nine voluntary global targets set under WHO Global Action Plan against NCDs<sup>54</sup> is to halt the rise in diabetes and obesity by 2025. Hence, Bangladesh has incorporated it as one of the key targets in its 5-year multisectoral action plan for 2018-2025<sup>10</sup> and its predecessor<sup>39</sup>.

---

<sup>52</sup> Lu, Y., Hajifathalian, K., Ezzati, M., Woodward, M., Rimm, E.B. and Danaei, G., 2014. Metabolic mediators of the effects of body-mass index, overweight, and obesity on coronary heart disease and stroke: a pooled analysis of 97 prospective cohorts with 1· 8 million participants.

<sup>53</sup> The GBD 2015 Obesity Collaborators. Health Effects of Overweight and Obesity in 195 Countries over 25 Years. *N Engl J Med.* 2017;377(1):13-27. doi:10.1056/NEJMoa1614362

<sup>54</sup> WHO. The Updated Appendix of 3 of the Global Action Plan for the Prevention and Control of NCDs 2013-2020. World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva.

---

## Current relevant policies and programs in Bangladesh for nutritional status

---

- Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases 2018-2025<sup>10</sup>
  - National Nutrition Policy 2015<sup>55</sup>
- 

This chapter summarizes anthropometric parameters that reflect both general obesity (body-mass Index (BMI)), and abdominal obesity as measured by waist circumference (WC) and waist-to-hip ratio (WHR) and its associated disease risk. The indicators presented will help Bangladesh assess current trends in overall nutrition status and the risk for chronic diseases and metabolic disorders and the effectiveness of current policy and programs.

### 9.1 Nutritional Status

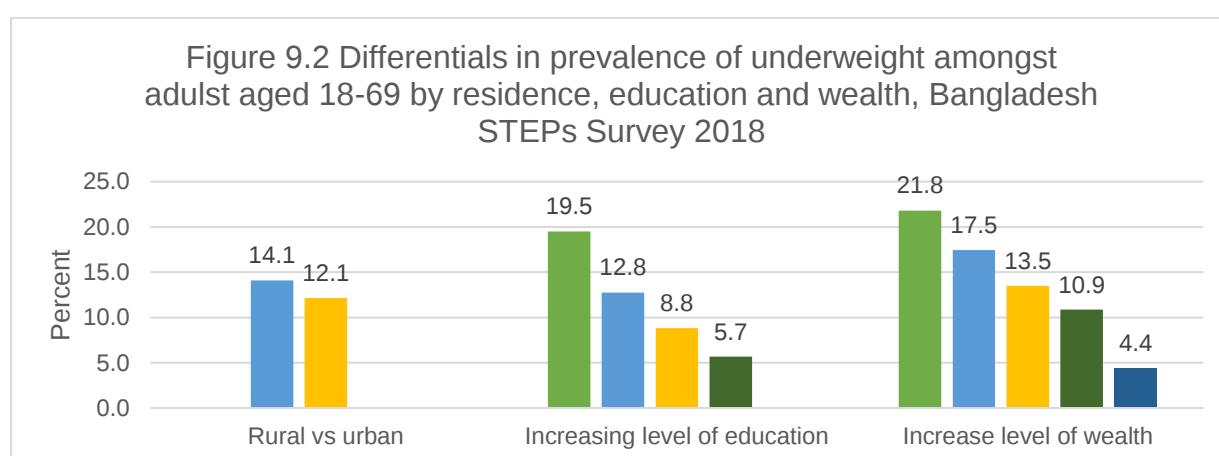
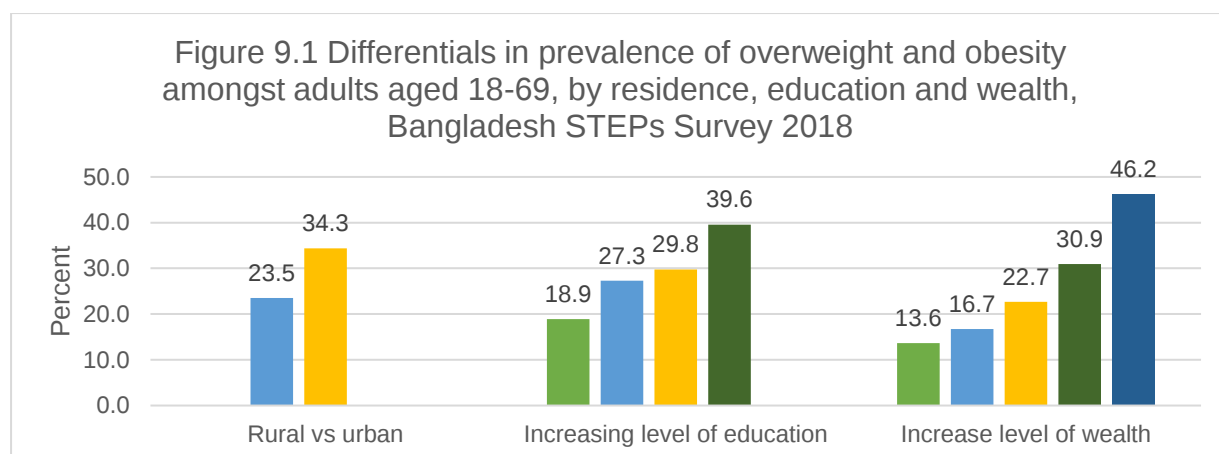
In 2018, mean population BMI of adult population (15-69 years) was 22.7kg/m<sup>2</sup> which is within normal weight range (i.e. 18.5 to 24.9 kg/m<sup>2</sup>). 13.7% of adults were underweight (BMI<18.5 kg/m<sup>2</sup>) while 20.5% and 5.4% of adults were overweight (BMI=25-29.9) and obese (BMI≥30), respectively (**Table 9.1**).

#### Patterns by background characteristics for nutritional status (Table 9.1):

- Mean BMI was significantly higher in age groups 25-39 and 40-54 compared to older and younger age groups.
- Women had significantly higher mean BMI than men (23.5 kg/m<sup>2</sup> vs 21.9 kg/m<sup>2</sup>) which is also reflected in prevalence of overweight and obesity (33.7% vs 18.3%) (**Table 9.1**)
- Adults who are urban residents, with higher education levels and higher household wealth had significantly higher mean BMI and prevalence of overweight and obesity (**Figure 9.1**). While the opposite relationship is seen for underweight (**Figure 9.2**)

---

<sup>55</sup> National Nutrition policy 2015. Available at : <http://extwprlegs1.fao.org/docs/pdf/bgd152517.pdf>



- Dhaka rural had the highest prevalence of overweight and obesity (31.6%) and Mymensingh had the highest prevalence of underweight (21.1%) (**Table 9.1**).

## 9.2 Waist Circumference and Waist-Hip Ratio

While BMI is a population-level measure for overweight and obesity, it does not reflect variation in body fat distribution and lean body mass. Both WC and WHR correlate more closely to abdominal obesity which in-turn is more reflective of metabolic abnormalities such as decreased glucose tolerance, reduced insulin sensitivity and adverse lipid profiles<sup>56</sup>. There are no definite evidence on appropriate universal or population-specific cut offs for WC or WHR<sup>57</sup> and variations in outcome measures used for reference. For the purpose of this report, cut-offs commonly attributed to WHO<sup>6,58</sup> (used for discussion below) and South Asian specific cut-offs established by International Diabetes Federation<sup>59</sup> (only shown in

<sup>56</sup> WHO. Waist circumference and waist-hip ratio: report of a WHO expert consultation, Geneva, 2008.

<sup>57</sup> Lear SA, James PT, Ko GT, Kumanyika S. Appropriateness of waist circumference and waist-to-hip ratio cutoffs for different ethnic groups. *Eur J Clin Nutr*. 2010;64(1):42-61. doi:10.1038/ejcn.2009.70

<sup>58</sup> WHO. Obesity: preventing and managing the global epidemic: report a WHO consultation. Geneva, 2000.

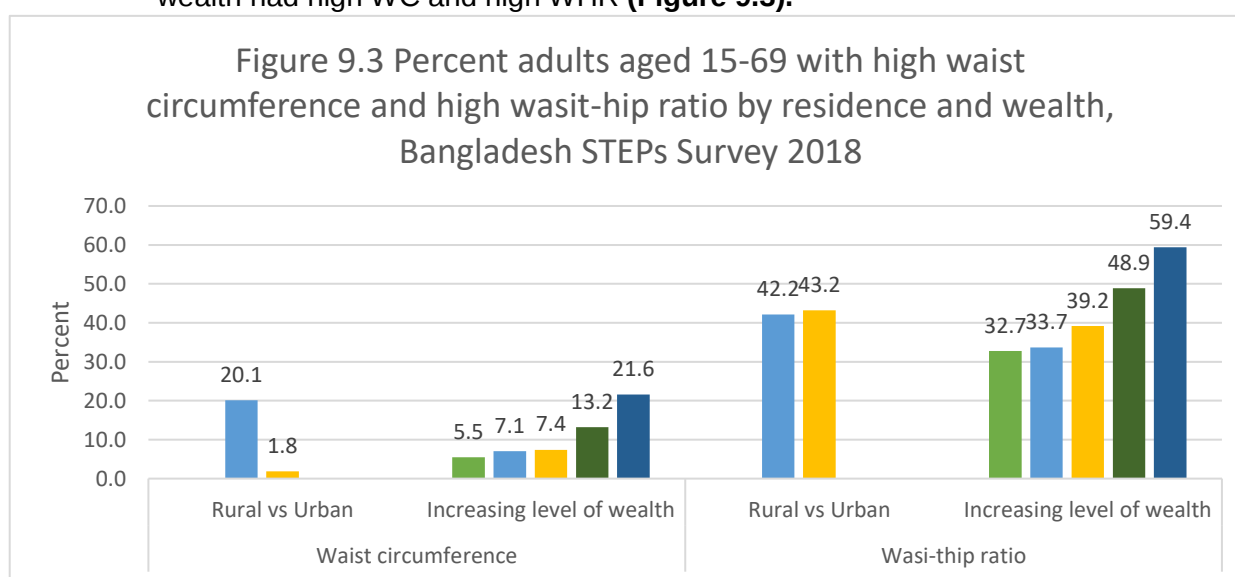
<sup>59</sup> Alberti KGMM, Zimmet P, Shaw J. Metabolic syndrome-a new world-wide definition. A Consensus Statement from the International Diabetes Federation. *Diabet Med*. 2006;23(5):469-480. doi:10.1111/j.1464-5491.2006.01858.x

**Table 9.2)** that both have been widely cited across studies were utilized for cross country comparison and trend analysis. Further analysis using validated country or population specific cut-offs may be required for more sensitive population risk assessment.

The population mean WC of all adults (18-69 years) was 78.6 cm and mean WHR was 0.87 (**Table 9.2**). 10.9% of adults had high WC (>88 cm for women, > 102 cm for men). 42.7% of adults have high WHR (**Table 9.2**).

**Patterns by background characteristics for waist circumference and waist-hip ratio (Table 9.2):**

- Although mean WC did not differ significantly between men and women, a substantially higher proportion of women had high WC compared to men (20.1% vs 1.8%).
- Women had significantly lower mean WHR than men (0.84 vs 0.89) but did not differ much in prevalence of high WHR.
- A higher proportion of adults who are urban residents and are of higher household wealth had high WC and high WHR (**Figure 9.3**).



- Chattogram and Khulna are amongst the divisions with the highest prevalence of high WC or high WHR. Interestingly, Although Rangpur has the second highest prevalence of high WC(43.1%) , only 8.4% of adults have high WC. (**Table 9.2**)

### 9.3 Disease risk based on body-mass index and waist circumference

Information from BMI and WC can be combined to capture both general obesity and abdominal obesity for the better categorization of risk status relative to individuals who have normal BMI and normal WC (**Figure 9.6**).

**Figure 9.6 Classification of Overweight and Obesity by BMI, Waist Circumference, and Associated Disease Risk\* (adapted from: NHLBI Obesity Education Initiative (2000)<sup>60</sup>)**

| BMI categories**           | Waist Circumference      |                        |
|----------------------------|--------------------------|------------------------|
|                            | Men<=102cm, Women <=88cm | Men<102cm, Women <88cm |
| Normal (BMI 18.5-24.9)     | Normal risk              | Increased risk         |
| Overweight (BMI 25.0-29.9) | Increased risk           | High risk              |
| Obese (BMI>=30.0)          | High risk                | Very high risk         |

\*Disease risk is relative to normal weight and waist circumference

\*\*Excluded underweight category

In Bangladesh 69.2% of adults had both a normal BMI and a normal WC and hence falls in the normal risk group for chronic diseases (**Table 9.3**). 19.9% of adults were in “increased” risk group, while 7.5% and 3.3% of all adults were categorized into “high” and “very-high” risk group respectively (**Table 9.3**).

#### Patterns by background characteristics (**Table 9.3**):

- A substantially higher proportion of men and rural residence compared to their counterparts.
- Rangpur has the highest percent of adults with normal risk (78.2%) and the lowest in Dhaka rural (63.9%)
- Increasing levels of education and household wealth is associated with a higher prevalence of disease risk (**Figure 9.7 & Figure 9.8**).

Figure 9.7 Differentials in disease risk based on BMI and WC by wealth amongst adults aged 18-69, Bangladesh STEPs Survey 2018

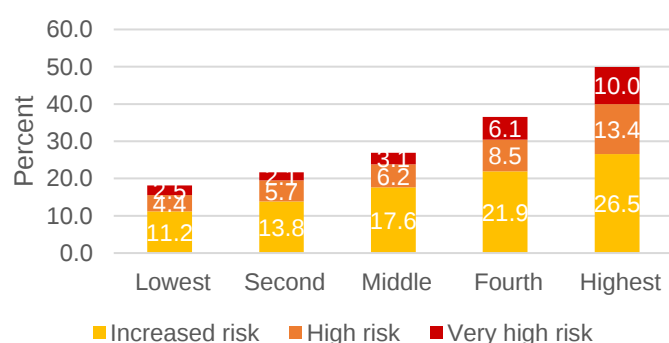
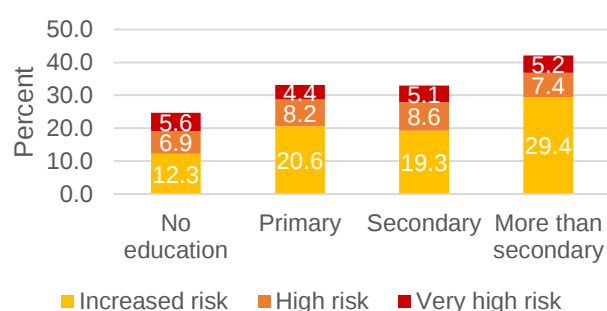


Figure 9.8 Differentials in disease risk based on BMI and WC by education level amongst adults aged 18-69, Bangladesh STEPs Survey 2018



<sup>60</sup> National Institutes of Health. National Heart, Lung, and Blood Institute. NIH Publication Number 00-4084. October 2000. NHLBI Obesity Education Initiative.

List of Tables:

For more information on anthropometry, see the following tables:

Table 9.1 Nutritional status based on body-mass index: all respondents (excluding pregnant women)

Table 9.2 Nutritional status based on waist circumference and waist-hip ratio: all respondents (excluding pregnant women)

Table 9.3 Disease risk based on body-mass index and waist circumference: all respondents (excluding pregnant women)

**Table 9.1 Nutritional status based on body-mass Index: all respondents (excluding pregnant women)**

Mean population BMI and percentage of adults aged 15-69 who had normal BMI, were underweight, overweight or obese; by background characteristics, [Bangladesh, 2018]

| Background characteristic | Mean BMI* (kg/m <sup>2</sup> ) | 95% CI |        | Percent respondents who's weight status is: |                        |                            |                     | Number of respondents (n) |
|---------------------------|--------------------------------|--------|--------|---------------------------------------------|------------------------|----------------------------|---------------------|---------------------------|
|                           |                                |        |        | Normal (BMI 18.5-24.9)                      | Underweight (BMI<18.5) | Overweight (BMI 25.0-29.9) | Obese (BMI >= 30.0) |                           |
| <b>Age</b>                |                                |        |        |                                             |                        |                            |                     |                           |
| 18-24                     | 21.6                           | 21.3   | - 22.0 | 69.4                                        | 14.8                   | 13.0                       | 2.9                 | 966                       |
| 25-39                     | 23.2                           | 23.0   | - 23.4 | 57.1                                        | 11.5                   | 25.7                       | 5.7                 | 3378                      |
| 40-54                     | 23.0                           | 22.8   | - 23.3 | 57.6                                        | 13.6                   | 21.1                       | 7.7                 | 2484                      |
| 55-69                     | 22.3                           | 21.8   | - 22.7 | 59.3                                        | 17.1                   | 18.0                       | 5.6                 | 1157                      |
| <b>Sex</b>                |                                |        |        |                                             |                        |                            |                     |                           |
| Women                     | 23.5                           | 23.2   | - 23.7 | 54.7                                        | 11.6                   | 25.1                       | 8.6                 | 4206                      |
| Men                       | 21.9                           | 21.7   | - 22.0 | 66.0                                        | 15.7                   | 16.0                       | 2.3                 | 3779                      |
| <b>Residence</b>          |                                |        |        |                                             |                        |                            |                     |                           |
| Rural                     | 22.4                           | 22.2   | - 22.6 | 62.4                                        | 14.1                   | 18.9                       | 4.6                 | 4087                      |
| Urban                     | 23.6                           | 23.3   | - 23.9 | 53.5                                        | 12.1                   | 26.0                       | 8.3                 | 3898                      |
| <b>Division</b>           |                                |        |        |                                             |                        |                            |                     |                           |
| Barishal                  | 22.5                           | 22.2   | - 22.8 | 62.5                                        | 13.8                   | 18.9                       | 4.8                 | 967                       |
| Chattogram                | 23.0                           | 22.6   | - 23.4 | 60.6                                        | 11.1                   | 22.2                       | 6.2                 | 1016                      |
| Dhaka Rural               | 23.1                           | 22.8   | - 23.5 | 56.3                                        | 12.1                   | 25.4                       | 6.2                 | 974                       |
| Khulna                    | 23.0                           | 22.6   | - 23.4 | 59.7                                        | 12.2                   | 20.6                       | 7.4                 | 1023                      |
| Mymensingh                | 21.5                           | 21.1   | - 21.9 | 62.9                                        | 21.1                   | 13.6                       | 2.5                 | 995                       |
| Rajshahi                  | 22.8                           | 22.3   | - 23.3 | 59.0                                        | 13.4                   | 21.3                       | 6.3                 | 1040                      |
| Rangpur                   | 21.9                           | 21.4   | - 22.4 | 67.2                                        | 15.3                   | 14.3                       | 3.3                 | 987                       |
| Sylhet                    | 21.6                           | 21.3   | - 22.0 | 64.3                                        | 18.4                   | 14.9                       | 2.4                 | 983                       |
| <b>Education</b>          |                                |        |        |                                             |                        |                            |                     |                           |
| No education              | 21.8                           | 21.6   | - 22.1 | 61.6                                        | 19.5                   | 13.5                       | 5.4                 | 2443                      |
| Primary                   | 22.8                           | 22.6   | - 23.0 | 60.0                                        | 12.8                   | 22.4                       | 4.9                 | 3622                      |
| Secondary                 | 23.2                           | 22.9   | - 23.5 | 61.5                                        | 8.8                    | 23.4                       | 6.4                 | 1352                      |
| More than secondary       | 24.0                           | 23.3   | - 24.7 | 54.7                                        | 5.7                    | 33.0                       | 6.6                 | 547                       |
| <b>Wealth quintile</b>    |                                |        |        |                                             |                        |                            |                     |                           |
| Lowest                    | 21.2                           | 20.9   | - 21.4 | 64.6                                        | 21.8                   | 11.2                       | 2.4                 | 1602                      |
| Second                    | 21.7                           | 21.4   | - 21.9 | 65.8                                        | 17.5                   | 14.5                       | 2.2                 | 1637                      |
| Middle                    | 22.3                           | 22.0   | - 22.7 | 63.8                                        | 13.5                   | 18.7                       | 4.0                 | 1405                      |
| Fourth                    | 23.2                           | 22.9   | - 23.6 | 58.2                                        | 10.9                   | 24.1                       | 6.9                 | 1471                      |
| Highest                   | 24.9                           | 24.6   | - 25.3 | 49.4                                        | 4.4                    | 34.4                       | 11.8                | 1870                      |
| Total (18-39)             | 22.6                           | 22.5   | - 22.8 | 61.6                                        | 12.7                   | 21.0                       | 4.7                 | 4344                      |
| Total (40-69)             | 22.7                           | 22.4   | - 22.9 | 58.3                                        | 15.2                   | 19.7                       | 6.8                 | 3641                      |
| Total (25-69)             | 23.0                           | 22.8   | - 23.1 | 57.7                                        | 13.3                   | 22.8                       | 6.2                 | 7019                      |
| <b>Total (18-69)</b>      | 22.7                           | 22.5   | - 22.8 | 60.4                                        | 13.7                   | 20.5                       | 5.4                 | 7985                      |

\* underweight BMI<18.5; overweight BMI >=25.0-29.9; obese BMI>=30.0. For respondents aged 15-18, BMI classification is based on age: underweight BMI<-2SD, overweight BMI >=1-2SD, obese BMI>=2SD ([https://www.who.int/growthref/who2007\\_bmi\\_for\\_age/en/](https://www.who.int/growthref/who2007_bmi_for_age/en/))

**Table 9.2: Nutritional status based on waist circumference and waist-hip ratio: all respondents (excluding pregnant women)**

Mean waist circumference and waist/hip ratio and Percentage of people age 18-69 (excluding pregnant women) who have high waist circumference and at-risk and high-risk waist-hip ratio; by background characteristics, [Bangladesh, 2018]

| Background characteristic | Mean WC (cm) | 95% CI      |   |             | Percent adults with high WC based on cut-offs: |                                  | Mean WHR *** | 95% CI      |   |             | Percent adults with high WHR ( $\geq 0.85$ women, $\geq 0.90$ men) | Number of respondents (n) |
|---------------------------|--------------|-------------|---|-------------|------------------------------------------------|----------------------------------|--------------|-------------|---|-------------|--------------------------------------------------------------------|---------------------------|
|                           |              |             |   |             | women $>88$ cm<br>men $>102$ cm*               | women $>80$ cm<br>men $>90$ cm** |              |             |   |             |                                                                    |                           |
| <b>Age</b>                |              |             |   |             |                                                |                                  |              |             |   |             |                                                                    |                           |
| 18-24                     | 74.5         | 73.7        | - | 75.3        | 4.9                                            | 16.2                             | 0.83         | 0.83        | - | 0.84        | 22.5                                                               | 972                       |
| 25-39                     | 79.4         | 78.8        | - | 80.0        | 10.8                                           | 30.5                             | 0.87         | 0.86        | - | 0.87        | 43.9                                                               | 3388                      |
| 40-54                     | 80.4         | 79.7        | - | 81.0        | 14.1                                           | 32.5                             | 0.88         | 0.88        | - | 0.88        | 51.9                                                               | 2490                      |
| 55-69                     | 80.4         | 79.2        | - | 81.7        | 15.6                                           | 31.9                             | 0.90         | 0.89        | - | 0.90        | 56.6                                                               | 1163                      |
| <b>Sex</b>                |              |             |   |             |                                                |                                  |              |             |   |             |                                                                    |                           |
| Women                     | 78.2         | 77.5        | - | 78.8        | 20.1                                           | 41.1                             | 0.84         | 0.84        | - | 0.85        | 42.2                                                               | 4229                      |
| Men                       | 79.1         | 78.5        | - | 79.6        | 1.8                                            | 14.7                             | 0.89         | 0.89        | - | 0.90        | 43.2                                                               | 3784                      |
| <b>Residence</b>          |              |             |   |             |                                                |                                  |              |             |   |             |                                                                    |                           |
| Rural                     | 77.8         | 77.3        | - | 78.3        | 9.6                                            | 25.4                             | 0.86         | 0.86        | - | 0.87        | 40.7                                                               | 4104                      |
| Urban                     | 81.4         | 80.7        | - | 82.1        | 15.5                                           | 36.2                             | 0.88         | 0.87        | - | 0.88        | 49.5                                                               | 3909                      |
| <b>Division</b>           |              |             |   |             |                                                |                                  |              |             |   |             |                                                                    |                           |
| Barishal                  | 78.2         | 77.4        | - | 79.1        | 9.9                                            | 24.5                             | 0.86         | 0.85        | - | 0.87        | 37.4                                                               | 970                       |
| Chattogram                | 80.0         | 78.7        | - | 81.2        | 14.6                                           | 33.8                             | 0.88         | 0.87        | - | 0.88        | 48.3                                                               | 1022                      |
| Dhaka Rural               | 79.2         | 78.4        | - | 80.0        | 9.8                                            | 28.3                             | 0.86         | 0.86        | - | 0.87        | 40.0                                                               | 976                       |
| Khulna                    | 79.8         | 78.7        | - | 80.9        | 14.8                                           | 30.9                             | 0.87         | 0.86        | - | 0.88        | 43.3                                                               | 1024                      |
| Mymensingh                | 77.1         | 76.0        | - | 78.3        | 8.4                                            | 24.9                             | 0.87         | 0.86        | - | 0.88        | 43.3                                                               | 999                       |
| Rajshahi                  | 78.3         | 77.0        | - | 79.6        | 10.7                                           | 27.9                             | 0.87         | 0.86        | - | 0.88        | 42.4                                                               | 1046                      |
| Rangpur                   | 76.1         | 75.1        | - | 77.1        | 6.0                                            | 18.5                             | 0.87         | 0.86        | - | 0.87        | 43.6                                                               | 989                       |
| Sylhet                    | 76.9         | 75.6        | - | 78.1        | 8.4                                            | 22.3                             | 0.86         | 0.85        | - | 0.87        | 37.8                                                               | 987                       |
| <b>Education</b>          |              |             |   |             |                                                |                                  |              |             |   |             |                                                                    |                           |
| No education              | 76.7         | 75.9        | - | 77.5        | 10.1                                           | 22.4                             | 0.87         | 0.86        | - | 0.87        | 41.1                                                               | 2451                      |
| Primary                   | 78.7         | 78.1        | - | 79.4        | 11.5                                           | 29.5                             | 0.86         | 0.86        | - | 0.87        | 41.5                                                               | 3637                      |
| Secondary                 | 79.9         | 79.1        | - | 80.8        | 11.0                                           | 29.8                             | 0.87         | 0.86        | - | 0.88        | 43.1                                                               | 1357                      |
| More than secondary       | 83.8         | 82.1        | - | 85.5        | 10.4                                           | 36.8                             | 0.89         | 0.88        | - | 0.90        | 59.7                                                               | 547                       |
| <b>Wealth quintile</b>    |              |             |   |             |                                                |                                  |              |             |   |             |                                                                    |                           |
| Lowest                    | 74.0         | 73.3        | - | 74.6        | 5.5                                            | 14.0                             | 0.85         | 0.85        | - | 0.86        | 32.7                                                               | 1606                      |
| Second                    | 75.6         | 74.8        | - | 76.3        | 7.1                                            | 19.1                             | 0.85         | 0.85        | - | 0.86        | 33.7                                                               | 1645                      |
| Middle                    | 78.1         | 77.3        | - | 79.0        | 7.4                                            | 23.2                             | 0.87         | 0.86        | - | 0.87        | 39.2                                                               | 1411                      |
| Fourth                    | 80.8         | 79.9        | - | 81.8        | 13.2                                           | 34.1                             | 0.88         | 0.87        | - | 0.89        | 48.9                                                               | 1477                      |
| Highest                   | 84.8         | 83.8        | - | 85.7        | 21.6                                           | 49.1                             | 0.89         | 0.88        | - | 0.90        | 59.4                                                               | 1874                      |
| Total (18-39)             | 77.6         | 77.1        | - | 78.1        | 8.6                                            | 25.2                             | 0.85         | 0.85        | - | 0.86        | 36.0                                                               | 4360                      |
| Total (40-69)             | 80.4         | 79.7        | - | 81.1        | 14.8                                           | 32.2                             | 0.89         | 0.88        | - | 0.89        | 54.0                                                               | 3653                      |
| Total (25-69)             | 79.9         | 79.4        | - | 80.4        | 12.7                                           | 31.3                             | 0.88         | 0.87        | - | 0.88        | 48.8                                                               | 7041.0                    |
| <b>Total (18-69)</b>      | <b>78.6</b>  | <b>78.2</b> | - | <b>79.1</b> | <b>10.9</b>                                    | <b>27.8</b>                      | <b>0.87</b>  | <b>0.86</b> | - | <b>0.87</b> | <b>42.7</b>                                                        | <b>8013</b>               |

\*WHO cut-offs for substantially increased risk by WC:  $>88$  cm for women and  $>102$  cm for men. \*\* International Diabetes Federation(IDF) cut-offs for increased risk by WC for South Asians:  $>80$ cm for women and  $>90$  cm for men. \*\*\*WHO cut offs for increased risk by WHR: $\geq 0.85$  for women,  $\geq 0.90$  for men.

**Table 9.3 Disease risk based on body-mass index and waist circumference: all respondents (excluding pregnant women)**

Prevalence of different levels of disease risk\* based on Body Mass Index and waist circumference amongst adults aged 18-69, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Percent of adults who's disease risk is: |                |            |                | Total        | Number of respondents (N) |
|---------------------------|------------------------------------------|----------------|------------|----------------|--------------|---------------------------|
|                           | Normal risk**                            | Increased risk | High risk  | Very high risk |              |                           |
| <b>Age</b>                |                                          |                |            |                |              |                           |
| 18-24                     | 80.7                                     | 13.3           | 3.6        | 2.4            | 100.0        | 826                       |
| 25-39                     | 63.9                                     | 22.7           | 8.9        | 4.5            | 100.0        | 3002                      |
| 40-54                     | 64.9                                     | 19.0           | 8.6        | 7.4            | 100.0        | 2175                      |
| 55-69                     | 68.5                                     | 15.0           | 10.1       | 6.3            | 100.0        | 965                       |
| <b>Sex</b>                |                                          |                |            |                |              |                           |
| Women                     | 59.5                                     | 18.9           | 13.2       | 8.5            | 100.0        | 3755                      |
| Men                       | 78.2                                     | 18.2           | 2.4        | 1.3            | 100.0        | 3213                      |
| <b>Residence</b>          |                                          |                |            |                |              |                           |
| Rural                     | 71.3                                     | 17.6           | 6.9        | 4.2            | 100.0        | 3466                      |
| Urban                     | 59.7                                     | 21.8           | 11.2       | 7.3            | 100.0        | 3502                      |
| <b>Division</b>           |                                          |                |            |                |              |                           |
| Barishal                  | 71.0                                     | 17.2           | 7.9        | 3.8            | 100.0        | 863                       |
| Chattogram                | 65.5                                     | 19.3           | 9.6        | 5.6            | 100.0        | 910                       |
| Dhaka Rural               | 63.9                                     | 22.5           | 9.0        | 4.6            | 100.0        | 861                       |
| Khulna                    | 67.1                                     | 16.5           | 8.5        | 8.0            | 100.0        | 921                       |
| Mymensingh                | 77.6                                     | 13.4           | 6.1        | 2.9            | 100.0        | 801                       |
| Rajshahi                  | 66.9                                     | 21.1           | 5.8        | 6.3            | 100.0        | 917                       |
| Rangpur                   | 78.2                                     | 14.4           | 4.8        | 2.6            | 100.0        | 869                       |
| Sylhet                    | 77.7                                     | 12.7           | 7.0        | 2.6            | 100.0        | 826                       |
| <b>Education</b>          |                                          |                |            |                |              |                           |
| No education              | 75.3                                     | 12.3           | 6.9        | 5.6            | 100.0        | 1994                      |
| Primary                   | 66.8                                     | 20.6           | 8.2        | 4.4            | 100.0        | 3174                      |
| Secondary                 | 67.1                                     | 19.3           | 8.6        | 5.1            | 100.0        | 1256                      |
| More than secondary       | 57.9                                     | 29.4           | 7.4        | 5.2            | 100.0        | 530                       |
| <b>Wealth quintile</b>    |                                          |                |            |                |              |                           |
| Lowest                    | 81.9                                     | 11.2           | 4.4        | 2.5            | 100.0        | 1248                      |
| Second                    | 78.4                                     | 13.8           | 5.7        | 2.1            | 100.0        | 1373                      |
| Middle                    | 73.1                                     | 17.6           | 6.2        | 3.1            | 100.0        | 1217                      |
| Fourth                    | 63.5                                     | 21.9           | 8.5        | 6.1            | 100.0        | 1332                      |
| Highest                   | 50.1                                     | 26.5           | 13.4       | 10.0           | 100.0        | 1798                      |
| Total (18-39)             | 69.9                                     | 19.3           | 7.0        | 3.8            | 100.0        | 3828                      |
| Total (40-69)             | 66.5                                     | 17.2           | 9.3        | 6.9            | 100.0        | 3140                      |
| Total (25-69)             | 65.1                                     | 20.1           | 9.1        | 5.7            | 100.0        | 6142                      |
| <b>Total (18-69)</b>      | <b>68.7</b>                              | <b>18.6</b>    | <b>7.8</b> | <b>4.9</b>     | <b>100.0</b> | <b>6968</b>               |

\* Disease risk for type 2 diabetes, hypertension and CVD. Normal risk: Normal BMI and normal WC; increased risk: normal BMI and high WC or overweight and normal WC; High risk: overweight and high WC or Obese and normal WC; very high risk: obese and high WC. \*\* Adults who are underweight were excluded. Source: NHLBI Obesity Education Initiative (2000)

## Chapter 10 Blood Pressure: screening, prevalence and treatment

### Key findings

---

#### Prevalence of raised blood pressure (BP) among adults age 18-69 yrs.

- *Based on actual measurement:* Based on the criteria of Systolic BP  $\geq$  140 or diastolic BP  $\geq$  90mm Hg, the prevalence of raised blood pressure was 21.0%. This includes people on medication who were normotensive at the time of the survey.
- *Self-reported prevalence:* Among adults who had ever had their BP measured, 13.7% adults were ever told by a doctor or health care provider that they have raised BP.

#### Diagnosis and treatment gap among those noted to have raised BP at the time of survey

- *Unaware about their raised BP:* 51.3% adults
- *Not on treatment:* 13.8% of adults knew their raised BP but were not on treatment.
- *On treatment but not controlled:* 20.8% of adults.
- *On treatment and controlled:* 14.1% of adults.

#### Screening coverage, prescription of medications, treatment compliance

- *Screening coverage:* 70.1% of adults (78.8 % among 40-69 years old) had had their BP ever measured by a doctor or a health care provider.
- *Treatment compliance:* Among adults who were told to have raised BP 77.3% reported ever taking medications and 41.4% reported currently taking their prescribed medication in the two weeks prior to the survey.

#### Sources of care and medications

- *Public and private sources of care:* 77.2% and 14.0% of adults reported seeking treatment and advice for raised BP usually from only private and public facilities, respectively. 6.3% reported seeking care from either government or private facilities.
- *Sources of drugs/medications:* Majority of the adults (97.5%) who were prescribed medication reported usually getting them only from private sources and only 1.0% reported getting their medications only from government facilities.
- *Only 1.4% of adults reported ever seeking care from local healers while 0.3% reported using herbal medications to control their raised BP.*

#### Reasons for not taking medications among those prescribed medication to control their hypertension

- *“Medication not necessary” and “blood pressure got normal” were the most common reasons given for not taking medication-- reported by 68.1% adults.*
-

## Introduction

Elevated blood pressure or hypertension is a serious medical condition which significantly increases the risk of developing heart, brain, kidney and other diseases. An individual is considered hypertensive if when measured on two consecutive occasions, their systolic blood pressure is  $\geq 140$ mm Hg and their diastolic blood pressure is  $\geq 90$ mm Hg on both occasions.<sup>61</sup>

Hypertension is often considered a “silent killer” as most people with hypertension are unaware of the problem and the condition may represent no warning signs or symptoms. Several modifiable risk factors may lead to hypertension. These include unhealthy diets (excessive salt consumption, a diet high in saturated fat and trans fats, low intake of fruits and vegetables), physical inactivity, consumption of tobacco and alcohol, and being overweight or obese.<sup>61</sup>

Under the WHO Global Action Plan, one of the nine voluntary targets is to achieve 25% relative reduction in the prevalence of raised blood pressure by 2025 relative to 2010 levels.<sup>62</sup> Hence, Bangladesh has incorporated it as one of the key targets in its 5-year multisectoral action plan for 2018-2025<sup>10</sup> and its predecessor<sup>39</sup>.

---

### Current relevant policies and programs in Bangladesh for nutritional status

- Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases 2018-2025<sup>10</sup>
  - National guidelines for management of hypertension in Bangladesh<sup>63</sup>
- 

This chapter focuses on indicators related to blood pressure; assessing prevalence, diagnosis and treatment gaps and care seeking behaviors around blood pressure management. This information will help Bangladesh assess trends and progress towards hypertension management as specified in its multisectoral action plan as well as evaluation of current policies and programs in place to reduce population blood pressure levels. These will also guide future policy and programs to manage hypertension at population level.

### Blood Pressure Measurement

---

<sup>61</sup> World Health Organization (WHO). Hypertension [Internet]. Geneva, Switzerland: WHO; 13 Sep 2019 [cited 30 Mar 2020]. Available from: <https://www.who.int/news-room/fact-sheets/detail/hypertension#>

<sup>62</sup> World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva, Switzerland: WHO; 2013.

<sup>63</sup> World Health Organization. Country Office for Bangladesh. (2013). National guidelines for management of hypertension in Bangladesh. World Health Organization. Country Office for Bangladesh. <https://apps.who.int/iris/handle/10665/279486>

Blood pressure was measured with a digital, automated blood pressure monitor. Before taking the measurements, participants were asked to sit quietly and rest for 15 minutes with legs uncrossed. Three readings of systolic and diastolic blood pressure were obtained. Participants rested for three minutes between each reading. The mean of the second and third readings was calculated. A universal cuff size was used for all participants. The sphygmomanometer cuff was placed on the left arm while the participant rested their forearm on a table with the palm facing upward. Participants were requested to remove or roll up clothing on the arm. The cuff was kept above the elbow aligning the mark for artery (ART) on the cuff with the brachial artery and making sure the lower edge of the cuff was placed 1.2 to 2.5 cm above the inner side of the elbow joint and with the level of the cuff at the same level as the heart.

#### Analysis

Hypertension was defined as having systolic blood pressure  $\geq 140$  mm Hg and/or diastolic blood pressure  $\geq 90$  mm Hg during the study, or normotensive at the time of survey but previously diagnosed as having hypertension and currently taking medications to control blood pressure.

Observations which had systolic BP  $\leq 40$  mm Hg or  $\geq 300$  mm Hg were and Diastolic BP  $< 30$  mm Hg or  $\geq 200$  mm Hg were excluded, though none of adults were recorded in this range. In case the third reading was invalid, the average of the first two readings was considered.

#### **10.1. Prevalence of raised blood pressure based on measurement and medications history**

Self-reported prevalence is likely to underestimate the true prevalence as many people may be asymptomatic and not aware of their BP status. Therefore, carrying out measurements in order to determine the actual prevalence is essential to understanding the overall risk of hypertension across the population.

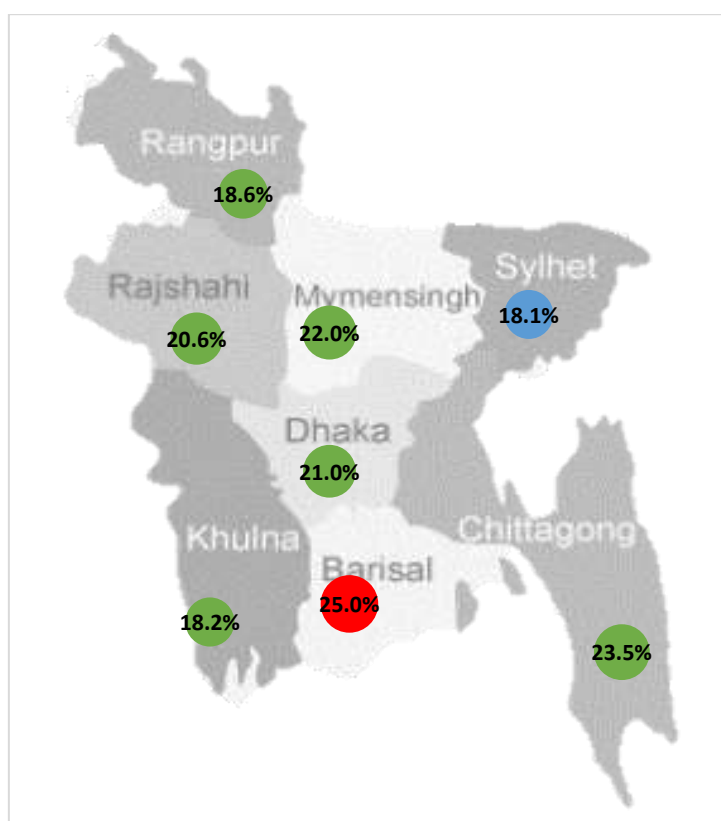
Overall 21.0% of adults were measured to have raised BP based on both the measurement and medications history (**Table 10.1**). On the other hand, based on self-reports among adults who ever got their BP measured, the prevalence was only 13.7% (**Table 10.2**).

#### **Patterns by background characteristics (Table 10.1):**

- The prevalence of hypertension increased with age. The prevalence increased substantially after the age 40 (34.4% prevalence among adults aged 40-54 years). Prevalence of hypertension was significantly higher in women compared to men (24.1% vs 17.9%).

- No significant trends regarding prevalence of hypertension were observed by education level. The prevalence of hypertension increased with increase in wealth quintile with a 15.8% prevalence in the lowest group and 28.8% in the wealthiest group.
- Prevalence of hypertension was higher in residents of urban households compared to rural households (25.2%-urban vs 19.8%-rural). The prevalence of hypertension was observed to be the highest in the Barisal region- 25.0% followed by 22.5% in Chittagong and lowest in the Sylhet region 18.1% (**Figure 10.1**).

**Figure 10.1 Regional differences in hypertension prevalence among 18-69 years population, Bangladesh's STEPs survey 2018**



## 10.2. Diagnosis and treatment gap

Hypertension increases the risk of development of severe health complications such as heart disease or stroke. Ensuring early diagnosis and initiation of treatment enables adults to make necessary lifestyle adjustments and reduces the risk of lasting damage.

### Diagnosis gap (Table 10.1):

Of all the people who were diagnosed to be hypertensive as presented in section 10.1, 51.3 % hypertensive adults were unaware of their hypertensive status.

- Percentage of people unaware of their raised BP status declined with age.

- More men were unaware of their raised BP status than women (56.4%- men vs 47.6%-women)
- The proportion of adults who were unaware of their diagnosis status decreased with increased education level and with increased household wealth. (Figure 10.3)

**Treatment gap (Table 10.1):**

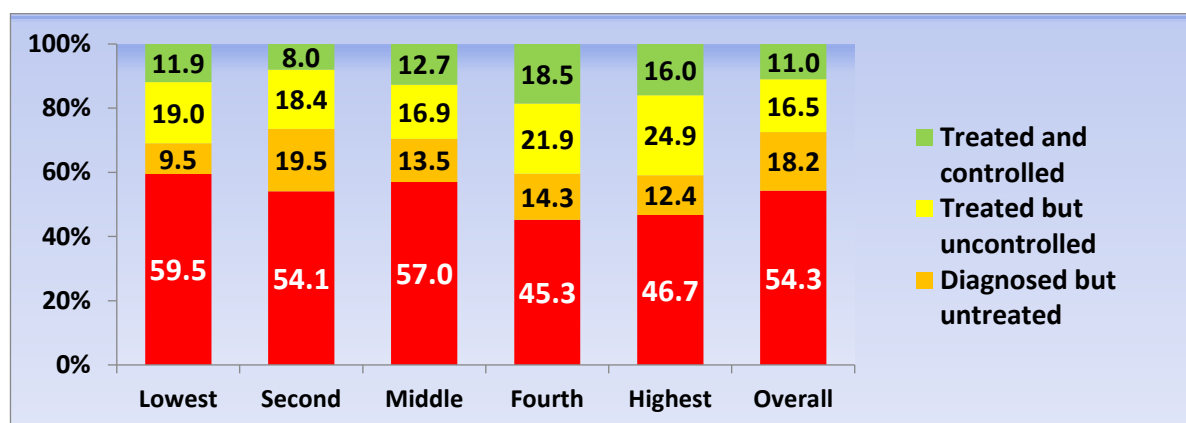
Overall, 18.2 % of the people with raised BP at the time of survey were aware of diagnosis but were not on treatment. Out of remaining 17.5% of adults with raised BP who reported to be on treatment, 16.5% adults still have raised BP (uncontrolled) at the time of survey and only 11% of adults were on treatment and controlled.

- Similar to diagnosis gap, the proportion of adults who were on treatment increased with increasing age.
- A higher proportion of urban residents were on treatment when compared to rural residing hypertensive adults.
- The proportion of adults who were on treatment increased with increase in education level and increase in wealth. (**Figure 10.3**)

**Quality of treatment (Table 10.1): Adults on treatment and controlled**

- Overall, 14.1 % of adults were on treatment with BP within normal limits at the time of survey.
- A higher proportion of men were on treatment which could control their raised BP when women with raised BP (14.7%-men vs 13.6%-women)
- A higher proportion of urban residents were on treatment which could control their raised BP when compared to rural residing adults with raised BP (15.3%-Urban vs 13.6%-Rural)
- The proportion of adults who were on treatment with controlled BP increased progressively with increase in education level and increase in wealth quintile (**Figure 10.3**)

**Figure 10.3 Diagnosis and Treatment gaps among adults aged 18-69 years by wealth quintile, Bangladesh's STEPs survey 2018**



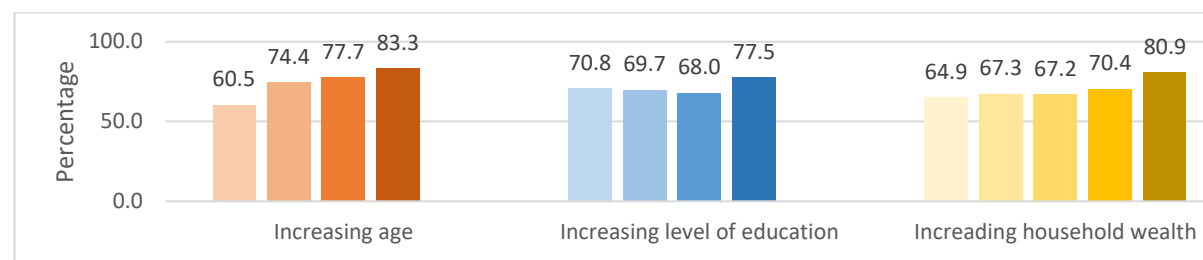
### 10.3. Screening coverage

Early detection of raised BP through regular (at least annual) screening of healthy adults is one of the key public health strategies for reduction the morbidity and mortality associated with hypertension. Though data were not elicited about annual screening, 70.1% adults (78.8 % among the age group 40-69 years old) had had their blood pressure ever measured by a doctor or a health care provider.

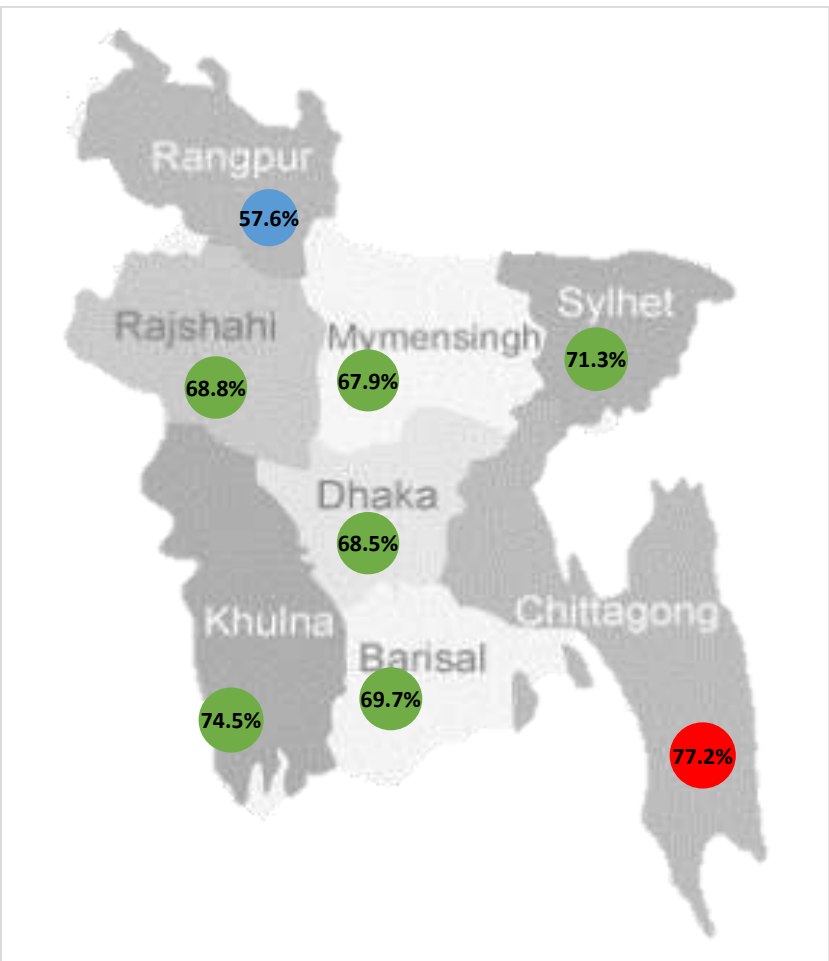
#### Patterns by background characteristics (Table 10.2):

- More women reported ever having their BP measured (82.9 %- women versus 57.0%- men).
- Younger adults age 15-24 years were much less likely to report their BP ever measured compared to other age-groups (**Figure 10.4**).
- The likelihood of ever having BP measured did not vary by residence types and but varied by region. The screening coverage in the Chittagong region was highest (77.2%) followed by the Khulna region (74.5%) and was least in the Rangpur region (57.6%). (**Figure 10.5**).
- The likelihood of having had BP measured increased significantly by household wealth (**Figure 10.4**).

**Figure 10.4: Percent of adults who have ever had their BP measured by a doctor or health care provider among adults aged 18-69 years, Bangladesh’s STEPs survey 2019**



**Figure 10.5 Percent of adults who have ever had their BP measured by a Doctor or Health Care provider among adults age 18-69 years, Bangladesh’s STEPs survey 2018**



**10.4. Prescription of medications and compliance with treatment (Table 10.2)**

Monitoring of prescription practices and treatment compliance is an important strategy for evaluating the outcomes at individual and at population level. Hypertension is a chronic risk factor, requiring treatment over the lifetime of a person, which may reduce the compliance with treatment as observed with many other chronic conditions such as HIV/AIDS or tuberculosis.

Overall, 13.7% of adults who were ever told to have raised BP, 77.3% ever took medicines to control their BP and 41.4% reported currently taking the medications, showing poor compliance with the prescriptions.

- Compliance with treatment increased with age. So, if a person is diagnosed and prescribed medicine in 30-44-year age group, he/she is less likely to take drug compared to adults 45-69 years of age.
- The likelihood of ever taking medications varied inversely with educational level. However, the likelihood of having taken medications in the past two weeks prior to the survey increased with increase in education level.
- The proportion of the adults who reported ever taking or currently taking medications increased directly with household wealth.

#### **10.5. Sources of care for treatment and advice and medications for raised BP**

Overall a much higher proportion of adults sought treatment advise and care from Private facilities (which include NGO run centers) (77.2%) than from government (14.0%) or other sources (such as Ayurvedic, homeopathic or naturopathic hospital/clinic, medicine shops, pharmacies, etc.) (10.9%) (**Table 10.3**). Similarly, for medications, majority of the adults approached only private providers (97.5%), and only 0.8% of adults went to government providers. 1.0% of adults mentioned both government and private sources for medications for raised BP. (**Table 10.4**)

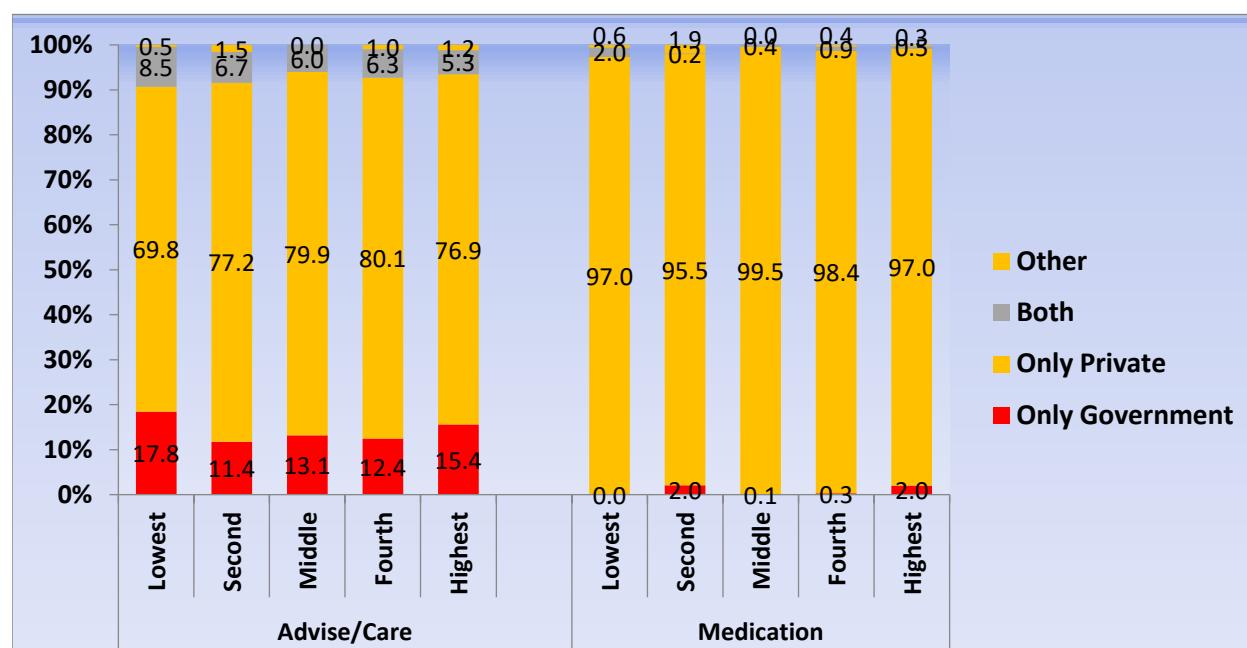
#### **Background patterns: (Table 10.3 and 10.4)**

- The proportion of adults who usually visited private facilities for care and medication increased with increasing age. Highest proportion of adults sought care-treatment and advice from private sources (77.2%)
- Men were more likely to seek both treatment/advice (16.0%- men vs 12.6%-women) and medications (1.4%- men vs 0.8%-women) only from government facilities.
- *Sources of care and household wealth*: More than half of all adults, even in the poorest wealth quintile sought care from private facilities. The proportion of adults seeking treatment and advice at government had a reverse relationship with wealth quintile (**Figure 10.7**). Lower wealth quintiles were more likely to seek advice and consultation from government facilities (17.8% in the lowest wealth index group) while higher wealth quintiles usually seek care form private facilities 15.4% in the wealthiest group).
- *Source of care and region*: In all the provinces and irrespective of the residence in urban or rural residences, more than 50% of adults sought both care/advice and medications from private providers. The use of government facilities for

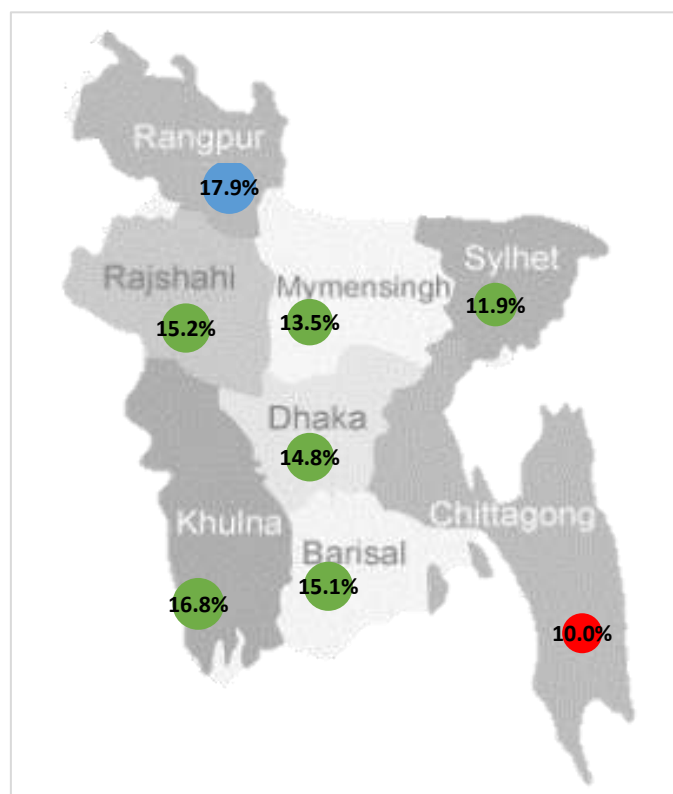
advice/consultation was lowest in the Chittagong and Mymensingh regions, and higher in the Rangpur, Khulna and Rajshahi. (Figure 10.8).

- *Source of care and residence:* By residence, while use of government facilities was much higher in urban residences for consultation and advice for raised BP compared rural residences, the same was not true for source of medication.

**Figure 10.7 Percent of adults (who were ever told to have raised BP) who sought treatment care/advise and medications from government and private facilities with respect to wealth quintile, Bangladesh's STEPs survey 2018**



**Figure 10.8 Percent of adults (who were ever told to have raised BP) who sought treatment care/advise from government facilities with respect to province, Bangladesh's STEPs survey 2018**



#### 10.6. Consultation with traditional healers and use of herbal remedies

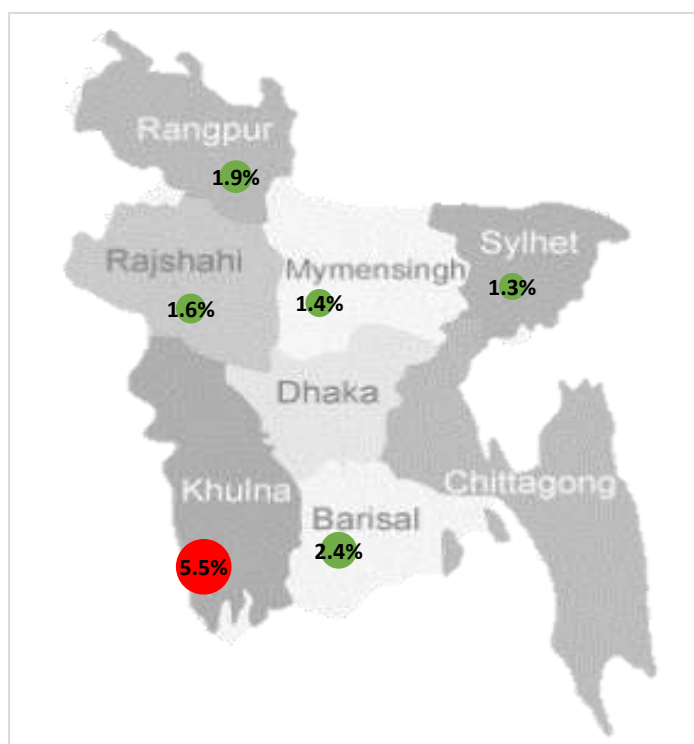
1.4% of adults with raised BP who reported visiting a traditional healer for treatment and advise of which 0.3% adults reported currently taking herbal or traditional remedies for their raised blood pressure.

##### Background patterns: (Table 10.5)

- The proportion of adults who reported taking herbal or traditional remedies for their raised blood pressure was highest in the 40-55 years age group- 1.1%. Women were more likely to have ever visited a local healer as compared to men (1.9%- women vs 0.6%- men). Additionally, a higher proportion of women reported currently taking herbal or traditional remedies to control their BP among adults who had ever visited a traditional healer. (0.5%-women vs 0%-men)
- Rural residents were more likely to have ever visited a local healer as compared to urban residents.

- The proportion of adults who had ever visited a local healer and currently taking herbal or traditional remedies to control their BP decreased with increase in education level.

**Figure 10.9 Percent of adults (who were ever told to have raised BP) who had ever visited a traditional healer with respect to region, Bangladesh's STEPs survey 2018**



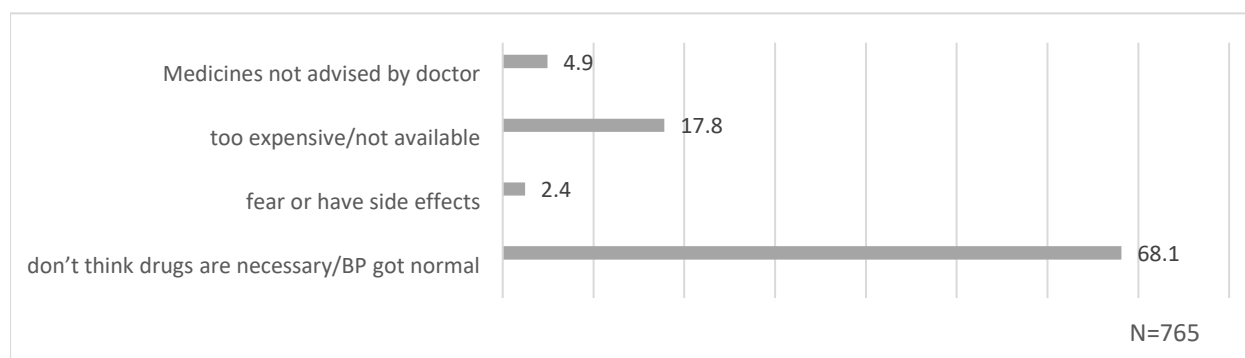
### 10.7. Reasons for not on treatment

69.8% of adults who were prescribed medications cited “didn’t think the drugs were necessary” and “their blood pressure got normal” as reasons for not currently taking medications/treatment (**Table 10.6**). The second most common reason given for not taking medications was “too expensive/ drugs not available” as cited by 19.6% adults

#### Patterns by background characteristics (**Table 10.6**):

- The highest proportion of adults who reported “too expensive/ drugs not available” were within the ages 40-54 years (24.1%).
- A higher proportion of men (77.8 %) gave the reasons “did not think drugs were necessary” or “their blood pressure was under control” compared to women (61.2%).
- The proportion of adults who reported did not think drugs were necessary” or “their blood pressure was under control” increased with increase in education level and increased household wealth.

**Figure 10.11 Reasons for which hypertensive adults reported not taking drugs for raised BP, Bangladesh 2018.**



### List of Tables:

For more information on raised blood pressure prevalence, screening and treatment coverage or sources of care, see the following tables:

Table: 10.1 Prevalence of raised BP and diagnosis, treatment and control rates

Table: 10.2 Measurement of BP, prescription of medications, treatment compliance

Table: 10.3 sources of care for raised BP

Table: 10.4 sources of medications for raised BP

Table: 10.5 Care seeking from traditional healers and use of traditional/herbal remedies

Table: 10.6 Reasons for not taking medications among those told to have raised BP and have been prescribed medications.

**Table NCD.10.1 Prevalence of raised BP and diagnosis, treatment and control rates: All**

Percentage of people 18-69 who had raised BP at the time of survey or on BP medications and who were aware of their diagnosis, on treatment or have their BP controlled or uncontrolled with medications, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Prevalence of raised BP <sup>1</sup> | (n)         | Among those with raised BP <sup>1</sup> |                                      |                                 |                             | Total (n)   |
|---------------------------|--------------------------------------|-------------|-----------------------------------------|--------------------------------------|---------------------------------|-----------------------------|-------------|
|                           |                                      |             | Not aware of diagnosis                  | Aware of diagnosis but not treatment | On treatment but not controlled | On treatment and controlled |             |
| <b>Age</b>                |                                      |             |                                         |                                      |                                 |                             |             |
| 15-24                     | 8.8                                  | 1919        | 69.7                                    | 9.8                                  | 6.6                             | 14.0                        | 177         |
| 25-39                     | 20.7                                 | 3439        | 58.1                                    | 15.8                                 | 16.7                            | 9.5                         | 762         |
| 40-54                     | 34.4                                 | 2098        | 43.5                                    | 16.5                                 | 24.5                            | 15.5                        | 816         |
| 55-69                     | 46.9                                 | 563         | 39.7                                    | 11.4                                 | 31.3                            | 17.6                        | 266         |
| <b>Sex</b>                |                                      |             |                                         |                                      |                                 |                             |             |
| Women                     | 24.1                                 | 4306        | 47.6                                    | 14.5                                 | 24.3                            | 13.6                        | 1215        |
| Men                       | 17.9                                 | 3713        | 56.4                                    | 12.9                                 | 15.9                            | 14.7                        | 806         |
| <b>Residence</b>          |                                      |             |                                         |                                      |                                 |                             |             |
| Rural                     | 19.8                                 | 4106        | 54.0                                    | 14.9                                 | 17.5                            | 13.6                        | 887         |
| Urban                     | 25.2                                 | 3913        | 43.9                                    | 10.8                                 | 30.0                            | 15.3                        | 1134        |
| <b>Region</b>             |                                      |             |                                         |                                      |                                 |                             |             |
| Barishal                  | 25.0                                 | 975         | 43.6                                    | 15.5                                 | 18.9                            | 21.9                        | 299         |
| Chattogram                | 23.5                                 | 1031        | 47.8                                    | 14.4                                 | 19.7                            | 18.1                        | 236         |
| Dhaka Ru                  | 21.0                                 | 975         | 52.5                                    | 14.1                                 | 22.4                            | 11.0                        | 251         |
| Khulna                    | 18.2                                 | 1021        | 51.2                                    | 11.3                                 | 24.9                            | 12.6                        | 260         |
| Mymensingh                | 22.0                                 | 991         | 49.4                                    | 13.4                                 | 23.3                            | 13.9                        | 230         |
| Rajshahi                  | 20.6                                 | 1045        | 57.7                                    | 17.0                                 | 15.2                            | 10.1                        | 263         |
| Rangpur                   | 18.6                                 | 986         | 62.7                                    | 12.1                                 | 20.6                            | 4.6                         | 234         |
| Sylhet                    | 18.1                                 | 995         | 40.4                                    | 8.5                                  | 23.1                            | 28.1                        | 248         |
| <b>Education</b>          |                                      |             |                                         |                                      |                                 |                             |             |
| No education              | 22.7                                 | 3604        | 53.9                                    | 13.8                                 | 19.9                            | 12.4                        | 850         |
| Primary                   | 19.5                                 | 2486        | 53.1                                    | 14.2                                 | 18.5                            | 14.3                        | 616         |
| Secondary                 | 16.8                                 | 866         | 42.4                                    | 14.7                                 | 24.7                            | 18.3                        | 225         |
| More than secondary       | 23.2                                 | 1042        | 45.4                                    | 12.5                                 | 25.8                            | 16.3                        | 327         |
| <b>Wealth quintile</b>    |                                      |             |                                         |                                      |                                 |                             |             |
| Lowest                    | 15.8                                 | 1604        | 59.5                                    | 9.5                                  | 19.0                            | 11.9                        | 301         |
| Second                    | 17.8                                 | 1639        | 54.1                                    | 19.5                                 | 18.4                            | 8.0                         | 338         |
| Middle                    | 18.0                                 | 1425        | 57.0                                    | 13.5                                 | 16.9                            | 12.7                        | 296         |
| Fourth                    | 24.8                                 | 1479        | 45.3                                    | 14.3                                 | 21.9                            | 18.5                        | 427         |
| Highest                   | 28.8                                 | 1872        | 46.7                                    | 12.4                                 | 24.9                            | 16.0                        | 659         |
| Total (18-39)             | 12.0                                 | 4447        | 65.2                                    | 12.8                                 | 10.7                            | 11.3                        | 663         |
| Total (40-69)             | 37.0                                 | 3572        | 43.3                                    | 14.4                                 | 26.7                            | 15.7                        | 1358        |
| Total (25-69)             | 25.0                                 | 7008        | 48.7                                    | 14.4                                 | 22.1                            | 14.9                        | 1945        |
| <b>Total (18-69)</b>      | <b>21.0</b>                          | <b>8019</b> | <b>51.3</b>                             | <b>13.8</b>                          | <b>20.8</b>                     | <b>14.1</b>                 | <b>2021</b> |

<sup>1</sup> based on measurement of BP and medications history

**Table NCD.10.2 Blood Pressure measured, self-reported prevalence and treatment of raised blood pressure: All**

Percentage of respondents age 18-69 who have ever had their blood pressure measured and who have been told by a health care provider that they have raised blood pressure; among people who have been told they have raised blood pressure, the percentage told in the past 12 months they have raised blood pressure, and percentage taking medication to control blood pressure, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Ever had blood pressure measured by doctor or health care provider | Ever told have raised blood pressure by doctor or health care provider | Number of respondents | Among respondents who have been told by a doctor or health care provider they have raised blood pressure, the percentage who were: |                                                 |                                                       |                       |
|---------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------|-----------------------|
|                           |                                                                    |                                                                        |                       | Told in the past 12 months have raised blood pressure                                                                              | ever taken medication to control blood pressure | currently taking medication to control blood pressure | Number of respondents |
| <b>Age</b>                |                                                                    |                                                                        |                       |                                                                                                                                    |                                                 |                                                       |                       |
| 18-24                     | 60.5                                                               | 5.5                                                                    | 1942                  | 75.8                                                                                                                               | 55.1                                            | 27.4                                                  | 126                   |
| 25-39                     | 74.4                                                               | 12.9                                                                   | 3505                  | 79.8                                                                                                                               | 72.8                                            | 34.0                                                  | 511                   |
| 40-54                     | 77.7                                                               | 23.5                                                                   | 2152                  | 82.2                                                                                                                               | 85.0                                            | 48.2                                                  | 586                   |
| 55-69                     | 83.3                                                               | 30.8                                                                   | 586                   | 89.6                                                                                                                               | 87.4                                            | 50.1                                                  | 186                   |
| <b>Sex</b>                |                                                                    |                                                                        |                       |                                                                                                                                    |                                                 |                                                       |                       |
| Women                     | 82.9                                                               | 16.2                                                                   | 4381                  | 83.8                                                                                                                               | 81.7                                            | 43.1                                                  | 878                   |
| Men                       | 57.0                                                               | 11.2                                                                   | 3804                  | 80.2                                                                                                                               | 70.6                                            | 38.7                                                  | 531                   |
| <b>Residence</b>          |                                                                    |                                                                        |                       |                                                                                                                                    |                                                 |                                                       |                       |
| Rural                     | 69.9                                                               | 12.7                                                                   | 4183                  | 80.1                                                                                                                               | 76.7                                            | 34.9                                                  | 618                   |
| Urban                     | 71.0                                                               | 17.2                                                                   | 4002                  | 88.1                                                                                                                               | 78.7                                            | 57.8                                                  | 791                   |
| <b>Region</b>             |                                                                    |                                                                        |                       |                                                                                                                                    |                                                 |                                                       |                       |
| Barishal                  | 69.7                                                               | 17.6                                                                   | 986                   | 84.1                                                                                                                               | 79.9                                            | 41.8                                                  | 221                   |
| Chattogram                | 77.2                                                               | 14.6                                                                   | 1053                  | 89.3                                                                                                                               | 83.1                                            | 39.2                                                  | 154                   |
| Dhaka                     | 68.5                                                               | 12.9                                                                   | 997                   | 80.9                                                                                                                               | 80.3                                            | 50.3                                                  | 160                   |
| Khulna                    | 74.5                                                               | 13.4                                                                   | 1040                  | 80.9                                                                                                                               | 75.3                                            | 41.3                                                  | 188                   |
| Mymensingh                | 67.9                                                               | 14.9                                                                   | 1021                  | 76.7                                                                                                                               | 73.6                                            | 38.4                                                  | 172                   |
| Rajshahi                  | 68.8                                                               | 12.0                                                                   | 1066                  | 76.4                                                                                                                               | 71.2                                            | 29.6                                                  | 165                   |
| Rangpur                   | 57.6                                                               | 11.3                                                                   | 1009                  | 78.4                                                                                                                               | 68.1                                            | 34.4                                                  | 138                   |
| Sylhet                    | 71.3                                                               | 17.0                                                                   | 1013                  | 87.3                                                                                                                               | 75.0                                            | 48.2                                                  | 211                   |
| <b>Education</b>          |                                                                    |                                                                        |                       |                                                                                                                                    |                                                 |                                                       |                       |
| No education              | 68.9                                                               | 13.7                                                                   | 3678                  | 81.1                                                                                                                               | 80.3                                            | 38.0                                                  | 544                   |
| Primary                   | 71.9                                                               | 13.2                                                                   | 2533                  | 82.0                                                                                                                               | 75.5                                            | 40.2                                                  | 446                   |
| Secondary                 | 69.2                                                               | 11.5                                                                   | 888                   | 89.2                                                                                                                               | 75.4                                            | 49.6                                                  | 165                   |
| More than secondary       | 70.9                                                               | 16.9                                                                   | 1065                  | 82.4                                                                                                                               | 73.3                                            | 48.1                                                  | 243                   |
| <b>Wealth quintile</b>    |                                                                    |                                                                        |                       |                                                                                                                                    |                                                 |                                                       |                       |
| Lowest                    | 64.9                                                               | 10.1                                                                   | 1639                  | 72.5                                                                                                                               | 78.7                                            | 39.0                                                  | 196                   |
| Second                    | 67.3                                                               | 11.5                                                                   | 1670                  | 77.9                                                                                                                               | 70.2                                            | 31.1                                                  | 221                   |
| Middle                    | 67.2                                                               | 11.7                                                                   | 1451                  | 81.1                                                                                                                               | 75.1                                            | 35.4                                                  | 219                   |
| Fourth                    | 70.4                                                               | 16.9                                                                   | 1506                  | 83.9                                                                                                                               | 75.9                                            | 38.6                                                  | 298                   |
| Highest                   | 80.9                                                               | 18.5                                                                   | 1919                  | 89.9                                                                                                                               | 83.5                                            | 55.5                                                  | 475                   |
| Total (18-39)             | 65.2                                                               | 7.6                                                                    | 4515                  | 77.6                                                                                                                               | 62.6                                            | 28.8                                                  | 455                   |
| Total (40-69)             | 78.8                                                               | 24.4                                                                   | 3670                  | 84.9                                                                                                                               | 85.2                                            | 48.2                                                  | 954                   |
| Total (25-69)             | 74.8                                                               | 16.6                                                                   | 7159                  | 82.7                                                                                                                               | 79.0                                            | 42.5                                                  | 1361                  |
| <b>Total (18-69)</b>      | <b>70.1</b>                                                        | <b>13.7</b>                                                            | <b>8185</b>           | <b>82.4</b>                                                                                                                        | <b>77.3</b>                                     | <b>41.4</b>                                           | <b>1409</b>           |

**Table NCD.10.3 Source of care for treatment and advise for BP: All**

Percentage of people 18-69 who were ever told to have raised BP and who mentioned different sources of care for treatment/advise and for medication, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Government Facility | Private/NGO Facility | Both government and private | Any alternative/ traditional provider | Government facilities |            |            | Private*    |            | n           |
|---------------------------|---------------------|----------------------|-----------------------------|---------------------------------------|-----------------------|------------|------------|-------------|------------|-------------|
|                           |                     |                      |                             |                                       | Primary               | secondary  | tertiary   | Primary     | secondary  |             |
| <b>Age</b>                |                     |                      |                             |                                       |                       |            |            |             |            |             |
| 18-24                     | 10.2                | 81.3                 | 2.7                         | 1.4                                   | 10.4                  | 0.8        | 2.0        | 32.5        | 2.8        | 126         |
| 25-39                     | 15.7                | 76.9                 | 4.4                         | 1.6                                   | 10.8                  | 4.2        | 5.2        | 34.6        | 1.7        | 511         |
| 40-54                     | 13.9                | 77.1                 | 7.9                         | 0.7                                   | 10.2                  | 5.2        | 7.4        | 37.0        | 1.6        | 586         |
| 55-69                     | 14.8                | 75.0                 | 8.9                         | 0.0                                   | 8.4                   | 7.0        | 8.6        | 39.0        | 2.3        | 186         |
| <b>Sex</b>                |                     |                      |                             |                                       |                       |            |            |             |            |             |
| Women                     | 12.6                | 77.3                 | 7.9                         | 0.8                                   | 9.2                   | 4.7        | 7.0        | 36.5        | 2.2        | 878         |
| Men                       | 16.0                | 77.1                 | 4.0                         | 1.1                                   | 11.1                  | 4.5        | 4.9        | 35.5        | 1.7        | 531         |
| <b>Residence</b>          |                     |                      |                             |                                       |                       |            |            |             |            |             |
| Rural                     | 13.1                | 78.5                 | 5.5                         | 1.1                                   | 10.5                  | 4.2        | 4.2        | 33.4        | 1.3        | 618         |
| Urban                     | 16.2                | 74.1                 | 8.4                         | 0.3                                   | 8.5                   | 5.7        | 11.3       | 43.0        | 3.7        | 791         |
| <b>Region</b>             |                     |                      |                             |                                       |                       |            |            |             |            |             |
| Barisal                   | 15.1                | 69.6                 | 8.2                         | 5.2                                   | 10.4                  | 6.4        | 7.7        | 37.1        | 0.0        | 221         |
| Chittagong                | 10.0                | 88.2                 | 0.7                         | 0.3                                   | 6.7                   | 0.6        | 3.3        | 27.4        | 0.0        | 154         |
| Dhaka Ru                  | 14.8                | 75.0                 | 9.7                         | 0.0                                   | 7.9                   | 4.3        | 12.3       | 32.6        | 4.3        | 160         |
| Khulna                    | 16.8                | 77.2                 | 4.0                         | 1.7                                   | 14.9                  | 2.4        | 4.0        | 41.6        | 2.3        | 188         |
| Mymensingh                | 13.5                | 71.3                 | 12.0                        | 0.0                                   | 11.7                  | 6.7        | 7.4        | 33.9        | 0.1        | 172         |
| Rajshahi                  | 15.2                | 77.6                 | 2.1                         | 0.1                                   | 6.0                   | 11.5       | 1.9        | 38.4        | 1.4        | 165         |
| Rangpur                   | 17.9                | 70.7                 | 9.0                         | 2.1                                   | 16.8                  | 5.9        | 4.7        | 36.1        | 3.6        | 138         |
| Sylhet                    | 11.9                | 73.7                 | 10.2                        | 1.0                                   | 14.0                  | 4.3        | 4.2        | 60.4        | 3.4        | 211         |
| <b>Education</b>          |                     |                      |                             |                                       |                       |            |            |             |            |             |
| No education              | 10.9                | 80.2                 | 6.9                         | 0.5                                   | 10.1                  | 4.8        | 3.5        | 35.0        | 1.7        | 544         |
| Primary                   | 16.3                | 76.6                 | 4.5                         | 1.3                                   | 9.2                   | 5.2        | 7.0        | 35.3        | 0.8        | 446         |
| Secondary                 | 11.0                | 81.0                 | 7.8                         | 0.1                                   | 5.5                   | 1.9        | 11.4       | 37.0        | 1.3        | 165         |
| More than secondary       | 19.4                | 69.0                 | 6.3                         | 1.6                                   | 12.5                  | 4.7        | 8.9        | 40.1        | 5.8        | 243         |
| <b>Wealth quintile</b>    |                     |                      |                             |                                       |                       |            |            |             |            |             |
| Lowest                    | 17.8                | 69.8                 | 8.5                         | 0.5                                   | 14.8                  | 8.5        | 3.5        | 30.5        | 0.4        | 196         |
| Second                    | 11.4                | 77.2                 | 6.7                         | 1.5                                   | 12.1                  | 3.3        | 3.6        | 25.1        | 4.2        | 221         |
| Middle                    | 13.1                | 79.9                 | 6.0                         | 0.0                                   | 9.7                   | 5.1        | 4.2        | 33.3        | 1.9        | 219         |
| Fourth                    | 12.4                | 80.1                 | 6.3                         | 1.0                                   | 8.7                   | 4.7        | 5.5        | 40.0        | 0.0        | 298         |
| Highest                   | 15.4                | 76.9                 | 5.3                         | 1.2                                   | 7.2                   | 3.0        | 11.1       | 44.4        | 3.4        | 475         |
| Total (18-39)             | 13.1                | 78.4                 | 4.0                         | 1.6                                   | 10.6                  | 3.0        | 3.7        | 32.2        | 1.8        | 455         |
| Total (40-69)             | 14.4                | 76.6                 | 7.6                         | 0.5                                   | 9.6                   | 5.5        | 7.5        | 38.3        | 2.1        | 954         |
| Total (25-69)             | 13.9                | 77.5                 | 6.7                         | 0.7                                   | 9.6                   | 5.0        | 6.6        | 37.5        | 2.2        | 1361        |
| <b>Total (18-69)</b>      | <b>14.0</b>         | <b>77.2</b>          | <b>6.3</b>                  | <b>0.9</b>                            | <b>10.0</b>           | <b>4.6</b> | <b>6.2</b> | <b>36.1</b> | <b>2.0</b> | <b>1409</b> |

\* Private includes NGO clinics and hospitals

**Table NCD.10.4: Source of drugs/medications for BP: All**

Percentage of people 18-69 who have ever taken medication for raised BP and who mentioned different sources medications, by background characteristics, [Bangladesh, 2018]

| <b>Background characteristic</b> | <b>Government Only</b> | <b>Private* Only</b> | <b>Both government and private</b> | <b>Any alternative/ traditional provider</b> | <b>n</b>    |
|----------------------------------|------------------------|----------------------|------------------------------------|----------------------------------------------|-------------|
| <b>Age</b>                       |                        |                      |                                    |                                              |             |
| 18-24                            | 3.9                    | 94.0                 | 2.1                                | 0.0                                          | 71          |
| 25-39                            | 0.0                    | 97.7                 | 0.7                                | 1.4                                          | 370         |
| 40-54                            | 0.8                    | 97.6                 | 1.0                                | 0.5                                          | 500         |
| 55-69                            | 0.8                    | 98.8                 | 0.1                                | 0.1                                          | 164         |
| <b>Sex</b>                       |                        |                      |                                    |                                              |             |
| Women                            | 0.8                    | 97.7                 | 0.6                                | 0.8                                          | 708         |
| Men                              | 1.4                    | 97.3                 | 1.2                                | 0.2                                          | 397         |
| <b>Residence</b>                 |                        |                      |                                    |                                              |             |
| Rural                            | 1.2                    | 97.5                 | 0.5                                | 0.7                                          | 476         |
| Urban                            | 0.4                    | 97.5                 | 1.4                                | 0.2                                          | 629         |
| <b>Region</b>                    |                        |                      |                                    |                                              |             |
| Barishal                         | 0.6                    | 97.8                 | 0.8                                | 0.0                                          | 181         |
| Chattogram                       | 2.0                    | 97.2                 | 0.7                                | 0.2                                          | 122         |
| Dhaka                            | 0.0                    | 100.0                | 0.0                                | 0.0                                          | 130         |
| Khulna                           | 0.7                    | 95.8                 | 0.2                                | 3.1                                          | 145         |
| Mymensingh                       | 0.9                    | 96.0                 | 2.5                                | 0.3                                          | 132         |
| Rajshahi                         | 0.2                    | 99.8                 | 0.0                                | 0.0                                          | 112         |
| Rangpur                          | 4.1                    | 94.1                 | 0.6                                | 1.2                                          | 106         |
| Sylhet                           | 0.0                    | 94.8                 | 3.6                                | 0.8                                          | 177         |
| <b>Education</b>                 |                        |                      |                                    |                                              |             |
| No education                     | 0.5                    | 97.6                 | 0.9                                | 0.8                                          | 427         |
| Primary                          | 0.7                    | 97.9                 | 0.8                                | 0.6                                          | 355         |
| Secondary                        | 0.1                    | 99.8                 | 0.1                                | 0.0                                          | 124         |
| More than secondary              | 3.6                    | 95.3                 | 0.8                                | 0.2                                          | 190         |
| <b>Wealth quintile</b>           |                        |                      |                                    |                                              |             |
| Lowest                           | 0.0                    | 97.0                 | 2.0                                | 0.6                                          | 159         |
| Second                           | 2.0                    | 95.5                 | 0.2                                | 1.9                                          | 160         |
| Middle                           | 0.1                    | 99.5                 | 0.4                                | 0.0                                          | 166         |
| Fourth                           | 0.3                    | 98.4                 | 0.9                                | 0.4                                          | 229         |
| Highest                          | 2.0                    | 97.0                 | 0.5                                | 0.3                                          | 391         |
| Total (18-39)                    | 1.7                    | 96.1                 | 1.4                                | 0.7                                          | 299         |
| Total (40-69)                    | 0.7                    | 98.1                 | 0.5                                | 0.5                                          | 806         |
| Total (25-69)                    | 0.6                    | 97.9                 | 0.8                                | 0.6                                          | 1081        |
| <b>Total (18-69)</b>             | <b>1.0</b>             | <b>97.5</b>          | <b>0.8</b>                         | <b>0.6</b>                                   | <b>1105</b> |

**Table NCD.10.6 Care seeking from traditional healers and use of traditional/herbal remedies: All**

Percentage of people 18-69 who have been ever told to have raised blood pressure and who sought care from a traditional healer or currently using a traditional/herbal remedy , by background characteristics, [Bangladesh, 2018]

| Background characteristic | For raised BP            |                  |                                  |                  |
|---------------------------|--------------------------|------------------|----------------------------------|------------------|
|                           | ever seen a local healer | Total Number (N) | currently taking a herbal remedy | Total Number (n) |
| <b>Age</b>                |                          |                  |                                  |                  |
| 18-24                     | 0.2                      | 126              | 0.0                              | 126              |
| 25-39                     | 3.0                      | 511              | 1.0                              | 511              |
| 40-54                     | 1.1                      | 586              | 0.2                              | 586              |
| 55-69                     | 0.9                      | 186              | 0.0                              | 186              |
| <b>Sex</b>                |                          |                  |                                  |                  |
| Women                     | 1.9                      | 878              | 0.5                              | 878              |
| Men                       | 0.6                      | 531              | 0.0                              | 531              |
| <b>Residence</b>          |                          |                  |                                  |                  |
| Rural                     | 1.6                      | 618              | 0.3                              | 618              |
| Urban                     | 0.8                      | 791              | 0.4                              | 791              |
| <b>Region</b>             |                          |                  |                                  |                  |
| Barishal                  | 2.4                      | 221              | 0.3                              | 221              |
| Chattogram                | 0.0                      | 154              | 0.0                              | 154              |
| Dhaka                     | 0.0                      | 160              | 0.0                              | 160              |
| Khulna                    | 5.5                      | 188              | 1.7                              | 188              |
| Mymensingh                | 1.4                      | 172              | 0.0                              | 172              |
| Rajshahi                  | 1.6                      | 165              | 0.2                              | 165              |
| Rangpur                   | 1.9                      | 138              | 0.7                              | 138              |
| Sylhet                    | 1.3                      | 211              | 0.3                              | 211              |
| <b>Education</b>          |                          |                  |                                  |                  |
| No education              | 1.6                      | 544              | 0.4                              | 544              |
| Primary                   | 2.1                      | 446              | 0.4                              | 446              |
| Secondary                 | 0.1                      | 165              | 0.1                              | 165              |
| More than secondary       | 0.2                      | 243              | 0.0                              | 243              |
| <b>Wealth quintile</b>    |                          |                  |                                  |                  |
| Lowest                    | 1.4                      | 196              | 1.2                              | 196              |
| Second                    | 2.9                      | 221              | 0.2                              | 221              |
| Middle                    | 0.6                      | 219              | 0.5                              | 219              |
| Fourth                    | 1.5                      | 298              | 0.1                              | 298              |
| Highest                   | 0.8                      | 475              | 0.1                              | 475              |
| Total (18-39)             | 1.5                      | 455              | 0.3                              | 455              |
| Total (40-69)             | 1.3                      | 954              | 0.3                              | 954              |
| Total (25-69)             | 1.5                      | 1,361            | 0.3                              | 1,361            |
| <b>Total (18-69)</b>      | 1.4                      | 1,409            | 0.3                              | 1,409            |

**Table NCD.10.5 Reasons for not taking medications for raised BP: All**

Percentage of people 18-69 who have been ever advised to take drugs but not taking drugs in the past 2 weeks and specified different reasons for not taking medication for raised BP, by background characteristics, [Bangladesh, 2018]

| Background characteristic | don't think drugs are necessary/BP got normal | fear or have side effects | too expensive/not available | Medicines not advised by doctor | (n)        |
|---------------------------|-----------------------------------------------|---------------------------|-----------------------------|---------------------------------|------------|
| <b>Age</b>                |                                               |                           |                             |                                 |            |
| 15-24                     | 82.4                                          | 4.2                       | 12.7                        | 7.4                             | 96         |
| 25-39                     | 73.8                                          | 1.9                       | 20.0                        | 5.8                             | 316        |
| 40-54                     | 67.4                                          | 2.1                       | 24.1                        | 3.3                             | 278        |
| 55-69                     | 47.5                                          | 1.9                       | 12.0                        | 3.3                             | 75         |
| <b>Sex</b>                |                                               |                           |                             |                                 |            |
| Women                     | 61.2                                          | 1.4                       | 19.1                        | 5.0                             | 466        |
| Men                       | 77.8                                          | 3.9                       | 16.0                        | 4.8                             | 299        |
| <b>Residence</b>          |                                               |                           |                             |                                 |            |
| Rural                     | 67.1                                          | 2.6                       | 18.7                        | 4.3                             | 387        |
| Urban                     | 72.3                                          | 1.8                       | 14.1                        | 7.4                             | 378        |
| <b>Region</b>             |                                               |                           |                             |                                 |            |
| Barishal                  | 58.6                                          | 10.1                      | 23.2                        | 6.2                             | 132        |
| Chattogram                | 54.0                                          | 0.0                       | 12.9                        | 1.8                             | 88         |
| Dhaka                     | 71.7                                          | 4.2                       | 17.8                        | 1.4                             | 75         |
| Khulna                    | 79.0                                          | 1.1                       | 10.8                        | 3.0                             | 91         |
| Mymensingh                | 68.1                                          | 0.0                       | 16.2                        | 4.7                             | 103        |
| Rajshahi                  | 78.0                                          | 1.4                       | 22.8                        | 16.5                            | 110        |
| Rangpur                   | 66.8                                          | 0.5                       | 25.5                        | 6.4                             | 76         |
| Sylhet                    | 78.3                                          | 7.7                       | 22.1                        | 2.5                             | 90         |
| <b>Education</b>          |                                               |                           |                             |                                 |            |
| No education              | 56.4                                          | 1.9                       | 23.3                        | 4.4                             | 307        |
| Primary                   | 81.5                                          | 2.3                       | 11.8                        | 2.4                             | 247        |
| Secondary                 | 79.0                                          | 0.4                       | 14.6                        | 6.7                             | 85         |
| More than secondary       | 70.9                                          | 4.7                       | 12.9                        | 11.5                            | 118        |
| <b>Wealth quintile</b>    |                                               |                           |                             |                                 |            |
| Lowest                    | 48.4                                          | 3.1                       | 45.0                        | 9.1                             | 113        |
| Second                    | 66.3                                          | 3.1                       | 19.9                        | 4.5                             | 148        |
| Middle                    | 69.5                                          | 1.6                       | 19.2                        | 5.6                             | 138        |
| Fourth                    | 67.7                                          | 2.4                       | 5.0                         | 0.9                             | 164        |
| Highest                   | 84.1                                          | 2.2                       | 10.4                        | 6.7                             | 202        |
| Total (18-39)             | 81.4                                          | 3.0                       | 15.8                        | 6.5                             | 313        |
| Total (40-69)             | 58.2                                          | 2.0                       | 19.3                        | 3.7                             | 452        |
| Total (25-69)             | 66.2                                          | 2.3                       | 18.1                        | 4.1                             | 726        |
| <b>Total (18-69)</b>      | <b>68.1</b>                                   | <b>2.4</b>                | <b>17.8</b>                 | <b>4.9</b>                      | <b>765</b> |

## Chapter 11 Diabetes: screening, prevalence and treatment

### Key findings

---

#### Prevalence of raised blood glucose among adults age 15-69 yrs.

- *Actual measurement:* Based on the criteria of fasting blood glucose > 126 mg/dl, the prevalence of raised blood glucose was 8.3 %. This includes people on medication whose blood glucose levels were normal at the time of survey.
- *Self-reported prevalence:* Among adults who had ever had their blood glucose measured, 5.1% adults were ever told by a doctor or a health care provider that they have raised blood glucose.

#### Diagnosis and treatment gap among those noted to have raised blood glucose at the time of survey

- *Unaware about their raised blood glucose:* 51.4% adults
- *Not on treatment:* 10.4% for adults knew they had raised blood glucose but were not on treatment.
- *On treatment but not controlled:* 24.7% of adults.
- *On treatment and controlled:* 13.6% of adults.

#### Screening coverage, prescription of medications, treatment compliance

- *Screening coverage:* 25.1% of adults (36.7% among 40-69 years old) had had their blood glucose ever measured by a doctor or a health care provider.
- *Treatment compliance:* 79.8% adults who were told to have raised blood glucose reported ever taking any medications to control their blood glucose. 58.5% adults reported currently taking their prescribed medications (including insulin) in the two weeks prior to the survey.

#### Sources of care and medications

- *Sources of care:* 62.1% of adults usually sought treatment and advice for raised blood glucose from private facilities only, and 26.9% reported so from government facilities only. 5.7% sought care from both government and private facilities.
- *Sources of drugs/medication:* Majority of the adults who were prescribed medication reported usually getting them only from private facilities (95.2%) and 1.1% reported getting their medication only from government facilities.
- 4.3% visiting a traditional healer for controlling their diabetes or raised blood glucose.

#### Reasons for not taking medications among those prescribed medication to control their blood glucose

“Medication not necessary” and “blood glucose got normal” were the most common reasons given for not taking medication - reported by 51.7% adults who were ever prescribed medications.

---

## Introduction

Diabetes is a chronic metabolic disorder characterized by raised blood glucose or hyperglycemia that occurs when the pancreas does not produce sufficient insulin (Type 1 diabetes) or when the body cannot effectively use the insulin it produces (Type 2 diabetes). Over time, diabetes can cause damage to the heart, blood vessels, eyes, kidneys and nerves. Type 2 diabetes is much more common and affects older people (generally 35 years or older) around the world. The risk for Type 2 diabetes arises increases among obese and physically inactive individuals.<sup>1</sup> Smoking also notably increases the risk of diabetes and other cardiovascular diseases<sup>1</sup>. An individual is considered to be hyperglycemic/diabetic if their fasting blood glucose is  $\geq 7$  mmol/L or  $\geq 126$  mg/ml<sup>64</sup>.

Simple lifestyle changes have been shown to be effective in preventing or delaying the onset of type 2 diabetes. These include being physically active (at least 30 minutes of regular, moderate intensity activity on most days), achieving and maintaining a healthy body weight, eating a healthy diet and avoiding tobacco use.

Under the WHO Global Action Plan, two of the nine voluntary targets are directed at global diabetes control. These include attaining a 25% relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases and halting the rise in diabetes and obesity<sup>62</sup>. Hence, Bangladesh has incorporated it as one of the key targets in its 5-year multisectoral action plan for 2018-2025<sup>10</sup> and its predecessor<sup>39</sup>.

---

### Current relevant policies and programs in Bangladesh for nutritional status

- Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases 2018-2025
  - Diabetes Care BADAS Guideline 2019<sup>65</sup>
  - Guidelines for Care Of Type 2 diabetes mellitus In Bangladesh<sup>66</sup>
- 

This chapter focuses on indicators related to raised blood glucose; assessing prevalence, diagnosis and treatment gaps and care seeking behaviors around blood glucose and diabetes management. This information will help Bangladesh assess trends and progress towards diabetes management as specified in its multisectoral action plan as well as evaluation of current policies and programs in

---

<sup>64</sup> World Health Organization (WHO). Diabetes [Internet]. Geneva, Switzerland: WHO; 30 Oct 2018 [cited 30 Mar 2020]. Available from: <https://www.who.int/news-room/fact-sheets/detail/diabetes>

<sup>65</sup> Diabetes treatment guideline and diabetes journey app launched. The Daily Star [Internet]. 2019 Dec 18 [cited 30 Mar 2020; Health. Available from: <https://www.thedailystar.net/health/news/diabetes-treatment-guideline-and-diabetes-journey-app-launched-1827913>

<sup>66</sup> Mahtab H, Khan AR, Latif ZA, Pathan MF, Ahmed T. Guidelines for care of type 2 diabetes mellitus in Bangladesh. BIRDEM Clinical Research Group. 2003 Feb 28. Available at <http://www.whoban.org/pdf/diabetes.pdf>

place to reduce population blood glucose levels. These will also guide future policy and programs to manage diabetes at population level.

#### Blood Glucose Measurement

Blood glucose was measured in the step 3 of the Survey and a sample of venous blood was obtained as mentioned in the data collection section. Appropriate consent was obtained from the respondents to carry out to obtain blood sample and carry out the biochemical measurements.

#### Analysis

Hyperglycemia or raised blood glucose was defined as having fasting blood glucose  $\geq 126$  mg /dl during the study, or blood glucose  $< 126$  mg/dl but currently taking medications to lower blood glucose based on previous diagnosis.

Observations which had fasting blood glucose  $\leq 18$  mg /dl Hg or  $\geq 630$  mg /dl were excluded, though none of adults were recorded in this range in the survey.

#### **11.1. Prevalence of raised blood glucose based on measurement and medications history**

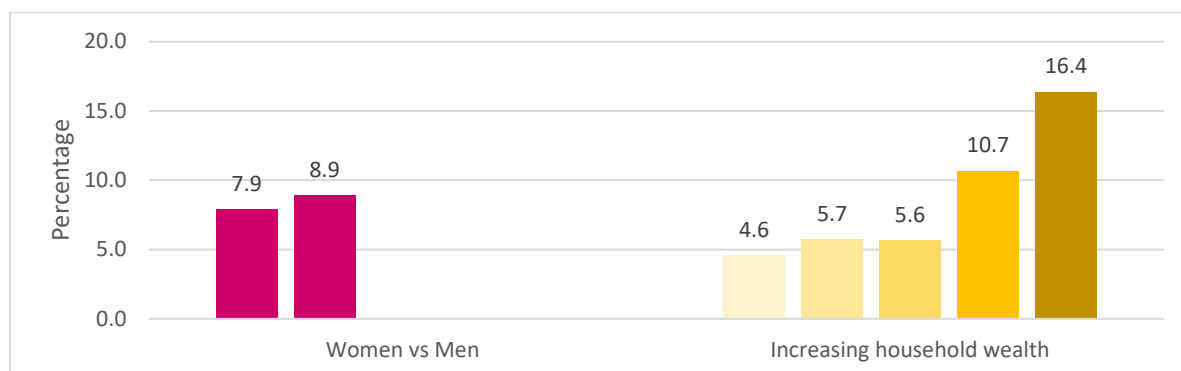
Self-reported prevalence is likely to underestimate the true prevalence as many people with raised blood glucose may not have any symptoms in the initial stages and few asymptomatic people get their blood glucose measured regularly. Therefore, carrying out actual measurements of blood glucose levels is essential to determine the actual population-based prevalence.

Overall 8.3% of adults were measured to have raised blood glucose based on both the measurement and prior diagnosis and medications history. On the other hand, based on self-reports among individuals who ever got their blood glucose measured, the prevalence was only 5.1%.

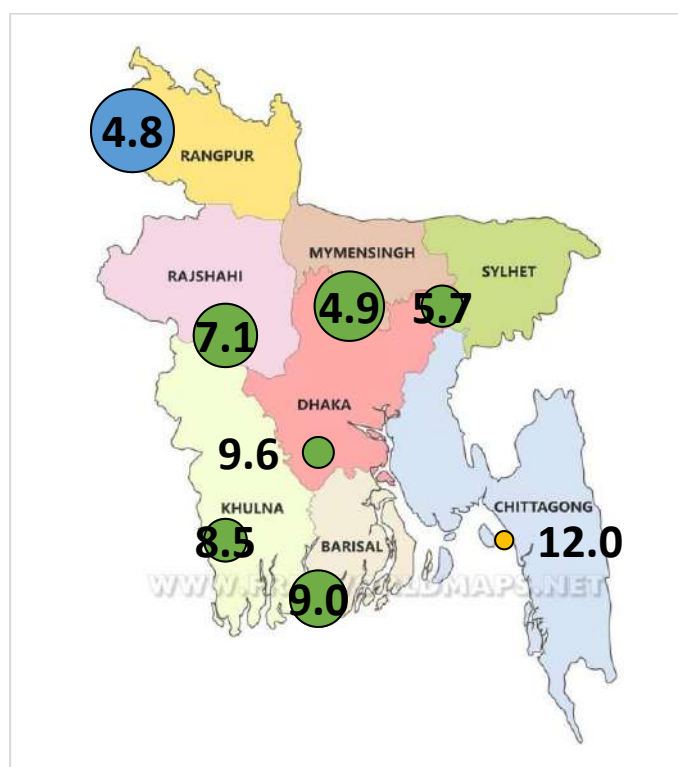
#### **Patterns by background characteristics (Table 11.1):**

- The prevalence of raised blood glucose increased with age. The prevalence increases substantially after the age 40 (12.7% prevalence among adults aged 40-69 years). Prevalence of diabetes was higher in men compared to women (8.9%-men vs 7.9%-women). **(Figure 11.1)**
- The prevalence of raised blood glucose increased directly with increasing household wealth. (4.6% in the lowest group and 16.4% in the wealthiest group) **(Figure 11.1)**
- Adults from urban residences were more likely to have raised blood glucose (13.2%) compared to adults from rural residences (7.1%). The raised blood glucose prevalence was highest in Chattogram (12%) and lowest in Rangpur (4.8%). **(Figure 11.2)**

**Figure 11.1 Prevalence raised blood glucose among adults aged 18-69 years by age and household wealth, Bangladesh's STEPs survey 2018**



**Figure 11.2 Regional differences in diabetes prevalence among 18-69 years population, Bangladesh's STEPs survey 2018**



### 11.2. Diagnosis and treatment gap (Table 11.1)

diabetes increases the risk of development of severe health complications such as heart disease or problems with nerves, blood vessels, eyes and kidneys. Ensuring early diagnosis and initiation of treatment enables adults to make necessary lifestyle adjustments and reduces the risk of lasting damage. Hence, early detection of diabetes by regular screening using fasting blood glucose levels (at least annually is an important secondary prevention strategy to control morbidity and mortality associated with diabetes.

## Diagnosis gap

Of all the adults who were diagnosed to be diabetic as presented in section 11.1, 51.4 % diabetic adults were unaware of their raised blood glucose status. The largest proportion amongst this group was observed to be between the ages 15-24 years (86.7%).

- Percentage of diabetic adults unaware of their raised blood glucose status declined with age .
- More diabetic men were unaware of their raised blood glucose status than women (54.5%- men vs 48.4%- women)
- Diabetic residents of rural areas were more likely to be unaware of their blood glucose status compared to urban residents. (56.7%- rural vs 40.2%- urban)
- The proportion of adults who were unaware of their diagnosis status decreased with increased education level (**Figure 11.2**), but no consistent trends were seen with household wealth.

## Treatment gap:

Overall, 10.4% of the people with raised blood glucose were aware of diagnosis but not on treatment.

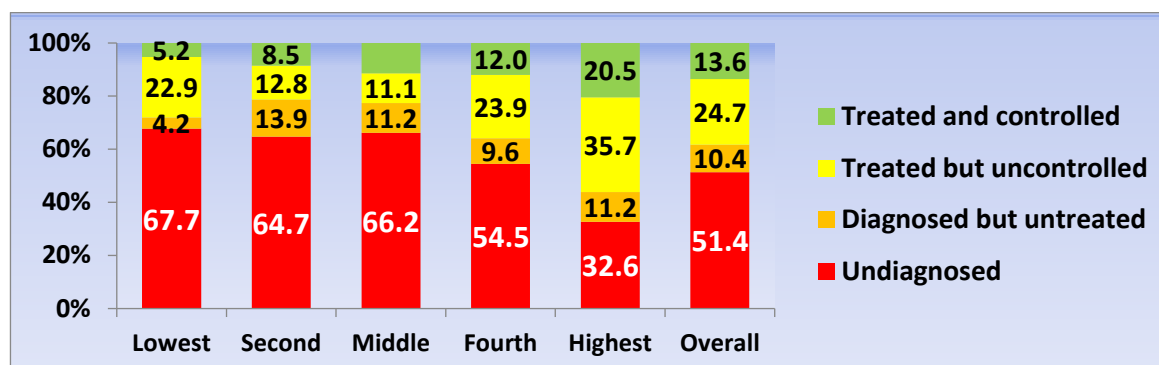
- The proportion of adults who were aware of their status not on treatment was highest in the age group of 40-69 years (10.6 %)
- There were no consistent trends for adults on treatment in terms of household wealth (**Figure 11.2**) or education level.

## Quality of treatment: controlled or uncontrolled while on treatment

Overall, 13.6 % of adults with raised blood glucose were on treatment which had their blood glucose under control and 24.7 % were on treatment but still had raised blood glucose levels.

The proportion of adults with raised blood glucose who were on treatment which did not control their blood glucose increased with increasing age group (3.1% in the 15-24 years age group to 34.9% in the 55-69 years age group). The proportion of adults who were aware of their diagnosis and were on treatment that controlled was highest in the age group of 55-69 years (27.5%).

**Figure 11.3 Diagnosis and Treatment gaps among adults aged 18-69 years by wealth quintile, Bangladesh's STEPs survey 2018**



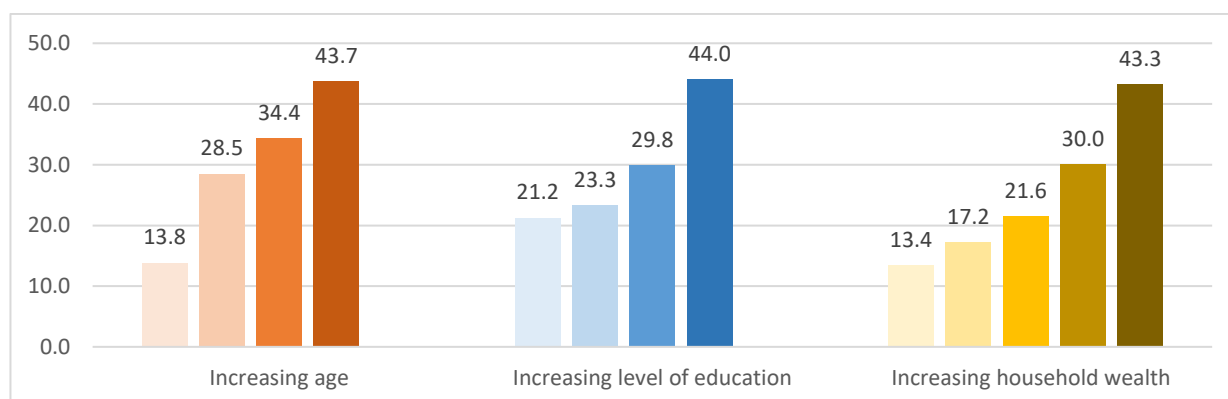
### 11.3. Screening coverage (Table 11.2)

Early detection of raised blood glucose through regular (at least annual) screening of healthy individuals is one of the key public health strategies for reduction the morbidity and mortality associated with diabetes. Though data were not elicited about annual screening, 25.1% adults (36.7% among the age group 40-69 years old) had had their blood glucose ever measured by a doctor or a health care provider.

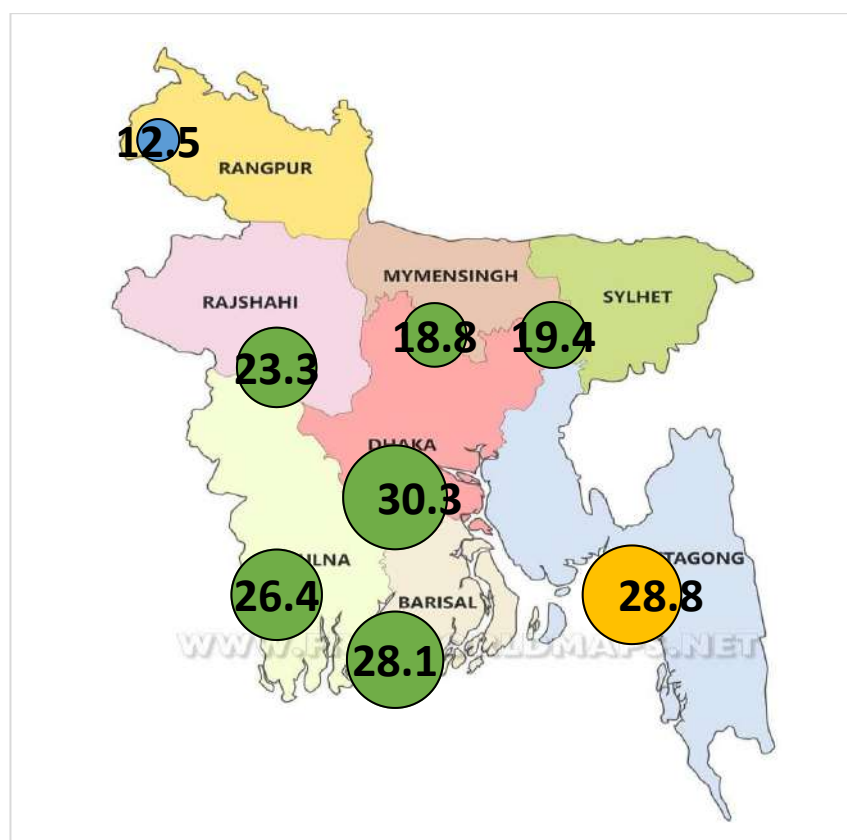
#### Patterns by background characteristics (Figure 11.6):

- Younger adults age 15-24 years were much less likely to report their blood glucose ever measured compared to other age-groups.
- Women were more likely to have ever had their blood glucose measured compared to men (27.5%-women vs 22.6%-men)
- The likelihood of ever having blood glucose measured was higher among residents from urban areas (34.5%) compared to those from rural residences (22.3%). The likelihood of ever measurement of blood glucose also varied by region. The screening coverage in the Dhaka region was highest (30.3%) followed by Chattogram (28.8%) and lowest in the Rangpur region (12.5%). (**Table 11.2**)
- The likelihood of having had blood glucose measured increased by both household wealth and education level.

**Figure 11.4 Percent of adults who have ever had their blood glucose measured by a doctor or health care provide among adults aged 18-69 years, Bangladesh's STEPs survey 2018**



**Figure 11.5 Percent of adults who have ever had their blood glucose measured by a doctor or health care provide among adults aged 18-69 years by province, Bangladesh's STEPs survey 2019**



#### 11.4. Prescription of medications and compliance with treatment (Table 11.2)

Monitoring of prescription practices and treatment compliance is an important strategy for evaluating the outcomes at individual and at population level. Raised blood glucose is a chronic risk factor,

requiring treatment over the lifetime of a person, which may reduce the compliance with treatment as observed with many other chronic conditions such as HIV/AIDS or tuberculosis.

Overall, a majority of the adults who were ever told to have raised blood glucose 79.8% ever took the medicines and 58.5% reported currently taking the medications, showing fairly good compliance with the prescriptions.

- The likelihood of compliance with treatment increased with age being highest in 40-69 years age groups (82.5% ever taken medication, 63.3% currently taking medication).
- The likelihood of ever taking medications or currently taking medications increased with increase in education level and household wealth.

### **11.5. Sources of care for treatment and advice and medications for raised blood glucose**

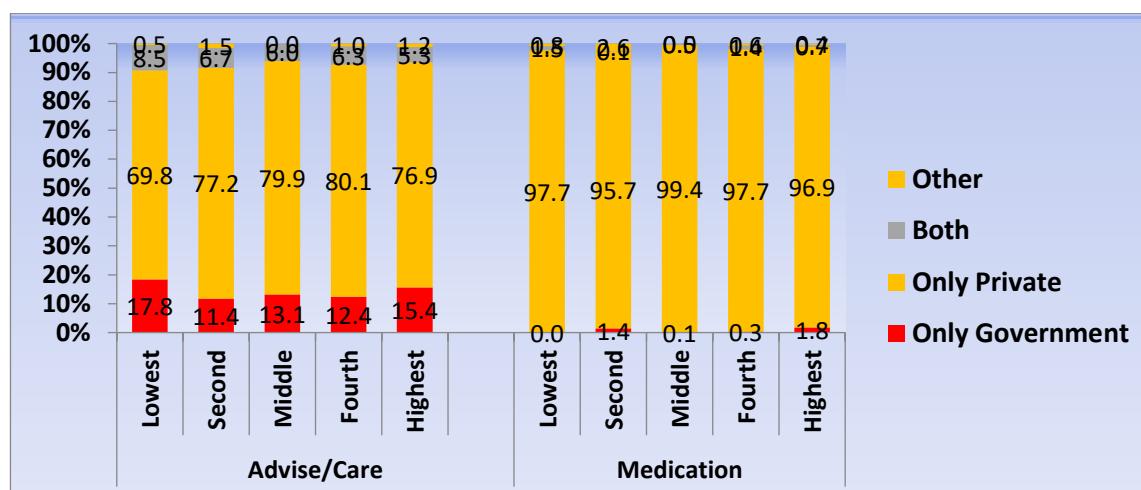
Overall a much higher proportion of adults sought treatment advise and care from Private facilities (which include NGO run centers) (62.1 %) than from government (26.9%) or other sources (such as Alternative medicine practitioners- Homeo, Ayurveda, Unani and Traditional healers) (5.7%) (Table 10.3). Similarly, for medications, majority of the adults approached only private providers (95.2%), and only 1.1% of adults went to government providers. 2.7% of adults mentioned both government and private sources for medications for raised blood glucose. (Table 11.4)

#### **Background patterns: (Table 11.3 and 11.4)**

- The proportion of adults who usually visited government facilities for care- treatment and advise increased with increasing age.
- Women were more likely to seek both treatment/advice (33.3%- women vs 23.3%-men) and medications (1.2%- women vs 1%-men) only from government facilities.
- *Sources of care and household wealth:* More than half of all adults, even in the poorest wealth quintile sought care from private facilities. Lower wealth quintiles were more likely to seek advice and consultation from government facilities (33.6% in the lowest wealth index group) while higher wealth quintiles usually seek care form private facilities 59.9% in the wealthiest group) (Figure 11.6).
- *Source of care and region:* In all the provinces and irrespective of the residence in urban and rural residences, more than 50% of adults sought both care/advice and medications from private providers. The use of government facilities for advice/consultation was lowest in the Rajshahi and Sylhet regions. (Figure 11.7).

- *Source of care and residence:* By residence, while use of government facilities was much higher in urban residences for consultation, advice and medication for raised blood glucose compared rural residences.

**Figure 11.6 Percent of adults (who were ever told to have raised blood glucose) who sought treatment care/advice and medications from government and private facilities with respect to wealth quintile, Bangladesh's STEPs survey 2018**



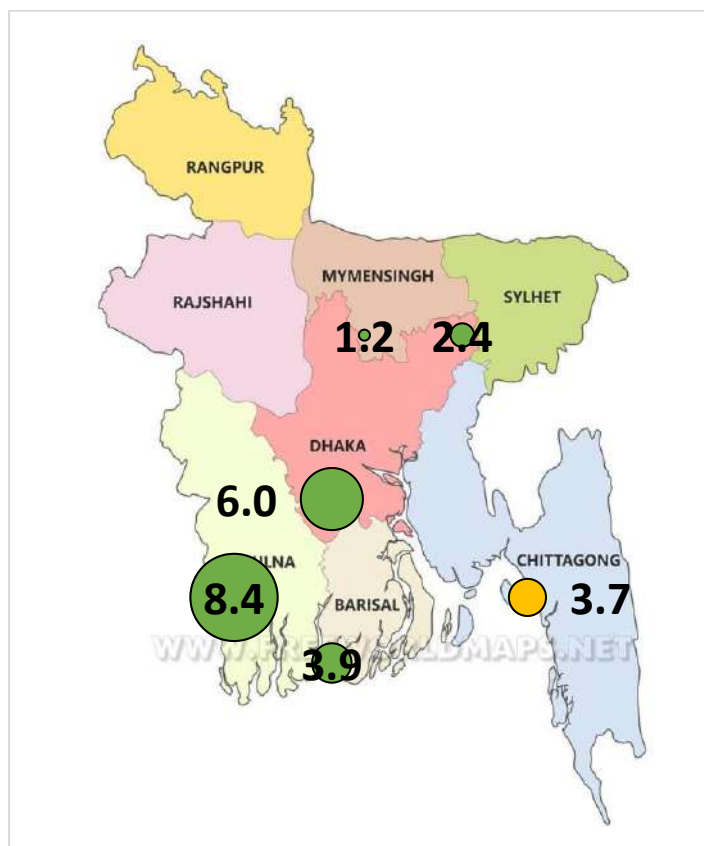
### 11.6. Consultation with traditional healers and use of herbal remedies

4.3% of adults with raised blood glucose who reported visiting a traditional healer for treatment and advise of which 29.2% adults reported currently taking herbal or traditional remedies for their raised blood pressure.

#### Background patterns: (Table 11.5)

- The proportion of adults who reported taking herbal or traditional remedies for their raised blood pressure was highest in the 40-54 years age group- 5.9%. Women were more likely to have ever visited a local healer as compared to men (6%- women vs 2%- men).
- Rural residents were more likely to have ever visited a local healer as compared to urban residents (5%-rural vs 3%-urban).
- The proportion of adults who had ever visited a local healer and currently taking herbal or traditional remedies to control their blood glucose decreased with increase in education level.

**Figure 11.7 Percent of adults (who were ever told to have raised blood glucose) who had ever visited a traditional healer with respect to region, Bangladesh's STEPs survey 2018**



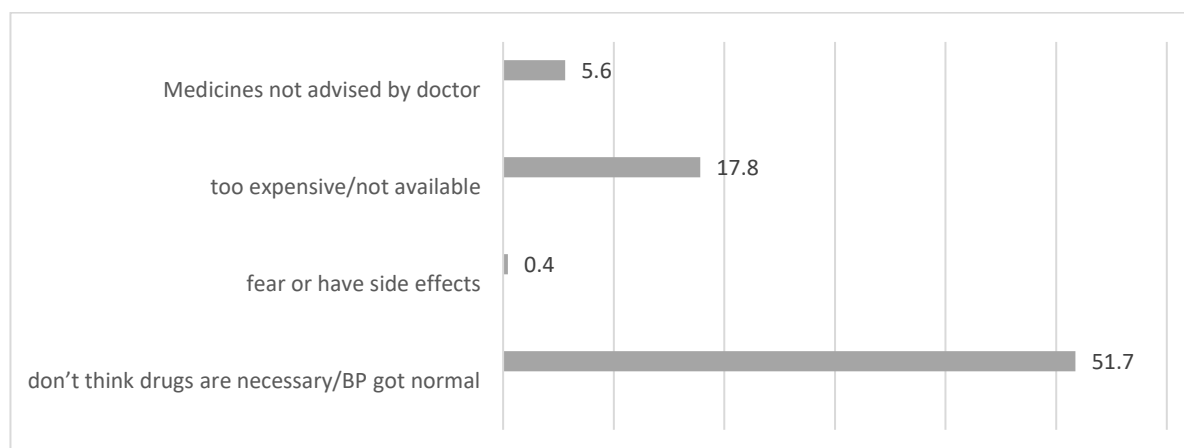
### 10.7. Reasons for not on treatment

51.7% of adults who were prescribed medications cited “didn’t think the drugs were necessary” and “their blood pressure got normal” as reasons for not currently taking medications/treatment (**Table 11.6**). The second most common reason given for not taking medications was “too expensive/ drugs not available” as cited by 17.8% adults

#### Patterns by background characteristics (**Table 11.6**):

- The highest proportion of adults who reported “too expensive/ drugs not available” were within the ages 15-24 years (29.6%).
- A higher proportion of men (60 %) gave the reasons “did not think drugs were necessary” or “their blood pressure was under control” compared to women (45.5%).
- The proportion of adults who reported did not think drugs were necessary” or “their blood pressure was under control” increased with increase in education level and increased household wealth.

**Figure 11.8 Reasons for which diabetic adults reported not taking drugs for raised blood glucose, Bangladesh 2018**



### List of Tables:

For more information on raised blood glucose prevalence, screening and treatment coverage or sources of care, see the following tables:

Table: 11.1 Prevalence of raised blood glucose and diagnosis, treatment and control rates

Table: 11.2 Measurement of blood glucose, prescription of medications, treatment compliance

Table: 11.3 sources of care for raised blood glucose

Table: 11.4 sources of medications for raised blood glucose

Table: 11.5 Care seeking from traditional healers and use of traditional/herbal remedies

Table: 11.6 Reasons for not taking medications among those told to have raised blood band have been prescribed medications.

**Table NCD.11.1 Prevalence of raised blood glucose and diagnosis, treatment and control rates: All**

Percentage of people<sup>1</sup> 15-69 who had raised blood glucose at the time of survey or on blood glucose medications and who were aware of their diagnosis, on treatment or have their blood glucose controlled or uncontrolled with medications, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Prevalence of raised Blood glucose <sup>1</sup> | (n)   | Among those with raised blood glucose <sup>1</sup> |                                      |                                 |                             | Total (n) |
|---------------------------|-------------------------------------------------|-------|----------------------------------------------------|--------------------------------------|---------------------------------|-----------------------------|-----------|
|                           |                                                 |       | Not aware of diagnosis                             | Aware of diagnosis but not treatment | On treatment but not controlled | On treatment and controlled |           |
| <b>Age</b>                |                                                 |       |                                                    |                                      |                                 |                             |           |
| 15-24                     | 2.9                                             | 1,553 | 86.7                                               | 7.0                                  | 3.1                             | 3.2                         | 53        |
| 25-39                     | 8.1                                             | 3,072 | 60.3                                               | 11.6                                 | 18.9                            | 9.2                         | 257       |
| 40-54                     | 12.4                                            | 1,910 | 39.8                                               | 13.1                                 | 32.0                            | 15.1                        | 274       |
| 55-69                     | 16.3                                            | 521   | 34.8                                               | 2.8                                  | 34.9                            | 27.5                        | 93        |
| <b>Sex</b>                |                                                 |       |                                                    |                                      |                                 |                             |           |
| Women                     | 7.9                                             | 3,807 | 48.4                                               | 11.6                                 | 24.5                            | 15.5                        | 345       |
| Men                       | 8.9                                             | 3,249 | 54.5                                               | 9.1                                  | 24.8                            | 11.6                        | 332       |
| <b>Residence</b>          |                                                 |       |                                                    |                                      |                                 |                             |           |
| Rural                     | 7.1                                             | 3,736 | 56.7                                               | 9.8                                  | 20.9                            | 12.6                        | 259       |
| Urban                     | 13.2                                            | 3,320 | 40.2                                               | 11.6                                 | 32.5                            | 15.8                        | 418       |
| <b>Region</b>             |                                                 |       |                                                    |                                      |                                 |                             |           |
| Barishal                  | 9.0                                             | 843   | 58.3                                               | 11.6                                 | 23.9                            | 6.2                         | 88        |
| Chattogram                | 12.0                                            | 854   | 57.2                                               | 6.4                                  | 19.2                            | 17.3                        | 112       |
| Dhaka                     | 9.6                                             | 765   | 38.2                                               | 17.3                                 | 26.8                            | 17.7                        | 83        |
| Khulna                    | 8.5                                             | 948   | 52.1                                               | 12.8                                 | 23.3                            | 11.7                        | 100       |
| Mymensingh                | 4.9                                             | 913   | 73.5                                               | 8.6                                  | 13.0                            | 4.9                         | 55        |
| Rajshahi                  | 7.1                                             | 982   | 43.1                                               | 6.5                                  | 37.2                            | 13.1                        | 91        |
| Rangpur                   | 4.8                                             | 906   | 59.6                                               | 3.6                                  | 30.4                            | 6.4                         | 71        |
| Sylhet                    | 5.7                                             | 845   | 61.8                                               | 9.6                                  | 24.5                            | 4.1                         | 77        |
| <b>Education</b>          |                                                 |       |                                                    |                                      |                                 |                             |           |
| No education              | 7.4                                             | 2,206 | 64.1                                               | 9.9                                  | 15.1                            | 11.0                        | 159       |
| Primary                   | 8.0                                             | 3,266 | 46.6                                               | 10.6                                 | 27.2                            | 15.6                        | 302       |
| Secondary                 | 8.3                                             | 1,138 | 51.1                                               | 6.9                                  | 28.7                            | 13.4                        | 134       |
| More than                 | 18.6                                            | 427   | 35.1                                               | 16.4                                 | 35.4                            | 13.1                        | 82        |
| <b>Wealth quintile</b>    |                                                 |       |                                                    |                                      |                                 |                             |           |
| Lowest                    | 4.6                                             | 1,475 | 67.7                                               | 4.2                                  | 22.9                            | 5.2                         | 68        |
| Second                    | 5.7                                             | 1,495 | 64.7                                               | 13.9                                 | 12.8                            | 8.5                         | 86        |
| Middle                    | 5.6                                             | 1,269 | 66.2                                               | 11.2                                 | 11.1                            | 11.4                        | 98        |
| Fourth                    | 10.7                                            | 1,290 | 54.5                                               | 9.6                                  | 23.9                            | 12.0                        | 131       |
| Highest                   | 16.4                                            | 1,527 | 32.6                                               | 11.2                                 | 35.7                            | 20.5                        | 294       |
| Total (18-39)             | 5.1                                             | 3810  | 72.1                                               | 10.0                                 | 11.5                            | 6.4                         | 212       |
| Total (40-69)             | 12.7                                            | 3246  | 40.3                                               | 10.6                                 | 31.7                            | 17.5                        | 465       |
| Total (25-69)             | 9.6                                             | 6242  | 49.9                                               | 10.8                                 | 25.6                            | 13.8                        | 658       |
| <b>Total (18-69)</b>      | 8.3                                             | 7056  | 51.4                                               | 10.4                                 | 24.7                            | 13.6                        | 677       |

**Table NCD.11.2 Blood glucose measured, self-reported prevalence and treatment of raised blood glucose: All**

Percentage of respondents age 15-69 who have ever had their blood glucose measured and who have been told by a health care provider that they have raised blood glucose; among people who have been told they have raised blood glucose, the percentage told in the past 12 months they have raised blood glucose, and percentage taking medication to control blood pressure, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Ever had blood glucose measured by doctor or health care provider | Ever told have raised blood glucose by doctor or health care provider | Number of respondents | Among respondents who have been told by a doctor or health care provider they have raised blood glucose, the percentage who were: |                                                |                                                      |                       |
|---------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------|-----------------------|
|                           |                                                                   |                                                                       |                       | Told in the past 12 months have raised blood glucose                                                                              | Ever taken medication to control blood glucose | Currently taking medication to control blood glucose | Number of respondents |
| <b>Age</b>                |                                                                   |                                                                       |                       |                                                                                                                                   |                                                |                                                      |                       |
| 18-24                     | 13.8                                                              | 0.5                                                                   | 1942                  | 75.5*                                                                                                                             | 51.9*                                          | 34.9*                                                | 15*                   |
| 25-39                     | 28.5                                                              | 4.5                                                                   | 3505                  | 77.7                                                                                                                              | 76.4                                           | 50.4                                                 | 179                   |
| 40-54                     | 34.4                                                              | 10.2                                                                  | 2152                  | 84.4                                                                                                                              | 74.1                                           | 60.3                                                 | 248                   |
| 55-69                     | 43.7                                                              | 15.8                                                                  | 586                   | 75.6                                                                                                                              | 91.9                                           | 65.3                                                 | 96                    |
| <b>Sex</b>                |                                                                   |                                                                       |                       |                                                                                                                                   |                                                |                                                      |                       |
| Women                     | 27.5                                                              | 5.7                                                                   | 4381                  | 74.8                                                                                                                              | 74.9                                           | 54.3                                                 | 298                   |
| Men                       | 22.6                                                              | 4.5                                                                   | 3804                  | 85.0                                                                                                                              | 85.4                                           | 64.0                                                 | 240                   |
| <b>Residence</b>          |                                                                   |                                                                       |                       |                                                                                                                                   |                                                |                                                      |                       |
| Rural                     | 22.3                                                              | 4.1                                                                   | 4183                  | 74.8                                                                                                                              | 76.6                                           | 52.2                                                 | 180                   |
| Urban                     | 34.5                                                              | 8.7                                                                   | 4002                  | 86.4                                                                                                                              | 84.3                                           | 68.8                                                 | 358                   |
| <b>Region</b>             |                                                                   |                                                                       |                       |                                                                                                                                   |                                                |                                                      |                       |
| Barishal                  | 28.1                                                              | 6.3                                                                   | 986                   | 61.7                                                                                                                              | 62.3                                           | 37.3                                                 | 71                    |
| Chattogram                | 28.8                                                              | 6.8                                                                   | 1053                  | 77.5                                                                                                                              | 82.5                                           | 62.5                                                 | 86                    |
| Dhaka                     | 30.3                                                              | 6.3                                                                   | 997                   | 87.8                                                                                                                              | 82.5                                           | 62.8                                                 | 84                    |
| Khulna                    | 26.4                                                              | 5.9                                                                   | 1040                  | 79.7                                                                                                                              | 74.5                                           | 45.0                                                 | 82                    |
| Mymensingh                | 18.8                                                              | 2.0                                                                   | 1021                  | 64.2                                                                                                                              | 69.6                                           | 44.8                                                 | 44                    |
| Rajshahi                  | 23.3                                                              | 4.5                                                                   | 1066                  | 81.9                                                                                                                              | 81.0                                           | 69.5                                                 | 75                    |
| Rangpur                   | 12.5                                                              | 2.8                                                                   | 1009                  | 65.3                                                                                                                              | 74.0                                           | 58.5                                                 | 43                    |
| Sylhet                    | 19.4                                                              | 2.1                                                                   | 1013                  | 76.3                                                                                                                              | 93.8                                           | 59.5                                                 | 53                    |
| <b>Education</b>          |                                                                   |                                                                       |                       |                                                                                                                                   |                                                |                                                      |                       |
| No education              | 21.2                                                              | 4.9                                                                   | 2476                  | 66.8                                                                                                                              | 78.8                                           | 44.8                                                 | 112                   |
| Primary                   | 23.3                                                              | 5.0                                                                   | 3735                  | 83.8                                                                                                                              | 79.1                                           | 64.5                                                 | 228                   |
| Secondary                 | 29.8                                                              | 4.6                                                                   | 1397                  | 79.9                                                                                                                              | 74.6                                           | 55.9                                                 | 122                   |
| More than secondary       | 44.0                                                              | 9.6                                                                   | 556                   | 93.4                                                                                                                              | 92.1                                           | 75.4                                                 | 75                    |
| <b>Wealth quintile</b>    |                                                                   |                                                                       |                       |                                                                                                                                   |                                                |                                                      |                       |
| Lowest                    | 13.4                                                              | 2.7                                                                   | 1639                  | 75.5                                                                                                                              | 59.7                                           | 49.7                                                 | 42                    |
| Second                    | 17.2                                                              | 3.1                                                                   | 1670                  | 58.4                                                                                                                              | 73.8                                           | 37.1                                                 | 51                    |
| Middle                    | 21.6                                                              | 1.9                                                                   | 1451                  | 78.1                                                                                                                              | 70.9                                           | 49.4                                                 | 52                    |
| Fourth                    | 30.0                                                              | 6.7                                                                   | 1506                  | 71.8                                                                                                                              | 83.6                                           | 53.7                                                 | 117                   |
| Highest                   | 43.3                                                              | 11.3                                                                  | 1919                  | 90.6                                                                                                                              | 84.3                                           | 71.0                                                 | 276                   |
| Total (18-39)             | 18.4                                                              | 1.6                                                                   | 4515                  | 72.6                                                                                                                              | 67.9                                           | 39.9                                                 | 119                   |
| Total (40-69)             | 36.7                                                              | 11.3                                                                  | 3670                  | 80.9                                                                                                                              | 82.5                                           | 63.3                                                 | 419                   |
| Total (25-69)             | 29.6                                                              | 6.6                                                                   | 7159                  | 79.6                                                                                                                              | 80.0                                           | 58.6                                                 | 532                   |
| <b>Total (18-69)</b>      | <b>25.1</b>                                                       | <b>5.1</b>                                                            | <b>8185</b>           | <b>79.2</b>                                                                                                                       | <b>79.8</b>                                    | <b>58.5</b>                                          | <b>538</b>            |

\*interpret data with caution due to small sample size

**Table NCD.11.3 source of care for treatment and advise for diabetes: All**

Percentage of people 15-69 who were ever told to have raised blood glucose and who mentioned different sources of care for treatment/advise and for medication, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Government Facility | Private/ NGO Facility | Both government and private | Any alternative/ traditional provider | government facilities |           |          | Private |           | n   |
|---------------------------|---------------------|-----------------------|-----------------------------|---------------------------------------|-----------------------|-----------|----------|---------|-----------|-----|
|                           |                     |                       |                             |                                       | Primary               | secondary | tertiary | Primary | secondary |     |
| <b>Age</b>                |                     |                       |                             |                                       |                       |           |          |         |           |     |
| 18-24                     | 12.2*               | 78.2*                 | 0*                          | 0*                                    | 0*                    | 0*        | 12.2*    | 36.4*   | 0*        | 15* |
| 25-39                     | 27.1                | 61.8                  | 7.5                         | 2.9                                   | 13.9                  | 3.5       | 17.6     | 36.2    | 0.8       | 179 |
| 40-54                     | 25.1                | 66.4                  | 4.2                         | 0.0                                   | 7.1                   | 4.7       | 18.7     | 27.5    | 0.9       | 248 |
| 55-69                     | 36.2                | 53.5                  | 4.8                         | 0.0                                   | 12.5                  | 12.7      | 17.3     | 41.5    | 4.4       | 96  |
| <b>Sex</b>                |                     |                       |                             |                                       |                       |           |          |         |           | 298 |
| Women                     | 33.3                | 57.6                  | 4.5                         | 1.3                                   | 12.1                  | 7.4       | 18.8     | 36.1    | 0.7       | 240 |
| Men                       | 23.3                | 65.8                  | 5.8                         | 0.0                                   | 8.2                   | 6.6       | 16.1     | 33.6    | 3.9       |     |
| <b>Residence</b>          |                     |                       |                             |                                       |                       |           |          |         |           |     |
| Rural                     | 26.6                | 62.6                  | 4.8                         | 0.9                                   | 14.3                  | 6.8       | 10.7     | 37.3    | 0.3       | 180 |
| Urban                     | 32.8                | 58.8                  | 5.6                         | 0.4                                   | 4.1                   | 7.5       | 29.0     | 31.2    | 4.9       | 358 |
| <b>Region</b>             |                     |                       |                             |                                       |                       |           |          |         |           | 71  |
| Barishal                  | 25.8                | 55.7                  | 11.8                        | 0.6                                   | 19.5                  | 3.0       | 15.4     | 51.9    | 0.4       | 86  |
| Chattogram                | 28.3                | 67.6                  | 1.2                         | 0.4                                   | 8.1                   | 10.6      | 11.2     | 28.1    | 0.0       | 84  |
| Dhaka                     | 32.4                | 61.6                  | 5.0                         | 1.0                                   | 4.4                   | 6.8       | 27.4     | 30.6    | 5.2       | 82  |
| Khulna                    | 35.6                | 50.4                  | 9.1                         | 0.0                                   | 21.8                  | 7.2       | 17.7     | 37.5    | 2.1       | 44  |
| Mymensingh                | 42.9                | 50.1                  | 4.8                         | 0.0                                   | 4.6                   | 5.9       | 37.3     | 29.4    | 1.1       | 75  |
| Rajshahi                  | 11.2                | 70.2                  | 0.2                         | 2.4                                   | 6.4                   | 3.1       | 2.6      | 43.6    | 0.3       | 43  |
| Rangpur                   | 35.0                | 50.4                  | 6.5                         | 0.0                                   | 30.6                  | 2.1       | 11.1     | 35.9    | 1.9       | 53  |
| Sylhet                    | 19.1                | 55.0                  | 26.0                        | 0.0                                   | 5.5                   | 11.6      | 31.1     | 67.2    | 1.3       |     |
| <b>Education</b>          |                     |                       |                             |                                       |                       |           |          |         |           |     |
| No education              | 26.6                | 66.8                  | 2.1                         | 0.0                                   | 17.4                  | 5.7       | 7.1      | 40.0    | 0.9       | 112 |
| Primary                   | 31.8                | 55.9                  | 5.7                         | 0.7                                   | 11.2                  | 8.5       | 18.7     | 32.5    | 0.4       | 228 |
| Secondary                 | 29.9                | 61.2                  | 8.1                         | 0.0                                   | 2.3                   | 8.5       | 28.1     | 30.7    | 0.5       | 122 |
| More than secondary       | 21.7                | 68.3                  | 5.4                         | 3.9                                   | 1.3                   | 2.2       | 24.5     | 38.7    | 15.4      | 75  |
| <b>Wealth quintile</b>    |                     |                       |                             |                                       |                       |           |          |         |           |     |
| Lowest                    | 33.6                | 52.6                  | 7.8                         | 0.0                                   | 27.6                  | 1.3       | 12.5     | 26.3    | 0.4       | 42  |
| Second                    | 37.2                | 54.2                  | 6.3                         | 2.3                                   | 22.4                  | 8.7       | 12.4     | 34.6    | 0.3       | 51  |
| Middle                    | 25.7                | 61.4                  | 9.1                         | 0.0                                   | 18.2                  | 8.5       | 16.0     | 37.6    | 0.9       | 52  |
| Fourth                    | 22.0                | 69.9                  | 4.4                         | 0.2                                   | 7.6                   | 9.9       | 9.2      | 35.2    | 1.1       | 117 |
| Highest                   | 30.2                | 59.9                  | 3.8                         | 0.9                                   | 3.3                   | 6.0       | 25.6     | 36.6    | 3.8       | 276 |
| Total (18-39)             | 13.0                | 73.2                  | 7.2                         | 4.3                                   | 8.7                   | 2.9       | 9.9      | 42.5    | 0.7       | 119 |
| Total (40-69)             | 31.1                | 58.7                  | 5.3                         | 0.0                                   | 10.8                  | 8.1       | 19.6     | 33.1    | 2.4       | 419 |
| Total (25-69)             | 27.2                | 61.7                  | 5.8                         | 1.0                                   | 10.6                  | 7.2       | 18.0     | 35.0    | 2.1       | 532 |
| <b>Total (18-69)</b>      | 26.9                | 62.1                  | 5.7                         | 1.0                                   | 10.4                  | 7.0       | 17.6     | 35.0    | 2.1       | 538 |

\* Private includes NGO clinics and hospitals

**Table NCD.11.4 source of drugs/medications for diabetes: All**

Percentage of people 18-69 who have ever taken medication for raised blood glucose and who mentioned different sources medications, by background characteristics, [Bangladesh, 2018]

| <b>Background characteristic</b> | <b>Government Only</b> | <b>Private* Only</b> | <b>Both government and private</b> | <b>Any alternative/ traditional provider</b> | <b>n</b>   |
|----------------------------------|------------------------|----------------------|------------------------------------|----------------------------------------------|------------|
| <b>Age</b>                       |                        |                      |                                    |                                              |            |
| 18-24                            | 0*                     | 100*                 | 0*                                 | 0*                                           | 12*        |
| 25-39                            | 1.4                    | 94.1                 | 0.7                                | 2.9                                          | 150        |
| 40-54                            | 1.6                    | 97.5                 | 0.6                                | 0.0                                          | 208        |
| 55-69                            | 0.6                    | 93.5                 | 5.9                                | 0.0                                          | 76         |
| <b>Sex</b>                       |                        |                      |                                    |                                              |            |
| Women                            | 1.2                    | 96.0                 | 1.3                                | 2.8                                          | 253        |
| Men                              | 1.0                    | 94.4                 | 0.0                                | 0.0                                          | 193        |
| <b>Residence</b>                 |                        |                      |                                    |                                              |            |
| Rural                            | 0.7                    | 94.3                 | 0.9                                | 2.4                                          | 159        |
| Urban                            | 1.7                    | 96.3                 | 0.4                                | 0.0                                          | 287        |
| <b>Region</b>                    |                        |                      |                                    |                                              |            |
| Barishal                         | 3.7                    | 96.3                 | 0.0                                | 0.6                                          | 58         |
| Chattogram                       | 1.4                    | 97.7                 | 0.9                                | 0.4                                          | 72         |
| Dhaka                            | 0.0                    | 98.6                 | 0.0                                | 1.0                                          | 69         |
| Khulna                           | 1.9                    | 96.0                 | 1.6                                | 0.0                                          | 65         |
| Mymensingh                       | 7.0                    | 87.7                 | 2.6                                | 0.0                                          | 40         |
| Rajshahi                         | 1.7                    | 76.7                 | 18.0                               | 2.4                                          | 62         |
| Rangpur                          | 0.0                    | 100.0                | 0.0                                | 0.0                                          | 36         |
| Sylhet                           | 0.0                    | 100.0                | 0.0                                | 0.0                                          | 44         |
| <b>Education</b>                 |                        |                      |                                    |                                              |            |
| No education                     | 0.0                    | 96.7                 | 3.3                                | 0.0                                          | 104        |
| Primary                          | 1.8                    | 93.5                 | 3.5                                | 0.7                                          | 187        |
| Secondary                        | 1.1                    | 97.9                 | 1.0                                | 0.0                                          | 98         |
| More than                        | 0.7                    | 95.0                 | 0.9                                | 3.9                                          | 56         |
| <b>Wealth quintile</b>           |                        |                      |                                    |                                              |            |
| Lowest                           | 0.0                    | 89.6                 | 10.5                               | 0.0                                          | 40         |
| Second                           | 0.0                    | 94.8                 | 0.0                                | 2.3                                          | 47         |
| Middle                           | 1.8                    | 97.0                 | 1.3                                | 0.0                                          | 47         |
| Fourth                           | 1.5                    | 98.5                 | 0.0                                | 0.2                                          | 96         |
| Highest                          | 1.2                    | 94.3                 | 3.4                                | 0.9                                          | 216        |
| Total (18-39)                    | 0.0                    | 93.2                 | 1.0                                | 3.3                                          | 99         |
| Total (40-69)                    | 1.3                    | 95.5                 | 3.0                                | 0.1                                          | 347        |
| Total (25-69)                    | 1.1                    | 95.1                 | 2.7                                | 0.7                                          | 443        |
| <b>Total (18-69)</b>             | <b>1.1</b>             | <b>95.2</b>          | <b>2.7</b>                         | <b>0.7</b>                                   | <b>446</b> |

\*interpret data with caution due to small sample size

**Table NCD.11.5 Care seeking from traditional healers and use of traditional/herbal remedies: All**

Percentage of people 18-69 who have been ever told to have raised blood glucose and who sought care from a traditional healer or currently using a traditional/herbal remedy, by background characteristics, [Bangladesh, 2018]

| Background characteristic | For raised blood glucose |                  |                                  |                  |
|---------------------------|--------------------------|------------------|----------------------------------|------------------|
|                           | Ever seen a local healer | Total Number (n) | currently taking a herbal remedy | Total Number (n) |
| <b>Age</b>                |                          |                  |                                  |                  |
| 18-24                     | 0*                       | 15*              | 0*                               | 0*               |
| 25-39                     | 3.3                      | 179              | 30.9*                            | 8*               |
| 40-54                     | 5.9                      | 248              | 47.3*                            | 12*              |
| 55-69                     | 3.8                      | 96               | 0*                               | 3*               |
| <b>Sex</b>                |                          |                  |                                  |                  |
| Women                     | 6.0                      | 298              | 29.0*                            | 18*              |
| Men                       | 2.0                      | 240              | 29.7*                            | 5*               |
| <b>Residence</b>          |                          |                  |                                  |                  |
| Rural                     | 5.0                      | 180              | 13.9*                            | 10*              |
| Urban                     | 3.0                      | 358              | 70.3*                            | 13*              |
| <b>Region</b>             |                          |                  |                                  |                  |
| Barishal                  | 3.9                      | 71               | 58.3*                            | 3*               |
| Chattogram                | 3.7                      | 86               | 9.9*                             | 3*               |
| Dhaka                     | 6.0                      | 84               | 25*                              | 7*               |
| Khulna                    | 8.4                      | 82               | 45.7*                            | 8*               |
| Mymensingh                | 1.2                      | 44               | 100*                             | 1*               |
| Rajshahi                  | 0.0                      | 75               | 0*                               | 0*               |
| Rangpur                   | 0.0                      | 43               | 0*                               | 0*               |
| Sylhet                    | 2.4                      | 53               | 0*                               | 0*               |
| <b>Education</b>          |                          |                  |                                  |                  |
| No education              | 7.0                      | 112              | 16.9*                            | 6*               |
| Primary                   | 3.5                      | 228              | 46.1*                            | 11*              |
| Secondary                 | 3.4                      | 122              | 7.3*                             | 3*               |
| More than                 | 1.6                      | 75               | 100*                             | 3*               |
| <b>Wealth quintile</b>    |                          |                  |                                  |                  |
| Lowest                    | 6.6                      | 42               | 16.4*                            | 3*               |
| Second                    | 13.4                     | 51               | 21.8*                            | 4*               |
| Middle                    | 1.5                      | 52               | 0*                               | 1*               |
| Fourth                    | 0.2                      | 117              | 100*                             | 1*               |
| Highest                   | 4.1                      | 276              | 40.1*                            | 14*              |
| Total (18-39)             | 1.6                      | 119              | 66.3*                            | 5*               |
| Total (40-69)             | 4.9                      | 419              | 26.1*                            | 18*              |
| Total (25-69)             | 4.3                      | 532              | 29.2*                            | 23*              |
| Total (18-69)             | 4.3                      | 538              | 29.2*                            | 23*              |

\*interpret data with caution due to small sample size

**Table NCD.11.6 Reasons for not taking medications for raised diabetes: All**

Percentage of people 18-69 who have been ever advised to take drugs but not taking drugs in the past 2 weeks and specified different reasons for not taking medication for raised blood glucose, by background characteristics, [Nepal, 2018]

| <b>Background characteristic</b> | <b>don't think drugs are necessary/blood glucose got normal</b> | <b>fear or have side effects</b> | <b>too expensive/not available</b> | <b>Medicines not advised by doctor</b> | <b>(n)</b> |
|----------------------------------|-----------------------------------------------------------------|----------------------------------|------------------------------------|----------------------------------------|------------|
| <b>Age</b>                       |                                                                 |                                  |                                    |                                        |            |
| 15-24                            | 61.4*                                                           | 0*                               | 29.6*                              | 15.7*                                  | 12*        |
| 25-39                            | 57.0                                                            | 0.5                              | 18.8                               | 6.9                                    | 150        |
| 40-54                            | 53.4                                                            | 0.1                              | 21.9                               | 7.2                                    | 208        |
| 55-69                            | 45.6                                                            | 0.8                              | 11.9                               | 2.2                                    | 76         |
| <b>Sex</b>                       |                                                                 |                                  |                                    |                                        |            |
| Women                            | 45.5                                                            | 0.2                              | 18.5                               | 6.5                                    | 253        |
| Men                              | 60.0                                                            | 0.8                              | 16.9                               | 4.5                                    | 193        |
| <b>Residence</b>                 |                                                                 |                                  |                                    |                                        |            |
| Rural                            | 49.9                                                            | 0.0                              | 23.7                               | 7.4                                    | 159        |
| Urban                            | 55.0                                                            | 1.2                              | 7.4                                | 2.5                                    | 287        |
| <b>Region</b>                    |                                                                 |                                  |                                    |                                        |            |
| Barishal                         | 47.3                                                            | 2.3                              | 40.8                               | 6.3                                    | 58         |
| Chattogram                       | 40.2                                                            | 0.4                              | 20.8                               | 1.4                                    | 72         |
| Dhaka                            | 59.2                                                            | 0.0                              | 8.8                                | 3.4                                    | 69         |
| Khulna                           | 70.0                                                            | 0.0                              | 18.5                               | 12.6                                   | 65         |
| Mymensingh                       | 46.4                                                            | 0.0                              | 12.4                               | 8.5                                    | 40         |
| Rajshahi                         | 52.9                                                            | 0.0                              | 19.2                               | 16.2                                   | 62         |
| Rangpur                          | 54.8                                                            | 2.9                              | 14.4                               | 5.2                                    | 36         |
| Sylhet                           | 19.3                                                            | 0.8                              | 33.7                               | 0.0                                    | 44         |
| <b>Education</b>                 |                                                                 |                                  |                                    |                                        |            |
| No education                     | 47.6                                                            | 0.3                              | 22.1                               | 3.9                                    | 104        |
| Primary                          | 46.2                                                            | 0.5                              | 20.9                               | 7.3                                    | 187        |
| Secondary                        | 63.8                                                            | 0.6                              | 9.3                                | 6.1                                    | 98         |
| More than                        | 68.3                                                            | 0.5                              | 5.2                                | 3.3                                    | 56         |
| <b>Wealth quintile</b>           |                                                                 |                                  |                                    |                                        |            |
| Lowest                           | 44.3                                                            | 0.0                              | 31.2                               | 7.9                                    | 40         |
| Second                           | 45.3                                                            | 0.0                              | 38.4                               | 13.0                                   | 47         |
| Middle                           | 48.6                                                            | 3.3                              | 31.0                               | 14.3                                   | 47         |
| Fourth                           | 57.9                                                            | 0.4                              | 17.5                               | 3.4                                    | 96         |
| Highest                          | 52.6                                                            | 0.2                              | 5.1                                | 2.3                                    | 216        |
| Total (18-39)                    | 62.5                                                            | 0.7                              | 21.6                               | 9.0                                    | 99         |
| Total (40-69)                    | 49.0                                                            | 0.4                              | 16.9                               | 4.7                                    | 347        |
| Total (25-69)                    | 51.7                                                            | 0.4                              | 17.9                               | 5.7                                    | 443        |
| <b>Total (18-69)</b>             | <b>51.7</b>                                                     | <b>0.4</b>                       | <b>17.8</b>                        | <b>5.6</b>                             | <b>446</b> |

Notes: \*interpret data with caution due to small sample size

## Chapter 12 Cholesterol: screening, prevalence and treatment

### Key findings

---

#### ***Prevalence of raised blood cholesterol among adults age 18-69 yrs.***

- Actual measurement: Based on the criteria of total cholesterol > 190 mg/dl, the prevalence of raised blood cholesterol was 28.4%. This includes people on medication whose blood cholesterol levels were normal at the time of survey.
- Self-reported prevalence: Among adults who had ever had their blood cholesterol measured, 4.6% adults were ever told by a doctor or a health care provider that they have raised blood cholesterol.

#### ***Diagnosis and treatment gap among those noted to have raised blood cholesterol at the time of survey***

- Unaware about their raised blood cholesterol: 94.8% adults
- Not on treatment: 2.5% for adults knew they had raised blood cholesterol but were not on treatment.
- On treatment but not controlled: 0.7% of adults.
- On treatment and controlled: 2.0% of adults.

#### ***Screening coverage, prescription of medications, treatment compliance***

- Screening coverage: 4.6% of adults (7.6% among 40-69 years old) had had their blood cholesterol ever measured by a doctor or a health care provider.
- Treatment compliance: 78.9% adults who were told to have raised blood cholesterol reported ever taking any medications to control their blood cholesterol. 40.2% reported currently taking their prescribed medications in the two weeks prior to the survey.

#### ***Sources of care and medications***

- Sources of care: 70.2% of adults usually sought treatment and advice for raised blood cholesterol from private facilities only, and 20.1% reported so from government facilities only.
  - Sources of drugs/medications: Majority of the adults who were prescribed medication reported usually getting them only from private facilities (95.2%) and none of them reported getting their medications only from only government facilities.
  - 4.9% adult reported visiting a traditional healer for controlling their raised blood cholesterol.
-

## Introduction

Raised blood cholesterol was defined as having a lipid profile (total cholesterol, HDL and triglycerides) of  $\geq 190$  mg/dl during the study, or normal cholesterol levels at the time of survey but previously diagnosed as having raised blood cholesterol and currently taking medications to control blood cholesterol.

Observations which had cholesterol levels  $<75$  mg/dl or  $> 470$ mg/dl were excluded, though none of adults were recorded in this range.

### 12.1. Prevalence of raised blood cholesterol based on measurement and medications history

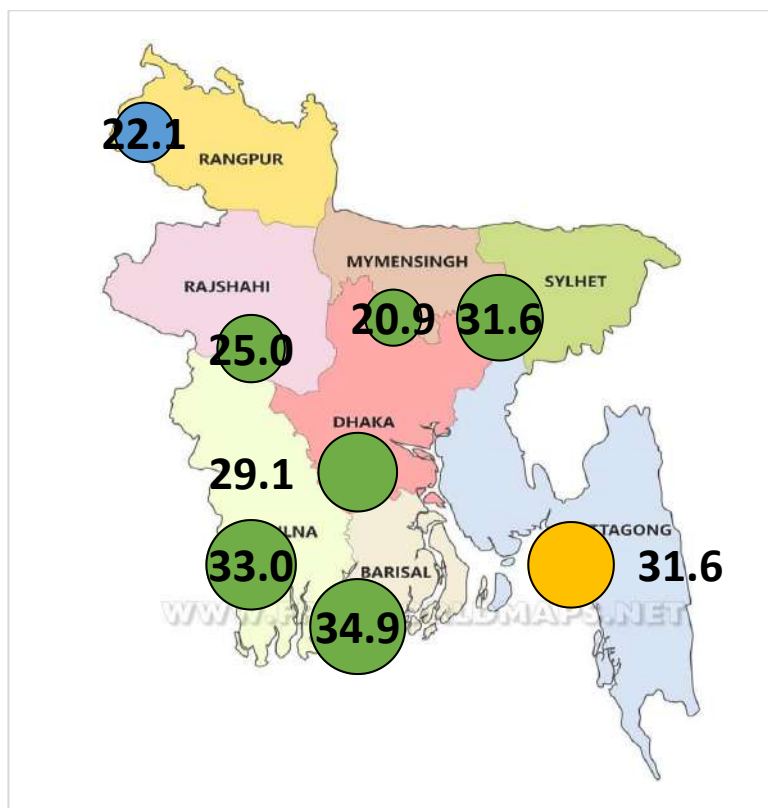
Self-reported prevalence is likely to underestimate the true prevalence as many people may be asymptomatic and not aware of their raised blood cholesterol status. Therefore, carrying out measurements in order to determine the actual prevalence is essential to understanding the overall risk of raised cholesterol across the population

Overall 28.4% of adults were measured to have raised cholesterol; based on both the measurement and medications history (**Table 12.1**). The prevalence based on self-reports among individuals who ever got their blood cholesterol measured (4.6%), was higher reported to be 46.8% (**Table 12.2**).

#### Patterns by background characteristics (**Table 12.1**):

- The prevalence of raised cholesterol increased with age. The prevalence increased substantially after the age 40 (35.7 % prevalence among adults aged 40- 69 years). Prevalence of raised cholesterol was higher in women compared to men (29.3% vs 27.4%).
- The prevalence of raised cholesterol was observed to be highest in adults with “more than secondary level” education (36.1%). Raised cholesterol prevalence were observed to increase with increase in household wealth.
- Adults from urban residences were more likely to have raised cholesterol compared to those from rural residences (32.4%-Urban vs 27.4%-Rural). By region, the highest prevalence of raised cholesterol was observed in Barishal (34.9%) followed by Khulna (33%) and was lowest in Mymensingh (20.9%). (**Figure 12.1**).

**Figure 12.1 Regional differences in raised cholesterol prevalence among 18-69 years population, Bangladesh's STEPs survey 2018**



## 12.2. Diagnosis and treatment gap

Raised blood cholesterol increases the risk of development of severe health complications such as heart disease or stroke. Ensuring early diagnosis and initiation of treatment enables adults to make necessary lifestyle adjustments and reduces the risk of lasting damage.

### Diagnosis gap (Table 12.1):

Of all the people who were diagnosed to have raised blood cholesterol as presented in section 12.1, 94.8% adults with raised blood cholesterol were unaware of their raised blood cholesterol status (**Figure 12.2**).

- Percentage of people unaware of their raised cholesterol status declined with age.
- More women were unaware of their raised blood cholesterol status than men (95.3%-women vs 94.2%-men)
- The proportion of adults who were unaware of their diagnosis status decreased with increase in wealth and educational level.

### Treatment gap (Table 12.1):

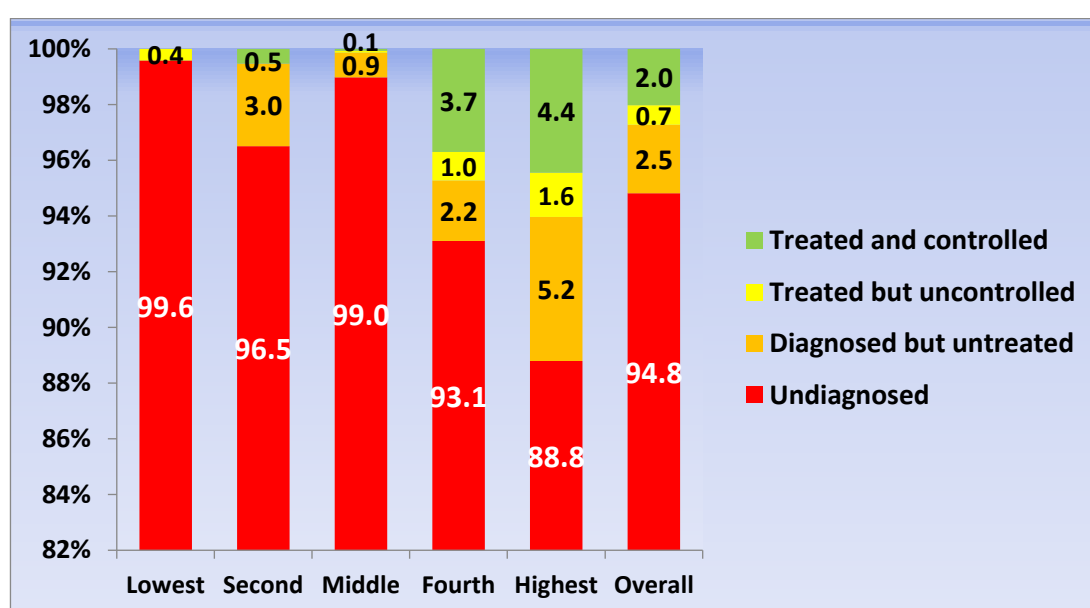
Overall, 2.5% of the people with raised blood cholesterol at the time of survey were aware of diagnosis but were not on treatment. Out of remaining adults with raised blood cholesterol who reported to be on treatment, 0.7 % adults still have raised blood cholesterol (uncontrolled) at the time of survey and 2% of adults were on treatment and controlled.

- Similar to diagnosis gap, the proportion of adults who were on treatment increased with increasing age.
- The proportion of adults with raised blood cholesterol who were on treatment increased with increasing age group. More women were on treatment which did not control their blood cholesterol than men (0.9%-women vs 0.4%- men)
- The proportion of adults who were on treatment increased with increasing household wealth, but no consistent trends were seen with education level.

### Quality of treatment (Table 12.1): Adults on treatment and controlled

Only 2% of the adults surveyed reported being on treatment which controlled this blood cholesterol, this is likely due to the majority of adults surveyed being unaware of their raised blood cholesterol status.

**Figure 12.2 Diagnosis and Treatment gaps among adults aged 18-69 years by wealth quintile, Bangladesh's STEPs survey 2018**



### **12.3. Screening coverage**

Early detection of raised blood cholesterol through regular (at least annual) screening of healthy individuals is one of the key public health strategies for reduction the morbidity and mortality associated with high cholesterol. Though data were not elicited about annual screening, 4.6 % adults (7.6 % among the age group 40-69 years old) had had their blood cholesterol ever measured by a doctor or a health care provider.

### **12.4. Prescription of medications and compliance with treatment (Table 12.2)**

Monitoring of prescription practices and treatment compliance is an important strategy for evaluating the outcomes at individual and at population level. Raised blood cholesterol is a chronic risk factor, requiring treatment over the lifetime of a person, which may reduce the compliance with treatment as observed with many other chronic conditions such as HIV/AIDS or tuberculosis.

Overall, of the adults who were ever told to have raised blood cholesterol 78.9% ever took the medicines and 40.2% reported currently taking the medications, showing poor compliance with the prescriptions.

- The likelihood of compliance with treatment increased with age. So, if a person is diagnosed and prescribed medicine in 30-44-year age group, he/she is less likely to take drug compared to adults 45-69 years of age.
- There were no significant variation in compliance with treatment observed with regard to education level or household wealth.

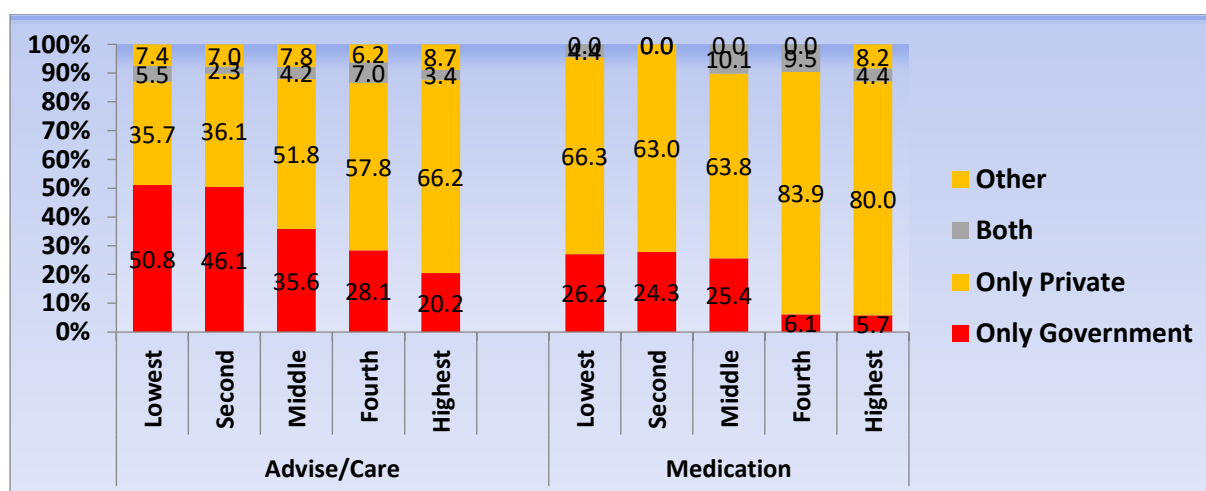
### **12.5. Sources of care for treatment and advice and medications for raised blood cholesterol**

Overall a much higher proportion of adults sought treatment advise and care from only Private facilities (which include NGO run centers) (70.2%) than from only government facilities (20.1%) or other sources (such as Alternative medicine practitioners- Homeo, Ayurveda, Unani and Traditional healers.) (0.2%) (**Table 12.3**). Similarly, for medications, majority of the adults approached only private providers (95.2%), and 0% of adults went to government providers. 2.7% of adults mentioned both government and private sources for medications for raised blood cholesterol. (**Table 12.4**)

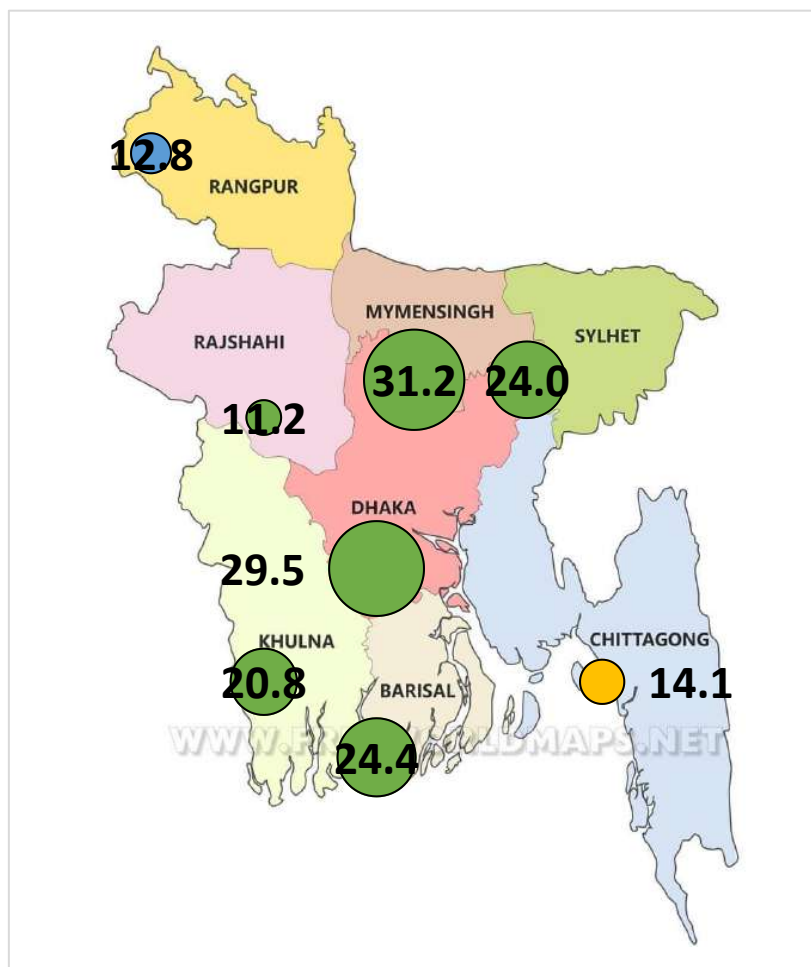
**Background patterns: (Table 10.3 and 10.4)**

- The proportion of adults who usually visited private facilities for care and medication decreased with increasing age. Highest proportion of adults sought care-treatment and advice from private sources (70.2%)
- *Sources of care and household wealth:* Most of all adults, even in the poorest wealth quintile sought care from private facilities. The proportion of adults seeking treatment and advice at both government and private facilities increased directly with increase in wealth quintile (**Figure 12.3**).
- *Source of care and region:* In all the provinces and irrespective of the residence in urban or rural residences, more than 50% of adults sought both care/advice and medications from private providers. The use of government facilities for advice/consultation was lowest in the Rajshahi and Rangpur regions, and higher in the Mymensingh and Dhaka regions. (**Figure 12.4**).

**Figure 12.3 Percent of adults (who were ever told to have raised blood cholesterol) who sought treatment care/advice and medications from government and private facilities with respect to wealth quintile, Bangladesh's STEPs survey 2018**



**Figure 12.4 Percent of adults (who were ever told to have raised blood cholesterol) who sought treatment care/advise from government facilities with respect to province, Bangladesh's STEPs survey 2018**



## 12.6. Consultation with traditional healers and use of herbal remedies

4.9% of adults with raised blood cholesterol reported visiting a traditional healer like treatment and advise. Of which, 33.9% adults reported currently taking herbal remedies for their raised blood cholesterol

### Background patterns: (Table 12.5)

- The proportion of adults who reported taking herbal or traditional remedies for their raised blood cholesterol was highest in the 40-55 years age group- 28.3%. Women were more likely to have ever visited a local healer as compared to men (7.5%- women vs 2.9%- men). However, a higher proportion of men reported currently taking herbal or traditional remedies to control their blood cholesterol among adults who had ever visited a traditional healer. (53.0%-men vs 25.0%-women)

- Rural residents were more likely to have ever visited a local healer as compared to urban residents.
- The proportion of adults who had ever visited a local to control their blood cholesterol decreased with increase in education level and wealth quintile.

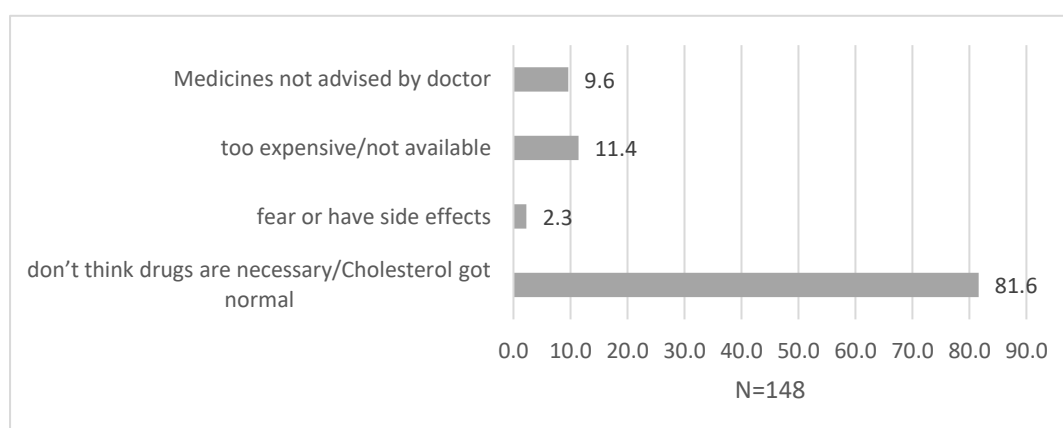
## 12.7. Reasons for not on treatment

81.9% of adults who were prescribed medications cited “didn’t think the drugs were necessary” and “their blood cholesterol got normal” as reasons for not currently taking medications/treatment (**Table 12.6**). The second most common reason given for not taking medications was “too expensive/ drugs not available” as cited by 11.4% adults

### Patterns by background characteristics (Table 12.6):

- The highest proportion of adults who reported “too expensive/ drugs not available” were within the ages 40-54 years (86.1%).
- A higher proportion of men (82.5 %) gave the reasons “did not think drugs were necessary” or “their blood pressure was under control” compared to women (80.8%).
- The proportion of adults who reported did not think drugs were necessary” or “their blood pressure was under control” increased with increase in education level however, no consistent trends were observed with regards to household wealth.

**Figure 12.5 Reasons for which adults with high blood cholesterol reported not taking drugs for raised Blood cholesterol, Bangladesh 2018.**



**List of Tables:**

For more information on raised blood cholesterol prevalence, screening and treatment coverage or sources of care, see the following tables:

Table: 12.1 Prevalence of raised blood cholesterol and diagnosis, treatment and control rates

Table: 12.2 Measurement of blood cholesterol, prescription of medications, treatment compliance

Table: 12.3 sources of care for raised blood cholesterol

Table: 12.4 sources of medications for raised blood cholesterol

Table: 12.5 Care seeking from traditional healers and use of traditional/herbal remedies

Table: 12.6 Reasons for not taking medications among those told to have raised blood cholesterol and have been prescribed medications.

**Table NCD.12.1 Prevalence of raised blood cholesterol and diagnosis, treatment and control rates: All**

Percentage of people 18-69 who had raised blood cholesterol at the time of survey or on blood cholesterol medications and who were aware of their diagnosis, on treatment or have their blood cholesterol controlled or uncontrolled with medications, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Prevalence of raised blood cholesterol | (n)         | Among those with raised blood cholesterol |                                      |                                 |                             | Total (n)   |
|---------------------------|----------------------------------------|-------------|-------------------------------------------|--------------------------------------|---------------------------------|-----------------------------|-------------|
|                           |                                        |             | Not aware of diagnosis                    | Aware of diagnosis but not treatment | On treatment but not controlled | On treatment and controlled |             |
| <b>Age</b>                |                                        |             |                                           |                                      |                                 |                             |             |
| 18-24                     | 20.6                                   | 1550        | 99.0                                      | 0.6                                  | 0.0                             | 0.5                         | 317         |
| 25-39                     | 26.7                                   | 3070        | 95.3                                      | 2.8                                  | 0.5                             | 1.4                         | 888         |
| 40-54                     | 36.4                                   | 1908        | 92.7                                      | 3.2                                  | 1.1                             | 3.0                         | 766         |
| 55-69                     | 39.5                                   | 521         | 91.8                                      | 2.6                                  | 1.4                             | 4.1                         | 189         |
| <b>Sex</b>                |                                        |             |                                           |                                      |                                 |                             |             |
| Women                     | 29.3                                   | 3805        | 95.3                                      | 2.9                                  | 0.9                             | 0.9                         | 1,196       |
| Men                       | 27.4                                   | 3244        | 94.2                                      | 1.8                                  | 0.4                             | 3.5                         | 964         |
| <b>Residence</b>          |                                        |             |                                           |                                      |                                 |                             |             |
| Rural                     | 27.4                                   | 3733        | 96.5                                      | 1.7                                  | 0.5                             | 1.3                         | 1,004       |
| Urban                     | 32.4                                   | 3316        | 89.3                                      | 4.8                                  | 1.3                             | 4.6                         | 1,156       |
| <b>Region</b>             |                                        |             |                                           |                                      |                                 |                             |             |
| Barishal                  | 34.9                                   | 842         | 90.3                                      | 5.1                                  | 1.7                             | 3.0                         | 313         |
| Chattogram                | 31.6                                   | 854         | 96.3                                      | 1.6                                  | 0.6                             | 1.5                         | 264         |
| Dhaka                     | 29.1                                   | 765         | 90.8                                      | 4.2                                  | 0.9                             | 4.2                         | 228         |
| Khulna                    | 33.0                                   | 947         | 94.4                                      | 2.1                                  | 1.2                             | 2.2                         | 345         |
| Mymensingh                | 20.9                                   | 912         | 99.1                                      | 0.3                                  | 0.0                             | 0.7                         | 212         |
| Rajshahi                  | 25.0                                   | 981         | 98.4                                      | 1.2                                  | 0.0                             | 0.4                         | 279         |
| Rangpur                   | 22.1                                   | 903         | 97.6                                      | 1.1                                  | 0.2                             | 1.1                         | 232         |
| Sylhet                    | 31.6                                   | 845         | 94.8                                      | 3.5                                  | 0.8                             | 0.9                         | 287         |
| <b>Education</b>          |                                        |             |                                           |                                      |                                 |                             |             |
| No education              | 27.0                                   | 3269        | 97.6                                      | 1.4                                  | 0.2                             | 0.9                         | 929         |
| Primary                   | 28.8                                   | 2199        | 92.5                                      | 3.8                                  | 1.3                             | 2.5                         | 689         |
| Secondary                 | 29.5                                   | 724         | 94.3                                      | 1.5                                  | 0.8                             | 3.4                         | 234         |
| More than Secondary       | 33.0                                   | 838         | 90.6                                      | 4.2                                  | 1.1                             | 4.2                         | 302         |
| <b>Wealth quintile</b>    |                                        |             |                                           |                                      |                                 |                             |             |
| Lowest                    | 21.5                                   | 1474        | 99.6                                      | 0.0                                  | 0.4                             | 0.0                         | 324         |
| Second                    | 24.2                                   | 1493        | 96.5                                      | 3.0                                  | 0.0                             | 0.5                         | 395         |
| Middle                    | 27.2                                   | 1267        | 99.0                                      | 0.9                                  | 0.1                             | 0.1                         | 374         |
| Fourth                    | 32.4                                   | 1289        | 93.1                                      | 2.2                                  | 1.0                             | 3.7                         | 445         |
| Highest                   | 38.7                                   | 1526        | 88.8                                      | 5.2                                  | 1.6                             | 4.4                         | 622         |
| Total (18-39)             | 23.0                                   | 3805        | 97.7                                      | 1.5                                  | 0.2                             | 0.6                         | 931         |
| Total (40-69)             | 35.7                                   | 3244        | 92.4                                      | 3.2                                  | 1.1                             | 3.3                         | 1229        |
| Total (25-69)             | 30.1                                   | 6237        | 94.3                                      | 2.8                                  | 0.8                             | 2.2                         | 2012        |
| <b>Total (18-69)</b>      | <b>28.4</b>                            | <b>7049</b> | <b>94.8</b>                               | <b>2.5</b>                           | <b>0.7</b>                      | <b>2.0</b>                  | <b>2160</b> |

**Table NCD.12.2 Blood cholesterol measured, self-reported prevalence and treatment of raised blood cholesterol: All**

Percentage of respondents age 18-69 who have ever had their blood cholesterol measured and who have been told by a health care provider that they have raised blood cholesterol; among people who have been told they have raised cholesterol, the percentage told in the past 12 months they have raised cholesterol, and percentage taking medication to control cholesterol, by background characteristics, [Bangladesh]

| Background characteristic | Ever had blood cholesterol measured by doctor or health care provider | Number of respondents | Ever told have raised cholesterol by doctor or health care provider | Number of respondents | Among respondents who have been told by a doctor or health care provider they have raised blood cholesterol, the percentage who were: |                        |                                                    |                       |
|---------------------------|-----------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------|-----------------------|
|                           |                                                                       |                       |                                                                     |                       | Told in the past 12 months have raised cholesterol                                                                                    | ever taken medications | currently taking medication to control cholesterol | Number of respondents |
| <b>Age</b>                |                                                                       |                       |                                                                     |                       |                                                                                                                                       |                        |                                                    |                       |
| 18-24                     | 2.1                                                                   | 1942                  | 27.7                                                                | 45                    | 49.5*                                                                                                                                 | 89.5*                  | 12.2*                                              | 12*                   |
| 25-39                     | 5.1                                                                   | 3505                  | 42.3                                                                | 196                   | 55.2                                                                                                                                  | 72.4                   | 22.0                                               | 88                    |
| 40-54                     | 7.5                                                                   | 2152                  | 58.3                                                                | 208                   | 76.3                                                                                                                                  | 85.6                   | 56.3                                               | 115                   |
| 55-69                     | 8.5                                                                   | 586                   | 54.8                                                                | 65                    | 79.3                                                                                                                                  | 71.9                   | 50.3                                               | 35                    |
| <b>Sex</b>                |                                                                       |                       |                                                                     |                       |                                                                                                                                       |                        |                                                    |                       |
| Women                     | 4.3                                                                   | 4381                  | 44.8                                                                | 247                   | 72.0                                                                                                                                  | 77.0                   | 29.9                                               | 121                   |
| Men                       | 5.0                                                                   | 3804                  | 48.5                                                                | 267                   | 64.9                                                                                                                                  | 80.4                   | 48.5                                               | 129                   |
| <b>Residence</b>          |                                                                       |                       |                                                                     |                       |                                                                                                                                       |                        |                                                    |                       |
| Rural                     | 3.2                                                                   | 4183                  | 43.1                                                                | 155                   | 65.9                                                                                                                                  | 84.2                   | 34.6                                               | 71                    |
| Urban                     | 9.5                                                                   | 4002                  | 51.0                                                                | 359                   | 70.2                                                                                                                                  | 73.7                   | 45.7                                               | 179                   |
| <b>Region</b>             |                                                                       |                       |                                                                     |                       |                                                                                                                                       |                        |                                                    |                       |
| Barishal                  | 7.8                                                                   | 986                   | 49.5                                                                | 94                    | 65.1                                                                                                                                  | 85.1                   | 29.7                                               | 45                    |
| Chattogram                | 3.7                                                                   | 1053                  | 54.0                                                                | 55                    | 63.9*                                                                                                                                 | 92.6*                  | 45.2*                                              | 32*                   |
| Dhaka                     | 7.9                                                                   | 997                   | 50.7                                                                | 99                    | 66.0                                                                                                                                  | 78.2                   | 45.3                                               | 54                    |
| Khulna                    | 3.4                                                                   | 1040                  | 51.3                                                                | 63                    | 91.7                                                                                                                                  | 82.5                   | 50.7                                               | 35                    |
| Mymensingh                | 3.6                                                                   | 1021                  | 27.4                                                                | 52                    | 97.5*                                                                                                                                 | 27.5*                  | 12.6*                                              | 17*                   |
| Rajshahi                  | 1.9                                                                   | 1066                  | 48.4*                                                               | 33*                   | 45.4*                                                                                                                                 | 54.0*                  | 9.4                                                | 18*                   |
| Rangpur                   | 1.8                                                                   | 1009                  | 30.5*                                                               | 32*                   | 91.9*                                                                                                                                 | 60.6*                  | 44.7*                                              | 12*                   |
| Sylhet                    | 5.9                                                                   | 1013                  | 27.1                                                                | 86                    | 54.5                                                                                                                                  | 92.1                   | 30.0                                               | 37                    |
| <b>Education</b>          |                                                                       |                       |                                                                     |                       |                                                                                                                                       |                        |                                                    |                       |
| No education              | 2.3                                                                   | 3678                  | 41.3                                                                | 94                    | 73.2                                                                                                                                  | 70.3                   | 38.3                                               | 42                    |
| Primary                   | 5.1                                                                   | 2533                  | 53.6                                                                | 145                   | 73.1                                                                                                                                  | 95.6                   | 41.6                                               | 85                    |
| Secondary                 | 5.0                                                                   | 888                   | 44.5                                                                | 88                    | 51.1                                                                                                                                  | 87.4                   | 53.7                                               | 45                    |
| More than Secondary       | 11.3                                                                  | 1065                  | 44.0                                                                | 187                   | 65.6                                                                                                                                  | 57.8                   | 33.4                                               | 78                    |
| <b>Wealth quintile</b>    |                                                                       |                       |                                                                     |                       |                                                                                                                                       |                        |                                                    |                       |
| Lowest                    | 1.3                                                                   | 1639                  | 14.0*                                                               | 20*                   | 50.1*                                                                                                                                 | 95.7*                  | 32.7*                                              | 5*                    |
| Second                    | 1.7                                                                   | 1670                  | 48.9*                                                               | 32*                   | 73.3*                                                                                                                                 | 89.9*                  | 10.3*                                              | 14*                   |
| Middle                    | 2.1                                                                   | 1451                  | 34.2                                                                | 38                    | 56.6*                                                                                                                                 | 69.6*                  | 3.3*                                               | 16*                   |
| Fourth                    | 6.4                                                                   | 1506                  | 45.2                                                                | 109                   | 74.5                                                                                                                                  | 86.1                   | 61.1                                               | 55                    |
| Highest                   | 11.9                                                                  | 1919                  | 53.0                                                                | 315                   | 66.2                                                                                                                                  | 74.7                   | 38.7                                               | 160                   |
| Total (18-39)             | 2.9                                                                   | 4515                  | 30.8                                                                | 173                   | 49.4                                                                                                                                  | 83.4                   | 13.3                                               | 57                    |
| Total (40-69)             | 7.6                                                                   | 3670                  | 57.4                                                                | 341                   | 74.8                                                                                                                                  | 77.3                   | 49.9                                               | 193                   |
| Total (25-69)             | 5.6                                                                   | 7159                  | 48.3                                                                | 492                   | 68.6                                                                                                                                  | 79.0                   | 41.0                                               | 243                   |
| <b>Total (18-69)</b>      | 4.6                                                                   | 8185                  | 46.8                                                                | 514                   | 68.1                                                                                                                                  | 78.9                   | 40.2                                               | 250                   |

\*interpret with caution due to small sample size

**Table NCD.12.3 source of care for treatment and advise for blood cholesterol: All**

Percentage of people 18-69 who were ever told to have raised blood cholesterol and who mentioned different sources of care for treatment/advise and for medication, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Government Facility | Private/NGO Facility | Both government and private | Any alternative/traditional provider | government facilities |           |          | Private |           | n   |
|---------------------------|---------------------|----------------------|-----------------------------|--------------------------------------|-----------------------|-----------|----------|---------|-----------|-----|
|                           |                     |                      |                             |                                      | Primary               | secondary | tertiary | Primary | secondary |     |
| <b>Age</b>                |                     |                      |                             |                                      |                       |           |          |         |           |     |
| 18-24                     | 100.0               | 95.5                 | 100.0                       | 0*                                   | 0.0                   | 0.0       | 0.0      | 42.0    | 13.7      | 12* |
| 25-39                     | 80.3                | 72.7                 | 95.1                        | 0.8                                  | 2.7                   | 7.8       | 14.1     | 25.9    | 0.0       | 88  |
| 40-54                     | 79.9                | 71.5                 | 92.6                        | 0.0                                  | 4.3                   | 3.6       | 21.4     | 43.8    | 0.7       | 115 |
| 55-69                     | 70.4                | 54.1                 | 83.8                        | 0.0                                  | 5.9                   | 0.6       | 39.3     | 32.8    | 0.0       | 35  |
| <b>Sex</b>                |                     |                      |                             |                                      |                       |           |          |         |           |     |
| Women                     | 20.1                | 70.0                 | 8.5                         | 0.5                                  | 0.8                   | 1.4       | 26.9     | 42.7    | 3.9       | 121 |
| Men                       | 20.2                | 70.3                 | 7.7                         | 0.0                                  | 6.3                   | 5.4       | 17.0     | 30.2    | 0.0       | 129 |
| <b>Residence</b>          |                     |                      |                             |                                      |                       |           |          |         |           |     |
| Rural                     | 15.9                | 70.7                 | 12.6                        | 0.0                                  | 6.9                   | 4.8       | 16.9     | 37.5    | 0.0       | 71  |
| Urban                     | 24.2                | 69.7                 | 3.5                         | 0.5                                  | 0.8                   | 2.5       | 25.9     | 34.1    | 3.5       | 179 |
| <b>Region</b>             |                     |                      |                             |                                      |                       |           |          |         |           |     |
| Barishal                  | 17.2                | 53.4                 | 28.9                        | 0.0                                  | 3.8                   | 7.6       | 35.2     | 66.6    | 2.3       | 45  |
| Chattogram                | 8.2                 | 90.6                 | 0.0                         | 1.2                                  | 0.0                   | 5.6       | 2.6      | 21.2    | 0.0       | 32* |
| Dhaka                     | 27.5                | 65.4                 | 6.1                         | 0.0                                  | 1.6                   | 1.8       | 30.2     | 20.1    | 3.4       | 54  |
| Khulna                    | 18.5                | 73.2                 | 8.3                         | 0.0                                  | 5.2                   | 3.8       | 17.8     | 67.9    | 0.0       | 35  |
| Mymensingh                | 25.7                | 33.9                 | 40.4                        | 0*                                   | 50.5                  | 0.0       | 15.6     | 58.1    | 0.0       | 17* |
| Rajshahi                  | 8.5                 | 82.3                 | 0.0                         | 0*                                   | 0.0                   | 7.2       | 8.5      | 58.8    | 0.0       | 18* |
| Rangpur                   | 11.0                | 73.3                 | 0.0                         | 0*                                   | 8.9                   | 2.2       | 8.9      | 49.1    | 0.0       | 12* |
| Sylhet                    | 19.4                | 79.6                 | 1.0                         | 0.0                                  | 0.0                   | 4.9       | 15.5     | 64.5    | 0.0       | 37  |
| <b>Education</b>          |                     |                      |                             |                                      |                       |           |          |         |           |     |
| No education              | 22.5                | 58.9                 | 16.1                        | 0*                                   | 12.9                  | 3.0       | 26.0     | 26.7    | 0*        | 42  |
| Primary                   | 14.8                | 77.4                 | 7.8                         | 0.0                                  | 1.5                   | 0.8       | 20.5     | 41.1    | 4.5       | 85  |
| Secondary                 | 31.4                | 61.0                 | 4.5                         | 0.0                                  | 0.0                   | 10.1      | 25.9     | 37.1    | 0.0       | 45  |
| More than Secondary       | 20.7                | 71.9                 | 4.7                         | 0.8                                  | 2.7                   | 5.0       | 17.7     | 34.0    | 0.0       | 78  |
| <b>Wealth quintile</b>    |                     |                      |                             |                                      |                       |           |          |         |           |     |
| Lowest                    | 17.2                | 37.0                 | 45.8                        | 0.0                                  | 45.8                  | 0.0       | 17.2     | 78.5    | 0.0       | 5*  |
| Second                    | 22.2                | 77.9                 | 0.0                         | 0.0                                  | 0.0                   | 0.0       | 22.2     | 58.8    | 0.0       | 14* |
| Middle                    | 12.2                | 29.4                 | 58.4                        | 0.0                                  | 29.1                  | 0.6       | 40.9     | 52.3    | 0.0       | 16* |
| Fourth                    | 20.9                | 71.4                 | 5.9                         | 0.0                                  | 1.5                   | 9.6       | 16.0     | 22.9    | 0.0       | 55  |
| Highest                   | 20.4                | 74.2                 | 3.3                         | 0.4                                  | 1.3                   | 1.8       | 21.8     | 35.8    | 3.1       | 160 |
| Total (18-39)             | 8.7                 | 86.1                 | 2.2                         | 0.9                                  | 1.1                   | 1.2       | 8.6      | 31.1    | 5.8       | 57  |
| Total (40-69)             | 24.2                | 64.5                 | 10.1                        | 0.0                                  | 4.8                   | 4.5       | 26.0     | 37.5    | 0.3       | 193 |
| Total (25-69)             | 21.2                | 69.1                 | 8.5                         | 0.2                                  | 4.0                   | 3.8       | 22.6     | 35.6    | 1.9       | 243 |
| <b>Total (18-69)</b>      | 20.1                | 70.2                 | 8.0                         | 0.2                                  | 3.8                   | 3.6       | 21.4     | 35.8    | 1.8       | 250 |

\* Private includes NGO clinics and hospitals

**Table NCD.12.4 source of drugs/medications for blood cholesterol: All**

Percentage of people 18-69 who have ever taken medication for raised blood cholesterol and who mentioned different sources medications, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Government Only | Private* Only | Both government and private | Any alternative/ traditional provider | n   |
|---------------------------|-----------------|---------------|-----------------------------|---------------------------------------|-----|
| <b>Age</b>                |                 |               |                             |                                       |     |
| 18-24                     | 0.0             | 100.0         | 0.0                         | 0.0                                   | 9*  |
| 25-39                     | 0.0             | 94.1          | 0.7                         | 2.9                                   | 61  |
| 40-54                     | 0.0             | 97.5          | 0.6                         | 0.0                                   | 91  |
| 55-69                     | 0.0             | 93.5          | 5.9                         | 0.0                                   | 26* |
| <b>Sex</b>                |                 |               |                             |                                       |     |
| Women                     | 0.0             | 96.0          | 0.8                         | 1.3                                   | 89  |
| Men                       | 0.0             | 94.4          | 4.6                         | 0.0                                   | 98  |
| <b>Residence</b>          |                 |               |                             |                                       |     |
| Rural                     | 0.0             | 94.3          | 3.4                         | 0.9                                   | 58  |
| Urban                     | 0.0             | 96.3          | 1.8                         | 0.4                                   | 129 |
| <b>Region</b>             |                 |               |                             |                                       |     |
| Barishal                  | 0.0             | 96.3          | 0.0                         | 0.6                                   | 35  |
| Chattogram                | 0.0             | 97.7          | 0.9                         | 0.4                                   | 27* |
| Dhaka                     | 0.0             | 98.6          | 0.0                         | 1.0                                   | 42  |
| Khulna                    | 0.0             | 96.0          | 1.6                         | 0.0                                   | 26* |
| Mymensingh                | 0.0             | 87.7          | 2.6                         | 0.0                                   | 8*  |
| Rajshahi                  | 0.0             | 76.7          | 18.0                        | 2.4                                   | 9*  |
| Rangpur                   | 0.0             | 100.0         | 0.0                         | 0.0                                   | 9*  |
| Sylhet                    | 0.0             | 100.0         | 0.0                         | 0.0                                   | 31* |
| <b>Education</b>          |                 |               |                             |                                       |     |
| No education              | 0.0             | 97.2          | 2.8                         | 0.0                                   | 28* |
| Primary                   | 0.0             | 91.4          | 4.2                         | 1.0                                   | 74  |
| Secondary                 | 0.0             | 96.6          | 1.7                         | 0.0                                   | 37  |
| More than Secondary       | 0.0             | 96.6          | 0.6                         | 2.7                                   | 48  |
| <b>Wealth quintile</b>    |                 |               |                             |                                       |     |
| Lowest                    | 0.0             | 89.6          | 10.5                        | 0.0                                   | 4*  |
| Second                    | 0.0             | 94.8          | 0.0                         | 2.3                                   | 11* |
| Middle                    | 0.0             | 97.0          | 1.3                         | 0.0                                   | 13* |
| Fourth                    | 0.0             | 98.5          | 0.0                         | 0.2                                   | 42  |
| Highest                   | 0.0             | 94.3          | 3.4                         | 0.9                                   | 117 |
| Total (18-39)             | 0.0             | 93.2          | 1.0                         | 3.3                                   | 41  |
| Total (40-69)             | 0.0             | 95.5          | 3.0                         | 0.1                                   | 146 |
| Total (25-69)             | 0.0             | 95.1          | 2.7                         | 0.7                                   | 183 |
| <b>Total (18-69)</b>      | 0.0             | 95.2          | 2.7                         | 0.7                                   | 187 |

\*interpret with caution due to small sample size

**Table NCD.12.5 Care seeking from traditional healers and use of traditional/herbal remedies: All**

Percentage of people 18-69 who have been ever told to have raised blood cholesterol and who sought care from a traditional healer or currently using a traditional/herbal remedy, by background characteristics, [Bangladesh, 2018]

| Background characteristic | For raised blood cholesterol |                  |                                  |                  |
|---------------------------|------------------------------|------------------|----------------------------------|------------------|
|                           | ever seen a local healer     | Total Number (n) | currently taking a herbal remedy | Total Number (n) |
| <b>Age</b>                |                              |                  |                                  |                  |
| 18-24                     | 0.0                          | 12*              | 0.0                              | 0*               |
| 25-39                     | 4.0                          | 88               | 74.6                             | 4*               |
| 40-54                     | 7.1                          | 115              | 28.3                             | 7*               |
| 55-69                     | 5.2                          | 35               | 9.6                              | 0*               |
| <b>Sex</b>                |                              |                  |                                  |                  |
| Women                     | 7.5                          | 121              | 25.0                             | 10*              |
| Men                       | 2.9                          | 129              | 53.0                             | 3*               |
| <b>Residence</b>          |                              |                  |                                  |                  |
| Rural                     | 6.6                          | 71               | 12.5                             | 5*               |
| Urban                     | 3.3                          | 179              | 75.9                             | 8*               |
| <b>Region</b>             |                              |                  |                                  |                  |
| Barishal                  | 17.5                         | 45               | 6.6                              | 5*               |
| Chattogram                | 5.5                          | 32*              | 100.0                            | 2*               |
| Dhaka                     | 1.6                          | 54               | 0.0                              | 1*               |
| Khulna                    | 13.7                         | 35               | 32.6                             | 3*               |
| Mymensingh                | 0.0                          | 17*              | 0.0                              | 0*               |
| Rajshahi                  | 0.0                          | 18*              | 0.0                              | 0*               |
| Rangpur                   | 0.0                          | 12*              | 0.0                              | 0*               |
| Sylhet                    | 3.4                          | 37               | 74.9                             | 2*               |
| <b>Education</b>          |                              |                  |                                  |                  |
| No education              | 10.3                         | 42               | 51.9                             | 4*               |
| Primary                   | 6.1                          | 85               | 4.8                              | 6*               |
| Secondary                 | 3.3                          | 45               | 100.0                            | 2*               |
| More than Secondary       | 0.6                          | 78               | 74.9                             | 1*               |
| <b>Wealth quintile</b>    |                              |                  |                                  |                  |
| Lowest                    | 45.8                         | 5*               | 0.0                              | 1*               |
| Second                    | 10.1                         | 14*              | 0.0                              | 1*               |
| Middle                    | 22.8                         | 16*              | 7.9                              | 3*               |
| Fourth                    | 3.8                          | 55               | 100.0                            | 2*               |
| Highest                   | 1.7                          | 160              | 57.8                             | 6*               |
| Total (18-39)             | 1.9                          | 57               | 82.0                             | 2*               |
| Total (40-69)             | 6.0                          | 193              | 28.5                             | 11*              |
| Total (25-69)             | 5.2                          | 243              | 33.9                             | 13*              |
| <b>Total (18-69)</b>      | 4.9                          | 250              | 33.9                             | 13*              |

\*interpret with caution due to small sample size

**Table NCD.12.6 Reasons for not taking medications for raised blood cholesterol: All**

Percentage of people 18-69 who have been ever advised to take drugs but not taking drugs in the past 2 weeks and specified different reasons for not taking medication for raised blood cholesterol, by background characteristics, [Bangladesh, 2018]

| Background characteristic | don't think drugs are necessary/Cholesterol got normal | fear or have side effects | too expensive/not available | Medicines not advised by doctor | (n) |
|---------------------------|--------------------------------------------------------|---------------------------|-----------------------------|---------------------------------|-----|
| <b>Age</b>                |                                                        |                           |                             |                                 |     |
| 15-24                     | 88.5*                                                  | 0.0*                      | 0.0*                        | 10.8*                           | 11* |
| 25-39                     | 65.1                                                   | 4.3                       | 17.5                        | 14.4                            | 63  |
| 40-54                     | 86.1                                                   | 2.6                       | 11.6                        | 5.1                             | 55  |
| 55-69                     | 100*                                                   | 0*                        | 9.4*                        | 5.9*                            | 19* |
| <b>Sex</b>                |                                                        |                           |                             |                                 |     |
| Women                     | 80.8                                                   | 0.0                       | 8.3                         | 17.1                            | 79  |
| Men                       | 82.5                                                   | 4.8                       | 14.8                        | 1.4                             | 69  |
| <b>Residence</b>          |                                                        |                           |                             |                                 |     |
| Rural                     | 76.2                                                   | 3.7                       | 16.2                        | 9.6                             | 45  |
| Urban                     | 88.0                                                   | 0.6                       | 5.8                         | 9.6                             | 103 |
| <b>Region</b>             |                                                        |                           |                             |                                 |     |
| Barishal                  | 76.6*                                                  | 0.7                       | 25*                         | 25.4*                           | 30* |
| Chattogram                | 94.0*                                                  | 0.0*                      | 5.9*                        | 5.3*                            | 19* |
| Dhaka                     | 78.9*                                                  | 3.2*                      | 13.1*                       | 8.0*                            | 28* |
| Khulna                    | 86.4*                                                  | 9.0*                      | 3.1*                        | 4.6*                            | 18* |
| Mymensingh                | 97.2*                                                  | 0.0*                      | 0.0*                        | 2.8*                            | 11* |
| Rajshahi                  | 81.2*                                                  | 0.0*                      | 2.3*                        | 10.1*                           | 16* |
| Rangpur                   | 53.9*                                                  | 0.0*                      | 6.3*                        | 39.8*                           | 6*  |
| Sylhet                    | 64.3*                                                  | 3.3*                      | 25.6*                       | 2.9*                            | 20* |
| <b>Education</b>          |                                                        |                           |                             |                                 |     |
| No education              | 71.2*                                                  | 0.0*                      | 24.4*                       | 9.9*                            | 29* |
| Primary                   | 81.2                                                   | 1.8                       | 11.0                        | 11.7                            | 47  |
| Secondary                 | 96.3*                                                  | 1.9*                      | 0.0*                        | 6.0*                            | 23* |
| More than Secondary       | 83.9                                                   | 4.4                       | 7.6                         | 8.2                             | 49  |
| <b>Wealth quintile</b>    |                                                        |                           |                             |                                 |     |
| Lowest                    | 100*                                                   | 0.0*                      | 0.0*                        | 0.0*                            | 4*  |
| Second                    | 62.0*                                                  | 0.0*                      | 21.3*                       | 17.8*                           | 11* |
| Middle                    | 83.8*                                                  | 6.5*                      | 28.3*                       | 11.6*                           | 13* |
| Fourth                    | 63.5*                                                  | 7.6*                      | 33.9*                       | 7.5*                            | 29* |
| Highest                   | 89.8                                                   | 0.5                       | 0.3                         | 8.7                             | 91  |
| Total (18-39)             | 80.8                                                   | 0.2                       | 7.5                         | 11.1                            | 42  |
| Total (40-69)             | 82.1                                                   | 3.6                       | 13.9                        | 8.7                             | 106 |
| Total (25-69)             | 80.3                                                   | 2.4                       | 12.2                        | 10.3                            | 142 |
| <b>Total (18-69)</b>      | 81.6                                                   | 2.3                       | 11.4                        | 9.6                             | 148 |

Notes: \*interpret data with caution due to small sample size

## Chapter 13 Cardiovascular diseases history, predicted CVD risk and life-style advice

### Key findings

---

#### ***History of cardiovascular disease***

- 10.0% of adults 18-69 years of age (12.2% in women, 7.8% in men) and 11.8% of 40-69 years old adults reported ever having a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident).

#### ***Predicted 10-year cardiovascular disease risk***

- 15.5% of adults aged 40-69 (14.3% of men and 16.7% of women) have a predicted 30% or more chance of having a fatal or non-fatal major cardiovascular event (myocardial infarction or stroke) in the next 10 years based on WHO/ISH risk prediction charts.

#### ***Lifestyle advice***

- The adults, who visited a health provider in the previous 12 months, most commonly reported receiving lifestyle advices from doctors and other health workers on: (1) “eat at least five servings of fruit and/or vegetables each day” (43.7%), (2) “reduce salt in your diet” (36.7%) and (3) “reduce fat in your diet” (20.9%).
- 

### Introduction

Cardiovascular diseases (CVDs), the most common NCD, are responsible for over 17.8 million deaths globally and of which more than three quarters are in lower middle income countries<sup>67</sup>. In the WHO SEA region, CVDs are estimated to cause almost 44% of all the NCD-related deaths (~8.6 million deaths) and almost half of these deaths occur in the economically productive years between 30-69 years of age<sup>68</sup>. Therefore, reducing the burden of CVDs is critical to achieve the target of a 25% relative reduction in risk of premature mortality from NCDs<sup>62</sup>.

CVDs include diseases of the heart and blood vessels and vascular diseases of the brain. Atherosclerosis – a complex process involving deposits of plaques made in the blood vessels leading to the narrowing of blood vessels and formation of blood clots (thrombus) is

---

<sup>67</sup>Roth GA, Abate D, Abate KH, et al. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. 2018;392(10159):1736-1788. doi:10.1016/S0140-6736(18)32203-7

<sup>68</sup> Global Burden of Disease Collaborative Network. Global burden of disease study 2016(GBD 2016) Results. Seattle: Institute for Health Metrics and Evaluation (IHME), 2017. <http://ghdx.healthdata.org/gbd-results-tool> - accessed 24 May 2018.

implicated in many cases of CVD<sup>69</sup>. Modification of certain behaviour (tobacco use, physical inactivity, unhealthy diet, harmful alcohol use) and managing metabolic risk factors (raised blood pressure, raised blood glucose and cholesterol) can slow down the development of atherosclerosis and overall cardiovascular risk<sup>70</sup>.

While national health policies that address population-wide health are important tools for reducing behavioural risk factors, strategies targeted at high-risk individuals are essential in managing and reducing metabolic risks. WHO/ISH cardiovascular disease risk charts developed<sup>71</sup> and revised<sup>72</sup> for different WHO regions and sub-regions in 2007 are being used for clinical decision-making by physicians as well as for predicting the proportion of population with different levels of CVD risk for the purpose of planning of health service delivery and resource allocation<sup>73</sup>. These risk prediction charts take into account the age, sex, blood pressure, smoking status, total blood cholesterol and presence or absence of diabetes mellitus to compute the overall risk/probability of developing a CVD event in the next 10 years.

At the time of writing, WHO is working to revise the risk prediction charts. However, pending the availability of revised charts, this report uses 2007 risk prediction charts (SEAR D).

Bangladesh is committed to reducing CVDs burden and has included the 25% relative reduction in premature death from NCDs as one of the targets in its 3-year multisectoral action plan for 2018-2025<sup>10</sup> and its predecessor<sup>39</sup>.

---

#### **Current relevant policies and programs in Bangladesh for the prevention and treatment of CVDs:**

- WHO PEN Package
  - Multisectoral action plan for prevention and control of NCDs 2018–2025
- 

---

<sup>69</sup> World Health Organization. Global Atlas on Cardiovascular Disease Prevention and Control. Mendis S, Puska P, Norrving B editors. World Health Organization, Geneva; 2011.

<sup>70</sup> World Health Organization. (2007). Prevention of cardiovascular disease : guidelines for assessment and management of total cardiovascular risk. World Health Organization. <https://apps.who.int/iris/handle/10665/43685>

<sup>71</sup> Mendis S, Lindholm LH, Mancia G, et al. World Health Organization (WHO) and International Society of Hypertension (ISH) risk prediction charts: assessment of cardiovascular risk for prevention and control of cardiovascular disease in low and middle-income countries: *Journal of Hypertension*. 2007;25(8):1578-1582. doi:10.1097/HJH.0b013e3282861fd3

<sup>72</sup> Kaptoge S, Pennells L, De Bacquer D, et al. World Health Organization cardiovascular disease risk charts: revised models to estimate risk in 21 global regions. *The Lancet Global Health*. 2019;7(10):e1332-e1345. doi:10.1016/S2214-109X(19)30318-3

<sup>73</sup> Otgontuya D, Oum S, Buckley BS, Bonita R. Assessment of total cardiovascular risk using WHO/ISH risk prediction charts in three low and middle income countries in Asia. *BMC Public Health*. 2013;13(1):539. doi:10.1186/1471-2458-13-539

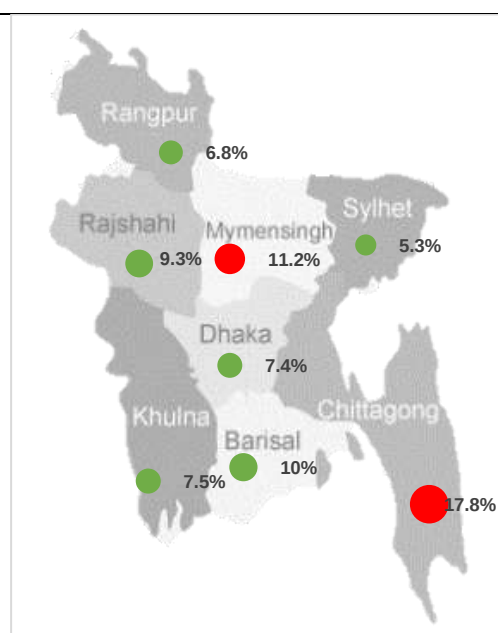
This chapter describes self-reported history of cardiovascular diseases and lifestyle advice received from doctors or health workers. Additionally, 10-year cardiovascular disease risk is predicted for Bangladesh's population. This information will help Bangladesh assess trends and progress towards the reduction in CVDs burden as well as the evaluation of current policies and programs in place.

### 13.1 History of Cardiovascular disease

10.0% of adults age 18-69 years reported ever having a CVD event including heart attacks or chest pain from a heart disease or a stroke (**Table 13.1**). Amongst high risk age group (i.e. 40 years old and above), 11.8% of adults reported ever having a heart attack or chest pain (**Table 13.1**). However, these data may underestimate true prevalence of heart attacks/stroke due to survivor bias (people who died from fatal cardiovascular events were excluded from the survey), recall bias, and failure to take into account asymptomatic or undiagnosed non-fatal events.

#### Patterns by background characteristics (**Table 13.1**):

**Figure 13. 1** Percent of adults aged 15-69 who reported ever having a CVD event by province, Bangladesh STEPs Survey 2018



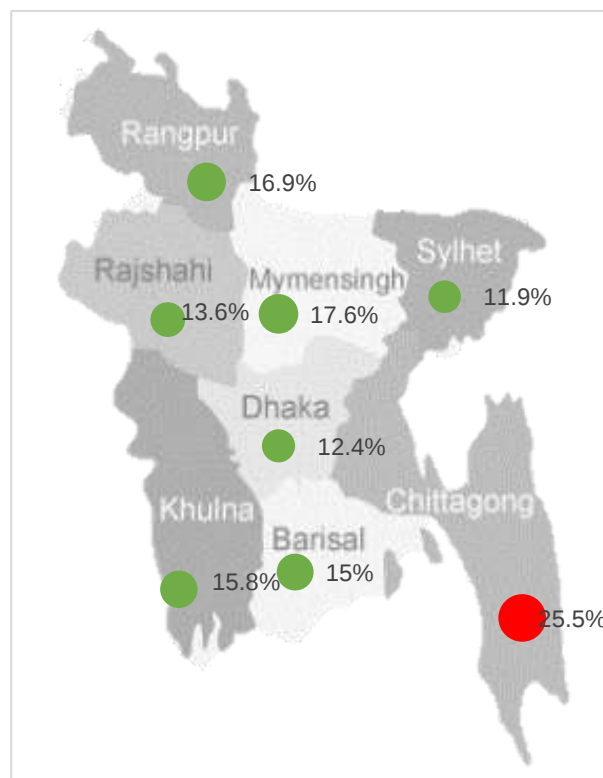
- Women have significantly higher prevalence of self-reported CVD events compared to men (12.2% vs 7.8%).
- Chattogram (17.8%) and Mymensingh (11.2%) had significantly higher self-reported prevalence of CVD events compared to other divisions (**Figure 13. 1**).
- Adults with no education were more likely to report CVD events than adults with more than secondary level education (11.6% vs 6.3%).

### 13.2 Predicted 10-year cardiovascular disease risk

10-year cardiovascular disease risk at population-level was estimated using WHO/ICH risk prediction chart (2007) for

South-East Asia (SEAR D)<sup>71</sup>. To calculate predicted risk for fatal or non-fatal CVD event (myocardial infarction or stroke), respondents information on age, sex, systolic blood pressure, total cholesterol and the presence or absence of type 2 diabetes are utilized and combined<sup>10</sup>.

Amongst adults aged 40-69, 15.5% of adults have a predicted 10-year CVD risk of 30% or more.



**Figure 13.2 Percent adults aged 40-69 who have a 30% or higher predicted 10-year cardiovascular disease risk, Bangladesh STEPs Survey 2018**

#### Patterns by background characteristics (Table 13.2)

- Chattogram division had the highest percentage of adults aged 40-69 with 30% or more CVD risk than almost all other provinces (24.7%) (**Figure 13.2**).

### 13.3 Lifestyle advice

Individual-based intervention involving life-style advice from doctors and health workers to modify key risk behavioral among high-risk individuals have an important place for overall NCD prevention and control along with population-based measured targeted at the whole population.

Amongst those who visited a doctor or health worker in the past 12 months, the three most common lifestyle advices that adults received were: (1) “eat at least five servings of fruit and/or vegetables each day” (43.7%), (2) “reduce salt in your diet” (36.7%) and (3) “reduce fat in your diet” (20.9%) (**Table 13.3 and Figure 13. 3**). Only 13.9% of adults received advice to reduce glucose beverages in the diet.

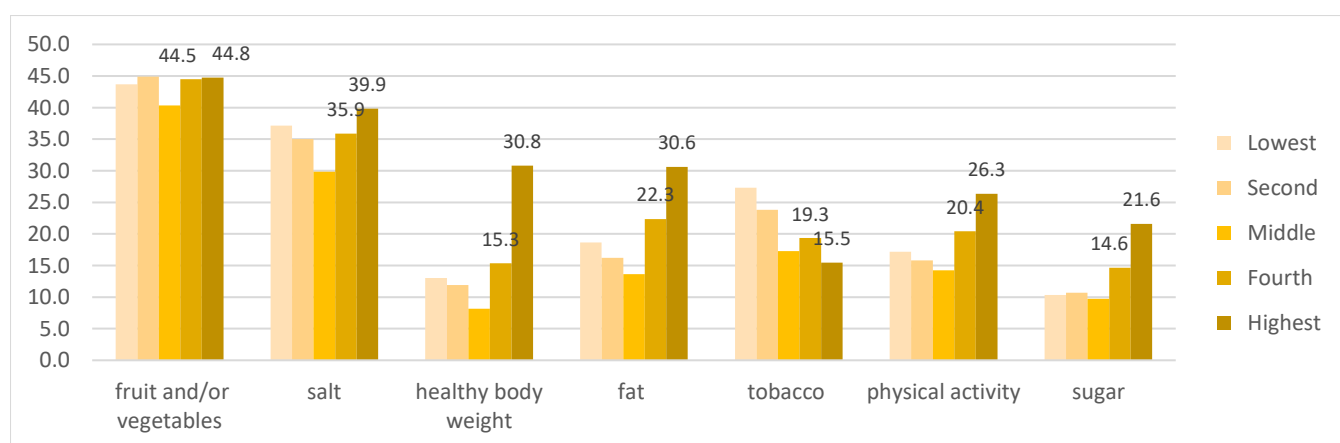
**Figure 13. 3 Percent adults aged 18-69 who have received different lifestyle advice from a doctor or health worker, Bangladesh STEPs Survey 2018**



**Patterns by background characteristic (Table 13.3):**

- The likelihood of receiving a lifestyle advice increased with age.
- A much higher percentage of men were given advice to quit using tobacco or don't start than women (40.0% vs 8.2%).
- Adults who were of the lowest and highest wealth quintile were more likely to receive some kind of life-style advice than adults who were of the middle wealth quintile (Figure 13.4).

**Figure 13.4 Differentials in lifestyle advice received amongst adults aged 18-69 by wealth, Bangladesh STEPs Survey 2018**



**Patterns by disease and risk conditions (Table 13.4):**

- Presence of a physiological risk factor increased the probability of receiving an advice to reduce salt and dietary fat, increase physical activity or quit tobacco. Similarly, a significantly higher proportion of smokers reported receiving an advice to quit or not to initiate smoking than never smokers.
- Adults with predicted 10-year cardiovascular disease risk of 30% or more received slightly more lifestyle advice than their counterparts.

**List of Tables:**

For more information on cardiovascular diseases, see the following tables:

Table 13.1 History of cardiovascular disease: all respondents

Table 13.2 Predicted 10-year cardiovascular disease risk: all respondents

Table 13.3 Lifestyle advice from doctors and other health workers: all respondents (By background characteristics)

Table 13.4 Lifestyle advice from doctors and other health workers: all respondents (by presence of a disease condition and/or risk factor)

**Table 13.1 History of cardiovascular disease: all respondents**

Percent of adults aged 18-69 who self-reported ever having a heart attack or chest pain from heart disease or stroke, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Ever having a heart attack or chest pain from heart disease or stroke | 95 % CI    |             | Number of respondents (N) |
|---------------------------|-----------------------------------------------------------------------|------------|-------------|---------------------------|
| <b>Age</b>                |                                                                       |            |             |                           |
| 18-24                     | 4.4                                                                   | 2.7        | 6.9         | 1026                      |
| 25-39                     | 9.2                                                                   | 7.4        | 11.5        | 3489                      |
| 40-54                     | 13.3                                                                  | 11.3       | 15.6        | 2503                      |
| 55-69                     | 16.3                                                                  | 12.9       | 20.3        | 1167                      |
| <b>Sex</b>                |                                                                       |            |             |                           |
| Women                     | 12.2                                                                  | 10.0       | 14.9        | 4381                      |
| Men                       | 7.8                                                                   | 6.6        | 7.8         | 3804                      |
| <b>Residence</b>          |                                                                       |            |             |                           |
| Rural                     | 10.1                                                                  | 8.5        | 11.9        | 4183                      |
| Urban                     | 9.8                                                                   | 7.9        | 12.1        | 4002                      |
| <b>Division</b>           |                                                                       |            |             |                           |
| Barishal                  | 9.5                                                                   | 7.0        | 12.9        | 986                       |
| Chattogram                | 17.8                                                                  | 13.0       | 23.9        | 1053                      |
| Dhaka Rural               | 7.4                                                                   | 5.4        | 10.1        | 997                       |
| Khulna                    | 7.5                                                                   | 5.5        | 10.1        | 1040                      |
| Mymensingh                | 11.2                                                                  | 8.3        | 14.9        | 1021                      |
| Rajshahi                  | 9.3                                                                   | 6.7        | 12.7        | 1066                      |
| Rangpur                   | 6.8                                                                   | 4.8        | 9.7         | 1009                      |
| Sylhet                    | 5.3                                                                   | 3.4        | 8.2         | 1013                      |
| No education              | 11.6                                                                  | 9.9        | 13.6        | 2476                      |
| Primary                   | 10.0                                                                  | 8.0        | 12.5        | 3735                      |
| Secondary                 | 8.3                                                                   | 5.7        | 12.1        | 1397                      |
| More than secondary       | 6.3                                                                   | 4.4        | 9.0         | 556                       |
| <b>Wealth quintile</b>    |                                                                       |            |             |                           |
| Lowest                    | 11.2                                                                  | 9.1        | 13.7        | 1639                      |
| Second                    | 9.7                                                                   | 7.8        | 12.0        | 1670                      |
| Middle                    | 8.1                                                                   | 6.1        | 10.8        | 1451                      |
| Fourth                    | 10.2                                                                  | 7.7        | 13.2        | 1506                      |
| Highest                   | 11.0                                                                  | 8.5        | 14.2        | 1919                      |
| Total (18-39)             | 7.4                                                                   | 6.0        | 9.1         | 4515                      |
| Total (40-69)             | 14.7                                                                  | 12.6       | 17.0        | 3670                      |
| Total (25-69)             | 11.8                                                                  | 10.3       | 13.5        | 7159                      |
| <b>Total (18-69)</b>      | <b>10.0</b>                                                           | <b>8.7</b> | <b>11.5</b> | <b>8185</b>               |

**Table 13.2 Predicted 10-year cardiovascular disease risk: all respondents**

Percent of adults aged 40-69 who have different predicted risk levels for heart attacks or stroke in 10 years based on WHO/ISH risk prediction charts (2007)\* for South-East Asia, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Percent population with 10-year risk levels of $\geq 30\%$ : | 95% CI |      | Number of respondents (n) |
|---------------------------|--------------------------------------------------------------|--------|------|---------------------------|
| <b>Age</b>                |                                                              |        |      |                           |
| 40-54                     | 13.8                                                         | 11.7   | 16.2 | 2182                      |
| 55-69                     | 18.5                                                         | 15.4   | 22.1 | 1021                      |
| <b>Sex</b>                |                                                              |        |      |                           |
| Women                     | 16.7                                                         | 13.7   | 20.2 | 1557                      |
| Men                       | 14.3                                                         | 12.0   | 16.9 | 1646                      |
| <b>Residence</b>          |                                                              |        |      |                           |
| Rural                     | 15.2                                                         | 13.0   | 17.7 | 1701                      |
| Urban                     | 16.6                                                         | 13.9   | 20.0 | 1502                      |
| <b>Division</b>           |                                                              |        |      |                           |
| Barishal                  | 14.2                                                         | 9.7    | 20.3 | 431                       |
| Chattogram                | 24.7                                                         | 18.8   | 31.8 | 361                       |
| Dhaka Rural               | 12.5                                                         | 9.0    | 17.0 | 329                       |
| Khulna                    | 13.6                                                         | 10.1   | 18.0 | 439                       |
| Mymensingh                | 16.4                                                         | 11.8   | 22.4 | 447                       |
| Rajshahi                  | 11.9                                                         | 7.9    | 17.4 | 436                       |
| Rangpur                   | 14.2                                                         | 10.2   | 19.6 | 409                       |
| Sylhet                    | 10.5                                                         | 7.2    | 15.1 | 351                       |
| <b>Education</b>          |                                                              |        |      |                           |
| No education              | 15.1                                                         | 12.9   | 17.7 | 1949                      |
| Primary                   | 18.2                                                         | 14.6   | 22.4 | 691                       |
| Secondary                 | 15.3                                                         | 9.9    | 22.9 | 239                       |
| More than secondary       | 11.8                                                         | 7.7    | 17.7 | 309                       |
| <b>Wealth quintile</b>    |                                                              |        |      |                           |
| Lowest                    | 14.1                                                         | 11.1   | 17.7 | 721                       |
| Second                    | 15.9                                                         | 12.1   | 20.3 | 676                       |
| Middle                    | 13.8                                                         | 10.3   | 18.3 | 525                       |
| Fourth                    | 15.6                                                         | 11.6   | 20.6 | 553                       |
| Highest                   | 18.7                                                         | 14.4   | 24.0 | 728                       |
| <b>Total (40-69)</b>      | 15.5                                                         | 13.6   | 17.6 | 3203                      |

\*Revised WHO CVD risk charts (2019) for LMICs are currently underway, therefore 2007 risk charts for SEAR D was used: [https://www.who.int/ncds/management/WHO\\_ISH\\_Risk\\_Prediction\\_Charts.pdf?ua=1](https://www.who.int/ncds/management/WHO_ISH_Risk_Prediction_Charts.pdf?ua=1)

**Table 13.3 Lifestyle advice from doctors and other health workers: all respondents (By background characteristics)**

Percent of adults aged 15-69 who have ever visited a doctor or health worker and received lifestyle advice on behavioural risk factors for non-communicable diseases by background characteristics, [Bangladesh, 2018]

| Background characteristic | Percent adults who reported receiving lifestyle advice to: |                          |                                                                |                         |                                    |                                               |                                       | Number of respondents |
|---------------------------|------------------------------------------------------------|--------------------------|----------------------------------------------------------------|-------------------------|------------------------------------|-----------------------------------------------|---------------------------------------|-----------------------|
|                           | quit using tobacco or don't start                          | reduce salt in your diet | eat at least five servings of fruit and/or vegetables each day | reduce fat in your diet | start or do more physical activity | maintain a healthy body weight or lose weight | reduce glucose beverages in your diet |                       |
| <b>Age</b>                |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| 18-24                     | 8.7                                                        | 24.8                     | 43.1                                                           | 14.0                    | 13.3                               | 12.2                                          | 9.2                                   | 463                   |
| 25-39                     | 16.5                                                       | 30.8                     | 42.1                                                           | 19.7                    | 18.5                               | 15.8                                          | 12.2                                  | 1649                  |
| 40-54                     | 25.4                                                       | 43.7                     | 45.9                                                           | 27.5                    | 24.8                               | 19.6                                          | 18.2                                  | 1232                  |
| 55-69                     | 35.6                                                       | 49.7                     | 45.0                                                           | 24.0                    | 21.6                               | 20.1                                          | 18.0                                  | 633                   |
| <b>Sex</b>                |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Women                     | 8.2                                                        | 36.7                     | 41.4                                                           | 19.9                    | 13.5                               | 16.2                                          | 11.3                                  | 2564                  |
| Men                       | 40.0                                                       | 34.2                     | 47.4                                                           | 22.4                    | 28.6                               | 17.4                                          | 18.1                                  | 1413                  |
| <b>Residence</b>          |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Rural                     | 21.2                                                       | 34.4                     | 43.7                                                           | 19.4                    | 17.0                               | 13.5                                          | 12.4                                  | 1931                  |
| Urban                     | 17.6                                                       | 39.8                     | 43.6                                                           | 25.2                    | 25.8                               | 26.1                                          | 18.3                                  | 2046                  |
| <b>Division</b>           |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Barishal                  | 15.5                                                       | 48.9                     | 61.9                                                           | 28.6                    | 24.8                               | 23.3                                          | 21.8                                  | 509                   |
| Chattogram                | 17.3                                                       | 34.9                     | 44.5                                                           | 15.0                    | 13.2                               | 10.4                                          | 13.6                                  | 456                   |
| Dhaka                     | 22.6                                                       | 41.7                     | 37.9                                                           | 21.6                    | 24.7                               | 21.6                                          | 12.7                                  | 502                   |
| Khulna                    | 12.5                                                       | 30.8                     | 37.8                                                           | 22.7                    | 13.4                               | 10.4                                          | 11.5                                  | 591                   |
| Mymensingh                | 26.7                                                       | 35.8                     | 50.8                                                           | 16.8                    | 9.7                                | 11.3                                          | 6.8                                   | 454                   |
| Rajshahi                  | 18.4                                                       | 24.4                     | 40.1                                                           | 17.0                    | 23.9                               | 22.0                                          | 12.9                                  | 542                   |
| Rangpur                   | 28.5                                                       | 36.7                     | 47.7                                                           | 26.9                    | 27.5                               | 24.8                                          | 20.8                                  | 419                   |
| Sylhet                    | 24.9                                                       | 34.6                     | 50.5                                                           | 28.1                    | 14.3                               | 7.9                                           | 17.6                                  | 504                   |
| <b>Education</b>          |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| No education              | 28.1                                                       | 39.0                     | 44.5                                                           | 18.4                    | 16.6                               | 12.5                                          | 11.4                                  | 1634                  |
| Primary                   | 15.5                                                       | 34.6                     | 43.1                                                           | 21.0                    | 17.2                               | 14.6                                          | 13.4                                  | 1292                  |
| Secondary                 | 12.2                                                       | 33.0                     | 41.2                                                           | 19.6                    | 22.3                               | 22.8                                          | 15.3                                  | 466                   |
| More than secondary       | 15.7                                                       | 31.1                     | 45.3                                                           | 29.4                    | 28.9                               | 27.9                                          | 21.1                                  | 570                   |
| <b>Wealth quintile</b>    |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Lowest                    | 27.3                                                       | 37.1                     | 43.7                                                           | 18.6                    | 17.2                               | 13.0                                          | 10.4                                  | 689                   |
| Second                    | 23.8                                                       | 35.0                     | 44.9                                                           | 16.2                    | 15.8                               | 11.9                                          | 10.7                                  | 728                   |
| Middle                    | 17.3                                                       | 29.8                     | 40.3                                                           | 13.6                    | 14.2                               | 8.1                                           | 9.8                                   | 711                   |
| Fourth                    | 19.3                                                       | 35.9                     | 44.5                                                           | 22.3                    | 20.4                               | 15.3                                          | 14.6                                  | 722                   |
| Highest                   | 15.5                                                       | 39.9                     | 44.8                                                           | 30.6                    | 26.3                               | 30.8                                          | 21.6                                  | 1127                  |
| Total (18-39)             | 13.6                                                       | 28.6                     | 42.5                                                           | 17.6                    | 16.6                               | 14.5                                          | 11.1                                  | 2112                  |
| Total (40-69)             | 30.5                                                       | 46.7                     | 45.5                                                           | 25.8                    | 23.2                               | 19.9                                          | 18.1                                  | 1865                  |
| Total (25-69)             | 23.6                                                       | 38.9                     | 43.8                                                           | 22.8                    | 20.9                               | 17.9                                          | 15.2                                  | 3514                  |
| <b>Total (18-69)</b>      | 20.3                                                       | 35.7                     | 43.7                                                           | 20.9                    | 19.2                               | 16.6                                          | 13.9                                  | 3977                  |

**Table 13.4 Lifestyle advice from doctors and other health workers: all respondents (by disease and risk conditions)**

Percent of adults aged 18-69 who have ever visited a doctor or health worker and received lifestyle advice on behavioural risk factors for non-communicable diseases by disease and risk conditions, [Bangladesh, 2018]

| Disease and risk condition                            | Percent adults who reported receiving lifestyle advice to: |                          |                                                                |                         |                                    |                                               |                                       | Number of respondents |
|-------------------------------------------------------|------------------------------------------------------------|--------------------------|----------------------------------------------------------------|-------------------------|------------------------------------|-----------------------------------------------|---------------------------------------|-----------------------|
|                                                       | Quit using tobacco or don't start                          | Reduce salt in your diet | Eat at least five servings of fruit and/or vegetables each day | Reduce fat in your diet | Start or do more physical activity | Maintain a healthy body weight or lose weight | Reduce glucose beverages in your diet |                       |
| <b>Smoking status</b>                                 |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Current smokers                                       | 68.0                                                       | 34.6                     | 49.6                                                           | 22.5                    | 24.4                               | 13.3                                          | 17.7                                  | 638                   |
| Previous smokers                                      | 42.7                                                       | 49.2                     | 51.4                                                           | 30.1                    | 32.7                               | 23.8                                          | 23.1                                  | 291                   |
| Never smokers                                         | 7.9                                                        | 34.8                     | 41.7                                                           | 19.7                    | 16.9                               | 16.7                                          | 12.2                                  | 3048                  |
| <b>Blood Pressure status</b>                          |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Raised blood pressure                                 | 21.8                                                       | 52.5                     | 46.8                                                           | 30.4                    | 28.5                               | 26.3                                          | 21.5                                  | 1227                  |
| Normal blood pressure                                 | 19.7                                                       | 29.1                     | 42.5                                                           | 17.4                    | 15.3                               | 12.7                                          | 10.5                                  | 2641                  |
| <b>diabetes</b>                                       |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Raised blood glucose/ diabetes                        | 25.5                                                       | 55.7                     | 56.7                                                           | 37.7                    | 37.0                               | 41.0                                          | 39.2                                  | 453                   |
| Normal blood-glucose/ diabetes                        | 20.1                                                       | 33.6                     | 42.6                                                           | 18.8                    | 17.0                               | 12.9                                          | 10.9                                  | 3007                  |
| <b>Cholesterol</b>                                    |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Raised cholesterol                                    | 22.1                                                       | 44.1                     | 47.4                                                           | 25.5                    | 23.0                               | 22.5                                          | 16.2                                  | 1194                  |
| Normal cholesterol                                    | 20.1                                                       | 32.4                     | 42.8                                                           | 18.9                    | 17.6                               | 13.2                                          | 13.1                                  | 2262                  |
| <b>Nutrition Status</b>                               |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| Obese                                                 | 15.4                                                       | 50.4                     | 46.7                                                           | 48.9                    | 40.6                               | 57.9                                          | 22.8                                  | 350                   |
| Overweight                                            | 15.7                                                       | 40.5                     | 39.5                                                           | 24.2                    | 22.8                               | 25.6                                          | 15.4                                  | 1011                  |
| Normal and underweight                                | 23.4                                                       | 32.9                     | 44.3                                                           | 17.0                    | 16.2                               | 8.8                                           | 12.6                                  | 2472                  |
| <b>Predicted 10-year CVD risk (adults aged 40-69)</b> |                                                            |                          |                                                                |                         |                                    |                                               |                                       |                       |
| >=30%                                                 | 38.5                                                       | 61.2                     | 60.4                                                           | 40.7                    | 27.8                               | 28.0                                          | 24.7                                  | 316                   |
| <30%                                                  | 27.8                                                       | 42.6                     | 41.5                                                           | 20.9                    | 21.6                               | 17.4                                          | 16.0                                  | 1321                  |
| <b>Total (18-69)</b>                                  | 20.3                                                       | 35.7                     | 43.7                                                           | 20.9                    | 19.2                               | 16.6                                          | 13.9                                  | 3977                  |

## Chapter 14 Cervical Cancer: Screening and Treatment

### Key findings

---

#### **Testing for cervical cancer**

- Ever tested for cervical cancer: 6.1% (4.3% in the last 5 years) and 4.3% (2.6% in the last five years) of women age 30-49 years and 18-69 years, respectively, reported ever getting a cervical cancer test.
- Main reason for testing: 49.0% of women (18-69 years) reported getting test done as they were experiencing pain or other symptom; 30.3% women reported the test as recommended by health care provider.
- 93.3% of women received back the results of their most recent test.

#### **Source (type of facility) for the most recent test for cervical cancer (18-69 years)**

- 55.6% of women got their most recent test at private clinics, NGO or community-run hospitals.
- 43.2% and 42.6% of women received their most recent test at private hospitals and government hospital respectively.

#### **Treatment for cervical cancer**

- Treatment: 74.5% of women who received abnormal or inconclusive test results received treatment
  - Follow-up: 68.5% of women who received abnormal or inconclusive test results received a follow-up visit.
- 

### Introduction

Cervical cancer is the second most common cause of cancer morbidity and mortality among women in the South-east Asia Region. The burden is particularly high in low- and middle-income countries (LMICs) accounting for 85% of deaths related to cervical cancer worldwide<sup>74,75</sup>. *It is the second most common cancer among women in Bangladesh*<sup>76</sup>. Human papillomavirus (HPV) infection is the main cause of cervical cancer and when

---

<sup>74</sup> Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*. 2018;68(6):394-424. doi:10.3322/caac.21492

<sup>75</sup> Ferlay J, Soerjomataram I, Dikshit R, et al. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012: Globocan 2012. *Int J Cancer*. 2015;136(5):E359-E386. doi:10.1002/ijc.29210

<sup>76</sup> International Agency for Research on Cancer. Bangladesh: World Health Organization; 2018 [updated March 2019; cited 2019 30 April]. Available from: <http://gco.iarc.fr/today/data/factsheets/populations/50-bangladesh-fact-sheets.pdf>.

detected early, cervical cancer is largely preventable and treatable form of cancer<sup>2,77</sup>. However, lack of access to timely and effective health services (vaccination, screening and treatment); social stigma and lack of awareness has posed major barriers to the reduction of cervical cancer related morbidity and mortality in low resource settings<sup>78</sup>.

**Figure 14.1 Global Targets for the elimination of Cervical Cancer by 2030**

- **90%** of girls fully vaccinated with HPV vaccine by 15 years of age.
- **70%** of women are screened with a high-precision test at 35 and 45 years of age.
- **90%** of women identified with cervical disease receive treatment and care.

It is estimated that without further intervention there would be 44.4 million cervical cancer cases diagnosed globally over the period 2020–69, with almost two-thirds of cases occurring in LMICs<sup>79</sup>. In May 2018, the WHO Direction-General made a global call for action to eliminate<sup>80</sup> cervical cancer as a public health problem<sup>81</sup> and proposed

targets for 2030 (Figure 14.1)<sup>82</sup>.

Current WHO recommendation for cervical cancer prevention and treatment include<sup>83</sup>: (1) HPV vaccination for girls aged 9-13 before they initiate sexual activity; (2) Every woman aged 30-49 should be screened for cervical cancer at least once in a life-time regardless of vaccination status and should be repeated at least every 5 years if previous results are negative; (3) Adopt the “screen-and-treat” approach where treatment is given ideally on the same day and same location after positive diagnosis of pre-cancerous lesions to prevent loss to follow-up and delayed treatment.

<sup>77</sup> Franco EL, Duarte-Franco E, Ferenczy A. Cervical cancer: epidemiology, prevention and the role of human papillomavirus infection. *CMAJ*. 2001;164(7):1017-1025.

<sup>78</sup> WHO. Comprehensive cervical cancer control: a guide to essential practice – 2<sup>nd</sup> ed. 2014 Geneva.

<sup>79</sup> Simms KT, Steinberg J, Caruana M, et al. Impact of scaled up human papillomavirus vaccination and cervical screening and the potential for global elimination of cervical cancer in 181 countries, 2020–99: a modelling study. *The Lancet Oncology*. 2019;20(3):394-407. doi:10.1016/S1470-2045(18)30836-

<sup>80</sup> Elimination defined as age-adjusted incidence rate less than 4 per 100,000 women-years.

<sup>81</sup> Ghebreyesus, T., *Cervical Cancer: An NCD We Can Overcome*. 2018, World Health Organization: Geneva, Switzerland.

<sup>82</sup> WHO. [Draft] Global Strategy Towards the Elimination of Cervical Cancer as a Public Health Problem. 2019, World Health Organization: Geneva, Switzerland. [Assessed on: Sep 24, 2019] <https://www.who.int/docs/default-source/documents/cervical-cancer-elimination-draft-strategy.pdf>

<sup>83</sup> Not an exhaustive list of recommendations, please see original document for comprehensive guidelines. WHO. Comprehensive cervical cancer control: a guide to essential practice – 2<sup>nd</sup> ed. 2014 World Health Organization: Geneva, Switzerland.

In Bangladesh, the National Cervical Cancer Screening program was launched in 2005<sup>84</sup> and the expansion of its cervical cancer screening program has been included in the National Strategy for Cervical Cancer Prevention and Control Bangladesh (2017-2022)<sup>85</sup>.

---

**Current relevant policies and programs in Bangladesh for the prevention and treatment of cervical cancer:**

- Introduce and scale up delivery of HPV vaccine to girls aged 9 to 13 years through a coordinated multisectoral approach including EPI.
  - Implement and scale up organized cervical cancer screening programmes utilizing evidence based, cost-effective interventions through public health service delivery system across different levels of health care.
  - Strengthen health systems and quality assurance mechanism to ensure quality and equitable access to cervical cancer screening services with particular attention to socioeconomically disadvantaged population groups.
  - Augment management facilities for invasive cancer cervix as part of a comprehensive cancer control programme.
  - Introduce palliative care services into all level of health system as part of a comprehensive cancer control programme.
  - Encourage convergence with related health programmes to ensure a coordinated approach for cervical cancer control within the health system.
  - Initiate and augment a structured advocacy and educational campaign for cervical cancer control.
  - 8. Establish a Monitoring & Evaluation framework for the cervical cancer control.
  - To contribute towards establishment of a National Cancer Registry comprising several hospitals based and one population based cancer registry as a ready source of data for further research.
- 

This chapter focuses on the health service component of cervical cancer prevention and treatment. This information will help Bangladesh assess trends and progress towards the elimination of cervical cancer as well as the evaluation of current policies and programs in place.

---

<sup>84</sup> Basu, P., et al., Evaluation of the National Cervical Cancer Screening Programme of Bangladesh and the formulation of quality assurance guidelines. *BMJ Sexual & Reproductive Health*, 2010. 36(3): p. 131-134

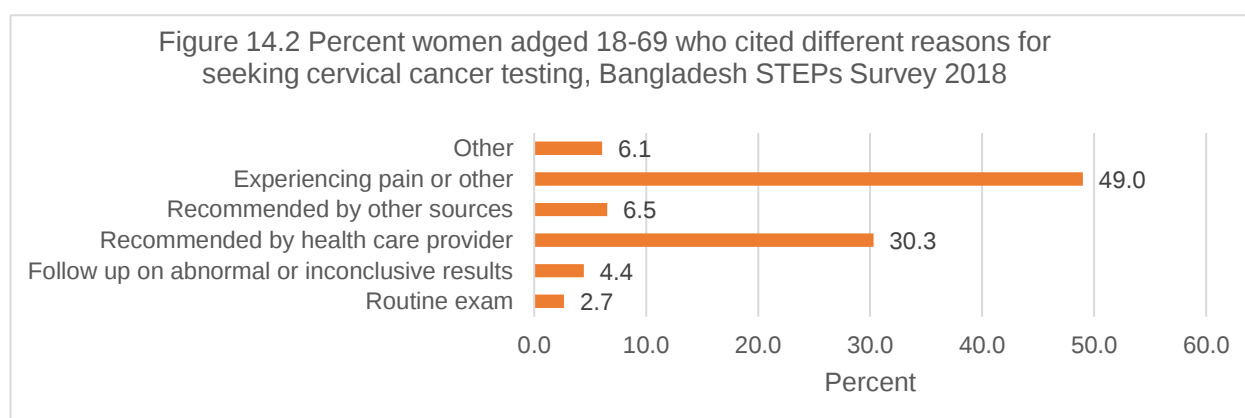
<sup>85</sup> National Strategy for Cervical Cancer Prevention and Control Bangladesh (2017-2022). Dhaka: Directorate General of Health Services, Health Services Division, Ministry of Health and Family Welfare, Government of the People's Republic of Bangladesh, 2017. [Accessed on Oct 3, 2019]: <http://www.searo.who.int/bangladesh/cervical-cancer-strategy-english-book250118.pdf?ua=1>

### 14.1 Testing for cervical cancer

Only 4.3% of women age 18-69 years reported ever tested for cervical cancer and 2.6% were tested within the past 5 years (**Table 14.1**). In the age recommended for screening (i.e. 30-49 years of age), 6.1% of women got ever tested for cervical cancer, and 4.3% were tested within the last 5 years.

Amongst those who have ever been tested, 49.5% received their first testing between the age of 30-49, 17.7% were first tested between the age of 18-29 and 15.2% between 50-69 (**Table 14.1**).

Amongst women who have ever been tested for cervical cancer, 49.0% of women stated the main reason for their last test was due to experiencing pain or some other symptoms; 30.3% of women stated that it was recommended by a health care provider and 6.5% of women reported that it was recommended by other sources (**Figure 14.2**). 86.6% of women who have ever been tested for cervical cancer received their test results (**Table 14.2**).



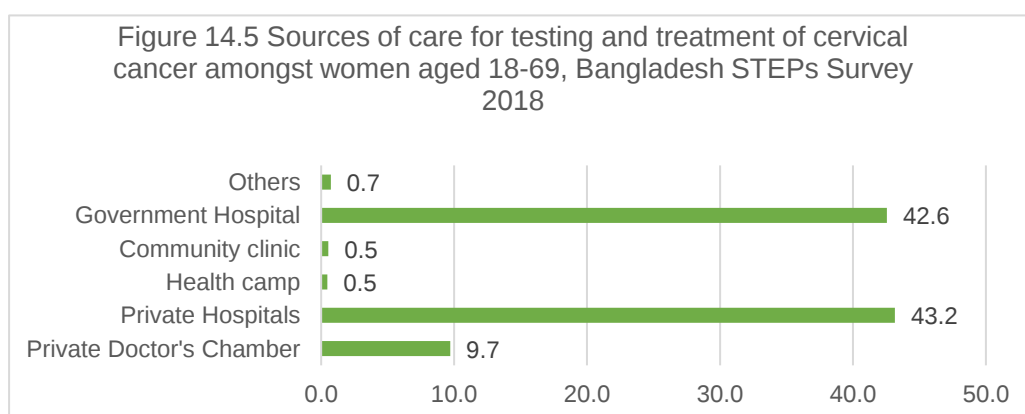
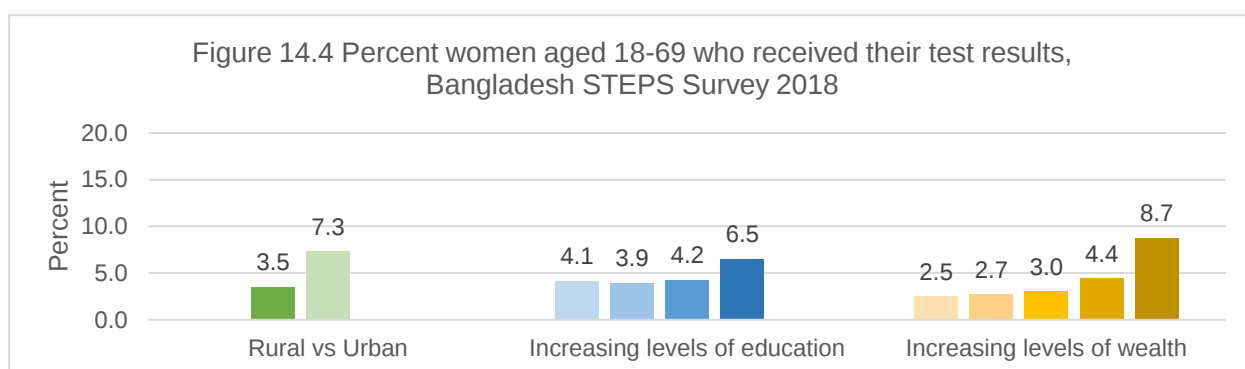
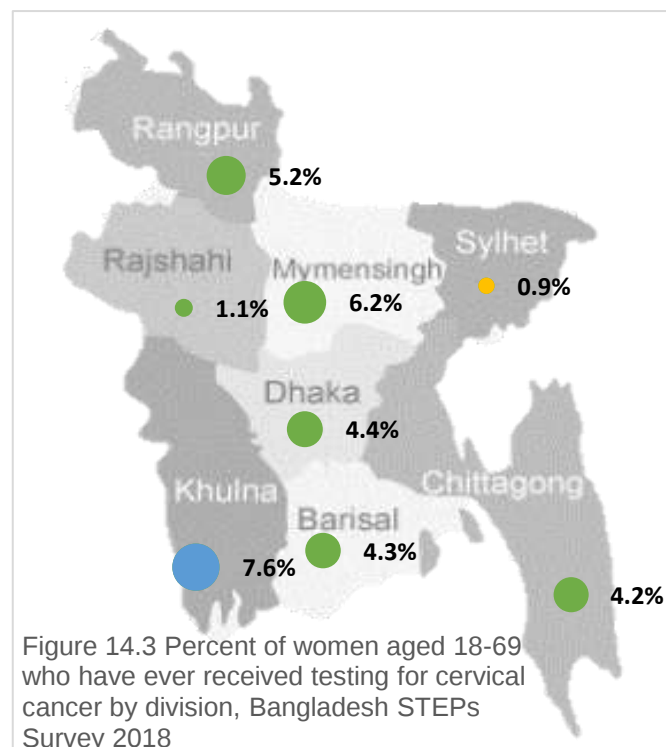
#### Patterns by background characteristics (Table 14.1 and 14.2):

- The highest percentage of women who were ever tested for cervical cancer was amongst women aged 50-69 and the highest percentage of women who received their last test less than 5 years ago was amongst women aged 30-49 (7.7% and 4.3% respectively).
- Khulna had the highest percentage (7.6%) of women who were tested and the lowest was in Sylhet (0.9%) (**Figure 14.3**).
- Percentage of women who have ever been tested and those who were tested within the last 5 years increased with increasing levels of education, wealth and urban living (**Figure 14.4**).

- Chattogram had the lowest percent of women who tested for cervical cancer and subsequently received their test result (62.0%) compared to all other divisions

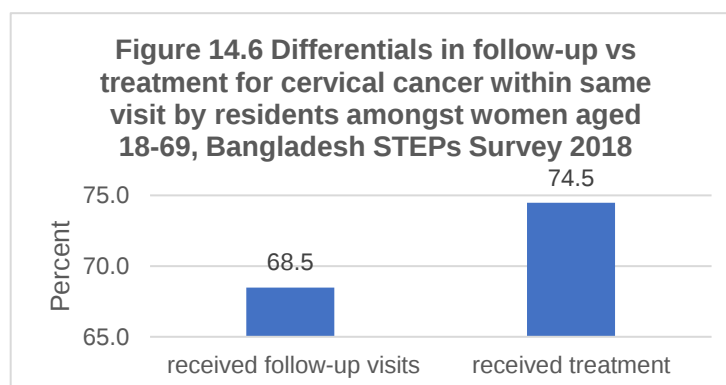
## 14.2 Sources of care for cervical cancer

43.2% of women (18-69 year of age) received their most recent test at private hospitals and 42.6% received the test at government hospitals (**Table 14.3 and Figure 14.5**).



### 14.3 Treatment for cervical cancer

Amongst women with a cervical cancer test and those who received abnormal or inconclusive test results, 74.5% reported receiving treatment while 68.5% reported having a follow-up visit as a result of the test<sup>86</sup> (**Figure 14.6**).



#### List of Tables:

For more information on cervical cancer, see the following tables:

Table Cervical Cancer.14.1 Testing for cervical cancer: All women

Table Cervical Cancer.14.2: Reasons for testing for cervical cancer

Table Cervical Cancer.14.3 Sources of care for testing and treatment of cervical cancer

<sup>86</sup> This data is not presented in tables due to small sample size (n=83).

**Table Cervical Cancer.14.1 Testing for cervical cancer: All women**

Percent of women aged 18-69 who have ever tested for cervical cancer; timing of the last test; age of first testing, amongst women aged 18-69, by background characteristics [ Bangladesh, 2018]

| Background characteristic | Percent women ever tested for cervical cancer | Percent women whose most recent test was less than 5 years ago* | Number of women (n) | Amongst those who have ever been tested for cervical cancer: |       |       |                                                         |                     |
|---------------------------|-----------------------------------------------|-----------------------------------------------------------------|---------------------|--------------------------------------------------------------|-------|-------|---------------------------------------------------------|---------------------|
|                           |                                               |                                                                 |                     | percent who received their first test at age*                |       |       | Percent who received test results from most recent test | Number of women (n) |
|                           |                                               |                                                                 |                     | 18-29                                                        | 30-49 | 50-69 |                                                         |                     |
| <b>Age</b>                |                                               |                                                                 |                     |                                                              |       |       |                                                         |                     |
| 18-29                     | 1.3                                           | 1.3                                                             | 1158                | 89.6                                                         | 0.0   | 0.0   | 99.3                                                    | 25**                |
| 30-49                     | 6.1                                           | 4.3                                                             | 2405                | 10.8                                                         | 89.2  | 0.0   | 84.1                                                    | 182                 |
| 50-69                     | 7.7                                           | 2.2                                                             | 755                 | 0.0                                                          | 56.5  | 43.5  | 85.4                                                    | 63                  |
| <b>Residence</b>          |                                               |                                                                 |                     |                                                              |       |       |                                                         |                     |
| Rural                     | 3.5                                           | 1.9                                                             | 2225                | 12.7                                                         | 69.0  | 17.0  | 88.1                                                    | 92                  |
| Urban                     | 7.3                                           | 5.1                                                             | 2093                | 26.4                                                         | 60.0  | 12.1  | 83.9                                                    | 178                 |
| <b>Division</b>           |                                               |                                                                 |                     |                                                              |       |       |                                                         |                     |
| Barishal                  | 4.3                                           | 3.0                                                             | 531                 | 67.1                                                         | 15.2  | 0.0   | 89.9                                                    | 35                  |
| Chattogram                | 4.2                                           | 1.9                                                             | 546                 | 7.4                                                          | 47.6  | 45.0  | 62.0                                                    | 29**                |
| Dhaka                     | 4.4                                           | 2.8                                                             | 515                 | 22.3                                                         | 77.7  | 0.0   | 91.5                                                    | 27**                |
| Khulna                    | 7.6                                           | 4.0                                                             | 555                 | 27.8                                                         | 68.4  | 3.8   | 92.7                                                    | 66                  |
| Mymensingh                | 6.2                                           | 4.7                                                             | 538                 | 28.6                                                         | 46.3  | 16.8  | 91.8                                                    | 46                  |
| Rajshahi                  | 1.1                                           | 1.1                                                             | 564                 | 5.8                                                          | 68.8  | 14.9  | 100.0                                                   | 17**                |
| Rangpur                   | 5.2                                           | 2.9                                                             | 541                 | 2.6                                                          | 86.8  | 10.7  | 98.8                                                    | 36                  |
| Sylhet                    | 0.9                                           | 0.7                                                             | 528                 | 3.3                                                          | 88.2  | 8.4   | 100.0                                                   | 14**                |
| <b>Education</b>          |                                               |                                                                 |                     |                                                              |       |       |                                                         |                     |
| No education              | 4.1                                           | 2.0                                                             | 1921                | 7.6                                                          | 61.5  | 28.9  | 90.6                                                    | 95                  |
| Primary                   | 3.9                                           | 2.4                                                             | 1507                | 28.7                                                         | 61.9  | 7.7   | 82.4                                                    | 89                  |
| Secondary                 | 4.2                                           | 2.7                                                             | 432                 | 21.7                                                         | 78.3  | 0.0   | 77.1                                                    | 35                  |
| More than secondary       | 6.5                                           | 5.6                                                             | 437                 | 20.4                                                         | 75.1  | 4.5   | 91.8                                                    | 49                  |
| <b>Wealth quintile</b>    |                                               |                                                                 |                     |                                                              |       |       |                                                         |                     |
| Lowest                    | 2.5                                           | 1.5                                                             | 962                 | 18.4                                                         | 70.3  | 4.5   | 93.4                                                    | 28**                |
| Second                    | 2.7                                           | 2.2                                                             | 888                 | 8.4                                                          | 68.4  | 23.2  | 87.8                                                    | 33**                |
| Middle                    | 3.0                                           | 1.9                                                             | 716                 | 24.6                                                         | 72.7  | 0.9   | 84.3                                                    | 35                  |
| Fourth                    | 4.4                                           | 2.0                                                             | 709                 | 9.7                                                          | 43.8  | 46.5  | 76.3                                                    | 35                  |
| Highest                   | 8.7                                           | 5.2                                                             | 1043                | 21.9                                                         | 71.5  | 5.9   | 89.5                                                    | 139                 |
| <b>Total (18-69)</b>      | 4.3                                           | 2.6                                                             | 4318                | 17.7                                                         | 65.7  | 15.2  | 86.6                                                    | 270                 |

\* Women who refused to respond or stated "don't know" for these two questions are not presented here but included in the denominator at the time of the analysis.

\*\* Interpret with caution due to small sample size

**Table Cervical Cancer.14.2: Reasons for testing for cervical cancer: All women**

Percent of women aged 18-69 who have ever received cervical cancer testing and cited different reasons for seeking the test, by background characteristics [Bangladesh, 2018]

| Background characteristic | Percent whose main reason for the last test was*: |                                               |                                     |                              |                            |       | Number of women (N) |
|---------------------------|---------------------------------------------------|-----------------------------------------------|-------------------------------------|------------------------------|----------------------------|-------|---------------------|
|                           | Routine exam                                      | Follow up on abnormal or inconclusive results | Recommended by health care provider | Recommended by other sources | Experiencing pain or other | Other |                     |
| <b>Age</b>                |                                                   |                                               |                                     |                              |                            |       |                     |
| 18-29                     | 4.4                                               | 6.0                                           | 17.7                                | 9.2                          | 62.7                       | 0.0   | 25**                |
| 30-49                     | 2.3                                               | 2.3                                           | 38.9                                | 3.5                          | 44.5                       | 8.4   | 181                 |
| 50-69                     | 2.6                                               | 7.0                                           | 22.5                                | 9.9                          | 50.3                       | 5.0   | 63                  |
| <b>Residence</b>          |                                                   |                                               |                                     |                              |                            |       |                     |
| Rural                     | 0.7                                               | 5.1                                           | 30.5                                | 5.6                          | 51.4                       | 6.6   | 92                  |
| Urban                     | 6.0                                               | 3.2                                           | 29.9                                | 8.1                          | 44.9                       | 5.2   | 177                 |
| <b>Division</b>           |                                                   |                                               |                                     |                              |                            |       |                     |
| Barishal                  | 9.4                                               | 0.0                                           | 46.0                                | 5.6                          | 37.5                       | 0.7   | 35                  |
| Chattogram                | 0.0                                               | 0.9                                           | 43.0                                | 9.0                          | 45.2                       | 1.9   | 29**                |
| Dhaka Rural               | 1.6                                               | 4.0                                           | 18.5                                | 0.0                          | 65.2                       | 6.8   | 27**                |
| Khulna                    | 2.2                                               | 0.0                                           | 26.9                                | 15.5                         | 47.8                       | 7.5   | 66                  |
| Mymensingh                | 0.7                                               | 22.3                                          | 35.3                                | 2.6                          | 24.4                       | 14.8  | 46                  |
| Rajshahi                  | 21.2                                              | 0.0                                           | 36.6                                | 7.1                          | 31.6                       | 3.6   | 16**                |
| Rangpur                   | 4.3                                               | 3.2                                           | 25.0                                | 0.0                          | 63.8                       | 3.7   | 36                  |
| Sylhet                    | 6.6                                               | 0.0                                           | 8.4                                 | 50.9                         | 30.7                       | 3.3   | 14**                |
| <b>Education</b>          |                                                   |                                               |                                     |                              |                            |       |                     |
| No education              | 1.7                                               | 4.9                                           | 29.0                                | 6.5                          | 55.0                       | 3.0   | 95                  |
| Primary                   | 3.9                                               | 5.9                                           | 32.7                                | 6.2                          | 41.9                       | 9.4   | 89                  |
| Secondary                 | 2.2                                               | 4.2                                           | 18.3                                | 3.0                          | 54.3                       | 9.7   | 35                  |
| More than secondary       | 3.5                                               | 0.0                                           | 41.0                                | 6.9                          | 43.8                       | 4.9   | 48                  |
| <b>Wealth quintile</b>    |                                                   |                                               |                                     |                              |                            |       |                     |
| Lowest                    | 0.0                                               | 6.3                                           | 34.5                                | 14.0                         | 34.8                       | 3.1   | 28**                |
| Second                    | 0.0                                               | 16.6                                          | 39.5                                | 3.8                          | 33.4                       | 6.7   | 33                  |
| Middle                    | 0.0                                               | 0.0                                           | 33.5                                | 10.4                         | 49.1                       | 7.0   | 35                  |
| Fourth                    | 3.5                                               | 0.0                                           | 18.8                                | 5.1                          | 72.6                       | 0.0   | 35                  |
| Highest                   | 4.6                                               | 3.6                                           | 30.7                                | 4.6                          | 47.0                       | 9.3   | 138                 |
| <b>Total (18-69)</b>      | 2.7                                               | 4.4                                           | 30.3                                | 6.5                          | 49.0                       | 6.1   | 269                 |

\* Women who refused to respond or stated "don't know" for these two questions are not presented here but included in the denominator at the time of the analysis. \*\* Interpret with caution due to small sample size

**Table Cervical Cancer.14.3 Sources of care for testing and treatment of cervical cancer**

Percent of women aged 18-69 who received screening/testing from difference sources by background characteristics [Bangladesh, 2018].

| Background characteristics | Source of care for testing |                   |             |                  |                     |        | Number of women (n) |
|----------------------------|----------------------------|-------------------|-------------|------------------|---------------------|--------|---------------------|
|                            | Private Doctor's Chamber   | Private Hospitals | Health camp | Community clinic | Government Hospital | Others |                     |
| <b>Age</b>                 |                            |                   |             |                  |                     |        |                     |
| 18-29                      | 20.6                       | 17.5              | 0.0         | 0.0              | 56.3                | 0.0    | 25**                |
| 30-49                      | 11.8                       | 47.6              | 0.9         | 1.1              | 35.7                | 1.4    | 182                 |
| 50-69                      | 2.5                        | 46.5              | 0.0         | 0.0              | 47.4                | 0.0    | 63                  |
| <b>Residence</b>           |                            |                   |             |                  |                     |        |                     |
| Rural                      | 11.5                       | 40.6              | 0.7         | 0.9              | 41.2                | 0.6    | 92                  |
| Urban                      | 6.6                        | 47.6              | 0.0         | 0.0              | 44.9                | 0.9    | 178                 |
| <b>Division</b>            |                            |                   |             |                  |                     |        |                     |
| Barishal                   | 19.5                       | 39.6              | 0.0         | 0.0              | 41.0                | 0.0    | 35                  |
| Chattogram                 | 13.5                       | 30.0              | 0.0         | 0.0              | 56.5                | 0.0    | 29**                |
| Dhaka Rural                | 0.0                        | 52.0              | 0.0         | 0.0              | 48.0                | 0.0    | 27**                |
| Khulna                     | 11.8                       | 57.6              | 0.0         | 0.0              | 23.3                | 0.9    | 66                  |
| Mymensingh                 | 14.7                       | 25.6              | 0.0         | 0.0              | 46.6                | 1.0    | 46                  |
| Rajshahi                   | 0.0                        | 49.1              | 0.0         | 0.0              | 50.9                | 0.0    | 17**                |
| Rangpur                    | 12.6                       | 44.6              | 4.0         | 0.0              | 35.6                | 3.2    | 36                  |
| Sylhet                     | 2.5                        | 40.8              | 0.0         | 40.7             | 12.8                | 3.3    | 14**                |
| <b>Education</b>           |                            |                   |             |                  |                     |        |                     |
| No education               | 7.8                        | 37.4              | 1.1         | 0.0              | 46.8                | 0.2    | 95                  |
| Primary                    | 11.2                       | 51.0              | 0.0         | 0.0              | 37.4                | 0.5    | 89                  |
| Secondary                  | 6.0                        | 33.1              | 0.0         | 0.0              | 57.3                | 3.6    | 35                  |
| More than secondary        | 16.1                       | 54.0              | 0.0         | 0.0              | 29.6                | 0.3    | 49                  |
| <b>Wealth quintile</b>     |                            |                   |             |                  |                     |        |                     |
| Lowest                     | 14.4                       | 33.7              | 0.0         | 4.2              | 32.0                | 0.0    | 28**                |
| Second                     | 9.7                        | 42.5              | 0.0         | 0.0              | 47.8                | 0.0    | 33**                |
| Middle                     | 9.4                        | 39.7              | 3.9         | 0.0              | 40.2                | 0.0    | 35                  |
| Fourth                     | 9.8                        | 33.1              | 0.0         | 0.0              | 57.1                | 0.0    | 35                  |
| Highest                    | 8.4                        | 51.8              | 0.0         | 0.0              | 38.2                | 1.7    | 139                 |
| <b>Total (18-69)</b>       | 9.7                        | 43.2              | 0.5         | 0.5              | 42.6                | 0.7    | 270                 |

\* Women who refused to respond or stated "don't know" for these two questions are not presented here but included in the denominator at the time of the analysis. \*\* Interpret with caution due to small sample size

## Chapter 15 Oral health

### Key findings

---

#### ***Oral hygiene practices***

- Cleaning of teeth: Nearly all adults (99.2%) reported that they clean their teeth daily or twice in a day.
- Cleaning materials: most of the respondents used toothbrush (65.2%) and toothpaste (56.7%).

#### ***Care seeking for oral health issues***

- Ever visited dentist: 29.0% of adults (29.1% in women, 29.0% in men) reported that they have ever visited dentist in the past.
- Timing of recent visit: Amongst those who have ever seen a dentist less than half (45.4%) visited within last one year followed by 32.8% visited between 1-5 years and rest of them (21.8%) visited more than 5 years ago.
- Reason for visit: among those who ever visited a dentist, only 1.1% of adults visited for a preventive visit while others (98.9%) visited for consultation or treatment.

#### ***Self-reported oral health issues***

- 38.0% of adults (40.5% in women, 35.3% in men) reported experiencing pain, swelling, bleeding or discomfort of the teeth, gums or mouth, followed by difficulty in chewing (27.2%) and difficulty in speaking (13.2%).

#### ***Sources of care for oral health issues***

- Visited health facility: More than half (51.7%) of adults who experienced any oral health issue (49.8% in women, 54.2% in men) reported that they visited health facility for their oral health issues.
- Source of care: Among those who visited health facility, 47.1% of adults visited medical shops, village doctors and other alternative sources and 36.0% visited private chamber or clinics. Only 11.3% of adults visited only government health facilities and 8.7% visited private facilities.

#### ***Reason for not seeking care for oral health issues***

- Main demand side reason: more than half 63.5% of adults reported that they didn't think it was required.
  - Main supply-side reasons: 37.1% said services were too expensive.
-

## Introduction

Oral diseases are of the most common noncommunicable diseases affecting 3.6 billion people worldwide in 2016. Amongst those, the majority of oral diseases (2.4 billion) are caries of the permanent teeth, followed by periodontal diseases and caries of deciduous teeth<sup>87</sup>.

Oral health implies being free of chronic oro-facial pain, oral and pharyngeal cancers, oral tissue lesions, birth defects such as cleft lip and palate, and other diseases and disorders that affect the oral, dental and craniofacial tissues<sup>88</sup>. It is integral and essential to general health and quality of life and have significant economic implications from both direct treatment costs and costs incurred due to loss of productivity<sup>89</sup>.

Most oral diseases and conditions share modifiable risk factors (such as tobacco use, alcohol consumption and unhealthy diets high in free sugars) common to the other NCDs. Rapidly increasing levels of oral disease, have been observed in LMICs in parallel with changes in living conditions and the increasing adoption of unhealthy lifestyles. However, unequal distribution of oral health professionals, lack of appropriate health facilities, lack of awareness and socio-economic inequalities in most LMICs means that access to primary oral health services is often low<sup>90,91</sup>.

Oral health care systems often focus on disease treatment which require intensive health care resources and personnel's that are often in critical shortage in LMICS, while attention on primary prevention and oral health promotion is lacking<sup>92</sup>.

South-East Asia Regional oral health strategy suggested two overall targets for 2025: (1) A 25% relative reduction of premature mortality from oral

**Figure 15. 1 Strategy for oral health in South-East Asia (2013 - 2020)**

### **5 priority action areas:**

- (1) Integrating oral diseases into prevention and control of NCDs
- (2) Addressing oral cancer
- (3) Promoting oral health through fluorides
- (4) Increasing and diversifying the health workforce
- (5) Oral health through school health

<sup>87</sup> Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*. 2017;390(10100):1211-1259. doi:[10.1016/S0140-6736\(17\)32154-2](https://doi.org/10.1016/S0140-6736(17)32154-2)

<sup>88</sup> P.E.Petersen. World Oral Health Report 2003. Geneva: World Health Organization.

<sup>89</sup> Listl, S. *et al*. Global economic impact of dental diseases. *J. Dent. Res.* **94**, 1355–1361 (2015)

<sup>90</sup> Hosseinpoor AR, Itani L, Petersen PE. Socio-economic Inequality in Oral Healthcare Coverage: Results from the World Health Survey. *J Dent Res.* 2012;91(3):275-281. doi:[10.1177/0022034511432341](https://doi.org/10.1177/0022034511432341)

<sup>91</sup> Kandelman D, Arpin S, Baez RJ, Baehni PC, Petersen PE. Oral health care systems in developing and developed countries: Oral health care systems. *Periodontology 2000*. 2012;60(1):98-109. doi:[10.1111/j.1600-0757.2011.00427.x](https://doi.org/10.1111/j.1600-0757.2011.00427.x)

<sup>92</sup> Listl, S. *et al*. Global economic impact of dental diseases. *J. Dent. Res.* **94**, 1355–1361 (2015)

cancer (2) A 25% relative reduction of prevalence of dental caries. It also highlighted 5 priority action areas (**Figure 15. 1**)<sup>93</sup>.

---

Bangladesh's oral health situation/policy:

- Bangladesh Essential Health Service Package (ESP)<sup>94</sup>
- 

This chapter focuses on oral hygiene practices, reported oral health issues and access and usage of oral health services. This information will help Bangladesh to assess trends and progress of the national oral health status as well as the evaluation of current policies and programs in place that are related to oral health.

### 15.1 Oral hygiene practices

Almost all adults age 18-69 in Bangladesh practice daily or twice a day teeth-cleaning, in which only 65.2% of adults reported using toothbrush and 56.7% uses toothpaste (**Table 15.1**). Additionally 22.6% of adults reported using other methods such as tooth powder, plastic toothpicks or thread and 22.2% reported using charcoal (**Table 15.1**).

#### Patterns by background characteristics (Table 15.1)

- Adults who are older, less educated and of the lowest household wealth were less likely to use toothpaste or toothbrush for cleaning their teeth compared to their counterparts. While the opposite relationship is seen for use of other materials or charcoal.
- Residents of Sylhet were least likely to use toothpaste or toothbrush and most likely to use other materials compared to other divisions.

### 15.2 Care seeking for oral health issues with dentist

29.0% of adults reported ever visiting a dentist (**Table 15.2**). Amongst those 45.4% reported their last visit to be within the past one year and all (98.9%) reported the reason for visit to be for a consultation/treatment (**Table 15.2**). It is clear that the utilization of dental services is primarily for treatment of oral health issues rather than prevention.

---

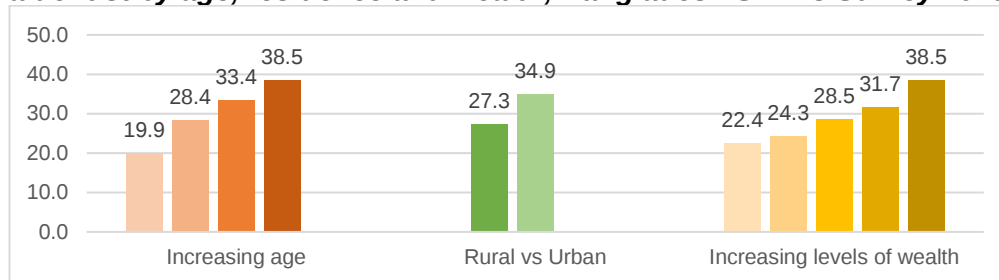
<sup>93</sup> World Health Organization Regional Office for South-East Asia. Strategy for oral health in South-East Asia, 20-13-202. New Delhi, India: World Health Organization Regional Office for South-East Asia, 2013.

<sup>94</sup> Ministry of Health and Family Welfare of Bangladesh. Bangladesh essential health service package (ESP). Dhaka, Bangladesh; 2016.

### Patterns by background characteristics (Table 15.3):

- A higher percentage of adults who were older, and were urban residents with higher household wealth reported ever visiting a dentist compared to their counterparts (

**Figure 15.2 Differentials in percent of aged 18-69 who have ever visited a dentist by age, residence and wealth, Bangladesh STEPs Survey 2018**

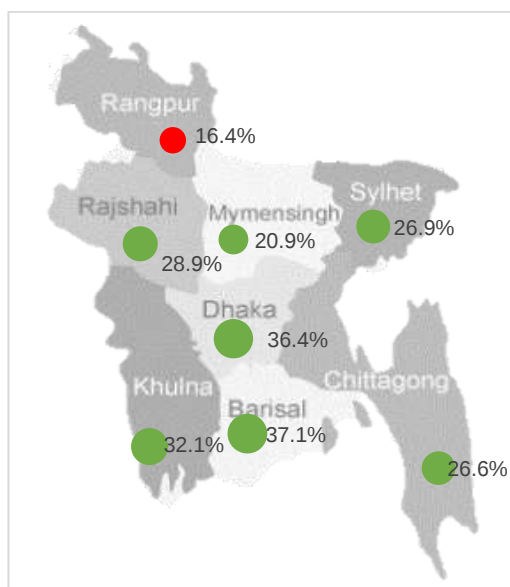


- **Figure 15.2).**

- 
- 

- Percentage of adults who have ever visited a dentist was lowest in Rangpur (16.4%) and the highest was 37.1% in Barishal (**Figure 15. 3**).

**Figure 15. 3 Percentage of adults aged 18-69 who have ever visited a dentist by division, Bangladesh STEPs Survey 2018**



### 15.3 Self-reported oral health issues

38.0% of adults aged 18-69 reported pain, swelling, bleeding or discomfort of the teeth, gum or mouth in the past 12 months (**Table 15.3**).

27.2% reported having difficulties with chewing followed by difficulty in speaking (12.2%) (**Table 15.3**).

### Patterns by background characteristics (Table 15.3):

- For reported oral health issues including pain, swelling, bleeding or discomfort of the teeth, gum or mouth, difficulty chewing, persistent wound, more adults who are women, older, and have lower levels of education and household wealth are more likely to report oral health issues.

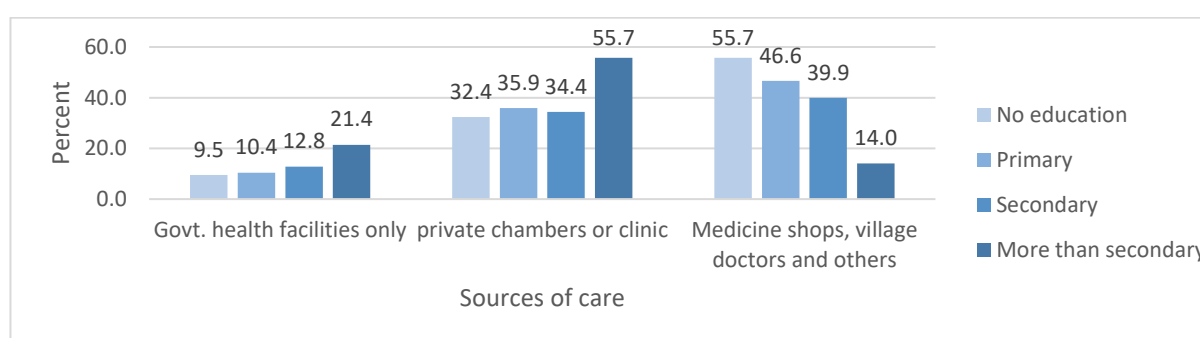
### 15.4 Sources of care for oral health issues

Amongst adults who reported existing oral health issues, over half (51.7%) stated that they visited a health facility for it (**Table 15.4**). Within the types of health facilities visited, the most common source was medicine shops, village doctors and others (47.1%), followed by private chambers or clinics (36.0%) while only 11.3% accessed government health facilities only (**Table 15.4**).

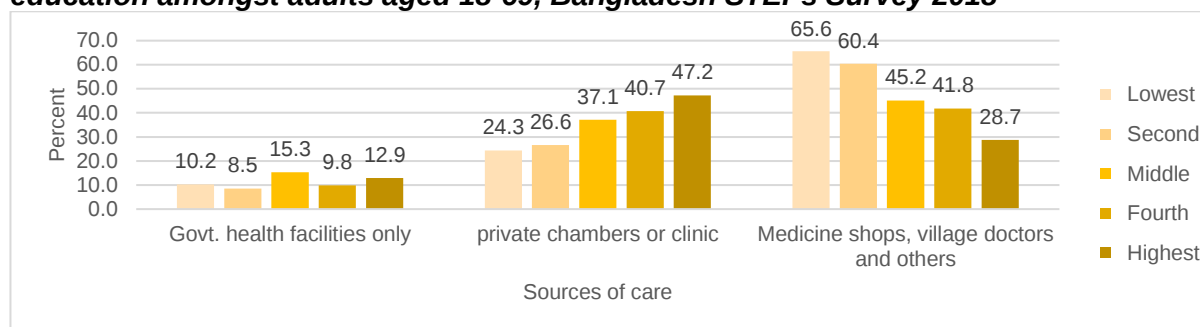
#### Patterns by background characteristics (**Table 15.4**):

- Amongst adults with oral health issues, more adults who are urban residents with higher levels of household wealth have visited a health facility for oral health issues compared to their counterparts.
- A higher percentage of urban residents access private health facilities (12.5% vs 7.4%) and private chambers or clinics (45.7% vs 32.7%), while more rural residents tend to access medicine shops, village doctors and other sources for oral health issues (51.7% vs 33.5%) (**Table 15.4**).
- Adults with higher levels of education and wealth were more likely to access government health facilities, private chambers and clinics, and less likely to access medicine shops, village doctors and other sources for oral health issues (**Figure 15.4** and **Figure 15.5**).

**Figure 15.4 Differentials in different sources of care for oral health issues by education amongst adults aged 18-69, Bangladesh STEPs Survey 2018**



**Figure 15.5 Differentials in different sources of care for oral health issues by education amongst adults aged 18-69, Bangladesh STEPs Survey 2018**



- Mymensingh had the highest percentage of adults who accessed government health facilities (25.6%) for oral health issues and lowest use of private chamber and clinics (19.2%). While use of medicine shops, village doctors and other sources was highest in Sylhet (64.7%), followed by Rangpur (57.4%) and Chattogram (57.1%) (Table 15.4)

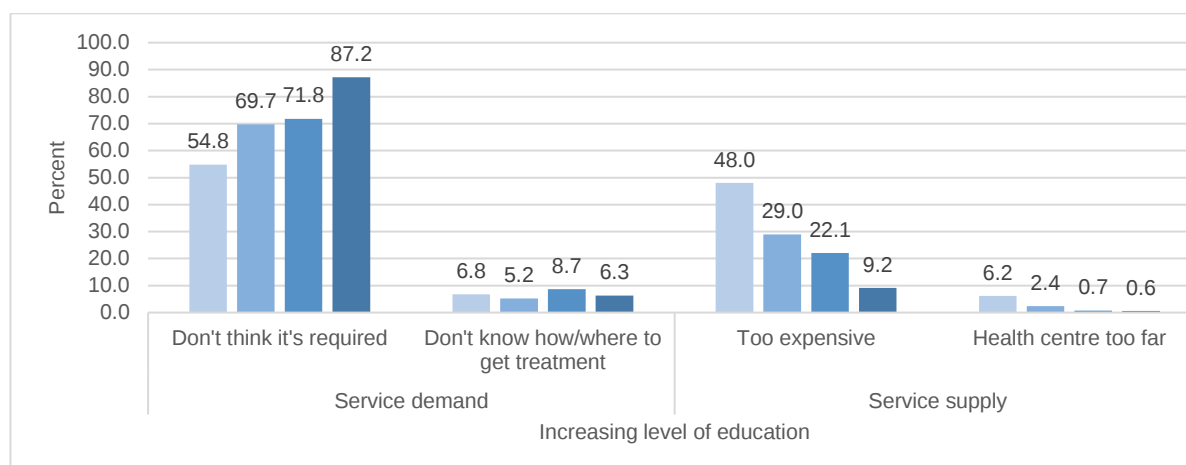
### 15.5 Reasons for not seeking care for oral health issues

The most common reason for not seeking care from the service demand side amongst adults with existing oral health issues was “Not serious enough to require treatment” (63.5%); from the service supply side, the most common reasons was “too expensive” (37.1%) (Table 15.6).

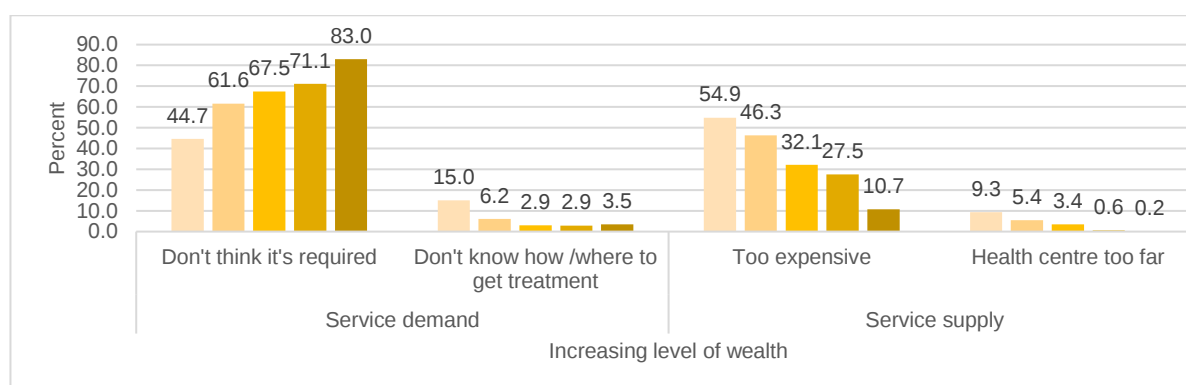
#### Patterns by background characteristics (Table 15.6):

- Adults who were younger were more likely to report “don’t think it’s required” as their reason for not seeking care, and less likely to find services “too expensive”, followed by also more likely to report “don’t know how/where to get treatment”.
- Adults with lower levels of education and household wealth were less likely to state “don’t think it’s required”, and more likely to find care services “too expensive” and “health center too far” (Figure 15.6 and Figure 15.7).
- On the service supply side, Sylhet and Chattogram had the highest reporting of care services being too expensive, 47.7% and 46.9% respectively. Mymensingh and Rajshahi had the highest reporting of health center being too far, 14.8% and 10.3% respectively.

**Figure 15.6 Differentials in reasons for not seeking care amongst adults aged 15-69 with existing oral health issues by education, Bangladesh STEPs Survey 2018**



**Figure 15.7 Differentials in reasons for not seeking care amongst adults aged 15-69 with existing oral health issues by wealth, Bangladesh STEPs Survey 2018**



### List of Tables:

For more information on oral health, see the following tables:

Table 15.1 Oral hygiene practices: all respondents

Table 15.2 Care seeking for oral health issues through visiting a dentist: all respondents

Table 15.3 Self-reported oral health issues/problems: all respondents

Table 15.4 Care seeking for oral health issues through different health facilities: all respondents with existing oral health issues

Table 15.5 Reason for not seeking care for oral health issues: respondents with existing oral health issues

**Table 15.1 Oral hygiene practices: all respondents**

Percent distribution of respondents age 18-69 years with different oral hygiene practices, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Cleaning of teeth  |                        |       | Number of respondents (N) | Percent of respondents using different cleaning materials on usual basis among those who cleaned their teeth |            |                                |          |                             |                     | Number of respondents (N) |
|---------------------------|--------------------|------------------------|-------|---------------------------|--------------------------------------------------------------------------------------------------------------|------------|--------------------------------|----------|-----------------------------|---------------------|---------------------------|
|                           | Daily <sup>1</sup> | Non-daily <sup>2</sup> | Never |                           | Toothpaste                                                                                                   | Toothbrush | Wooden toothpicks <sup>3</sup> | Charcoal | Chewstick/ Miswak/ Dattiwan | Others <sup>4</sup> |                           |
| <b>Age</b>                |                    |                        |       |                           |                                                                                                              |            |                                |          |                             |                     |                           |
| 18-24                     | 100.0              | 0.0                    | 0.0   | 1026                      | 74.5                                                                                                         | 82.6       | 2.1                            | 17.3     | 9.3                         | 15.9                | 1025                      |
| 25-39                     | 99.4               | 0.3                    | 0.2   | 3489                      | 62.2                                                                                                         | 73.1       | 4.1                            | 18.2     | 14.0                        | 22.2                | 3483                      |
| 40-54                     | 98.8               | 0.9                    | 0.3   | 2503                      | 45.1                                                                                                         | 52.0       | 7.8                            | 27.3     | 19.4                        | 26.5                | 2499                      |
| 55-69                     | 98.0               | 1.2                    | 0.9   | 1167                      | 31.3                                                                                                         | 36.9       | 7.5                            | 32.7     | 24.3                        | 28.5                | 1157                      |
| <b>Sex</b>                |                    |                        |       |                           |                                                                                                              |            |                                |          |                             |                     |                           |
| Women                     | 99.8               | 0.2                    | 0.0   | 4381                      | 52.3                                                                                                         | 61.9       | 3.5                            | 26.3     | 9.1                         | 22.3                | 4378                      |
| Men                       | 98.6               | 0.8                    | 0.6   | 3804                      | 61.2                                                                                                         | 68.7       | 6.3                            | 17.9     | 22.4                        | 22.9                | 3786                      |
| <b>Residence</b>          |                    |                        |       |                           |                                                                                                              |            |                                |          |                             |                     |                           |
| Rural                     | 99.2               | 0.5                    | 0.3   | 4183                      | 51.5                                                                                                         | 60.8       | 5.0                            | 24.3     | 17.0                        | 24.4                | 4172                      |
| Urban                     | 99.3               | 0.5                    | 0.2   | 4002                      | 74.5                                                                                                         | 80.5       | 4.5                            | 14.7     | 11.1                        | 16.4                | 3992                      |
| <b>Division</b>           |                    |                        |       |                           |                                                                                                              |            |                                |          |                             |                     |                           |
| Barishal                  | 99.9               | 0.1                    | 0.0   | 986                       | 54.2                                                                                                         | 59.9       | 0.6                            | 33.0     | 17.8                        | 15.6                | 986                       |
| Chattogram                | 98.2               | 1.0                    | 0.8   | 1053                      | 50.3                                                                                                         | 52.8       | 1.4                            | 35.4     | 2.4                         | 15.7                | 1044                      |
| Dhaka Rural               | 99.3               | 0.5                    | 0.2   | 997                       | 69.5                                                                                                         | 75.0       | 4.1                            | 15.9     | 14.8                        | 25.6                | 995                       |
| Khulna                    | 99.8               | 0.2                    | 0.0   | 1040                      | 56.1                                                                                                         | 76.1       | 3.3                            | 10.8     | 16.3                        | 6.8                 | 1039                      |
| Mymensingh                | 99.6               | 0.3                    | 0.0   | 1021                      | 43.2                                                                                                         | 53.7       | 4.0                            | 33.4     | 16.4                        | 27.1                | 1019                      |
| Rajshahi                  | 98.6               | 0.9                    | 0.5   | 1066                      | 64.0                                                                                                         | 74.2       | 12.3                           | 10.3     | 34.2                        | 24.0                | 1061                      |
| Rangpur                   | 99.9               | 0.1                    | 0.1   | 1009                      | 56.1                                                                                                         | 71.1       | 5.8                            | 23.6     | 24.9                        | 24.1                | 1007                      |
| Sylhet                    | 99.9               | 0.1                    | 0.0   | 1013                      | 35.2                                                                                                         | 41.2       | 10.2                           | 22.1     | 5.2                         | 55.3                | 1013                      |
| <b>Education</b>          |                    |                        |       |                           |                                                                                                              |            |                                |          |                             |                     |                           |
| No education              | 98.6               | 0.9                    | 0.5   | 3678                      | 35.0                                                                                                         | 44.4       | 5.4                            | 33.1     | 18.2                        | 28.1                | 3662                      |
| Primary                   | 99.6               | 0.2                    | 0.2   | 2533                      | 63.6                                                                                                         | 73.6       | 4.0                            | 18.4     | 13.5                        | 22.1                | 2530                      |
| Secondary                 | 99.8               | 0.2                    | 0.0   | 888                       | 82.0                                                                                                         | 87.9       | 3.4                            | 11.0     | 11.3                        | 12.5                | 887                       |
| More than secondary       | 99.6               | 0.3                    | 0.2   | 1065                      | 90.4                                                                                                         | 95.3       | 6.2                            | 4.7      | 16.4                        | 14.0                | 1064                      |
| <b>Wealth quintile</b>    |                    |                        |       |                           |                                                                                                              |            |                                |          |                             |                     |                           |
| Lowest                    | 99.0               | 0.7                    | 0.2   | 1639                      | 33.3                                                                                                         | 46.4       | 4.2                            | 33.1     | 22.4                        | 27.6                | 1635                      |
| Second                    | 98.9               | 0.5                    | 0.6   | 1670                      | 43.9                                                                                                         | 55.2       | 4.8                            | 30.2     | 14.3                        | 25.2                | 1663                      |
| Middle                    | 99.1               | 0.4                    | 0.6   | 1451                      | 56.0                                                                                                         | 66.0       | 4.6                            | 19.9     | 17.3                        | 25.3                | 1444                      |
| Fourth                    | 99.3               | 0.7                    | 0.0   | 1506                      | 66.8                                                                                                         | 71.8       | 6.3                            | 17.1     | 13.9                        | 20.4                | 1505                      |
| Highest                   | 99.7               | 0.2                    | 0.1   | 1919                      | 83.5                                                                                                         | 86.9       | 4.5                            | 10.5     | 10.3                        | 14.3                | 1917                      |
| <b>Total (18-69)</b>      | 99.2               | 0.5                    | 0.3   | 8185                      | 56.7                                                                                                         | 65.2       | 4.9                            | 22.2     | 15.6                        | 22.6                | 8164                      |

<sup>1</sup> Once, or more than once a day; <sup>2</sup> Once/2-3 times a month or Once/2-6 times a week; <sup>3</sup> Neem stick; <sup>4</sup> Plastic toothpicks /Thread (Dental floss) / tooth powder

**Table 15.2 Care seeking for oral health issues through visiting a dentist: all respondents**

Percent distribution of respondents age 18-69 who ever visited a dentist, timing of and reasons for last visit, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Ever visited a dentist | Number of respondents (n) | Timing of most recent visit among those ever visited (year) |      |      | Reason for most recent visit among those ever visited |              | Number of respondents (n) |
|---------------------------|------------------------|---------------------------|-------------------------------------------------------------|------|------|-------------------------------------------------------|--------------|---------------------------|
|                           |                        |                           | <1                                                          | 1-5  | >5   | consultation/treatment                                | preventative |                           |
| <b>Age</b>                |                        |                           |                                                             |      |      |                                                       |              |                           |
| 18-24                     | 19.9                   | 1026                      | 55.1                                                        | 30.4 | 14.6 | 99.0                                                  | 1.0          | 223                       |
| 25-39                     | 28.4                   | 3489                      | 45.1                                                        | 35.2 | 19.7 | 99.1                                                  | 0.9          | 1039                      |
| 40-54                     | 33.4                   | 2503                      | 42.8                                                        | 35.7 | 21.6 | 99.5                                                  | 0.5          | 856                       |
| 55-69                     | 38.5                   | 1167                      | 41.3                                                        | 27.5 | 31.3 | 98.1                                                  | 1.9          | 423                       |
| <b>Sex</b>                |                        |                           |                                                             |      |      |                                                       |              |                           |
| Women                     | 29.1                   | 4381                      | 46.6                                                        | 30.3 | 23.1 | 98.1                                                  | 1.9          | 1375                      |
| Men                       | 29.0                   | 3804                      | 44.1                                                        | 35.4 | 20.5 | 99.8                                                  | 0.2          | 1166                      |
| <b>Residence</b>          |                        |                           |                                                             |      |      |                                                       |              |                           |
| Rural                     | 27.3                   | 4183                      | 43.9                                                        | 34.3 | 21.8 | 99.2                                                  | 0.8          | 1174                      |
| Urban                     | 34.9                   | 4002                      | 49.3                                                        | 28.8 | 21.9 | 98.2                                                  | 1.8          | 1367                      |
| <b>Division</b>           |                        |                           |                                                             |      |      |                                                       |              |                           |
| Barishal                  | 37.1                   | 986                       | 42.0                                                        | 37.5 | 20.5 | 99.7                                                  | 0.3          | 361                       |
| Chattogram                | 26.6                   | 1053                      | 50.2                                                        | 30.2 | 19.6 | 95.9                                                  | 4.1          | 285                       |
| Dhaka Rural               | 36.4                   | 997                       | 46.2                                                        | 29.9 | 23.9 | 99.5                                                  | 0.5          | 371                       |
| Khulna                    | 32.1                   | 1040                      | 53.7                                                        | 22.6 | 23.7 | 99.9                                                  | 0.1          | 348                       |
| Mymensingh                | 20.9                   | 1021                      | 36.1                                                        | 42.2 | 21.7 | 99.8                                                  | 0.2          | 246                       |
| Rajshahi                  | 28.9                   | 1066                      | 34.2                                                        | 44.1 | 21.7 | 99.5                                                  | 0.5          | 379                       |
| Rangpur                   | 16.4                   | 1009                      | 46.2                                                        | 39.4 | 14.4 | 99.6                                                  | 0.4          | 212                       |
| Sylhet                    | 26.9                   | 1013                      | 45.3                                                        | 31.7 | 23.0 | 99.6                                                  | 0.4          | 339                       |
| <b>Education</b>          |                        |                           |                                                             |      |      |                                                       |              |                           |
| No education              | 27.2                   | 3678                      | 47.5                                                        | 29.8 | 22.7 | 99.0                                                  | 1.0          | 998                       |
| Primary                   | 31.2                   | 2533                      | 45.1                                                        | 33.2 | 21.7 | 99.2                                                  | 0.8          | 822                       |
| Secondary                 | 29.0                   | 888                       | 43.2                                                        | 30.2 | 26.6 | 98.4                                                  | 1.6          | 306                       |
| More than secondary       | 30.5                   | 1065                      | 41.5                                                        | 43.5 | 15.0 | 98.5                                                  | 1.5          | 410                       |
| <b>Wealth quintile</b>    |                        |                           |                                                             |      |      |                                                       |              |                           |
| Lowest                    | 22.4                   | 1639                      | 50.3                                                        | 28.9 | 20.8 | 99.5                                                  | 0.5          | 343                       |
| Second                    | 24.3                   | 1670                      | 45.3                                                        | 31.7 | 23.0 | 100.0                                                 | 0.0          | 425                       |
| Middle                    | 28.5                   | 1451                      | 42.8                                                        | 32.6 | 24.6 | 99.3                                                  | 0.7          | 431                       |
| Fourth                    | 31.7                   | 1506                      | 43.6                                                        | 34.6 | 21.7 | 97.7                                                  | 2.3          | 509                       |
| Highest                   | 38.5                   | 1919                      | 45.8                                                        | 34.4 | 19.7 | 98.7                                                  | 1.3          | 833                       |
| <b>Total (18-69)</b>      | 29.0                   | 8185                      | 45.4                                                        | 32.8 | 21.8 | 98.9                                                  | 1.1          | 2541                      |

**Table 15.3 Self-reported oral health issues/problems: all respondents**

Percent distribution of respondents age 18-69 who reported experiencing different oral health problems in the past 12 months, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Oral health issues                                                 |                       |                        |                  |                |                                      |                                            | Number of respondents (N) |
|---------------------------|--------------------------------------------------------------------|-----------------------|------------------------|------------------|----------------|--------------------------------------|--------------------------------------------|---------------------------|
|                           | Pain, swelling, bleeding or discomfort of the teeth, gums or mouth | Difficulty in chewing | Difficulty in speaking | Persistent wound | Patch in mouth | Days not at work due to teeth/ mouth | Reduced participation in social activities |                           |
| <b>Age</b>                |                                                                    |                       |                        |                  |                |                                      |                                            |                           |
| 18-24                     | 29.6                                                               | 19.7                  | 10.5                   | 6.1              | 5.0            | 2.3                                  | 2.9                                        | 1026                      |
| 25-39                     | 36.2                                                               | 24.8                  | 10.4                   | 7.7              | 5.2            | 2.6                                  | 2.4                                        | 3489                      |
| 40-54                     | 44.1                                                               | 33.9                  | 17.0                   | 10.8             | 7.8            | 4.9                                  | 4.5                                        | 2503                      |
| 55-69                     | 46.9                                                               | 35.8                  | 19.2                   | 9.2              | 4.2            | 4.9                                  | 3.2                                        | 1167                      |
| <b>Sex</b>                |                                                                    |                       |                        |                  |                |                                      |                                            |                           |
| Women                     | 40.5                                                               | 31.9                  | 16.7                   | 9.6              | 5.4            | 2.9                                  | 2.5                                        | 4381                      |
| Men                       | 35.3                                                               | 22.4                  | 9.5                    | 6.6              | 5.6            | 3.9                                  | 3.6                                        | 3804                      |
| <b>Residence</b>          |                                                                    |                       |                        |                  |                |                                      |                                            |                           |
| Rural                     | 37.6                                                               | 26.9                  | 13.6                   | 8.2              | 5.2            | 3.5                                  | 3.1                                        | 4183                      |
| Urban                     | 39.1                                                               | 28.0                  | 11.6                   | 8.1              | 6.6            | 3.0                                  | 2.9                                        | 4002                      |
| <b>Division</b>           |                                                                    |                       |                        |                  |                |                                      |                                            |                           |
| Barishal                  | 41.5                                                               | 30.7                  | 11.6                   | 13.5             | 6.0            | 3.1                                  | 1.4                                        | 986                       |
| Chattogram                | 40.5                                                               | 31.7                  | 18.3                   | 9.8              | 5.1            | 3.7                                  | 4.6                                        | 1053                      |
| Dhaka Rural               | 39.2                                                               | 27.6                  | 12.2                   | 9.8              | 5.7            | 2.9                                  | 2.2                                        | 997                       |
| Khulna                    | 33.6                                                               | 24.1                  | 13.2                   | 4.8              | 2.9            | 3.2                                  | 2.2                                        | 1040                      |
| Mymensingh                | 40.2                                                               | 24.4                  | 15.1                   | 7.3              | 4.1            | 5.8                                  | 12.0                                       | 1021                      |
| Rajshahi                  | 37.2                                                               | 25.8                  | 8.1                    | 3.8              | 7.0            | 2.1                                  | 0.6                                        | 1066                      |
| Rangpur                   | 31.5                                                               | 21.7                  | 8.2                    | 7.2              | 5.8            | 1.6                                  | 0.5                                        | 1009                      |
| Sylhet                    | 38.2                                                               | 28.7                  | 16.7                   | 9.6              | 8.6            | 6.4                                  | 1.9                                        | 1013                      |
| <b>Education</b>          |                                                                    |                       |                        |                  |                |                                      |                                            |                           |
| No education              | 42.2                                                               | 31.6                  | 16.7                   | 9.6              | 6.5            | 4.8                                  | 3.8                                        | 3678                      |
| Primary                   | 37.3                                                               | 27.0                  | 11.8                   | 7.9              | 4.3            | 2.9                                  | 2.5                                        | 2533                      |
| Secondary                 | 33.8                                                               | 21.4                  | 9.6                    | 6.3              | 6.6            | 1.9                                  | 2.9                                        | 888                       |
| More than secondary       | 28.9                                                               | 18.1                  | 7.5                    | 5.9              | 3.9            | 1.0                                  | 2.0                                        | 1065                      |
| <b>Wealth quintile</b>    |                                                                    |                       |                        |                  |                |                                      |                                            |                           |
| Lowest                    | 40.1                                                               | 28.0                  | 13.7                   | 6.9              | 5.3            | 3.6                                  | 3.8                                        | 1639                      |
| Second                    | 37.7                                                               | 28.2                  | 14.9                   | 8.8              | 7.2            | 4.4                                  | 4.6                                        | 1670                      |
| Middle                    | 34.5                                                               | 25.1                  | 13.6                   | 7.8              | 4.8            | 3.3                                  | 2.3                                        | 1451                      |
| Fourth                    | 38.2                                                               | 28.9                  | 13.6                   | 8.5              | 4.3            | 3.1                                  | 2.4                                        | 1506                      |
| Highest                   | 39.3                                                               | 25.7                  | 9.9                    | 8.9              | 6.1            | 2.4                                  | 2.3                                        | 1919                      |
| <b>Total (18-69)</b>      | 38.0                                                               | 27.2                  | 13.2                   | 8.2              | 5.5            | 3.4                                  | 3.1                                        | 8185                      |

**Table 15.4 Care seeking for oral health issues through different health facilities: all respondents with existing oral health issues**

Percent distribution of respondents age 18-69 who reported seeking care from different types of health facilities amongst those with reported existing oral health issues, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Visited health facility for existing oral health issues | Number of respondents (N) | Source of care for oral health issues <sup>1</sup> |                                |                                        |                         |                                                         | n    |
|---------------------------|---------------------------------------------------------|---------------------------|----------------------------------------------------|--------------------------------|----------------------------------------|-------------------------|---------------------------------------------------------|------|
|                           |                                                         |                           | Govt. health facilities only                       | Private health facilities only | Both govt. & private health facilities | Private Chamber/ clinic | Medicine shops, village doctors and others <sup>2</sup> |      |
| <b>Age</b>                |                                                         |                           |                                                    |                                |                                        |                         |                                                         |      |
| 18-24                     | 51.4                                                    | 249                       | 7.9                                                | 4.4                            | 0.0                                    | 38.2                    | 50.4                                                    | 123  |
| 25-39                     | 53.0                                                    | 1025                      | 12.8                                               | 13.0                           | 0.0                                    | 34.7                    | 44.8                                                    | 539  |
| 40-54                     | 49.3                                                    | 886                       | 15.0                                               | 7.4                            | 0.8                                    | 35.6                    | 44.5                                                    | 440  |
| 55-69                     | 52.2                                                    | 467                       | 7.7                                                | 6.0                            | 0.5                                    | 36.9                    | 51.0                                                    | 225  |
| <b>Sex</b>                |                                                         |                           |                                                    |                                |                                        |                         |                                                         |      |
| Women                     | 49.8                                                    | 1543                      | 9.3                                                | 8.3                            | 0.0                                    | 36.9                    | 47.7                                                    | 760  |
| Men                       | 54.2                                                    | 1084                      | 13.9                                               | 9.2                            | 0.6                                    | 35.0                    | 46.3                                                    | 567  |
| <b>Residence</b>          |                                                         |                           |                                                    |                                |                                        |                         |                                                         |      |
| Rural                     | 50.0                                                    | 1372                      | 11.3                                               | 7.4                            | 0.3                                    | 32.7                    | 51.7                                                    | 637  |
| Urban                     | 57.2                                                    | 1255                      | 11.4                                               | 12.5                           | 0.3                                    | 45.7                    | 33.5                                                    | 690  |
| <b>Division</b>           |                                                         |                           |                                                    |                                |                                        |                         |                                                         |      |
| Barishal                  | 39.0                                                    | 339                       | 14.2                                               | 2.1                            | 0.0                                    | 47.2                    | 41.2                                                    | 147  |
| Chattogram                | 47.8                                                    | 371                       | 10.6                                               | 11.7                           | 0.0                                    | 21.7                    | 57.1                                                    | 179  |
| Dhaka Rural               | 64.0                                                    | 326                       | 13.1                                               | 12.6                           | 0.9                                    | 48.6                    | 27.8                                                    | 204  |
| Khulna                    | 51.8                                                    | 264                       | 8.3                                                | 6.8                            | 0.0                                    | 42.7                    | 50.2                                                    | 138  |
| Mymensingh                | 31.5                                                    | 376                       | 25.6                                               | 4.6                            | 0.0                                    | 19.2                    | 49.2                                                    | 139  |
| Rajshahi                  | 55.6                                                    | 323                       | 8.3                                                | 5.1                            | 0.0                                    | 37.1                    | 58.6                                                    | 172  |
| Rangpur                   | 50.8                                                    | 259                       | 7.1                                                | 3.9                            | 0.0                                    | 31.6                    | 57.4                                                    | 140  |
| Sylhet                    | 54.6                                                    | 369                       | 5.7                                                | 4.7                            | 0.0                                    | 27.2                    | 64.7                                                    | 208  |
| <b>Education</b>          |                                                         |                           |                                                    |                                |                                        |                         |                                                         |      |
| No education              | 48.6                                                    | 1349                      | 9.5                                                | 5.4                            | 0.0                                    | 32.4                    | 55.7                                                    | 602  |
| Primary                   | 55.5                                                    | 781                       | 10.4                                               | 10.8                           | 0.9                                    | 35.9                    | 46.6                                                    | 442  |
| Secondary                 | 51.7                                                    | 233                       | 12.8                                               | 16.4                           | 0.0                                    | 34.4                    | 39.9                                                    | 124  |
| More than secondary       | 56.7                                                    | 254                       | 21.4                                               | 10.0                           | 0.0                                    | 55.7                    | 14.0                                                    | 155  |
| <b>Wealth quintile</b>    |                                                         |                           |                                                    |                                |                                        |                         |                                                         |      |
| Lowest                    | 44.6                                                    | 565                       | 10.2                                               | 2.9                            | 0.0                                    | 24.3                    | 65.6                                                    | 219  |
| Second                    | 44.3                                                    | 577                       | 8.5                                                | 5.0                            | 0.6                                    | 26.6                    | 60.4                                                    | 256  |
| Middle                    | 51.0                                                    | 425                       | 15.3                                               | 9.8                            | 0.0                                    | 37.1                    | 45.2                                                    | 222  |
| Fourth                    | 56.6                                                    | 483                       | 9.8                                                | 9.1                            | 0.3                                    | 40.7                    | 41.8                                                    | 263  |
| Highest                   | 63.0                                                    | 577                       | 12.9                                               | 14.9                           | 0.5                                    | 47.2                    | 28.7                                                    | 367  |
| <b>Total (18-69)</b>      | 51.7                                                    | 2627                      | 11.3                                               | 8.7                            | 0.3                                    | 36.0                    | 47.1                                                    | 1327 |

<sup>1</sup> This is a multiple choice questions, statistics for "private chamber/clinics" and "medicine shops, village doctors and others" are non-exclusive to other categories. <sup>2</sup>Other includes alternative medicines, ayurvedic/homeopathic/Unani providers and traditional healers and others.

**Table 15.5 Reason for not seeking care for oral health issues: respondents with existing oral health issues**

Percent distribution of respondents age 18-69 that gave different reasons for not seeking care for existing oral health issues, by background characteristics, [Bangladesh, 2018]

| Background characteristic | Service demand            |                                        |                  |                   |                             | Service supply |                       |              | Number of respondents (n) |
|---------------------------|---------------------------|----------------------------------------|------------------|-------------------|-----------------------------|----------------|-----------------------|--------------|---------------------------|
|                           | Don't think it's required | Don't know how /where to get treatment | Didn't have time | Fear of procedure | Family member did not allow | Too expensive  | Health centre too far | Poor service |                           |
| <b>Age</b>                |                           |                                        |                  |                   |                             |                |                       |              |                           |
| 18-24                     | 74.9                      | 9.2                                    | 1.3              | 5.0               | 0.8                         | 19.9           | 0.4                   | 0.0          | 126                       |
| 25-39                     | 64.8                      | 7.9                                    | 7.9              | 1.0               | 1.3                         | 35.7           | 3.4                   | 0.4          | 486                       |
| 40-54                     | 57.8                      | 5.3                                    | 4.8              | 2.2               | 0.5                         | 46.4           | 4.9                   | 0.5          | 446                       |
| 55-69                     | 57.8                      | 4.0                                    | 3.2              | 2.6               | 0.4                         | 44.0           | 8.9                   | 2.0          | 242                       |
| <b>Sex</b>                |                           |                                        |                  |                   |                             |                |                       |              |                           |
| Women                     | 56.6                      | 8.5                                    | 2.1              | 3.2               | 1.0                         | 45.9           | 6.8                   | 1.0          | 783                       |
| Men                       | 73.9                      | 4.0                                    | 9.2              | 1.1               | 0.5                         | 23.9           | 0.5                   | 0.2          | 517                       |
| <b>Residence</b>          |                           |                                        |                  |                   |                             |                |                       |              |                           |
| Rural                     | 62.1                      | 7.4                                    | 5.1              | 1.9               | 0.7                         | 39.9           | 5.1                   | 0.7          | 735                       |
| Urban                     | 69.1                      | 4.0                                    | 4.3              | 4.2               | 1.3                         | 26.1           | 1.0                   | 0.6          | 565                       |
| <b>Division</b>           |                           |                                        |                  |                   |                             |                |                       |              |                           |
| Barishal                  | 65.4                      | 6.4                                    | 7.6              | 4.0               | 0.7                         | 44.1           | 0.5                   | 0.0          | 192                       |
| Chattogram                | 61.8                      | 2.7                                    | 7.3              | 3.8               | 0.5                         | 46.9           | 2.5                   | 2.4          | 192                       |
| Dhaka                     | 66.0                      | 2.3                                    | 3.0              | 1.7               | 1.0                         | 24.1           | 0.0                   | 0.4          | 122                       |
| Khulna                    | 73.6                      | 0.9                                    | 2.5              | 0.8               | 1.9                         | 29.0           | 1.1                   | 0.0          | 126                       |
| Mymensingh                | 57.9                      | 33.9                                   | 4.8              | 1.9               | 0.4                         | 41.2           | 14.8                  | 0.1          | 237                       |
| Rajshahi                  | 72.6                      | 0.7                                    | 0.7              | 1.2               | 0.8                         | 24.7           | 10.3                  | 0.0          | 151                       |
| Rangpur                   | 50.1                      | 0.8                                    | 3.9              | 2.3               | 0.0                         | 40.4           | 1.9                   | 0.0          | 119                       |
| Sylhet                    | 58.4                      | 3.5                                    | 10.3             | 2.3               | 2.0                         | 47.7           | 3.6                   | 0.1          | 161                       |
| <b>Education</b>          |                           |                                        |                  |                   |                             |                |                       |              |                           |
| No education              | 54.8                      | 6.8                                    | 4.1              | 3.3               | 0.4                         | 48.0           | 6.2                   | 0.9          | 747                       |
| Primary                   | 69.7                      | 5.2                                    | 4.9              | 0.6               | 1.9                         | 29.0           | 2.4                   | 0.0          | 339                       |
| Secondary                 | 71.8                      | 8.7                                    | 6.2              | 2.8               | 0.4                         | 22.1           | 0.7                   | 1.5          | 109                       |
| More than secondary       | 87.2                      | 6.3                                    | 9.1              | 1.7               | 0.0                         | 9.2            | 0.6                   | 1.0          | 99                        |
| <b>Wealth quintile</b>    |                           |                                        |                  |                   |                             |                |                       |              |                           |
| Lowest                    | 44.7                      | 15.0                                   | 2.7              | 3.1               | 0.7                         | 54.9           | 9.3                   | 0.0          | 346                       |
| Second                    | 61.6                      | 6.2                                    | 3.9              | 0.9               | 0.6                         | 46.3           | 5.4                   | 1.4          | 321                       |
| Middle                    | 67.5                      | 2.9                                    | 8.7              | 3.9               | 1.1                         | 32.1           | 3.4                   | 0.7          | 203                       |
| Fourth                    | 71.1                      | 2.9                                    | 5.1              | 2.0               | 1.5                         | 27.5           | 0.6                   | 1.1          | 220                       |
| Highest                   | 83.0                      | 3.5                                    | 5.7              | 2.3               | 0.0                         | 10.7           | 0.2                   | 0.2          | 210                       |
| <b>Total (18-69)</b>      | 63.5                      | 6.7                                    | 4.9              | 2.4               | 0.8                         | 37.1           | 4.3                   | 0.7          | 1300                      |

\* interpret with caution due to small sample size

## Chapter 16 Policy Recommendations

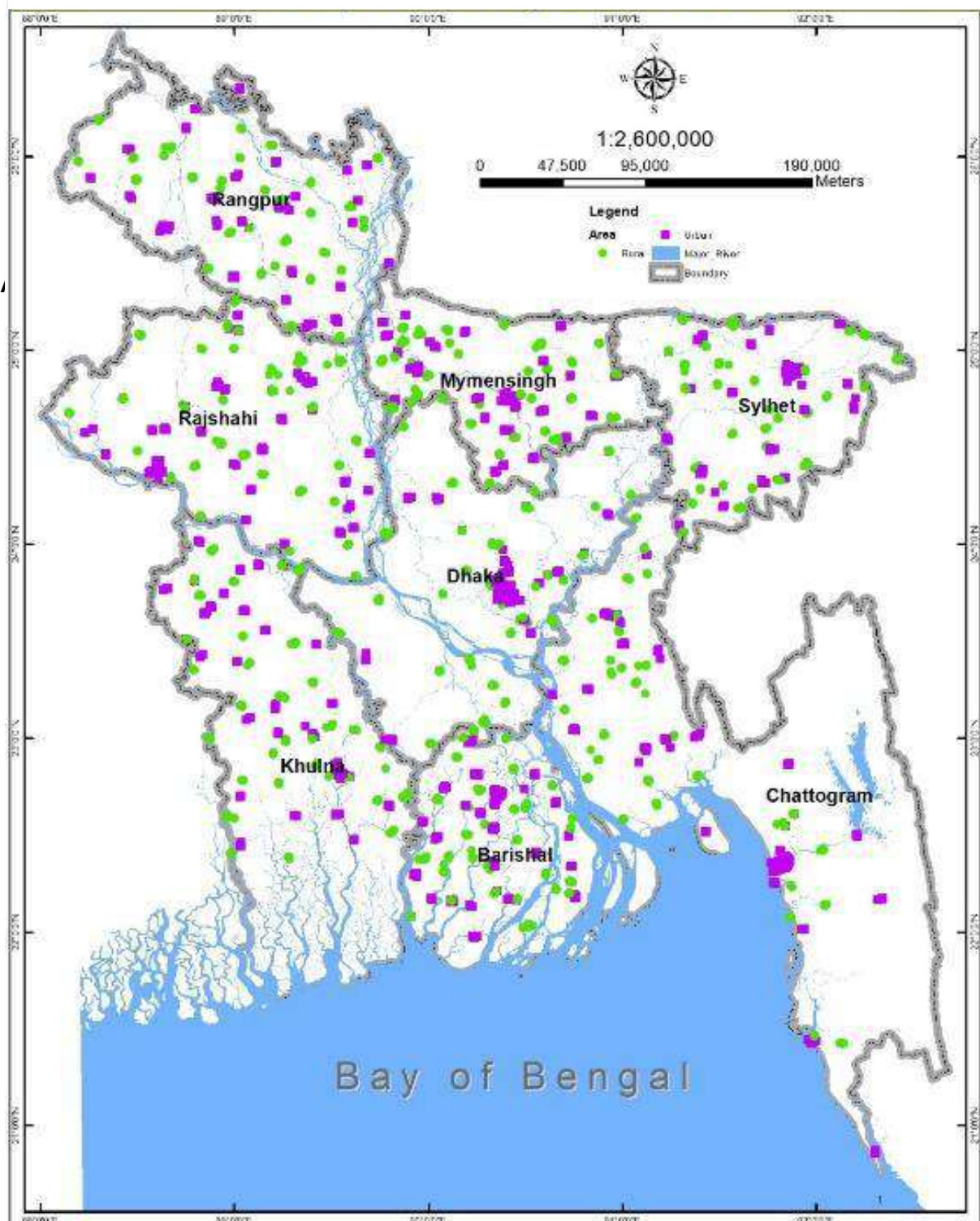
This second nationally representative survey provides essential information on key indicators of NCD risk factors and creates an opportunity for policy makers, program managers, academicians, development partners and researchers to adopt necessary interventions to combat the burden of NCDs in Bangladesh. Inadequate intake of fruit and vegetables, use of tobacco, low physical activity, obesity (especially central), high blood pressure, diabetes mellitus, extra salt intake, dyslipidemia and binge drinking among drinkers are identified risk factors for NCDs in Bangladeshi adults. Majority (70.9%) has at least one risk factor and substantial proportion of people have two or more risk factors. Based on these findings, the specific recommendations are:

1. To build mass awareness on the risk factors of NCDs, multidimensional and multilateral collaborative health education interventions are warranted through mass media, campaigns and school curricula.
2. To raise awareness of the people on non-communicable diseases, comprehensive population-based approach using community-oriented health care system for NCD prevention is essential to in Bangladesh
3. Effective strategies to promote accessibility and availability of fruits and vegetables round the year for all people should be devised and implemented.
4. To promote empowering environment for physical activity in both urban and rural settings, appropriate measures should be undertaken, with emphasis on physical activity, leisure time physical activity in particular,
5. For early detection and treatment of hypertension or high blood pressure, initiatives and health programs for periodic checkup of blood pressure should be launched throughout the country.
6. To reduce the prevalence of diabetes mellitus, early diagnosis and prompt treatment through primary health care system should be established throughout the country.
7. To establish national database on NCD risk factors, digital NCD surveillance system must be developed under the leadership of relevant public health institute.
8. To reduce tobacco consumption behavior of the people, adequate enforcement of the Act is necessary. Necessary amendment of the Act is also required to match with the provisions of WHO Framework Convention on Tobacco Control and close all the loop holes in the tobacco control program.
9. To prevent obesity and dyslipidemia, relevant health information communication and health education interventions are indispensable to implement throughout the country with special emphasis on the urban people.

10. Diseases specific screening programs also should be launched for early detection NCDs like cervical cancer among the females.
11. To improve oral health status of the people, awareness building interventions on dental care, oral hygiene and healthcare utilization should be commenced in the country with special emphasis on the rural people.
12. To reduce the risk of NCDs, drug abuse, alcohol addiction, special measures and interventions focused on lifestyle modification and behavior change communication are necessary to be portrayed in the country.

## Annexure A

**Map of Bangladesh showing study sites of STEPS Bangladesh 2018**



## Questionnaire (English)

### **STEP Survey for NCD Risk Factors in Bangladesh, 2018**



#### **Survey Instrument (English)**

**Date: 21 February 2018**

**(Version 2.0)**



**National Institute of Preventive and Social Medicine, (NIPSOM)**

Mohakhali, Dhaka-1212

[www.nipsom.gov.bd](http://www.nipsom.gov.bd)



## Instructions

Parenthesis in Third bracket [...] = Instruction for Interviewer. Need not to read out to the respondents

Right side of the Column indicate the Question Code = Example C1, TP1, etc.

Blue words in the Question = Need to emphasize when read out to the respondents



### Survey Information

| Location and Date | Response             | Code |
|-------------------|----------------------|------|
| PSU ID            | <input type="text"/> | I1   |
| Interviewer ID    | <input type="text"/> | I3   |

### Household Information

[THE HOUSEHOLD SCREENING RESPONDENT SHOULD BE 18 YEARS OF AGE OR OLDER AND YOU MUST BE CONFIDENT THAT THIS PERSON CAN PROVIDE ACCURATE INFORMATION ABOUT ALL MEMBERS OF THE HOUSEHOLD. IF NEEDED, VERIFY THE AGE OF THE HOUSEHOLD SCREENING RESPONDENT TO MAKE SURE HE/SHE IS 18 YEARS OF AGE OR OLDER.

THE HOUSEHOLD SCREENING RESPONDENT CAN BE LESS THAN 18 YEARS OLD, ONLY IF NO HOUSEHOLD MEMBERS AGED 18 YEARS AND ABOVE ARE AVAILABLE.]

#### INTRO:

National Institute of Preventive and Social Medicine (NIPSOM) under the Ministry of Health and Family Welfare (MOHFW) of Bangladesh is going to implement the STEPS Survey for NCD Risk Factors among 18-69 years old adults in Bangladesh and your household has been selected scientifically for participation. It is very important that each participant in the survey should participate for the success of this survey. All information gathered for this survey will be kept strictly confidential. I have a few questions to find out who in your household is/are eligible to participate.



### Survey Information

| Location and Date | Response             | Code |
|-------------------|----------------------|------|
| PSU ID            | <input type="text"/> | I1   |
| Interviewer ID    | <input type="text"/> | I3   |

### Household Information

[THE HOUSEHOLD SCREENING RESPONDENT SHOULD BE 18 YEARS OF AGE OR OLDER AND YOU MUST BE CONFIDENT THAT THIS PERSON CAN PROVIDE ACCURATE INFORMATION ABOUT ALL MEMBERS OF THE HOUSEHOLD. IF NEEDED, VERIFY THE AGE OF THE HOUSEHOLD SCREENING RESPONDENT TO MAKE SURE HE/SHE IS 18 YEARS OF AGE OR OLDER.

THE HOUSEHOLD SCREENING RESPONDENT CAN BE LESS THAN 18 YEARS OLD, ONLY IF NO HOUSEHOLD MEMBERS AGED 18 YEARS AND ABOVE ARE AVAILABLE.]

#### INTRO:

National Institute of Preventive and Social Medicine (NIPSOM) under the Ministry of Health and Family Welfare (MOHFW) of Bangladesh is going to implement the STEPS Survey for NCD Risk Factors among 18-69 years old adults in Bangladesh and your household has been selected scientifically for participation. It is very important that each participant in the survey should participate for the success of this survey. All information gathered for this survey will be kept strictly confidential. I have a few questions to find out who in your household is/are eligible to participate.



**HH4.** Now I- would like to collect information about male/female who live in this household and who are 18–69 years old. Let's start listing the male/female from oldest to youngest.

What is the (FILL: oldest/next oldest) person's full name?

What is his/her Age?

| Male HH ----- 1   |                |                |                           |                           |  |
|-------------------|----------------|----------------|---------------------------|---------------------------|--|
| Female HH ----- 2 |                |                |                           |                           |  |
|                   | Name           | Age in Years   | Gender                    |                           |  |
|                   |                |                | Male                      | Female                    |  |
| 1                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 2                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 3                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 4                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 5                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 6                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 7                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 8                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 9                 | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |
| 10                | -----<br>----- | -----<br>----- | <input type="text"/><br>1 | <input type="text"/><br>2 |  |



## Informed Consent—1 (for step 1 & 2)

Dear Participant,

My name is (Interviewer's name) ..... I am a professional interviewer from National Institute of Preventive and Social Medicine (NIPSOM) which is under the Ministry of Health and Family Welfare, Bangladesh. NIPSOM is implementing a survey titled 'STEPS survey for NCD risk factors in Bangladesh 2018' with technical assistance from World Health Organization (WHO). The information revealed from this survey will be used for planning public health policies and strategies by the Government of Bangladesh to combat Non-Communicable Diseases (NCDs) in Bangladesh. This survey is currently taking place in several countries around the world.

Your household have been selected randomly to participate in this survey. You have been also selected randomly as the participant for this survey. So, I would like to interview you. Your responses are very important to us and the country. Your answers will represent many other persons. The interview will last approximately 45 minutes. Your participation in this survey is entirely voluntary. There will be no penalty and you will not lose any services that you would normally receive if you do not participate in this survey.

Information you will provide will be totally confidential and will not be disclosed to anyone including your family members. It will only be used for research purposes. Your name, address, and other personal information will be removed, and only a code will be used to connect your name and your answers without identifying you. You may be contacted by the survey team again only if it is necessary to complete the information on the survey.

Your participation is voluntary and you can withdraw from the survey after having agreed to participate. No monetary compensation will be provided to you for participating this Survey. You can withdraw your consent from the survey after having agreed to participate. You are free to refuse to answer any question that is asked in the questionnaire. If you have any question(s) about this survey you may ask me or contact [Prof. Dr Md. Ziaul Islam, Head, Department of Community Medicine, NIPSOM and Mohakhali, Dhaka 1212, Bangladesh, Mob.01726693778].

Signing this consent form indicates that you have understood what will be expected from you and are you are willing to participate in this survey.

|                     |             |  |
|---------------------|-------------|--|
| Read by Participant | Interviewer |  |
| Agreed              | Refused     |  |

I hereby provide INFORMED CONSENT to take part in Steps 1 and 2 of the STEPS survey for NCD risk factors in Bangladesh 2018.

Signature and Name of the participant:  
Date:

Signature and Name of the Enumerator:  
Date:

OR

|                                                                                                                         |                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Finger print</b></p> <div style="border: 1px solid black; width: 150px; height: 100px; margin: 20px auto;"></div> | <p><b>Witness</b></p> <p>1. Name _____</p> <p>Relation _____</p> <p>Signature _____</p> <p>2. Name _____</p> <p>Relation _____</p> <p>Signature _____</p> |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|



| Consent and Name                                  | Response                                                                                    | Code |
|---------------------------------------------------|---------------------------------------------------------------------------------------------|------|
| Consent has been read and obtained                | Yes 1<br>No 2<br><i>[If 'No', END the interview]</i>                                        | I5   |
| Family Full name                                  | .....                                                                                       | I8   |
| Family Nick name                                  | .....                                                                                       | I9   |
| <b>Additional Information that may be helpful</b> |                                                                                             |      |
| Contact number of respondent                      | 1. .... [Enter '88' if refused and '99' if not available] <i>[if 88 or 99 go to 'I11a']</i> | I10  |
| Do you have alternate phone number?               | 1. Yes<br>2. No <i>[if No go to 'I11a']</i>                                                 | I10a |
| Alternate phone number                            | 2. .... [Enter '88' if refused and '99' if not available]                                   | I10b |
| NID (Smart card) number                           | .....<br>Not found 77 <i>[go to 'I11b']</i><br>Refused 88                                   | I11a |
| NID (Old) number                                  | .....<br>Not found 77 <i>[go to 'I11c']</i><br>Refused 88                                   | I11b |
| Birth Certificate Number                          | .....<br>Not found 77<br>Refused 88                                                         | I11c |



## Step 1 Demographic Information

| CORE: Demographic Information |                                                               |                                                                                      |             |
|-------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------|
|                               | Question                                                      | Response                                                                             | Code        |
| 1                             | Sex of the respondent                                         | Male 1<br>Female 2                                                                   | C1          |
| 2                             | What is your date of birth?<br><i>Don't Know 77 77 7777</i>   | <div> <div>dd</div> <div>mm</div> <div>year</div> </div> <i>[If Known, Go to C4]</i> | C2<br>(a-c) |
| 3                             | How old are you?                                              | Years <div></div>                                                                    | C3          |
| 4                             | Years of education you have completed (excluding pre-school)? | Years <div></div><br>If Don't know enter '77' and Refuse enter '88'                  | C4          |

| EXPANDED: Demographic Information |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                             |             |
|-----------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 5                                 | What is the <b>highest level of education</b> you have completed?                           | No formal schooling 1<br>Less than primary school 2<br>Primary school completed 3<br>Secondary school completed 4<br>Higher secondary school completed 5<br>College/University completed 6<br>Post graduate degree 7<br>Refused 88                                                                                                                                                                          | C5          |
| 6                                 | What is your religion?                                                                      | Islam 1<br>Hinduism 2<br>Christianity 3<br>Buddhism 4<br>Others (Please specify.....) C6other<br>Refuse 88                                                                                                                                                                                                                                                                                                  | C6          |
| 7                                 | What is your <b>marital status</b> ?                                                        | Never married 1<br>Currently married 2<br>Separated 3<br>Divorced 4<br>Widowed 5<br>Refused 88                                                                                                                                                                                                                                                                                                              | C7          |
| 8                                 | Which of the following best describes your <b>main work</b> status over the past 12 months? | Government Employee 1<br>Non-Government Employee 2<br>Business (Small) 3<br>Business (Large) 4<br>Agriculture (land owner and farmer) 5<br>Agriculture labourer (other's land) 6<br>Industrial Labourer 7<br>Day labourer 8<br>Transport labourer 9<br>Other Self Employed 10<br>Student 11<br>Home maker/Household work 12<br>Retired 13<br>Unemployed (able to work) 14<br>Unemployed (unable to work) 15 | C8/C8others |



|    |                                                                                                                                                                                                                          |                                                                                                                   |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----|
|    |                                                                                                                                                                                                                          | Paid domestic worker 16<br>Blacksmith/Goldsmith/Tati 17<br><br>Others (Please specify.....) C8others<br>Refuse 88 |     |
| 9a | In total, how many persons live in this household (including infants)?<br><br>[INCLUDE ANYONE WHO CONSIDERS THIS HOUSEHOLD AS THEIR USUAL PLACE OF RESIDENCE AND STAYED LAST NIGHT AT HOME]                              | Number of People <input type="text"/><br><br>Enter '77' if not known and '88' for refused.                        | C9a |
| 9b | How many people aged 18–69 years, including yourself, live in your household? (include both males and females)<br><br>Number of people aged 18 years cannot be less than 1 or bigger than total person in the household. | Number of People <input type="text"/><br><br>Enter '77' if not known and '88' for refused.                        | C9b |

| EXPANDED: Demographic Information |                                                                                                                 |                            |       |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------|-------|
|                                   | Question                                                                                                        | Response                   | Code  |
| 10                                | Please ask / observe - whether this household or any person who lives in the household has the following items: |                            |       |
|                                   | a. [Electricity]                                                                                                | Yes 1<br>No 2<br>Refuse 88 | Cex1a |
|                                   | b. [Flush toilet]                                                                                               | Yes 1<br>No 2<br>Refuse 88 | Cex1b |
|                                   | c. [Land Phone]                                                                                                 | Yes 1<br>No 2<br>Refuse 88 | Cex1c |
|                                   | d. [Mobile phone]                                                                                               | Yes 1<br>No 2<br>Refuse 88 | Cex1d |
|                                   | e. [Television]                                                                                                 | Yes 1<br>No 2<br>Refuse 88 | Cex1e |
|                                   | f.                                                                                                              |                            |       |
|                                   | g. [Refrigerator]                                                                                               | Yes 1<br>No 2<br>Refuse 88 | Cex1g |
|                                   | h. [Car]                                                                                                        | Yes 1<br>No 2<br>Refuse 88 | Cex1h |
|                                   | i. [Moped/scooter/motorcycle/Auto-Rickshaw]                                                                     | Yes 1<br>No 2<br>Refuse 88 | Cex1i |
|                                   | j. [Washing machine]                                                                                            | Yes 1<br>No 2<br>Refuse 88 | Cex1j |
|                                   | k. [Bicycle]                                                                                                    | Yes 1<br>No 2              | Cex1k |



|    |                                                                                                                                                                                                                                                                                               |                                                                                            |             |       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------|-------|
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          |       |
|    |                                                                                                                                                                                                                                                                                               | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1l |
|    | m. [Almirah / wardrobe]                                                                                                                                                                                                                                                                       | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1m |
|    | n. [Table]                                                                                                                                                                                                                                                                                    | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1n |
|    | o. [Khat/Chowki]                                                                                                                                                                                                                                                                              | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1o |
|    | p. [Chair or Bench]                                                                                                                                                                                                                                                                           | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1p |
|    | q. [Watch or Clock]                                                                                                                                                                                                                                                                           | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1q |
|    | r. [Computer/ Laptop/Tab]                                                                                                                                                                                                                                                                     | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1r |
|    | s. [Domestic Animal<br>(Cow/ Buffalo/Goat)]                                                                                                                                                                                                                                                   | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1s |
|    | t. [Shallow Machine/Power<br>Tiller/Tractor]                                                                                                                                                                                                                                                  | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1t |
|    | u. [Rickshaw]                                                                                                                                                                                                                                                                                 | Yes                                                                                        | 1           |       |
|    |                                                                                                                                                                                                                                                                                               | No                                                                                         | 2           |       |
|    |                                                                                                                                                                                                                                                                                               | Refuse                                                                                     | 88          | Cex1u |
| 11 | What is the main material of the roof of the main house?<br>[record observation]<br><b>Instruction:</b><br>If One HH has more houses then, need to add that house's roof where respondent consider as his main house.                                                                         | Katcha (bamboo/thatched/straw/gunny)<br>Tin, Tiles or similar materials<br>Cement/concrete | 1<br>2<br>3 | Cex2  |
| 12 | What is the type of this family?<br><b>Instruction:</b><br><u>Nuclear Family:</u> Family having husband and wife or husband-wife with their child (first generation).<br><u>Joint family:</u> Family having husband-wife, their child, their parents or siblings (second or more generation). | Nuclear Family<br>Joint Family                                                             | 1<br>2      | Cex3  |



The next questions I will ask about the **fruits and vegetables** that you usually eat;  
I have a nutrition card/picture here that shows you some examples of local fruits and vegetables;  
Each picture represents the size of a serving;  
To answer these questions, please think of a typical week.

Dietary salt

With the next questions, I would like to learn more about salt in your diet. Dietary salt includes ordinary table salt, unrefined salt such as sea salt, iodized salt, salty stock cubes and powders, bit salt, testing salt and salty sauces etc. and salty sauces such as soya sauce or fish sauce (Use show card5 to 8).

The following questions are on adding salt to the food right before you eat it, on eating processed foods that are high in salt such as Fast food, Chips, Dried fish, Salty fish, Pickles, Chana Chur, Jhal Muri and questions on controlling your salt intake. Please answer the questions even if you consider yourself to eat a diet low in salt.

| Please answer the questions even if you consider yourself to eat a diet low in salt. |                                                                                                                                                                                            |                                                                            |      |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------|
|                                                                                      | Question                                                                                                                                                                                   | Response                                                                   | Code |
| 18                                                                                   | How often do you <u>add salt</u> to your food <u>right before you eat</u> it or as you are eating it? <i>[SELECT ONLY ONE]</i><br><br><i>[USE SHOWCARD – 05]</i>                           | Always 1<br>Often 2<br>Sometimes 3<br>Rarely 4<br>Never 5<br>Don't know 77 | D5a  |
| 19                                                                                   | How often do you <u>add salty sauce such as soya sauce</u> to your food <u>right before you eat</u> it or as you are eating it? <i>[SELECT ONLY ONE]</i><br><br><i>[USE SHOWCARD – 06]</i> | Always 1<br>Often 2<br>Sometimes 3<br>Rarely 4<br>Never 5<br>Don't know 77 | D5b  |



|    | Question                                                                                                                                                                                                                                                                                                                                                                                                        | Response                                                                                                     | Code |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------|
| 20 | How often do you eat <u>processed food high in salt</u> ?<br>Processed food high in salt means foods that have been altered from their natural state, such as packaged salty snacks (such as Chips, Chanachur, Jhal Muri), canned salty food including pickles and preservatives, salty food prepared at a fast food restaurant, cheese, processed meat, dried fish, salty fish etc.<br><br>(USE SHOWCARD – 07) | Always 1<br>Often 2<br>Sometimes 3<br>Rarely 4<br>Never 5<br>Don't know 77                                   | D7   |
| 21 | How much <u>salt</u> do you think you consume?<br><br><b>Instruction:</b><br>Count all sources of salt that respondent consume. Like for meal preparation, extra salt intake and others.                                                                                                                                                                                                                        | Far too much 1<br>Too much 2<br>Just the right amount 3<br>Too little 4<br>Far too little 5<br>Don't know 77 | D8a  |
| 22 | How much <u>salty sauce</u> do you think you consume?<br><br><b>Instruction:</b><br>Count all sources of sauce that respondent consume. Like for meal preparation, extra sauce intake and others.                                                                                                                                                                                                               | Far too much 1<br>Too much 2<br>Just the right amount 3<br>Too little 4<br>Far too little 5<br>Don't know 77 | D8b  |

| EXPANDED: Diet |                                                                                                                         |                                                                                                                                                                                                    |                  |
|----------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|                | Question                                                                                                                | Response                                                                                                                                                                                           | Code             |
| 23             | How much <u>extra salt</u> do you take in a typical day?<br>[USE SHOW CARD – 08]                                        | <input type="text"/> <input type="text"/> Teaspoonful (TSF)<br>Don't know 77                                                                                                                       | Dx2              |
| 24             | How important to you is <u>lowering the salt</u> in your diet?                                                          | Very important 1<br>Somewhat important 2<br>Not at all important 3<br>Don't know 77                                                                                                                | D9               |
| 25             | What is the maximum amount of salt do you think a person should take in a day from all sources?<br>[USE SHOW CARD – 08] | <input type="text"/> <input type="text"/> Teaspoonful (TSF)<br>Don't know 77                                                                                                                       | Dx3              |
| 26             | What do you think that too much salt or salty sauce in your diet can do to your health?<br>[Multiple response]          | Nothing, more salt is good for one's health 1<br>Increase blood pressure 2<br>Kidney disease 3<br>Asthma 4<br>Cancer 5<br>Tuberculosis 6<br>Others (Please specify.....) Dx4other<br>Don't know 77 | Dx4/<br>Dx4other |



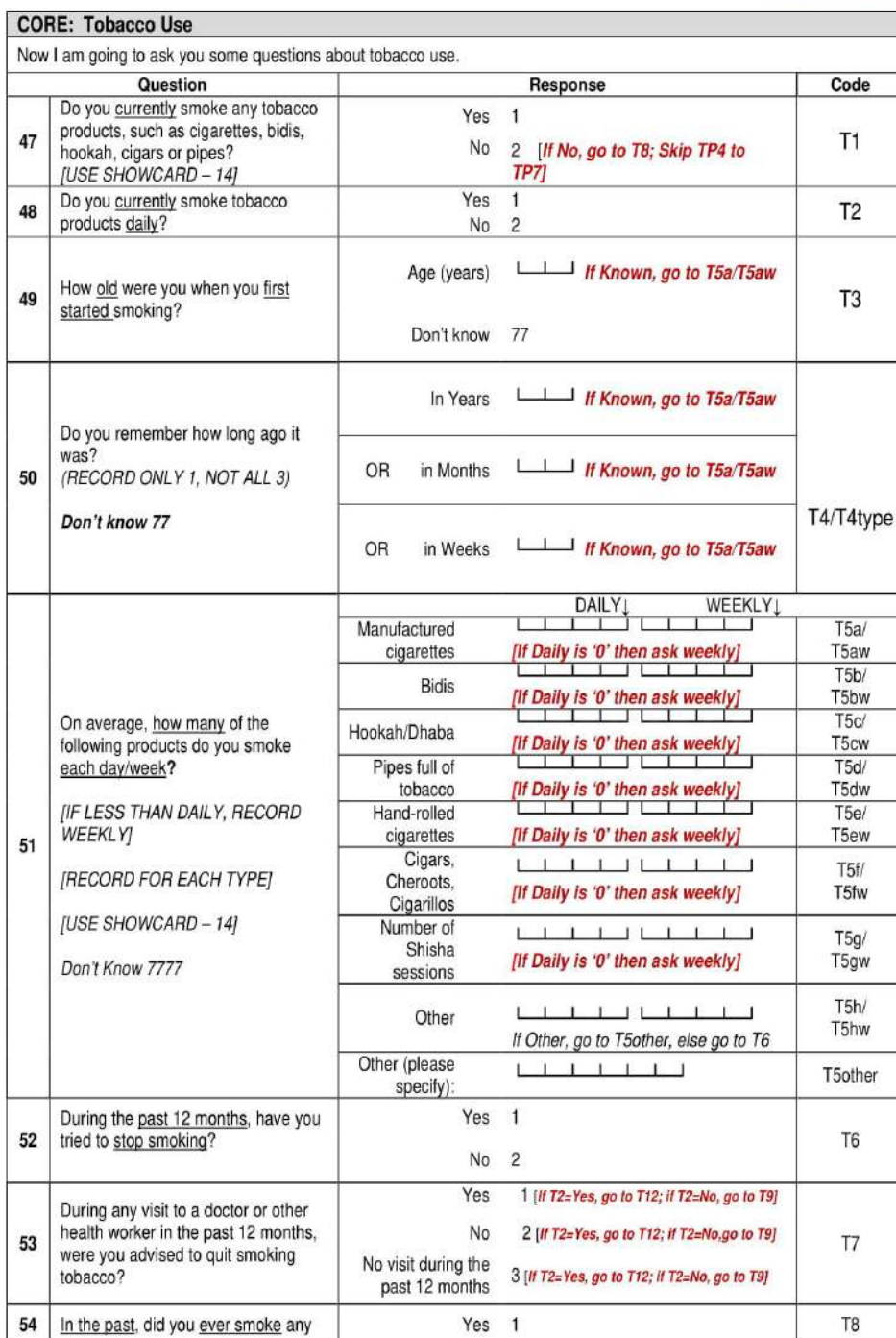
| Question |                                                                                                                                                               | Response                                                                                                                                                                             | Code             |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 27       | Currently are you doing anything on regular basis to control your salt intake?                                                                                | Yes 1<br>No 2 <i>[If 'No' go to Dx6]</i><br>Don't know 77                                                                                                                            | Dx5              |
| 28       | Do you do any of the following on a regular basis to <b>control your salt intake?</b><br>(RECORD FOR EACH)                                                    |                                                                                                                                                                                      |                  |
|          | Limit consumption of processed foods                                                                                                                          | Yes 1<br>No 2                                                                                                                                                                        | D11a             |
|          | Look at the salt or sodium content on food labels                                                                                                             | Yes 1<br>No 2                                                                                                                                                                        | D11b             |
|          | Buy low salt/sodium alternatives                                                                                                                              | Yes 1<br>No 2                                                                                                                                                                        | D11c             |
|          | Use spices other than salt when cooking                                                                                                                       | Yes 1<br>No 2                                                                                                                                                                        | D11d             |
|          | Avoid eating foods prepared outside of a home                                                                                                                 | Yes 1<br>No 2                                                                                                                                                                        | D11e             |
|          | Stop/Reduce added salt                                                                                                                                        | Yes 1<br>No 2                                                                                                                                                                        | D11f             |
|          | Do other things specifically to control your salt intake                                                                                                      | Yes 1 <i>If Yes, go to D11other</i><br>No 2                                                                                                                                          | D11g             |
|          | Other (please specify)                                                                                                                                        | _____                                                                                                                                                                                | D11other         |
| 29       | What type of <b>OIL</b> is most often used to cook food in your house ?<br>[ ANSWER ONLY ONE OPTION]                                                          | Soybean Oil 1<br>Palm Oil 2<br>Sunflower Oil 3<br>Mustard Oil 4<br>Rice bran oil 5<br>Dalda 6<br>Ghee/Butter 7<br>Not specific 8<br>Other 9<br>Others (Please specify.....) Dx6other | Dx6/<br>Dx6other |
| 30       | On often do you eat in a restaurant or take away in a week? (any of the meals (Breakfast, Lunch, Dinner))                                                     | _____ Times<br>Don't Know 77                                                                                                                                                         | Dx7              |
| 30a      | On an average how many times in a day do you eat snacks such as singara, samucha, puri, chips, chanachur, fuchka, chotpoti, jhal muri, salted biscuits, etc.? | _____ Times<br>Don't Know 77                                                                                                                                                         | Dx8              |



| CORE: Physical Activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                             |                                                                                                |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------|
| <p>Next, I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.</p> <p>Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing or hunting for food, seeking employment. In answering the following questions, '<b>vigorous-intensity activities</b>' are activities that require hard physical effort and cause large increases in breathing or heart rate, '<b>moderate-intensity activities</b>' are activities that require moderate physical effort and cause small increases in breathing or heart rate.</p> |                                                                                                                                                                                                                                                                                                                             |                                                                                                |             |
| Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                                                                    | Code                                                                                           |             |
| <b>Work</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                             |                                                                                                |             |
| 31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Does your work involve <u>vigorous-intensity activity</u> that causes large increases in breathing or heart rate like <i>carrying or lifting heavy loads, digging or construction work, reaping paddy, washing clothes, fishing by nets etc</i>, for <u>at least 10 minutes</u> continuously?<br/>[USE SHOWCARD – 9]</p> | <p>Yes 1</p> <p>No 2 [If No, go to P4]</p>                                                     | P1          |
| 32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | In a <u>typical week</u> , on how many <u>days</u> do you do vigorous-intensity activities as part of your work?                                                                                                                                                                                                            | <p>Number of days <input type="text"/></p> <p>Don't know 77<br/>[If Don't know, go to P4]</p>  | P2          |
| 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | How much time do you spend doing vigorous-intensity activities at work on a <u>typical day</u> ?                                                                                                                                                                                                                            | <p>Hours: minutes <input type="text"/> : <input type="text"/></p> <p>hrs mins</p>              | P3<br>(a-b) |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Does your work involve <u>moderate-intensity activity</u> that causes small increases in breathing or heart rate such as <i>brisk walking, carrying light loads, washing clothes</i> for at least 10 minutes continuously?<br>[USE SHOWCARD – 10]                                                                           | <p>Yes 1</p> <p>No 2 [If No, go to P7]</p>                                                     | P4          |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | In a <u>typical week</u> , on how many <u>days</u> do you do moderate-intensity activities as part of your work?                                                                                                                                                                                                            | <p>Number of days <input type="text"/></p> <p>Don't know 77<br/>[If Don't know, go to P7]</p>  | P5          |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | How much time do you spend doing moderate-intensity activities at work on a <u>typical day</u> ?                                                                                                                                                                                                                            | <p>Hours: minutes <input type="text"/> : <input type="text"/></p> <p>hrs mins</p>              | P6<br>(a-b) |
| <b>Travel to and from places</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                             |                                                                                                |             |
| <p>The next questions exclude the physical activities at work that you have already mentioned.</p> <p>Now I would like to ask you about the <u>usual way you travel</u> to and from places. For example, to work, for shopping, to market, to place of worship.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                             |                                                                                                |             |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Do you <u>walk or use a bicycle (pedal cycle)</u> for at least 10 minutes continuously to get to and from places?                                                                                                                                                                                                           | <p>Yes 1</p> <p>No 2 [If No, go to P 10]</p>                                                   | P7          |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | In a <u>typical week</u> , on how many <u>days</u> do you walk or bicycle for at least 10 minutes continuously to get to and from places?                                                                                                                                                                                   | <p>Number of days <input type="text"/></p> <p>Don't know 77<br/>[If Don't know, go to P10]</p> | P8          |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | How much time do you spend walking or bicycling for travel on a <u>typical day</u> ?                                                                                                                                                                                                                                        | <p>Hours: minutes <input type="text"/> : <input type="text"/></p> <p>hrs mins</p>              | P9<br>(a-b) |



| CORE: Physical Activity, Continued                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                    |                                                                                           |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------|
| Question                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                    | Response                                                                                  | Code         |
| <b>Recreational activities</b>                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                           |              |
| The next questions exclude the work and transport activities that you have already mentioned. Now I would like to ask you about sports, fitness and recreational activities (leisure).                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                    |                                                                                           |              |
| 40                                                                                                                                                                                                                                                                                                                                  | Do you do any <b>vigorous-intensity</b> sports, fitness or recreational ( <i>leisure</i> ) activities that cause large increases in breathing or heart rate like <i>[running, football, Kabaddi, Dariabandha, Gollachut]</i> for at least <u>10 minutes</u> continuously?<br><i>[USE SHOWCARD – 11]</i>                            | Yes 1<br><br>No 2 <i>[If No, go to P 13]</i>                                              | P10          |
| 41                                                                                                                                                                                                                                                                                                                                  | In a <u>typical week</u> , on how many <u>days</u> do you do vigorous-intensity sports, fitness or recreational ( <i>leisure</i> ) activities?                                                                                                                                                                                     | Number of days <input type="text"/><br>Don't know 77<br><i>[If Don't know, go to P13]</i> | P11          |
| 42                                                                                                                                                                                                                                                                                                                                  | <u>How much time</u> do you spend doing vigorous-intensity sports, fitness or recreational activities on a <u>typical day</u> ?                                                                                                                                                                                                    | Hours: minutes <input type="text"/> : <input type="text"/><br>hrs mins                    | P12<br>(a-b) |
| 43                                                                                                                                                                                                                                                                                                                                  | Do you do any <b>moderate-intensity</b> sports, fitness or recreational ( <i>leisure</i> ) activities that cause a small increase in breathing or heart rate such as brisk walking, <i>running on treadmill, cycling, swimming, volleyball, jogging</i> for at least <u>10 minutes</u> continuously?<br><i>[USE SHOWCARD – 12]</i> | Yes 1<br><br>No 2 <i>[If No, go to P16]</i>                                               | P13          |
| 44                                                                                                                                                                                                                                                                                                                                  | In a <u>typical week</u> , on how many <u>days</u> do you do moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities?                                                                                                                                                                                     | Number of days <input type="text"/><br>Don't know 77<br><i>[If Don't know, go to P16]</i> | P14          |
| 45                                                                                                                                                                                                                                                                                                                                  | <u>How much time</u> do you spend doing moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities on a <u>typical day</u> ?                                                                                                                                                                                 | Hours : minutes <input type="text"/> : <input type="text"/><br>hrs mins                   | P15<br>(a-b) |
| <b>EXPANDED: Physical Activity</b>                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                    |                                                                                           |              |
| <b>Sedentary behaviour</b>                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                    |                                                                                           |              |
| The following question is about sitting or reclining at work, at home, getting to and from places, or with friends including time spent sitting at a desk, sitting with friends, traveling in car, bus, train, reading, playing cards or watching television, but do not include time spent sleeping.<br><i>[USE SHOWCARD – 13]</i> |                                                                                                                                                                                                                                                                                                                                    |                                                                                           |              |
| 46                                                                                                                                                                                                                                                                                                                                  | <u>How much time</u> do you usually spend sitting or reclining on a <u>typical day</u> ?                                                                                                                                                                                                                                           | Hours: <input type="text"/> hrs<br><br>Minutes : <input type="text"/> mins                | P16<br>(a-b) |





|    |                                          |                                                                                             |    |
|----|------------------------------------------|---------------------------------------------------------------------------------------------|----|
|    | tobacco products?<br>[USE SHOWCARD – 14] | No 2 [If No, go to T12]                                                                     |    |
| 55 | In the past, did you ever smoke daily?   | Yes 1 [If T1=Yes, go to T12, else go to T10]<br>No 2 [If T1=Yes, go to T12, else go to T10] | T9 |

| EXPANDED: Tobacco Use |                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Questions             |                                                                                                                                                                                                                                                                 | Response                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Code                                                                                                                                |
| 56                    | How <u>old</u> were you when you <u>stopped</u> smoking?                                                                                                                                                                                                        | Age (years) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> If Known, go to T12<br>Don't Know 77                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | T10                                                                                                                                 |
| 57                    | How <u>long ago</u> did you <u>stop</u> smoking?<br>(RECORD ONLY 1, NOT ALL 3)                                                                                                                                                                                  | Years ago, <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> If Known, go to T12<br>OR Months ago <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> If Known, go to T12<br>OR Weeks ago <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | T11/T11type                                                                                                                         |
| 58                    | Do you <u>currently</u> use any <u>smokeless tobacco</u> products such as Betel quid with zarda, zarda only or zarda with supari, Betel quid with sadapata, pan masala with tobacco, sadapata chewing, gul, Khoinee, Nossi, <i>gutka</i> ?<br>[USE SHOWCARD-15] | Yes 1<br><br>No 2 [If No, go to T15]                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | T12                                                                                                                                 |
| 59                    | Do you <u>currently</u> use <u>smokeless tobacco</u> products such as Betel quid with zarda, zarda only or zarda with supari, Betel quid with sadapata, pan masala with tobacco, sadapata chewing, gul, Khoinee, Nossi, <i>gutka</i> daily?                     | Yes 1<br><br>No 2 [If No, go to T14aw]                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | T13                                                                                                                                 |
| 60                    | On average, how many times do you use following tobacco products in a day/week?<br>(IF LESS THAN DAILY, RECORD WEEKLY)<br>(RECORD FOR EACH TYPE, USE SHOWCARD)<br>Don't Know 7777                                                                               |                                                                                                                                                                                                                                                                                                                                                 | DAILY ↓ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/><br>WEEKLY ↓ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/><br>[If Daily is '0' then ask weekly]<br>[If Daily is '0' then ask weekly]<br>[If Daily is '0' then ask weekly]<br>[If Daily is '0' then ask weekly]<br>[If Daily is '0' then ask weekly]<br>[If Daily is '0' then ask weekly]<br>[If Daily is '0' then ask weekly] | T14a/<br>T14aw<br>T14b/<br>T14bw<br>T14c/<br>T14cw<br>T14d/<br>T14dw<br>T14e/<br>T14ew<br>T14f/<br>T14fw<br>T14g/<br>T14gw<br>T14h/ |



|    |                                                                                                                                                              |                         |                                                                                                   |                                                          |       |  |  |  |  |  |  |  |          |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------|--|--|--|--|--|--|--|----------|
|    |                                                                                                                                                              |                         |                                                                                                   | <i>[If Other, go to T14other, if T13=No, go to TP1a]</i> | T14hw |  |  |  |  |  |  |  |          |
|    |                                                                                                                                                              | Other (Please specify): | <table><tr><td>L</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> |                                                          | L     |  |  |  |  |  |  |  | T14other |
| L  |                                                                                                                                                              |                         |                                                                                                   |                                                          |       |  |  |  |  |  |  |  |          |
| 61 | In the <u>past</u> , did you ever use <u>smokeless tobacco</u> products such as <i>zarda, sadapata, gul, khoinee, snuff, chewing tobacco, or betel quid?</i> | Yes                     | 1                                                                                                 |                                                          | T15   |  |  |  |  |  |  |  |          |
|    |                                                                                                                                                              | No                      | 2                                                                                                 |                                                          |       |  |  |  |  |  |  |  |          |

| Electronic Cigarettes                                                                                                                                                                                                                                                |                                                                                          |                                                                                                |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------|
| The next questions are about using electronic cigarettes. Electronic cigarettes include any product that uses batteries or other methods to produce a vapor which contains nicotine. They have various other names such as e-cigarette, vape-pen, e-shisha, e-pipes. |                                                                                          |                                                                                                |      |
|                                                                                                                                                                                                                                                                      | Question                                                                                 | Response                                                                                       | Code |
| 62                                                                                                                                                                                                                                                                   | Before today, have you <u>ever</u> heard of electronic cigarettes?                       | Yes 1<br>No 2 <i>[If 'No' go to A1]</i><br>Refused 88 <i>[go to A1]</i>                        | ECx1 |
| 63                                                                                                                                                                                                                                                                   | Which one of the following is an electronic cigarette?<br><br><i>[USE SHOWCARD – 17]</i> | Pipes full of tobacco 1<br>E-cigarette 2<br>Shisha 3<br>Hukka 4                                | ECx2 |
| 64                                                                                                                                                                                                                                                                   | Do you currently use electronic cigarettes on a <u>daily</u> basis?                      | Daily 1 <i>[go to A1]</i><br>Less than daily 2 <i>[go to A1]</i><br>Not at all 3<br>Refused 88 | ECx3 |
| 65                                                                                                                                                                                                                                                                   | Have you ever, <u>even once</u> , used an electronic cigarette?                          | Yes 1<br>No 2<br>Refused 88                                                                    | ECx4 |



| CORE: Alcohol Consumption                                           |                                                                                                                                                                               |                                                                                                                                  |      |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------|
| The next questions I will ask you about the consumption of alcohol. |                                                                                                                                                                               |                                                                                                                                  |      |
|                                                                     | Question                                                                                                                                                                      | Response                                                                                                                         | Code |
| 80                                                                  | Have you <b>ever</b> consumed any alcohol such as beer, wine, spirits, tari, cholai, ram, bangla, chuani, keru, vodka, jeen etc?<br>[USE SHOWCARD – 18]                       | Yes 1<br><br>No 2 [If No, go to D1]                                                                                              | A1   |
| 81                                                                  | Have you consumed any alcohol within the <u>past 12 months</u> ?                                                                                                              | Yes 1 [If Yes, go to A4]<br>No 2                                                                                                 | A2   |
| 82                                                                  | Have you <u>stopped</u> drinking due to health reasons, such as a negative impact on your health or on the advice of your doctor or other health worker?                      | Yes 1 [If Yes, go to D1]<br><br>No 2 [If No, go to D1]                                                                           | A3   |
| 83                                                                  | During the <u>past 12 months</u> , how frequently have you had at least <u>one standard</u> alcoholic drink?<br>[READ RESPONSES]<br>[USE SHOWCARD – 19]                       | Daily 1<br>5-6 days per week 2<br>3-4 days per week 3<br>1-2 days per week 4<br>1-3 days per month 5<br>Less than once a month 6 | A4   |
| 84                                                                  | Have you consumed any alcohol within the <u>past 30 days</u> ?                                                                                                                | Yes 1<br>No 2 [If No, go to H1]                                                                                                  | A5   |
| 85                                                                  | During the <u>past 30 days</u> , on how many occasions did you have at least <u>one standard</u> alcoholic drink?                                                             | Number <input type="text"/> <input type="text"/> [If Zero, go to H1]<br>Don't know 77                                            | A6   |
| 86                                                                  | During the <u>past 30 days</u> , when you drank alcohol, how many <u>standard drinks on average</u> did you have during <u>one drinking occasion</u> ?<br>[USE SHOWCARD – 19] | Number <input type="text"/> <input type="text"/><br>Don't know 77                                                                | A7   |
| 87                                                                  | During the <u>past 30 days</u> , what was the <u>largest number</u> of standard drinks you had on a <u>single occasion</u> , counting all types of alcoholic drinks together? | Largest number <input type="text"/> <input type="text"/><br>Don't Know 77                                                        | A8   |
| 88                                                                  | During the <u>past 30 days</u> , how many <u>times</u> did you have <u>six or more</u> standard drinks in a single drinking occasion?                                         | Number of times <input type="text"/> <input type="text"/><br>Don't Know 77                                                       | A9   |
| 89                                                                  | During <u>each</u> of the <u>past 7 days</u> , how many standard drinks did you have each day?<br>[USE SHOWCARD – 20]<br>Don't Know 77                                        | Monday <input type="text"/> <input type="text"/>                                                                                 | A10a |
|                                                                     |                                                                                                                                                                               | Tuesday <input type="text"/> <input type="text"/>                                                                                | A10b |
|                                                                     |                                                                                                                                                                               | Wednesday <input type="text"/> <input type="text"/>                                                                              | A10c |
|                                                                     |                                                                                                                                                                               | Thursday <input type="text"/> <input type="text"/>                                                                               | A10d |
|                                                                     |                                                                                                                                                                               | Friday <input type="text"/> <input type="text"/>                                                                                 | A10e |
|                                                                     |                                                                                                                                                                               | Saturday <input type="text"/> <input type="text"/>                                                                               | A10f |
|                                                                     |                                                                                                                                                                               | Sunday <input type="text"/> <input type="text"/>                                                                                 | A10g |



| CORE: Alcohol Consumption, continued                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                              |          |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------|--|
| I have just asked you about your consumption of alcohol during the <u>past 7 days</u> . The questions were about alcohol in general, while the next questions refer to your consumption of homebrewed alcohol, alcohol brought over the border/from another country, any alcohol not intended for drinking or other untaxed alcohol. Please only think about these types of alcohol when answering the next questions. |                                                                                                              |          |  |
| Question                                                                                                                                                                                                                                                                                                                                                                                                               | Response                                                                                                     | Code     |  |
| 90 During the <u>past 7 days</u> , did you consume any homebrewed alcohol or any alcohol brought over the border/from another country, any alcohol not intended for drinking or other untaxed alcohol?<br>(USE SHOWCARD-20)                                                                                                                                                                                            | Yes 1<br><br>No 2 <i>[If No, go to H1]</i>                                                                   | A11      |  |
| 91 On average, <b>how many standard drinks</b> of the following did you consume <b>during the past 7 days</b> ?<br><br>(USE SHOWCARD-20)<br><br>Don't Know 77                                                                                                                                                                                                                                                          | Homebrewed beer or wine, e.g. beer, palm or fruit wine <input type="text"/>                                  | A12a     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                        | Alcohol brought over the border/from another country <input type="text"/>                                    | A12b     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                        | Alcohol not intended for drinking, e.g. alcohol-based medicines, perfumes, after shaves <input type="text"/> | A12c     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                        | Choani <input type="text"/>                                                                                  | A12d     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                        | Other untaxed alcohol in the country <input type="text"/>                                                    | A12e     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                        | Other (Please specify) .....                                                                                 | A12other |  |

| CORE: History of Raised Blood Pressure                                                                                                                                                                |                                             |      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------|--|
| Question                                                                                                                                                                                              | Response                                    | Code |  |
| 92 Have you <u>ever</u> had your <u>blood pressure</u> measured by a doctor or other health worker?                                                                                                   | Yes 1<br><br>No 2 <i>[If No, go to H6]</i>  | H1   |  |
| 93 Have you <u>ever</u> been <u>told</u> by a doctor or other health worker that you have <u>raised blood pressure</u> or hypertension?                                                               | Yes 1<br><br>No 2 <i>[If No, go to H6]</i>  | H2a  |  |
| 94 Have you been told this in the <u>past 12 months</u> ?                                                                                                                                             | Yes 1<br><br>No 2                           | H2b  |  |
| 95 Have you <u>ever</u> taken <u>drugs/medications</u> for raised blood pressure prescribed by a doctor/health worker?                                                                                | Yes 1<br><br>No 2 <i>[If No, go to Hx2]</i> | Hx1  |  |
| 96 In the <u>past two weeks</u> , have you taken any <u>drugs</u> (medication) for raised blood pressure prescribed by a doctor or other health worker (not including the traditional herbal remedy)? | Yes 1<br><br>No 2 <i>[If No, go to Hx2]</i> | H3   |  |



| 97       | Where do you usually go for <u>treatment</u> or advice for your raised blood pressure?<br>[MULTIPLE RESPONSE]<br>[Appear only if H2a=yes]                                                                                              | Govt. Community Clinic (CC) 1<br>Govt. Union Health and Govt. Family Welfare Center 2<br>Govt. Upazila Health Complex 3<br>Govt. District Sadar Hospital 4<br>Govt. Medical College Hospital 5<br>Govt. Specialized Hospital 6<br>NGO Clinic 7<br>NGO Hospital 8<br>Private Hospital 9<br>Private Chamber/clinic 10<br>Medicine Shop 11<br>Village doctor 12<br>Alternative Medicine practitioner (Homeo, Ayurveda, Unani) 13<br>Traditional Healer 14<br>Others (Please specify) Hx2other<br>Don't know 77 | Hx2 /<br>Hx2other |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 98       | Where do you usually get your drugs for raised blood pressure?<br>[MULTIPLE RESPONSE]<br>[Appear only if Hx1=yes]                                                                                                                      | Govt. Upazila Health Complex 1<br>Govt. District Sadar Hospital 2<br>Govt. Medical College Hospital 3<br>Govt. Specialized Hospital 4<br>NGO Hospital 5<br>NGO Clinic 6<br>Private Hospital 7<br>Private Chamber/Clinic 8<br>Medicine shop 9<br>Village doctor 10<br>Alternative Medicine Practitioner (Homeo, Ayurveda, Unani) 11<br>Traditional healer 12<br>Others (Please specify) Hx3other<br>Don't know 77                                                                                            | Hx3 /<br>Hx3other |
| Question |                                                                                                                                                                                                                                        | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Code              |
| 99       | What is the most important reason for which you are <u>not currently taking medications</u> ? (Yes, to last 12 months/ever treatment and no to current treatment)<br>[MULTIPLE RESPONSE]<br>[Appear if H2a=yes and ( Hx1=No or H3=No)] | Don't think taking drug is necessary 1<br>Too expensive 2<br>Got side-effect or afraid of side-effect 3<br>Blood pressure is now normal 4<br>Medicine is not available 5<br>Medicine not advised 6<br>Others (Please specify) Hx4other                                                                                                                                                                                                                                                                      | Hx4/<br>Hx4other  |
| 100      | Have you ever consulted a <u>traditional healer</u> for raised blood pressure or hypertension?                                                                                                                                         | Yes 1<br>No 2 [If No, go to H6]                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H4                |
| 101      | Are you currently taking any traditional remedy for your raised blood pressure?                                                                                                                                                        | Yes 1<br>No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | H5                |



| CORE: History of Diabetes |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 102                       | Have you ever had your <u>blood sugar</u> (Diabetes) measured by a doctor or other health worker?                                                                                                    | Yes 1<br>No 2 [If No, go to H12]                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H6               |
| 103                       | Have you ever been <u>told</u> by a doctor or other health worker that you <u>have diabetes</u> ?                                                                                                    | Yes 1<br>No 2 [If No, go to H12]                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H7a              |
| 104                       | Were you told this in the <u>past 12 months</u> ?                                                                                                                                                    | Yes 1<br>No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | H7b              |
| 105                       | Have you ever taken <u>drugs/medications</u> for diabetes prescribed by a doctor/health worker?                                                                                                      | Yes 1<br>No 2 [If No, go to Hx6]                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hx5              |
| 106                       | In the <u>past two weeks</u> , have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?                                                                     | Yes 1<br>No 2 [If No, go to Hx6]                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H8               |
| 107                       | Are you <u>currently</u> taking insulin for diabetes prescribed by a doctor or other health worker?                                                                                                  | Yes 1<br>No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | H9               |
| 108                       | Where do you usually go for treatment and advice for your <u>diabetes</u> ? (Only to those who said yes in the last two weeks)<br><br>[MULTIPLE RESPONSE]<br><br>[Appear only If H7a=yes]            | Govt. Community Clinic (CC) 1<br>Govt. Union Health and Govt. Family Welfare Center 2<br>Govt. Upazila Health Complex 3<br>Govt. District Sadar Hospital 4<br>Govt. Medical College Hospital 5<br>Govt. Specialized Hospital 6<br>NGO Clinic 7<br>NGO Hospital 8<br>Private Hospital 9<br>Private Chamber/clinic 10<br>Medicine Shop 11<br>Village doctor 12<br>Alternative Medicine practitioner (Homeo, Ayurveda, Unani) 13<br>Traditional Healer 14<br>Others(Please specify) Hx6other<br>Don't know 77 | Hx6/<br>Hx6other |
| 109                       | Where do you usually get your <u>drugs</u> for <u>diabetes</u> ?<br><br>[MULTIPLE RESPONSE]<br><br>[Appear only If Hx5=yes]                                                                          | Govt. Upazila Health Complex 1<br>Govt. District Sadar Hospital 2<br>Govt. Medical College Hospital 3<br>Govt. Specialized Hospital 4<br>NGO Hospital 5<br>NGO Clinic 6<br>Private Hospital 7<br>Private Chamber/Clinic 8<br>Medicine shop 9<br>Village doctor 10<br>Alternative Medicine Practitioner (Homeo, Ayurveda, Unani) 11<br>Traditional healer 12<br>Others (Please specify) Hx7other<br>Don't know 77                                                                                           | Hx7/<br>Hx7other |
| 110                       | What is the most important <u>reason</u> you are <u>not currently taking medications</u> for diabetes (Yes, to last 12 months/ever treatment and no to current treatment)<br><br>[MULTIPLE RESPONSE] | Don't think taking drug is necessary 1<br>Too expensive 2<br>Got side-effect or afraid of side-effect 3<br>Blood sugar is now normal 4                                                                                                                                                                                                                                                                                                                                                                     | Hx8/<br>Hx8other |



|     |                                                                    |                                                                                               |     |
|-----|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----|
|     | [Appear if H7a=yes and ( Hx5=No or H8=No or H9=No)]                | Medicine is not available 5<br>Medicine not advised 6<br>Others (Please specify....) Hx8other |     |
| 111 | Have you ever consulted a <u>traditional healer</u> for diabetes?  | Yes 1<br>No 2 [If No, go to H12]                                                              | H10 |
| 112 | Are you currently taking any traditional remedy for your diabetes? | Yes 1<br>No 2                                                                                 | H11 |

| CORE: History of Raised Total Cholesterol |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|                                           | Question                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Code               |
| 113                                       | Have you ever had your <u>cholesterol</u> (fat levels in your blood) measured by a doctor or other health worker?                                                                                   | Yes 1<br>No 2 [If No, go to H17]                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H12                |
| 114                                       | Have you ever been <u>told</u> by a doctor or other health worker that you have <u>raised cholesterol</u> ?                                                                                         | Yes 1<br>No 2 [If No, go to H17]                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | H13a               |
| 115                                       | Were you told in the <u>past 12 months</u> ?                                                                                                                                                        | Yes 1<br>No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | H13b               |
| 116                                       | Have you <u>ever</u> taken <u>drugs/medications</u> for raised blood cholesterol prescribed by a doctor/health worker?                                                                              | Yes 1<br>No 2 [If No, go to Hx10]                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Hx9                |
| 117                                       | In the <u>past two weeks</u> , have you taken any oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health worker?                                           | Yes 1<br>No 2 [If No, go to Hx10]                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H14                |
| 118                                       | Where do you usually go for treatment and care advice for your raised blood cholesterol? (Only to those who said yes in the last two weeks)<br><br>[MULTIPLE RESPONSE]<br>[Appear only if H13a=yes] | Govt. Community Clinic (CC) 1<br>Govt. Union Health and Govt. Family Welfare Center 2<br>Govt. Upazila Health Complex 3<br>Govt. District Sadar Hospital 4<br>Govt. Medical College Hospital 5<br>Govt. Specialized Hospital 6<br>NGO Clinic 7<br>NGO Hospital 8<br>Private Hospital 9<br>Private Chamber/clinic 10<br>Medicine Shop 11<br>Village doctor 12<br>Alternative Medicine practitioner (Homeo, Ayurveda, Unani) 13<br>Traditional Healer 14<br>Others (Please specify) Hx10other<br>Don't know 77 | Hx10/<br>Hx10other |



|     |                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |
|-----|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 119 | Where do you usually get your drugs for raised blood cholesterol?<br>[MULTIPLE RESPONSE]<br>[Appear only if Hx9=yes] | Govt. Upazila Health Complex 1<br>Govt. District Sadar Hospital 2<br>Govt. Medical College Hospital 3<br>Govt. Specialized Hospital 4<br>NGO Hospital 5<br>NGO Clinic 6<br>Private Hospital 7<br>Private Chamber/Clinic 8<br>Medicine shop 9<br>Village doctor 10<br>Alternative Medicine Practitioner (Homeo, Ayurveda, Unani) 11<br>Traditional healer 12<br>Others (Please specify) 13<br>Don't know Hx11other 77 | Hx11/<br>Hx11other |
|-----|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|

| CORE: History of Raised Total Cholesterol, Continue |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                             |                    |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|                                                     | Question                                                                                                                                                                                                                                              | Response                                                                                                                                                                                                                    | Code               |
| 120                                                 | What is the most important reason you are not currently taking medications to lower our cholesterol level? (Yes, to last 12 months/ever treatment and no to current treatment)<br>[MULTIPLE RESPONSE]<br>[Appear If H13a=yes and ( Hx9=No or H14=No)] | Don't think taking drug is necessary 1<br>Too expensive 2<br>Got side-effect or afraid of side-effect 3<br>Blood Lipid Profile is now normal 4<br>Medicine is not available 5<br>Medicine not advised 6<br>Others specify 7 | Hx12/<br>Hx12other |
| 121                                                 | Have you ever consulted a traditional healer for raised cholesterol?                                                                                                                                                                                  | Yes 1<br>No 2 [If No, go to H17]                                                                                                                                                                                            | H15                |
| 122                                                 | Are you currently taking any traditional remedy for your raised cholesterol?                                                                                                                                                                          | Yes 1<br>No 2                                                                                                                                                                                                               | H16                |

| CORE: History of Cardiovascular Diseases |                                                                                                                                                       |               |     |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----|
| 123                                      | Have you ever had a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident)?                        | Yes 1<br>No 2 | H17 |
| 124                                      | Are you currently taking aspirin regularly to prevent or treat heart disease?                                                                         | Yes 1<br>No 2 | H18 |
| 125                                      | Are you currently taking statin group of drugs (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease? | Yes 1<br>No 2 | H19 |

| CORE: Lifestyle Advice |                                                                                                                                                    |                                                                     |      |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------|
|                        | Question                                                                                                                                           | Response                                                            | Code |
| 126                    | During the past 12 months, have you visited a doctor or other health worker?                                                                       | Yes 1<br>No 2 If No and C1=1, go to O6<br>If No and C1=2, go to CX1 | H20  |
| 127                    | During any of your visits to a doctor or other health worker in the past 12 months, were you advised to do any of the following? (RECORD FOR EACH) |                                                                     |      |
| 128                    | Quit using tobacco or don't start                                                                                                                  | Yes 1<br>No 2                                                       | H20a |



|     |                                                                |                                                               |      |
|-----|----------------------------------------------------------------|---------------------------------------------------------------|------|
| 129 | Reduce salt in your diet                                       | Yes 1<br>No 2                                                 | H20b |
| 130 | Eat at least five servings of fruit and/or vegetables each day | Yes 1<br>No 2                                                 | H20c |
| 131 | Reduce fatty food in your diet                                 | Yes 1<br>No 2                                                 | H20d |
| 132 | Start or do more physical activity                             | Yes 1<br>No 2                                                 | H20e |
| 133 | Maintain a healthy body weight or lose weight                  | Yes 1<br>No 2                                                 | H20f |
| 134 | Reduce sugary beverages in your diet                           | Yes 1 <i>If C1=1 go to O6</i><br>No 2 <i>If C1=1 go to O6</i> | H20g |

### Cervical Cancer

#### CORE and EXPANDED:

[Expanded questions are in Shaded]

The next questions I will ask about cervical cancer prevention. Screening tests for cervical cancer prevention can be done in different ways, including Visual Inspection with Acetic Acid/Vinegar (VIA), Pap Smear and Human Papillomavirus (HPV) test. VIA is an inspection of the surface of the uterine cervix after acetic acid (or vinegar) has been applied to it. For both pap smear and HPV test, a doctor or nurse uses a swab to wipe from inside your vagina, take a sample and send it to a laboratory. It is even possible that you were given the swab yourself and asked to swab the inside of your vagina. The laboratory checks for abnormal cell changes if a pap smear is done and for the HP virus if an HPV test is done.

| Question                                                                                                                                              |                                                                                                            | Response                                                                                                                                                                                                                                                                      | Code           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 135                                                                                                                                                   | Have you ever had a <u>screening</u> test for cervical cancer, using any of these methods described above? | Yes 1<br>No 2 <i>If CX1=2 go to CX11</i><br>Don't Know 77                                                                                                                                                                                                                     | CX1            |
| <i>The next questions CX2 – CX10 are administered only to those that ever had a screening test for cervical cancer (CX1=1). If CX1=2, go to CX11.</i> |                                                                                                            |                                                                                                                                                                                                                                                                               |                |
| 136                                                                                                                                                   | At what age were you <u>first tested</u> for cervical cancer?                                              | Age ____ (years)<br>Don't Know 77<br>Refused 88                                                                                                                                                                                                                               | CX2            |
| 137                                                                                                                                                   | When was your <u>last (most recent) test</u> for cervical cancer?                                          | Less than 1 year ago 1<br>1-2 years ago 2<br>3-5 years ago 3<br>More than 5 years ago 4<br>Don't know 77<br>Refused 88                                                                                                                                                        | CX3            |
| 138                                                                                                                                                   | What is the <u>main reason</u> you had your <u>last</u> test for cervical cancer?                          | Part of a routine check-up 1<br>Next step following the abnormal or inconclusive result of test 2<br>Recommendation of healthcare provider 3<br>Recommendation of other source 4<br>Experiencing pain or other symptoms 5<br>Other (Please specify) CX4other<br>Don't know 77 | CX4 / CX4other |



|     |                                                                                                   |                                                                                                                                                                |                                                    |                |
|-----|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------|
|     |                                                                                                   | Refused                                                                                                                                                        | 88                                                 |                |
| 139 | Where did you receive your last test for cervical cancer?<br>[INSERT COUNTRY-SPECIFIC CATEGORIES] | Private Doctor's chamber<br>Private hospital<br>Health camp<br>Community clinic<br>Govt. Hospital<br>Others<br>Other (Please specify)<br>Don't know<br>Refused | 1<br>2<br>3<br>4<br>5<br>6<br>CX5other<br>77<br>88 | CX5 / CX5other |

| Question |                                                                                                                            | Response                                                                                                                                                                                                                                         |                                                                                                                 | Code |
|----------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------|
| 140      | What was the result of your <b>last (most recent)</b> test for cervical cancer?<br>[Please verify from the Medical Report] | Did not receive result<br>Normal / Negative<br>Abnormal /Positive<br>Suspect cancer<br>Inconclusive<br>Don't know<br>Refused                                                                                                                     | 1<br>2<br>3<br>4<br>5<br>77<br>88<br><i>If CX6=1, go to next section</i><br><i>If CX6=2, go to next section</i> | CX6  |
| 141      | Did you have any follow-up visits because of your test results?                                                            | Yes<br>No<br>Don't know<br>Refused                                                                                                                                                                                                               | 1<br>2<br>77<br>88                                                                                              | CX7  |
| 142      | Did you receive any treatment to your cervix because of your test result?                                                  | Yes<br>No<br>Don't know<br>Refused                                                                                                                                                                                                               | 1<br>2<br>77<br>88<br><i>[If No, go to CX10]</i>                                                                | CX8  |
| 143      | Did you receive treatment <b>during the same visit</b> as your last test for cervical cancer?                              | Yes<br>No<br>Don't know<br>Refused                                                                                                                                                                                                               | 1<br>2<br>77<br>88                                                                                              | CX9  |
| 144      | What is the <b>main</b> reason you did not receive treatment?                                                              | Was not told I needed treatment<br>Did not know how/where to get treatment<br>Embarrassment<br>Too expensive<br>Didn't have time<br>Health centre too far away<br>Poor service quality<br>Fear of procedure<br>Social stigma<br>Cultural beliefs | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10                                                                 | CX10 |



|          |                                                                           | Family member did not allow it     | 11        |                    |
|----------|---------------------------------------------------------------------------|------------------------------------|-----------|--------------------|
|          |                                                                           | Don't know                         | 77        |                    |
|          |                                                                           | Refused                            | 88        |                    |
|          |                                                                           |                                    |           |                    |
| Question |                                                                           | Response                           |           | Code               |
| 145      | What is the <b>main</b> reason you have never had a cervical cancer test? | Did not know how/where to get test | 1         | CX11/<br>CX11other |
|          |                                                                           | Embarrassment                      | 2         |                    |
|          |                                                                           | Too expensive                      | 3         |                    |
|          |                                                                           | Didn't have time                   | 4         |                    |
|          |                                                                           | Health centre too far away         | 5         |                    |
|          |                                                                           | Poor service quality               | 6         |                    |
|          |                                                                           | Fear of procedure                  | 7         |                    |
|          |                                                                           | Social stigma                      | 8         |                    |
|          |                                                                           | Cultural beliefs                   | 9         |                    |
|          |                                                                           | Family member did not allow it     | 10        |                    |
|          |                                                                           | Other (Please specify)             | CX11other |                    |
|          |                                                                           | Don't know                         | 77        |                    |
|          |                                                                           | Refused                            | 88        |                    |

| Oral Health                                                                         |                                                                                                                    |                                  |   |                         |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------|---|-------------------------|
| Oral Health                                                                         |                                                                                                                    |                                  |   |                         |
| The next questions I will ask about your oral health status and related behaviours. |                                                                                                                    |                                  |   |                         |
| Question                                                                            |                                                                                                                    | Response                         |   | Code                    |
| 153                                                                                 | During the past 12 months, did your teeth, gums or mouth cause any <b>pain, swelling, bleeding or discomfort</b> ? | Yes                              | 1 | O6                      |
|                                                                                     |                                                                                                                    | No                               | 2 |                         |
| 154                                                                                 | How long has it been since you last <b>saw a dentist</b> ?                                                         | Less than 6 months               | 1 | O7                      |
|                                                                                     |                                                                                                                    | 6-12 months                      | 2 |                         |
|                                                                                     |                                                                                                                    | More than 1 year but less than 2 | 3 |                         |
|                                                                                     |                                                                                                                    | 2 or more years but less than 5  | 4 |                         |
|                                                                                     |                                                                                                                    | years                            | 5 |                         |
|                                                                                     |                                                                                                                    | 5 or more years                  | 5 |                         |
|                                                                                     |                                                                                                                    | Never received dental care       | 6 | If Never, go to O9      |
| 155                                                                                 | What was the <b>main reason for your last visit</b> to the dentist?                                                | Consultation / advice            | 1 | O8                      |
|                                                                                     |                                                                                                                    | Pain or trouble with teeth, gums | 2 |                         |
|                                                                                     |                                                                                                                    | Treatment / Follow-up            | 3 |                         |
|                                                                                     |                                                                                                                    | Routine check-up / treatment     | 4 |                         |
|                                                                                     |                                                                                                                    | Others                           | 5 | If Other, go to O8other |



|                                                                                                                                                                  |                                                                                                                                                                                                                                |                                                                                                                                                                                                                                |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                                                                                                                                                                  |                                                                                                                                                                                                                                | Other (Please specify) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | O8other  |
| 156                                                                                                                                                              | How often do you clean your teeth?                                                                                                                                                                                             | Never 1 If Never, go to O13a<br>Once a month 2<br>2-3 times a month 3<br>Once a week 4<br>2-6 times a week 5<br>Once a day 6<br>Twice or more a day 7                                                                          | O9       |
| 157                                                                                                                                                              | Do you use <b>toothpaste</b> to clean your teeth?                                                                                                                                                                              | Yes 1<br>No 2 If No, go to O12a                                                                                                                                                                                                | O10      |
| 158                                                                                                                                                              | Do you use <b>toothpaste</b> containing fluoride?                                                                                                                                                                              | Yes 1<br>No 2<br>Don't know 77                                                                                                                                                                                                 | O11      |
| Do you use any of the following to <b>clean your teeth</b> ? (RECORD FOR EACH)                                                                                   |                                                                                                                                                                                                                                |                                                                                                                                                                                                                                |          |
| 159                                                                                                                                                              | Toothbrush                                                                                                                                                                                                                     | Yes 1<br>No 2                                                                                                                                                                                                                  | O12a     |
| 160                                                                                                                                                              | Wooden toothpicks                                                                                                                                                                                                              | Yes 1<br>No 2                                                                                                                                                                                                                  | O12b     |
| 161                                                                                                                                                              | Plastic toothpicks                                                                                                                                                                                                             | Yes 1<br>No 2                                                                                                                                                                                                                  | O12c     |
| 162                                                                                                                                                              | Thread (Dental floss)                                                                                                                                                                                                          | Yes 1<br>No 2                                                                                                                                                                                                                  | O12d     |
| 163                                                                                                                                                              | Charcoal                                                                                                                                                                                                                       | Yes 1<br>No 2                                                                                                                                                                                                                  | O12e     |
| 164                                                                                                                                                              | Chewstick / Miswak                                                                                                                                                                                                             | Yes 1<br>No 2                                                                                                                                                                                                                  | O12f     |
| 165                                                                                                                                                              | Other                                                                                                                                                                                                                          | Yes 1 If Yes, go to O12other<br>No 2                                                                                                                                                                                           | O12g     |
| 166                                                                                                                                                              | Other (Please specify) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |                                                                                                                                                                                                                                | O12other |
| Have you <b>experienced any of the following problems</b> during the past 12 months because of the <b>state of your teeth, gums or mouth</b> ? (RECORD FOR EACH) |                                                                                                                                                                                                                                |                                                                                                                                                                                                                                |          |
| 167                                                                                                                                                              | Difficulty in chewing foods                                                                                                                                                                                                    | Yes 1<br>No 2                                                                                                                                                                                                                  | O13a     |
| 168                                                                                                                                                              | Difficulty with speech/trouble pronouncing words                                                                                                                                                                               | Yes 1<br>No 2                                                                                                                                                                                                                  | O13b     |
| 170                                                                                                                                                              | Have a persistent wound and/or swelling in the mouth for more than three weeks                                                                                                                                                 | Yes 1<br>No 2                                                                                                                                                                                                                  | O13c     |
| 171                                                                                                                                                              | Have a red or red and white patch in the mouth                                                                                                                                                                                 | Yes 1<br>No 2                                                                                                                                                                                                                  | O13d     |
| 176                                                                                                                                                              | Days not at work because of teeth or mouth                                                                                                                                                                                     | Yes 1<br>No 2                                                                                                                                                                                                                  | O13e     |
| 179                                                                                                                                                              | Reduced participation in social activities                                                                                                                                                                                     | Yes 1<br>No 2                                                                                                                                                                                                                  | O13f     |
| 179a                                                                                                                                                             | Have you taken treatment or advice for this?                                                                                                                                                                                   | If Yes to any above Yes 1<br>No 2 [Skip O15]                                                                                                                                                                                   | O14      |



|      |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |
|------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 179b | Where did you go for treatment or advice?<br>[Multiple response] | Govt. Community Clinic (CC) 1<br>Govt. Union Health and Govt. Family Welfare Center 2<br>Govt. Upazila Health Complex 3<br>Govt. District Sadar Hospital 4<br>Govt. Medical College Hospital 5<br>Govt. Specialized Hospital 6<br>NGO Clinic 7<br>NGO Hospital 8<br>Private Hospital 9<br>Private Chamber/clinic 10<br>Medicine Shop 11<br>Village doctor 12<br>Alternative Medicine practitioner (Homeo, Ayurveda, Unani) 13<br>Traditional Healer 14<br>Others (Please specify) O15other 77<br>Don't know 77 | Ox1/Oxother    |
| 179c | Why you did not take treatment or advice                         | Not serious enough to required treatment 1<br>Did not know how/where to get treatment 2<br>Too expensive 3<br>Didn't have time 4<br>Health centre too far away 5<br>Poor service quality 6<br>Fear of procedure 7<br>Family member did not allow it 8<br>Others(Please specify) O17others 88<br>Refused 88                                                                                                                                                                                                     | Ox2/Ox2 others |



## Step 2 Physical Measurements

| CORE: Blood Pressure        |                                                                                                                                                   |                                                                                                                                |      |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------|
| Question                    |                                                                                                                                                   | Response                                                                                                                       | Code |
| 181                         | Reading 1                                                                                                                                         | Systolic ( mmHg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                           | M4a  |
|                             |                                                                                                                                                   | Diastolic (mmHg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                           | M4b  |
|                             |                                                                                                                                                   | Heart rate (beats per minute) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>              | M16a |
| 181                         | Reading 2                                                                                                                                         | Systolic ( mmHg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                           | M5a  |
|                             |                                                                                                                                                   | Diastolic (mmHg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                           | M5b  |
|                             |                                                                                                                                                   | Heart rate (beats per minute) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>              | M16b |
| 182                         | Reading 3                                                                                                                                         | Systolic ( mmHg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                           | M6a  |
|                             |                                                                                                                                                   | Diastolic (mmHg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                           | M6b  |
|                             |                                                                                                                                                   | Heart rate (beats per minute) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>              | M16c |
| 183                         | During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker? | Yes    1<br>No    2                                                                                                            | M7   |
| CORE: Height and Weight     |                                                                                                                                                   |                                                                                                                                |      |
| 184                         | <b>For women:</b> Are you pregnant? If C1=2                                                                                                       | Yes    1 If Yes, End Interview.<br>No    2                                                                                     | M8   |
| 185                         | Height                                                                                                                                            | in Centimetres (cm) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> | M11  |
| 186                         | Weight<br><i>If too large for scale 666.6</i>                                                                                                     | in Kilograms (kg) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>   | M12  |
| CORE: Waist                 |                                                                                                                                                   |                                                                                                                                |      |
| 187                         | Waist circumference                                                                                                                               | in Centimeters (cm) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> | M14  |
| EXPANDED: Hip Circumference |                                                                                                                                                   |                                                                                                                                |      |
| 188                         | Hip circumference                                                                                                                                 | in Centimeters (cm) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> | M15  |

## Annexure C

### Questionnaire (Bangla)

#### STEPS Survey for NCD Risk Factors in Bangladesh, 2017—18



ন্যাশনাল ইনিস্টিটিউট অব প্রিভেনটিভ এন্ড সোশ্যাল মেডিসিন (নিপসম)

মহাখালী, ঢাকা-১২১২

[www.nipsom.gov.bd](http://www.nipsom.gov.bd)

#### STEPS কিউ বাই কিউ ম্যানুয়াল

ভূমিকা:

এই কিউ বাই কিউ ম্যানুয়ালটিতে তে STEPS Survey for NCD Risk Factors in Bangladesh, 2017—18 এ ব্যবহৃত প্রতিটি প্রশ্নের সংক্ষিপ্ত ব্যাখ্যা দেয়া হয়েছে।

|                             |                                                                                                                                             |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>উদ্দেশ্যঃ</b>            | এই কিউ বাই কিউ ম্যানুয়ালটির উদ্দেশ্য হচ্ছে, সুপারভাইজার ও তথ্য সংগ্রহকারী কে প্রতিটি প্রশ্নের উদ্দেশ্য সম্পর্কে বিস্তারিত তথ্য প্রদান করা। |
|                             | তথ্য সংগ্রহকারীকে প্রতিটি প্রশ্ন যথাযথ ভাবে উত্তর দাতার নিকট উপস্থাপন করে সঠিক উত্তর গ্রহণ করার সহায়তা করা।                                |
|                             | উত্তরদাতা যখন কোন প্রশ্ন সম্পর্কে স্পষ্ট ভাবে জানতে চায় অথবা 'জানি না' উত্তর দেয় তখন তথ্য সংগ্রহকারী কে সহায়তা করা।                      |
|                             | তথ্য সংগ্রহকারী ও সুপারভাইজারদের নিজস্ব ব্যাখ্যা থেকে বিরত থাকতে সহায়তা করা।                                                               |
| <b>কলামগুলোর নির্দেশনাঃ</b> | নিচের টেবিলটি কিউ বাই কিউ ম্যানুয়ালের কলামগুলো সম্পর্কে নির্দেশনা প্রদান করে।                                                              |

| কলাম                             | ব্যাখ্যা                                                                                                                                                                 |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| প্রশ্ন                           | প্রতিটি প্রশ্ন অংশগ্রহণকারীকে পড়ে ওনাতে হবে                                                                                                                             |
| উত্তর                            | এই কলামে সম্ভাব্য উত্তরগুলো থাকবে যেখানে তথ্য গ্রহণকারী উত্তরগুলো পূরণ করবে। (স্কিপ গুলো উত্তরের ডান দিকে থাকবে এবং তথ্য গ্রহণের সময় তা গুরুত্ব সহকারে অনুসরণ করতে হবে। |
| কোড                              | এই কলামটি এমনভাবে তৈরি করা হয়েছে যেন তা হেডহেড, ডাটা এনালাইসিস সিনট্যাক্স, ডাটা বুক, ফ্যাট শিটের সাথে সামঞ্জস্যপূর্ণ থাকে।                                              |
| [তৃতীয় বন্ধনীতে...] লিখিত বাক্য | তথ্য সংগ্রহকারীর জন্য নির্দেশনা সমূহ, উত্তরদাতাকে পড়ে ওনানোর প্রয়োজন নাই।                                                                                              |
| প্রশ্নের আভারলাইন মুক্ত শব্দ     | তথ্য প্রদানকারীকে বিশেষ গুরুত্ব দিয়ে পড়ে ওনাতে হবে।                                                                                                                    |

### জরিপের তথ্যাবলী

| পি এস ইউ এবং সাক্ষাৎকারের বিবরণ                                                                                                | উত্তর                | কোড |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------|-----|
| পি এস ইউ আই ভি নম্বর (PSU ID)                                                                                                  | <input type="text"/> | 11  |
| <b>নির্দেশনা:</b><br>প্রদানকৃত ডায়েরি থেকে PSU ID টি লিখুন।                                                                   |                      |     |
| তথ্য সংগ্রহকারীর ID নম্বর                                                                                                      | <input type="text"/> | 13  |
| <b>নির্দেশনা:</b><br>তথ্য সংগ্রহকারীর নিজের ID নম্বর লিখুন। অথবা ট্যাবে এ প্রদর্শিত আপনার ID নম্বরটি সঠিক কিনা তা নিশ্চিত হউন। |                      |     |

### খানা সম্পর্কিত তথ্যাবলী

[খানা সম্পর্কে তথ্য প্রদানকারীর বয়স অবশ্যই ১৮ বছর বা তার বেশি হতে হবে এবং আপনাকে অবশ্যই নিশ্চিত হতে হবে যে সেই ব্যক্তি খানাটি সম্পর্কে সঠিক তথ্য দিতে পারবেন।]

[যদি প্রয়োজন হয়, খানা সম্পর্কিত তথ্য প্রদানকারীর বয়স যাচাই করুন এবং নিশ্চিত হউন যে, তার বয়স ১৮ বছর বা তার বেশি।]

#### ভূমিকা:

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়ের অধীনে ন্যাশনাল ইনিষ্টিটিউট অব প্রিভেন্টিভ এন্ড সোশ্যাল মেডিসিন (নিপসম) সারা বাংলাদেশে ১৮ থেকে ৬৯ বছরের প্রাপ্তবয়স্কদের মধ্যে জাতীয় পর্যায়ে অসংক্রামক রোগের ঝুঁকি সমূহের ব্যাপ্তি নির্ণয়ের একটি গুরুত্বপূর্ণ জরিপকাজ পরিচালনা করছে এবং আপনার পরিবার এতে অংশ গ্রহনের জন্য বৈজ্ঞানিক পদ্ধতিতে নির্বাচিত হয়েছে। এই জরিপের সাক্ষ্যের জন্য নির্বাচিত সকলের অংশ গ্রহন খুবই গুরুত্বপূর্ণ। সংগৃহীত সকল তথ্যই গুরুত্ব দিয়ে গোপন রাখা হবে। আপনার খানার মধ্যে, যে/যারা এই জরিপে অংশগ্রহনের জন্য উপযুক্ত তা জানার জন্য আমি কয়েকটি প্রশ্ন করব।

#### নির্দেশনা:

- খানার তথ্য প্রদানকারীকে জরিপ সম্পর্কে ভূমিকা প্রদান করতে হবে
- খানা সম্পর্কে তথ্যপ্রদানকারীর বয়স ১৮ বছর বা উর্দ্ধ হতে হবে এবং আপনাকে অবশ্যই নিশ্চিত হতে হবে যে সেই ব্যক্তি পরিবারটি সম্পর্কে সঠিক তথ্য দিতে পারবে। (তবে ব্যতিক্রম যে, যদি কোন খানায় ১৮ বছর বয়সের উর্দ্ধে কোন সদস্য একেবারেই না পাওয়া যায়, সেক্ষেত্রে ১৮ বছর বয়সের নিচে কোন সদস্য হতে তথ্য সংগ্রহ করা যাবে)
- আপনি খানার তথ্য প্রদানকারীকে ভূমিকাটি গড়ে শোনান। জরিপ সম্পর্কে তথ্যপ্রদানকারীর যে কোন প্রশ্নের উত্তর দিন। যদি তথ্যপ্রদানকারী দ্বিধাগ্রস্ত থাকেন তবে তাঁকে অংশগ্রহণের লক্ষ্যে রাজী করানোর জন্য চেষ্টা করুন, এক্ষেত্রে প্রয়োজনে সুপারভাইজারের সাহায্য নিন।

**খানাঃ** খানা হচ্ছে কিছু ব্যক্তির একসাথে বসবাস যারা কিনা একে অপরের সাথে সম্পর্কের বান্ধনে আবদ্ধ অথবা নির্ভরশীল এবং একসাথে (এক হাড়িতে) আহার করে। একজন ব্যক্তি কিংবা একাধিক ব্যক্তির সমন্বয়ে খানা হতে পারে। অন্য ভাবে, যখন কিছু ব্যক্তি একটি পরিবারে সম্পর্কের বান্ধনে আবদ্ধ হয়ে একসাথে বসবাস করে এবং এক হাড়িতে আহার করে তাকে খানা বলে। ক্ষেত্র বিশেষে, একটি বাড়িতে/গৃহে একাধিক খানা থাকতে পারে। অমুদ্রপভাবে, একটি খানায় একাধিক গৃহের লোক থাকতে পারে। খানা সম্পর্কিতভাবে পরিবার থেকে পৃথক, পরিবারের রক্তের সম্পর্কের একাধিক ব্যক্তি থাকতে পারে কিন্তু খানা হতে হলে এক সাথে বসবাস ও এক হাড়িতে আহার অপরিহার্য।

| জরিপের উদ্দিষ্ট জনগোষ্ঠী (Target Population)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"> <li>জরিপের উদ্দিষ্ট জনগোষ্ঠী হল, জরিপের নির্ধারিত অঞ্চলে বসবাসকারী ১৮—৬৯ বছরের সব অসামরিক ও অপ্রাতিষ্ঠানিক নাগরিক (পুরুষ ও মহিলা) যারা STEPS জরিপের খানার সদস্য হওয়ার শর্ত পূরণ করেন।</li> <li>যে সকল ব্যক্তি জরিপ বাস্তবায়নকারী দেশে বসবাসকারী হিসেবে বিবেচিত হবেনঃ (ক) দেশের নাগরিক এবং বসবাসকারী, অথবা (খ) দেশে বসবাসকারী অ-নাগরিক, কিন্তু যারা দেশকে তাদের স্বাভাবিক আবাসস্থল হিসেবে বিবেচনা করেন (অর্থাৎ তারা খানা সম্পর্কিত প্রশ্নাবলী সম্পন্ন করার পূর্বের দায়িত্ব বাস্তবায়নকারী দেশে অবস্থান করেছেন)।</li> <li>যারা স্পষ্টভাবে জরিপ থেকে বাদ যাবেঃ খানা সম্পর্কিত প্রশ্নাবলী সম্পন্ন করার সময়, (ক) অ-নাগরিক যারা কয়েক সপ্তাহের জন্য বাস্তবায়নকারী দেশে অবস্থান করেছেন (যেমনঃ পর্যটক, বন্ধু/অতিথী দৈনিক এসেছেন) ইত্যাদি, (খ) নাগরিকরা যাদের স্বাভাবিক আবাসস্থল সামরিক ঘাটি, অথবা (গ) প্রাতিষ্ঠানিকভাবে বসবাসকারী নাগরিকঃ হাসপাতাল, কারাগার, নার্সিং হোমস্ এবং অন্য আরও প্রতিষ্ঠান।</li> </ul> |  |
| খানায় বসবাসকারীদের সম্পর্কে নির্দেশিকা (Household Residence Guidelines)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| <ul style="list-style-type: none"> <li>খানা সংক্রান্ত প্রশ্নগত পূরণের সময়, নমুনা খানায় অন্তর্ভুক্ত ১৮—৬৯ বছরের অসামরিক, অ-প্রাতিষ্ঠানিক পুরুষ ও মহিলা যারা জরিপের উদ্দিষ্ট জনগোষ্ঠী সংক্রান্ত শর্ত পূরণ করে এবং যদি নমুনা খানাটি তাদের স্বাভাবিক আবাসস্থল হয়।</li> <li>যে ব্যক্তি জরিপের নমুনা খানায় স্বাভাবিক ভাবে বসবাস করছে ও তার আর কোন আবাসস্থল নেই, তাকেই ঐ খানার স্বাভাবিক বসবাসকারী বলা হয়। যদি কোন ব্যক্তি নমুনা খানায় আসে এবং পুনরায় আর পুরনো খানায় যাওয়ার সম্ভাবনা নেই, সেও ঐ খানার স্বাভাবিক বসবাসকারী হিসেবে বিবেচিত হবেন। একইভাবে, একজন ব্যক্তি যিনি সাময়িকভাবে নমুনা খানা থেকে চলে গেছেন এবং আর ফিরে আসার কোন সম্ভাবনা নেই, তিনি খানার স্বাভাবিক সদস্য হিসেবে বিবেচিত হবেন না।</li> <li>কোন ব্যক্তির একাধিক বাসস্থান হলে, ঐ খানাটিই তার 'স্বাভাবিক' বাসস্থান হিসেবে বিবেচিত হবে যেখানে সে গত ১২ মাসের কমপক্ষে অর্ধেক সময় অবস্থান করেছেন।</li> </ul>                                                                  |  |

- HH4.** এখন আমি এই খানায় বসবাসকারী ১৮-৬৯ বছর বয়সী পুরুষ / মহিলা -দের বিষয়ে তথ্য সংগ্রহ করতে চাই।  
 [বয়সে বড় থেকে ছোট ক্রমে পুরুষ / মহিলা-দের তালিকা তৈরি করুন।]  
 [খানা সদস্যদের সম্পূর্ণ নাম এবং ডাক নাম (যদি থাকে) সহ লিপিবদ্ধ করুন।]  
 [তাদের বয়স কত?]

|                  |     |      |                                           |
|------------------|-----|------|-------------------------------------------|
| পুরুষ HH ----- ১ |     |      |                                           |
| মহিলা HH ----- ২ |     |      |                                           |
|                  | নাম | বয়স | লিঙ্গ                                     |
|                  |     |      | পুরুষ    মহিলা                            |
| 1                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 2                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 3                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 4                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 5                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 6                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 7                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 8                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 9                |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |
| 10               |     |      | <input type="text"/> <input type="text"/> |
|                  |     |      | ১    ২                                    |

**নির্দেশিকাঃ**

এই খানায় ১৮-৬৯ বছর বয়সের সদস্যদের (এটি পুরুষ না কি মহিলা খানা তার উপর নির্ভর করে) সম্পর্কে তথ্য সংগ্রহ করা। খানা সংজ্ঞা রোষ্টারের উপর ভিত্তি করে একজনকে ব্যক্তিগত সাক্ষাৎকারের জন্য নির্বাচিত করা হবে। সম্পূর্ণ নামটি জিজ্ঞাস্য করুন (ডাক নাম সহ), যেন ঐ নামে তাকে সনাক্ত করা যায়। যদি একই খানার সদস্যদের মধ্যে নামের মিল থাকে অথবা উত্তরদাতা পূর্ণ নাম বলতে অস্বীকার করে সেক্ষেত্রে ডাক নাম বা অন্য নাম সনাক্তকরণের জন্য লিখতে হবে। যদি উত্তরদাতার সঠিক জন্ম তারিখ বলতে বা প্রমাণ দিতে না পারেন, সেক্ষেত্রে বিশেষ কেন ইভেন্ট অনুশঙ্কাদের ভিত্তিতে অনুমান করে লিখুন (নিম্নের ইভেন্ট ক্যালেন্ডার টি অনুসরণ করুন)।

**ইভেন্ট ক্যালেন্ডার**

| সন   | ঘটনা                       | বয়স    |
|------|----------------------------|---------|
| ১৯৪৭ | ব্রিটিশ শাসন হতে স্বাধীনতা | ৭০ বৎসর |
| ১৯৫২ | ৫২ এর ভাষা আন্দোলন         | ৬৫ বৎসর |
| ১৯৬৫ | ৬৫ সালের পাক-ভারত যুদ্ধ    | ৫২ বৎসর |
| ১৯৭১ | ৭১ এর স্বাধীনতা যুদ্ধ      | ৪৬ বৎসর |
| ১৯৮৮ | ৮৮ এর বন্যা                | ২৯ বৎসর |
| ১৯৯১ | ৯১ এর সংসদ নির্বাচন        | ২৬ বৎসর |
| ১৯৯৮ | ৯৮ এর বন্যা                | ১৯ বৎসর |

## অবহিতক্রেমে সম্মতি—১

মহোদয়/মহোদয়,

আমার নাম (তথ্য সংগ্রহকারীর নাম) .....। আমি গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়ধীন ন্যাশনাল ইনিটিটিউট অফ প্রিভেন্টিভ এন্ড সোস্যাল মেডিসিন (নিপসম) থেকে আগত একজন পেশাদার তথ্য সংগ্রহকারী নিপসম, বিশ্ব স্বাস্থ্য সংস্থার কারিগরি সহায়তায় বাংলাদেশে 'STEPS survey for NCD risk factors in Bangladesh 2017 – 18' বাস্তবায়ন করছে। জরিপ থেকে প্রাপ্ত তথ্য বাংলাদেশ সরকারকে অসংক্রামক রোগ নিয়ন্ত্রণে প্রয়োজনীয় ব্যবস্থা গ্রহণের বিষয়ে সহায়তা করবে। এই জরিপটি বিশ্বের আরো অন্যান্য দেশে পরিচালিত হচ্ছে।

আপনি এবং আপনার থানা এই জরিপে অংশগ্রহণের জন্য বৈজ্ঞানিক (নেবচয়ন) পদ্ধতিতে নির্বাচিত হয়েছেন। আমি আপনার একটি সাক্ষাৎকার নিতে চাই। আপনার উক্ত আমদের কাছে এবং সমাজের জন্য খুবই গুরুত্বপূর্ণ। আপনার দেয়া উক্তরের মাধ্যমে অন্যান্য ব্যক্তিদের মতামতের প্রতিফলন ঘটবে। সাক্ষাৎকারটি সম্পন্ন করতে আনুমানিক ৪৫ মিনিট সময় লাগবে। এই জরিপে আপনার অংশগ্রহণ সম্পূর্ণ এচ্ছিক। আপনি জরিপে অংশগ্রহণ না করলে কোন ধরনের ব্যক্তিগত বা পেশাগত সমস্যা সম্মুখীন হবেন না।

আপনার দেয়া উক্ত সম্পূর্ণ গোপন রাখা হবে এবং আপনার নাম দিয়ে আপনার উক্ত সনাক্ত করা হবে না। আপনার ব্যক্তিগত উক্ত অন্যের কাছে প্রকাশ করা হবে না এমন কি আপনার পরিবারের অন্য কারো কাছেও না। তথ্যগুলো শুধুমাত্র গবেষণার কাজে ব্যবহৃত হবে। আপনার নাম, ঠিকানা ও ব্যক্তিগত তথ্য আলাদা করে ফেলা হবে এবং কোডের মাধ্যমে আপনার উক্ত সনাক্ত করা হবে।

আপনি সাক্ষাৎকারের যে কোন সময় আপনার সম্মতি প্রত্যাহার করতে পারেন এমনকি যে কোন প্রশ্নের উত্তর নাও দিতে পারেন। আপনি এই জরিপে অংশগ্রহণ করলে, আমরা আপনার একটি ব্যক্তিগত সাক্ষাৎকার এবং আপনার উচ্চতা, ওজন ও রক্তচাপের পরিমাপ করব। আপনার যদি এই জরিপ সম্পর্কে আরও কোন প্রশ্ন থাকে তাহলে আমাকে অথবা অধ্যাপক ডা জিয়াউল ইসলাম, বিভাগীয় প্রধান, প্রিভেন্টিভ এন্ড সোস্যাল মেডিসিন বিভাগ, নিপসম, মোবাইল: ০১৭২৬৬৯৩৭৭৮ এর সাথে যোগাযোগ করতে পারেন।

এই পরে সম্মতি ও স্বাক্ষর প্রদানের মাধ্যমে এটাই প্রতীয়মান হয় যে আপনি এই সম্মতি পত্রটি পড়েছেন, বুঝেছেন এবং জরিপের উদ্দেশ্য সম্পর্কে অবহিত হয়ে বেচ্ছায় ও স্ব-প্রণোদিত হয়ে এই জরিপে অংশ গ্রহণ করেছেন।

|                              |  |                                     |  |
|------------------------------|--|-------------------------------------|--|
| সম্মতি পত্রটি                |  | তথ্য প্রদানকারী সম্মত হয়েছেন       |  |
| তথ্য প্রদানকারী নিজে পড়েছেন |  | তথ্য প্রদানকারী প্রত্যাশ্যান করেছেন |  |

আমি অবহিতক্রেমে (STEPS survey for NCD risk factors in Bangladesh 2017 – 18) এই জরিপের পাণ-১ এবং পাণ-২ এ অংশগ্রহণে সম্মতি প্রদান করছি।

অংশগ্রহণকারীর নাম ও স্বাক্ষর:  
তারিখ:

তথ্য সংগ্রহকারীর নাম ও স্বাক্ষর:  
তারিখ:

অথবাঃ

|                                                                                                                        |                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>আস্থানের স্থাপ:</b><br><div style="border: 1px solid black; width: 100px; height: 100px; margin: 10px auto;"></div> | <b>সাক্ষী</b><br>নামঃ _____<br>সম্পর্কঃ _____<br>স্বাক্ষর _____<br>নামঃ _____<br>সম্পর্কঃ _____<br>স্বাক্ষর _____ |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|

| সম্মতি, সাক্ষাৎকারের ভাষা এবং নাম                           | উত্তর                                      | কোড |
|-------------------------------------------------------------|--------------------------------------------|-----|
| সম্মতি পত্রটি পড়ে ও জানা হয়েছিল এবং সম্মতি দেয়া হয়েছিল। | হ্যাঁ ১<br>না ২                            | 15  |
| <b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।         | <b>উত্তর 'না' হলে সাক্ষাৎকার শেষ করুন।</b> |     |

|                                                                                                                                                                                                                                                                                                                 |                                                                                                                          |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------|
| তথ্য প্রদানকারীর পারিবারিক পূর্ণনাম                                                                                                                                                                                                                                                                             |                                                                                                                          | I8   |
| <b>নির্দেশনাঃ</b><br>তথ্যপ্রদানকারীর পূর্ণ নাম লিখুন (তথ্যপ্রদানকারীকে জরিপের গোপনীয়তার ব্যাপারে নিশ্চিত করুন, এই তথ্য শুধুমাত্র পুনঃ তদারকির জন্য প্রয়োজন)।                                                                                                                                                  | .....।                                                                                                                   |      |
| তথ্য প্রদানকারীর পারিবারিক ডাক নাম                                                                                                                                                                                                                                                                              | .....।                                                                                                                   | I9   |
| <b>অতিরিক্ত সাহায্যকারী তথ্য</b>                                                                                                                                                                                                                                                                                |                                                                                                                          |      |
| তথ্য প্রদানকারীর মোবাইল নং                                                                                                                                                                                                                                                                                      | ১।.....<br><b>[জানাতে অসম্মতি হলে '৮৮' এবং না থাকলে '৯৯' লিখুন।]</b><br><b>[যদি '৮৮' বা '৯৯' হয় তবে 'I11a' তে যান।]</b> | I10  |
| <b>নির্দেশনাঃ</b><br>তথ্যপ্রদানকারীর মোবাইল নাম্বার টি লিখুন (তথ্যপ্রদানকারীকে জরিপের গোপনীয়তার ব্যাপারে নিশ্চিত করুন, এই তথ্য শুধুমাত্র পুনঃ তদারকির জন্য প্রয়োজন)। তথ্যপ্রদানকারী মোবাইল ব্যবহার না করলে পাসপোর্ট বা ড্রাইভিং লাইসেন্স আভিজাত্যের নাম্বার দিন যাতে করে পরবর্তীতে তার সাথে যোগাযোগ করা যায়। |                                                                                                                          |      |
| আপনার কি অন্যকোন মোবাইল নাম্বার আছে?                                                                                                                                                                                                                                                                            | হ্যাঁ ১<br>না ২ <b>[যদি না হয় I11a এ যান।]</b>                                                                          | I10a |
| অন্য আরেকটি মোবাইল নাম্বার                                                                                                                                                                                                                                                                                      | ১।.....<br><b>[জানাতে অসম্মতি হলে '৮৮' এবং না থাকলে '৯৯' লিখুন।]</b>                                                     | I10b |
| জাতীয় পরিচয়পত্রের (স্মার্ট কার্ড) নাম্বার।                                                                                                                                                                                                                                                                    | .....<br>পাওয়া যায়নি ৭৭ <b>I11b এ যান।</b><br>জানাতে অসম্মতি ৯৯                                                        | I11a |
| জাতীয় পরিচয়পত্রের (পুরাতন কার্ড) নাম্বার                                                                                                                                                                                                                                                                      | .....<br>পাওয়া যায়নি ৭৭ <b>I11 c এ যান।</b><br>জানাতে অসম্মতি ৯৯                                                       | I11b |
| জন্ম সনদের নাম্বার                                                                                                                                                                                                                                                                                              | .....<br>পাওয়া যায়নি ৭৭<br>জানাতে অসম্মতি ৯৯                                                                           | I11c |
| <b>নির্দেশনাঃ</b><br>তথ্যপ্রদানকারীর জন্ম সনদের (যদি থাকে) নাম্বার টি লিখুন (তথ্যপ্রদানকারীকে জরিপের গোপনীয়তার ব্যাপারে নিশ্চিত করুন, এই তথ্য শুধুমাত্র পুনঃ তদারকির জন্য প্রয়োজন)।                                                                                                                           |                                                                                                                          |      |

STEP 1 ডেমোগ্রাফিক তথ্যাবলী

| মূল: ডেমোগ্রাফিক তথ্যাবলী                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                           |                                                              |          |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------|----|----------|-----------|---|----|----------|-------|----|----|---------------|------|----|----|--------|-------|----|----|-------------|-------|----|
| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                           | উত্তর                                                        | কোড      |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ১                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>উত্তর দাতার লিঙ্গ</p> <p><b>নির্দেশিকা:</b><br/>উত্তরদাতা পুরুষ/মহিলা তা নির্বাচন করুন।</p>                                                                                                                                                                                                                                            | <p>পুরুষ ১</p> <p>মহিলা ২</p>                                | C1       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>আপনার জন্ম তারিখ কত?<br/>(জানা নাই হলে ৭৭ ৭৭ ৭৭৭৭ লিখুন)</p> <p><b>নির্দেশিকা:</b><br/>উত্তরদাতার সঠিক জন্মতারিখ জাতীয় পরিচয় পত্র/ জন্ম সনদ দেখে লিখুন। অসামঞ্জস্যপূর্ণ জন্ম তারিখ থাকলে, মতব্য অংশে টীকা লিখুন।<br/>যদি জানা না থাকে তাহলে ৭৭ ৭৭ ৭৭৭৭ লিখুন।</p>                                                                    | <p>দিন      মাস      সাল</p> <p>যদি জানা থাকে, C4 এ যান।</p> | C2 (a-c) |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ৩                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>আপনার বয়স কত?</p> <p><b>নির্দেশিকা:</b><br/>সঠিক বয়স জানা না থাকলে 'ইডেন্ট ক্যালেন্ডার ব্যবহার করে এবং তথ্য প্রদানকারীর সাহায্য নিয়ে আনুমানিক বয়স নির্ধারণ করতে হবে।</p>                                                                                                                                                           | <p>বছর</p>                                                   | C3       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ৪                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>আপনি সর্বমোট কত বছর প্রাতিষ্ঠানিক শিক্ষা গ্রহণ করেছেন (কোন শ্রেণী পাশ করেছেন)? (প্রথম শ্রেণীর নিচে এবং উপানুষ্ঠানিক শিক্ষা অন্তর্ভুক্ত হবে না)</p> <p><b>নির্দেশিকা:</b><br/>তথ্য প্রদানকারী সর্বমোট কত বৎসর প্রাতিষ্ঠানিক শিক্ষা সম্পন্ন করেছেন তা লিপিবদ্ধ করুন (প্রথম শ্রেণীর নিচে এবং উপানুষ্ঠানিক শিক্ষা অন্তর্ভুক্ত হবে না)।</p> | <p>বছর</p>                                                   | C4       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| <p>সাধারণ শিক্ষা ও মাত্রাসা শিক্ষার সমমান নিচে দেয়া হলোঃ</p> <table border="1"> <tbody> <tr> <td>০১</td> <td>প্রাথমিক</td> <td>এবতেদায়ী</td> <td>৫</td> </tr> <tr> <td>০২</td> <td>মাধ্যমিক</td> <td>দাখিল</td> <td>১০</td> </tr> <tr> <td>০৩</td> <td>উচ্চ মাধ্যমিক</td> <td>আলিম</td> <td>১২</td> </tr> <tr> <td>০৪</td> <td>স্নাতক</td> <td>ফাজিল</td> <td>১৬</td> </tr> <tr> <td>০৫</td> <td>স্নাতকোত্তর</td> <td>কামিল</td> <td>১৮</td> </tr> </tbody> </table> |                                                                                                                                                                                                                                                                                                                                           |                                                              |          | ০১ | প্রাথমিক | এবতেদায়ী | ৫ | ০২ | মাধ্যমিক | দাখিল | ১০ | ০৩ | উচ্চ মাধ্যমিক | আলিম | ১২ | ০৪ | স্নাতক | ফাজিল | ১৬ | ০৫ | স্নাতকোত্তর | কামিল | ১৮ |
| ০১                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | প্রাথমিক                                                                                                                                                                                                                                                                                                                                  | এবতেদায়ী                                                    | ৫        |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ০২                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | মাধ্যমিক                                                                                                                                                                                                                                                                                                                                  | দাখিল                                                        | ১০       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ০৩                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | উচ্চ মাধ্যমিক                                                                                                                                                                                                                                                                                                                             | আলিম                                                         | ১২       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ০৪                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | স্নাতক                                                                                                                                                                                                                                                                                                                                    | ফাজিল                                                        | ১৬       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |
| ০৫                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | স্নাতকোত্তর                                                                                                                                                                                                                                                                                                                               | কামিল                                                        | ১৮       |    |          |           |   |    |          |       |    |    |               |      |    |    |        |       |    |    |             |       |    |

| বর্ষিক ডেমোগ্রাফিক তথ্যসমূহ |                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| ৫                           | <p>আপনি সর্বোচ্চ কতদূর পর্যন্ত পড়াশোনা করেছেন?</p> <p><b>নির্দেশনাঃ</b><br/>যদি উত্তরদাতা মাধ্যমিক পর্যায়ের প্রথম বর্ষে কিছুমাত্র ক্লাস করে থাকেন কিন্তু এক বছর শেষ করেন নি, তাহলে 'প্রাথমিক শিক্ষা শেষ করেছেন' নির্বাচন করুন। আর যদি প্রাথমিক শিক্ষার কিছু বছর পড়াশোনা করে থাকেন তাহলে 'প্রাথমিক শিক্ষা শেষ করেননি' নির্বাচন করুন।</p>                                                                                               | <p>কোন প্রাতিষ্ঠানিক শিক্ষা নেই ১<br/>প্রাথমিক/ সমতুল্য শিক্ষা শেষ করেননি ২<br/>প্রাথমিক/ সমতুল্য শিক্ষা শেষ করেছেন ৩<br/>মাধ্যমিক/ সমতুল্য শিক্ষা শেষ করেছেন ৪<br/>উচ্চ মাধ্যমিক/ সমতুল্য শিক্ষা শেষ করেছেন ৫<br/>কলেজ/বিশ্ববিদ্যালয়/ সমতুল্য শিক্ষা শেষ করেছেন ৬<br/>স্নাতকোত্তর ডিগ্রী অর্জন করেছেন ৭<br/>জানাতে অসম্মতি ৮</p>                                                                                                                                  | C5  |
| ৬                           | <p>আপনি কোন ধর্মের অনুসারী?</p> <p><b>নির্দেশনাঃ</b><br/>উত্তরদাতার যে ধর্মের অনুসারী তা নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                              | <p>ইসলাম ১<br/>হিন্দু ২<br/>খ্রিষ্টান ৩<br/>বৌদ্ধ ৪<br/>অন্যান্য ৫<br/>অন্যান্য নির্দিষ্ট করুন (.....) C6other<br/>অসম্মতি ৮</p>                                                                                                                                                                                                                                                                                                                                    | C6  |
| ৭                           | <p>আপনার বৈবাহিক অবস্থা কি?</p> <p><b>নির্দেশনাঃ</b><br/>উত্তরদাতার উপযুক্ত বৈবাহিক অবস্থা নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                            | <p>অবিবাহিত ১<br/>বিবাহিত ২<br/>গৃহক ৩<br/>তালাকপ্রাপ্ত ৪<br/>বিপত্তিক/ বিধবা ৫<br/>অসম্মতি ৮</p>                                                                                                                                                                                                                                                                                                                                                                   | C7  |
| ৮                           | <p>গত ১২ মাসে আপনার প্রধান পেশা কি ছিল?</p> <p><b>নির্দেশনাঃ</b><br/>যদি তথ্য প্রদানকারী গত ১২ মাসে একাধিক পেশার নিয়ুক্ত থাকেন তা হলে তিনি যে পেশাটিতে বেশি সময় ব্যয় করেছেন এবং প্রথাগত হিসেবে বিবেচনা করেন তা লিখিবদ্ধ করুন।<br/>এই প্রশ্নের মূল উদ্দেশ্য হচ্ছে তথ্য প্রদানকারীর পেশা ও অন্য প্রশ্নের উত্তরের সাথে সম্পর্ক দেখা দেওয়া। যেমনঃ তার পেশার সাথে অসংক্রমক রেগের পুঁক্তির সম্পৃক্ততা।<br/>সঠিক উত্তরটি নির্বাচন করুন।</p> | <p>সরকারী কর্মচারী ১<br/>বেসরকারী কর্মচারী ২<br/>ব্যবসা (ছোট) ৩<br/>ব্যবসা (বড়) ৪<br/>কৃষি কাজ (জমির মালিক এবং কৃষক) ৫<br/>ফেত মজুর ৬<br/>কারখানার শ্রমিক ৭<br/>দিনমজুর ৮<br/>পরিবহন শ্রমিক ৯<br/>অন্যান্য স্ব-নিয়োগ ১০<br/>ছাত্র/ছাত্রী ১১<br/>গৃহ-কর্ম ১২<br/>অবসরপ্রাপ্ত ১৩<br/>বেকার, কর্মক্ষম ১৪<br/>বেকার, কর্মক্ষম নন ১৫<br/>পারিশ্রমিক প্রাপ্ত গৃহকর্মী ১৬<br/>কামার/কুমার/তাই ১৭<br/>অন্যান্য ১৮<br/>অন্যান্য (নির্দিষ্ট করুন) C8other<br/>অসম্মতি ৮</p> | C8  |
| ৯                           | <p>শিশু সহ এই ঘানায় সর্বমোট কত জন বাস করে?</p> <p><b>নির্দেশনাঃ</b><br/>যারা এই খানা কে তাদের যাবতীয় বাসস্থান হিসেবে গণ্য করেন তাদের সকল কে (শিশু সহ) গণ্য করুন।</p>                                                                                                                                                                                                                                                                   | <p>_____ জন</p> <p>জানি না হলে '৭৭' আর<br/>অসম্মতি হলে '৮৮' লিখুন।</p>                                                                                                                                                                                                                                                                                                                                                                                              | C9a |
| ১০                          | <p>আপনি সহ আপনার ঘানায় ১৮ থেকে ৬৯ বছর বয়সের মধ্যে কতজন সদস্য (পুরুষ ও মহিলা সহ) বাস করেন?</p> <p><b>নির্দেশনাঃ</b><br/>১৮ থেকে ৬৯ বছরের সকল পুরুষ ও মহিলার সংখ্যা।</p>                                                                                                                                                                                                                                                                 | <p>সদস্য সংখ্যা _____ জন</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        | C9b |

| বর্ধিত: ডেমোগ্রাফিক তথ্যসমূহ |                                                                                                                                                                                                                                                                                                 |                                                                        |       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------|
| প্রশ্ন                       |                                                                                                                                                                                                                                                                                                 | উত্তর                                                                  | কোড   |
| ১০                           | <p>অনুগ্রহ করে জিজ্ঞাসা/ পর্যবেক্ষণ করুন (প্রয়োজন হলে) এই খানায় বা এই খানায় যারা বাস করেন তাদের কারও নিচের সামগ্রীগুলো আছে কি না:</p> <p><b>নিবেশন:</b></p> <p>খানার অর্থ-নামাজিক অবস্থা নির্ণয় করার জন্য এই প্রশ্নগুলো পৃথক পৃথক ভাবে জিজ্ঞাসা করুন অথবা পর্যবেক্ষণ করে লিখিবদ্ধ করুন।</p> |                                                                        |       |
| a.                           | বিদ্যুৎ                                                                                                                                                                                                                                                                                         | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1a |
| b.                           | ফ্লাশ পায়খানা                                                                                                                                                                                                                                                                                  | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1b |
| c.                           | [ল্যান্ড ফোন]                                                                                                                                                                                                                                                                                   | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1c |
| d.                           | [মোবাইল ফোন]                                                                                                                                                                                                                                                                                    | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1d |
| e.                           | [টেলিভিশন]                                                                                                                                                                                                                                                                                      | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানা নাই ৭৭</p> <p>জানাতে অসম্মতি ৮৮</p> | Cex1e |
| f.                           |                                                                                                                                                                                                                                                                                                 |                                                                        |       |
| g.                           | [রেফ্রিজারেটর]                                                                                                                                                                                                                                                                                  | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1g |
| h.                           | [প্রাইভেট কার]                                                                                                                                                                                                                                                                                  | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1h |
| i.                           | [মগেড/স্কুটার/মোটর সাইকেল/অটো রিক্সা]                                                                                                                                                                                                                                                           | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1i |
| j.                           | [ওয়াশিং মেশিন]                                                                                                                                                                                                                                                                                 | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1j |
| k.                           | [বাই সাইকেল]                                                                                                                                                                                                                                                                                    | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1k |
| l.                           | [সেলাই মেশিন]                                                                                                                                                                                                                                                                                   | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1l |
| m.                           | [অলমিরা / ওয়ান্ড্রোব]                                                                                                                                                                                                                                                                          | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1m |
| n.                           | [টেলিফোন]                                                                                                                                                                                                                                                                                       | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1n |
| o.                           | [গ্যাস/খাট]                                                                                                                                                                                                                                                                                     | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1o |
| p.                           | [চেয়ার/বেঞ্চ]                                                                                                                                                                                                                                                                                  | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1p |
| q.                           | [ঘড়ি]                                                                                                                                                                                                                                                                                          | <p>হ্যাঁ ১</p> <p>না ২</p> <p>জানাতে অসম্মতি ৮৮</p>                    | Cex1q |
| r.                           | [কম্পিউটার/লেপটপ/ট্যাব]                                                                                                                                                                                                                                                                         | <p>হ্যাঁ ১</p> <p>না ২</p>                                             | Cex1r |

|    |                                                                                                                                                                                                                                                   |                                                                           |             |       |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------|-------|
|    |                                                                                                                                                                                                                                                   | জানাতে অসম্মতি                                                            | ৮৮          |       |
| s. | পূহপালিত পত (গরু, মহিষ, ছাগল ইত্যাদি)                                                                                                                                                                                                             | হ্যাঁ                                                                     | ১           | Cex1s |
|    |                                                                                                                                                                                                                                                   | না                                                                        | ২           |       |
|    |                                                                                                                                                                                                                                                   | জানাতে অসম্মতি                                                            | ৮৮          |       |
| t. | শ্যাপো মেশিন/পাওয়ার টিলার/ট্রাক্টর                                                                                                                                                                                                               | হ্যাঁ                                                                     | ১           | Cex1t |
|    |                                                                                                                                                                                                                                                   | না                                                                        | ২           |       |
|    |                                                                                                                                                                                                                                                   | জানাতে অসম্মতি                                                            | ৮৮          |       |
| u. | [[রিঙ্গা]]                                                                                                                                                                                                                                        | হ্যাঁ                                                                     | ১           | Cex1u |
|    |                                                                                                                                                                                                                                                   | না                                                                        | ২           |       |
|    |                                                                                                                                                                                                                                                   | জানাতে অসম্মতি                                                            | ৮৮          |       |
| ১১ | প্রধান ঘরের ছাদ/চাল মূলত কি দিয়ে নির্মিত? (পরিবেক্ষণ করে লিখুন)                                                                                                                                                                                  | কাঁচা (বাঁশ/তালপাতা/খড়/চট<br>টিন/ টালি/ অদূরপ সামগ্রী<br>সিমেন্ট/কনক্রিট | ১<br>২<br>৩ | Cex2  |
|    | <b>নির্দেশনাঃ</b><br>যদি একটি খানায় একাধিক গৃহক ঘর থাকে তবে বসবাসের জন্য প্রধান ঘরের ছাদ / চাল প্রধানত কি দিয়ে নির্মিত তা পর্যবেক্ষণ করে লিখুন।                                                                                                 |                                                                           |             |       |
| ১২ | এই পরিবারের ধরণ কি?                                                                                                                                                                                                                               | একক পরিবার<br>যৌথ পরিবার                                                  | ১<br>২      | Cex3  |
|    | <b>নির্দেশনাঃ</b><br>একক পরিবারঃ যে পরিবারে শুধু স্বামী-স্ত্রী অথবা স্বামী-স্ত্রী ও তাদের সন্তান বাস করে (এক প্রজন্মের বসবাস)।<br>যৌথ পরিবারঃ যে পরিবারে স্বামী-স্ত্রী, তাদের সন্তান সহ, পিতা মাতা ও ভাই বোন সহ একাধিক প্রজন্মের সদস্য বসবাস করে। |                                                                           |             |       |

### Step 1 জীবনাচরণ পরিমাপের তথ্যাবলী

| মূল: খাদ্যাভ্যাস                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                        |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----|
| আমি আপনাকে পরবর্তীতে যে প্রশ্নগুলো জিজ্ঞাসা করতে যাচ্ছি তা হল সচরাচর আপনি যে সকল ফলমূল ও শাক-সজি খেয়ে থাকেন সেই বিষয়ে। আমার কাছে দেশীয় ফল এবং শাক-সজির কিছু ছবি আছে। প্রতিটি ছবি এক একটি প্রমাণ মাপের সমান। উত্তর দেওয়ার সময় সাধারণ ১টি সন্তোহের কথা চিন্তা করুন। মাসে ১—২ বার হলে '০০' হবে। |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                        |     |
|                                                                                                                                                                                                                                                                                                   | প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                           | উত্তর                                                                                                  | কোড |
| ১৩                                                                                                                                                                                                                                                                                                | সচরাচর সন্তোহের কত দিন আপনি ফল খান?<br>[শো-কার্ড - ০১ দেখান]<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে শো-কার্ডে প্রদর্শিত ফলগুলো দেখিয়ে চিন্তা করতে বলুন। এখানে প্যাকেটজাত ফলের জুস গ্রহণযোগ্য নয় তবে বাসায় ব্লাড করা ফলের জুস গ্রহণযোগ্য। সাধারণ সন্তোহ বলতে ধর্মীয় বা অন্য কোন বিশেষ উপলক্ষ ব্যতীত একটি স্বাভাবিক একটি সন্তোহ বুঝায়। মাসে ১—২ বার হলে '০০' হবে।                                              | দিনের সংখ্যা <input type="text"/> <input type="text"/> দিন<br>যদি '০০' দিন হয়, D3-এ যান<br>জানিনা ৭৭  | D1  |
| ১৪                                                                                                                                                                                                                                                                                                | সেই দিনগুলির একদিনে কতটুকু ফল খেয়েছেন?<br>[শো-কার্ড - ০২ দেখান]<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে যেকোন একদিনের কথা বর্ণনা করতে বলুন এবং শো-কার্ডে প্রদর্শিত প্রমাণ পরিমাণগুলো দেখে পরিমাপ করতে বলুন।                                                                                                                                                                                                       | সার্ভিস সংখ্যা <input type="text"/> <input type="text"/> . <input type="text"/><br>জানিনা ৭৭           | D2  |
| ১৫                                                                                                                                                                                                                                                                                                | সচরাচর সন্তোহের কত দিন আপনি শাক-সজি খান?<br>[শো-কার্ড - ০৩ দেখান]<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে শো-কার্ডে প্রদর্শিত ফলগুলো দেখিয়ে চিন্তা করতে বলুন। এখানে আপু শাক-সজি হিসেবে গণ্য হবে না। কাঁচা ও রান্না করা শাক-সজির প্রমাণ পরিমাণ আলাদা করে দেখান। মাসের সাথে রান্না করা সজির ফেরে ওষু সজির পরিমাণ করতে হবে। সাধারণ সন্তোহ বলতে ধর্মীয় বা অন্য কোন বিশেষ উপলক্ষ ব্যতীত একটি স্বাভাবিক সন্তোহ বুঝায়। | দিনের সংখ্যা <input type="text"/> <input type="text"/> দিন<br>যদি '০০' দিন হয়, Dx1-এ যান<br>জানিনা ৭৭ | D3  |
| ১৬                                                                                                                                                                                                                                                                                                | সেই দিনগুলির একদিনে কতটুকু শাক-সজি খেয়েছেন?<br>[শো-কার্ড - ০৪ দেখান]<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে যেকোন একদিনের কথা বর্ণনা করতে বলুন এবং শো-কার্ডে প্রদর্শিত প্রমাণ পরিমাণগুলো দেখে পরিমাপ করতে বলুন।                                                                                                                                                                                                  | সার্ভিস সংখ্যা <input type="text"/> <input type="text"/> . <input type="text"/><br>জানিনা ৭৭           | D4  |
| ১৭                                                                                                                                                                                                                                                                                                | একজনের প্রতিদিন কি পরিমাণ ফল-মূল ও শাক-সজি খাওয়া উচিত বলে আপনি মনে করেন?<br><b>নির্দেশনাঃ</b><br>একজন ব্যক্তির একদিনে ফল-মূল ও শাক-সজি সমস্ত প্রমাণ পরিমাণে কতটুকু খাওয়া উচিত সেই সম্পর্কে তথ্য প্রদানকারী কি মনে করেন তা নিশ্চিত করুন।                                                                                                                                                                            | সার্ভিস সংখ্যা <input type="text"/> <input type="text"/> . <input type="text"/><br>জানিনা ৭৭           | Dx1 |

| খাদ্য লবণ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                          |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----|
| <p>পরবর্তী প্রশ্নগুলোর মাধ্যমে আমরা আপনার খাদ্য লবণের ব্যবহার সম্পর্কে জানব। খাদ্য লবণ হচ্ছে সাধারণ লবণ, অপরিিশোধিত বা সামুদ্রিক লবণ, আয়োডিন যুক্ত লবণ, বিটি লবণ, টেস্টিং সল্ট, লবণযুক্ত পাউডার ও লবণ যুক্ত সস (যেমনঃ সয়া সস, ফিস সস, টমাটো সস, অন্যান্য)। পরবর্তী প্রশ্নগুলো গাতে লবণ খাওয়া, বাড়িতে খাবার রান্নার সময় লবণের ব্যবহার, প্রক্রিয়াজাত খাবার যেখানে প্রচুর লবণ থাকে এবং লবণ খাওয়া কমানো সম্পর্কে জিজ্ঞাসা করা হবে। আপনি খাবারে কম লবণ খান হিসেবে বিবেচনা করলেও দয়া করে প্রশ্নগুলির উত্তর দিন।</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে এই প্রশ্নিক বক্তব্যটি গড়ে তুলান এবং কেবল লবণ সম্পর্কেই চিন্তা করতে বসুন। এই বিষয়ে সতর্ক থাকবেন যে তথ্য প্রদানকারী যেন বুঝে সময় নিয়ে সঠিক উত্তর দিতে পারে। তথ্য প্রদানকারীকে প্রশ্ন করার সময় প্রাসঙ্গিক শে-কার্ড দেখাতে কখনোই ভুলবেন না।</p> |                                                                                          |     |
| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | উত্তর                                                                                    | কোড |
| <p>১৮ খাবার গ্রহণের পূর্বে অথবা খাওয়ার সময় আপনি কি মাত্রায় গাতে অতিরিক্ত/আলগা/কাঁচা লবণ খান?<br/>[যেকোন একটি নির্বাচন করুন]</p> <p><b>[শে-কার্ড – ০৫ দেখান।]</b></p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে উত্তরগুলো গড়ে তুলান এবং তার সাথে সামঞ্জস্যপূর্ণ একটি উত্তর লিপিবদ্ধ করুন। শে-কার্ডে প্রদর্শিত লবণের চিত্রগুলো ব্যাখ্যা করে বুঝিয়ে দিন যাতে করে তথ্য প্রদানকারী সঠিক উত্তরটি বলতে পারেন।</p>                                                                                                                                                                                                                                                                                                                                                                                                  | <p>সবসময় ১<br/>প্রায়সই ২<br/>মাকে মাকে ৩<br/>কদাচিৎ ৪<br/>কখনো না ৫<br/>জানি না ৬৭</p> | D5a |
| <p>১৯ খাবার গ্রহণের পূর্বে অথবা খাওয়ার সময় আপনি কি মাত্রায় লবণ যুক্ত সস (টমাটো সস, টমেটো কেচাপ, চিলি সস, ফিস সস, সয়া সস) খান?<br/>[যেকোন একটি নির্বাচন করুন]</p> <p><b>[শে-কার্ড – ০৬ দেখান।]</b></p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে উত্তরগুলো গড়ে তুলান এবং তার সাথে সামঞ্জস্যপূর্ণ একটি উত্তর লিপিবদ্ধ করুন। শে-কার্ডে প্রদর্শিত লবণ যুক্ত সসের চিত্রগুলো ব্যাখ্যা করে বুঝিয়ে দিন যাতে করে তথ্য প্রদানকারী সঠিক উত্তরটি বলতে পারেন।</p>                                                                                                                                                                                                                                                                                                                                                       | <p>সবসময় ১<br/>প্রায়সই ২<br/>মাকে মাকে ৩<br/>কদাচিৎ ৪<br/>কখনো না ৫<br/>জানি না ৬৭</p> | D5b |
| <p>২০ আপনি অতিরিক্ত লবণযুক্ত প্রক্রিয়াজাত খাবার কি মাত্রায় খান ?</p> <p>অতিরিক্ত লবণযুক্ত প্রক্রিয়াজাত খাবার হচ্ছে, ঐ সকল খাবার যেগুলোর স্বাভাবিক অবস্থা পরিবর্তিত হয়েছে যেমনঃ লবণযুক্ত প্যাকেটজাত স্যান্ড যেমনঃ চিপস, চানাচুর, ঝাল মুড়ি, কোটা জাত লবণযুক্ত খাবার যেমনঃ আচার, প্রিজারভেডিস, লবণাক্ত ফাস্টফুড যেমনঃ পনির, প্রক্রিয়াজাত মাংশ, শুটকি মাছ, লবণ দেয়া মাছ ইত্যাদি।</p> <p><b>[শে-কার্ড – ০৭ দেখান।]</b></p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে উত্তরগুলো গড়ে তুলান এবং তার সাথে সামঞ্জস্যপূর্ণ একটি উত্তর লিপিবদ্ধ করুন।</p>                                                                                                                                                                                                                                                            | <p>সবসময় ১<br/>প্রায়সই ২<br/>মাকে মাকে ৩<br/>কদাচিৎ ৪<br/>কখনো না ৫<br/>জানি না ৬৭</p> | D7  |

|    | প্রশ্নাবলী                                                                                                                                                                                                | উত্তর                                                                                            | কোড |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----|
| ২১ | আপনি কি পরিমাণ লবণ খান বলে মনে করেন?<br><br><b>নির্দেশনা:</b><br>তথ্য প্রদানকারীকে উত্তরওনো গড়ে ওনান এবং তার সাথে সামঞ্জস্যপূর্ণ একটি উত্তর লিখিবদ্ধ করুন।                                               | অত্যধিক বেশি ১<br>খুব বেশি ২<br>স্বাভাবিক পরিমাণ ৩<br>খুব কম ৪<br>সামান্য পরিমাণ ৫<br>জানি না ৭৭ | D8a |
| ২২ | আপনি কি মাত্রায় লবণাক্ত সস (টমেটো সস, টমাটো কেসাপ, চিলি সস, সয়া সস, ফিস সস) খান?<br><br><b>নির্দেশনা:</b><br>তথ্য প্রদানকারীকে উত্তরওনো গড়ে ওনান এবং তার সাথে সামঞ্জস্যপূর্ণ একটি উত্তর লিখিবদ্ধ করুন। | অত্যধিক বেশি ১<br>খুব বেশি ২<br>স্বাভাবিক পরিমাণ ৩<br>খুব কম ৪<br>সামান্য পরিমাণ ৫<br>জানি না ৭৭ | D8b |

| বর্ধিত: খাদ্যাভ্যাস |                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                           |      |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                     | প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                  | উত্তর                                                                                                                                                                     | কোড  |
| ২৩                  | আপনি প্রতিদিন কি পরিমাণ অতিরিক্ত/পাতে/আলগা লবণ খান?<br><br>[শো-কার্ড – ০৮ দেখান]<br><br><b>নির্দেশনা:</b><br>এক্ষেত্রে তথ্য প্রদানকারী একদিনে সর্বমোট কি পরিমাণ পাতে অতিরিক্ত/আলগা/কার লবণ খান তা লিখিবদ্ধ করুন। তথ্য প্রদানকারী যদি আলুনের চিমটি দিয়ে বা কোটা থাকিয়ে পাতে লবণ খান, সেক্ষেত্রে তার পরিমাণ শো-কার্ড অনুযায়ী চা-চামচে রূপান্তরিত করে একদিনের পরিমাণ লিখুন। | <input type="text"/> . <input type="text"/> চা চামচ<br>জানি না ৭৭                                                                                                         | Dx2  |
| ২৪                  | আপনি খাবারে লবণের পরিমাণ কমানো কতটুকু গুরুত্বপূর্ণ মনে করেন?<br><br><b>নির্দেশনা:</b><br>এক্ষেত্রে তথ্য প্রদানকারীর উপলব্ধি লিখিবদ্ধ করুন।                                                                                                                                                                                                                                  | খুবই গুরুত্বপূর্ণ ১<br>কিছুটা গুরুত্বপূর্ণ ২<br>মোটাই গুরুত্বপূর্ণ নয় ৩<br>জানি না ৭৭                                                                                    | D9   |
| ২৫                  | সুস্থ থাকার জন্য একজন মানুষকে সকল উৎস থেকে প্রতিদিন কি পরিমাণ লবণ খাওয়া উচিত বলে আপনি মনে করেন?<br><br>[শো-কার্ড – ০৮ দেখান]<br><br><b>নির্দেশনা:</b><br>এটি তথ্য প্রদানকারীর জ্ঞান সম্পর্কিত। উপযুক্ত উত্তরটি লিখিবদ্ধ করুন।                                                                                                                                              | <input type="text"/> . <input type="text"/> চা চামচ<br>জানি না ৭৭                                                                                                         | Dx3  |
| ২৬                  | যাবারে অতিরিক্ত লবণ বা লবণ যুক্ত সস স্বাস্থ্যের কি ধরনের ক্ষতি করতে পারে বলে আপনি মনে করেন?<br><br><b>নির্দেশনা:</b><br>এটি তথ্য প্রদানকারীর জ্ঞান সম্পর্কিত। উপযুক্ত উত্তরটি লিখিবদ্ধ করুন।                                                                                                                                                                                | কিছু হয় না, লবণ শরীরের জন্য ভাল ১<br>রক্তচাপ বৃদ্ধি ২<br>কিডনির রোগ ৩<br>হৃদযন্ত্র ৪<br>ক্যালসিয়াম ৫<br>যক্ষা ৬<br>অন্যান্য নির্দিষ্ট করুন (...) Dx4other<br>জানি না ৭৭ | Dx4  |
| ২৭                  | আপনি লবণ গ্রহণের মাত্রা নিয়ন্ত্রণের জন্য বর্তমানে নিয়মিতভাবে কি কিছু করছেন?<br><br><b>নির্দেশনা:</b><br>উপযুক্ত উত্তরটি লিখিবদ্ধ করুন।                                                                                                                                                                                                                                    | হ্যাঁ ১<br>না ২ / না হলে Dx6 এ যান<br>জানি না ৭৭                                                                                                                          | Dx5  |
| ২৮                  | লবণ গ্রহণের মাত্রা নিয়ন্ত্রণের জন্য আপনি নিম্নের কোন কোনটি নিয়মিত ভাবে পালন করেন?<br><br><b>নির্দেশনা:</b><br>প্রত্যেকটির অংশের উত্তর উল্লেখ করুন। নিম্নের প্রতিটি অংশ তথ্য প্রদানকারীর গুরুত্বপূর্ণ লবণ খাওয়া কমানোর জন্য প্রয়োজ্য, অন্য কোন উদ্দেশ্য গণ্য হবে না।                                                                                                     |                                                                                                                                                                           |      |
|                     | প্রক্রিয়াজাত খাবার কম খাওয়া                                                                                                                                                                                                                                                                                                                                               | হ্যাঁ ১<br>না ২                                                                                                                                                           | D11a |
|                     | খাদ্যের উপাদানের তালিকায় লবণ/সোডিয়ামের পরিমাণ দেখা                                                                                                                                                                                                                                                                                                                        | হ্যাঁ ১                                                                                                                                                                   | D11b |

|    |                                                                                                                                                                       |                                                                                                                                                                                                         |          |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|    |                                                                                                                                                                       | না ২                                                                                                                                                                                                    |          |
|    | কম লবণ/সোডিয়ামযুক্ত বিকল্প খাবার জন্ম করা                                                                                                                            | হ্যাঁ ১<br>না ২                                                                                                                                                                                         | D11c     |
|    | রান্নার সময় লবণের পরিবর্তে বিভিন্ন মশলা ব্যবহার করা                                                                                                                  | হ্যাঁ ১<br>না ২                                                                                                                                                                                         | D11d     |
|    | বাহিরের তৈরি খাবার উপেক্ষা করা                                                                                                                                        | হ্যাঁ ১<br>না ২                                                                                                                                                                                         | D11e     |
|    | অতিরিক্ত লবণ খাওয়া বন্ধ করা/কমিয়ে দেওয়া                                                                                                                            | হ্যাঁ ১<br>না ২                                                                                                                                                                                         | D11f     |
|    | অতিরিক্ত লবণ খাওয়া নিয়ন্ত্রণের জন্য অন্যান্য কিছু করা                                                                                                               | হ্যাঁ ১<br>না ২                                                                                                                                                                                         | D11g     |
|    | অন্যকিছু নির্দিষ্ট করুন (.....)                                                                                                                                       | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | D11other |
| ২৯ | আপনার বাড়িতে খাবার রান্নায় কোন ধরনের তেল ব্যবহার করেন?<br>[যে কোন একটি নির্দিষ্ট করুন]<br><b>নির্দেশনাঃ</b><br>সচরাচর যে তেল দিয়ে রান্না করা হয় তা নির্ধারণ করুন। | সয়াবিন তেল ১<br>পাম ওয়েল ২<br>সানফাওয়ার তেল ৩<br>সরিষার তেল ৪<br>ধানের ভূমির তেল ৫<br>ডালডা ৬<br>মাখন/ঘি ৭<br>নির্দিষ্ট কোনটি নয় ৮<br>অন্যান্য ৯<br>অন্যান্য (নির্দিষ্ট করুন) ১০                    | Dx6      |
| ৩০ | আপনি সন্ধ্যা গড়ে কয়বার বাইরের তৈরি খাবার খান? (সকালের নাস্তা, দুপুরের খাবার, রাতের খাবার)।<br><b>নির্দেশনাঃ</b><br>উপর্যুক্ত উত্তরটি লিখুন।                         | <input type="checkbox"/> <input type="checkbox"/> সংখ্যা<br>জানিনা ৭৭                                                                                                                                   | Dx7      |
| ৩১ | আপনি দিনে গড়ে কয়বার বাইরের তৈরি খাবার খান?<br>সন্ধ্যা, সন্ধ্যা, পুষ্টি, চপস, চানাচুর, হুচকা, চটপটি, ঝাংশুড়ি, সলটেড বিস্কুট।                                        | <input type="checkbox"/> <input type="checkbox"/> সংখ্যা<br>জানিনা ৭৭                                                                                                                                   | Dx8      |

| মূল: শারীরিক পরিশ্রম সংক্রান্ত তথ্য                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |          |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------|-----|
| <p>এরপর আমি আপনাকে সজ্ঞাহে আপনি বিভিন্ন ধরনের শারীরিক পরিশ্রমে যে সময় কাটান সে সম্পর্কিত কিছু প্রশ্ন করবো। আপনি নিজেই শারীরিকভাবে সক্ষম মনে না করলেও, অনুগ্রহ করে এই প্রশ্নগুলোর উত্তর দিন। প্রথমে আপনি কাজ করার জন্য যে সময় ব্যয় করেন তা বলুন। কাজগুলো হতে পারে টাকার বিনিময়ে বা বিনামূল্যের কাজ। গাড়াওনা, প্রশিক্ষণ, গৃহস্থালীর কাজ, খাদ্য-শস্যের চাষাবাদ, মাছ ধরা বা খাদ্যের জন্য শিকার করা অথবা চাকুরী খোঁজ। এখানে “অতি মাত্রার কাজ” বলতে সেই কাজগুলোকে বোঝায় যে কাজগুলো করতে বেশি পরিমানে শারীরিক পরিশ্রমের প্রয়োজন হয় এবং কাজগুলো করার ফলে শ্বাস প্রশ্বাস অথবা হৃদস্পন্দন অনেক বেড়ে যায় এবং ‘মধ্যম মাত্রার কাজ’ বলতে সেই কাজগুলোকে বোঝায় যে কাজগুলো করতে মাঝারি পরিমানের শারীরিক পরিশ্রমের প্রয়োজন হয় এবং কাজগুলো করার ফলে শ্বাস প্রশ্বাস অথবা হৃদস্পন্দন সামান্য বেড়ে যায়।</p>                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |          |     |
| <p><b>নির্দেশনাঃ</b><br/>উপরের ভূমিকাটি তথ্য প্রদানকারীকে পড়ে চেনান। এই অংশটি রান দেয়া যাবে না। তথ্য প্রদানকারীকে প্রথমে অবশ্যই তার দৈনন্দিন কাজগুলো সম্পর্কে চিন্তা করবে। (পারিশ্রমিক ও গারিশ্রমিক বিহীন কাজ, গৃহস্থালী কাজ, খাদ্য উৎপাদন, খাওয়ার জন্য মাছ ধরা বা শিকার করা, কাজ খোঁজা) তার পর এক জায়গা থেকে অন্য জায়গায় যাওয়ার জন্য ব্যয়িত সময় এবং সবক্ষেত্রে অবসর সময়ে ব্যয়িত সময়।<br/>উত্তরদাতাকে যতদূর সম্ভব নিম্নলিখিত বিষয়গুলোর উত্তর দিবেঃ<br/><b>ভারী কাজ হচ্ছে</b> – এমন কার্যিক পরিশ্রম যুক্ত কাজ যার ফলে শ্বাস-প্রশ্বাসের হার ও হৃদস্পন্দনের হার অতিমাত্রার বৃদ্ধি পায়,<br/><b>মাঝারি মাত্রার কাজ হচ্ছে</b> – এমন মাত্রার শারীরিক পরিশ্রম যুক্ত কাজ যার ফলে শ্বাস-প্রশ্বাসের হার ও হৃদস্পন্দনের হার মাঝারি মাত্রার বৃদ্ধি পায়। (শো-কার্ড ওপো দেখাতে কখনোই ভুলবেন না, যেগুলো উত্তরদাতাকে উত্তর প্রদান করতে সহায়তা করবে।)</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |          |     |
| কর্মক্ষেত্র                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | প্রশ্নাবলী                                                         | উত্তর    | কোড |
| এখন আমি আপনার ভারী কাজ সম্পর্কে জানতে চাইবো।                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |          |     |
| ৩১                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>শ্বাসপ্রশ্বাস ও হৃদস্পন্দন অনেক বেড়ে যায় এমন কোন অতিমাত্রার কাজ একনাগাড়ে কমপক্ষে ১০ মিনিট ধরে, আপনাকে করতে হয় কি?<br/>অতিমাত্রার কাজ যেমন-ভারী জিনিস বহন করা বা তেল, মাটি কাটা, নির্মাণ কাজ, খান কাটা, জাল দিয়ে মাছ ধরা, ইত্যাদি।<br/>[শো-কার্ড – ০৯ দেখান]</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে শ্রমমাত্র কমানোর ‘ভারী কাজগুলো’ সম্পর্কে চিন্তা করতে বলুন। এই কাজগুলোই ভারী মাত্রার কাজ হিসেবে গণ্য হবে যার ফলে শ্বাস-প্রশ্বাসের হার ও হৃদস্পন্দনের হার অতিমাত্রার বৃদ্ধি পায়।</p> | <p>হ্যাঁ ১<br/>না ২ (যদি না হয়, P4 এ যান)</p>                     | P1       |     |
| ৩২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>আপনি দৈনন্দিন কাজের অংশ হিসেবে সজ্ঞাহে কয়দিন অতিমাত্রার কাজ করেন?</p> <p><b>নির্দেশনাঃ</b><br/>সাধারণ একটি সজ্ঞাহে হচ্ছে উত্তরদাতা তার একটি সাতাধিক সজ্ঞাহে যে কাজ করে বৈধ উত্তরদাতা হচ্ছে ১ – ৭ দিন।</p>                                                                                                                                                                                                                                                                                          | <p>_____ দিনের সংখ্যা</p> <p>জানি না ৭৭ (জানি না হলে এ P4 যান)</p> | P2       |     |
| ৩৩                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>সাধারণত আপনি দিনে কতসময় ধরে অতিমাত্রার কাজ করেন?</p> <p><b>নির্দেশনাঃ</b><br/>উত্তরদাতাকে তার কেন একটি দিনের কথা (যা সহজেই মনে আসে) চিন্তা করতে বলুন যে দিন তিনি কর্মক্ষেত্রে ভারী কাজে নিযুক্ত ছিলেন। উত্তরদাতা এসকল ভারী কাজগুলোকে আমলে আনবেন যেগুলো একটানা ১০ মি বা তার অধিক সময় ধরে করা হয়েছে। অধিক/অস্বাভাবিক (৪ ঘণ্টার অধিক) উত্তরগুলো যাজাই করুন।</p>                                                                                                                                     | <p>_____ ঘণ্টা : _____ মিনিট</p>                                   | P3 (a-b) |     |
| এখন আমি আপনার মাঝারি মাত্রার ভারী কাজ সম্পর্কে জানতে চাইবো।                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |          |     |
| ৩৪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>শ্বাসপ্রশ্বাস ও হৃদস্পন্দন সামান্য বেড়ে যায় এমন কোন মাঝারি মাত্রার কাজ একনাগাড়ে কমপক্ষে ১০ মিনিট ধরে, আপনাকে করতে হয় কি? যেমন-দ্রুত হাটা বা হালকা ভার বহন, কাপড় শোয়া।<br/>[শো-কার্ড – ১০ দেখান]</p> <p><b>নির্দেশনাঃ</b><br/>উত্তরদাতাকে শ্রমমাত্র কমানোর ‘মাঝারি মাত্রার কাজগুলো’ সম্পর্কে চিন্তা করতে বলুন। এই কাজগুলোই মাঝারি মাত্রার কাজ</p>                                                                                                                                              | <p>হ্যাঁ ১<br/>না ২ (যদি না হয়, P7 এ যান)</p>                     | P4       |     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                       |                                                                             |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | হিসেবে গণ্য হবে যার ফলে খুশ-প্রসূসের ও হৃদস্পন্দনের হার সানান্য বৃদ্ধি পায়।                                                                                                                                                                                                                                                                                                          |                                                                             |          |
| ৩৫                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | আপনি দৈনন্দিন কাজের অংশ হিসেবে সপ্তাহে কয়দিন মাঝারি মাত্রার কাজ করেন?<br><b>নির্দেশনা:</b><br>সাধারণ একটি সপ্তাহ হচ্ছে উত্তরদাতা তার একটি সাতাধিক সপ্তাহে যে কাজ করে বৈধ উত্তরনীমা হচ্ছে ১ – ৭ দিন।                                                                                                                                                                                  | <div>_____ দিন</div> <div>জানি না ৭৭ [‘৭৭’ হলে P7 এ যান]</div>              | P5       |
| ৩৬                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | সাধারণত আপনি দিনে কতসময় ধরে মাঝারি মাত্রার কাজ করেন?<br><b>নির্দেশনা:</b><br>উত্তরদাতাকে আর কোন একটি দিনের কথা (যা সহজেই মনে আসে) চিন্তা করতে বসুন যে দিন তিনি কর্মক্ষেত্রে মাঝারি মাত্রার কাজে নিযুক্ত ছিলেন। উত্তরদাতা এসকল মাঝারি মাত্রার কাজগুলোকে আমলে আনবেন যেগুলো একটানা ১০ মি বা তার অধিক সময় ধরে করা হয়েছে। অধিক/অব্যাবহারিক (৪ ঘণ্টার অধিক) উত্তরগুলো যাই করুন।          | <div>_____ : _____</div> <div>ঘণ্টা মিনিট</div>                             | P6 (a-b) |
| <b>যাতায়াত</b><br>পরবর্তী প্রশ্নগুলো আপনি শারীরিক পরিশ্রম সম্পর্কিত যে কাজগুলো পূর্বে উল্লেখ করেছেন তা থেকে আলাদা। আমি এখন আপনি সচরাচর যেভাবে যাতায়াত করেন সে সম্পর্কে জিজ্ঞাসা করব, যেমন কাজে, বাজারে, দোকানে বা উপাসনালয়ে যাতায়াতের জন্য।<br><b>নির্দেশনা:</b><br>যাতায়াত সম্পর্কিত শারীরিক পরিশ্রমের এই ভূমিকাটি খুবই গুরুত্বপূর্ণ। এটি উত্তরদাতাকে এক জায়গা থেকে অন্য জায়গায় যেতে কি মাধ্যম ব্যবহার করে তা চিন্তা করতে সাহায্য করে। এই অংশটি কখনোই বাদ দেয়া যাবেনা। |                                                                                                                                                                                                                                                                                                                                                                                       |                                                                             |          |
| ৩৭                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | আপনি কি যাতায়াতের জন্য একনাগাড়ে কমপক্ষে ১০ মিনিট হাঁটেন বা বাইসাইকেল ব্যবহার করেন?<br><b>নির্দেশনা:</b><br>সঠিক উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                                                              | <div>হ্যাঁ ১</div> <div>না ২ [যদি না হয়, P10 এ যান]</div>                  | P7       |
| ৩৮                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | আপনি যাতায়াতের জন্য সাধারণত সপ্তাহে কয়দিন একনাগাড়ে কমপক্ষে ১০ মিনিট হাঁটেন বা বাইসাইকেল ব্যবহার করেন?<br><b>নির্দেশনা:</b><br>সাধারণ একটি সপ্তাহ হচ্ছে উত্তরদাতা তার একটি সাতাধিক সপ্তাহে যে কাজ করে বৈধ উত্তরনীমা হচ্ছে ১ – ৭ দিন।                                                                                                                                                | <div>_____ দিনের সংখ্যা</div> <div>জানি না ৭৭ [জানি না হলে P10 এ যান]</div> | P8       |
| ৩৯                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | আপনি যাতায়াতের জন্য সাধারণত দিনে কত সময় হাঁটেন বা বাইসাইকেল চালান?<br><b>নির্দেশনা:</b><br>উত্তরদাতাকে আর কোন একটি দিনের কথা (যা সহজেই মনে আসে) চিন্তা করতে বসুন যে দিন তিনি যাতায়াতের জন্য শারীরিক পরিশ্রম করেছিলেন। উত্তরদাতা এসকল মাঝারি মাত্রার কাজগুলোকে আমলে আনবেন যেগুলো একটানা ১০ মি বা তার অধিক সময় ধরে করা হয়েছে। অধিক/অব্যাবহারিক (৪ ঘণ্টার অধিক) উত্তরগুলো যাই করুন। | <div>_____ : _____</div> <div>ঘণ্টা মিনিট</div>                             | P9 (a-b) |

| মূল: শারীরিক পরিশ্রম সংক্রান্ত তথ্য                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                      |                                         |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----|
| বিনোদনমূলক কাজ                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                      |                                         |     |
| পরবর্তী প্রশ্নগুলো পেশাগত কাজ এবং যাতায়াতের জন্য আপনি যে কাজগুলো উল্লেখ করেছেন তা থেকে আলাদা। এখন আমি আপনার খেলাধুলা, ব্যায়াম অথবা বিনোদনমূলক কাজ ( অবসর সময়ে) সম্পর্কে জিজ্ঞাসা করব।                                                                                                                                                                                              |                                                                                                                                                                                                                                      |                                         |     |
| নির্দেশনাঃ                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                      |                                         |     |
| এই ভূমিকাটি উত্তরদাতাকে বিনোদনমূলক কাজ সম্পর্কে চিন্তা করতে সাহায্য করবে। অনেক ক্ষেত্রে একে বিবেচনামূলক/অবসর সময় ও বলে। এগুলো হচ্ছে খেলাধুলা এবং ব্যায়াম যা প্রতিযোগিতার ক্ষেত্রেও বিবেচ্য। কর্মকর্তাদের নিয়মিত সংঘটিত হতে হবে, কদাচিৎ নয়। শুধুমাত্র বিনোদনমূলক কাজের প্রতি মনোযোগ দিতে হবে, পূর্বে উল্লেখিত কোন কর্মকর্তা এখানে বিবেচ্য হবে না। এই অংশটি কখনোই বাদ দেয়া যাবেনা। |                                                                                                                                                                                                                                      |                                         |     |
| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                      | উত্তর                                   | কোড |
| এখন আমি আপনার পেশাগত কাজের বাহিরে ভারী পরিশ্রম সম্পর্কে জানতে চাইব।                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                      |                                         |     |
| ৪১                                                                                                                                                                                                                                                                                                                                                                                    | শ্বাসপ্রশ্বাস ও হৃদস্পন্দন অনেক বেড়ে যায় এমন কোন অতিমাত্রার খেলাধুলা, শরীরচর্চা অথবা বিনোদন মূলক কাজ একনাগাড়ে কমপক্ষে ১০ মিনিট ধরে, আপনাকে করতে হয় কি? যেমনঃ দৌড়ানো, ক্যাম্পাভি, ফুটবল খেলা, দাড়িয়া বাক্সা, পোহাছুট, ইত্যাদি। | হ্যাঁ ১<br>না ২ (যদি না হয়, P13 এ যান) | P10 |
| শো-বার্ড – ১১ দেখান।                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                      |                                         |     |
| নির্দেশনাঃ                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                      |                                         |     |

|                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                             |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------|
|                                                                                                                                                                                                                                                                                                                                                 | উত্তরদাতাকে শুধুমাত্র অবসরসময়ে ভারী কাজের কথা চিন্তা করতে বলা।<br>এ কাজগুলোই অতিমাত্রার কাজ হিসেবে গণ্য হবে যার ফলে শ্বস-<br>প্রশ্বাসের ও হৃদস্পন্দনের হার অতিমাত্রায় বৃদ্ধি পায়।                                                                                                                                                                                                                                                                                                                                    |                                                             |              |
| ৪২                                                                                                                                                                                                                                                                                                                                              | আপনি অতিমাত্রার খেলাধুলা, শরীরচর্চা বা বিনোদন মূলক কাজ<br>সত্ত্বে কয়দিন করেন?<br>যেমন- খেলাধুলা, ব্যায়াম অথবা বিনোদনমূলক কাজ।<br><br><b>নির্দেশনাঃ</b><br>সাধারণ একটি সপ্তাহ হচ্ছে উত্তরদাতা তার একটি হাড্ডাবিক সপ্তাহে যে<br>কাজ করে বৈধ উত্তরসীমা হচ্ছে ১-৭ দিন।                                                                                                                                                                                                                                                    | <div>_____ দিন</div><br>জানি না ৭৭ [জানি না হলে P13 এ যান।] | P11          |
| ৪৩                                                                                                                                                                                                                                                                                                                                              | আপনি দিনে অতিমাত্রার খেলাধুলা, শরীরচর্চা বা বিনোদন মূলক<br>কাজ কতক্ষণ করেন?<br><br><b>নির্দেশনাঃ</b><br>উত্তরদাতাকে তার কোন একটি দিনের কথা (যা সহজেই মনে আসে)<br>চিন্তা করতে বলা যে দিন তিনি অবসরসময়ে ভারী শারীরিক পরিশ্রম<br>করেছিলেন। উত্তরদাতা এসকল ভারী কাজগুলোকে আমলে আনবেন<br>যেগুলো একটানা ১০ মিনিট বা তার অধিক সময় ধরে করা হয়েছে।<br>অধিক/অস্বাভাবিক (৪ ঘণ্টার অধিক) উত্তরগুলো যাত্রাই করুন।                                                                                                                 | <div>____ : ____<br/>ঘণ্টা মিনিট</div>                      | P12<br>(a-b) |
| এখন আমি আপনার গোপন কাজের বাহিরে মাঝারি মাত্রার পরিশ্রম সম্পর্কে জানতে চাইব।                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                             |              |
| ৪৪                                                                                                                                                                                                                                                                                                                                              | শ্বাসপ্রশ্বাস ও হৃদস্পন্দন সামান্য বেড়ে যায় এমন কোন মাঝারি<br>মাত্রার খেলাধুলা, শরীরচর্চা অথবা বিনোদন মূলক কাজ<br>একনাগাড়ে কয়গড়ে ১০ মিনিট ধরে, আপনাকে করতে হয় কি?<br>যেমন- দ্রুত হাঁটা, ট্রেড মিলে হাঁটা, সাইকেল চালনা, সাঁতার<br>কাটা, ভলিবল, জগিং।<br>[শো-কার্ড - ১২ দেখান।]<br><br><b>নির্দেশনাঃ</b><br>উত্তরদাতাকে শুধুমাত্র অবসরসময়ে “মাঝারি মাত্রার কাজগুলো” সম্পর্কে<br>চিন্তা করতে বলা। এ কাজগুলোই মাঝারি মাত্রার কাজ হিসেবে গণ্য হবে<br>যার ফলে শ্বস-প্রশ্বাসের ও হৃদস্পন্দনের হার সামান্য বৃদ্ধি পায়। | <div>হ্যাঁ ১<br/>না ২ [যদি না হয়, P16 এ যান।]</div>        | P13          |
| ৪৫                                                                                                                                                                                                                                                                                                                                              | আপনি সপ্তাহে কয়দিন এ ধরনের মাঝারি মাত্রার খেলাধুলা,<br>শরীরচর্চা বা বিনোদন মূলক কাজ করেন?<br><br><b>নির্দেশনাঃ</b><br>সাধারণ একটি সপ্তাহ হচ্ছে উত্তরদাতা তার একটি হাড্ডাবিক সপ্তাহে যে<br>কাজ করে বৈধ উত্তরসীমা হচ্ছে ১-৭ দিন।                                                                                                                                                                                                                                                                                         | <div>_____ দিন</div><br>জানি না ৭৭ [জানি না হলে P16 এ যান।] | P14          |
| ৪৬                                                                                                                                                                                                                                                                                                                                              | আপনি দিনে এ ধরনের মাঝারি মাত্রার খেলাধুলা, শরীরচর্চা বা<br>বিনোদন মূলক কাজ কতক্ষণ করেন?<br><br><b>নির্দেশনাঃ</b><br>উত্তরদাতাকে তার কোন একটি দিনের কথা (যা সহজেই মনে আসে)<br>চিন্তা করতে বলা যে দিন তিনি অবসরসময়ে মাঝারি মাত্রার কাজে<br>নিযুক্ত ছিলেন। উত্তরদাতা এসকল মাঝারি মাত্রার কাজগুলোকে আমলে<br>আনবেন যেগুলো একটানা ১০ মি বা তার অধিক সময় ধরে করা হয়েছে।<br>অধিক/অস্বাভাবিক (৪ ঘণ্টার অধিক) উত্তরগুলো যাত্রাই করুন।                                                                                          | <div>____ : ____<br/>ঘণ্টা মিনিট</div>                      | P15<br>(a-b) |
| <b>বার্ষিক শারিরিক পরিশ্রম সজ্জাজ্ঞ তথ্যাবলী</b>                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                             |              |
| <b>অবসর সময়ের কাজের ধরণ</b>                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                             |              |
| পরবর্তী প্রশ্নগুলো আপনার বসে বা হেলান দিয়ে কাটানো সময় সম্পর্কিত, যা কর্মক্ষেত্রে, বাড়িতে, এক জায়গা থেকে অন্য জায়গায় যাতায়াত অথবা<br>বন্ধুদের সাথে আড্ডায়, গাড়ী, বাস বা ট্রেনে করে যাতায়াত, পড়াশোনা, কার্ড খেলা অথবা টেলিভিশন দেখার ক্ষেত্রে প্রযোজ্য। তবে এখানে ঘুমিয়ে<br>কাটানো সময় অন্তর্ভুক্ত হবে না।<br>[শো-কার্ড - ১৩ দেখান।] |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                             |              |
| ৪৭                                                                                                                                                                                                                                                                                                                                              | সাধারণত আপনি দিনে কত সময় বসে (ছুঁম ব্যতীত) বা হেলান<br>দিয়ে কাটান?<br><br><b>নির্দেশনাঃ</b><br>উত্তরদাতাকে কাজকরার সময়, অফিসে, গাড়িশোনার সময়,<br>টেলিভিশন দেখার সময়, কম্পিউটার ব্যবহারের সময়, রান্নাঘরে<br>হাতের কাজ করার সময়, বিশ্রামের সময় কতক্ষণ বসে কাটান।<br>এখানে উত্তরদাতার ঘুমানোর সময় বিবেচ্য হবে না।                                                                                                                                                                                                | <div>____ : ____<br/>ঘণ্টা মিনিট</div>                      | P16<br>(a-b) |

| মূল: তামাকের ব্যবহার                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                               |                                                                                                                               |              |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------|
| এখন আমি আপনাকে তামাক ও তামাকজাত দ্রব্যের (যেমনঃ ধূমপান, ধোঁয়াবিহীন তামাকের) ব্যবহার সম্পর্কে কিছু প্রশ্ন জিজ্ঞাসা করব। |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                               |                                                                                                                               |              |
|                                                                                                                         | প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | উত্তর                                                                                                                                                                                                                                                                         | কোড                                                                                                                           |              |
| ৪৭                                                                                                                      | আপনি কি বর্তমানে কোন প্রকার ধূমপান (যেমন- সিগারেট, বিড়ি, ছকা, চুন্ট, সিগার, পাইপ) করেন?<br>[শো-কার্ড – ১৪ দেখান]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | হ্যাঁ ১<br>না ২ [যদি না হয়, T8 এ যান]<br><b>[TP4 থেকে TP7 প্রযোজ্য নয়]</b>                                                                                                                                                                                                  | T1                                                                                                                            |              |
| ৪৮                                                                                                                      | আপনি কি বর্তমানে প্রতিদিন ধূমপান করেন?<br><br><b>নির্দেশনাঃ</b><br>উত্তরদাতাকে শো-কার্ড দেখিয়ে চিত্রা করতে বলুন যে বর্তমানে তিনি কোন দ্রব্যটি ধূমপান করছেন।                                                                                                                                                                                                                                                                                                                                                                                                                                         | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                               | T2                                                                                                                            |              |
| ৪৯                                                                                                                      | কত বছর বয়সে আপনি প্রথম ধূমপান শুরু করেন?<br><br><b>নির্দেশনাঃ</b><br>এই প্রশ্নটি যিনি বর্তমানে প্রতিদিন ধূমপান করেন তার জন্য প্রযোজ্য। উত্তরদাতাকে চিত্রা করতে বলুন যে, প্রথম যখন তিনি কোন তামাকজাত দ্রব্য ধূমপান শুরু করেন তখন তার বয়স কত ছিল।                                                                                                                                                                                                                                                                                                                                                    | বছর <input type="text"/> <input type="text"/> <input type="text"/><br>জানি না ৭৭<br><b>[জানি থাকলে, T5a/T5aw-এ যান]</b>                                                                                                                                                       | T3                                                                                                                            |              |
| ৫০                                                                                                                      | আপনার কি মনে আছে তা কত আগে?<br>[যেকোন একটি নির্বাচন করুন, সবগুলো নয়]<br><br>জানি না থাকলে = ৭৭<br><br><b>নির্দেশনাঃ</b><br>যদি উত্তরদাতা মনে করতে না পারেন যে তিনি কত বছর বয়সে ধূমপান শুরু করেছেন তাহলে এই প্রশ্নের মাধ্যমে সিগারেট করুন যে তিনি কত বছর বা কতমাস বা কত সপ্তাহ আগে প্রথম ধূমপান শুরু করেন।                                                                                                                                                                                                                                                                                          | <input type="text"/> <input type="text"/> <input type="text"/> বছর<br><b>[জানি থাকলে, T5a/T5aw-এ যান]</b><br><br>অথবা<br><input type="text"/> <input type="text"/> মাস<br><b>[জানি থাকলে, T5a/T5aw-এ যান]</b><br><br>অথবা<br><input type="text"/> <input type="text"/> সপ্তাহ | T4a<br>T4b<br>T4c                                                                                                             |              |
| ৫১                                                                                                                      | নিচের তামাক দ্রব্যগুলোর মধ্যে আপনি দিনে/সপ্তাহে কোনটি কতটি (শলাকা) বা কতবার করে ধূমপান করেন?<br>[যদি প্রতিদিন না করে থাকেন তাহলে প্রতি সপ্তাহে গ্রহণের সংখ্যা বা বার উল্লেখ করুন]<br><br>(প্রতিটি উপাদানের ক্ষেত্রে তথ্য উল্লেখ করুন)<br>জানি না হলে ৭৭৭৭ লিখুন।<br>[শো-কার্ড – ১৪ দেখান]<br><br><b>নির্দেশনাঃ</b><br>এই প্রশ্নটি যিনি বর্তমানে প্রতিদিন ধূমপান করেন তার জন্য প্রযোজ্য। উত্তরদাতা যে দ্রব্যগুলো ব্যবহার করেন না সেগুলোতে খালি না রেখে শূন্য দিনে/প্রতিদিন ধূমপানের জন্য প্রতিদিনের ব্যবহারের সংখ্যা উল্লেখ করুন। যদি প্রতিদিন ধূমপায়ী না হন তা হলে সাপ্তাহিক ধূমপানের সংখ্যা লিখুন। |                                                                                                                                                                                                                                                                               |                                                                                                                               |              |
|                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | সপ্তাহে                                                                                                                                                                                                                                                                       | দিনে                                                                                                                          |              |
|                                                                                                                         | সিগারেট                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                                                                                                                                                 | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | T5a/<br>T5aw |
|                                                                                                                         | বিড়ি                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                                                                                                                                                 | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | T5b/<br>T5bw |
|                                                                                                                         | ছকা/বন্দী ছকা                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                                                                                                                                                 | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | T5c/<br>T5cw |

|  |                                                                      |                      |                      |              |
|--|----------------------------------------------------------------------|----------------------|----------------------|--------------|
|  | তামাক পূর্ব পাইপ                                                     | <input type="text"/> | <input type="text"/> | T5d/<br>T5dw |
|  | হাতে মোড়ানো সিগারেট                                                 | <input type="text"/> | <input type="text"/> | T5e/<br>T5ew |
|  | সিগার/চুরুট/সিগারোল                                                  | <input type="text"/> | <input type="text"/> | T5g/<br>T5gw |
|  | শিশু গ্রহণের সেশন সংখ্যা                                             | <input type="text"/> | <input type="text"/> | T5h/<br>T5hw |
|  | অন্যান্য (যদি অন্যান্য হয় তবে T5 Others-এ যান, তা না হলে T6-এ যান), | <input type="text"/> | <input type="text"/> | T5f/<br>T5fw |
|  | অন্যান্য (নির্দিষ্ট করুন) এবং T6-এ যান                               | <input type="text"/> | <input type="text"/> | T5<br>Other  |

**মূল: তামাকের ব্যবহার**

| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                           | উত্তর                                                                                                                                            | কোড |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| ৫২ গত ১২ মাসের মধ্যে আপনি কি ধূমপান ছাড়ার কোন চেষ্টা করেছেন? <p><b>নির্দেশনা:</b><br/>এটি বর্তমানে ধূমপায়ীর জন্য প্রযোজ্য। তথ্য প্রদানকারীকে বিগত ১২ মাসের মধ্যে ধূমপান বন্ধের যে কোন উদ্যোগ কে মনে করতে বলুন।</p>                                                                                                                                                 | হ্যাঁ ১<br>না ২                                                                                                                                  | T6  |
| ৫৩ গত ১২ মাসের মধ্যে কোন ডাক্তার বা স্বাস্থ্য কর্মী আপনাকে ধূমপান ছাড়ার জন্য পরামর্শ দিয়েছেন কি? <p><b>নির্দেশনা:</b><br/>এটি বর্তমানে ধূমপায়ীর জন্য প্রযোজ্য।<br/>তথ্য প্রদানকারীকে বিগত ১২ মাসের মধ্যে কোন ডাক্তার বা স্বাস্থ্য কর্মীর কাছে তাঁর নিজের জন্য গিয়েছিলেন কি না তা চিন্তা করতে বলুন। যদি না গিয়ে থাকেন তবে কাউকে দেখানো হয়নি নির্ভরশীল করুন।</p> | হ্যাঁ ১ (T2= হ্যাঁ হলে, T12 এ যান; T2=না হলে, T9 এ যান)<br>না ২ (T2= হ্যাঁ হলে, T12 এ যান; T2=না হলে, T9 এ যান)<br>গত ১২ মাসে কাউকে দেখানো হয়নি | T7  |
| ৫৪ পূর্বে আপনি কি কখনো কোন প্রকার ধূমপান করেছেন? [শো-কার্ড – ১৪ দেখান] <p><b>নির্দেশনা:</b><br/>তথ্য প্রদানকারীকে চিন্তা করে বলতে বলুন যে তিনি পূর্বে জীবনের কোন এক সময় কি ধূমপান করেছেন।</p>                                                                                                                                                                       | হ্যাঁ ১<br>না ২ ('না' হলে, T12 এ যান)                                                                                                            | T8  |
| ৫৫ পূর্বে আপনি কি প্রতিদিন ধূমপান করতেন? <p><b>নির্দেশনা:</b><br/>তথ্য প্রদানকারীকে চিন্তা করে বলতে বলুন যে তিনি পূর্বে কি প্রতিদিন ধূমপান করতেন।</p>                                                                                                                                                                                                                | হ্যাঁ ১<br>না ২ T1= 'হ্যাঁ' হলে, T12 এ যান, নতুবা T10 এ যান।                                                                                     | T9  |

**বর্ধিত: তামাকের ব্যবহার**

|                                                                                                                                                                                                                  |                                                                                                    |                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------|
| ৫৬ আপনি কত বছর বয়সে ধূমপান ছেড়ে দিয়েছিলেন? <p><b>নির্দেশনা:</b><br/>তথ্য প্রদানকারী কত বছর বয়সে ধূমপান ছেড়েছেন তা চিন্তা করে বলতে বলুন। এক্ষেত্রে তথ্য প্রদানকারীকে বিভিন্ন ভাবে যাচাই করে নিন।</p>         | বয়স <input type="text"/> বছর<br><b>(যদি জানেন T12 যান)</b><br>জানি না ৭৭                          | T10                  |
| ৫৭ কত সময় আগে আপনি ধূমপান ছেড়ে দিয়েছেন? [যে কোন একটি উত্তর লিখুন, সবগুলো নয়] <p><b>নির্দেশনা:</b><br/>যদি তথ্য প্রদানকারী মনে করতে না পারেন যে তিনি কত বছর বয়সে ধূমপান ছেড়েছেন তবে এই প্রশ্নের মাধ্যমে</p> | অথবা <input type="text"/> বছর<br>অথবা <input type="text"/> মাস<br>অথবা <input type="text"/> সপ্তাহ | T11a<br>T11b<br>T11c |

|                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                              |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------|----------------|
|                                                                                                                                                                                                                                                                                                                                                                       | জানার চেষ্টা করুন যে তিনি কত দিন আগে ধূম পান ছেড়েছেন।                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             | [জানা থাকলে T12 এ যান]<br>জানা না ৭৭         |                |
| ৫৮                                                                                                                                                                                                                                                                                                                                                                    | আপনি কি বর্তমানে কোন ধোঁয়াবিহীন তামাক দ্রব্য, যেমন-পানের সাথে জর্ক, শুধু জর্ক, সুপারির সাথে জর্ক, পানের সাথে সাদাপাতা, তামাক যুক্ত পান মশলা, চিবিয়ে খাওয়া সাদা-পাতা, বৈনি, নসি, গুল, গুটকা ইত্যাদি ব্যবহার করেন?<br>[শো-কার্ড – ১৫ দেখান]<br><br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে ধোঁয়াবিহীন তামাক যেমনঃ জর্ক, গুল, সাদা পাতা, বৈনি, নসি দ্রব্য ওলো কি বর্তমানে ব্যবহার করেন কিনা তা চিহ্ন করে উত্তর দিতে বলুন। এক্ষেত্রে, শুধু পান সুপারি ও চুন প্রযোজ্য হবে না। যদি তথ্য প্রদানকারী পানের সাথে জর্ক বা শুধু জর্ক, পানের সাথে সাদাপাতা বা শুধু সাদাপাতা, পানের সাথে তামাক যুক্ত পান মশলা বা শুধু তামাক যুক্ত পান মশলা খান তাহলে ধোঁয়াবিহীন তামাক সেবন হিসেবে গণ্য হবে। | হ্যাঁ<br>না | ১<br>২ <i>[যদি না হয়, T15 এ যান]</i>        | T12            |
| ৫৯                                                                                                                                                                                                                                                                                                                                                                    | আপনি কি বর্তমানে কোন ধোঁয়াবিহীন তামাক দ্রব্য, যেমন-পানের সাথে জর্ক, শুধু জর্ক, সুপারির সাথে জর্ক, পানের সাথে সাদাপাতা, তামাক যুক্ত পান মশলা, চিবিয়ে খাওয়া সাদা-পাতা, গুল, বৈনি, নসি, গুল, গুটকা প্রতিদিন ব্যবহার করেন?<br><br><b>নির্দেশনাঃ</b><br>যদি বর্তমানে ধোঁয়াবিহীন তামাক ব্যবহার করেন তার জন্য প্রযোজ্য।<br><b>প্রতিদিন জর্কঃ</b><br>প্রায় একমাস বা তার বেশি সময় ধরে প্রতিদিন অন্তত একটি ধোঁয়াবিহীন তামাক পদ্য ব্যবহার করা কে বুঝায়।                                                                                                                                                                                                                               | হ্যাঁ<br>না | ১<br>২<br><i>[যদি 'না' হয়, T14aw এ যান]</i> | T13            |
| ৬০ গড়ে আপনি প্রতিদিন/সপ্তাহে নিম্নের তামাক দ্রব্যগুলোর কতবার ব্যবহার করেন?<br>[প্রতিদিন না হলে সপ্তাহে উল্লেখ করুন]<br>[প্রতিটি তামাক দ্রব্যের উল্লেখ করুন]<br>[শো-কার্ড – ১৫ দেখান]<br>[না জানলে ৭৭৭৭]                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                              |                |
| <b>নির্দেশনাঃ</b><br>যারা বর্তমানে ধোঁয়াবিহীন তামাক ব্যবহার করেন তাদের জন্য এই প্রশ্ন প্রযোজ্য। নিচের সকল উপাদানের জন্য তথ্য দিগ্বিক করুন। যদি কোন দ্রব্য ব্যবহার না করেন তাহলে শূন্য দিন, কিন্তু কোন উপাদান ই খালি রাখা যাবে না যে দ্রব্যটি প্রতিদিন সেবন করেন তা প্রতিদিনের জায়গায় আর যেটি সপ্তাহে ব্যবহার করেন (প্রতিদিন না) তা সপ্তাহের জায়গায় দিগ্বিক করুন। |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                              |                |
|                                                                                                                                                                                                                                                                                                                                                                       | পানের সাথে জর্ক/ শুধু জর্ক/ সুপারির সাথে জর্ক                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | দিনে        | সপ্তাহে                                      | T14a/<br>T14aw |
|                                                                                                                                                                                                                                                                                                                                                                       | পানের সাথে সাদাপাতা                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                              | T14b/<br>T14bw |
|                                                                                                                                                                                                                                                                                                                                                                       | তামাক যুক্ত পান মশলা                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                              | T14c/<br>T14cw |
|                                                                                                                                                                                                                                                                                                                                                                       | চিবিয়ে খাওয়া সাদা-পাতা                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                                              | T14d/<br>T14dw |

|    |                                                                                                                                                                                                |                                                                               |                      |                                |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------|--------------------------------|
|    | গুল                                                                                                                                                                                            | <input type="text"/>                                                          | <input type="text"/> | T14e/<br>T14ew                 |
|    | খৈনি                                                                                                                                                                                           | <input type="text"/>                                                          | <input type="text"/> | T14f/<br>T14fw                 |
|    | নসিয়                                                                                                                                                                                          | <input type="text"/>                                                          | <input type="text"/> | T14g/<br>T14gw                 |
|    | অন্যান্য                                                                                                                                                                                       | <input type="text"/>                                                          | <input type="text"/> | T14h/<br>T14hw                 |
|    |                                                                                                                                                                                                | যদি অন্যান্য হয় তাহলে T14<br>Other এ যান, যদি T13 না হয় তাহলে TP1a<br>এ যান |                      |                                |
|    | অন্যান্য (নির্দিষ্ট করুন)                                                                                                                                                                      | <input type="text"/>                                                          | <input type="text"/> | T14<br>Other/<br>T14<br>Otherw |
|    |                                                                                                                                                                                                | যদি T13 না হয় তাহলে TP1a এ যান                                               |                      |                                |
| ৬১ | পূর্বে আপনি কি কখনো কোন প্রকার ধোঁয়াবিহীন তামাক দ্রব্য যেমনঃ জর্দা, সাদাপাতা, গুল, খৈনি, নসিয়, চিবিয়ে খাওয়া তামাক অথবা তামাক মুক্ত পান ব্যবহার করেছেন?                                     | হ্যাঁ ১                                                                       | না ২                 | T15                            |
|    | <b>নির্দেশনাঃ</b><br>এই প্রশ্ন যারা বর্তমানে ধোঁয়াবিহীন তামাক ব্যবহার করেন না তাদের জন্য প্রযোজ্য। তথ্য প্রদানকারীকে পূর্বে কোন ধোঁয়াবিহীন তামাক ব্যবহার করতেন কিনা তা চিন্তা করে বলতে বসুন। |                                                                               |                      |                                |

| ইলেকট্রনিক সিগারেট                                                                                                                                                                                                                                                  |                                                                                                         |      |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------|--|
| পরবর্তী প্রাপ্তগুলো ইলেকট্রনিক সিগারেট ব্যবহার সম্পর্কে ইলেকট্রনিক সিগারেট এমন একটি পণ্য যা ব্যাটারি বা অন্য কোনো পদ্ধতি ব্যবহার করে এর মধ্যে সংরক্ষিত নিকোটিন থেকে ধোঁয়া তৈরি করে। এগুলোর আরো কিছু নাম আছে যেমন ই-সিগারেট, ভেপ-পেন, ই-শিশা, ই-পাইপ।               |                                                                                                         |      |  |
| <b>নির্দেশনাঃ</b><br>এই অংশটি তথ্য প্রদানকারীকে গড়ে তুলান। মনে রাখবেন এই অংশটি কোন অবস্থাতেই বাস দেয়া যাবে না।                                                                                                                                                    |                                                                                                         |      |  |
| প্রশ্নাবলী                                                                                                                                                                                                                                                          | উত্তর                                                                                                   | কোড  |  |
| ৬১. এর আগে, আপনি কি কখনো ইলেকট্রনিক সিগারেটের নাম শুনেছেন?<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারী কখনো ইলেকট্রনিক সিগারেটের নাম শুনেছেন কি না তা জিজ্ঞাসা করুন।                                                                                                    | হ্যাঁ ১<br>না ২ [না হলে A1 যান]<br>অসম্ভব ৮৮ [৮৮ হলে A1 যান]                                            | ECx1 |  |
| ৬২. ছবিতে প্রদর্শিত ছবি গুলোর মধ্যে কোনটি ইলেকট্রনিক সিগারেটের?<br>শো-কার্ড -- ১৭ দেখান।<br><b>নির্দেশনাঃ</b><br>এই প্রশ্নটি পূর্বের প্রশ্নের উত্তর সঠিক কি না তা যাচাই করার জন্য শো-কার্ড দেখিয়ে তথ্য প্রদানকারীকে ইলেকট্রনিক সিগারেট কোনটি তা চিহ্নিত করতে বসুন। | তামাক ভর্তী গাইগ ১<br>ই-সিগারেট ২<br>শিশা ৩<br>হুকা ৪<br>অসম্ভব ৭৭                                      | ECx2 |  |
| ৬৩. আপনি কি বর্তমানে ইলেকট্রনিক সিগারেট নিয়মিতভাবে ব্যবহার করেন?<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারী ইলেকট্রনিক সিগারেট ব্যবহার করেন কি না জিজ্ঞাসা করুন।                                                                                                      | প্রতিদিন ১ [প্রতিদিন হলে A1 যান]<br>প্রতিদিন না ২ [প্রতিদিন না হলে A1 যান]<br>একবারেই না ৩<br>অসম্ভব ৮৮ | ECx3 |  |
| ৬৪. আপনি কি কখনো একবার হলেও ইলেকট্রনিক সিগারেট ব্যবহার করেছেন?<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারী যদি বর্তমানে ইলেকট্রনিক সিগারেট ব্যবহার না করত থাকেন তা হলে পূর্বে কখনো কি ব্যবহার করেছেন কি না তা জিজ্ঞাসা করুন।                                            | হ্যাঁ ১<br>না ২<br>অসম্ভব ৮৮                                                                            | ECx4 |  |

| মূল: মদ্যপান                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                            |     |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----|--|
| আমি আপনাকে পরবর্তী প্রশ্নগুলো মদ্যপান সম্পর্কে করব।                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                            |     |  |
| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | উত্তর                                                                                                                      | কোড |  |
| <p>৬৬ আপনি কি কখনো মদ্য জাতীয় পানীয় যেমন- বিয়ার, ওয়াইন, স্পিরিট, তারি, চোলাই, রাম, বাংলা, চুয়ানি, কের, ভদকা, জিন, হুইচকি, ইত্যাদি পান করেছেন?</p> <p>[শো-কার্ড – ১৮ দেখান]</p> <p><b>নির্দেশনাঃ</b><br/>শো-কার্ড দেখিয়ে তথ্য প্রদানকারীকে মদ্য পান সম্পর্কে চিত্তা করতে বলুন, এমনকি চিকিৎসার উদ্দেশ্যে এলকোহল সেবন, অথবা একবার কিছু পরিমাণ সেবনও গন্য হবে এবং হ্যাঁ উত্তর দিতে হবে কোন পানীয়ের মধ্যে ০.৫% এলকোহল থাকলে তা মদ বলে গন্য হবে। ১০ গ্রাম ইথানল = ১ প্রমাণ পরিমাণ।</p>                             | <p>হ্যাঁ ১<br/>না ২<br/><i>['না' হলে, D1 এ যান]</i></p>                                                                    | A1  |  |
| <p>৬৭ আপনি কি গত ১২ মাসের মধ্যে কোন প্রকার মদ্য পান করেছেন?</p> <p><b>নির্দেশনাঃ</b><br/>শো-কার্ড দেখিয়ে তথ্য প্রদানকারীকে মদ্য পান সম্পর্কে চিত্তা করতে বলুন, এমনকি চিকিৎসার উদ্দেশ্যে এলকোহল সেবন, অথবা একবার কিছু পরিমাণ সেবনও গন্য হবে এবং হ্যাঁ উত্তর দিতে হবে।</p>                                                                                                                                                                                                                                           | <p>হ্যাঁ ১<br/><i>['হ্যাঁ' হলে, A4 এ যান]</i><br/>না ২</p>                                                                 | A2  |  |
| <p>৬৮ স্বাস্থ্যগত কারণে, যেমনঃ আপনার স্বাস্থ্যের নেতিবাচক প্রভাবের কারণে ডাক্তারের অথবা অন্য কোন স্বাস্থ্য কর্মীর পরামর্শে আপনি কি মদ্য পান বন্ধ করে দিয়েছিলেন?</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারী মদ্য পান ছেড়ে দিয়েছেন কিনা তা জিজ্ঞাসা করুন।</p>                                                                                                                                                                                                                                                    | <p>হ্যাঁ ১<br/><i>['হ্যাঁ' হলে, D1 এ যান]</i><br/>না ২<br/><i>['না' হলে, D1 এ যান]</i></p>                                 | A3  |  |
| <p>৬৯ আপনি গত ১২ মাসে এক প্রমাণ পাত্র পরিমাণ হারে কি মাত্রায় মদ্য পান করেছেন?</p> <p>[উত্তরগুলো পড়ে শুনান]<br/>[শো-কার্ড – ১৯ দেখান]</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে শো-কার্ডের প্রমাণ পাত্রের পরিমাণটিকে দেখিয়ে চিত্তা করে উত্তর দিতে বলুন। প্রয়োজনে শো-কার্ডটি ব্যাখ্যা করে বলুন।<br/>উত্তরদাতাকে গত ৩০ দিনের কথা চিন্তা করতে বলুন। কতবার খেয়েছেন তা লিখিত করুন। মনে রাখবেন গত ৩০ দিনে একের অধিক সেবন করতে হবে। কোন উত্তরদাতা যদি গত ৩০ দিনে সমান পরিমাণ গ্রহণ করে থাকেন তাহলে সূচ্য হবে।</p> | <p>দৈনিক ১<br/>সপ্তাহে ৫-৬ দিন ২<br/>সপ্তাহে ৩-৪ দিন ৩<br/>সপ্তাহে ১-২ দিন ৪<br/>মাসে ১-৩ দিন ৫<br/>মাসে ১ বারেরও কম ৬</p> | A4  |  |
| <p>৭০ আপনি কি গত ৩০ দিনে কোন প্রকার মদ্য পান করেছেন?</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারী বিগত ৩০ দিনে কোন রূপ মদ্য পান করেছেন কি না তা জিজ্ঞাসা করুন।</p>                                                                                                                                                                                                                                                                                                                                                  | <p>হ্যাঁ ১<br/>না ২ <i>['না' হলে, H1 এ যান]</i></p>                                                                        | A5  |  |
| <p>৭১ গত ৩০ দিনের মধ্যে আপনি কতবার অন্তত এক প্রমাণ পাত্রের পরিমাণে মদ্য পান করেছেন?</p> <p><b>নির্দেশনাঃ</b><br/>শো-কার্ডে প্রদর্শিত পরিমাণে তথ্য প্রদানকারী কি পরিমাণ সেবন করেছেন তা নির্ণয় করতে সাহায্য করুন।</p>                                                                                                                                                                                                                                                                                                | <p>সংখ্যা <input type="text"/><br/><i>['০' হলে, H1 এ যান]</i></p> <p>জানি ৭৭<br/>না</p>                                    | A6  |  |
| <p>৭২ গত ৩০ দিনের মধ্যে যে কোন একটি মদ্য পান বৈধক এ এক প্রমাণ পাত্রের সমান গড়ে কি পরিমাণ মদ্য পান করেছিলেন?</p> <p>[শো-কার্ড – ১৯ দেখান]</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে গত ৩০ দিনের কথা চিন্তা করতে বলুন। এই প্রশ্নটি, কোন একটি উপলক্ষে প্রমাণ পাত্রের সর্বোচ্চ কি পরিমাণ মদ সেবন করা হয়েছে তার নির্ণয়ের জন্য।</p>                                                                                                                                                                               | <p>সংখ্যা <input type="text"/><br/>জানি ৭৭<br/>না</p>                                                                      | A7  |  |

|    |                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                               |                                                                                     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| ৭৩ | <p>গত ৩০ দিনের মধ্যে একটি বৈঠকে এক প্রমিত পাত্রের সমান সর্বোচ্চ কিলো পরিমাণ মদ্য পান করেছিলেন? সব ধরনের মদ জাতীয় গাণীয়েকে সমন্বয় করে।</p> <p><b>নির্দেশনাঃ</b><br/>তথ্য প্রদানকারীকে গত ৩০ দিনের কথা চিন্তা করতে বলা হয়। এবং এক বৈঠকে সর্বোচ্চ কিলো পরিমাণ গ্রহণ করতে তা বলতে সাহায্য করুন।</p> | <p>সর্বোচ্চ সংখ্যা <input type="text"/></p> <p>জানি না ৭৭ <input type="text"/></p>                                                                                                                                                                            | A8                                                                                  |
| ৭৪ | <p>গত ৩০ দিনের মধ্যে একটি বৈঠকে একসাথে কতবার ৬ বা ততোধিক প্রমিত পাত্রের সমান মদ্য পান করেছেন?</p> <p><b>নির্দেশনাঃ</b><br/>বিগত ৩০ দিনে এক বৈঠকে প্রমিত পাত্রের পরিমাণ ৬ এর অধিক কত বার মদ্য পান করেছেন তা বলতে সহায়তা করুন। এটি বিশ্ব ক্রিয়াকার নির্ণয়ের জন্য।</p>                              | <p>কতবার <input type="text"/></p> <p>জানি না ৭৭ <input type="text"/></p>                                                                                                                                                                                      | A9                                                                                  |
| ৭৫ | <p>গত ৭ দিনের প্রতিদিনে কতবার এক প্রমিত পাত্রের সমান পরিমাণ মদ্য পান করেছিলেন?</p> <p>[শো-কার্ড — ২০ দেখান]</p> <p>[জানি না হলে ৭৭]</p> <p><b>নির্দেশনাঃ</b><br/>শো-কার্ডে প্রদর্শিত পরিমাণে তথ্য প্রদানকারী বিগত ৭ দিনে কিলো পরিমাণ মদ্য পান করেছেন তা নির্ণয় করতে সাহায্য করুন।</p>              | <p>সোমবার <input type="text"/></p> <p>মঙ্গলবার <input type="text"/></p> <p>বুধবার <input type="text"/></p> <p>বৃহস্পতিবার <input type="text"/></p> <p>শুক্রবার <input type="text"/></p> <p>শনিবার <input type="text"/></p> <p>রবিবার <input type="text"/></p> | <p>A10a</p> <p>A10b</p> <p>A10c</p> <p>A10d</p> <p>A10e</p> <p>A10f</p> <p>A10g</p> |

| মূল: মদ্যপান                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                    |           |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------|--|
| আমি কেবলমাত্র বিগত ৭ দিনে আপনার মদ্য পান সম্পর্কে জিজ্ঞাসা করেছি। পূর্বের প্রশ্নগুলো ছিল সাধারণ মদ্যপান সম্পর্কিত ছিল কিন্তু পরবর্তী প্রশ্নগুলো দেশে তৈরি, অন্য দেশ থেকে আনা বা যে মদগুলো ট্যাক্স বিহীন আমদানি করা হয়েছে সেই সম্পর্কিত।<br>অনুগ্রহপূর্বক পরবর্তী প্রশ্নগুলোর উত্তর দেয়ার জন্য শুধুমাত্র এই ধরনের মদ্য জাতীয় পানীয়কে বিবেচনায় আনবেন।                                                                               |                                                                                                    |           |  |
| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                                             | উত্তর                                                                                              | কোড       |  |
| ৭৬ গত ৭ দিনে, আপনি কি কোন দেশে তৈরি, অন্যদেশ থেকে আনা বা এমন মদ যা পানের জন্য আনা হয়নি বা বিনা ট্যাক্সে আনা হয়েছে তা পান করেছেন?<br>[শো-কার্ড – ২০ দেখান]<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে শুধুমাত্র দেশে তৈরি মদ, অন্য দেশ থেকে আনা ট্যাক্স বিহীন মদ অথবা অন্য দেশ থেকে পানের জন্য নয় আনা মদের কথা চিন্তা করতে বলুন।                                                                                                      | হ্যাঁ ১<br>না ২ 'না' হলে, <b>H1</b> এ যান                                                          | A11       |  |
| ৭৭ গত ৭ দিনে গড়ে নিম্নের মদগুলোর কোনটি বর্তমান এক গ্রামান প্যাকের সমান পান করেছেন?<br>[শো-কার্ড – ২০ দেখান]<br>জানি না হলে = ৭৭<br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারীকে বিগত ৭ দিনের কথা চিন্তা করতে বলুন শো-কার্ড দেখিয়ে প্রতিটি মদের ওমান পরিমাণ গুলো বুঝিয়ে দিন। যে এককেইবা গুলো পানীয় হিসেবে আনা হয়নি সেগুলো মূলত স্পিরিট নামে পরিচিত। প্রতিটি ক্ষেত্রে উত্তর লিপিবদ্ধ করুন। যদি কোনটি না পান করে থাকেন তা হলে শূন্য লিখুন। | দেশে তৈরি বিয়ার অথবা মদ, যেমনঃ বিয়ার, ভাল বা ফলের রস দিয়ে তৈরি মদ                               | A12a      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                        | অন্য দেশ থেকে আনা মদ                                                                               | A12b      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                        | অন্যদেশ থেকে আনা মদ যা পানের জন্য আনা হয়নি, যেমনঃ এককোহল মিশ্রিত ঔষধ, সুগন্ধির ও আফটারশেভ এর জন্য | A12c      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                        | চায়নি                                                                                             | A12d      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                        | দেশের মধ্যে অন্যান্য গুরু বিহীন মদ                                                                 | A12e      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                        | অন্যান্য নির্দিষ্ট করুন (.....)                                                                    | A12others |  |

| মূল: উচ্চ রক্তচাপ সংক্রান্ত তথ্য |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| প্রশ্নাবলী                       |                                                                                                                                                                                                                                                                                                                                            | উত্তর                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | কোড |
| ৭৬                               | কখনো কোন ডাক্তার বা স্বাস্থ্যকর্মী আপনার রক্তচাপ মাপেছেন?<br><br><b>নির্দেশনা:</b><br>তথ্য প্রদানকারীকে শুধুমাত্র ডাক্তার বা স্বাস্থ্যকর্মী দ্বারা উচ্চ রক্তচাপ মাপার ক্ষেত্রে আমলে অন্তর্ভুক্ত করুন।                                                                                                                                      | হ্যাঁ ১<br>না ২ [যদি না হয়, H6 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | H1  |
| ৭৭                               | কখনো কোন ডাক্তার বা স্বাস্থ্যকর্মী কি বলেছেন যে আপনার উচ্চ রক্তচাপ আছে?<br><b>নির্দেশনা:</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                             | হ্যাঁ ১<br>না ২ [যদি না হয়, H6 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | H2a |
| ৭৮                               | গত ১২ মাসের মধ্যে কি এই কথাটি বলা হয়েছে?<br><b>নির্দেশনা:</b><br>শুধুমাত্র তাদের জন্য যাদের পূর্বে উচ্চ রক্তচাপ নির্ণয় হয়েছিল।                                                                                                                                                                                                          | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | H2b |
| ৭৯                               | আপনি কি কখনো ডাক্তার বা স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী উচ্চ রক্তচাপের জন্য কোন প্রকার ঔষধ সেবন করেছেন?<br><br><b>নির্দেশনা:</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                   | হ্যাঁ ১<br>না ২ [যদি না হয়, Hx2 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Hx1 |
| ৮০                               | আপনি গত দুই সপ্তাহের মধ্যে ডাক্তার বা স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী উচ্চ রক্তচাপের জন্য কোন ঔষধ সেবন করেছেন কি? (সনাতন হারবাল ঔষধ ছাড়া)।<br><br><b>নির্দেশনা:</b><br>শুধুমাত্র ডাক্তার বা অন্য কোন স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ঔষধ সেবন করতে হবে অন্য কোনো নয়, যেমন: কাল ফল, গালি পাতা, তেল পাতা, গাছ গাছড়া, ইত্যাদি। | হ্যাঁ ১<br>না ২ [যদি না হয়, Hx2 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | H3  |
| ৮১                               | আপনি সচরাচর আপনার উচ্চ রক্তচাপের জন্য চিকিৎসা ও উপদেশ নিতে কোথায় যান?<br>উত্তর একাধিক হতে পারে।<br><br><b>নির্দেশনা:</b><br>যাদের উচ্চ রক্তচাপ নির্ণয় হয়েছে তারা সচরাচর কোথা থেকে চিকিৎসা ও উপদেশ গ্রহণ করে তা লিপিবদ্ধ করুন। এখানে একাধিক উত্তর হতে পারে।<br><br><b>[H2a= হ্যাঁ হলে এই প্রশ্ন প্রযোজ্য]</b>                            | সরকারি কমিউনিটি ক্লিনিক ১<br>সরকারি ইউনিয়ন স্বাস্থ্য ও পরিবার কল্যাণ কেন্দ্র ২<br>সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ৩<br>সরকারি জেলা সদর হাসপাতাল ৪<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৫<br>সরকারি বিশেষায়িত হাসপাতাল ৬<br>এন জি ও ক্লিনিক ৭<br>এন জি ও হাসপাতাল ৮<br>বেসরকারি হাসপাতাল ৯<br>জাকারের প্রাইভেট চেম্বার/ক্লিনিক ১০<br>ঔষধের দোকান ১১<br>পল্লী চিকিৎসক ১২<br>অল্টারনেটিভ মেডিসিন প্রেশিশনার (হোমিও, আয়ুর্বেদী, ইউনানী) ১৩<br>সনাতন চিকিৎসা ১৪<br>অন্যান্য নির্দিষ্ট করুন ১৫<br>জানি না ১৬<br>Hx2other ১৭ | Hx2 |
| ৮২                               | আপনি আপনার উচ্চ রক্তচাপের ঔষধ সচরাচর কোথা থেকে সংগ্রহ করেন?<br>উত্তর একাধিক হতে পারে।<br><br><b>নির্দেশনা:</b><br>যাদের উচ্চ রক্তচাপ নির্ণয় হয়েছে তারা সচরাচর কোথা থেকে উচ্চ রক্তচাপের ঔষধ সংগ্রহ করে তা লিপিবদ্ধ করুন। এখানে একাধিক উত্তর হতে পারে।<br><br><b>[Hx1= হ্যাঁ হলে এই প্রশ্ন প্রযোজ্য]</b>                                   | সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ১<br>সরকারি জেলা সদর হাসপাতাল ২<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৩<br>সরকারি বিশেষায়িত হাসপাতাল ৪<br>এন জি ও হাসপাতাল ৫<br>এন জি ও ক্লিনিক ৬<br>বেসরকারি হাসপাতাল ৭<br>জাকারের প্রাইভেট চেম্বার/ক্লিনিক ৮<br>ঔষধের দোকান ৯<br>পল্লী চিকিৎসক ১০<br>অল্টারনেটিভ মেডিসিন প্রেশিশনার (হোমিও, আয়ুর্বেদী, ইউনানী) ১১                                                                                                                                                                     | Hx3 |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                  | সনাতন চিকিৎসা<br>অন্যান্য (নির্দিষ্ট করুন) ১২<br>জানি না ১৩<br>Hx3other<br>৭৭                                                                                                                                  |     |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| ৮৩ | বর্তমানে ঔষধ না খাওয়ার অন্যতম কারণ কি?<br><br>[গত ১২ মাসে/অতীতে কখনো (চিকিৎসা নিয়ে থাকলে)<br>যারা ঔষধ খেয়েছে কিন্তু বর্তমানে খাচ্ছে না তাদের কেন্দ্রে<br>প্রযোজ্য]<br>[উত্তর রকমিক হতে পারে]<br><b>নির্দেশনাঃ</b><br>যদি তথ্য প্রদানকারী উচ্চ রক্তচাপ নির্ণয় হওয়ার পরেও কেন<br>ঔষধ সেবন না করেন বা বন্ধ করে দেন তার সম্ভাব্য কারণগুলো<br>নির্ণয় করুন।<br><b>যদি H2a=হ্যাঁ হয় এবং (Hx1= না অথবা H3= না</b> | ঔষধ খাওয়া জরুরী মনে করি না ১<br>ব্যায় বহুল ২<br>পার্শ্ব প্রতিক্রিয়া হয় বা হওয়ার ভয় ৩<br>বর্তমানে রক্তচাপ স্বাভাবিক ৪<br>ঔষধ পাওয়া যায় না ৫<br>ঔষধ খেতে বলা হয়নি ৬<br>অন্যান্য নির্দিষ্ট করুন Hx4other | Hx4 |
| ৮৪ | আপনি কি উচ্চ রক্তচাপের জন্য কখনো সনাতন<br>চিকিৎসকের (ঝার ফুক, পানি পরা) পরামর্শ নিয়েছেন?<br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                                                                                 | হ্যাঁ ১<br>না ২ [যদি না হয়, H6 এ যান]                                                                                                                                                                         | H4  |
| ৮৫ | আপনি কি বর্তমানে উচ্চ রক্তচাপের জন্য অন্য কোন সনাতন<br>চিকিৎসা (ঝার ফুক, পানি পরা) নিয়েছেন?<br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                                                                              | হ্যাঁ ১<br>না ২                                                                                                                                                                                                | H5  |

| মূল: ডায়াবেটিস সংক্রান্ত তথ্য |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| প্রশ্নাবলী                     |                                                                                                                                                                                                                                                                                                           | উত্তর                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | কোড |
| ৮৯                             | কখনো কোন ডাক্তার বা স্বাস্থ্যকর্মী আপনার রক্তের সুগার/ডায়াবেটিস মেপেছেন?<br><br><b>নির্দেশনা:</b><br>তথ্য প্রদানকারীকে শুধুমাত্র ডাক্তার বা স্বাস্থ্যকর্মী দ্বারা রক্তের সুগার/চিনি মাপানো কে আমলে আনতে বসুন।                                                                                            | হ্যাঁ ১<br>না ২ [যদি না হয়, H12 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | H6  |
| ৯০                             | কখনো কোন ডাক্তার বা স্বাস্থ্যকর্মী কি বলেছেন যে আপনার ডায়াবেটিস আছে?<br><br><b>নির্দেশনা:</b><br>উপর্যুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                        | হ্যাঁ ১<br>না ২ [যদি না হয়, H12 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | H7a |
| ৯১                             | গত ১২ মাসের মধ্যে কি এই কথাটি বলা হয়েছে?<br><br><b>নির্দেশনা:</b><br>উপর্যুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                    | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H7b |
| ৯২                             | আপনি কি কখনো ডাক্তার বা স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ডায়াবেটিস এর জন্য কোন ঔষধ সেবন করেছেন?<br><br><b>নির্দেশনা:</b><br>উপর্যুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                        | হ্যাঁ ১<br>না ২ [যদি না হয়, Hx6 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Hx5 |
| ৯৩                             | আপনি গত দুই সপ্তাহের মধ্যে ডাক্তার বা স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ডায়াবেটিস এর জন্য কোন ঔষধ সেবন করেছেন কি?<br><br><b>নির্দেশনা:</b><br>শুধু মাত্র ডাক্তার বা অন্য কোন স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ঔষধ সেবন করতে হবে অন্য কারো নয়।                                                  | হ্যাঁ ১<br>না ২ [যদি না হয়, Hx6 এ যান।]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | H8  |
| ৯৪                             | আপনি কি বর্তমানে ডাক্তার বা স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ডায়াবেটিসের জন্য কোন ইনসুলিন নিচ্ছেন?<br><br><b>নির্দেশনা:</b><br>শুধু মাত্র ডাক্তার বা অন্য কোন স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ঔষধ সেবন করতে হবে অন্য কারো নয়।                                                                | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H9  |
| ৯৫                             | আপনি সচরাচর ডায়াবেটিস এর জন্য চিকিৎসা ও উপদেশ নিতে কোথায় যান?<br>[উত্তর একাধিক হতে পারে]<br><br><b>নির্দেশনা:</b><br>যাদের উক্ত রক্তচাপ নির্ণয় হয়েছে তারা সচরাচর কোথা থেকে চিকিৎসা ও উপদেশ গ্রহণ করে তা লিপিবদ্ধ করুন। এখানে একাধিক উত্তর হতে পারে।<br><br><b>(H7a= হ্যাঁ হলে এই প্রশ্ন প্রযোজ্য)</b> | সরকারি কমিউনিটি ক্লিনিক ১<br>সরকারি ইউনিয়ন স্বাস্থ্য ও পরিবার কল্যাণ কেন্দ্র ২<br>সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ৩<br>সরকারি জেলা সদর হাসপাতাল ৪<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৫<br>সরকারি বিশেষায়িত হাসপাতাল ৬<br>এন জি ও ক্লিনিক ৭<br>এন জি ও হাসপাতাল ৮<br>বেসরকারি হাসপাতাল ৯<br>ডাক্তারের প্রাইভেট চেম্বার/ক্লিনিক ১০<br>ঔষধের দোকান ১১<br>পল্লী চিকিৎসক ১২<br>অল্টারনেটিভ মেডিসিন প্রাক্টিশনার (হোমিও, আয়ুর্বেদী, ইউনানী) ১৩<br>সনাতন চিকিৎসা ১৪<br>অন্যান্য নির্দিষ্ট করুন ১৫<br>জানি না Hx2other ১৬<br>১৭ | Hx6 |
| ৯৬                             | আপনি আপনার ডায়াবেটিস এর ঔষধ সচরাচর কোথা থেকে সংগ্রহ করেন?<br>[উত্তর একাধিক হতে পারে]<br><br><b>নির্দেশনা:</b>                                                                                                                                                                                            | সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ১<br>সরকারি জেলা সদর হাসপাতাল ২<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৩<br>সরকারি বিশেষায়িত হাসপাতাল ৪<br>এন জি ও হাসপাতাল ৫<br>এন জি ও ক্লিনিক ৬<br>বেসরকারি হাসপাতাল ৭                                                                                                                                                                                                                                                                                                                     | Hx7 |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                     |     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|    | <p>যাদের ডায়াবেটিস নির্ণয় হয়েছে তারা সচরাচর দেখা থেকে ডায়াবেটিস এর ঔষধ সংরহ করে তা লিপিবদ্ধ করুন। এখানে একাধিক উত্তর হতে পারে।</p> <p><b>[ Hx5 = হ্যাঁ হলে এই প্রশ্ন প্রযোজ্য ]</b></p>                                                                                                                                                                                                                                                                     | <p>ডাক্তারের প্রাইভেট চেম্বার/ক্লিনিক ৭<br/> ঔষধের দোকান ৮<br/> পল্লী চিকিৎসক ৯<br/> অল্টারনেটিভ মেডিসিন প্র্যাক্টিশনার ১০<br/> (হোমিও, আয়ুর্বেদী, ইউনানী) ১১<br/> সনাতন চিকিৎসা ১২<br/> অন্যান্য (নির্দিষ্ট করুন) ১৩<br/> জানি না Hx3other ৭৭</p> |     |
| ৯৭ | <p>বর্তমানে ডায়াবেটিস ঔষধ না খাওয়ার অন্যতম কারণ কি?</p> <p>[গত ১২ মাসে/ অতীতে কখনো (চিকিৎসা নিয়ে থাকলে) যারা ঔষধ খেয়েছে কিন্তু বর্তমানে খাচ্ছে না তাদের ক্ষেত্রে প্রযোজ্য]<br/> [উত্তর একাধিক হতে পারে]</p> <p><b>[যদি H7a= হ্যাঁ এবং ( Hx5= না or H8= না or H9= না হলে এই প্রশ্ন আসবে)]</b></p> <p><b>নির্দেশনাঃ</b><br/> যদি তথ্য প্রদানকারী ডায়াবেটিস নির্ণয় হওয়ার পরেও কোন ঔষধ সেবন না করেন বা বন্ধ করে দেন তার সম্ভাব্য কারণগুলো লিপিবদ্ধ করুন।</p> | <p>ঔষধ খাওয়া জরুরী মনে করি না ১<br/> ব্যায় বহুল ২<br/> পার্শ্ব প্রতিক্রিয়া হয় বা হওয়ার ভয় ৩<br/> বর্তমানে রক্তচাপ স্বাভাবিক ৪<br/> ঔষধ পাওয়া যায় না ৫<br/> ঔষধ খেতে বলা হয়নি ৬<br/> অন্যান্য নির্দিষ্ট করুন Hx4other</p>                   | Hx8 |
| ৯৮ | <p>আপনি কি ডায়াবেটিস এর জন্য কখনো সনাতন চিকিৎসকের পরামর্শ নিয়েছেন?</p> <p><b>নির্দেশনাঃ</b><br/> উপর্যুক্ত উত্তরটি নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                         | <p>হ্যাঁ ১<br/> না ২</p>                                                                                                                                                                                                                            | H10 |
| ৯৯ | <p>আপনি কি বর্তমানে ডায়াবেটিস এর জন্য সনাতন চিকিৎসা নিয়েছেন?</p> <p><b>নির্দেশনাঃ</b><br/> উপর্যুক্ত উত্তরটি নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                               | <p>হ্যাঁ ১<br/> না ২</p>                                                                                                                                                                                                                            | H11 |

| মূল: রক্তের চর্বি পরিমাণ বৃদ্ধি সম্পর্কিত |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| প্রশ্নাবলী                                |                                                                                                                                                                                                                                                                                                                                   | উত্তর                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | কোড  |
| ১০০                                       | কখনো কোন ডাক্তার বা স্বাস্থ্যকর্মী আপনার রক্তের চর্বি মেপেছেন?<br><br><b>নির্দেশনা:</b><br>তথ্য প্রদানকারীকে শুধুমাত্র ডাক্তার বা স্বাস্থ্যকর্মী দ্বারা রক্তের চর্বি মাপনো কে আমলে অন্তর্ভুক্ত করুন।                                                                                                                              | হ্যাঁ ১<br>না ২ (যদি না হয়, <b>H17</b> এ যান)                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H12  |
| ১০১                                       | কখনো কোন ডাক্তার বা স্বাস্থ্যকর্মী কি বলেছেন যে আপনার রক্তের চর্বি পরিমাণ বেড়ে গিয়েছে?<br><br><b>নির্দেশনা:</b><br>উপর্যুক্ত উত্তরটি নির্বচন করুন।                                                                                                                                                                              | হ্যাঁ ১<br>না ২ (যদি না হয়, <b>H17</b> এ যান)                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H13a |
| ১০২                                       | গত ১২ মাসের মধ্যে এই কথাটি কি বলা হয়েছে?<br><br><b>নির্দেশনা:</b><br>শুধুমাত্র তাদের জন্য যাদের পূর্বে রক্তে অধিক চর্বি আছে নিশ্চয় হয়েছিল।                                                                                                                                                                                     | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H13b |
| ১০৩                                       | আপনি কি রক্তের বর্ধিত চর্বি/চর্বি বেড়ে যাওয়ার জন্য এর জন্য কখনো ডাক্তার বা স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী কোন ঔষধ সেবন করেছেন?<br><br><b>নির্দেশনা:</b><br>উপর্যুক্ত উত্তরটি নির্বচন করুন।                                                                                                                               | হ্যাঁ ১<br>না ২ (যদি না হয়, <b>Hx10</b> এ যান)                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hx9  |
| ১০৪                                       | আপনি গত দুই সপ্তাহের মধ্যে ডাক্তার বা অন্য কোন স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী রক্তের বর্ধিত চর্বি/চর্বি বেড়ে যাওয়ার জন্য কোন ঔষধ সেবন করেছেন কি?<br><br><b>নির্দেশনা:</b><br>শুধুমাত্র ডাক্তার বা অন্য কোন স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী ঔষধ সেবন করতে হবে অন্য কারো নয়।                                        | হ্যাঁ ১<br>না ২ (যদি না হয়, <b>Hx10</b> এ যান)                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H14  |
| ১০৫                                       | আপনি সচরাচর রক্তের বর্ধিত চর্বি/চর্বি বেড়ে যাওয়ার জন্য চিকিৎসা ও উপদেশ নিতে কোথায় যান?<br>[উত্তর একাধিক হতে পারে]<br><br><b>নির্দেশনা:</b><br>যাদের রক্তে অধিক চর্বি আছে নিশ্চয় হয়েছে তারা সচরাচর কোথা থেকে চিকিৎসা ও উপদেশ গ্রহণ করে তা লিপিবদ্ধ করুন। এখানে একাধিক উত্তর হতে পারে।<br><br><b>[যদি H13a=হ্যাঁ হয় তবে /</b> | সরকারি কমিউনিটি ক্লিনিক ১<br>সরকারি ইউনিয়ন স্বাস্থ্য ও পরিবার কল্যাণ কেন্দ্র ২<br>সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ৩<br>সরকারি জেলা সদর হাসপাতাল ৪<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৫<br>সরকারি বিশেষায়িত হাসপাতাল ৬<br>এন জি ও ক্লিনিক ৭<br>এন জি ও হাসপাতাল ৮<br>বেসরকারি হাসপাতাল ৯<br>ডাক্তারের প্রাইভেট চেম্বার/ক্লিনিক ১০<br>ঔষধের দোকান ১১<br>পল্লী চিকিৎসক ১২<br>অল্টারনেটিভ মেডিসিন প্রেক্ষাগৃহ (হোমিও, আয়ুর্বেদী, ইউনানী) ১৩<br>স্নাতক চিকিৎসা ১৪<br>অন্যান্য নির্দিষ্ট করুন ১৫<br>জানি না ১৬<br>Hx2other ১৭ | Hx10 |
| ১০৬                                       | আপনি আপনার রক্তের বর্ধিত চর্বি/চর্বি বেড়ে যাওয়ার জন্য ঔষধ সচরাচর কোথা থেকে সংগ্রহ করেন?<br>[উত্তর একাধিক হতে পারে]<br><br><b>নির্দেশনা:</b><br>যাদের রক্তে অধিক চর্বি আছে তারা সচরাচর কোথা থেকে রক্তে অধিক চর্বি ঔষধ সংগ্রহ করে তা লিপিবদ্ধ করুন। এখানে একাধিক উত্তর হতে পারে।                                                  | সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ১<br>সরকারি জেলা সদর হাসপাতাল ২<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৩<br>সরকারি বিশেষায়িত হাসপাতাল ৪<br>এন জি ও হাসপাতাল ৫<br>এন জি ও ক্লিনিক ৬<br>বেসরকারি হাসপাতাল ৭<br>ডাক্তারের প্রাইভেট চেম্বার/ক্লিনিক ৮                                                                                                                                                                                                                                                                             | Hx11 |

|     |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                  |      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|     | <b>[যদি Hx9 =হ্যাঁ হয় তবে /</b>                                                                                                                                                                                                                                                                                                                                                         | ঔষধের দোকান ৮<br>গুল্ম চিকিৎসক ৯<br>অল্টারনেটিভ মেডিসিন প্রেশ্রিনার ১০<br>(হোমিও, আয়ুর্বেদী, ইউনানী) ১১<br>সনাতন চিকিৎসা<br>অন্যান্য (নির্দিষ্ট করুন) ১২<br>জানি না ১৩<br>Hx3other ১৪                           |      |
| ১০৭ | বর্তমানে ঔষধ না খাওয়ার অন্যতম কারণ কি?<br>[গত ১২ মাসে যারা ঔষধ খেয়েছে কিন্তু বর্তমানে খাচ্ছে না তাদের ক্ষেত্রে প্রযোজ্য]<br>[উত্তর একাধিক হতে পারে]<br><b>নির্দেশনাঃ</b><br>যদি তথ্য প্রদানকারী রক্তে অধিক চর্বি নির্ণয় হওয়ার পরেও কোন ঔষধ সেবন না করেন বা বন্ধ করে দেন তার সভাব্য কারণগুলো লিপিবদ্ধ করুন।<br><b>[যদি H13a=হ্যাঁ এবং (Hx9=না অথবা H14=না হয় তবে এই প্রশ্ন আসবে)</b> | ঔষধ খাওয়া জরুরী মনে করি না ১<br>ব্যায় বৃদ্ধি ২<br>পার্শ্ব প্রতিক্রিয়া হয় বা হওয়ার ভয় ৩<br>বর্তমানে রক্তচাপ স্বাভাবিক ৪<br>ঔষধ পাওয়া যায় না ৫<br>ঔষধ খেতে বলা হয়নি ৬<br>অন্যান্য নির্দিষ্ট করুন Hx4other | Hx12 |
| ১০৮ | আপনি কি রক্তের বর্ধিত চর্বি/ চর্বি বেড়ে যাওয়ার জন্য অন্য কখনো সনাতন চিকিৎসকের পরামর্শ নিয়েছেন?<br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                                                 | হ্যাঁ ১<br>না ২ [যদি না হয়, <b>H17</b> এ যান]                                                                                                                                                                   | H15  |
| ১০৯ | আপনি কি বর্তমানে রক্তের বর্ধিত চর্বি/ চর্বি বেড়ে যাওয়ার জন্য সনাতন চিকিৎসা নিচ্ছেন?<br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                                                                                                                                                                                             | হ্যাঁ ১<br>না ২                                                                                                                                                                                                  | H16  |

| মূল: হৃদ রোগ সম্পর্কিত |                                                                                                                                                                                                                                                           |                 |     |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|
|                        | প্রশ্নাবলী                                                                                                                                                                                                                                                | উত্তর           | কোড |
| ১১০                    | আপনার কি কখনো হৃদরোগ জনিত কারনে হাট্ট এটাক বা বুকে ব্যাথা অথবা স্ট্রোক (মস্তিষ্কের রক্তনালীর সমস্যা) হয়েছিল?<br><br><i>নির্দেশনাঃ</i><br>উপর্যুক্ত উত্তরটি নির্বাচন করুন।                                                                                | হ্যাঁ ১<br>না ২ | H17 |
| ১১১                    | হৃদরোগ প্রতিরোধ বা চিকিৎসা হিসেবে আপনি কি বর্তমানে এসগিরিন জাতীয় ঔষধ নিয়মিত সেবন করছেন?<br><br><i>নির্দেশনাঃ</i><br>নিয়মিত অর্ধ গ্রায় প্রতিদিন।                                                                                                       | হ্যাঁ ১<br>না ২ | H18 |
| ১১২                    | হৃদরোগ প্রতিরোধ বা চিকিৎসা হিসেবে আপনি কি বর্তমানে স্ট্যাটিন জাতীয় ঔষধ নিয়মিত ব্যবহার করছেন? (যেমনঃ লোভা স্ট্যাটিন, সিমভাস্ট্যাটিন, এটরভাস্ট্যাটিন)।<br><br><i>নির্দেশনাঃ</i><br>নিয়মিত অর্ধ গ্রায় প্রতিদিন। ঔষধের নাম ঔষধের গাভা দেখে লিপিবদ্ধ করুন। | হ্যাঁ ১<br>না ২ | H19 |

| মূল: জীবনাচরণ সম্পর্কিত উপদেশ |                                                                                                                                                                                                                                                                                                                    |                                                       |      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------|
| প্রশ্নাবলী                    |                                                                                                                                                                                                                                                                                                                    | উত্তর                                                 | কোড  |
| ১১৩                           | গত ১২ মাসে আপনি কি কোন ডাক্তার বা অন্য কোন স্বাস্থ্য কর্মীর কাছে গিয়েছিলেন?                                                                                                                                                                                                                                       | হ্যাঁ ১<br>না ২ যদি না ও C1=1, তবে O6 এ<br>যান        | H20  |
| ১১৪                           | গত ১২ মাসে ডাক্তার বা স্বাস্থ্য কর্মীর নিকট সাক্ষাৎের সময়, তারা কি আপনাকে নিম্নের উপদেশগুলো দিয়েছিল?<br>[সবগুলোর ক্ষেত্রে উত্তর লিপিবদ্ধ করুন]<br><b>নির্দেশনাঃ</b><br>উপর্যুক্ত উত্তরটি নির্বাচন করুন। তথ্য প্রদানকারীকে শুধু মাত্র ডাক্তার বা স্বাস্থ্য কর্মীর নিকট যাওয়া কে আমলে আনতে বলবান (অন্য কিছু নয়)। |                                                       |      |
| ১১৫                           | ধূমপান বন্ধ করতে বা এটা শুরু না করতে                                                                                                                                                                                                                                                                               | হ্যাঁ ১<br>না ২                                       | H20a |
| ১১৬                           | খাবারে লবণ কম খাওয়া                                                                                                                                                                                                                                                                                               | হ্যাঁ ১<br>না ২                                       | H20b |
| ১১৭                           | প্রতিদিন ৫ প্রমাণ পরিমাণ ফল-মূল এবং/ অথবা শাক সব্জি খাওয়া<br><i>[নির্দেশনাঃ শো-ব্রডের নির্দেশিত প্রমাণ পরিমাণ অনুযায়ী সার্জিং হিসাব করতে হবে]</i>                                                                                                                                                                | হ্যাঁ ১<br>না ২                                       | H20c |
| ১১৮                           | আপনার খাবারে চর্বি পরিমাণ কমানো                                                                                                                                                                                                                                                                                    | হ্যাঁ ১<br>না ২                                       | H20d |
| ১১৯                           | শারীরিক পরিশ্রম করতে শুরু করা অথবা আরো অধিক করা                                                                                                                                                                                                                                                                    | হ্যাঁ ১<br>না ২                                       | H20e |
| ১২০                           | ওজন কমানো এবং নিয়ন্ত্রণে রাখা                                                                                                                                                                                                                                                                                     | হ্যাঁ ১<br>না ২                                       | H20f |
| ১২১                           | চিনিযুক্ত পানীয় (যেমনঃ চা, কফি, সরবত ও অন্যান্য কোমল পানীয়) কম খাওয়া                                                                                                                                                                                                                                            | হ্যাঁ ১ যদি C1=1, O6 এ যান<br>না ২ যদি C1=1, O6 এ যান | H20g |

জরায়ুর ক্যান্সার

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                      |     |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| জরায়ুর ক্যান্সার ফ্রিনিং মূল এবং বর্ধিতঃ (যদি C1=মহিলা হয়)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                      |     |  |
| <p>পরবর্তী প্রশ্নগুলো জরায়ুর ক্যান্সার প্রতিরোধ সংক্রান্ত। জরায়ুর ক্যান্সার বিভিন্ন উপায়ে ফ্রিনিং টেস্ট করা যায়, যেমন ভায়ো টেস্ট (ভিজুয়াল ইন্সপেকশন উইথ এসিটিক এসিড/ ভিনেগার), পেপ স্মেয়ার এবং হিউমেন পেপিলোমা ভাইরাস (এইচপিভি) টেস্ট। ভায়ো টেস্টে জরায়ুর মুখে এসিটিক এসিড (বা ভিনেগার) দিয়ে চোখে দেখে পরীক্ষা করা হয়। পেপ স্মেয়ার এবং এইচপিভি টেস্ট উভয় ক্ষেত্রে একজন চিকিৎসক বা নার্স একটি সোয়াব স্টিক দিয়ে আপনার যোনি পথের ভিতর থেকে নমুনা সংগ্রহ করে পরীক্ষার জন্য ল্যাবরেটরিতে পাঠানো হয়। কোন কোন ক্ষেত্রে এই নমুনা সংগ্রহের কাজটি আপনার নিজেরও করা লাগতে পারে। পরীক্ষাগারে পেপ স্মেয়ার পরীক্ষার জন্য অস্থায়িক কোমের উপস্থিতি দেখা হয় এবং এইচপিভি টেস্টে এইচপিভি ভাইরাস এর উপস্থিতি দেখা হয়।</p> |                                                                                                                                                                                                                                                                                                                                                      |     |  |
| <p><b>নির্দেশনা:</b><br/>এই অংশ টুকু শুধুমাত্র মহিলাদের জন্য প্রযোজ্য। এটি মহিলা তথ্য প্রদানকারীকে পড়ে অন্যতে হবে কোন অবস্থাতেই এই অংশ বাদ দেয়া যাবে না।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                      |     |  |
| প্রশ্নাবলী                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | উত্তর                                                                                                                                                                                                                                                                                                                                                | কোড |  |
| <p>১২২ আপনি কি কখনো আপনার জরায়ুর ক্যান্সারের উপস্থিতি পরীক্ষার জন্য উপরে বর্ণিত কোন ফ্রিনিং টেস্ট করেছেন?</p> <p><b>নির্দেশনা:</b><br/>উপর্যুক্ত উত্তর নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>হ্যাঁ<br/>না<br/>জানি না</p> <p>১<br/>২ <b>[যদি CX1=2 go to CX11]</b><br/>৩৭</p>                                                                                                                                                                                                                                                                  | CX1 |  |
| <p>পরবর্তী প্রশ্নগুলো (CX2-CX10) শুধুমাত্র যারা জীবনে কখনো জরায়ুর ক্যান্সার পরীক্ষার জন্য ফ্রিনিং টেস্ট করেছেন তাদের ক্ষেত্রে প্রযোজ্য (CX1=1)। যদি CX1=2 হয় তাহলে CX11 প্রশ্নে যান।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                      |     |  |
| <p>১২৩ প্রথমবার কতবছর বয়সে আপনি এই ফ্রিনিং টেস্ট করিয়েছিলেন?</p> <p><b>নির্দেশনা:</b><br/>তথ্য প্রদানকারী কত বছর বয়সে ফ্রিনিং টেস্ট করেছেন তা মনে করতে সময় দিন।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>বয়স<br/>জানি না<br/>অসম্মতি</p> <p>.....<br/>৩৭<br/>৮৮</p>                                                                                                                                                                                                                                                                                       | CX2 |  |
| <p>১২৪ আপনি জরায়ুর ক্যান্সারের ফ্রিনিং টেস্ট সর্বশেষ কবে করিয়েছিলেন?</p> <p><b>নির্দেশনা:</b><br/>উপর্যুক্ত উত্তরটি নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>এক বছরের কম<br/>১—২ বছর আগে<br/>৩—৫ বছর আগে<br/>৫ বছর বা তার বেশি আগে<br/>জানি না<br/>অসম্মতি</p> <p>১<br/>২<br/>৩<br/>৪<br/>৫<br/>৬<br/>৮৮</p>                                                                                                                                                                                                   | CX3 |  |
| <p>১২৫ শেষ বার জরায়ুর ক্যান্সারের ফ্রিনিং করানোর মূল কারণ কি ছিল?</p> <p><b>নির্দেশনা:</b><br/>উপর্যুক্ত উত্তরটি নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>নিয়মিত চেকআপের অংশ<br/>পরীক্ষার প্রাপ্ত<br/>আসামগ্ৰন্থপূর্ণ ফলাফলের<br/>পরবর্তী ধাপ হিসেবে<br/>স্বাস্থ্য সেবাদানকারীর<br/>পরামর্শে<br/>অন্য কারো পরামর্শে<br/>ব্যাথা অথবা অন্যান্য লক্ষণ<br/>দেখা দেয়ায়<br/>অন্যান্য<br/>অন্যান্য নির্দিষ্ট করুন<br/>জানি না<br/>অসম্মতি</p> <p>১<br/>২<br/>৩<br/>৪<br/>৫<br/>৬<br/>CX4other<br/>৩৭<br/>৮৮</p> | CX4 |  |
| <p>১২৬ শেষবার আপনি কোথায় জরায়ুর ক্যান্সারের পরীক্ষা করিয়েছিলেন?</p> <p><b>নির্দেশনা:</b><br/>উপর্যুক্ত উত্তরটি নির্বাচন করুন।</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>ডাক্তারের চেম্বার<br/>বেসরকারী হাসপাতাল<br/>হেলথ ক্যাম্প<br/>কমিউনিটি ক্লিনিক<br/>সরকারী হাসপাতাল<br/>অন্যান্য<br/>অন্যান্য নির্দিষ্ট করুন<br/>জানি না<br/>অসম্মতি</p> <p>১<br/>২<br/>৩<br/>৪<br/>৫<br/>৬<br/>CX5other<br/>৩৭<br/>৮৮</p>                                                                                                          | CX5 |  |
| <p>১২৭ শেষবার (অতি সম্প্রতি) জরায়ুর ক্যান্সারের পরীক্ষার ফলাফল কি ছিল?<br/>(অনুগ্রহ করে মেডিকেল রিপোর্ট যাচাই করুন)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>কোন ফলাফল পাইনি<br/>স্বাভাবিক/নেগেটিভ</p> <p>১ <b>[যদি CX6=1, হয় পরবর্তী অংশে যান]</b></p>                                                                                                                                                                                                                                                       | CX6 |  |

|                                                                                |                                                                    |                                                                   |  |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------|--|
| নির্দেশনা:<br>মোটকেন্স রিপোর্ট বা ব্যালান্স পত্র যদি থাকে তাহলে যাজাই করে দিন। | আবাসিক/পত্রটি<br>ক্যাপার সন্দেশ<br>অমিমাংসিত<br>জানি না<br>অসম্মতি | ২/যদি CX6=2, হয় পরবর্তি অংশে<br>যা না<br>৩<br>৪<br>৫<br>৭৭<br>৮৮ |  |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------|--|

| বর্ষিত ও মূল্য জরায়ুর ক্যাপার                                                                                       |                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |      |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| প্রশ্নাবলী                                                                                                           |                                                                                         | উত্তর                                                                                                                                                                                                                                                                                                                                               | কোড  |
| ১২৮                                                                                                                  | পরীক্ষার ফলাফলের উপর ভিত্তি করে কোন ফলো-আপ ভিজিট করিয়েছেন কি?                          | হ্যাঁ ১<br>না ২<br>জানি না ৭৭<br>অসম্মতি ৮৮                                                                                                                                                                                                                                                                                                         | CX7  |
| নির্দেশনা:<br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                         |                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |      |
| ১২৯                                                                                                                  | আপনি কি পরীক্ষার ফলাফলের উপর ভিত্তি করে, জরায়ুর ক্যাপারের জন্য কোন চিকিৎসা নিয়েছিলেন? | হ্যাঁ ১<br>না ২/যদি না হয়, তবে CX10 এ যান<br>জানি না ৭৭<br>অসম্মতি ৮৮                                                                                                                                                                                                                                                                              | CX8  |
| নির্দেশনা:<br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                         |                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |      |
| ১৩০                                                                                                                  | জরায়ুর ক্যাপারের শেষ বারের পরীক্ষার ভিত্তিতে আপনি ঐ সময়ে কোন চিকিৎসা নিয়েছিলেন কি?   | হ্যাঁ ১<br>না ২<br>জানি না ৭৭<br>অসম্মতি ৮৮                                                                                                                                                                                                                                                                                                         | CX9  |
| নির্দেশনা:<br>উপযুক্ত উত্তরটি নির্বাচন করুন।                                                                         |                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |      |
| ১৩১                                                                                                                  | আপনার চিকিৎসা না নেয়ার মূল কারণ কি?                                                    | আমার চিকিৎসা দরকার তা<br>কখনো বলা হয় নি ১<br>জানি না কোথায়/কিভাবে<br>চিকিৎসা পাওয়া যায় ২<br>লজ্জা বোধ করা ৩<br>অনেক খরচ ৪<br>সময় ছিল না ৫<br>চিকিৎসা কেন্দ্র অনেক দূরে ৬<br>সেবার মান খারাপ ৭<br>চিকিৎসা পদ্ধতি ভয় পাই ৮<br>সামাজিক কুসংস্কার ৯<br>সামাজিক বিশ্বাস ১০<br>পরিবারের সদস্যরা অনুমতি দেয়<br>নি<br>জানি না ১১<br>অসম্মতি ৭৭<br>৮৮ | CX10 |
| নির্দেশনা:<br>উপযুক্ত উত্তরটি নির্বাচন করুন।*পরিবারের সদস্য অনুমতি দেয় 'নি' হলে ঐ সদস্যের সাথে সম্পর্ক উল্লেখ করুন। |                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |      |
| ১৩২                                                                                                                  | আপনার কখনোই জরায়ুর ক্যাপারের কোন পরীক্ষা না করার কারণ কি?                              | জানতাম না কোথায়/কিভাবে<br>পরীক্ষা করাতে হয় ১<br>লজ্জা বোধ করা ২<br>অনেক খরচ ৩<br>সময় পাই নি ৪<br>চিকিৎসা কেন্দ্র অনেক দূরে ৫<br>সেবার মান খুব খারাপ ৬<br>চিকিৎসা পদ্ধতি ভয় পাই ৭<br>সামাজিক কুসংস্কার ৮<br>সামাজিক বিশ্বাস ৯<br>পরিবারের সদস্যরা অনুমতি দেয়<br>নি<br>জানি না ১০<br>অসম্মতি ৭৭<br>৮৮                                            | CX11 |
| নির্দেশনা:<br>উপযুক্ত উত্তরটি নির্বাচন করুন।*পরিবারের সদস্য অনুমতি দেয় 'নি' হলে ঐ সদস্যের সাথে সম্পর্ক উল্লেখ করুন। |                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |      |

| মুখগহ্বরের স্বাস্থ্য                                                                                                                                                                                  |                                                                                                                                                                                                                                  |                 |  |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|---------|
| পরবর্তী প্রশ্নগুলো আপনার মুখগহ্বরের স্বাস্থ্য ও প্রাসঙ্গিক আচরণ নিয়ে করা হবে।                                                                                                                        |                                                                                                                                                                                                                                  |                 |  |         |
| প্রশ্নবলী                                                                                                                                                                                             | উত্তর                                                                                                                                                                                                                            |                 |  | কোড     |
| ১৩৩ গত ১২ মাসে আপনার দাঁত, মাড়ি বা মুখে কোন ব্যাথা, ফোলা, রক্ত ফরণ বা অস্বাভাবিকতা দেখা দিয়েছে কি?<br><br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তর নির্বাচন করুন।                                         | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                  |                 |  | 06      |
| ১৩৪ কত সময় আগে সর্বশেষ আপনি দাঁতের ডাক্তার দেখিয়েছিলেন?<br><br><b>নির্দেশনাঃ</b><br>দাঁতের ডাক্তার অর্থঃ শুধুমাত্র রেজিস্ট্রার্ড দন্ত চিকিৎসক (বি.ডি.এস. ডিগ্রী ধারী)। উপযুক্ত উত্তর নির্বাচন করুন। | ৬ মাসেরও কম ১<br>৬—১২ মাসের মধ্যে ২<br>১ বছরের বেশি কিন্তু ২ বছরের কম ৩<br>২ বা তার বেশি কিন্তু ৫ বছরের কম ৪<br>৫ বা তার বেশি বছর ৫<br>কখনোই দাঁতের সেবা নেই নি ৬<br>৫<br>৬ <b>যদি কখনোই যাই<br/>নাই হয় তাহলে 09<br/>এ যান।</b> |                 |  | 07      |
| ১৩৫ শেষবার দাঁতের ডাক্তার দেখানোর মূল কারণ কি ছিল?<br><br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তর নির্বাচন করুন।                                                                                           | পরামর্শ/ উপদেশ ১<br>দাঁত, মাড়ি অথবা মুখ গহ্বরের ব্যাথা বা সমস্যা ২<br>দাঁতের চিকিৎসা/ ফলো-আপ ৩<br>নিয়মিত চেক-আপ/ চিকিৎসা ৪<br>অন্যান্য ৫                                                                                       |                 |  | 08      |
|                                                                                                                                                                                                       | অন্যান্য (নির্দিষ্ট করুন)                                                                                                                                                                                                        |                 |  | 08other |
| ১৩৬ আপনি কি হারে দাঁত পরিস্কার করেন?<br><br><b>নির্দেশনাঃ</b><br>উপযুক্ত উত্তর নির্বাচন করুন।                                                                                                         | কখনোই না ১ [কখনোই না হলে 014a এ যান]<br>মাসে এক বার ২<br>মাসে ২—৩ বার ৩<br>সপ্তাহে এক বার ৪<br>সপ্তাহে ২ থেকে ৬ বার ৫<br>দিনে ১ বার ৬<br>দিনে ২ বা ততোধিক বার ৭                                                                  |                 |  | 09      |
| ১৩৭ আপনি কি দাঁত পরিস্কার করার জন্য টুথপেস্ট ব্যবহার করেন?<br><br><b>নির্দেশনাঃ</b><br>টুথপেস্ট ছাড়া অন্য কোন হাই, মাজনি বা পাউডার প্রয়োজন নয়।                                                     | হ্যাঁ ১<br>না ২ <b>যদি না হয় তাহলে 012a এ<br/>যান।</b>                                                                                                                                                                          |                 |  | 010     |
| ১৩৮ আপনি কি ফ্লোরাইড যুক্ত টুথপেস্ট ব্যবহার করেন?<br><br><b>নির্দেশনাঃ</b><br>তথ্য প্রদানকারী যদি না জানেন যে তার ব্যবহৃত টুথপেস্ট ফ্লোরাইড আছে কি না, তাহলে জানি না নির্বাচন করুন।                   | হ্যাঁ ১<br>না ২<br>জানি না ৩                                                                                                                                                                                                     |                 |  | 011     |
| আপনি দাঁত পরিস্কার করার জন্য নিচের উপাদান গুলো ব্যবহার করেন কি?<br>[প্রত্যেকটির জন্য তথ্য উল্লেখ করুন।]<br><br><b>নির্দেশনাঃ</b><br>প্রতিটির ক্ষেত্রে গুরুত্বপূর্ণ ও উপযুক্ত উত্তর নির্বাচন করুন।     |                                                                                                                                                                                                                                  |                 |  |         |
| ১৩৯                                                                                                                                                                                                   | টুথব্রাশ                                                                                                                                                                                                                         | হ্যাঁ ১<br>না ২ |  | 012a    |
| ১৪০                                                                                                                                                                                                   | কাঠের টুথ পিক                                                                                                                                                                                                                    | হ্যাঁ ১         |  | 012b    |

|                                                                                                                                        |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|                                                                                                                                        |                                                           | না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |
| ১৪১                                                                                                                                    | প্রাটিকের ট্র্যাপিক                                       | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O12c             |
| ১৪২                                                                                                                                    | সূত্র (ডেন্টাল ফ্লুস)                                     | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O12d             |
| ১৪৩                                                                                                                                    | করলা                                                      | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O12e             |
| ১৪৪                                                                                                                                    | মেসওয়ারক                                                 | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O12f             |
| ১৪৫                                                                                                                                    | অন্যান্য                                                  | হ্যাঁ ১ <i>হ্যাঁ হলে O12other-এ যান।</i><br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | O12g             |
| ১৪৬                                                                                                                                    | অন্যান্য (নির্দিষ্ট করুন)                                 | <input type="text"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | O12other         |
| আপনি গত ১২ মাসে আপনার দাঁত, মাড়ি বা মুখ গহ্বরের অবস্থার জন্য নিম্নের সমস্যাগুলোতে ভুগেছেন কি?<br>[প্রত্যেকটির জন্য তথ্য উল্লেখ করুন।] |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |
| <b>নির্দেশনাঃ</b><br>প্রতিটির ক্ষেত্রে গুরুত্ব করুন ও উপযুক্ত উত্তর নির্বাচন করুন।                                                     |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |
| ১৪৭                                                                                                                                    | খাবার চিবাতে কষ্ট                                         | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O13a             |
| ১৪৮                                                                                                                                    | কথা বলতে/ শব্দ উচ্চারণ করতে কষ্ট                          | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O13b             |
| ১৪৯                                                                                                                                    | মুখগহ্বরে তিন সপ্তাহের বেশি স্থায়ী ক্ষত<br>এবং/অথবা ফোলা | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O13d             |
| ১৫০                                                                                                                                    | মুখগহ্বরে লাল অথবা সাদা-লাল মিশ্রিত ক্ষত                  | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O13e             |
| ১৫১                                                                                                                                    | মুখগহ্বরে ও দাঁতের অবস্থার জন্য কাজ বন্ধ রাখা             | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O13j             |
| ১৫২                                                                                                                                    | সামাজিক কাজ কর্মে কম অংশগ্রহণ করা                         | হ্যাঁ ১<br>না ২                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O13m             |
| ১৫৩                                                                                                                                    | আপনি কি এই সমস্যার জন্য কোন চিকিৎসা বা পরামর্শ নিয়েছেন?  | হ্যাঁ ১<br>না ২ (না হলে O14 তা যান।)                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | O14              |
| ১৫৪                                                                                                                                    | চিকিৎসার বা পরামর্শের জন্য আপনি কোথায় গিয়েছেন?          | সরকারি কমিউনিটি ক্লিনিক ১<br>সরকারি ইউনিয়ন স্বাস্থ্য ও পরিবার কল্যাণ কেন্দ্র ২<br>সরকারি উপজেলা স্বাস্থ্য কমপ্লেক্স ৩<br>সরকারি জেলা সদর হাসপাতাল ৪<br>সরকারি মেডিকেল কলেজ হাসপাতাল ৫<br>সরকারি বিশেষায়িত হাসপাতাল ৬<br>এন জি ও ক্লিনিক ৭<br>এন জি ও হাসপাতাল ৮<br>বেসরকারি হাসপাতাল ৯<br>ডাক্তারের প্রাইভেট চেম্বার/ক্লিনিক ১০<br>ঔষধের দোকান ১১<br>পল্লী চিকিৎসক ১২<br>অল্টারনেটিভ মেডিসিন প্র্যাকটিশনার (হোমিও, আয়ুর্বেদী, ইউনানী) ১৩<br>সনাতন চিকিৎসা ১৪<br>অন্যান্য নির্দিষ্ট করুন Hx2other<br>জানি না ১৫ | Ox1/<br>Ox1Other |

|     |                                  |                                                                                                                                                                                                                                                                                                                                              |                                  |
|-----|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| ১৫৫ | আপনার চিকিৎসা না নেয়ার কারন কি? | চিকিৎসা নেয়ার ব্যাপারে এত বেশি<br>আন্তরিক ছিলাম না ১<br>জানভাম না কোথায়/কিভাবে পরীক্ষা<br>করাতে হয় ২<br>অনেক খরচ ৩<br>সময় পাই নি ৪<br>চিকিৎসা কেন্দ্র অনেক দূরে ৫<br>সেবার মান খুব খারাপ ৬<br>চিকিৎসা পদ্ধতি ভয় পাই ৭<br>পরিবারের সদস্যরা অনুমতি দেয় নি ৮<br>অন্যান্য (নির্দিষ্ট করুন) ৮<br>জানি না <i>Ox2 others</i> ৭৭<br>অসম্মতি ৮৮ | <i>Ox2/</i><br><i>Ox2 others</i> |
|-----|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|

**STEP 2 শারীরিক পরিমাপের তথ্যসমূহ (Physical Measurement)**

|                            |                                                                                                                                  |                                               |            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------|
| <b>মূল: রক্তচাপ</b>        |                                                                                                                                  |                                               |            |
| ১৫৭                        | রিডিং ১                                                                                                                          | সিস্টোলিক<br>(মি.মি.অব মার্কারী)              | M4a        |
|                            |                                                                                                                                  | ডায়াস্টোলিক<br>(মি.মি.অব মার্কারী)           | M4b        |
|                            |                                                                                                                                  | হৃদ স্পন্দন<br>(স্পন্দন/ মিনিট)               | M6a        |
| ১৫৮                        | রিডিং ২                                                                                                                          | সিস্টোলিক<br>(মি.মি.অব মার্কারী)              | M5a        |
|                            |                                                                                                                                  | ডায়াস্টোলিক<br>(মি.মি.অব মার্কারী)           | M5b        |
|                            |                                                                                                                                  | হৃদ স্পন্দন<br>(স্পন্দন/ মিনিট)               | M6b        |
| ১৫৯                        | রিডিং ৩                                                                                                                          | সিস্টোলিক<br>(মি.মি.অব মার্কারী)              | M6a        |
|                            |                                                                                                                                  | ডায়াস্টোলিক<br>(মি.মি.অব মার্কারী)           | M6b        |
|                            |                                                                                                                                  | হৃদ স্পন্দন<br>(স্পন্দন/ মিনিট)               | M6c        |
| ১৬০                        | আপনি গত দুই সপ্তাহের মধ্যে ডাক্তার বা অন্য কোন স্বাস্থ্যকর্মীর ব্যবস্থাপত্র অনুযায়ী উচ্চ রক্তচাপের জন্য কোন ঔষধ সেবন করেছেন কি? | হ্যাঁ ১<br>না ২                               | M7         |
| <b>মূল: উচ্চতা এবং ওজন</b> |                                                                                                                                  |                                               |            |
| <b>প্রশ্নাবলী</b>          |                                                                                                                                  | <b>উত্তর</b>                                  | <b>কোড</b> |
| ১৬১                        | মহিলাদের জন্য: আপনি কি গর্ভবতী? (যদি C1= ২ হয়)                                                                                  | হ্যাঁ ১ (যদি হলে সাক্ষাৎকার শেষ করুন)<br>না ২ | M9         |
| ১৬২                        | উচ্চতা                                                                                                                           | সেন্টিমিটার (সেমি)                            | M11        |
| ১৬৩                        | ওজন<br>(যদি স্কেলের সর্বোচ্চ মাত্রা অতিক্রম করে তাহলে ৬৬৬.৬)                                                                     | কিলোগ্রামে                                    | M12        |
| <b>মূল: কোমর</b>           |                                                                                                                                  |                                               |            |
| ১৬৪                        | কোমরের পরিধি                                                                                                                     | সেন্টিমিটার                                   | M14        |
| <b>বর্ধিত: নিতম্ব</b>      |                                                                                                                                  |                                               |            |
| ১৬৫                        | নিতম্বের পরিধি                                                                                                                   | সেন্টিমিটার                                   | M15        |

## Annexure D

### Template of Report on blood glucose and lipid levels (STEP 3)



|                    |  |          |  |                    |  |
|--------------------|--|----------|--|--------------------|--|
| PID:               |  | PSU Name |  | Date of Collection |  |
| Participant's Name |  |          |  |                    |  |
| Age (years)        |  | Sex:     |  | Date of Reporting  |  |

To,  
Name.....  
  
Mouza/Mahalla.....  
  
Thana/Upazilla.....  
  
District.....  
Post Code.....

#### Feedback Report on blood glucose and lipid profile

| Test                      | Result mg/dl | Comment    |         |      |            |               |
|---------------------------|--------------|------------|---------|------|------------|---------------|
|                           |              | Normal     | Raised  | High | Low        | On medication |
| Plasma Glucose (Fasting)  |              | <110       | ≥110    | –    | –          |               |
| Corresponding Urine Sugar |              |            |         |      |            |               |
| S. Total Cholesterol      |              | <190       | 190-239 | ≥240 | –          |               |
| S. Triglyceride           |              | <150       | ≥150    | –    | –          | –             |
| S. HDL (direct)           |              | Male ≥40   | –       | –    | Male <40   |               |
|                           |              | Female ≥50 |         |      | Female <50 |               |
| S. LDL                    |              | <100       |         |      |            |               |

মন্তব্য: ১। রক্তের গ্লুকোজ : ☐ স্বাভাবিক ☐ অতিরিক্ত (ডায়াবেটিস) ☐

অস্বাভাবিক

২। রক্তের চর্বি: ☐ স্বাভাবিক ☐ অস্বাভাবিক

উপদেশ: নিকটস্থ স্বাস্থ্যকেন্দ্রে ( উপজেলা স্বাস্থ্য কমপ্লেক্স / জেলা সদর হাসপাতাল / মেডিকেল কলেজ/ বিশেষায়িত হাসপাতাল ) যোগাযোগ করুন

জীবনাচরণ পরিবর্তন করুন -

- ১। হাঁটখাঁটি করুন
- ২। ধূমপান থেকে বিরত থাকুন, ধূমপান মূত্রে ঘটায়ে
- ৩। পান/ সুপারি/ তামাক/ জর্দা খাওয়া থেকে বিরত থাকুন
- ৪। পাতে আলগা লবণ খাওয়ার অভ্যাস ত্যাগ করুন
- ৫। বেশি বেশি সবজী ও ফল খান
- ৬। চানাচুর/ চিপস/ কোমল পানীয় স্বাস্থ্যের জন্য ভাল নয়
- ৭। ওজন নিয়ন্ত্রণে রাখুন

Prof. Md. Akram Hossain  
Head, Microbiology & Mycology  
Consultant, NIPSOM Lab

Dr. Fahmida Khanam  
Assistant Professor, Virology  
In Charge, NIPSOM Lab

## Annexure E

### Show cards

শো কার্ড নং-১  
বিভিন্ন ফলের উদাহরণ, প্রশ্ন নং- D1



Photo credit: Dr. Irfan Nowroze Noor

শো কার্ড নং-২,  
বিভিন্ন ফলের আহ্বারের পরিমাণ এর উদাহরণ, প্রশ্ন নং- D২



Photo credit: Dr. Irfan Nowroze Noor

শো কার্ড নং-৩  
বিভিন্ন প্রকার সবজি এর উদাহরণ, প্রশ্ন নং- D3



Photo credit: Dr. Irfan Nowroze Noor

শো কার্ড নং-৪  
বিভিন্ন প্রকার সবজি আহ্বারের পরিমাণ এর উদাহরণ, প্রশ্ন নং- D4

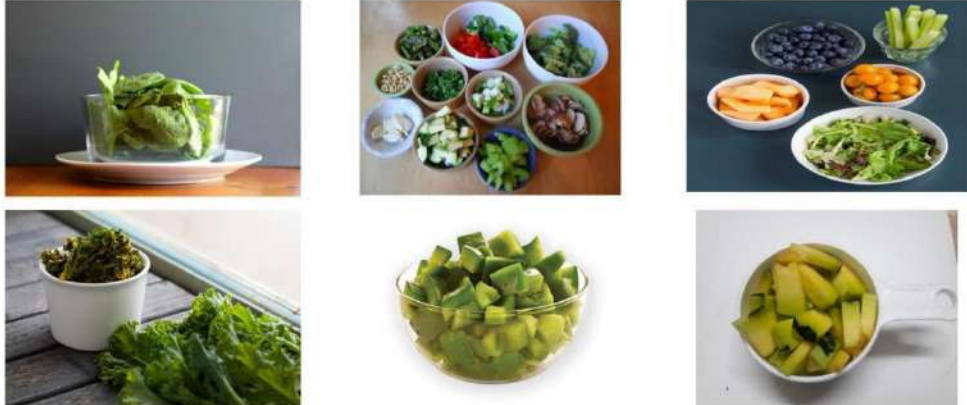


Photo credit: Dr. Irfan Nowroze Noor

শো কার্ড নং-৫  
বিভিন্ন প্রকার লবণের উদাহরণ, প্রশ্ন নং- D5a



Photo credit: Dr. Irfan Nowroze Noor

শো কার্ড নং-৬  
বিভিন্ন প্রকার সস এর উদাহরণ, প্রশ্ন নং- D5b



Photo credit: Dr. Irfan Nowroze Noor

**শো কার্ড নং-৭**  
বিভিন্ন প্রকার প্রক্রিয়াজাত খাদ্যের উদাহরণ, প্রশ্ন নং- D7



Photo credit: Dr. Irfan Nowroze Noor and open source [internet]

**শো কার্ড নং-৮**  
লবণ খাওয়ার পরিমানের উদাহরণ- Dx2, Dx3



Photo credit: Dr. Irfan Nowroze Noor

শো কার্ড নং-৯  
বিভিন্ন প্রকার ভারী কাজের উদাহরণ প্রশ্ন নং- P1



Photo credit: Open source [internet]

শো কার্ড নং-১০  
বিভিন্ন প্রকার মাঝারী মাত্রার কাজের উদাহরণ প্রশ্ন নং- P4



Photo credit: Open source [internet]

### শো কার্ড নং-১১

বিভিন্ন প্রকার বিনোদনমূলক ভারী কাজের উদাহরণ প্রশ্ন নং- P10



Photo credit: Open source [internet]

### শো কার্ড নং-১২

বিভিন্ন প্রকার বিনোদনমূলক মাঝারি মাত্রার কাজের উদাহরণ প্রশ্ন নং- P13



Photo credit: Open source [internet]

### শো কার্ড নং-১৩

অবসর সময়ে বিভিন্ন ধরনের কাজ (শুয়ে বা বসে করা যায় এমন) কাজের উদাহরণ, প্রশ্ন নং-P 16 (a-b)



Photo credit: Dr. Irfan Nowroze Noor and open source [internet]

### শো কার্ড নং-১৪

ধোয়াযুক্ত তামাকের উদাহরণ, প্রশ্ন নং-T1, T5(all), T8



Photo credit: Dr. Irfan Nowroze Noor and open source [internet]

### শো কার্ড নং-১৫

ধোঁয়াবিহীন তামাকের উদাহরণ, প্রশ্ন নং- T12, T14 (all)



Photo credit: Dr. Irfan Nowroze Noor and open source [internet]

### শো কার্ড নং-১৬

ইলেকট্রনিক সিগারেট এর সনাক্তকরণ, প্রশ্ন-EC2



Photo credit: Dr. Irfan Nowroze Noor and open source [internet]

শো কার্ড নং-১৭  
বিভিন্ন প্রকার মদ জাতীয় পানীয় এর উদাহরণ, প্রশ্ন- A1



Photo credit: Open source [internet]

শোকার্ড নং-১৮ (ক)  
বিভিন্ন প্রকার মদ জাতীয় পানীয় এর জন্য প্রমাণ পাত্রের মাপ এর উদাহরণ, প্রশ্ন- A4, A6, A7, A10



Photo credit: Open source [internet]

**শো কার্ড নং-১৮ (গ)**

বিভিন্ন প্রকার মদ জাতীয় পানীয় এর জন্য প্রমাণ পাত্রের মাপ উদাহরণ, প্রশ্ন- A4, A6, A7, A10



*Photo credit: Open source [internet]*

**শো কার্ড নং-১৮ (ঘ)**

বিভিন্ন প্রকার মদ জাতীয় পানীয় এর জন্য প্রমাণ পাত্রের মাপ উদাহরণ, প্রশ্ন- A4, A6, A7, A10



*Photo credit: Open source [internet]*

শো কার্ড নং- ১৯  
দেশীয় মদ জাতীয় পানীয় এর উদাহরণ, প্রশ্ন- A11, A12 (all)



Photo credit: Open source [internet]