



Ministry of Health

Prevalence of non-communicable disease risk factors and conditions in Cambodia



STEPS survey
Country Report, 2023

This report was prepared by the Preventive Medicine Department of the Ministry of Health, Kingdom of Cambodia, with support from the World Health Organization.

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Report prepared by:

STEPS Working Group comprising of Preventive Medicine Department, National Institute of Public Health, National Center for Health Promotion, and partners, including KHANA, HACC, PSI and MoPoTsyo.

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Abbreviations

BMI Body Mass Index

CI Confidence Interval

CVD Cardiovascular Disease

DBP Diastolic Blood Pressure

ETS Environmental Tobacco Smoke

EU Elementary Unit

i.e. That is

IFG Impaired Fasting Glucose

IGT Impaired Glucose Tolerance

HC Hip Circumference

HTN Hypertension

KAP Knowledge, Attitude and Practice

MSA-NCD National Multisectoral Action Plan for the Prevention and Control of
Noncommunicable Diseases (2018-2027)

MET Metabolic Equivalent Test

n Number of respondents

NA Not Available

NCD Non-Communicable Disease(s)

NSP National Strategic Plan for NCD Prevention and Control 2022-2030

PA Physical Activity

PSU Primary Sampling Unit

SSU Secondary Sampling Unit

SBP Systolic Blood Pressure

TSU Tertiary Sampling Unit

WC Waist Circumference

WHO World Health Organization

WHR Waist to Hip Ratio

Foreword

In Cambodia, noncommunicable diseases (NCDs) present a growing threat to public health. The prevalence of the main NCDs (cardiovascular diseases, diabetes, cancer, and chronic respiratory disease) has been increasing, killing nearly 60,000 Cambodians every year. Many of these deaths are occurring prematurely, with an estimated one in every four deaths from NCDs occurring before the age of 70.

The increase in NCDs is a global problem that is being caused by an increase in preventable behavioural risk factors, such as smoking, harmful use of alcohol, unhealthy dietary practices, and insufficient physical activity. The increase in these behavioural risk factors is accompanied by an increase in the prevalence of physiological risk factors, overweight and obesity, hypertension, hyperglycemia, and dyslipidemia.

Rapid globalization and urbanization seen in many countries, including Cambodia, has led to significant lifestyle changes for many people. As purchasing power has increased in some populations, so has their exposure to aggressive marketing for unhealthy products, such as foods high in sugar and salt, tobacco and alcohol. Availability of cheap, motorized transportation has also reduced physical activity, while at the same time contributing to air pollution, particularly in urban areas.

The Royal Government of Cambodia (RGC), by adopting the National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases, 2018-2027 (MSA-NCDs), has recognized that the health sector alone cannot make progress on reducing premature mortality and morbidity from NCDs. The plan identifies several roles and actions to be taken in a whole-of government approach to control NCDs, and together with the National Strategic Plan for the Prevention and Control of NCDs 2022-2030, has established national targets for controlling the major NCD risk factors.

The RGC has demonstrated its commitment to measuring the prevalence of NCDs and their risk factors by conducting three WHO STEPs surveys, in 2010, 2016, and 2023, and it will continue to support periodic NCD surveillance using STEPS and other evidence-based nationally representative surveys. For the first time, the 2023 STEPS survey also includes results from questions on oral health. This new information can serve as national baseline data for measuring future progress on objectives outlined in the National Action Plan for Oral Health (2023-2030).

The findings of STEPS survey are very crucial for development of policies, and strategic plans for NCD prevention and control; scaling up NCD service delivery in primary health care to achieving UHC; accelerating multi-sectoral actions to address

NCD risk factors through a whole of government and whole of society approaches; and measuring progress in prevention and control of NCDs in Cambodia.

We sincerely thank the World Health Organization for providing technical and financial support for the survey. We also thank STEPS Working Group comprising of the Preventive Medicine Department, National Institute of Public Health, National Center for Health Promotion, and partners, including Khmer HIV/AIDS NGO Alliance (KHANA), HIV/AIDS Coordinating Committee (HACC), Population Services International (PSI) and MoPoTsyo Patient Information Centre who have contributed to the successful implementation of this survey.

Phnom Penh, 06th / August / 2024



Minister of Health

Prof. CHHEANG RA

Acknowledgements

We would like first and foremost to thank the World Health Organization (WHO) HQ in Geneva, the Western Pacific Regional Office (WPRO) in Manila, Philippines, and WHO Country Office in Cambodia for providing technical and financial support with funding from Bloomberg Philanthropies to this survey throughout the various stages of implementation.

We would also like to thank all Provincial Health Departments and local authorities for their support through facilitation of data collection in their respective catchment areas.

We would like to express our sincere appreciation for the dedication of field supervisors from the Preventive Medicine Department who undertook the challenging work of data collection, and the staff from the National Institute of Public Health Laboratory. Their dedication, attention to detail, and strict adherence to the survey procedures ensured the quality of the results presented in this report.

Executive Summary

The 2023 Cambodia national survey on risk factors of noncommunicable diseases (NCDs) was the third survey using the WHO STEPS methodology, with previous surveys conducted in 2010 and 2016. The survey goal was to determine the prevalence of major behavioral and biological risk factors and conditions for noncommunicable diseases among the adult population aged 18–69 years in Cambodia. The survey employed the WHO-STEPwise approach. Step one utilized a standardized questionnaire to collect data on socio-demographic indicators (age, sex, education, income, urban vs. rural) and common behavioral risk factors, including levels of consumption of salt, sugar-sweetened beverages, fruits and vegetables, alcohol, tobacco use and physical activity patterns. Step two included a physical examination to measure blood pressure, determine Body Mass Index (BMI) by measuring height and weight, and waist and hip circumference. Step three included the collection of biochemical samples to measure blood glucose and cholesterol (through blood tests) and sodium intake (through urine tests). In addition to using the standard STEPS survey questions, the STEPS survey instrument included two optional modules on oral health and cervical cancer.

The survey was conducted in 25 provinces across the country using a multi-stage cluster sampling design to select a nationally representative sample of adults aged 18-69 years. This resulted in a sample size of 4,320 men and women. These results reveal the current prevalence of NCD risk factors and conditions and can be used to monitor progress on NCD prevention and control, both nationally and globally, by using results from the 2010 STEPS survey as baseline data for measuring progress on national targets for NCD prevention and control. The survey also provided information on respondents' knowledge, attitudes and beliefs about NCD risk factors, and their access to and utilization of NCD preventive health services. This information can also be used to support monitoring and evaluation of health promotion programs and will help to inform the design of future NCD policies and strategies.

The National Multi-Sectoral Action Plan for NCD Prevention and Control, 2018-2027 has used results from STEPS 2010 to establish baseline measurements for monitoring progress on key NCD reduction targets, including daily tobacco smoking, heavy episodic drinking, lack of physical activity, daily intake of salt/sodium, and the prevalence of high blood pressure, diabetes and obesity. Considering in the fact that the age category used in STEPS 2010 and 2023 are different, the age group in STEPS 2023 has been re-coded in order to make this data comparable for all indicators. A preliminary comparison of results from STEPS 2010, 2016 and 2023, using age groups 25-64, is shown in Appendix A. There has been a steady decline in current tobacco smoking among adult men (54.1% in 2010 vs. 36.9% in 2023). For women, however, there was an increase in current tobacco smoking in this age group (5.9% in 2010 vs. 8.4% in 2023). A smaller percentage of adults reported getting insufficient physical activity in 2023 as compared to 2010 (10.6% in 2010 vs. 7.0% in 2023). Other key indicators showed very little change, or in some cases are moving in the wrong direction. Since STEPS 2010 did not include measurement of mean population intake of salt/sodium, a comparison of this indicator

was made only between STEPS 2016 and 2023. Mean population intake of salt/sodium for both men and women saw a small increase between STEPS 2016 (8.5 gram/day) and STEPS 2023 (9.5 grams/day). The prevalence of high blood pressure among adults (both sexes) aged 25-64 increased from the 11.2% baseline established in STEPS 2010, to 19.9% in STEPS 2023. National targets for diabetes and obesity are to halt the increase in prevalence of both conditions. The 2010 baseline prevalence of diabetes among adults aged 25-64, both sexes, was 2.9%, and 2023 results show an increase to 7.6%. There has also been an increase in the prevalence of obesity in this age range, from a 2010 baseline of 1.9% to 4.7% in STEPS 2023.

The 2023 STEPS survey included several questions on oral health which were not included in the previous two surveys. Oral health diseases make up a significant proportion of NCDs, affecting 3.6 billion people worldwide in 2016. The results reported here coincide with the endorsement of Cambodia's National Action Plan for Oral Health, 2023-2030, and serve as important baseline data for measuring progress on actions outlined in this plan.

The results from the STEPS 2023 survey should be used to support a call for accelerating multisectoral actions outlined in the MSA-NCD 2017-2027 and the National Strategic Plan for NCD Prevention and Control 2022-2030 (NSP-NCD 2022-2030). Collectively the three STEPS surveys are improving the ability to monitor the prevalence of NCD risk factors and conditions and demonstrate the Government of Cambodia's commitment to monitoring progress in reducing NCD risk factors in the population. These results represent an important resource for policy makers, NCD program managers, and health partners who are working to reduce the burden of NCDs in Cambodia.

The key findings include:

- **Consumption of fruits and vegetables:** Four out of five adults (80.7%) consumed less than 5 servings of fruits and/or vegetables on average per day, and nearly half (45.5%) reported consuming only 1-2 servings of fruits and/or vegetables on average per day.
- **High consumption of salt and salty foods:** Almost one third (36.2%) of Cambodians aged 18-69 reported always or often adding salt or salty sauce such as soya sauce to their food before eating or as they are eating, and nearly half (46.5%) report adding salt always or often when cooking or preparing food at home. The mean salt intake for all adults, both sexes, was 9.5 (95%CI=9.3-9.6) grams per day, nearly twice the WHO recommendation to limit salt intake to less than 5 grams of salt per day.
- **Consumption of sugar-sweetened drinks:** Almost one in ten (9.4%) adults for all age group and sexes reported one drink per day. It is the youngest age groups (both men and women) that have the highest consumption of these products, with 15.7% of men and 10.4% of women aged 18-29 reporting that they drink a carbonated soft drink one time per day.

- **Physical activity:** Most Cambodian adults are meeting the WHO recommended 150 minutes of moderate-intensity activity per week, with only just under one in ten adults (9.3%) aged 18-69 years having insufficient physical activity. Among adults aged 18-69, men were more likely to engage in vigorous physical activity than were women (84.9% for men vs. 32.7% for women).
- **Overweight and obesity:** This STEPS survey results showed that one in five (19.4%) for both sexes of adults aged 18-69 were overweight, and 4.3% were classified as obese.
- **Tobacco use:** While there is evidence that the most common form of tobacco use (tobacco smoking) is declining¹, results from the 2023 Cambodia STEPS survey confirm that it is still a significant risk factor for NCDs, particularly among adult men, with nearly one in three (29.6%) men aged 18-69 years reporting current smoking.
- **Harmful use of alcohol:** Nearly half of adult men (49.5%) aged 18-69 reported that they engaged in heavy episodic drinking during the past 30 days.
- **Prevalence of hypertension:** Nearly one in five adults (16.8%) aged 18-69 had raised blood pressure (BP) defined as SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg, or were on medication for raised BP. Among older men, 33.8% of those aged 45-59 and 46.0% of those aged 60-69 had raised blood pressure.
- **Prevalence of raised blood glucose or diabetes:** The prevalence of raised blood glucose or currently on medication for diabetes for adults aged 18-69 was 6.3%. More than 1 in 10 adults (13.3%) aged 45-59, and 1 in 5 adults (20.0%) aged 60-69 had raised blood glucose or were on medication for diabetes.
- **Prevalence of raised blood cholesterol:** One in four adults (25.5%) aged 18-69 had raised total cholesterol or were on medication for raised cholesterol. Among older age group, more than half (50.8%) of women and one third (30.0%) of men aged 60-69 had raised total cholesterol or were on medication for raised cholesterol.
- **Cervical cancer prevention:** One in five women (20.3%) aged 30-49 had been tested for cervical cancer.
- **Oral Health:** Two in five adults (39.6%) aged 18-69 reported difficulty in chewing, and this was much higher in older age-groups (66.2% for adults aged 60-69), while more than half (53.7%) of those reported having poor state of teeth and less than half (47.4%) had oral pain or discomfort. This affects the ability to consume a varied and healthy diet. More than half of adults aged 18-69 reported that they had never received dental care (54.9%). Only one in six (15.2%) received oral health treatment.

¹ Cambodia Country Report, National Adult Tobacco Survey 2021, Ministry of Health, Kingdom of Cambodia,

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Cambodia STEPS Survey 2023 Fact Sheet

The STEPS survey of noncommunicable disease (NCD) risk factors and conditions in Cambodia was carried out from June 2023 to July 2023. Cambodia carried out Step 1, Step 2 and Step 3. Socio demographic and behavioral information was collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of adults aged 18-69. A cross-sectional design was used to produce representative data for that age range in Cambodia. A total of 4240 adults participated in the survey. The overall response rate was 98.1%. A repeat survey is planned for 2028 if funds permit.

Results for adults aged 18-69 years (incl. 95% CI) (adjust if necessary)	Both Sexes	Males	Females
Step 1 Diet			
Mean number of days fruit consumed in a typical week	2.7 (2.6-2.9)	2.4 (2.3-2.5)	3.1 (3.0-3.3)
Mean number of servings of fruit consumed on average per day	1.2 (1.1-1.3)	1.1 (1.0-1.2)	1.3 (1.2-1.4)
Mean number of days vegetables consumed in a typical week	5.5 (5.4-5.6)	5.5 (5.4-5.7)	5.5 (5.4-5.6)
Mean number of servings of vegetables consumed on average per day	2.4 (2.3-2.6)	2.5 (2.3-2.7)	2.3 (2.1-2.4)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	80.7% (78.6-82.8)	81.9% (79.1-84.7)	79.5% (77.0-82.0)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	36.2% (33.5-38.9)	36.8% (33.2-40.4)	35.6% (32.4-38.8)
Percentage who always or often eat processed foods high in salt	26.8% (24.7-28.8)	25.1% (22.1-28.2)	28.5% (25.7-31.2)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent) *	9.3% (7.7-10.9)	7.5% (5.4-9.6)	11.1% (8.9-13.4)
Median time spent in physical activity on average per day (minutes) (Presented with inter-quartile range)	184.3 (60.0-394.3)	260.0 (85.7-471.4)	124.3 (45.7-300.0)
Percentage not engaging in vigorous activity	58.1% (55.3-60.8)	32.7% (29.2-36.2)	84.9% (82.9-86.9)
Step 1 Tobacco Use			

Percentage who currently smoke tobacco	19.4% (17.1-21.7)	35.5% (32.0-39.0)	2.4% (1.2-3.5)
Percentage who currently smoke tobacco daily	16.1% (14.1-18.2)	29.4% (26.1-32.6)	2.1% (1.0-3.2)
<i>For those who smoke tobacco daily</i>			
Average age started smoking (years)	19.8 (19.1-20.5)	19.8 (19.1-20.5)	20.3 (16.8-23.9)
Percentage of daily smokers smoking manufactured cigarettes	93.6% (91.6-95.6)	94.6% (92.7-96.5)	79.0% (68.5-89.4)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	12.0 (10.8-13.2)	12.3 (11.1-13.6)	7.5 (3.8-11.2)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	19.9% (17.5-22.2)	8.8% (6.2-11.5)	31.5% (28.3-34.7)
Percentage who are past-12-month abstainers	12.0% (10.7-13.3)	7.0% (5.6-8.3)	17.3% (15.3-19.4)
Percentage who currently drink (drank alcohol in the past 30 days)	50.0% (47.4-52.5)	71.2% (67.7-74.7)	27.5% (24.7-30.3)
Percentage who engages in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	24.5% (21.6-27.3)	49.5% (44.3-54.6)	3.2% (1.9-4.5)



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Results for adults aged 18-69 years (incl. 95% CI) (adjust if necessary)	Both Sexes	Males	Females
Step 1 Cervical Cancer Screening			
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer			20.3% (17.2-23.5)
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m ²)	22.7 (22.5-22.9)	22.4 (22.1-22.7)	22.9 (22.7-23.2)
Percentage who are overweight (BMI ≥ 25 kg/m ²)	19.4% (17.7-21.1)	17.5% (15.0-20.0)	21.5% (19.3-23.7)
Percentage who are obese (BMI ≥ 30 kg/m ²)	4.3% (3.5-5.0)	2.9% (1.9-4.0)	5.7% (4.6-6.9)
Average waist circumference (cm)		80.0 (79.0-81.0)	78.0 (77.3-78.7)

Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	117.0 (116.3-117.6)	121.3 (120.4-122.1)	112.5 (111.8-113.2)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	74.9 (74.4-75.4)	75.9 (75.1-76.7)	73.8 (73.3-74.5)
Percentage with raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP)	16.8% (15.2-18.3)	18.4% (15.9-21.0)	15.0% (13.5-16.5)
Percentage with raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg) who are not currently on medication for raised BP	53.6% (48.7-58.4)	62.8% (56.0-69.5)	41.6% (36.8-46.5)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mg/dl)	88.3 (86.8-89.9)	87.9 (85.8-90.0)	88.8 (87.0-90.6)
Percentage with impaired fasting glycaemia as defined (plasma venous value 110 mg/dl and 126 mg/dl)	4.5% (3.7-5.4)	5.0% (3.6-6.4)	4.0% (3.2-5.0)
Percentage with raised fasting blood glucose as defined (plasma venous value $\geq$ 7.0 mmol/L (126 mg/dl) or currently on medication for raised blood glucose	6.3% (5.4-7.2)	5.5% (4.3-6.8)	7.1% (5.9-8.3)
Mean total blood cholesterol, including those currently on medication for raised cholesterol (in mg/dl)	165.4 (162.8-168.0)	159.3 (156.1-162.6)	171.8 (168.8-174.7)
Percentage with raised total cholesterol ($\geq$ 5.0 mmol/L or $\geq$ 190 mg/dl or currently on medication for raised cholesterol)	25.5% (23.2-27.8)	21.6% (18.7-24.5)	29.6% (26.8-32.4)
Mean intake of salt per day (in grams)	9.5 (9.3-9.6)	10.5 (10.3-10.7)	8.4 (8.3-8.5)
Cardiovascular disease (CVD) risk			
Percentage aged 40-69 years with a 10-year CVD risk $\geq$ 20%, or with existing CVD**	12.5 (11.1-14.2)	10.4 (8.3-12.9)	14.7 (12.8-16.9)
Summary of combined risk factors			
- current daily smokers - less than 5 servings of fruits & vegetables per day - insufficient physical activity - overweight (BMI $\geq$ 25 kg/m²) - raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	9.6% (8.1-11.1)	7.4% (5.5-9.4)	12.0% (9.9-14.2)
Percentage with three or more of the above risk factors, aged 18 to 44 years	7.9% (6.3-9.5)	11.1% (8.3-13.9)	4.3% (3.1-5.5)
Percentage with three or more of the above risk factors, aged 45 to 69 years	22.9% (20.7-25.1)	25.7% (22.2-29.2)	20.1% (17.6-22.6)

Percentage with three or more of the above risk factors, aged 18 to 69 years	11.9% (10.5-13.3)	14.8% (12.5-17.1)	8.7% (7.6-9.9)
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* For complete definitions of insufficient physical activity, refer to the GPAQ Analysis Guide (<https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/physical-activity-surveillance>) or to the WHO Global recommendations on physical activity for health (<https://www.who.int/news-room/fact-sheets/detail/physical-activity>).

** A 10-year CVD risk of $\geq 20\%$ is defined according to age, sex, blood pressure, smoking status (current smokers), total cholesterol, and previously diagnosed diabetes.

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Chapter 1. Introduction

Current Situation: Cambodia has been going through a demographic and epidemiological transition over the past 30 years as it recovered from years of war and internal conflict. Steady progress has been made reducing poverty and improving health. Despite having 80 per cent of Cambodians living in rural areas, there has been a significant reduction in maternal and infant mortality², and steady progress has also been made in reducing mortality from communicable diseases, including advancements towards ending tuberculosis, eliminating malaria, and controlling HIV/AIDS. These changes reflect a global trend that has seen the emergence of noncommunicable diseases (NCDs) as the major cause of premature mortality (defined by WHO as the unconditional probability of death between ages 30 and 70 years from four diseases; cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases)³.

Noncommunicable diseases kill 41 million people globally each year and are responsible for three out of four deaths, with 17 million of these deaths occurring before age 70. According to the World Health Organization, 86% of premature NCD deaths (deaths occurring between the ages of 30-69) are in low- and middle-income countries⁴, where access and utilization of preventive health care services is less widespread than in high-income countries.

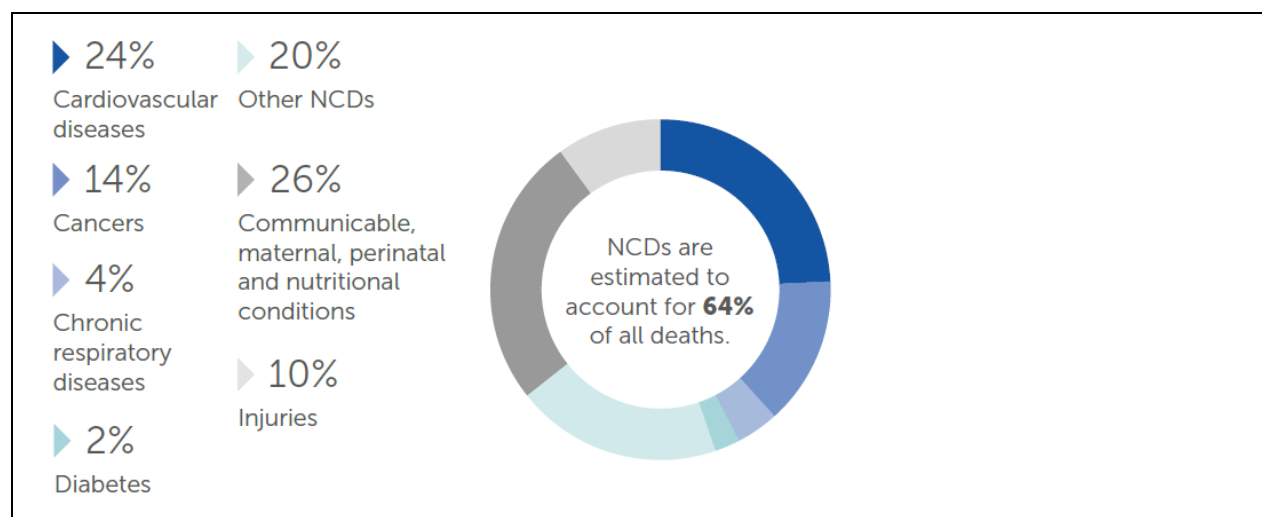
Four groups of diseases account for more than 80% of premature NCD deaths. These include cardiovascular diseases, accounting for most NCD deaths, (17.9 million deaths annually) followed by cancers (9.3 million), chronic respiratory diseases (4.1 million), and diabetes (2.0 million, which also includes kidney disease deaths caused by diabetes). In Cambodia, 64% of all deaths in 2019 were from NCDs, with nearly one quarter of all deaths caused by cardiovascular disease (Figure 1).

² UNFPA Cambodia, UNFPA website 2021, accessed Dec 18, 2023 <https://www.unfpa.org/data/KH>

³ World Health Organization, Global Health Observatory website, accessed Dec 18, 2023 <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3411>

⁴ WHO Global Health Observatory, Noncommunicable diseases: Mortality: <https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-mortality>, accessed 25/01/2023.

Figure 1. Proportional causes of mortality in Cambodia, 2019



* Source: NCD data portal, World Health Organization, 2023.

To address the growing burden of NCDs the World Health Assembly endorsed the Global Action Plan for NCD Prevention and Control in 2013-2020, which has been extended to 2030. A key objective of the plan is to monitor the trends and determinants of noncommunicable diseases and evaluate progress in their prevention and control. To assist member states in monitoring trends and assessing progress made on both global and national strategies, policies and plans for NCD control, a comprehensive global monitoring framework including 25 indicators has been adopted. The framework also includes 9 Global voluntary targets to be achieved by the year 2030.

Cambodia has established national targets in the National Multisectoral Action Plan for the Prevention and Control of NCDs (2018-2027) and the National Strategic Plan for the Prevention and Control of NCDs (2022-2030). Strategic Objective 3 in the National Strategic Plan for the Prevention and Control of NCDs (NSP) is *“To measure the trends in NCDs and their risk factors and inform policy decision making through applying innovative, evidence-based surveys and research”*. A sub-objective is to implement a NCD surveillance mechanism at national level, which includes using the WHO STEPwise approach, and to conduct national NCD Risk factor surveillance at 5-year intervals (2022, 2026 and 2030). Table 1 shows both the Global and Cambodia National targets for NCD Action Plans.

Table 1. Global and National targets and indicators based on the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020, the National Strategic Plan for the Prevention and Control of NCDs (2022-2030), and National Multisectoral Action Plan for the Prevention and Control of NCDs (2018-2027)

Framework Element	Global Target	National Target	National Indicator
MORTALITY AND MORBIDITY			
Premature mortality from noncommunicable disease	A 25% relative reduction in the overall mortality from CVDs, cancer, diabetes, or chronic respiratory diseases	A 25% relative reduction in the overall mortality from CVDs, cancer, diabetes, or chronic respiratory diseases	Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Additional indicator		Elimination of cervical cancer	- Cervical cancer age-specific incidence; - Cervical cancer age-specific mortality
BEHAVIOURAL RISK FACTORS			
Harmful use of alcohol	At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	- Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context - Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context
Physical inactivity	A 10% relative reduction in prevalence of insufficient physical activity	A 10% relative reduction in prevalence of insufficient physical activity	- Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily* - Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
Salt/sodium intake	A 30% relative reduction in mean population intake of salt/sodium	A 30% relative reduction in mean population intake of salt/sodium	Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years
Tobacco use	A 30% relative reduction in prevalence of current tobacco use	A 30% relative reduction in prevalence of current tobacco use in persons 15+ years	Prevalence of current tobacco use among adolescents Age-standardized prevalence of current tobacco use among persons aged 18+ years

Framework Element	Global Target	National Target	National Indicator
BIOLOGICAL RISK FACTORS			
Raised blood pressure	A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg) and mean systolic blood pressure
Diabetes and obesity	Halt the rise in diabetes & obesity	Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years	Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose) Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex) Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/m² for overweight and body mass index ≥ 30 kg/m² for obesity)
Additional diet-related indicators			Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥ 5.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration
NATIONAL SYSTEMS RESPONSE – To orient the health system towards providing NCD services through people-centred primary health care, universal health coverage, and support for management of chronic illnesses such as diabetes, hypertension and cervical cancer, as well as rehabilitation and palliative care when needed.			

Framework Element	Global Target	National Target	National Indicator
Drug therapy to prevent heart attacks and strokes	At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk $\geq 30\%$, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
Hypertension		At least 50% of hypertension patients receive treatment in health facilities	Percentage of people aged 25-64 years with hypertension receiving treatment in health facilities The proportion of hypertension patients with blood pressure controlled after 12 month-treatment
Diabetes		At least 50% of diabetes patients receive treatment in health facilities	Percentage of people aged 25-64 years with diabetes receiving treatment in health facilities Percentage of diabetes patients with fasting or random blood glucose control after 12-month treatment
essential NCD medicines and basic technologies to treat major NCDs	9. An 80% availability of the affordable basic technologies and essential medicines, including generics required to treat major noncommunicable diseases in both public and private facilities	An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities 100% of total health facilities with core CVD/ diabetes drugs available	Availability and affordability of quality, safe and efficacious essential NCD medicines, including generics, and basic technologies in both public and private facilities The proportion of health centers in a given geographical area that have core CVD/diabetes drugs available
NCD Service delivery at Primary Health Care level		100% of [primary care] health centers equipped with NCD services	Percentage of target health centers providing NCD services.
Cervical cancer		70% of women are screened for cervical cancer	Proportion of women between the ages of 30–49 screened for cervical cancer at least once in their lifetime. Percentage of screening-test positive

Framework Element	Global Target	National Target	National Indicator
		90% of women identified with cervical disease receive treatment (90% of women with precancer treated, and 90% of women with invasive cancer managed) 100% of total health centers with cervical cancer screening services	women receiving treatment in the previous 12-month period Percentage of target health centers providing cervical cancer screening services.
Oral Health	75% of the global population will be covered by essential oral health care services to ensure progress towards UHC for oral health	25% of the health centres in targeted provinces has basic essential oral health care services. *	Percentage of health centres in the target provinces provide basic oral health care services. *

*National Action Plan for Oral Health, 2023-2030

WHO STEPS surveys in Cambodia

The WHO STEPwise approach to NCD risk factor surveillance (STEPS) provided a standardized method for collecting, analysing and disseminating data on key NCD risk factors in countries. The survey instrument covered key behavioural risk factors: tobacco use, alcohol use, physical inactivity, unhealthy diet, as well as key biological risk factors: overweight and obesity, raised blood pressure, raised blood glucose, and abnormal blood lipids.

Two previous STEPS surveys have been conducted in Cambodia. The first STEPS survey was conducted in 2010, and a second survey was conducted in 2016. Having results from the 3 STEPS surveys provides the opportunity to compare results that can better measure progress towards meeting NSP and MSA-NCD targets.

Key objectives of the Cambodia STEPS Survey 2023

- To measure the current prevalence of NCD risk factors and conditions in the adult population ages 18 to 69 years.
- To identify the extent to which preventive health care services for NCDs were being utilized.
- To monitor trends in the prevalence of NCDs risk factors and utilization of services.

Chapter 2. Methodology

Survey Design/Scope

A cross-sectional study was conducted in 25 provinces across the country to gather data that represents the adult population aged 18-69 years in Cambodia. The survey consists of three steps,

Step 1. Determining behavioural risk factors and history of health conditions underlying NCDs by interviewing participants.

Step 2. Physical measurements, including blood pressure, height and weight, waist and hip circumference, and heart rate.

Step 3. Biochemical measurements using a rapid diagnostic test to measure fasting blood sugar and total cholesterol, including HDL cholesterol and a spot urine test to measure sodium, creatinine and cotinine levels.

Sampling calculations

A multi-stage cluster sampling designed was used to select a nationally representative sample of adults in Cambodia aged 18-69 years. A sample size of 4,320 men and women aged 18-69 years was selected. The estimation of sample size was done using a 95% confidence interval, calculated by the following formula and assumption: Three steps are split to compute the sample size.

Step1:

The equation for calculating sample size was as follows

$$n = Z^2 \frac{P(1-P)}{e^2}$$

where:

Z = level of confidence, it indicates the number of standard errors away from the mean. This explains the uncertainty in the sample mean or prevalence as an estimate of the population means (Z = 1.96, for a 95% confidence level).

P = baseline level of the indicators, the estimated proportion of one of the indicators reflecting the risk factors, which are currently being measured. The prevalence of NCD Risk factors by age group (50%) was from the last STEPS survey done in Cambodia.

e = margin of error, the expected half width of the confidence interval and taken 0.05 for this STEPs survey.

$$n = 1.96^2 \frac{0.5(1-0.5)}{0.05^2} = 384$$

The prevalence of NCD risk factors and conditions was expected to increase with age and to vary, sometimes significantly, by gender. The number of age-sex estimates were established based on the target age range of the survey (18-69) and the resources available for conducting the survey. The number of age-sex estimates was 6 (18-29, 30-44, and 45-69 years for men and women) shown in Table 2. This ensured enough representation for these age-sex groups to be reported and allowed reporting of some indicators by urban-rural disaggregation.

Table 2. Age-sex groups of study participants

Age group	Sex	n
18-29	Male	384
30-44	Male	384
45-69	Male	384
18-29	Female	384
30-44	Female	384
45-69	Female	384
Total:		2304

Step 2:

A design effect of 1.5 was computed to address the issue of cluster sampling.

$$n = 384 * 1.5 * 6 = 3,456$$

Step 3:

Adjustment for the anticipation of non-response rate:

Therefore, n was divided by 0.80 to adjust for the anticipated 20% non-response rate:

$$n = 3,456 \div 0.80 = 4,320$$

Finally, the total sample size of the survey population aged 18-69 years was 4,320. To achieve a nationally representative sample, a multi-stage cluster sampling method was applied to selected enumeration areas (EA), households, and eligible participants at each of the selected households in three stages.

Sampling procedure

A three-stage cluster sampling approach was used to formulate enumeration areas (EA), households, and eligible participants to reach a national representative sample. Regarding administrative structure, Cambodia is divided into 24 provinces and the special administrative unit Phnom Penh, which is known as the province level. Including Phnom Penh, Cambodia, has 25 provinces and municipalities. Each province is currently subdivided into Districts whereas the capital city of Phnom Penh, Khan is at the same

level as the district level. Each of the provinces has one capital district (City/Town). The district of a province is divided into communes. The commune is further divided into villages. In Phnom Penh, the districts are called Khan and their subdivisions are Sangkat. Sangkat is further subdivided into Phum which are usually translated as villages.

Stage1: selection of PSUs and SSUs. The list of communes and villages with their respective population from the Commune Databases 2021 was used as the sampling frame. It was decided that country lists of villages would form the Primary Sampling Units (PSUs). Based on the commune databases 2021, there were a total of 14,568 villages in 25 provinces/cities. To develop an enumeration area (EA), this list in each village had an average of 234 households, and the median was 183 with an IQR between 120 and 275. Logistically, the decision was that the large village (of 400 households or more) would be divided by 200, and the smaller-sized villages combined.

Therefore, a total of 22,949 EAs were created ranging from 100 to 200 households. A total of 289 clusters were selected from the list of 22,949 villages (EA). With a total of 289 villages, 38% (110 villages) of villages were selected from urban areas and 62% (179 villages) from rural areas. This was done using the systematic random selection of each PSU.

Stage 2: Selection of households (SSUs). Once the PSU was selected, 15 households were recruited using simple random sampling. The sampling frame for this was based on the list of households with a unique identification number (ID) from a recent listing of households available from the Provincial Health Department/local authority.

Stage3: Selection of eligible participants at the household level. One eligible participant (aged between 18 and 69 years) in the selected households was recruited for the survey. A random sampling method was used to select one eligible member in each household once all eligible HH members were listed on the tablets. There was no replacement for eligible participants who have been selected. The following criteria were used for eligible participants:

Inclusion criteria

- Participants of both sexes and aged between 18 and 69 years;
- Household members lived in the household for at least 3 months.
- Pregnant women were included but not measured for weight, height, waist, and hip circumference.

Exclusion criteria

- Mentally challenged individuals who may have with difficulty responding to questions.
- Participants living in institutions such as boarding schools, care homes, and prisons

Data collection and statistical analysis

The group for the data collection consisted of 12 survey teams, with each team consisting of 3 persons assigned as interviewers. Interviewers were recruited from medical backgrounds, with most having been employed in the provincial health departments, operational districts, and health centers. The WHO STEP survey and tools were adapted by the survey teams, including translation into local interview languages and then

translation of the local language version back to English to ensure the unchanged meaning of the questionnaire.

A 5-day training workshop was conducted to train survey interviewers and supervisors on all aspects data collection. This was followed by a one-day field pilot survey to assess the applicability of the questionnaires to the local communities, the respondents' reactions to the survey procedures and whether all instructions in the field manual were relevant and straightforward. The pilot test also helped estimate the time needed to administer the questionnaire and to run validity checks on translated responses.

Data entry was done on handheld tablets used by each member of the survey team to record respondents' answers to the STEP 1 interview and the physical and biochemical results from STEP 2 and 3, with the exception for recording results from the urine analysis of sodium and creatinine, which were done separately by a central laboratory (NIPH's Lab). The WHO eSTEPS software was used to capture all survey data.

Data cleaning and weighting were done prior to data analysis, following guidance provided by WHO eSTEPS manual. The weighting of data was done to ensure that the sample was representative of the target population (adults aged 18 to 69 years).

Weights were calculated to adjust for the following aspects: the probability of selection (sample weight), non-response (non-response weight), and differences between the sample population and target population (population weight) From these, an overall weight was calculated for each step of the survey and applied to the final dataset.

Epi Info 3.5.1 was used to analyze the dataset and produce the survey Databook and a STEPS Fact Sheet. Data was also weighted to adjust for the probability of selection (sample weight), nonresponse (nonresponse weight),

Results were presented in frequency, percentage, means (SD), median (IQR) and 95% CI. Considering the fact that the age category used in STEPS 2010 and 2023 are different, the age group in STEPS 2023 has been re-coded in order to make this data comparable for all indicators in the Fact Sheet Comparing results from STEPS 2010, 2016, and 2023 (p.89).

WHO provided technical support for data analysis and report writing, development of a summary Fact Sheet, and differences between the sample population and target population (population weight).

A summary of information collected in each step is shown below:

STEP 1 - Interview Questions (using Android tablets)

- Socio demographic information
- Tobacco use
- Alcohol consumption
- Dietary behaviour
- Oral health
- Physical activity
- History of raised blood pressure

- History of raised blood glucose
- History of raised total cholesterol
- History of CVD.
- Lifestyle advice from a health care professional
- Cervical cancer screening

STEP 2 - Physical measurements:

- Blood pressure
- Heart rate
- Height
- Weight
- Waist circumference
- Hip circumference

STEP 3 – Biomedical measurements

- CardioChek Plus (PA) analyzer
 - Multiple tests possible with a single strip
- Urine container collection:
 - Urine Cotinine rapid test kits
 - Lab testing for urine sodium and creatinine

Ethical considerations

The STEP survey protocol was submitted for approval from the National Ethics Committee for Health Research (NECHR).

Survey enumerators received training on the protection of anonymity, confidentiality, and safety for survey respondents, and were provided with a script for explaining to participants the study objectives, risks, and benefits they may expect from participating in the survey. This also included explaining their rights as a respondent to participate, and to withdraw at any time should they choose to do so. The STEPS survey instrument was translated from English to Khmer and back to English and was field-tested prior to implementation.

The survey data collectors obtained two copies of written informed consent forms. One consent form was used for STEPS 1 and 2, and a separate consent form for STEP 3 consisted of two separate forms, one consent form for sodium and one consent form for creatine measurement and testing cotinine level. A copy of each consent form was for the respondent and the survey team will keep the other on file. After obtaining informed consent, the interview and physical measurements (Steps 1 and 2) were then administered at the household. Interviews were conducted in a manner that ensured the confidentiality and privacy of the survey respondents.

For additional information on WHO STEPS noncommunicable disease risk surveillance: <https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps>

Chapter 3. Survey Results.

Socio-demographic information results

Tables 3 to 6 present demographic characteristics of the study sample aged group 18-69. There were nearly twice as many adult women in the sample as men. Among the four age categories reported for men, the smallest number of respondents was among men aged 18-29 (n=216). For the total population surveyed, 62.5% resided in rural areas and 37.5% lived in urban areas. The percentage of the survey population with completed college/university degree, high school, secondary school, and primary school was 2.4%, 6.6%, 14.0% and 18.3%, respectively, with 42.3% having less than primary school and 16% having no formal education. In terms of ethnicity, the majority of respondents were Khmer 97.8%, and 2.1% identified as Cham. Overall, a higher percentage of men were employed and attained a higher education level compared to women. The prevalence of unpaid employment among men aged 18-69 was only 8.1% compared to 31.2% among women aged 18-69. The mean annual per capita income for respondents (n=4,091) was USD 3,078.9.

Table 3. Age group and sex of respondents

Age group and sex of respondents						
Age Group (years)	Men		Women		Both Sexes	
	n	%	n	%	n	%
18-29	216	38.3	348	61.7	564	13.3
30-44	487	35.4	888	64.6	1375	32.4
45-59	498	36.3	875	63.7	1373	32.4
60-69	312	33.6	616	66.4	928	21.9
18-69	1513	35.7	2727	64.3	4240	100.0

Table 4. Rural and urban response rates

	Men n (%)	Women n (%)	Both sexes n (%)
Rural	968 (36.5%)	1682 (63.5%)	2,650 (62.5%)
Urban	545 (34.3%)	1045 (65.7%)	1,590 (37.5%)
TOTAL	1513 (35.7)	2727(64.3)	4,240 (100%)

Table 5. Highest level of education

Age Group (years)	Men							
	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/University completed	% Post graduate degree completed
18-29	216	4.2	25.9	22.2	23.6	19.9	4.2	0.0
30-44	487	6.8	37.4	23.8	17.0	9.4	3.9	1.6
45-59	498	6.4	41.8	19.3	20.9	9.8	1.2	0.6
60-69	312	17.6	52.9	14.7	12.8	1.0	1.0	0.0
18-69	1513	8.5	40.4	20.2	18.4	9.3	2.4	0.7
Age Group (years)	Women							
	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/University completed	% Post graduate degree completed
18-29	348	3.2	19.8	27.3	25.3	16.1	7.8	0.6
30-44	888	12.2	40.5	23.9	12.7	6.3	4.1	0.3
45-59	875	22.7	51.8	13.1	10.5	1.7	0.0	0.1
60-69	615	37.9	48.5	7.8	3.9	1.8	0.2	0.0
18-69	2726	20.2	43.3	17.2	11.6	5.1	2.3	0.2
Age Group (years)	Both Sexes							
	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/University completed	% Post graduate degree completed
18-29	564	3.5	22.2	25.4	24.6	17.6	6.4	0.4
30-44	1375	10.3	39.4	23.9	14.3	7.4	4.0	0.8
45-59	1373	16.8	48.1	15.4	14.3	4.7	0.4	0.3
60-69	927	31.1	49.9	10.1	6.9	1.5	0.4	0.0
18-69	4239	16.0	42.3	18.3	14.0	6.6	2.4	0.4

Table 6. Ethnicity of respondents

Age Group (years)	Both Sexes			
	n	% Khmer	% Vietnamese	% Cham
18-29	542	97.4	0.4	2.2
30-44	1356	97.6	0.0	2.4
45-59	1359	98.5	0.0	1.5
60-69	924	97.3	0.0	2.7
18-69	4181	97.8	0.0	2.1

Table 7. Employment status of respondents

Age Group (years)	Men				
	n	% Government employee	% Non- government employee	% Self- employed	% Unpaid
18-29	216	2.8	25.9	56.0	15.3
30-44	487	4.7	20.5	73.3	1.4
45-59	498	8.0	17.3	69.3	5.4
60-69	312	6.1	16.7	59.3	17.9
18-69	1513	5.8	19.4	66.6	8.1
Age Group (years)	Women				
	n	% Government employee	% Non- government employee	% Self- employed	% Unpaid
18-29	348	2.9	25.3	38.8	33.0
30-44	888	3.3	16.7	60.2	19.8
45-59	875	1.5	11.1	58.4	29.0
60-69	616	0.5	7.5	42.5	49.5
18-69	2727	2.0	13.9	52.9	31.2
Age Group (years)	Both Sexes				
	n	% Government employee	% Non- government employee	% Self- employed	% Unpaid
18-29	564	2.8	25.5	45.4	26.2
30-44	1375	3.8	18.0	64.9	13.3
45-59	1373	3.9	13.3	62.3	20.5
60-69	928	2.4	10.6	48.2	38.9
18-69	4240	3.4	15.9	57.8	22.9

Step 1 Results from interview on behavioural risk factors and history of health conditions

Fruit and vegetable consumption

The NSP indicator for fruit and vegetable consumption is the age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day.

Four out of five adults (80.7%) aged 18-69 consumed less than five servings of fruit and/or vegetables per day, with very little difference across all age and sex groups (Table 8).

Table 8. Consuming less than five servings of fruit and/or vegetables per day

Age Group (years)	Men			Women			Both Sexes		
	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI
18-29	216	85.0	80.0-89.9	348	78.4	73.6-83.3	564	81.8	78.3-85.3
30-44	486	77.9	73.8-81.9	886	79.2	76.0-82.3	1372	78.5	75.6-81.4
45-59	498	82.3	78.4-86.1	874	79.8	76.4-83.1	1372	81.0	78.4-83.7
60-69	311	81.4	76.6-86.2	615	85.1	81.6-88.5	926	83.4	80.5-86.2
18-69	1511	81.9	79.1-84.7	2723	79.4	76.9-82.0	4234	80.7	78.6-82.7

The mean number of days in a typical week that men aged 18-69 consumed fruit was 2.4, while for women in this age category it was 3.1 (Table 9).

Table 9. Mean number of days fruit consumed in a typical week

Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
18-29	216	2.0	1.8-2.3	347	3.2	2.9-3.5	563	2.6	2.4-2.8
30-44	479	2.5	2.3-2.7	882	3.2	3.0-3.4	1361	2.8	2.7-3.0
45-59	498	2.7	2.5-3.0	868	3.0	2.8-3.2	1366	2.9	2.7-3.0
60-69	308	2.8	2.5-3.1	607	3.1	2.9-3.3	915	2.9	2.8-3.1
18-69	1501	2.4	2.2-2.5	2704	3.1	3.0-3.3	4205	2.7	2.6-2.9

The mean number of days in a typical week that vegetables were consumed was 5.5 for both men and women aged 18-69. Again, there was little difference in results across all age groups (Table 10).

Table 10. Mean number of days vegetables consumed in a typical week

Age Group (years)	Men			Women			• Both Sexes		
	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
18-29	216	5.4	5.2-5.7	348	5.5	5.2-5.7	564	5.5	5.3-5.6
30-44	487	5.7	5.6-5.9	886	5.6	5.5-5.7	1373	5.7	5.6-5.8
45-59	498	5.5	5.3-5.6	875	5.4	5.3-5.5	1373	5.4	5.3-5.6
60-69	311	5.3	5.1-5.6	615	5.4	5.2-5.5	926	5.4	5.2-5.5
18-69	1512	5.5	5.4-5.7	2724	5.5	5.4-5.6	4236	5.5	5.4-5.6

There was also very little difference across age and sex groups in the mean number of servings of fruits, 1.2 for both sexes aged 18-69 (Table 11). The mean number of servings of vegetables was also similar across age and sex groups, showing 2.4 for both sexes aged 18-69 (Table 12).

Table 11. Mean number of servings of fruits on average per day

Age Group (years)	Men			Women			• Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
18-29	216	0.9	0.8-1.1	345	1.3	1.2-1.5	561	1.1	1.0-1.3
30-44	478	1.2	1.0-1.4	882	1.4	1.2-1.5	1360	1.3	1.1-1.4
45-59	498	1.2	1.0-1.4	867	1.3	1.1-1.4	1365	1.2	1.1-1.4
60-69	308	1.1	1.0-1.3	606	1.2	1.0-1.3	914	1.1	1.0-1.3
18-69	1500	1.1	1.0-1.2	2700	1.3	1.2-1.4	4200	1.2	1.1-1.3

Table 12. Mean number of servings of vegetables on average per day

Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
18-29	216	2.4	2.0-2.7	348	2.2	2.0-2.4	564	2.3	2.1-2.4
30-44	486	2.9	2.5-3.2	885	2.4	2.2-2.6	1371	2.6	2.4-2.9
45-59	498	2.4	2.1-2.7	873	2.4	2.1-2.6	1371	2.4	2.2-2.6
60-69	311	2.1	1.9-2.4	615	2.0	1.8-2.2	926	2.1	1.9-2.3
18-69	1511	2.5	2.3-2.7	2721	2.3	2.1-2.4	4232	2.4	2.3-2.5

Intake of Salt per day

The NSP for Prevention and Control of NCD 2022-2030 has set a target of a 30% relative reduction in mean population intake of salt/sodium.

Habits of salt consumption were assessed in Step 1 with questions about adding salt to foods, checking food labels for salt or sodium content, and attempts to limit salt in the diet. In Step 3 respondents provided urine samples for testing to determine actual salt intake. Together, these results aid in monitoring several of the actions outlined in the National Action Plan for Salt Reduction, 2021-2027, which include surveillance of salt intake, reducing salt content of food supply, introducing nutrition labeling, raising awareness of health risks of high sodium intake, and implementing salt reduction in community settings.

More than one in three adults (36.2%) aged 18-69 indicated they always or often added salt to the food they are eating (Table 13) and nearly half (46.5%) reported adding salt always or often when preparing food at home (Table 14). There were no large differences across age and sex groups.

Table 13. Add salt always or often before eating or when eating

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	212	31.7	25.1-38.4	344	38.6	32.8-44.4	556	35.1	30.2-40.0
30-44	481	42.2	37.0-47.5	882	35.8	31.9-39.8	1363	39.2	35.7-42.7
45-59	491	37.1	32.5-41.7	867	32.6	28.4-36.7	1358	34.9	31.5-38.2
60-69	310	39.9	33.5-46.4	610	26.6	22.3-30.9	920	32.8	28.8-36.7
18-69	1494	36.8	33.2-40.4	2703	35.6	32.4-38.8	4197	36.2	33.5-38.9

Table 14. Add salt always or often when cooking or preparing food at home

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	193	33.7	26.1-41.3	343	56.3	50.1-62.5	536	45.3	40.0-50.7
30-44	438	45.8	39.9-51.6	885	55.3	51.2-59.4	1323	50.5	46.5-54.5
45-59	449	39.4	33.8-44.9	872	48.0	43.9-52.0	1321	43.8	40.2-47.4
60-69	286	43.7	36.9-50.4	608	41.9	37.1-46.8	894	42.7	38.6-46.8
18-69	1366	39.5	35.1-43.8	2708	53.2	49.9-56.5	4074	46.5	43.3-49.7

Results from Knowledge, Attitude and Practice (KAP) questions showed that only around one in ten adults think they consume either too much or far too much salt (11.2% for both sexes aged 18-69, as shown in Table 15).

Table 15. Think they consume far too much or too much salt

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	9.6	5.4-13.8	348	12.4	8.5-16.3	564	11.0	7.9-14.1
30-44	487	12.0	8.9-15.2	887	10.7	8.3-13.1	1374	11.4	9.4-13.4
45-59	498	12.6	9.5-15.8	875	9.7	7.4-12.0	1373	11.2	9.2-13.2
60-69	312	17.0	12.4-21.6	613	5.5	3.6-7.4	925	10.8	8.4-13.2
18-69	1513	11.5	9.4-13.6	2723	10.8	8.9-12.7	4236	11.2	9.6-12.7

The majority of both men (69.4%) and women (78.0%) aged 18-69 indicated that they thought it was very important to lower the amount of salt in the diet (Table 16).

Table 16. Importance of lowering salt in the diet, men and women

Age Group (years)	Men						
	n	% Very important	95% CI	% Somewhat important	95% CI	% Not at all important	95% CI
18-29	181	69.9	63.0-76.7	26.7	20.3-33.2	3.4	0.6-6.2
30-44	361	70.7	65.6-75.9	26.8	21.8-31.9	2.4	0.9-3.9
45-59	419	67.8	62.7-73.0	29.8	24.9-34.8	2.3	0.0-4.6
60-69	261	64.7	57.5-72.0	32.6	25.4-39.8	2.7	0.2-5.1
18-69	1222	69.4	65.9-72.9	27.8	24.3-31.3	2.8	1.5-4.2
Age Group (years)	Women						
	n	% Very important	95% CI	% Somewhat important	95% CI	% Not at all important	95% CI
18-29	303	76.8	71.8-81.8	22.1	17.5-26.8	1.1	0.0-2.6
30-44	760	81.1	78.0-84.3	17.1	14.1-20.0	1.8	0.6-3.0
45-59	753	76.4	72.6-80.3	23.1	19.2-26.9	0.5	0.0-1.0
60-69	526	76.1	71.9-80.2	22.6	18.5-26.8	1.3	0.2-2.5
18-69	2342	78.0	75.4-80.6	20.8	18.4-23.2	1.2	0.5-1.9

A little more than one-half of both men and women (56.8%) aged 18-69 reported trying to limit their consumption of processed foods (Table 17) but just 15.8% reported looking at the salt or sodium content on food labels, with only small differences between age and sex groups. Around one-third to half of adults indicated taking other actions, such as buying low salt/sodium alternatives or altering cooking or food consumption habits (Table 18).

Table 17. Limit consumption of processed foods

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	52.7	45.5-59.8	348	58.6	52.5-64.7	564	55.6	51.0-60.1
30-44	487	53.9	48.8-59.0	888	59.5	55.6-63.4	1375	56.5	52.9-60.1
45-59	498	56.5	51.6-61.3	875	61.7	57.7-65.7	1373	59.0	55.5-62.5
60-69	312	55.8	50.1-61.6	616	61.2	56.6-65.9	928	58.7	55.1-62.4
18-69	1513	54.0	50.2-57.9	2727	59.7	56.7-62.7	4240	56.8	54.1-59.4

Table 18. Actions taken to reduce sodium in the diet.

Look at the salt or sodium content on food labels									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	18.0	12.5-23.4	348	18.3	13.5-23.1	564	18.1	14.5-21.7
30-44	487	12.6	8.9-16.4	888	16.6	14.0-19.3	1375	14.5	12.1-16.9
45-59	498	13.3	10.2-16.4	875	15.2	12.2-18.3	1373	14.2	11.9-16.6
60-69	312	12.8	8.7-16.9	616	12.3	9.1-15.6	928	12.5	9.9-15.2
18-69	1513	15.0	12.3-17.6	2727	16.7	14.4-19.0	4240	15.8	14.0-17.7
Buy low salt/sodium alternatives									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	20.1	14.7-25.5	348	37.7	32.4-43.0	564	28.8	24.9-32.6
30-44	487	30.5	25.5-35.6	888	37.7	34.1-41.3	1375	33.9	30.7-37.1
45-59	498	31.1	26.4-35.8	875	37.4	33.7-41.2	1373	34.2	31.1-37.2
60-69	312	29.5	23.6-35.4	616	34.1	29.5-38.6	928	32.0	28.1-35.8
18-69	1513	26.3	23.1-29.4	2727	37.4	34.7-40.1	4240	31.7	29.4-33.9
Use spices other than salt when cooking									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	47.7	40.0-55.4	348	60.0	54.2-65.9	564	53.7	48.5-59.0
30-44	487	53.0	47.3-58.7	888	57.8	53.7-61.9	1375	55.2	51.3-59.1
45-59	498	47.1	41.8-52.4	875	52.1	47.9-56.2	1373	49.5	45.9-53.2
60-69	312	42.5	36.0-49.0	616	49.0	44.0-54.1	928	46.0	41.6-50.4
18-69	1513	49.0	44.6-53.4	2727	56.9	53.5-60.3	4240	52.8	49.6-56.1
Avoid eating foods prepared outside of a home									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	41.7	34.6-48.9	348	48.2	42.2-54.2	564	44.9	40.4-49.4
30-44	487	44.2	39.7-48.6	888	54.9	50.9-58.9	1375	49.2	45.9-52.5
45-59	498	46.2	41.2-51.1	875	49.7	45.5-53.9	1373	47.9	44.4-51.3
60-69	312	52.0	45.6-58.4	616	52.5	47.7-57.2	928	52.3	48.0-56.5
18-69	1513	44.1	40.4-47.7	2727	50.9	47.7-54.2	4240	47.4	44.8-49.9
Do other things specifically to control your salt intake									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	216	2.2	0.3-4.0	348	7.8	4.7-10.9	564	4.9	3.1-6.8
30-44	487	3.1	1.2-5.1	888	3.2	1.9-4.4	1375	3.1	2.0-4.3
45-59	498	3.8	2.0-5.6	875	4.4	2.6-6.3	1373	4.1	2.7-5.5
60-69	312	1.9	0.2-3.7	616	3.1	1.2-5.0	928	2.6	1.1-4.0
18-69	1513	2.8	1.6-4.0	2727	5.3	3.8-6.9	4240	4.0	3.0-5.1

Consumption of sugar-sweetened beverages

Although there is no specific national target for reducing consumption of sugar-sweetened beverages (SSBs), the NSP and MSA-NCD include objectives to increase taxation on these products in order to reduce consumption in the population. STEPS ask about consumption of two forms of SSBs, as carbonated soft drinks (CSD), and as other non-carbonated SSBs.

A significant proportion of Cambodian adults did not consume sugar-sweetened beverages on a regular basis. Nearly half (46.8%) of adults aged 18-69 reported no consumption of CSDs (Table 19). Results show that the youngest age groups (both men and women) consumed the highest percentages of these products. The highest percentage for consuming a CSD one time per day was among men aged 18-29, at 15.7%, followed by women aged 18-29 (10.4%).

Table 19. Percentage of those who drank carbonated soft drinks (CSD) during past 7 days

Age Group (years)	Men										
	n	% No CSD	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	216	19.7	13.2-26.2	46.4	39.2-53.6	11.7	7.4-16.1	15.7	10.6-20.7	6.5	2.9-10.1
30-44	487	47.4	42.2-52.6	31.6	27.1-36.1	6.7	4.3-9.0	9.8	6.8-12.8	4.5	2.3-6.7
45-59	498	61.2	56.0-66.5	24.1	19.9-28.3	2.9	1.6-4.3	7.3	4.7-9.8	4.5	2.5-6.5
60-69	312	67.8	61.9-73.8	22.5	17.1-27.9	4.1	1.5-6.6	4.1	1.8-6.4	1.5	0.3-2.7
18-69	1513	40.0	36.2-43.7	35.7	32.2-39.1	7.9	5.8-10.0	11.4	8.9-13.8	5.1	3.4-6.9
Age Group (years)	Women										
	n	% No CSD	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	348	40.0	34.1-45.8	43.5	37.6-49.4	4.2	2.1-6.3	10.4	6.7-14.2	1.9	0.1-3.8
30-44	888	58.2	54.4-62.0	29.4	25.9-32.9	4.7	3.1-6.2	6.3	4.5-8.0	1.5	0.6-2.3
45-59	875	68.9	65.0-72.9	22.7	19.2-26.2	2.5	1.4-3.5	4.3	2.8-5.7	1.6	0.7-2.5
60-69	616	75.9	71.9-80.0	17.2	13.8-20.6	2.5	0.9-4.1	3.1	1.6-4.6	1.3	0.1-2.4
18-69	2727	54.1	51.0-57.2	33.0	30.0-36.0	3.9	2.8-4.9	7.4	5.6-9.1	1.7	0.8-2.6
Age Group (years)	Both Sexes										
	n	% No CSD	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI

18-29	564	29.6	25.0-34.3	45.0	40.0-49.9	8.0	5.6-10.5	13.1	10.1-16.1	4.3	2.2-6.3
30-44	1375	52.5	49.0-55.9	30.6	27.5-33.7	5.7	4.3-7.1	8.1	6.4-9.9	3.1	1.9-4.3
45-59	1373	65.0	61.5-68.5	23.4	20.5-26.3	2.7	1.9-3.5	5.8	4.3-7.3	3.1	2.0-4.2
60-69	928	72.2	68.6-75.7	19.6	16.5-22.8	3.2	1.7-4.7	3.6	2.3-4.9	1.4	0.5-2.2
18-69	4240	46.8	44.1-49.6	34.4	31.9-36.9	5.9	4.8-7.1	9.4	8.0-10.9	3.5	2.5-4.4

One in three adults (34.7%) reported no consumption of other non-carbonated SSBs (Table 20). On the other hand, more than half (53.2%) of those age group and sexes reported consumed CSDs (Table 19) and over two third (64.3%) consumed SSBs (Table 20). In terms of drinking non-carbonated SSBs during the past seven days, around one third of men (35.5%) and women (33.9%) aged 18-69 consumed no other non-SSBs, while 14.2% of men and 15.9% of women in this age group reported consuming a sugar sweetened beverage 1 time per day (Table 20).

Table 20. Percentage of those who drank other sugar-sweetened beverages (SSB) during past 7 days

Age Group (years)	Men										
	n	% No other SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	216	39.1	31.1-47.1	36.9	30.1-43.7	8.3	4.1-12.6	10.5	5.9-15.1	5.2	2.0-8.3
30-44	487	32.2	27.4-37.0	34.8	30.0-39.6	10.9	8.0-13.8	15.9	12.1-19.6	6.2	3.9-8.5
45-59	498	34.9	30.4-39.4	32.4	27.9-36.9	8.5	5.6-11.4	16.4	13.0-19.9	7.8	5.3-10.4
60-69	312	31.0	25.3-36.7	27.7	22.4-33.0	9.6	6.2-13.0	22.4	17.3-27.4	9.3	5.1-13.5
18-69	1513	35.5	31.4-39.6	34.7	31.3-38.2	9.3	7.1-11.4	14.2	11.8-16.6	6.3	4.5-8.1
Age Group (years)	Women										
	n	% No other SSB	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	348	28.7	23.1-34.3	41.3	35.3-47.4	9.4	5.6-13.3	16.3	11.8-20.8	4.2	1.8-6.5
30-44	888	34.4	30.8-38.0	35.9	32.5-39.2	8.7	6.4-11.0	17.4	14.6-20.2	3.7	2.2-5.2
45-59	875	40.7	36.8-44.7	36.1	32.2-40.0	5.6	3.9-7.4	13.3	10.8-15.7	4.2	2.5-5.9
60-69	616	42.1	37.5-46.8	37.8	33.4-42.2	3.6	2.0-5.1	14.7	11.5-17.9	1.8	0.6-3.0
18-69	2727	33.9	31.1-36.7	38.4	35.5-41.2	8.0	6.2-9.8	15.9	13.7-18.2	3.9	2.7-5.0
Age Group (years)	Both Sexes										
	n	% No other SSB	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI

18-29	564	34.0	29.0-39.0	39.1	34.6-43.6	8.9	5.9-11.9	13.3	9.8-16.8	4.7	2.5-6.9
30-44	1375	33.2	30.1-36.3	35.3	32.3-38.3	9.8	8.0-11.7	16.6	14.2-19.0	5.1	3.6-6.5
45-59	1373	37.7	34.6-40.8	34.2	31.1-37.4	7.1	5.3-8.8	14.9	12.7-17.1	6.0	4.5-7.6
60-69	928	37.0	33.3-40.7	33.1	29.8-36.5	6.3	4.5-8.1	18.2	15.3-21.2	5.3	3.2-7.4
18-69	4240	34.7	32.0-37.4	36.5	34.3-38.7	8.7	7.2-10.1	15.0	13.3-16.8	5.1	3.9-6.3

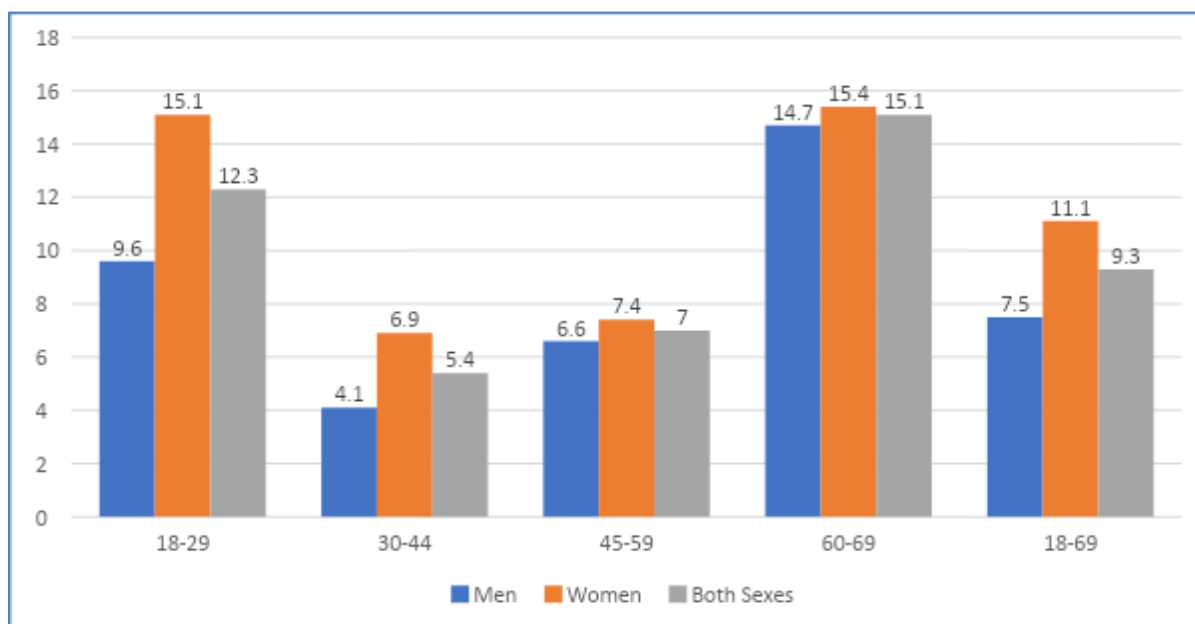
Physical Activity

The NSP for NCD Prevention and Control 2022-2030 has set a national target of a 10% reduction in the prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent).

Results from self-reported physical activity levels showed that:

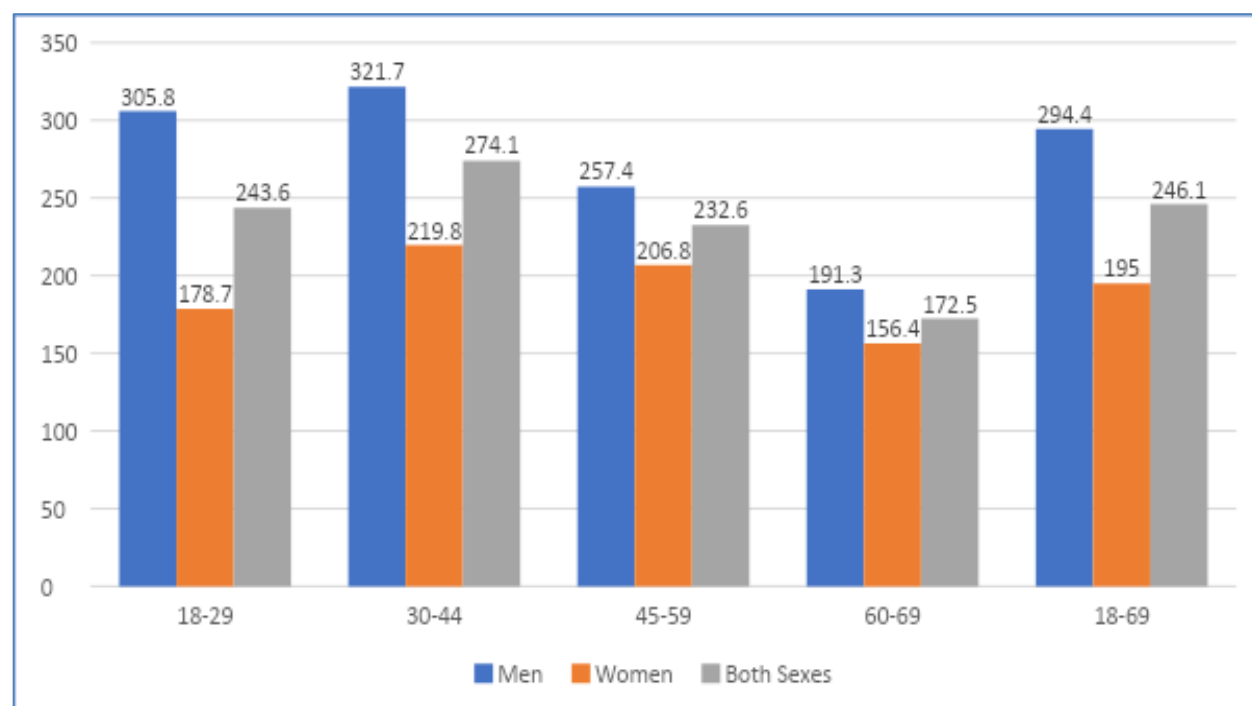
The WHO recommendation for physical activity levels was largely met in the population, with 92.5% men and 88.9% women meeting the recommendation. For both men and women, the youngest and the oldest age groups reported lower levels of physical activity (Figure 2).

Figure 2. Percentage of not meeting WHO recommendation on physical activity for health by age group



In terms of the mean minutes of total physical activity on average per day, men aged 18-69 averaged about 1/3 more minutes of total physical activity than women aged 18-69 (294.4 vs 195.0, as shown in Figure 3).

Figure 3. Mean minutes of total physical activity on average per day by age group



The composition of physical activity for work, transport, and during leisure time had similar results for men and women, except for the result that men do more physical activity during their leisure time (10.2% for men aged 18-69, as compared to 4.3% for women in this age range, as shown in Table 21).

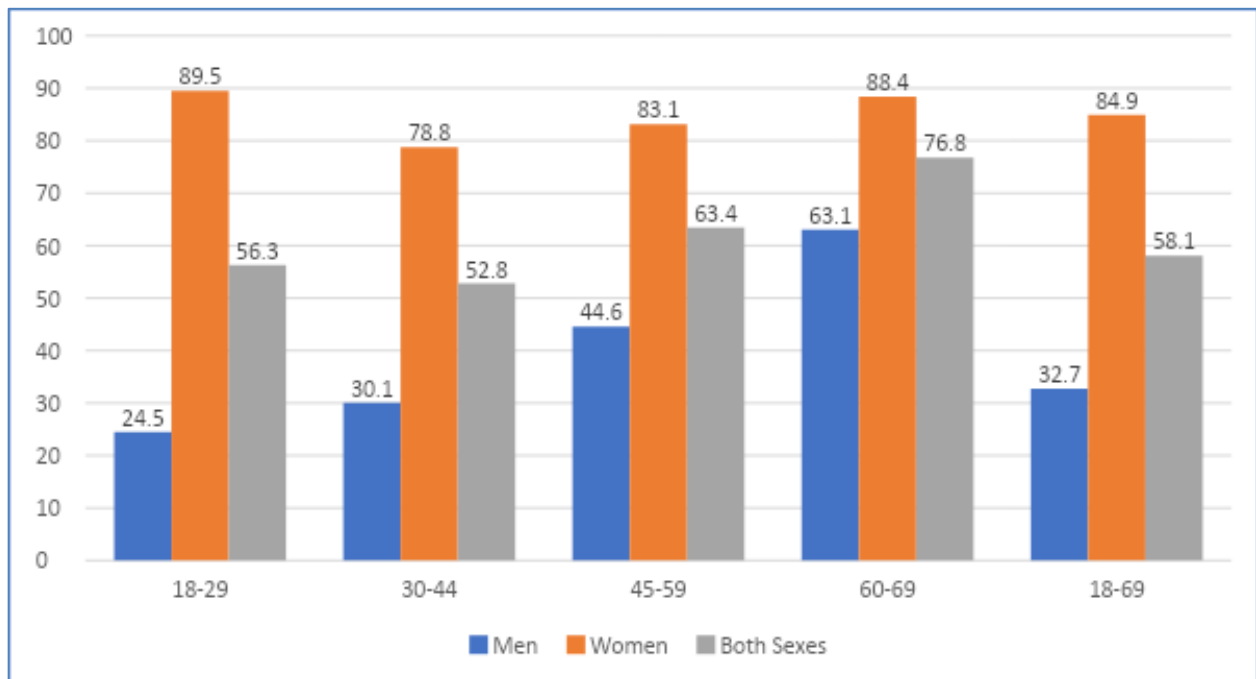
Table 21. Composition of total physical activity, men and women

Age Group (years)	Men						
	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-29	204	68.7	63.6-73.8	15.3	11.9-18.7	16.0	12.2-19.8
30-44	477	77.0	74.1-79.8	17.7	15.0-20.3	5.4	3.9-6.8
45-59	482	72.6	69.4-75.7	19.8	17.1-22.4	7.7	5.7-9.7
60-69	286	66.5	62.3-70.7	26.7	22.8-30.6	6.8	4.6-8.9
18-69	1449	72.1	69.5-74.7	17.7	15.8-19.6	10.2	8.5-12.0
Age Group (years)	Women						
	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI

18-29	338	73.2	69.3-77.1	23.6	19.8-27.3	3.3	1.8-4.7
30-44	866	76.5	74.2-78.8	18.9	16.7-21.1	4.6	3.6-5.6
45-59	852	70.2	67.7-72.7	24.4	22.0-26.9	5.3	4.1-6.6
60-69	570	65.4	62.0-68.9	28.1	25.1-31.2	6.5	4.7-8.2
18-69	2626	73.0	71.1-75.0	22.6	20.8-24.5	4.3	3.6-5.1

Results showed that more than twice as many women as men aged 18-69 reported getting no vigorous physical activity (84.9% vs. 32.7% respectively, as shown in Figure 4).

Figure 4. Percentage of no vigorous physical activity by age group



Tobacco Use

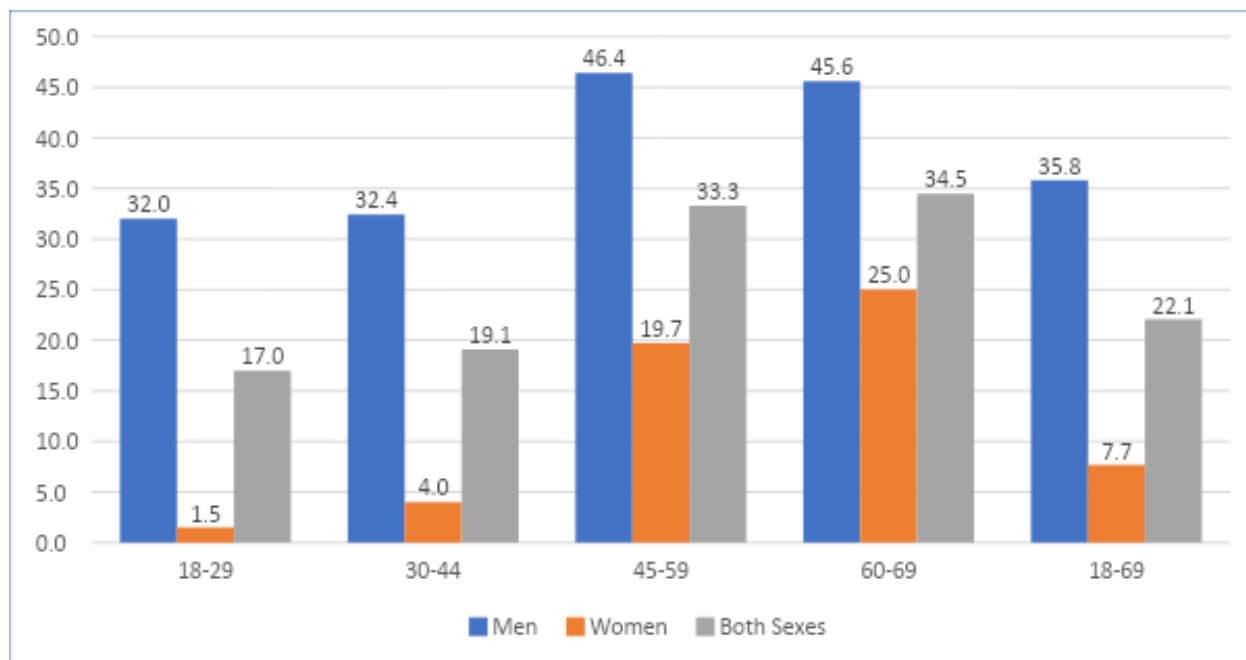
The NSP for Prevention and Control of NCD 2022-2030 has set a target of 30% relative reduction in prevalence of current tobacco use in persons 15+ years.

These results add to the significant amount of data that Cambodia has collected on tobacco use in the population through nationally representative surveys, beginning in 2006. Key results are presented for types and frequency of tobacco use, attempts to quit tobacco use, and exposure to second-hand tobacco smoke.

Types and frequency of tobacco use:

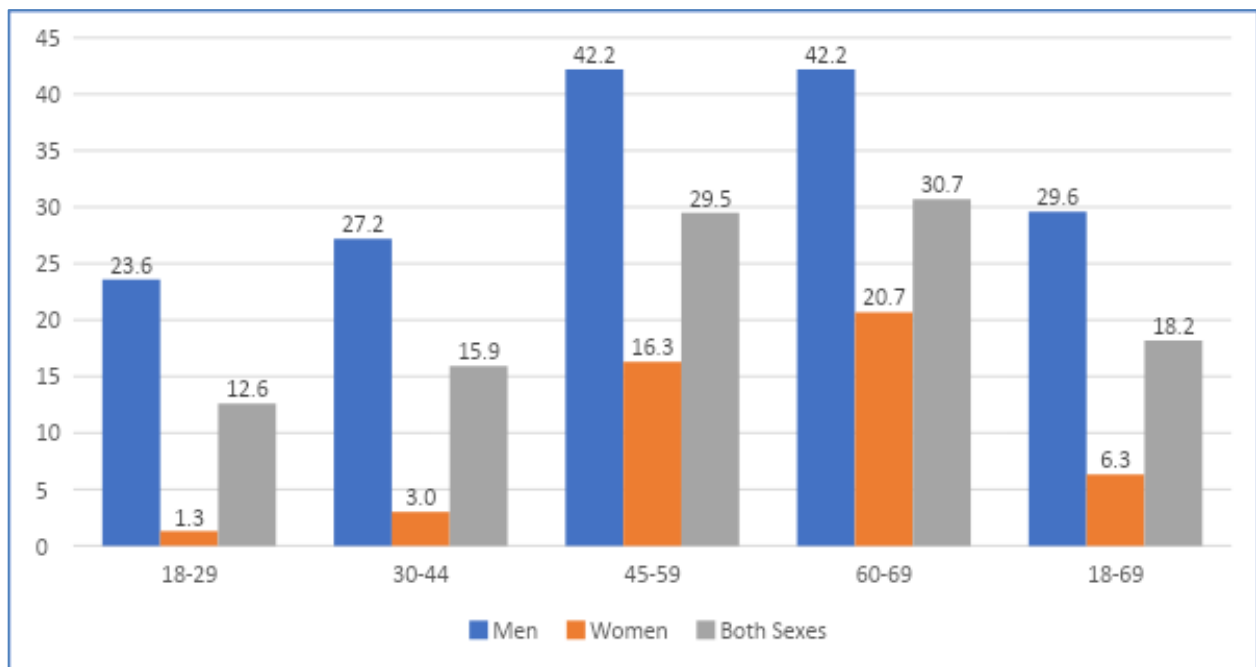
Current tobacco use (smoking and smokeless) among men aged 18-69 was 35.8%, while for women in this age range it was 7.7%. Tobacco use in both sex groups increased with age. There was significant difference between age group in women, going from a low of 1.5% in women aged 18-29 to 25.0% for women aged 60-69 (Figure 5).

Figure 5. Percentage of current and daily tobacco use (smoking and smokeless) by age group



Tobacco use was much more common among older men aged 45-69. Nearly 30% of men aged 18-69 reported being daily tobacco users (Figure 6).

Figure 6. Percentage of daily tobacco users by age group



The vast majority of tobacco use among men was smoked tobacco, but this was not the case for women tobacco users. Only 2.1% of women were daily smokers and 0.2% were non-daily smokers (Table 22).

Table 22. Tobacco smoking status, men, and women

Age Group (years)	Men								
	n	Current smoker				Non-smokers			
		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	216	23.6	17.1-30.1	8.4	3.8-13.0	15.7	10.6-20.9	52.3	45.3-59.3
30-44	487	27.2	23.0-31.5	5.1	2.8-7.4	15.4	12.1-18.8	52.2	47.2-57.3
45-59	498	41.6	36.3-46.9	4.2	2.3-6.2	26.6	22.3-31.0	27.5	23.4-31.6
60-69	312	40.9	34.8-47.0	3.1	1.1-5.1	37.2	31.1-43.4	18.8	13.7-23.9
18-69	1513	29.4	26.1-32.6	6.2	4.1-8.2	19.1	16.6-21.6	45.4	41.9-48.8
Age Group (years)	Women								
	n	Current smoker				Non-smokers			
		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	348	1.3	0.0-3.0	0.2	0.0-0.6	0.3	0.0-0.9	98.2	96.4-100.0
30-44	888	1.5	0.4-2.5	0.2	0.0-0.6	0.3	0.0-0.6	98.0	96.9-99.1
45-59	875	4.6	2.7-6.6	0.4	0.0-0.8	3.2	1.7-4.6	91.8	89.3-94.4
60-69	616	3.2	1.5-4.8	0.0	0.0-0.0	4.2	2.3-6.0	92.7	90.2-95.2
18-69	2727	2.1	1.0-3.2	0.2	0.0-0.5	1.2	0.7-1.6	96.5	95.2-97.7

This different pattern of use between Cambodian men and women was also shown in results for smokeless tobacco use, with current smokeless tobacco use among men aged 18-69 at 0.7%, whereas for women in this age range it was 5.6% (Figure 7). More men smoked manufactured cigarettes than women (91.5% vs 77.7% respectively for those aged 18-69, as shown in Figure 8.

Figure 7. Percentage of current users of smokeless tobacco by age group

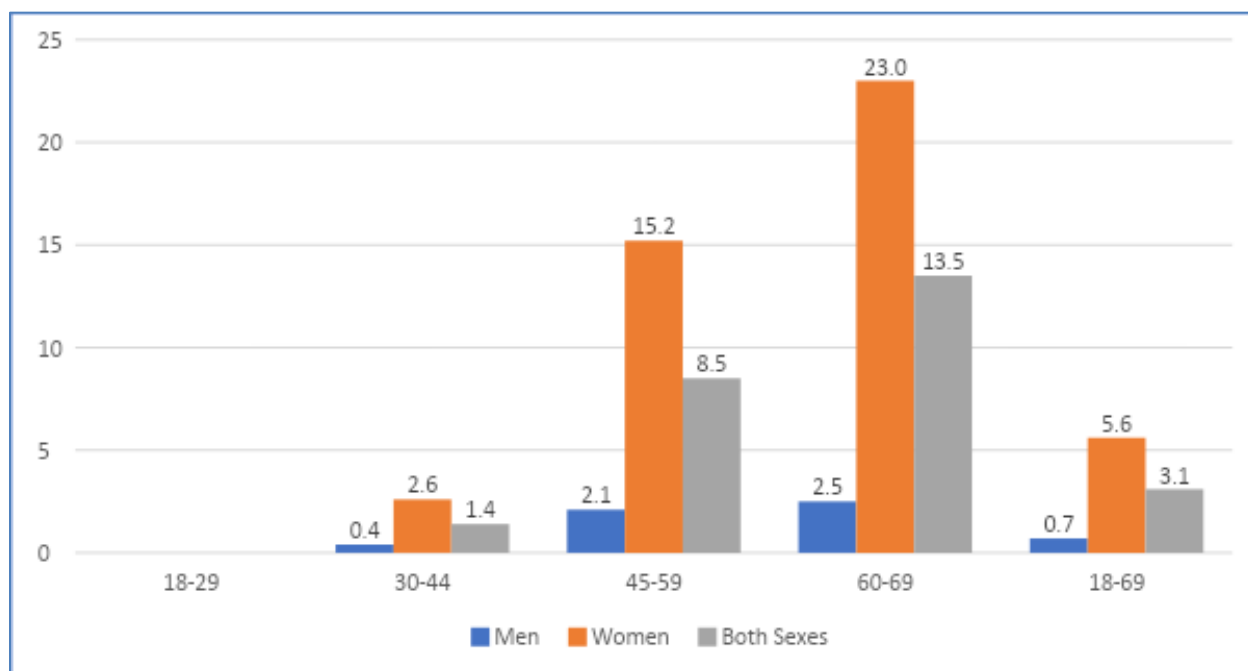
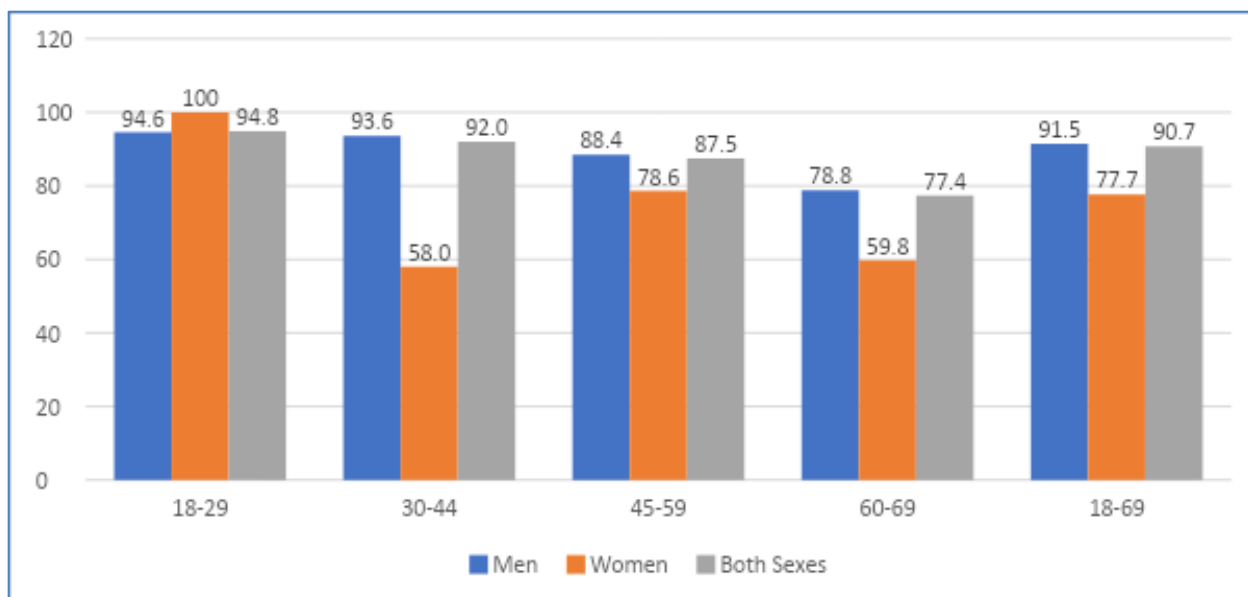


Figure 8. Percentage of manufactured cigarette smokers among current smokers by age group



Quitting tobacco use:

The percentage of men aged 18-69 reported quit smoking was 12.3%. Among those quit smoking, one in four men aged 45-59, and one in three men aged 60-69 reported being former daily smokers (Table 23). Almost 60% of both men and women current smokers aged 18-69 had tried to quit smoking (Table 24). Fewer than half of men aged 45-59 and aged 60-69 had been advised by a doctor to quit smoking (47.4% and 41.1% respectively, as shown in table 25).

Table 23. Former daily smokers (who don't smoke currently) among all respondents

Age Group (years)	Men			Women			Both Sexes		
	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
18-29	216	3.5	0.8-6.2	348	0.0	0.0-0.0	564	1.8	0.4-3.2
30-44	487	10.6	7.7-13.4	888	0.2	0.0-0.4	1375	5.7	4.2-7.2
45-59	498	25.7	21.3-30.1	875	2.6	1.4-3.7	1373	14.3	12.0-16.7
60-69	312	37.7	31.7-43.6	616	3.0	1.3-4.6	928	19.0	15.9-22.1
18-69	1513	12.3	10.4-14.2	2727	0.8	0.5-1.1	4240	6.7	5.7-7.7

Table 24. Current smokers who have tried to stop smoking

Age Group (years)	Men			Women			Both Sexes		
	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI
18-29	66	66.3	53.9-78.8	3	41.9	0.0-100.0	69	65.3	54.1-76.5
30-44	166	61.9	53.6-70.2	13	55.6	25.4-85.9	179	61.6	53.4-69.8
45-59	228	47.6	40.5-54.6	41	59.2	43.8-74.5	269	48.7	42.1-55.3
60-69	139	62.3	53.2-71.4	18	76.0	52.4-99.6	157	63.4	54.8-72.0
18-69	599	60.0	54.0-66.1	75	55.7	34.2-77.2	674	59.8	54.3-65.3

Table 25. Current smokers who have been advised by doctor to stop smoking

Age Group (years)	Men			Women			Both Sexes		
	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI
18-29	45	22.0	9.9-34.1	2	0.0	0.0-0.0	47	21.2	9.5-33.0
30-44	115	29.8	20.8-38.9	10	61.4	29.6-93.1	125	31.5	22.4-40.6
45-59	150	47.4	38.4-56.4	25	55.3	35.1-75.6	175	48.1	39.7-56.5
60-69	102	41.1	30.6-51.6	15	83.1	61.6-100.0	117	45.1	35.1-55.1
18-69	412	32.1	25.8-38.4	52	48.8	30.7-66.9	464	33.1	27.0-39.1

Exposure to second-hand tobacco smoke:

More than half of men (56.6%) and women (54.6%) reported that they were exposed to second-hand tobacco smoke at home in the past 30 days, with little difference across all age groups (Table 26).

Table 26. Exposed to second-hand smoke in home during the past 30 days

Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-29	216	61.9	54.6-69.1	348	55.7	50.1-61.3	564	58.8	53.8-63.9
30-44	487	54.4	49.6-59.3	888	54.2	50.0-58.4	1375	54.3	51.0-57.7
45-59	498	51.6	46.7-56.5	875	55.7	51.8-59.6	1373	53.6	50.4-56.8
60-69	312	49.6	43.4-55.8	616	47.5	42.7-52.2	928	48.5	44.4-52.5
18-69	1513	56.6	52.9-60.4	2727	54.6	51.6-57.6	4240	55.6	52.9-58.4

Among both men and women aged 18-69, 20.2% reported being exposed to second-hand smoke in the workplace during the past 30 days, with relatively small differences across all age groups (Table 27).

Table 27. Exposed to second-hand smoke in the workplace during the past 30 days

Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-29	157	25.2	17.1-33.2	257	19.7	13.9-25.5	414	22.4	17.3-27.6
30-44	325	20.2	15.1-25.3	635	19.3	15.5-23.2	960	19.8	16.5-23.1
45-59	349	18.0	13.2-22.8	608	18.1	14.1-22.2	957	18.1	14.7-21.4
60-69	215	15.2	9.8-20.7	422	13.3	9.4-17.3	637	14.2	10.8-17.7
18-69	1046	21.6	17.4-25.8	1922	18.8	15.7-22.0	2968	20.2	17.4-23.1

Alcohol Consumption

The NSP for Prevention and Control of NCD 2022-2030 target is at least 10% relative reduction in the harmful use of alcohol, defined as six or more drinks on a single occasion. Self-reported alcohol use showed that, as with tobacco use, the harmful use of alcohol is much more common in men than women:

Self-reported alcohol consumption status among men and women showed that 71.2% of men and 27.5% of women drank alcohol in the past 30 days (Table 28). In terms of frequency of alcohol consumption among those who reported alcohol drinking, 10.3% of men aged 18-69 drank daily, as compared to 3.0% of women aged 18-69. Daily drinking showed a steady increase from the youngest to oldest age groups among both men and women (Table 29).

Table 28. Alcohol consumption status, men and women

Age Group (years)	Men								
	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	216	71.8	64.6-79.1	16.4	10.6-22.1	1.6	0.0-3.2	10.2	5.5-14.9
30-44	487	80.8	77.0-84.6	9.8	7.1-12.5	5.3	3.2-7.4	4.1	1.6-6.6
45-59	498	62.9	57.8-68.1	12.3	9.2-15.5	13.2	9.8-16.5	11.6	8.0-15.1
60-69	312	42.4	36.5-48.3	10.2	6.5-13.9	31.0	25.2-36.9	16.4	11.9-21.0
18-69	1513	71.2	67.6-74.7	13.0	10.4-15.7	7.0	5.6-8.3	8.8	6.2-11.5
Age Group (years)	Women								
	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	348	28.6	23.2-33.9	28.5	23.2-33.9	13.7	9.5-17.9	29.2	23.1-35.3
30-44	888	33.3	29.6-37.1	27.6	24.4-30.7	13.6	10.9-16.2	25.6	22.1-29.1
45-59	875	22.8	19.5-26.1	15.3	12.2-18.5	23.1	19.8-26.4	38.8	34.8-42.7
60-69	616	11.0	8.1-13.9	4.1	2.5-5.7	36.7	31.9-41.5	48.2	43.2-53.2
18-69	2727	27.5	24.7-30.3	23.7	21.2-26.2	17.3	15.3-19.4	31.5	28.3-34.7

Table 29. Frequency of alcohol consumption in the past 12 months, men and women

Age Group (years)	Men												
	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	191	5.0	1.8-8.3	4.3	1.0-7.7	12.8	7.6-17.9	21.7	15.4-28.1	25.6	19.0-32.2	30.0	22.7-37.3
30-44	441	13.2	9.7-16.7	7.2	4.5-9.8	15.6	12.2-19.1	20.1	15.5-24.7	22.3	17.9-26.7	21.3	17.1-25.6
45-59	379	16.2	12.3-20.0	7.0	4.3-9.8	14.6	10.8-18.4	17.8	13.1-22.5	20.2	15.9-24.5	23.0	18.6-27.4
60-69	161	16.6	10.5-22.6	7.0	3.0-11.0	11.9	6.4-17.4	14.6	8.2-21.0	20.1	13.4-26.8	28.9	21.3-36.6
18-69	1172	10.3	8.3-12.3	5.9	4.1-7.7	14.1	11.3-16.8	20.2	16.8-23.6	23.3	19.9-26.6	25.7	22.1-29.2
Age Group (years)	Women												
	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	204	1.0	0.0-2.3	0.0	0.0-0.0	0.9	0.0-2.2	6.6	2.6-10.5	16.0	10.5-21.4	73.4	66.7-80.2
30-44	531	3.4	1.0-5.8	0.3	0.0-0.7	4.5	2.1-6.8	7.0	4.8-9.2	18.7	14.8-22.5	64.9	60.1-69.8
45-59	318	6.5	3.7-9.2	2.1	0.4-3.8	4.1	1.7-6.5	6.6	3.1-10.2	18.3	13.3-23.2	61.0	54.1-67.8
60-69	97	14.3	5.4-23.2	0.7	0.0-2.0	3.8	0.0-7.6	8.7	1.8-15.6	17.6	8.5-26.7	51.8	39.6-64.0
18-69	1150	3.0	1.7-4.2	0.4	0.1-0.7	2.8	1.6-3.9	6.8	4.7-8.9	17.3	14.2-20.4	68.0	64.0-72.0

The mean number of drinking occasions in the past 30 days was twice as high for men as for women. 8.4 vs. 3.7 respectively for ages 18-69 (Table 30). About half of men aged 18-69 reported having six or more drinks on a single drinking occasion within the past 30 days, (49.5%). The highest percentage of heavy episodic drinking was among men aged 30-44 years (62.1%, as shown in Table 31).

Table 30. Mean number of drinking occasions in the past 30 days among current (past 30 days) drinkers

Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	154	7.1	5.6-8.5	97	2.5	1.8-3.3	251	5.8	4.7-7.0
30-44	387	9.1	8.1-10.1	282	3.9	3.1-4.8	669	7.7	6.9-8.5
45-59	310	10.1	8.8-11.3	185	5.6	4.4-6.8	495	8.9	7.9-9.9
60-69	120	10.0	8.1-12.0	65	6.4	3.3-9.4	185	9.1	7.6-10.7
18-69	971	8.4	7.7-9.2	629	3.7	3.2-4.2	1600	7.2	6.6-7.8

Table 31. Six or more drinks on a single occasion at least once during the past 30 days among total population

Age Group (years)	Men			Women			Both Sexes		
	n	% ≥ 6 drinks	95% CI	n	% ≥ 6 drinks	95% CI	n	% ≥ 6 drinks	95% CI
18-29	130	51.7	41.2-62.3	255	3.6	0.8-6.4	385	25.8	20.1-31.6
30-44	282	62.1	55.4-68.8	629	5.0	3.0-7.0	911	32.8	28.8-36.8
45-59	296	36.5	30.3-42.8	694	1.1	0.4-1.9	990	16.8	13.8-19.9
60-69	215	14.3	9.1-19.4	553	0.4	0.0-0.9	768	5.9	3.7-8.0
18-69	923	49.5	44.3-54.6	2131	3.2	1.9-4.5	3054	24.5	21.6-27.3

The mean number of days in the past 30 days when heavy episodic drinking occurred among men aged 18-69 who reported heaving drinking was 4.9 days (Table 32). Consumption of unrecorded alcohol was most common among men aged 60-69 and women aged 45-50 at 24.6% and 18.9% respectively (Table 33). The percentage of unrecorded alcohol from all alcohol consumed during the past 7 days was 9.9% for both sexes aged 18-69 (Tables 34).

Table 32. Mean number of times with six or more drinks during a single occasion in the past 30 days among current drinkers

Age Group (years)	Men			Women			Both Sexes		
	n	Mean number of times	95% CI	n	Mean number of times	95% CI	n	Mean number of times	95% CI
18-29	69	4.1	2.7-5.4	8	0.9	0.8-1.1	77	3.8	2.5-5.1
30-44	184	5.4	4.3-6.4	28	3.9	1.5-6.3	212	5.2	4.3-6.2
45-59	113	6.2	4.7-7.8	10	2.2	1.0-3.4	123	6.1	4.6-7.5
60-69	33	2.9	2.2-3.6	4	3.4	0.0-6.9	37	2.9	2.2-3.7
18-69	399	4.9	4.1-5.7	50	2.4	1.1-3.7	449	4.7	4.0-5.4

Table 33. Consumption of unrecorded alcohol

Age Group (years)	Men			Women			Both Sexes		
	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI
18-29	122	14.0	7.6-20.5	67	11.4	0.5-22.4	189	13.4	7.9-18.9
30-44	348	22.7	17.6-27.7	206	13.1	7.8-18.5	554	20.6	16.3-24.8
45-59	268	15.9	10.5-21.3	142	18.9	11.8-26.0	410	16.6	12.0-21.1
60-69	113	24.6	14.8-34.5	53	17.3	5.8-28.9	166	23.0	14.3-31.6
18-69	851	18.2	14.7-21.7	468	13.5	8.4-18.7	1319	17.1	14.1-20.2

Table 34. Percentage of unrecorded alcohol from all alcohol consumed during past 7 days

Age Group (years)	Men		Women		Both Sexes	
	n	% unrecorded alcohol of all alcohol	n	% unrecorded alcohol of all alcohol	n	% unrecorded alcohol of all alcohol
18-29	119	10.6	62	6.1	181	10.2
30-44	343	11.4	203	7.5	546	11.0
45-59	264	6.3	139	10.9	403	6.7
60-69	110	10.2	53	18.1	163	10.9
18-69	836	10.1	457	8.1	1293	9.9

History of Raised Blood Pressure

The NSP for Prevention and Control of NCD 2022-2030 has set a target of 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances.

In Step 1 respondents were asked about having their blood pressure measured, if they have previously been diagnosed with high blood pressure, and if they were taking medication for raised blood pressure. Results for self-reported history of raised blood pressure show:

Table 35 presents percentage of blood pressure measurement and diagnosis among men and women by age group. Almost one-third (30.3%) of men and women aged 18-69 reported never having their blood pressure measured, while 8.7% said they had received a diagnosis of high blood pressure within the past 12 months. Results for never having BP measured were similar for men aged 30-44 and men aged 45-59 (32.7% and 31.2% respectively). Fewer women in these age ranges reported never having their blood pressure measured (18.6% and 15.7% respectively for women aged 30-44, and 45-59).

Table 35. Blood pressure measurement and diagnosis

Age Group (years)	Men								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	216	48.2	41.4-55.0	48.9	42.1-55.8	2.1	0.0-4.2	0.8	0.0-1.9
30-44	487	32.7	28.2-37.2	58.6	53.7-63.6	3.2	1.5-4.8	5.5	3.1-7.9
45-59	498	31.2	26.5-35.9	45.3	40.5-50.0	5.1	3.2-7.0	18.4	14.7-22.1
60-69	312	17.2	12.8-21.7	40.6	34.6-46.6	11.5	7.6-15.4	30.6	25.3-36.0
18-69	1513	37.8	34.5-41.1	50.9	47.6-54.2	3.6	2.5-4.7	7.7	6.3-9.0
Age Group (years)	Women								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	348	29.7	24.4-35.0	68.4	63.1-73.8	1.0	0.0-2.3	0.9	0.0-1.8
30-44	888	18.6	15.5-21.7	73.2	69.8-76.5	3.2	2.0-4.5	5.0	3.6-6.4
45-59	875	15.7	12.7-18.6	52.6	48.5-56.6	6.7	4.9-8.6	25.0	21.8-28.2
60-69	616	14.0	10.5-17.5	43.7	39.5-48.0	5.7	3.7-7.7	36.6	32.7-40.6
18-69	2727	22.3	19.8-24.9	64.8	62.1-67.5	3.2	2.4-3.9	9.7	8.6-10.9
Age Group (years)	Both sexes								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	564	39.2	34.6-43.8	58.5	53.9-63.0	1.5	0.3-2.8	0.8	0.1-1.6
30-44	1375	26.1	23.3-28.9	65.4	62.4-68.4	3.2	2.1-4.3	5.3	3.8-6.8
45-59	1373	23.6	20.6-26.5	48.9	45.6-52.1	5.9	4.6-7.2	21.7	19.1-24.2
60-69	928	15.5	12.7-18.3	42.3	38.9-45.7	8.4	6.2-10.5	33.8	30.6-37.1
18-69	4240	30.3	28.1-32.5	57.7	55.4-59.9	3.4	2.7-4.1	8.7	7.7-9.6

Among men and women aged 18-69 who were previously diagnosed with raised blood pressure, 55.8% of men and 64.4% of women reported that they were currently taking medication for raised blood pressure prescribed by doctors or health worker (Table 36).

Table 36. Currently taking medication for raised blood pressure

Age Group (years)	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-29	6	39.0	0.0-81.5	6	17.2	0.0-48.3	12	30.6	0.9-60.3
30-44	42	27.5	10.5-44.6	80	38.2	27.0-49.4	122	32.4	21.5-43.3
45-59	121	70.0	60.8-79.1	276	71.5	65.2-77.8	397	70.8	65.7-76.0
60-69	126	69.2	59.9-78.6	261	81.7	76.3-87.1	387	76.0	70.7-81.3
18-69	295	55.8	47.5-64.0	623	64.4	59.1-69.7	918	60.2	55.5-65.0

History of Diabetes

The NSP for Prevention and Control of NCD 2022-2030 includes a target to halt the increase in the prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or being on medication for raised blood glucose.)

Step 1 collected self-reported information on history of raised blood glucose, information on prevalence of impaired fasting glucose from biochemical testing was reported in Step 3 Results.

Almost two thirds (61.4%) of men and women reported never having their blood glucose measured, with more men never having had their blood glucose measured than women (68.7% vs. 53.6%, as shown in Table 37).

Table 37. Blood sugar measurement and diagnosis

Age Group (years)	Men								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	216	79.3	73.5-85.2	18.3	12.7-23.9	1.6	0.0-3.4	0.8	0.0-1.9
30-44	487	66.6	62.1-71.2	28.9	24.5-33.2	1.9	0.3-3.5	2.6	0.7-4.5
45-59	498	56.6	51.7-61.5	33.4	28.6-38.1	3.6	1.9-5.4	6.4	4.1-8.6
60-69	312	47.6	41.3-54.0	36.5	30.4-42.5	2.5	0.6-4.5	13.3	9.2-17.5
18-69	1513	68.7	65.6-71.8	25.9	22.9-28.8	2.2	1.2-3.1	3.3	2.4-4.2
Age Group (years)	Women								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	348	65.0	59.3-70.7	34.3	28.7-40.0	0.2	0.0-0.6	0.4	0.0-1.2
30-44	888	51.9	48.2-55.5	43.7	40.1-47.3	1.5	0.5-2.5	3.0	1.8-4.1
45-59	875	39.5	35.7-43.3	46.4	42.7-50.1	1.9	1.0-2.7	12.3	9.8-14.8
60-69	616	35.0	30.8-39.3	42.8	38.4-47.2	4.0	2.4-5.6	18.2	14.1-22.2
18-69	2727	53.6	50.7-56.5	40.2	37.4-43.1	1.2	0.8-1.6	4.9	4.0-5.9
Age Group (years)	Both sexes								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	564	72.3	67.9-76.7	26.1	21.8-30.5	0.9	0.0-1.9	0.6	0.0-1.3
30-44	1375	59.7	56.8-62.7	35.8	33.0-38.7	1.7	0.8-2.7	2.8	1.6-3.9
45-59	1373	48.2	44.7-51.6	39.8	36.5-43.0	2.8	1.7-3.8	9.3	7.6-11.0
60-69	928	40.8	37.0-44.7	39.9	36.3-43.5	3.3	2.1-4.5	15.9	13.1-18.8
18-69	4240	61.4	59.0-63.7	32.9	30.6-35.1	1.7	1.2-2.3	4.1	3.4-4.7

Among those respondents who reported a previous diagnosis of diabetes, only a small percentage of men aged 45-59 and aged 60-69 reported currently taking insulin (9.4% and 4.6% respectively). For women in these age groups the percentage was 8.3% and 14.2% respectively (Table 38).

Table 38. Currently taking insulin prescribed for diabetes among those previously diagnosed

Age Group (years)	Men			Women			Both Sexes		
	n	% taking insulin	95% CI	n	% taking insulin	95% CI	n	% taking insulin	95% CI
18-29	5	0.0	0.0-0.0	3	0.0	0.0-0.0	8	0.0	0.0-0.0
30-44	17	0.0	0.0-0.0	39	2.6	0.0-7.8	56	1.2	0.0-3.6
45-59	55	9.4	1.1-17.7	119	8.3	1.2-15.4	174	8.8	3.0-14.6
60-69	44	4.6	0.0-10.1	129	14.2	8.3-20.1	173	10.5	6.2-14.9
18-69	121	4.2	0.9-7.5	290	8.4	4.4-12.3	411	6.4	3.6-9.1

The percent of older men and women taking drugs (mediation) prescribed for diabetes was much higher, with two-thirds of both men and women aged 60-69 reporting that they were taking medication for diabetes 66.1% and 65.6% respectively, as shown in Table 39.

Table 39. Currently taking medication prescribed for diabetes among those previously diagnosed

Age Group (years)	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-29	5	0.0	0.0-0.0	3	51.6	0.0-100.0	8	10.8	0.0-31.3
30-44	17	12.0	0.0-26.0	39	30.9	16.1-45.7	56	20.8	9.9-31.7
45-59	55	54.2	39.5-68.9	119	62.6	52.9-72.4	174	59.1	50.9-67.3
60-69	44	66.1	50.2-82.0	129	65.6	56.7-74.5	173	65.8	57.8-73.7
18-69	121	35.0	24.0-46.1	290	56.0	48.8-63.2	411	45.9	38.9-53.0

History of Raised Total Cholesterol

The NSP for Prevention and Control of NCD 2022-2030 includes a target of 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities.

Step 1 collected self-reported information on history of total cholesterol measurement, diagnosis and treatment. Information on prevalence of raised total cholesterol from biochemical testing was reported in Step 3 Results.

A large percentage (81.4%) of adults aged 18-69 reported never having their cholesterol measured. Around two-thirds (of men and women aged 45-59 years reported never having their cholesterol level measured (Table 40). A low percentage (6.5%) of adults aged 18-69 presented raised total cholesterol, of whom 8.4% of women and 4.7% had raised total cholesterol. Among men and women aged 60-69, 30.7% and 34.9% respectively reported currently taking medication as prescribed for raised total cholesterol. These percentages drop to 24.6% and 19.1% respectively for men and women aged 45-59 (Table 41).

Table 40. Total cholesterol measurement and diagnosis

Age Group (years)	Men								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	216	91.3	87.4-95.2	8.2	4.4-12.0	0.0	0.0-0.0	0.5	0.0-1.6
30-44	487	81.3	77.4-85.3	13.3	9.6-17.0	2.5	1.1-4.0	2.8	1.3-4.4
45-59	498	76.9	72.8-81.1	12.8	9.5-16.2	3.3	1.6-5.0	6.9	4.4-9.5
60-69	312	67.2	60.9-73.6	21.8	16.1-27.5	3.1	1.1-5.1	7.9	4.6-11.3
18-69	1513	83.7	81.2-86.1	11.6	9.4-13.9	1.7	1.0-2.3	3.0	2.1-3.9
Age Group (years)	Women								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	348	91.0	87.6-94.5	5.8	3.1-8.6	0.7	0.0-2.2	2.4	0.5-4.2
30-44	888	75.6	72.3-78.8	15.6	12.9-18.4	3.0	1.8-4.2	5.8	4.1-7.6
45-59	875	66.3	62.2-70.4	19.3	16.1-22.4	4.3	2.8-5.9	10.1	7.7-12.4
60-69	616	59.3	54.8-63.8	21.4	17.5-25.3	6.1	4.0-8.2	13.1	9.7-16.5
18-69	2727	78.9	76.7-81.2	12.7	11.0-14.5	2.6	1.7-3.5	5.8	4.7-6.9
Age Group (years)	Both sexes								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	564	91.2	88.4-94.0	7.0	4.6-9.4	0.4	0.0-1.1	1.4	0.4-2.5
30-44	1375	78.6	76.0-81.3	14.4	12.0-16.8	2.7	1.8-3.7	4.2	3.0-5.4
45-59	1373	71.7	68.5-74.9	16.0	13.6-18.4	3.8	2.6-5.0	8.5	6.7-10.3
60-69	928	63.0	58.9-67.1	21.6	18.1-25.0	4.7	3.3-6.2	10.7	8.3-13.1
18-69	4240	81.4	79.5-83.3	12.2	10.7-13.7	2.1	1.6-2.7	4.4	3.6-5.1

Table 41. Currently taking oral treatment (medication) prescribed for raised total cholesterol among those previously diagnosed

Currently taking oral treatment (medication) prescribed for raised total cholesterol among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% taking meds	95% CI		n	% taking meds	95% CI		n	% taking meds	95% CI
18-29	1	0.0	0.0-0.0		8	6.8	0.0-20.4		9	5.8	0.0-17.3
30-44	28	8.4	0.0-18.1		77	20.8	10.8-30.8		105	15.7	8.7-22.7
45-59	51	24.6	11.8-37.5		130	19.1	11.7-26.4		181	21.4	14.0-28.8
60-69	36	30.7	14.3-47.1		116	34.9	24.5-45.3		152	33.5	24.5-42.6
18-69	116	18.2	10.3-26.1		331	20.7	15.2-26.2		447	19.7	15.1-24.4

Lifestyle Advice

Step 1 included a series of questions about being advised by a doctor or health worker on a range of lifestyles choices related to risk for NCDs, including tobacco use, reducing salt in the diet, eating at least five servings of fruit and/or vegetables each day, reducing fat in the diet, doing more physical activity, and maintaining a healthy body weight.

Results show that less than half of adults reported receiving advice on any of these topics, with the exception of a slightly higher percentage of women who received advice on reducing salt (60.7%), eating at least 5 servings of fruit and/or vegetables each day (59.5%) reducing fat in the diet (51.4%) and doing more physical activity (52.7%). The percentage of adults receiving advice increase somewhat in older age groups (Table 42).

Table 42. Lifestyle advice from a doctor or health worker

Advised by doctor or health worker to quit using tobacco or don't start											
Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	35.8	23.9-47.8		187	27.1	19.7-34.4		262	30.6	23.8-37.3
30-44	210	39.0	31.7-46.2		491	31.5	26.4-36.6		701	35.0	30.6-39.5
45-59	237	54.4	47.4-61.3		534	33.1	28.5-37.6		771	42.6	38.5-46.7
60-69	174	55.7	48.1-63.3		419	36.3	30.5-42.1		593	44.4	39.9-48.9
18-69	696	42.8	37.5-48.1		1631	30.6	26.9-34.2		2327	35.9	32.7-39.2
Advised by doctor or health worker to reduce salt in the diet											
Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	29.9	18.9-40.9		187	55.8	47.8-63.8		262	45.4	38.6-52.2
30-44	210	42.1	34.8-49.4		491	58.0	53.2-62.9		701	50.4	46.0-54.8
45-59	237	59.5	53.3-65.8		534	68.1	63.7-72.5		771	64.3	60.5-68.1
60-69	174	63.0	55.3-70.7		419	72.4	67.4-77.3		593	68.5	64.2-72.7
18-69	696	43.7	38.6-48.9		1631	60.7	57.1-64.3		2327	53.3	50.1-56.5
Advised by doctor or health worker to eat at least five servings of fruit and/or vegetables each day											
Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	51.9	38.8-65.1		187	62.2	53.5-70.9		262	58.1	50.4-65.8
30-44	210	48.8	41.1-56.6		491	57.2	52.1-62.2		701	53.2	48.4-58.0
45-59	237	53.3	46.3-60.3		534	57.5	52.5-62.5		771	55.6	51.4-59.9
60-69	174	58.0	49.0-67.1		419	59.8	53.9-65.6		593	59.0	54.0-64.1
18-69	696	51.7	45.9-57.5		1631	59.5	55.3-63.6		2327	56.1	52.4-59.8
Advised by doctor or health worker to reduce fat in the diet											
Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	43.8	31.3-56.3		187	46.9	38.6-55.2		262	45.6	38.5-52.8
30-44	210	37.6	29.7-45.5		491	49.2	44.1-54.4		701	43.7	39.0-48.4
45-59	237	49.1	42.2-55.9		534	60.1	55.5-64.7		771	55.2	51.0-59.3
60-69	174	48.4	40.2-56.6		419	56.7	51.2-62.1		593	53.2	48.4-58.0
18-69	696	43.2	37.8-48.6		1631	51.4	47.5-55.2		2327	47.8	44.4-51.1

Advised by doctor or health worker to start or do more physical activity									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	75	34.9	23.5-46.4	187	45.3	36.9-53.7	262	41.2	33.8-48.5
30-44	210	45.8	38.4-53.3	491	52.7	48.0-57.4	701	49.4	44.8-54.0
45-59	237	55.0	48.4-61.5	534	60.3	55.4-65.3	771	57.9	53.8-62.1
60-69	174	67.8	60.1-75.6	419	65.7	60.5-71.0	593	66.6	62.1-71.1
18-69	696	46.2	40.9-51.4	1631	52.7	48.9-56.6	2327	49.9	46.3-53.4
Advised by doctor or health worker to maintain a healthy body weight or to lose weight									
Age Group (years)	Men			Women			Both Sexes		
	n	% advised	95% CI	n	% advised	95% CI	n	% advised	95% CI
18-29	75	20.6	11.0-30.2	187	29.2	21.6-36.8	262	25.7	19.4-32.1
30-44	210	25.2	18.6-31.9	491	39.7	34.8-44.6	701	32.8	28.5-37.1
45-59	237	39.0	32.4-45.5	534	43.4	38.4-48.4	771	41.4	37.1-45.7
60-69	174	42.8	34.7-50.9	419	40.3	34.8-45.8	593	41.3	36.5-46.2
18-69	696	28.3	23.7-32.9	1631	36.4	33.0-39.9	2327	32.9	29.8-35.9

Step 2 Results of Physical Measurements

Physical measurements in Step 2 included measurement of height and weight to determine Body Mass Index (BMI) and blood pressure measurement.

Body Mass Index (BMI)

The NSP for Prevention and Control of NCD 2022-2030 includes a target to halt the increase in overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/m² for overweight and body mass index ≥ 30 kg/m² for obesity).

One in five for both sexes of adults (19.4%) aged 18-69 were overweight (BMI 25.0-29.9) and 4.3% were obese (BMI ≥ 30.0). For men in this age range, 17.5% were overweight and 2.9% were classified as obese). The highest prevalence of obesity, at 4.6%, was among men aged 45-59. A higher percentage of women than men aged 18-69 were found to be overweight (21.5%) and obese (5.7%). The highest prevalence of overweight was seen in women aged 45-59 (30.3%) and the highest prevalence of obesity was seen in women aged 45-59 at 7.4% (Table 43).

Table 43. Result of BMI measurement

Age Group (years)	Men								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	Overweight % BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-29	215	16.8	11.5-22.1	71.8	65.7-77.9	9.4	5.2-13.5	2.0	0.2-3.9
30-44	483	6.8	4.2-9.4	66.1	61.4-70.8	24.0	19.9-28.1	3.1	1.2-4.9
45-59	496	8.9	5.9-11.8	64.6	59.6-69.5	22.0	17.9-26.1	4.6	2.5-6.7
60-69	308	11.3	7.7-15.0	63.0	57.6-68.4	23.0	17.8-28.1	2.7	0.7-4.7
18-69	1502	11.6	9.0-14.2	68.0	64.7-71.2	17.5	15.0-20.0	2.9	1.9-4.0
Age Group (years)	Women								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	Overweight % BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-29	318	20.0	15.3-24.6	67.3	61.8-72.8	9.1	5.5-12.7	3.6	1.5-5.8
30-44	867	7.6	5.6-9.7	55.2	51.6-58.8	29.9	26.6-33.2	7.3	5.3-9.2
45-59	870	6.2	4.6-7.9	56.0	52.3-59.8	30.3	26.5-34.1	7.4	5.5-9.3
60-69	608	10.8	8.0-13.6	55.6	51.0-60.1	27.7	23.7-31.6	6.0	4.0-7.9
18-69	2663	12.5	10.5-14.6	60.2	57.6-62.8	21.5	19.3-23.7	5.7	4.6-6.9
Age Group (years)	Both Sexes								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	Overweight % BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-29	533	18.3	14.8-21.8	69.7	65.7-73.6	9.2	6.5-12.0	2.8	1.4-4.1
30-44	1350	7.2	5.5-8.8	61.1	58.0-64.1	26.7	24.0-29.5	5.0	3.6-6.4
45-59	1366	7.6	5.8-9.3	60.4	57.2-63.5	26.1	23.2-28.9	6.0	4.6-7.4
60-69	916	11.1	8.8-13.3	59.0	55.5-62.5	25.5	22.4-28.6	4.4	3.0-5.9
18-69	4165	12.1	10.4-13.7	64.3	62.2-66.4	19.4	17.7-21.1	4.3	3.5-5.0

Blood pressure measurement

The NSP for Prevention and Control of NCD 2022-2030 has set a target of 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances.

The prevalence of raised blood pressure among persons aged 18+ years is defined as systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg or currently on medication for raised blood pressure. Results from Step 2 physical measure of blood pressure showed:

The prevalence of those aged 18-69 with raised blood pressure or currently on medication (SBP $\geq$ 140 mmHg and/or DBP $\geq$ 90 mmHg) was 16.8%. A comparison across older age groups showed 31.5% of men aged 45-59 and 44.5% of men aged 60-69 had raised blood pressure or were currently on medication, while women in these age groups showed 36.2% and 47.4% respectively (Table 44). Whereas, for all age group and sexes having HTN cascade or medication (SBP $\geq$ 160 and/or DBP $\geq$ 100 mmHg) reported 9.7%, 9.5% of men and 10.0% of women reported having HTN cascade or on medication (Table 45).

Table 44. SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised blood pressure

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	8.5	4.5-12.5	335	1.8	0.4-3.2	542	5.2	3.0-7.5
30-44	477	18.1	13.8-22.4	854	11.3	9.1-13.5	1331	14.9	12.4-17.5
45-59	471	31.5	26.8-36.1	848	36.2	32.3-40.2	1319	33.8	30.7-37.0
60-69	304	44.5	38.0-51.0	566	47.4	43.0-51.8	870	46.0	42.3-49.7
18-69	1459	18.4	15.9-21.0	2603	15.0	13.5-16.5	4062	16.8	15.2-18.3

Table 45. SBP $\geq$ 160 and/or DBP $\geq$ 100 mmHg or currently on medication for raised blood pressure

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	2.3	0.0-4.6	335	0.3	0.0-1.0	542	1.3	0.1-2.5
30-44	477	6.0	3.5-8.5	854	4.7	3.3-6.2	1331	5.4	3.8-7.0
45-59	471	22.7	18.5-26.9	848	26.6	23.0-30.2	1319	24.6	21.9-27.3
60-69	304	34.9	28.8-40.9	566	40.9	36.6-45.1	870	38.0	34.3-41.7
18-69	1459	9.5	7.9-11.2	2603	10.0	8.8-11.2	4062	9.7	8.6-10.9

The percentage of raised blood pressure (by measurement) was higher among Cambodian men than in women. The prevalence of raised blood pressure ranged from 7.3% among men aged 18-29 to around one in every five men aged 45-59 (19.7% for men 45-59 and 20.9% for men aged 60-69). The percentage of raised blood pressure among women aged 45-59, and aged 60-69 was 17.9% and 16.0% respectively (Table 48). Among men with raised blood pressure, 5.7% of those aged 45-59, and 7.0% of those aged 60-69 had blood pressure in the range of SBP $\geq$ 160 and/or DBP $\geq$ 100 mmHg. Among women in these two older age groups, 4.1 % and 5.0% respectively had readings in the range of SBP $\geq$ 160 and/or DBP $\geq$ 100 mmHg (Table 49).

Table 46. SBP ≥ 140 and/or DBP ≥ 90 mmHg

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	7.3	3.6-11.1	335	1.5	0.3-2.8	542	4.5	2.4-6.6
30-44	477	16.3	12.2-20.3	854	8.8	6.7-10.9	1331	12.8	10.4-15.2
45-59	471	19.7	15.7-23.8	848	17.9	15.0-20.8	1319	18.8	16.3-21.3
60-69	304	20.9	15.8-25.9	566	16.0	12.5-19.4	870	18.3	15.4-21.2
18-69	1459	13.6	11.3-15.9	2603	8.1	7.0-9.2	4062	10.9	9.6-12.3

Table 47. SBP ≥ 160 and/or DBP ≥ 100 mmHg

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	1.2	0.0-2.8	335	0.0	0.0-0.0	542	0.6	0.0-1.4
30-44	477	3.7	1.9-5.6	854	1.8	0.9-2.8	1331	2.9	1.8-3.9
45-59	471	5.7	3.7-7.8	848	4.1	2.6-5.5	1319	4.9	3.6-6.1
60-69	304	7.0	3.6-10.4	566	5.0	2.8-7.1	870	5.9	3.8-8.0
18-69	1459	3.3	2.2-4.3	2603	1.7	1.3-2.2	4062	2.5	2.0-3.1

Mean SBP among adult population aged 18-69 was 117.0 mmHg. It showed that mean of SBP among men was significantly higher than that of women at 121.2 mmHg and 74.9 mmHg respectively (Table 48). Mean DBP among adult population aged 18-69 was 117.0 mmHg. It showed that the mean DBP among men was significantly higher than that of women at 75.9 mmHg and 73.8 mmHg respectively (Table 49).

Table 48. Mean systolic blood pressure (mmHg)

Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	216	118.5	117.0-120.0	345	105.7	104.6-106.8	561	112.3	111.1-113.4
30-44	484	121.8	120.3-123.3	887	112.7	111.7-113.7	1371	117.6	116.6-118.5
45-59	497	124.2	122.6-125.8	873	121.8	120.5-123.0	1370	123.0	121.9-124.1
60-69	311	127.0	124.7-129.4	612	123.7	121.9-125.4	923	125.2	123.7-126.7
18-69	1508	121.2	120.4-122.1	2717	112.5	111.7-113.2	4225	117.0	116.3-117.6

Table 49. Mean diastolic blood pressure (mmHg)

Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	216	72.7	71.3-74.1	345	69.7	68.8-70.6	561	71.3	70.4-72.1
30-44	484	77.9	76.6-79.2	887	75.4	74.6-76.2	1371	76.7	76.0-77.5
45-59	497	78.8	77.7-79.9	873	78.7	77.9-79.5	1370	78.8	78.1-79.5
60-69	311	77.4	76.2-78.6	612	77.2	76.3-78.1	923	77.3	76.6-78.0
18-69	1508	75.9	75.1-76.7	2717	73.8	73.3-74.4	4225	74.9	74.4-75.4

Step 3 Results

Biochemical tests included:

- Blood Tests
 - Blood glucose and total cholesterol tests used CardioChek Plus (PA) analyzer
- Urine Tests
 - Urine Cotinine Rapid Test kits for sample collection
 - Lab testing for urine sodium and creatinine

Testing for raised blood glucose

Halting the rise in diabetes requires adoption of a healthy diet, regular physical exercise, not using tobacco, and using alcohol safely. An effective system of regular surveillance of diabetes prevalence and its major risk factors including family history of the disease is necessary to monitor progress towards controlling and reducing diabetes prevalence. Step 3 collected blood samples from survey respondents who met the requirements for 8-hour fasting, and only for FBG test, prior to testing. Respondents were asked about taking insulin or other diabetes medication [for diabetes] prescribed by a doctor or health worker. Results showed:

Among respondents, prevalence of adult aged 18-69 with raised blood glucose or currently on medication was 6.3%. Among those aged group of 60-69, 19.0% of men and 20.8% of women reported having raised blood glucose or were currently on medication for diabetes, as shown in Table 50. Of whom, around one in ten men and women in age categories 45-59 and 60-69 had impaired fasting glycaemia (Table 51).

Table 50. Raised blood glucose or currently on medication for diabetes**

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	187	0.9	0.0-2.2	316	1.6	0.2-2.9	503	1.2	0.2-2.2
30-44	440	5.7	3.6-7.9	825	5.4	3.7-7.1	1265	5.6	4.1-7.0
45-59	464	11.1	7.9-14.3	829	15.6	12.7-18.5	1293	13.3	11.1-15.6
60-69	291	19.0	13.8-24.2	571	20.8	16.9-24.8	862	20.0	16.7-23.3
18-69	1382	5.5	4.3-6.7	2541	7.1	5.9-8.3	3923	6.3	5.4-7.2

* Impaired fasting glycaemia is defined as either

- plasma venous value: ≥ 6.1 mmol/L (110mg/dl) and < 7.0 mmol/L (126mg/dl)
- capillary whole blood value: ≥ 5.6 mmol/L (100mg/dl) and < 6.1 mmol/L (110mg/dl)

** Raised blood glucose is defined as either

- plasma venous value: ≥ 7 mmol/L (126mg/dl) and
- capillary whole blood value: ≥ 6.1 mmol/L (110mg/dl)

Table 51. Impaired Fasting Glycaemia*

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	187	2.1	0.0-4.3	316	0.9	0.0-1.9	503	1.5	0.3-2.8
30-44	440	5.3	3.3-7.4	825	3.4	1.8-5.1	1265	4.4	3.1-5.7
45-59	464	9.4	6.4-12.3	829	9.2	6.9-11.5	1293	9.3	7.4-11.2
60-69	291	9.2	5.8-12.7	571	9.8	7.1-12.5	862	9.5	7.2-11.8
18-69	1382	5.0	3.6-6.4	2541	4.0	3.2-4.9	3923	4.5	3.7-5.4

In the oldest two age groups, more women than men reported being on medication for diabetes (5.9% of men and 10.6% of women aged 45-59, and 10.7% for men as compared to 16.4% for women aged 60-69, as shown in Table 52).

Table 52. Currently on medication for diabetes

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	191	0.0	0.0-0.0	322	0.4	0.0-1.1	513	0.2	0.0-0.5
30-44	461	0.6	0.0-1.2	840	1.6	0.7-2.4	1301	1.0	0.5-1.5
45-59	478	5.9	3.7-8.0	846	10.6	7.9-13.2	1324	8.2	6.3-10.0
60-69	302	10.7	6.8-14.6	589	16.4	12.5-20.2	891	13.8	11.0-16.5
18-69	1432	2.0	1.4-2.6	2597	4.1	3.2-4.9	4029	3.0	2.4-3.5

Men aged 60-69 were more likely than women in this age group to have raised blood glucose not previously diagnosed (10.3% compared to 5.6%) and in the same age group women previously diagnosed with raised blood glucose were more likely to be taking medication than were men (15.9% compared to 10.9% respectively), as shown in tables 53 and 54.

Table 53. Raised blood glucose diagnosis and treatment among all respondents

Age Group (years)	Men						
	n	% with raised blood glucose, not previously diagnosed	95% CI	% with previously diagnosed raised blood glucose, not on medication n	95% CI	% with previously diagnosed raised blood glucose, on medication n	95% CI
18-29	187	0.9	0.0-2.2	2.6	0.3-4.9	0.0	0.0-0.0
30-44	441	5.2	3.1-7.3	4.4	1.8-7.0	0.6	0.0-1.2
45-59	464	5.3	3.0-7.5	4.8	2.8-6.9	5.4	3.3-7.5
60-69	293	10.3	6.2-14.5	5.1	2.3-7.9	10.9	6.9-14.9
18-69	1385	3.7	2.7-4.7	3.8	2.4-5.2	1.9	1.3-2.5

Table 54. Raised blood glucose diagnosis and treatment among all respondents

Age Group (years)	Women						
	n	% with raised blood glucose, not previously diagnosed	95% CI	% with previously diagnosed raised blood glucose, not on medication n	95% CI	% with previously diagnosed raised blood glucose, on medication n	95% CI
18-29	316	1.2	0.0-2.4	0.3	0.0-0.9	0.4	0.0-1.1
30-44	825	2.9	1.6-4.2	3.1	1.8-4.5	1.5	0.6-2.4
45-59	831	5.7	4.0-7.4	5.2	3.5-6.9	9.8	7.3-12.4
60-69	575	5.6	3.5-7.6	7.5	5.0-10.1	15.9	12.0-19.9
18-69	2547	3.0	2.2-3.8	2.8	2.1-3.4	3.9	3.0-4.7

Testing for total cholesterol

Total cholesterol levels in blood were measured because it is an important indicator of risk for CVD. As for blood glucose, testing was done on a subset of survey respondents that have met the requirements for 8-hour fasting. Results showed:

The percentage of raised total cholesterol increased from younger to older age groups in both sexes. One in five (21.0%) of men and nearly three in ten (28.9%) women aged 18-69 had total cholesterol levels ≥ 190 mg/dl, and nearly one-third (30%) of men and half (49.0%) of women aged 60-69 had levels in this range (Table 56).

The highest percentage of total cholesterol ≥ 240 mg/dl was seen in women aged 60-69, at 16.7%, followed by 7.5% for men in this same age group (Table 56).

Table 55. Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	179	13.3	7.9-18.8	314	19.1	14.0-24.2	493	16.1	12.3-19.9
30-44	448	24.7	20.5-28.9	826	27.8	24.2-31.4	1274	26.2	23.1-29.3
45-59	462	28.2	23.6-32.9	839	42.3	38.3-46.2	1301	35.2	32.1-38.4
60-69	292	30.0	23.5-36.5	585	49.0	43.9-54.1	877	40.4	36.3-44.6
18-69	1381	21.0	18.1-23.9	2564	28.9	26.1-31.7	3945	24.9	22.6-27.2

Table 56. Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	179	0.7	0.0-2.1	314	4.3	2.0-6.6	493	2.4	1.1-3.8
30-44	448	5.0	2.8-7.1	826	5.4	3.4-7.4	1274	5.2	3.7-6.7
45-59	462	6.4	3.8-8.9	839	10.9	8.4-13.4	1301	8.6	6.8-10.4
60-69	292	7.5	3.6-11.4	585	16.7	13.0-20.3	877	12.5	9.7-15.4
18-69	1381	3.6	2.5-4.8	2564	7.0	5.7-8.3	3945	5.3	4.4-6.2

The prevalence of raised total cholesterol among adult for both sexes increases with age. It found that the prevalence of raised total cholesterol for adult aged 18-69 was 25.5%. More women (29.6%) than men (21.0%) reported raised total cholesterol or currently on medication for raised cholesterol (Table 57). Result showed that adults having total cholesterol ≥ 240 mg/dl remained higher for women than men was 8.1% and 3.6%, respectively (Table 58).

Table 57. Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	179	13.3	7.9-18.8	314	19.1	14.0-24.2	493	16.1	12.3-19.9
30-44	448	24.7	20.5-28.9	826	28.7	25.0-32.4	1274	26.9	23.8-30.0
45-59	462	28.2	23.6-32.9	839	43.6	39.6-47.6	1301	36.7	33.4-39.9
60-69	292	30.0	23.5-36.5	585	50.8	45.7-55.8	877	41.8	37.6-46.0
18-69	1381	21.0	18.1-23.9	2564	29.6	26.8-32.4	3945	25.5	23.2-27.8

Table 58. Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl or currently on medication for raised cholesterol

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	179	0.7	0.0-2.1	314	4.3	2.0-6.6	493	2.4	1.1-3.8
30-44	448	5.0	2.8-7.1	826	6.6	4.3-8.8	1274	6.0	4.4-7.6
45-59	462	6.4	3.8-8.9	839	13.1	10.4-15.7	1301	10.5	8.4-12.6
60-69	292	7.5	3.6-11.4	585	20.4	16.3-24.5	877	15.2	12.1-18.3
18-69	1381	3.6	2.5-4.8	2564	8.1	6.7-9.5	3945	6.1	5.1-7.1

Measurement of daily salt intake

The NSP for Prevention and Control of NCD 2022-2030 has set a target of a 30% relative reduction in mean population intake of salt/sodium.

Levels of sodium and creatinine in spot urine samples were measured in STEP 3 to estimate population 24-hour salt intake. The WHO recommendation is less than 5 grams of salt or ~2 grams of sodium per person per day. Results showed little variation in salt intake across age groups in each sex category, but men had somewhat higher mean salt intake than women (10.5 grams for men as compared to 8.4 grams for women aged 18-69, as shown in Table 70).

Table 59. Mean salt intake (g/day)

Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-29	166	10.3	9.9-10.7	254	8.3	8.1-8.6	420	9.4	9.2-9.7
30-44	410	10.5	10.3-10.8	715	8.9	8.8-9.1	1125	9.8	9.6-9.9
45-59	409	10.7	10.5-10.9	737	8.2	8.0-8.3	1146	9.5	9.3-9.6
60-69	257	10.5	10.2-10.8	527	7.1	7.0-7.2	784	8.6	8.4-8.8
18-69	1242	10.5	10.3-10.7	2233	8.4	8.3-8.5	3475	9.5	9.4-9.6

Urine cotinine test results

Self-reported measures of smoking status may lead to an under-estimation of smoking prevalence among adults, especially women.⁵ Cotinine testing can be useful in validating self-reported tobacco use. Cotinine levels in a nonsmoker are generally less than 10 ng/mL, whereas cotinine levels in a light smoker or someone exposed to second-hand tobacco smoke are 11 ng/mL to 30 ng/mL. Cotinine levels in a heavy smoker may be more than 500 ng/mL. WHO STEPS analyses results based on two levels – Urine Cotinine 10 ng/mL and Urine Cotinine 200 ng/mL. Results showed:

⁵ Williams J, Rakovac I, Loyola E, Sturua L, Maglakelidze N, Gamkrelidze A, Mauer-Stender K, Mikkelsen B, Breda J. A comparison of self-reported to cotinine-detected smoking status among adults in Georgia. Eur J Public Health. 2020 Oct 1;30(5):1007-1012. doi: 10.1093/eurpub/ckaa093. Erratum in: Eur J Public Health. 2020 Oct 1;30(5):1037. PMID: 32588045; PMCID: PMC7536257.

The percentage of men 18-69 who tested cotinine positive (200 ng/ml) was 36.3% which was quite close to the 35.8% tobacco use prevalence based on self-report for men, and this was seen in all age groups for men.

For women aged 18-69, 9.2% were found to be cotinine positive (200 ng/ml) as shown in Table 61 while the self-reported prevalence of tobacco uses for women aged 18-69 was 7.7% (Figure 5). The largest differences between self-report and cotinine test results (for urine cotinine 200 ng/ml) were for women aged 18-29 (1.5% vs. 2.8% respectively, and women aged 60-69 (25.0 vs. 28.4% respectively as shown in Table 24 and Table 61).

Table 60. Urine Cotinine 10 ng/mL test results

Age Group (years)	Men			Women			Both Sexes		
	n	% Cotinine (+)	95% CI	n	% Cotinine (+)	95% CI	n	% Cotinine (+)	95% CI
18-29	191	41.4	33.7-49.1	308	4.7	1.8-7.7	499	23.7	18.9-28.6
30-44	460	38.6	33.6-43.5	817	9.4	6.9-11.9	1277	25.0	21.8-28.2
45-59	475	50.6	45.1-56.1	834	25.4	21.6-29.2	1309	38.2	34.4-42.0
60-69	302	49.0	42.4-55.5	587	32.7	27.9-37.4	889	40.3	36.1-44.5
18-69	1428	42.8	38.8-46.7	2546	12.7	10.7-14.8	3974	28.3	25.6-31.0

Table 61. Urine Cotinine 200 ng/mL test results

Age Group (years)	Men			Women			Both Sexes		
	n	% Cotinine (+)	95% CI	n	% Cotinine (+)	95% CI	n	% Cotinine (+)	95% CI
18-29	191	33.3	26.0-40.7	308	2.8	0.5-5.2	499	18.6	14.1-23.2
30-44	460	32.2	27.6-36.8	817	4.7	3.1-6.3	1277	19.4	16.6-22.2
45-59	475	45.8	40.3-51.4	835	20.9	17.5-24.4	1310	33.6	29.9-37.2
60-69	302	46.6	40.1-53.0	587	28.4	24.1-32.8	889	36.9	32.9-40.9
18-69	1428	36.3	32.7-39.9	2547	9.2	7.7-10.8	3975	23.3	20.9-25.7

The result showed that for men aged 18-69, 30.7% who had reported tobacco use were cotinine positive (200 ng/ml), while 5.6% who reported no tobacco use were cotinine positive at 200 ng/ml (Table 62).

Table 62. Reported tobacco use versus 200 ng/mL, men

Men									
Age Group (years)	n	% Reported use and Cotinine (+)	95% CI	% No Reported use and Cotinine (+)	95% CI	% Reported use and Cotinine (-)	95% CI	% No Reported use and Cotinine (-)	95% CI
18-29	191	26.4	19.7-33.1	6.9	3.2-10.6	4.8	1.6-8.0	61.9	54.1-69.8
30-44	460	27.3	23.0-31.6	4.9	2.7-7.0	5.1	2.7-7.5	62.7	57.8-67.7
45-59	475	41.3	36.1-46.5	4.6	2.5-6.7	4.4	2.5-6.3	49.7	44.1-55.4
60-69	302	42.1	35.9-48.3	4.4	1.6-7.2	3.6	1.5-5.8	49.8	43.6-56.1
18-69	1428	30.7	27.4-34.0	5.6	3.9-7.3	4.7	3.1-6.3	59.0	55.2-62.7

Table 63. Reported tobacco use versus cotinine 200 ng/mL, women

Women									
Age Group (years)	n	% Reported use and Cotinine (+)	95% CI	% No Reported use and Cotinine (+)	95% CI	% Reported use and Cotinine (-)	95% CI	% No Reported use and Cotinine (-)	95% CI
18-29	308	1.7	0.0-3.7	1.2	0.0-2.4	0.0	0.0-0.0	97.2	94.8-99.5
30-44	817	2.8	1.6-4.1	1.8	0.8-2.8	0.9	0.2-1.6	94.4	92.6-96.2
45-59	834	16.6	13.4-19.8	4.4	2.8-6.0	2.6	1.3-3.9	76.4	72.8-80.1
60-69	587	22.3	18.4-26.2	6.1	4.0-8.2	3.5	2.0-5.1	68.1	63.4-72.7
18-69	2546	6.8	5.4-8.2	2.4	1.7-3.2	1.1	0.7-1.5	89.6	88.0-91.3

Prediction of cardiovascular disease risk

Data from Steps 1, 2 and 3 were used to generate the percentage of respondents who are most at risk for developing cardiovascular disease in the next 10 years. The WHO cardiovascular disease risk laboratory-based chart for South-East Asia was used to assess a 10-year CVD risk of $\geq 20\%$ which is defined according to age, sex, systolic blood pressure, smoking status (current smokers), total cholesterol, and diabetes (previously diagnosed diabetes or raised fasting blood glucose ≥ 126 mg/dl).

Results showed:

One in 10 men (10.4%) aged 40-69 had a 10-year CVD risk $\geq 20\%$ or already had existing CVD. Compared to men, a higher percentage of women aged 40-69 had a 10-year CVD risk $\geq 20\%$ or already had existing CVD, at 14.7% (Table 64).

The percentage of eligible persons for receiving drug therapy and counselling to prevent heart attacks and strokes was similar for men and women aged 40-69 (25.4% of men and 27.1% of women). More than one in three eligible men and women aged 55-69 received drug therapy and counselling (41.4% and 40.3% respectively, as shown in Table 65).

Table 64. Percentage of respondent with a 10-year CVD risk $\geq 20\%$ or with existing CVD

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	492	8.8	6.2-12.3	858	14.0	11.4-17.1	1350	11.3	9.3-13.5
55-69	462	13.4	10.5-17.1	900	15.8	13.2-18.8	1362	14.7	12.6-17.1
40-69	954	10.4	8.3-12.9	1758	14.7	12.8-16.9	2712	12.5	11.1-14.2

Table 65. Percentage of eligible persons receiving drug therapy and counseling* to prevent heart attacks and strokes

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	41	12.4	5.1-27.3	125	17.5	11.7-25.3	166	15.4	10.3-22.4
55-69	66	41.4	28.8-55.3	142	40.3	31.8-49.4	208	40.8	33.0-49.1
40-69	107	25.4	16.9-36.2	267	27.1	22.0-33.0	374	26.4	21.4-32.0

*Counseling is defined as receiving advice from a doctor or other health worker to quit using tobacco or not start, reduce salt in diet, eat at least five servings of fruit and/or vegetables per day, reduce fat in diet, start or do more physical activity, maintain a healthy body weight or lose weight.

Summary of Combined Risk Factors

The WHO STEPS survey results included a summary of the percentage of respondents with 0, 1-2, or 3-5 of the following NCD risk factors:

- Current daily smoking
- Less than five servings of fruit and/or vegetables per day
- Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)
- Overweight or obese (BMI ≥ 25 kg/m²)
- Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP).

These percentages are based on data collected in Step 1 and Step 2 and are reported by age groups 18-44 and 45-69. The majority of men and women in both age groups fell into the 1-2 risk factor category. There are, however, a significant portion compared to younger age group for both men and women aged 45-69 who were in the 3-5 risk factors category (25.7% of men, and 20.1% of women, as shown in Table 66).

Table 66. Summary of Combined Risk Factors, men and women

Age Group (years)	Men						
	n	% With 0 risk factors	95% CI	% With 1-2 risk factors	95% CI	% With 3-5 risk factors	95% CI
18-44	681	8.1	5.7-10.6	80.8	77.5-84.0	11.1	8.3-13.9
45-69	766	5.4	3.3-7.4	68.9	65.0-72.8	25.7	22.2-29.2
18-69	1447	7.4	5.5-9.4	77.8	75.1-80.5	14.8	12.5-17.1
Age Group (years)	Women						
	n	% With 0 risk factors	95% CI	% With 1-2 risk factors	95% CI	% With 3-5 risk factors	95% CI
18-44	1141	13.9	11.1-16.7	81.8	78.7-84.9	4.3	3.1-5.5
45-69	1392	7.2	5.2-9.1	72.7	69.8-75.6	20.1	17.7-22.6
18-69	2533	12.0	9.9-14.2	79.2	76.8-81.6	8.7	7.6-9.9

Oral Health

The National Action Plan for Oral Health 2023-2030 has set a target for 25% of health centres to have essential basic oral care services, and for the prevalence of the main oral diseases and conditions over the life course to show a relative reduction of 10%.⁶

Many oral diseases and conditions are caused by modifiable risk factors, such as tobacco and/or alcohol use, and high consumption of sugar-sweetened drinks and food, or very low consumption of fruits and vegetables that provide important nutrients for healthy gums and teeth. Rapid urbanization and globalization of food marketing for company imported foods with high sugar and sodium content are driving an increase in unhealthy diet in many low- and middle-income countries (LMICs). At the same time, utilization of oral health preventive care treatment is low in many countries.^{7,8} This situation was reflected in the results from the 2023 Cambodia STEPs survey, which showed a high prevalence of many oral health disease conditions among Cambodian adults, and most adults had low utilization of dental health care.

Status of teeth and gums:

Overall, men retained more of their natural teeth throughout life than women, and this was seen in all age groups (Table 67).

Among adults having natural teeth both sexes aged 18-69, more than half (53.7%) reported having poor or very poor state of teeth. The percentage of those having poor and very poor state of teeth for both sexes increased with age. Poor oral health was already very high at ages 18-29 (with an average of 43.7% for both sexes combined and reaching 63.8% at ages 60-69 years (Table 68). A smaller percentage of men and women having natural teeth reported having poor and very poor state of gums, with 15.8% reported for both sexes aged 18-29. This increased to 26.3% for both sexes in age category 60-69 (Table 69).

⁶ The National Action Plan for Oral Health 2023-2030. PMD/MoH, 2023. Available on the MoH Webpage: <http://hismohcambodia.org/public/publications.php?pid=4>

⁷ Hossinpoor AR, Itani L, Perersen 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

⁸ 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

Table 67. Percentage of respondents with natural teeth

Men									
Age Group (years)	n	% ≥ 20 natural teeth	95% CI	% 10 - 19 natural teeth	95% CI	% 1 - 9 natural teeth	95% CI	% No natural teeth	95% CI
18-29	212	97.0	94.4-99.6	3.0	0.4-5.6	0.0	0.0-0.0	0.0	0.0-0.0
30-44	479	95.6	92.8-98.3	4.0	1.4-6.7	0.4	0.0-0.9	0.0	0.0-0.0
45-59	490	83.4	79.8-87.1	10.4	7.4-13.5	5.7	3.4-8.1	0.4	0.0-1.1
60-69	309	60.4	53.5-67.2	26.0	20.5-31.4	10.7	6.7-14.6	3.0	0.3-5.8
18-69	1490	91.4	89.9-92.9	6.3	4.9-7.6	2.0	1.4-2.6	0.3	0.0-0.5
Women									
Age Group (years)	n	% ≥ 20 natural teeth	95% CI	% 10 - 19 natural teeth	95% CI	% 1 - 9 natural teeth	95% CI	% No natural teeth	95% CI
18-29	343	94.6	91.0-98.2	5.2	1.6-8.8	0.2	0.0-0.5	0.0	0.0-0.0
30-44	871	87.6	84.8-90.4	10.0	7.4-12.7	2.3	1.3-3.3	0.0	0.0-0.1
45-59	856	67.7	63.1-72.4	21.1	17.3-24.9	9.8	6.9-12.6	1.4	0.3-2.5
60-69	600	44.6	39.6-49.5	24.9	19.7-30.1	25.0	20.5-29.5	5.5	3.0-8.1
18-69	2670	82.8	80.8-84.8	11.6	9.9-13.2	4.9	4.0-5.7	0.8	0.5-1.0
Both Sexes									
Age Group (years)	n	% ≥ 20 natural teeth	95% CI	% 10 - 19 natural teeth	95% CI	% 1 - 9 natural teeth	95% CI	% No natural teeth	95% CI
18-29	555	95.8	93.6-98.0	4.1	1.9-6.3	0.1	0.0-0.3	0.0	0.0-0.0
30-44	1350	91.9	89.9-94.0	6.8	4.8-8.7	1.3	0.7-1.8	0.0	0.0-0.0
45-59	1346	75.8	72.6-78.9	15.6	12.9-18.4	7.7	5.9-9.5	0.9	0.2-1.6
60-69	909	51.7	47.4-55.9	25.4	21.7-29.1	18.6	15.7-21.5	4.4	2.5-6.3
18-69	4160	87.3	85.6-89.0	8.8	7.4-10.3	3.4	2.8-3.9	0.5	0.3-0.7

Table 68. Percentage of respondents having poor or very poor state of teeth among those having natural teeth

Age Group (years)	Men			Women			Both Sexes		
	n	% having poor or very poor state of teeth	95% CI	n	% having poor or very poor state of teeth	95% CI	n	% having poor or very poor state of teeth	95% CI
18-29	11	39.0	2.1-75.9	22	46.6	18.1-75.1	33	43.7	21.6-65.9
30-44	28	56.0	38.8-73.3	135	44.5	32.6-56.4	163	48.3	37.9-58.8
45-59	99	48.5	36.8-60.2	305	57.9	50.2-65.5	404	54.6	47.8-61.3
60-69	136	59.5	49.6-69.4	339	66.4	60.2-72.5	475	63.8	58.3-69.4
18-69	274	51.4	42.6-60.1	801	55.0	49.3-60.8	1075	53.7	48.6-58.9

Table 69. Percentage of respondents having poor or very poor state of gums among those having natural teeth

Age Group (years)	Men			Women			Both Sexes		
	n	% having poor or very poor state of gums	95% CI	n	% having poor or very poor state of gums	95% CI	n	% having poor or very poor state of gums	95% CI
18-29	215	12.4	6.9-17.9	348	14.6	8.4-20.8	563	13.5	9.3-17.7
30-44	485	15.0	9.4-20.5	886	13.1	10.5-15.6	1371	14.1	10.6-17.6
45-59	495	17.8	13.6-22.0	873	21.6	17.8-25.3	1368	19.6	16.6-22.7
60-69	312	24.4	18.5-30.3	614	27.8	23.4-32.2	926	26.3	22.5-30.1
18-69	1507	15.1	12.2-18.1	2721	16.6	13.5-19.7	4228	15.8	13.5-18.2

Oral hygiene practices:

The majority (91.3%) of Cambodian men and women aged 18-69 reported daily cleaned their teeth (Table 70). More women (70.3%) than men (50.3%) reported cleaning their teeth at least twice daily (Table 71). Among adults aged 18-69 for both sexes, more than two-third (76.6%) reported using toothpaste containing fluoride to clean their teeth (Table 72).

Table 70. Percentage of respondents cleaning their teeth at least once a day

Age Group (years)	Men			Women			Both Sexes		
	n	% cleaning teeth at least daily	95% CI	n	% cleaning teeth at least daily	95% CI	n	% cleaning teeth at least daily	95% CI
18-29	11	85.0	64.4-100.0	22	100.0	100.0-100.0	33	94.3	86.4-100.0
30-44	28	100.0	100.0-100.0	136	97.0	94.1-99.8	164	98.0	96.1-99.9
45-59	100	84.6	76.9-92.2	306	93.2	88.3-98.2	406	90.2	86.1-94.3
60-69	137	85.3	77.5-93.0	347	84.6	78.6-90.5	484	84.8	79.9-89.7
18-69	276	88.2	83.0-93.4	811	93.0	90.5-95.5	1087	91.3	88.9-93.7

Table 71. Percentage of respondents cleaning their teeth at least twice a day

Age Group (years)	Men			Women			Both Sexes		
	n	% cleaning teeth at least twice a day	95% CI	n	% cleaning teeth at least twice a day	95% CI	n	% cleaning teeth at least twice a day	95% CI
18-29	11	47.7	12.8-82.7	22	89.2	73.4-100.0	33	73.5	54.6-92.4
30-44	28	59.4	41.8-77.0	136	75.3	65.2-85.4	164	70.0	60.8-79.2
45-59	100	48.7	37.3-60.2	306	68.9	62.3-75.5	406	61.8	55.5-68.1
60-69	137	46.6	36.4-56.9	347	56.2	49.2-63.1	484	52.7	46.6-58.7
18-69	276	50.3	42.2-58.5	811	70.3	65.1-75.6	1087	63.2	58.4-68.1

Table 72. Percentage of respondents using toothpaste containing fluoride among those using toothpaste

Age Group (years)	Men			Women			Both Sexes		
	n	% using toothpaste containing fluoride	95% CI	n	% using toothpaste containing fluoride	95% CI	n	% using toothpaste containing fluoride	95% CI
18-29	160	82.9	76.0-89.7	253	81.5	75.2-87.9	413	82.2	77.3-87.1
30-44	355	77.0	70.7-83.2	592	76.9	72.5-81.3	947	76.9	72.6-81.2
45-59	352	69.7	63.1-76.2	504	69.9	64.4-75.5	856	69.8	65.2-74.4
60-69	194	65.2	56.7-73.7	313	48.8	41.5-56.1	507	57.3	51.6-63.0
18-69	1061	77.2	73.3-81.2	1662	76.0	72.4-79.5	2723	76.6	73.5-79.7

Problems related to oral health:

Among all respondents aged 18-69 for both sexes, nearly half (47.4%) reported having oral pain or discomfort (Table 73). More than two-third (39.6%) of adults aged 18-69 complained of difficulty in chewing food. Among oldest age group, 63.0% of men and 68.8% of women reported having difficulty in chewing foods during the past 12 months (Table 74). In the same age group, those having difficulty with speech/trouble pronouncing words during the past 12 months for both men and women reported 24.3% and 26.4% respectively (Table 75).

Table 73. Percentage having oral pain or discomfort

Age Group (years)	Men			Women			Both Sexes		
	n	% Having oral pain or discomfort	95% CI	n	% Having oral pain or discomfort	95% CI	n	% Having oral pain or discomfort	95% CI
18-29	216	43.4	35.1-51.8	348	51.9	44.9-58.8	564	47.6	42.3-52.9
30-44	487	44.4	38.0-50.9	888	49.1	45.0-53.1	1375	46.6	42.4-50.8
45-59	498	41.4	36.0-46.7	875	51.4	46.7-56.0	1373	46.3	42.7-49.9
60-69	312	52.4	45.6-59.1	616	52.3	47.4-57.2	928	52.3	47.9-56.8
18-69	1513	43.9	39.7-48.2	2727	51.0	47.5-54.4	4240	47.4	44.5-50.2

Table 74. Percentage of respondents having difficulty in chewing foods during the past 12 months

Age Group (years)	Men			Women			Both Sexes		
	n	% Difficulty in chewing foods	95% CI	n	% Difficulty in chewing foods	95% CI	n	% Difficulty in chewing foods	95% CI
18-29	216	28.1	21.0-35.3	348	37.6	30.7-44.4	564	32.8	27.5-38.1
30-44	487	29.8	24.7-35.0	888	43.3	38.9-47.8	1375	36.0	32.4-39.7
45-59	498	43.5	38.5-48.5	875	54.9	50.6-59.2	1373	49.1	45.2-52.9
60-69	312	63.0	56.4-69.5	616	68.8	64.7-72.9	928	66.2	62.7-69.7
18-69	1513	34.0	30.5-37.5	2727	45.4	42.1-48.7	4240	39.6	37.0-42.1

Table 75. Percentage of respondents having difficulty with speech/trouble pronouncing words during the past 12 months

Age Group (years)	Men			Women			Both Sexes		
	n	% Difficulty with speech/ pronouncin g words	95% CI	n	% Difficulty with speech/ pronounci ng words	95% CI	n	% Difficulty with speech/ pronouncin g words	95% CI
18-29	216	13.0	7.9-18.0	348	12.4	7.6-17.2	564	12.7	9.2-16.2
30-44	487	11.7	7.9-15.5	888	15.9	12.6-19.2	1375	13.6	10.7-16.5
45-59	498	20.6	15.8-25.3	875	24.6	20.4-28.9	1373	22.6	19.1-26.0
60-69	312	24.3	18.1-30.4	616	26.4	21.9-30.8	928	25.4	21.8-29.0
18-69	1513	14.8	11.9-17.6	2727	17.1	14.7-19.5	4240	15.9	13.9-17.9

The percentage of adults for both sexes aged 18-69 who reported having feeling tense was 30.2%. Among those age group, more than one fourth of men (26.2%) and nearly one third of women (34.5%) revealed feeling tense because of problems with teeth or mouth during the past 12 months, and there were no large differences in these percentages seen across age groups (Table 76). Among adults aged 60-69, 10.6% of men and 14.6% of women had difficulty doing usual activities due to oral health problems during the past 12 months (Table 77).

Table 76. Percentage of respondents feeling tense because of problems with teeth or mouth during the past 12 months

Age Group (years)	Men			Women			Both Sexes		
	n	% Feeling tense because of problems with teeth or mouth	95% CI	n	% Feeling tense because of problems with teeth or mouth	95% CI	n	% Feeling tense because of problems with teeth or mouth	95% CI
18-29	216	26.2	19.4-32.9	348	35.4	28.4-42.4	564	30.7	25.6-35.8
30-44	487	24.2	18.3-30.1	888	31.2	27.0-35.4	1375	27.4	23.5-31.3
45-59	498	29.3	24.6-34.0	875	36.5	32.0-41.1	1373	32.8	29.4-36.3
60-69	312	27.8	21.7-34.0	616	36.9	31.8-42.0	928	32.9	28.8-37.0
18-69	1513	26.2	22.6-29.9	2727	34.5	31.1-37.9	4240	30.2	27.6-32.9

Table 77. Percentage of respondents having difficulty doing usual activities during the past 12 months

Age Group (years)	Men			Women			Both Sexes		
	n	% Having difficulty doing usual activities	95% CI	n	% Having difficulty doing usual activities	95% CI	n	% Having difficulty doing usual activities	95% CI
18-29	216	9.4	5.0-13.8	348	11.9	6.9-16.9	564	10.6	7.4-13.9
30-44	487	9.1	6.3-11.8	888	14.0	10.9-17.0	1375	11.3	9.0-13.6
45-59	498	13.7	9.9-17.5	875	20.4	16.4-24.3	1373	17.0	14.1-19.9
60-69	312	16.3	11.2-21.4	616	16.2	12.3-20.2	928	16.2	13.2-19.3
18-69	1513	10.6	8.2-12.9	2727	14.6	11.8-17.3	4240	12.5	10.6-14.4

Seeking care for oral health:

More than one in ten (15.2%) adults aged 18-69 reported receiving regular dental care. Among those age group, 13.4% of men and 17.1% of women were seen a dentist during the past 12 months (Table 78). More than half (54.9%) of adults for both sexes aged 18-69 were never received dental care. It showed that a larger percentage of men (60.9%) than women (48.5%) reported never having received dental care (Table 79).

Table 78. Percentage of respondents having seen a dentist during the past 12 months

Age Group (years)	Men			Women			Both Sexes		
	n	% having seen a dentist during the past 12 months	95% CI	n	% having seen a dentist during the past 12 months	95% CI	n	% having seen a dentist during the past 12 months	95% CI
18-29	216	15.1	8.8-21.5	348	15.6	10.8-20.4	564	15.3	11.5-19.2
30-44	487	12.4	8.6-16.1	888	18.7	15.5-21.8	1375	15.3	12.7-17.8
45-59	498	11.9	8.8-15.1	875	17.8	14.6-21.0	1373	14.8	12.5-17.1
60-69	312	13.3	8.1-18.4	616	17.1	13.9-20.4	928	15.4	12.4-18.4
18-69	1513	13.4	10.5-16.4	2727	17.1	15.0-19.2	4240	15.2	13.3-17.1

Table 79. Percentage of respondents who have never received dental care

Age Group (years)	Men			Women			Both Sexes		
	n	% never received dental care	95% CI	n	% never received dental care	95% CI	n	% never received dental care	95% CI
18-29	216	62.6	54.4-70.9	348	50.8	43.6-58.0	564	56.8	51.4-62.1
30-44	487	57.7	51.7-63.7	888	44.7	40.1-49.4	1375	51.7	47.6-55.9
45-59	498	63.9	58.2-69.5	875	48.9	44.3-53.5	1373	56.5	52.7-60.4
60-69	312	58.0	52.0-64.1	616	50.0	44.1-56.0	928	53.6	49.1-58.1
18-69	1513	60.9	56.6-65.3	2727	48.5	44.8-52.1	4240	54.9	51.8-57.9

Table 80 showed that adults aged group 18-69 reported pain or trouble with teeth or gums. Among those age groups, more than two-third of men (65.8%) and women (61.6%) had oral problems. There were no large differences in this percentage across age groups for either men or women. There were only a small proportion (3.7% of visit for men, and 3.1%) of visits for routine check-up treatment.

Table 80. Main reason for last visit to the dentist among those who ever visited a dentist, men and women

Age Group (years)	Men										
	n	% Consultation/ advice	95% CI	% Pain or trouble with teeth or gums	95% CI	% Follow-up treatment	95% CI	% Routine check-up treatment	95% CI	% Other	95% CI
18-29	5	0.0	0.0-0.0	58.1	43.8-72.5	27.9	15.4-40.4	7.4	0.0-15.4	5	0.0
30-44	2	0.5	0.0-1.3	68.9	61.2-76.6	28.3	20.5-36.2	1.7	0.1-3.3	2	0.5
45-59	6	1.3	0.0-3.0	70.5	62.5-78.6	22.7	16.0-29.4	1.3	0.0-3.1	6	1.3
60-69	3	2.0	0.0-4.9	78.8	70.5-87.0	17.9	10.1-25.8	0.0	0.0-0.0	3	2.0
18-69	16	0.6	0.1-1.0	65.8	59.6-72.0	26.4	20.5-32.4	3.7	0.6-6.8	16	0.6
Age Group (years)	Women										
	n	% Consultation/ advice	95% CI	% Pain or trouble with teeth or gums	95% CI	% Follow-up treatment	95% CI	% Routine check-up treatment	95% CI	% Other	95% CI
18-29	8	5.1	0.2-10.0	56.7	47.2-66.1	32.0	22.7-41.2	3.4	0.0-6.8	8	5.1
30-44	23	2.2	0.6-3.9	62.0	56.2-67.8	26.5	21.3-31.7	4.1	1.6-6.7	23	2.2
45-59	9	1.7	0.4-3.0	67.7	62.0-73.3	25.4	20.4-30.4	2.9	0.9-4.8	9	1.7
60-69	8	1.4	0.0-3.0	69.5	63.0-76.0	26.3	20.1-32.5	0.9	0.0-2.1	8	1.4
18-69	48	3.2	1.2-5.2	61.6	57.2-66.1	28.4	24.0-32.8	3.3	1.7-4.9	48	3.2

Cervical Cancer Screening

The NSP for Prevention and Control of NCD 2022-2030 includes a target that 70% of women are screened for cervical cancer.

Results showed that most women in the NSP target age group of 30-49 years had never been screened for cervical cancer, with only 20.3% (95% CI: 17.2-23.5) of women of that age group reporting they had ever been screened (Table 81). The rate of screening among women aged 18-69 was 13.8% (Table 82).

Table 81. Cervical cancer screening among women aged 30-49

Age Group (years)	Women		
	n	% ever tested	95% CI
30-49	996	20.3	17.2-23.5

Table 82. Cervical cancer screening among women aged 18-69

Age Group (years)	Women		
	n	% ever tested	95% CI
18-29	303	7.6	4.4-10.9
30-44	811	20.2	16.7-23.6
45-59	762	17.7	14.2-21.3
60-69	518	11.0	7.8-14.3
18-69	2394	13.8	11.7-15.9

Chapter 4. Discussion

The Cambodia STEPS Survey 2023 on noncommunicable diseases (NCDs) risk factors and conditions using the WHO STEPS methodology was the third round of national STEPS surveys in Cambodia. The objectives of the survey were to evaluate the current prevalence of risk factors and NCD conditions among the population aged 18-69, and to identify the extent to which preventive health care services for NCDs were being utilized. Having results from multiple STEPS surveys, along with other nationally representative surveys of NCD risk factors, makes it possible to monitor trends in the prevalence of NCD risk factors and utilization of NCD prevention services.

The NCD behavioural risk indicators evaluated included diet, physical activity, tobacco use and alcohol consumption.

Fruit and vegetable consumption:

Fruit and vegetables are important components of a healthy diet. Reduced fruit and vegetable consumption is linked to poor health and increased risk of noncommunicable diseases (NCDs).⁹ Current evidence indicates that fruits and vegetables consumed as part of the daily diet can help reduce the risk of coronary heart disease¹⁰, stroke¹¹, and certain types of cancer^{12,13}). As part of a healthy diet low in fat, sugars and sodium, WHO suggests consuming more than 400 grams of fruits and vegetables per day to improve overall health and reduce the risk of certain NCDs.¹⁴

Survey results for fruit and vegetable consumption indicated that the population is not consuming a sufficient quantity of fruits and vegetables. Few Cambodian adults met the WHO recommendation for fruit and vegetable consumption. Overall, 80.7% of both males and females consumed less than 5 servings of fruits and/or vegetables on average per day. Consumption of fruit was particularly low, with the mean number of days in a typical week when fruit was consumed being 2.4 for men and 3.1 for women aged 18-69. The mean number of days in a typical week when vegetables were consumed was higher at

⁹ Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani HA et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012; 380(9859):2224-60

¹⁰ Dauchet L, Amouyel P, Hercberg S, Dallongeville J. Fruit and vegetable consumption and risk of coronary heart disease: a meta-analysis of cohort studies. *Journal of Nutrition*. 2006; 136(10):2588-93.

¹¹ Hartley L, Igbinedion E, Holmes J, Flowers N, Thorogood M, Clarke A et al. Increased consumption of fruit and vegetables for the primary prevention of cardiovascular diseases. *Cochrane Database of Systematic Reviews*. 2013; 6:CD009874.

¹² World Cancer Research Fund, American Institute for Cancer Research. *Food, Nutrition, and Physical Activity, and the Prevention of Cancer: A Global Perspective*. 2007, AICR, Washington D.C.

¹³ Boeing H, Bechthold A, Bub A, Ellinger S, Haller D, Kroke A et al. Critical review: vegetables and fruit in the prevention of chronic diseases. *European Journal of Nutrition*. 2012; 51(6):637-63.

¹⁴ Increasing fruit and vegetable consumption to reduce the risk of noncommunicable diseases, e-Library of Evidence for Nutrition Actions (eLENA), WHO, last updated:09/08/2023, accessed at: <https://www.who.int/tools/elena/interventions/fruit-vegetables-ncds> 01/09/2023

5.5 for both men and women. Of particular concern was that 8.3% reported eating no servings of fruits and/or vegetables, and 45.5% reported consuming only 1-2 servings.

Recommended actions that can be taken to increase fruit and vegetable consumption in the population include:

- Increase behavioral interventions designed to increase fruit and vegetable consumption.
- At community level: promote and support gardening in home, community and school settings; and
- Ministry of Agriculture, Forestry and Fisheries support mechanisms to make agricultural produce safer and more accessible for consumers by promoting the production of local fruit and vegetables.

Reducing salt intake

The close relationship between hypertension and dietary sodium intake is widely recognized and supported by several studies. A reduction in dietary sodium not only decreases the blood pressure and the incidence of hypertension but is also associated with a reduction in morbidity and mortality from cardiovascular diseases.¹⁵ Reducing population salt intake has been identified as an important and cost-effective measure for improving population health outcomes throughout the world because high salt diets are linked to raised blood pressure. WHO's recommends intake be limited to less than 5 grams of salt (or 2 grams of sodium) per person per day.¹⁶

The STEPS survey results for salt intake based on spot urine testing showed the mean salt intake for men aged 18-69 was 10.5 g/day, whereas for women aged 18-69 mean salt intake was 8.4 g/day, and for both sexes the mean intake was 9.5 g/day. A 30% reduction for both sexes ages aged 18-69 by 2030 would be a mean population intake of 7.7 grams of salt per day. Results show some positive signs that education about the harms of too much salt intake were having an impact on people's knowledge and attitudes about salt and sodium consumption, with most men and women recognizing the importance of lowering their sodium consumption, and significant percentages of men and particularly women taking steps such as checking labels for sodium content or using low sodium alternatives. This indicates that public health education campaigns about the danger of consuming too much salt are having a positive effect on knowledge and attitudes. More effort will be needed to bring about the change in dietary practice that is needed to meet the 30% reduction target.

Recommended actions to reduce salt in the diet are included in the NSP, MSAP and the National Action Plan for Salt Reduction 2021-2027. Along with conducting surveillance to monitor salt intake, these actions include:

¹⁵ Grillo A, Salvi L, Coruzzi P, Salvi P, Parati G. Sodium Intake and Hypertension. *Nutrients*. 2019; 11(9):1970. <https://doi.org/10.3390/nu11091970>

¹⁶ The Global Health Observatory, WHO; <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3082>, accessed 01/02/2023.

- Reduce salt content across the food supply
- Introduce a food labelling system so that consumers can easily identify salt content of foods
- Raise public awareness of health risks of too much salt in the diet
- Implement salt reduction in community settings

Sugar-Sweetened Beverages

Sugar-sweetened beverage consumption is high in many countries and is contributing to poor quality of diets. Products, such as sugar-sweetened beverages, often consumed in large amounts, contribute to the overall energy density of diets. The calories provided by sugar-sweetened beverages and foods have little nutritional value but are at the same time high in calories, and yet may not provide the same feeling of fullness that solid food provides¹⁷. As a result, total energy intake may increase which can lead to unhealthy weight gain. There is also evidence to suggest that sugar-sweetened beverages are often consumed quickly and as a result, consumers tend not to reduce intake of other foods sufficiently to compensate for the extra calories provided by sugar-sweetened beverages¹⁸. Unfortunately, the recommendations of medical experts and health organizations to limit consumption of sweetened beverages has not been able to slow the sales of these products in many countries – and particularly in low- and middle-income countries as a result of aggressive marketing practices of multi-national food companies^{19,20}.

The STEPS survey results for consumption of both carbonated soft drinks and for other sugar sweetened beverages (SSBs) indicated that consumption of these products was not high in the general population, but efforts should be maintained to educate and encourage the population to avoid consumption of these products. Younger adults were most likely to consume carbonated soft drinks, with 15.7% of men aged 18-29 consuming them once per day and another 6.5% consuming them twice per day. For women 18-29 10.4% consumed a carbonated soft drink once per day and 1.9% reported consuming them twice per day.

Recommended actions to limit the impact of sugar-sweetened beverages need to include policies that can counter the cheap supply of these products for consumers. A good example for this is found in the MSAP, which identifies increasing taxation on drinks with high sugar content as a potential responsibility of the Ministry of Economy and Finance.

¹⁷ Pan A, Hu FB. Effects of carbohydrates on satiety: differences between liquid and solid food. *Current Opinion in Clinical Nutrition and Metabolic Care*. 2011; 14(4):385-90.

¹⁸ Bachman CM, Baranowski T, Nicklas TA. Is there an association between sweetened beverages and adiposity? *Nutrition Reviews*. 2006; 64(4):153–174.

¹⁹ PepsiCo and Coca-Cola's profit aided by growth in emerging markets [online document]. Foodnavigator-usa.com; 2011. (<http://www.foodnavigator-usa.com/content/view/print/388021>)

²⁰ Taylor FC, Satija A, Khurana S, Singh G, Ebrahim S. Pepsi and Coca Cola in Delhi, India: availability, price and sales. *Public Health Nutrition*. 2011; 14(4):653-60.

Public education campaigns should be designed especially for children and young adults, as they are likely targets for marketing these products.

Physical inactivity

There is strong evidence showing that physical activity can help prevent and manage noncommunicable diseases (NCDs) such as heart disease, stroke, diabetes and several cancers.²¹ It also helps prevent hypertension, maintain healthy body weight and can improve mental health, quality of life and well-being. To measure physical activity levels the 2023 STEPS survey followed the WHO recommendation that over the course of a week adults should do at least 150 minutes of moderate-intensity physical activity (including activity for work, during transport and during leisure time) or 75 minutes of vigorous-intensity physical activity, or an equivalent combination of moderate and vigorous-intensity physical activity to achieve at least 600 MET-minutes. This recommendation has changed since the 2010 STEPS survey, making it difficult to make a simple comparison of results between the two surveys. Results showed most Cambodian men and women were meeting the WHO recommendation. Only 7.5% of men and 11.1% of women aged 18-69 did not meeting the recommendation. However, a large percentage of women aged 18-69 (84.9%) did not engage in any vigorous physical activity in a typical week.

Actions to support physical activity promotion in the general population should be maintained, and actions that target older women specifically should be considered.

Tobacco use

There are 1.3 billion tobacco users around the world. Half of tobacco users will die from a tobacco-related disease, with most of the deaths and disabilities attributable to tobacco being the result of noncommunicable diseases. Tobacco use is a risk factor for all four of the leading causes of NCDs, including cardiovascular diseases, cancers, chronic respiratory diseases and diabetes.²²

Nearly one-fifth of the adult population (19.4%) aged 18-69 were current smokers, including 35.5% of men and 2.4% of women. Most adults who smoke tobacco were daily smokers - among men, 29.4 % reported daily smoking while among women 2.1% were daily smokers. Data from STEPS and other nationally representative surveys on tobacco use among adults (most notably four National Adult Tobacco Surveys of Cambodia, 2006, 2011, 2014 and 2021) show a decline in the prevalence of tobacco smoking in adults. This decline coincides with the establishment and enforcement of tobacco control

²¹ Karen Milton, Rona Macniven & Adrian Bauman (2014) Review of the epidemiological evidence for physical activity and health from low- and middle-income countries, *Global Public Health*, 9:4, 369-381, DOI: 10.1080/17441692.2014.894548

²² Tobacco and noncommunicable diseases, WHO, 4 May 2023, <https://www.who.int/europe/publications/m/item/tobacco-and-noncommunicable-diseases> , accessed December 20, 2023.

policies, including with National Tobacco Control Law which came into effect in 2015, and several Sub-decrees and Prakas that have supported implementation and compliance for specific tobacco control policies.

One apparent result of these policies is that most current smokers reported making at least one attempt to quit smoking in the previous 12 months. Increased interest in quitting is commonly seen in countries that have adopted and enforced evidence-based tobacco control policies. Only 12.5% of men, however, reported being former smokers. This may be seen as an indication of how difficult it is to quit. Success in quitting tobacco can be increased when health care providers offer assistance to those who are ready to quit.^{23,24}. Large numbers of health providers at provincial level have been trained in recent years, but results indicate that more health care providers need to be trained to provide brief advice to quit. Only one-third of men and less than half of women tobacco users were advised to quit by their doctor or health care worker).

The STEPS survey results also showed that more than half of both men and women (55.6%) reported being exposed to second-hand smoke at home during the 30 days before the survey., and this was an increase from results from STEPS 2010, in which 41.1% of adult men and women reported exposure to second-hand smoke at home. In contrast, a smaller percentage of men and women reported exposure to second-hand tobacco smoke at the workplace in 2023 as compared to 2010 (20.2% as compared to 36.4%.) These findings have implications for actions that may be needed to reduce exposure to second-hand tobacco smoke. They do show that enforcement of Smoke Free regulations in the workplace are working, but reducing exposure to second-hand smoke in the home lies outside of the realm of government policy and enforcement (except to the extent that if effectively implemented the policies will reduce the number of smokers). To impact the high level of exposure in the home will require community-based programs that can educate families on the danger of second-hand smoke and empower non-smokers to make their homes smoke free.

Although tobacco smoking among women remains low, the prevalence of current tobacco uses among women aged 18-69, at 7.7%, was still double the prevalence reported for smoking tobacco. The 2010 STEPS reported a rate of 14.9% for smokeless tobacco use, but because of different ages sampled caution needs to be used in comparing these results. The 2023 STEPS results showed a sharp increase in the prevalence of female tobacco use with increased age, jumping from 4.0% in women aged 30-44 to 19.7 in ages 45-59, and to 25% for women aged 60-69. The much lower rates reported by younger women may indicate that the practice of tobacco use (particularly smokeless tobacco) among women in Cambodia is declining. Epidemiologic data from studies conducted in Southeast Asia

²³ Utap MS, Tan C, Su AT. Effectiveness of a brief intervention for smoking cessation using the 5A model with self-help materials and using self-help materials alone: A randomised controlled trial. *Malays Fam Physician*. 2019 Aug 31;14(2):2-9. PMID: 31827729; PMCID: PMC6818691.

²⁴ Lancaster T, Stead L, Silagy C, Sowden A. Effectiveness of interventions to help people stop smoking: findings from the Cochrane Library. *BMJ*. 2000 Aug 5;321(7257):355-8. doi: 10.1136/bmj.321.7257.355. PMID: 10926597; PMCID: PMC1118332

(Cambodia, Vietnam, Indonesia, Malaysia) have identified that a significant proportion of women of reproductive age and older chew tobacco — often as part of a betel quid mixture that includes other potentially harmful ingredients.²⁵ Betel (areca nut) is itself classified as a Group 1 Carcinogen.²⁶ The results from the 2010 STEPS survey showed smokeless tobacco use among women was more prevalent in rural than in urban area (9.8% vs. 3.8%) for both sexes. More research is needed to understand the cultural practices that underly smokeless tobacco use among women in Cambodia.

This was the first time that the STEPS survey in Cambodia has employed cotinine testing as an aid to verifying self-reported tobacco use status. Some studies have indicated that low smoking prevalence among women in some Asian countries could be due to under-reporting.^{27 28} Cotinine testing provides an additional indicator of tobacco exposure based on cotinine levels in urine samples of survey participants in confirming self-reported tobacco use in both males and females.

Action areas for tobacco control are identified under NSP Strategic objective 1. These include:

- Focusing on regulation through enforcement of the Law on Tobacco Control
- Increasing tax on tobacco products
- Implementing the Strategic plan for Education and reduction of tobacco use (2021-2026)

²⁵ Singh PN, Kheam T, Lopez J, Job JS, Yel D. Patterns of Maternal Tobacco Use Among Cambodian Women: Findings from a Nationwide Sample. *Asia Pacific Journal of Public Health*. 2013;25(5_suppl):54S-63S. doi:10.1177/1010539513487014

²⁶ Review of areca (betel) nut and tobacco use in the Pacific: a technical report, WHO, Western Pacific Regional Office, 2013.

²⁷ Kyunghhee JC, Khang, Cho HJ, Hidden female smokers in Asia: A comparison of self-reported with cotinine-verified smoking prevalence rates in representative national data from an Asian population, *Tobacco Control*, 10/04/2011

²⁸ Park, M.B., Kim, CB., Nam, E.W. et al. Does South Korea have hidden female smokers: discrepancies in smoking rates between self-reports and urinary cotinine level. *BMC Women's Health* 14, 156 (2014). <https://doi.org/10.1186/s12905-014-0156-z>

Alcohol consumption

In 2018, the World Health Organization (WHO) reported that alcohol contributed to more than 200 diseases and injury-related health conditions, including liver diseases, road injuries, violence, cancers, cardiovascular diseases, suicides, tuberculosis, and HIV/AIDS.²⁹ In 2019, alcohol use was estimated to account for 2.07 million deaths of males and 374,000 deaths of females, globally.³⁰

Findings from the 2023 STEPS survey showed that the frequency of alcohol consumption in the previous 30 days was twice as high for men aged 18 to 69 (71.2%) as it was for women aged 18-69 (27.5%). The largest percentage of drinkers among both men and women were those aged 30-44 (80.8% and 30.3% respectively). Of greatest concern was the heavy episodic drinking among men, with 49.5% of men aged 18-69 (who drank alcohol in the past 30 days) who reported that they engaged in heavy episodic drinking (having six or more standard drinks on at least one drinking occasion in the past 30 days). There are many factors that underly harmful consumption of alcohol, including access to cheap alcohol products. Consumption of unrecorded alcohol is likely a significant factor in Cambodia, with nearly one in five men (18.2%) and more than one in ten women (13.5%) who drank alcohol in the past 30 days consuming unrecorded alcohol. Of all alcohol consumed by men aged 18-69, 10.1% was unrecorded, while for women aged 18-69 this figure was 8.1%.

Several Actions are described in the MSA-NCD to reduce the harmful use of alcohol in order to attain a 10% reduction in the prevalence of heavy episodic drinking among adults aged 25-64 by 2027 (from a 2010 baseline of 45.1% for men and 4.5% for women aged 25-64). These include passing a national target of harmful use of alcohol control law, and increasing taxation on alcohol products. Assuming these actions are successfully undertaken strategies should be used to reduce the availability of unrecorded alcohol, which may significantly undermine these efforts to reduce access to cheap alcohol.

The NCD metabolic risk indicators evaluated included raised blood pressure, raised blood glucose and body mass index. These are discussed in the following text.

Raised blood pressure or hypertension

Hypertension, tobacco use, diabetes mellitus, and lipid abnormalities [high cholesterol] are the major modifiable risk factors for cardiovascular disease. Among these risk factors, high blood pressure has been associated with the strongest evidence for causation of

²⁹ GBD 2016 Alcohol Collaborators. Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet*. 2018;392(10152):1015-35. PubMed PMID: 30146330WHO.

³⁰ GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet*. 2020;396(10258):1223-49. PubMed PMID: 33069327

CVD.³¹ In recent decades low- and middle-income countries (LMICs) have witnessed a significant shift toward raised blood pressure.³² However, in many countries many adults do not have their blood pressure monitored regularly and are unaware they have hypertension. This has historically been the case in Cambodia. STEPS 2023 showed that fewer adults reported never having had their blood pressure measured (30.2%) as compared to STEPS 2010 results (51.0%). Although some of this difference may be due to different age ranges used by the two surveys, such a large difference implies that more adult Cambodians are getting their blood pressure measured. In 2010, a larger percentage of men (62.1%) reported never having blood pressure measured than did women (40.4%), and this was also shown in 2023 results (37.8% for men as compared to 22.3% for women).

The 2010 survey reported a mean systolic BP of 116, and a mean diastolic BP of 72 for all adults aged 25-64. The 2023 survey reports similar results, with a mean systolic BP of 117 and diastolic BP of 75 for adults aged 18-69. The 2010 survey reported the prevalence of high blood pressure (or currently on medication for raised BP) among all adults aged 25-64 as 11.2% (men 12.8%, women 9.5%). For 2023, the prevalence for all adults aged 18-69 was 10.9% (men 13.6%, women 8.1%). Both surveys show a sharp increase in the prevalence of high blood pressure in older age groups, with 2010 showing 16.9% prevalence in adults aged 45-54 and a 24.2% prevalence in adults aged 55-64. The 2023 results show the prevalence of raised blood pressure among adults aged 45-59 was 18.8% and a prevalence of 18.3% among adults aged 60-69.

In 2010, 39.3% of adults who had been previously diagnosed with raised blood pressure reported taking medication for raised blood pressure. In 2023, the percent of adults aged 18-69 who had been previously diagnosed and were taking medication for high blood pressure was 60.2%, with about ten percent more women (64.4%) taking medication than men (55%). This is another positive sign that efforts to increase detection of high blood pressure in the population, and to control it through medication, are having an impact in the percent getting blood pressure measured and taking medication if diagnosed with high blood pressure.

The STEPS 2023 survey showed that efforts to increase early screening and detection of high blood pressure are reducing the percentage of people who have never had blood pressure measured, and that more of those who were found to have high blood pressure were being treated for the condition. To achieve the NSP objective of at least 50% of hypertension patients receive treatment in health facilities, the Ministry of Health should continue its efforts to strengthen capacity for screening, diagnosis and treatment of elevated BP at primary and tertiary care levels across the country.

³¹ Fuchs FD, Whelton PK. High Blood Pressure and Cardiovascular Disease. Hypertension. 2020 Feb;75(2):285-292. doi: 10.1161/HYPERTENSIONAHA.119.14240. Epub 2019 Dec 23. PMID: 31865786; PMCID: PMC10243231.

³² Schutte AE, Srinivasapura Venkateshmurthy N, Mohan S, Prabhakaran D. Hypertension in Low- and Middle-Income Countries. Circ Res. 2021 Apr 2;128(7):808-826. doi: 10.1161/CIRCRESAHA.120.318729. Epub 2021 Apr 1. PMID: 33793340; PMCID: PMC8091106.

Raised blood glucose

Diabetes mellitus, particularly type 2 diabetes, has become a major public health burden globally. Diabetes-associated comorbidities are increasing in many LMICs due to an epidemiological transition which is frequently referred to as the growing dual burden of non-communicable and communicable disease.³³ Diabetes affected an estimated 463 million people in 2019, a number that is expected to grow to approximately 700 million by 2045.³⁴

STEPS 2010 results showed that 2.9% of adults aged 24-64 had raised blood glucose or were currently on medication for diabetes. STEPS 2023 results for adults aged 18-69 showed that there were 6.3% with raised blood glucose, or currently on medication for diabetes. In 2010, 1.3% reported that they were on medication for diabetes, as compared to 3.0% of respondents who reported that they were taking diabetes medication in 2023. Although caution should be used in comparing results between the two surveys, there does seem to be an increase in the prevalence of raised blood glucose among older adults in 2023. In 2010, 4.8% of adults aged 45-54 and 6.0% of those aged 55-64 had raised blood glucose or were currently on medication for diabetes. The 2023 results showed that 13.3% of adults aged 45-59 and 20.0% of adults aged 60-69 had raised blood glucose or were on medication.

Among men aged 30-44, 66.6% reported never having had their blood sugar measured, while for men aged 45-59 this figure was 56.6%. Among women 51.9% who were aged 30-44, and 39.5% who were aged 45-59 had never had their blood sugar measured. These figures for men and women in older age groups, along with those obtained for blood pressure for the same age groups, can serve as valuable benchmarks for Cambodia's efforts to scale up early screening and prevention efforts for CVD risk. In terms of biochemical measurement results, results for impaired fasting glycemia showed that only 3.7% of men and 3.0% of women were found to have raised blood glucose among those not previously diagnosed. Among both men and women aged 18-69 who were previously diagnosed with impaired insulin, only a small percentage, 6.4% reported taking insulin, while 45.9% reported taking medication prescribed for diabetes.

Achieving the NSP target to halt the increase in diabetes cannot be achieved by medical intervention alone, but will require effective implementation of multisectoral actions described in the MSA-NCD, particularly those actions that can reduce the adoption of unhealthy lifestyles, such as by increasing taxation on SSBs and alcohol, along with health promotion efforts to encourage physical activity in the population.

³³ Lam AA, Lepe A, Wild SH, Jackson C. Diabetes comorbidities in low- and middle-income countries: An umbrella review. *J Glob Health*. 2021 Jul 24;11:04040. doi: 10.7189/jogh.11.04040. PMID: 34386215; PMCID: PMC8325931.

³⁴ International Diabetes Federation. *IDF Diabetes Atlas*, 9th edn. Brussels, Belgium: International Diabetes Federation, 2019. [Google Scholar]

Raised cholesterol

A large percentage of both men and women reported never having their cholesterol measured, with 83.7% of men aged 18-69 and 78.9% of women aged 18-69 never having had their cholesterol measured, including more than half of those ages 45-69. Results for biochemical analysis showed that 21.0% of men aged 18-69 years and 28.9% of women aged 18-69 had total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl, and that 3.6% of men, and 7.0% of women had total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl. Results also indicated that availability of statins for cholesterol control is limited, with only around 1 in 5 men and women previously diagnosed with elevated total cholesterol taking oral medication for high cholesterol.

Body Mass Index

Globally, obesity has increased four times since 1990 to 2022. In 2016, more than 1.9 billion adults worldwide were overweight and 650 million were living with obesity, outnumbering those who were normal weight.³⁵ The rise in overweight and obesity, which was once considered exclusively a high-income country problem, has become of a growing concern in many low- and middle-income countries, including Cambodia. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults [defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2)]. WHO defines overweight for adults as a BMI greater than or equal to 25; and obesity for adults is a BMI greater than or equal to 30. Raised BMI is a major risk factor for noncommunicable diseases such as diabetes, heart disease and stroke which are the leading causes of NCD deaths. Other diseases linked to obesity include musculoskeletal disorders (especially osteoarthritis), and certain cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon). The risk for these noncommunicable diseases increases, with increases in BMI.³⁶

The prevalence of overweight (BMI ≥ 25) among men aged 18-69 was 17.5%, while for women aged 18-69 it was 21.5%. Only 2.9% of men were classified as obese (BMI ≥ 30), while for women 5.7% fell into the obese range. The prevalence of overweight and obesity appears to be increasing as Cambodia continues to experience a significant epidemiologic shift from in higher prevalence of communicable diseases and undernutrition to increasing rates of overweight/obesity and related NCDs. Although there is a national target to contain the increase in obesity, results from multiple STEPS surveys indicate that the rate of obesity is increasing. Containing the rise in overweight and obesity will require more than health education on the dangers of making unhealthy food choices; it will require actions such as increasing tax on alcohol and drinks with high sugar content, and identified in the MSA-NCD, and protecting young people from aggressive marketing of obesogenic foods.

³⁵ Obesity and overweight, Key facts. WHO, <http://www.who.int/mediacentre/factsheets/fs311/en/>, accessed January 25, 2023

³⁶ Ibid.

Oral Health

The 2023 STEPS survey included several questions on oral health which were not included in the previous two surveys. Oral health diseases make up a significant proportion of NCDs, affecting 3.6 billion people worldwide in 2016. The majority of oral health diseases (2.4 billion globally) are dental caries, followed by periodontal diseases and caries of deciduous teeth.³⁷ Oral health is an important aspect of overall health and shares many of the same NCD risk factors, such as poor diets that include high sugar content, alcohol misuse, tobacco use, and physical inactivity.³⁸

Effective prevention and management of most dental disease requires a long-term care approach, but dental care systems in many LMICs is structured mainly around the delivery of acute care services. This is reflected in STEPS survey results for oral health, which showed that the majority of dental health care visits were due to pain or trouble with teeth or gums – 65.8% for men and 61.6% for women aged 18-69. Less than one in five adults aged 18-69 reported receiving regular dental care, and more than half reported that they had never received dental care (54.9%), with a larger percentage of men (60.9%) than women (48.5%) reported never having received dental care. Results also show that poor oral health has a significant impact on quality of life for many Cambodians, with nearly half (47.4%) of all respondents reporting that they have oral pain or discomfort. As expected, oral health problems are greatest for older Cambodians, with two-thirds of adults aged 60-69 reporting that they had difficulty in chewing foods during the past 12 months, as well as other health issues related to poor teeth and/or gums. This may exacerbate poor nutrition, especially among older adults.

In terms of broad actions that can be taken to improve oral health, the WHO Global Oral Health Status Report, published in 2022³⁹, calls for urgent action by integrating oral health into NCD and universal health coverage initiatives. The National Action Plan for Oral Health (NAPOH) 2023-2030 has been adopted and was disseminated in August 2023. The NAPOH endorses expanding access to Universal Health Care for Oral Health, focusing on early intervention to address oral health problems for all age groups. As this is the first time that oral health has been included in the Cambodia STEPS survey, these results should be widely disseminated to support a call to action to implement the NAPOH, and to raise awareness of the connection between oral health and NCDs.

³⁷ 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(01100):1211-1259.doi:10.1016/S0140-6736(17)32154-2

³⁸ Petersen PE, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C. The global burden of oral diseases and risks to oral health. *Bull World Health Org*. (2005) 83:661–69. 10.1590/S0042-96862005000900011

³⁹ Global Oral Health Status Report: Towards universal health coverage for oral health by 2030, <https://www.who.int/team/noncommunicable-diseases/global-status-report-on-oral-health-2022>, accessed 01/19/2023

More specifically, as there is a clear dose-response relationship between the amount of sugar consumed and the risk of tooth decay⁴⁰, it will be important to accelerate actions to limit consumption of foods with high sugar content, such as sugar-sweetened beverages, along with oral health education, increasing oral health services for early detection and prevention, and integration of oral health care into primary health care delivery.

Cervical Cancer Screening

The most common cause of cervical cancer is a persisting infection with the sexually transmitted human papilloma virus (HPV).⁴¹ Infection with HPV is accountable for 90–100% of cervical cancer cases, especially in women <35 years old.⁴² Cambodia has a population of 6.06 million women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 1135 women are diagnosed with cervical cancer and 643 die from the disease. Cervical cancer ranks as the 2nd most frequent cancer among women in Cambodia and the 2nd most frequent cancer among women between 15 and 44 years of age.⁴³

Strategies to reduce mortality from cervical cancer include Vaccination for HPV and early screening and diagnosis of HPV infections which can reduce progression to cervical cancer. The NSP target is for 70% of women aged 30-49 to be screened for cervical cancer at least once in their lifetime. Results from the STEPS survey showed that only 1 in 5 women (20.3%) aged 30-49 reported that they had ever been screened for cervical cancer.

While the adoption of screening standards was adopted in 2018, low screening rates should be a call to action to ensure training of medical personnel, availability of resources, and the implementation of active invitations for women in the target age group to be screened for cervical cancer.

⁴⁰ FV Zohoorim RM Duckworth, The impact of diet and nutrition on oral health. Chapter 7: sugar and dental caries. Karger, Basel 2020: 68-76.

⁴¹ Golfetto L, Alves EV, Martins TR, Sincero TCM, Castro JBS, Dannebrock C, Oliveira JG, Levi JE, Onofre ASC, Bazzo ML. PCR-RFLP assay as an option for primary HPV test. *Braz J Med Biol Res.* 2018;51:e7098. doi: 10.1590/1414-431x20177098. [PMC free article] [PubMed] [CrossRef] [Google Scholar]

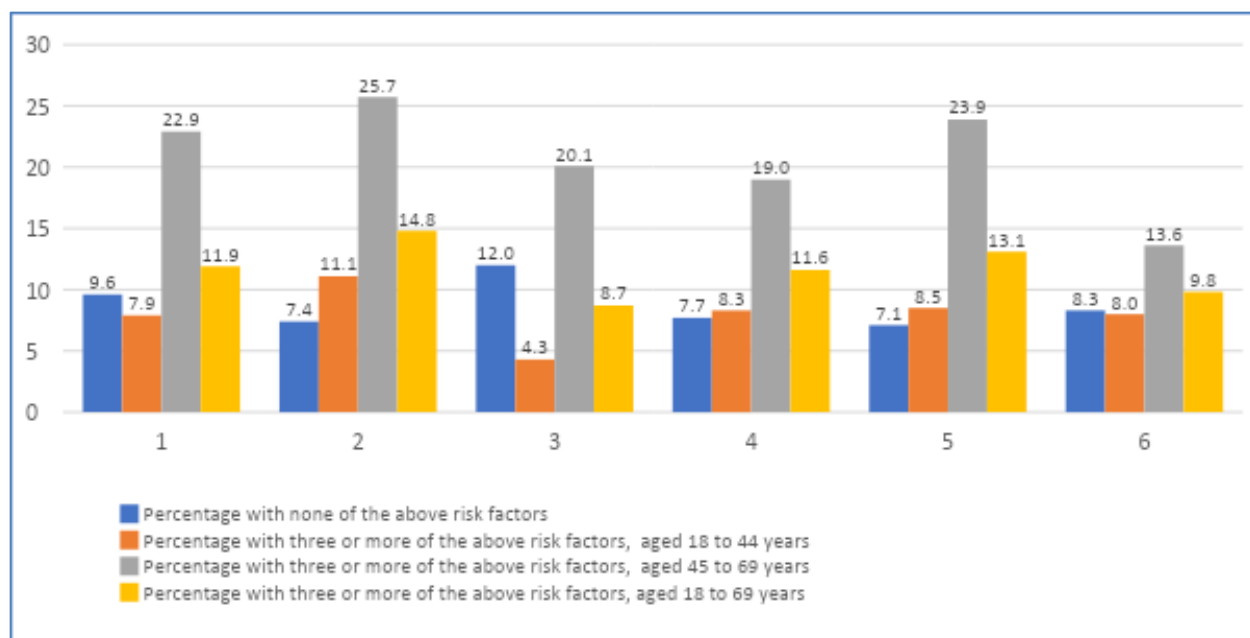
⁴² Bruni L, Diaz M, Castellsagué X, Ferrer E, Bosch FX, de Sanjosé S. Cervical human papillomavirus prevalence in 5 continents: Meta-analysis of 1 million women with normal cytological findings. *J Infect Dis.* 2010;202:1789–1799. doi: 10.1086/657321. [PubMed] [CrossRef] [Google Scholar]

⁴³ Human Papillomavirus and Related Cancers, Fact Sheet 2023, ICO/IARC Information Centre on HPV and Cancer, https://hpvcentre.net/statistics/reports/KHM_FS.pdf, accessed January 25, 2024.

Comparison of results with previous STEPS surveys in Cambodia

Appendix A shows a preliminary comparison of results for adults aged 25-64 years from the three STEPS surveys conducted in 2010, 2016, and 2023. Results show that while progress has been made towards reducing tobacco use among males, more needs to be done to see positive reductions toward national targets in other areas. The success in tobacco control has resulted from strong multi-sectoral actions, including enforcement of policies and increased taxation on tobacco products. A similar effort will be required to control other NCD risk factors, and many of these actions are contained in national strategies and plans for NCD control. Figure 2 shows the comparison of combined NCD risk factors (current daily smokers, less than 5 servings of fruits and vegetables per day, insufficient physical activity, overweight, and raised BP) between STEPS 2023 and STEPS 2016. There has been an increase in the percentage of adults having three or more risk factors for cardiovascular disease. More effort is needed to standardize and analyse results from multiple STEPS surveys, and to report finding that can help to increase a sense of urgency for increased actions to reduce NCD risk factors in the population.

Figure 9: Summary of combined risk factors, comparison between STEPS 2023 and STEPS 2016



Conclusions:

This STEPS survey 2023 provides updated prevalence of NCD risk factors and conditions in the adult population ages 18 to 69 years and monitors trends in the prevalence of NCDs risk factors and utilization of health services. Most of major risk factors for NCDs and conditions, including consumption of fruits and vegetables, salt intake, consumption of sugar-sweetened drinks, physical inactivity, overweight and obesity, harmful use of alcohol, prevalence of hypertension, prevalence of raised blood glucose or diabetes, prevalence of elevated blood cholesterol are increasing compared to the previous surveys. The survey also reveals that prevalence of current tobacco uses among men steadily decreased compared to other two previous surveys.

The prevalence of high blood pressure among adults (both sexes) aged 25-64 increased from the 11.2% baseline established in STEPS 2010, to 19.9% in STEPS 2023.

The prevalence of raised blood glucose or diabetes among adult population aged 18-69 is 6.3%. It is higher among older adult aged 45-59 (13.3%) and aged 60-69 (20%).

There is a little increase in cervical cancer screening coverage among women aged 30-49. In addition, STEPS survey 2023 provides baseline data on oral health with high proportion of adults aged 18-69 reported difficulty in chewing, having poor state of teeth and oral pain or discomfort.

Recommendations:

- Reduce NCD risk factors identified in STEPS survey by accelerating the implementation of the National Multisectoral Action Plan for the Prevention and Control of NCDs 2018-2027, and the National Action Plan for Salt Reduction 2021-2027 through joint efforts of Inter-ministerial Committee for the Prevention and Control of NCDs, Working Group for Sugar-Sweetened Beverage (SSB) Taxation, Committee on Tobacco Control and Tobacco Taxation.
- Improve healthy diet and physical activity by implementing the Guideline for Healthy Lifestyle through various trainings and awareness raising sessions of health workers at primary care level, and Village Health Support Groups (VHSG) members.
- Reduce harmful use of alcohol by implementing SAFER - WHO alcohol control initiative in Cambodia.
- Strengthen hypertension and diabetes services at primary care level to ensure access to quality and cost-effective health services through implementation of the National Strategic Plan for the Prevention and Control of NCDs 2022-2030 and improving availability of essential NCD medicines and basic medical equipment.
- Scale up and strengthen cervical cancer screening and management at all levels of health facilities by implementing the National SOP for Cervical Cancer Screening and Management.
- Integrate oral health in PHC activities to expand access of Universal Health Care for Oral Health, with a focus on early detection and intervention of oral diseases through the implementation of the National Action Plan for Oral Health 2023-2030.
- Disseminate findings of Cambodia STEPS survey 2023 to respective ministries, stakeholders, academic institutions, DPs and CSOs to ensure broad utilization of the information contained in the survey and awareness raising to reduce NCD risk factors.
- Conduct periodically the WHO STEPwise approach to NCD risk factor surveillance (STEPS) to monitor NCD risk factors in Cambodia.
- Conduct further investigations to understand more about the habits of Cambodian adults in consuming ultra-processed foods and foods where sugars are added.



Fact Sheet Comparing results from STEPS 2010, 2016, and 2023

The STEPS survey of noncommunicable disease (NCD) risk factors in Cambodia was carried out from June 2023 to July 2023. Cambodia carried out Step 1, Step 2, and Step 3. Socio-demographic and behavioral information was collected in Step 1. Physical measurements such as height, weight, and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of adults aged 18-69. A cross-sectional design was used to produce representative data for that age range in Cambodia. A total of 4240 adults participated in the survey. The overall response rate was 98.1%. A repeat survey is planned for 2028 if funds permit.

Comparison of Results for adults aged 25-64 years (incl. 95% CI) (adjust if necessary)	STEPS-2023				STEPS-2016***				STEPS-2010		
	Both Sexes	Males	Females		Both Sexes	Males	Females		Both Sexes	Males	Females
Step 1 Diet											
Mean number of days fruit consumed in a typical week	2.8 (2.7-3.0)	2.6 (2.5-2.7)	3.1 (3.0-3.3)		2.4 (2.3-2.6)	2.3 (2.1-2.5)	2.5 (2.4-2.7)		2.6 (2.4-2.8)	2.4 (2.2-2.6)	2.8 (2.6-2.9)
Mean number of servings of fruit consumed on average per day	1.3 (1.2-1.4)	1.2 (1.1-1.3)	1.3 (1.2-1.5)		2.3 (2.1-2.4)	2.3 (2.1-2.5)	2.2 (2.1-2.4)		1.0 (0.9-1.1)	1.0 (0.9-1.1)	1.1 (1.0-1.1)
Mean number of days vegetables consumed in a typical week	5.5 (5.4-5.6)	5.5 (5.4-5.7)	5.5 (5.4-5.6)		5.2 (5.1-5.3)	5.2 (5.1-5.3)	5.2 (5.1-5.3)		5.3 (5.2-5.5)	5.4 (5.3-5.5)	5.3 (5.2-5.4)
Mean number of servings of vegetables consumed on average per day	2.5 (2.3-2.6)	2.6 (2.4-2.8)	2.4 (2.2-2.5)		2.7 (2.6-2.9)	2.9 (2.7-3.1)	2.6 (2.4-2.7)		2.0 (1.8-2.1)	2.1 (1.9-2.2)	1.9 (1.8-2.0)
Percentage who ate <i>less than 5 servings</i> of fruit and/or vegetables on average per day	79.4% (77.2-81.6)	81.0% (77.5-83.2)	78.4% (75.9-81.0)		51.9% (48.1-55.6)	49.0% (43.7-54.2)	55.1% (51.2-58.9)		84.3% (82.1-86.6)	83.3% (80.5-86.2)	85.3% (83.1-87.5)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	37.7% (35.0-40.5)	38.6% (34.9-42.4)	36.8% (33.5-40.1)		42.3% (39.2-45.5)	44.7% (39.8-49.7)	39.7% (36.6-42.9)		NA	NA	NA
Percentage who always or often eat processed foods high in salt	26.5% (24.4-28.6)	25.6% (22.5-28.8)	27.5% (25.0-30.1)		36.7% (33.1-40.3)	34.7% (30.1-39.7)	38.8% (35.1-42.6)		NA	NA	NA
Step 1 Physical Activity											
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent) *	7.0% (5.6-8.4)	5.1% (3.6-6.7)	9.0% (6.8-11.1)		7.4% (6.2-8.8)	5.8% (4.1-8.2)	9.0% (7.5-10.9)		10.6% (9.3-11.8)	10.9% (9.1-12.7)	10.3% (8.8-11.7)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	205.7 (72.9-420.0)	270.0 (110.7-475.7)	141.4 (60.0-308.6)		148.6	237.1	90.0 (38.6-244.3)		244.3 (111.4-420.0)	300.0 (120.0-480.0)	214.3

					(51.4-375.0)	(72.9-450.0)				(90.0-360.0)
Percentage not engaging in vigorous activity	57.7% (55.1-60.2)	33.4% (30.0-36.9)	83.1% (81.0-85.2)		47.3% (43.6-51.1)	26.4% (22.2-30.9)	70.3% (66.3-73.9)	63.0% (60.7-65.2)	45.3% (42.3-48.2)	79.7% (77.6-81.9)
Step 1 Tobacco Use										
Percentage who currently smoke tobacco	19.9% (17.8-22.0)	36.6% (33.1-40.1)	2.4% (1.5-3.3)		22.1% (19.5-25.0)	39.7% (35.1-44.5)	2.9% (2.0-4.4)	29.4% (27.4-31.3)	54.1% (51.3-56.9)	5.9% (4.3-7.5)
Percentage who currently smoke tobacco daily	17.0% (15.0-19.1)	31.3% (28.0-34.8)	2.1% (1.3-2.9)		20.1% (17.7-22.8)	36.2% (31.8-40.8)	2.6% (1.7-3.8)	26.4% (24.5-28.3)	49.3% (46.5-52.1)	4.8% (3.3-6.2)
For those who smoke tobacco daily										
Average age started smoking (years)	20.8 (20.1-21.5)	20.7 (19.9-21.4)	22.6 (19.5-25.8)		20.4 (19.5-21.4)	20.3 (19.3-21.3)	22.3 (18.4-26.1)	20.4 (20.0-20.8)	20.1 (19.7-20.5)	23.3 (21.2-25.3)
Percentage of daily smokers smoking manufactured cigarettes	92.6% (90.0-95.2)	93.7% (91.3-96.0)	74.8% (55.3-94.3)		90.2% (85.3-93.5)	90.8% (86.3-93.9)	80.6% (56.6-92.9)	87.1% (84.0-90.2)	88.1% (85.2-90.9)	77.5% (66.4-88.6)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	12.5 (11.5-13.4)	12.7 (11.8-13.7)	8.0 (3.8-12.1)		13.2 (12.0-14.3)	13.6 (12.4-14.8)	6.8 (4.9-8.8)	12.8 (11.9-13.6)	13.4 (12.5-14.2)	6.9 (5.6-8.2)
Step 1 Alcohol Consumption										
Percentage who are lifetime abstainers	19.1% (16.7-21.4)	7.8% (5.1-10.5)	30.9% (27.6-34.1)		24.0% (21.5-26.8)	8.5% (6.3-11.3)	41.0% (37.5-45.2)	26.5% (24.8-28.2)	9.1% (7.5-10.6)	43.0% (40.5-45.4)
Percentage who are past-12-month abstainers	12.6% (11.3-14.0)	7.8% (6.3-9.3)	17.7% (15.6-19.8)		14.0% (12.3-16.0)	9.3% (7.0-12.2)	19.1% (16.6-21.9)	10.0% (9.0-11.1)	6.7% (5.4-8.0)	13.2% (11.8-14.6)
Percentage who currently drink (Drank alcohol in the past 30 days)	51.9% (49.4-54.5)	73.6% (70.3-76.9)	29.2% (26.3-32.1)		47.8% (44.8-50.9)	71.8% (67.0-76.1)	21.6% (19.2-24.3)	53.5% (51.4-55.6)	76.3% (73.9-78.7)	31.9% (29.6-34.2)
Percentage who engages in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	25.7% (22.9-28.4)	52.2% (47.3-57.1)	3.3% (2.0-4.5)		17.4% (14.1-21.3)	12.2% (9.6-15.4)	1.1% (0.7-1.8)	NA	NA	NA
Step 1 Cervical Cancer Screening										
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer			20.3% (17.2-23.5)				14.7% (11.9-17.9)	NA	NA	NA
Step 2 Physical Measurements										
Mean body mass index - BMI (kg/m2)	23.2 (23.0-23.5)	22.9 (22.6-23.3)	23.6 (23.4-23.9)		22.5 (22.3-22.8)	22.4 (22.0-22.8)	22.7 (22.4-23.0)	21.8 (21.7-22.0)	21.7 (21.5-21.8)	22.0 (21.8-22.2)
Percentage who are overweight (BMI ≥ 25 kg/m2)	22.9% (21.0-24.8)	20.4% (17.6-23.2)	25.6% (23.1-28.1)		21.9% (19.4-24.6)	19.7% (16.5-23.3)	24.5% (21.4-27.9)	15.4% (13.9-16.8)	11.6% (9.9-13.3)	19.0% (17.1-20.9)
Percentage who are obese (BMI ≥ 30 kg/m2)	4.7% (3.9-5.6)	3.3% (2.0-4.5)	6.3% (5.1-7.5)		3.6% (2.7-4.8)	3.6% (2.4-5.4)	3.6% (2.5-5.1)	1.9% (1.4-2.3)	1.1% (0.6-1.5)	2.7% (2.0-3.3)
Average waist circumference (cm)		81.8 (80.9-82.8)	79.9 (79.3-80.7)			77.7 (76.7-78.8)	76.7 (76.0-77.3)		76.0 (75.5-76.5)	75.5 (75.0-76.1)

Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	118.2 (117.4-118.9)	122.1 (121.1-123.2)	114.1 (113.2-114.9)		117.0 (116.1-117.8)	119.6 (118.3-120.9)	114.1 (112.9-115.3)		116.1 (115.4-116.7)	120.0 (119.1-120.9)	112.3 (111.6-113.1)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	76.2 (75.7-76.8)	77.3 (76.3-78.2)	75.2 (74.7-75.7)		76.8 (75.9-77.7)	77.9 (76.8-78.9)	77.4 (76.6-78.1)		72.3 (71.7-72.9)	74.0 (73.2-74.8)	70.6 (70.0-71.2)
Percentage with raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP)	19.9% (18.1-21.7)	21.7% (18.7-24.7)	18.1% (16.3-19.9)		14.5% (12.6-16.7)	15.9% (12.9-19.5)	13.0% (11.0-15.4)		11.2% (10.1-12.3)	12.8% (11.1-14.5)	9.6% (8.5-10.8)
Percentage with raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP) previously diagnosed	8.4% (6.1-10.7)	8.7% (4.9-12.6)	8.0% (5.4-10.5)		13.8% (11.8-16.0)	15.6% (12.5-19.2)	11.8% (9.8-14.2)		9.4% (8.4-10.4)	11.7% (10.1-13.3)	7.2% (6.2-8.2)
Percentage with raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP) on medication	11.8% (9.2-14.3)	11.8% (8.2-15.3)	11.8% (8.7-14.9)		NA	NA	NA		NA	NA	NA
Percentage with raised BP (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised BP) controlled	32.7% (28.6-36.8)	23.6% (17.9-29.3)	44.0% (39.0-49.1)		NA	NA	NA		NA	NA	NA
Step 3 Biochemical Measurement											
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mg/dl)	90.9 (89.2-92.7)	90.3 (88.0-92.6)	91.5 (89.5-93.6)		91.4 (89.6-93.1)	91.0 (88.7-93.4)	91.7 (89.9-93.5)		71.5 (70.4-72.6)	72.1 (70.8-73.3)	70.9 (69.6-72.3)
Percentage with impaired fasting glycaemia as defined below -plasma venous value 110 mg/dl and 126 mg/dl	5.5% (4.5-6.5)	6.3% (4.5-8.0)	4.7% (3.6-5.8)		9.6% (8.0-11.4)	8.7% (6.5-11.5)	10.5% (8.7-12.7)		1.4% (1.0-1.8)	1.8% (1.2-2.5)	1.0% (0.6-1.4)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose -plasma venous value $\geq$ 7.0 mmol/L (126 mg/dl)	7.6% (6.5-8.8)	7.2% (5.5-8.9)	8.0% (6.7-9.3)		1.5% (1.0-2.2)	1.3% (0.6-2.6)	1.7% (1.1-2.6)		2.9% (2.3-3.4)	2.5% (1.7-3.3)	3.3% (2.5-4.0)
Mean total blood cholesterol, including those currently on medication for raised cholesterol [choose accordingly: mmol/L or mg/dl]	168.5 (166.1-170.9)	163.3 (160.2-166.4)	173.7 (170.8-176.5)		191.3 (187.5-195.2)	180.0 (175.1-184.9)	203.8 (199.6-208.1)		173.2 (172.0-174.5)	169.9 (168.4-171.4)	176.4 (175.0-177.9)
Percentage with raised total cholesterol ($\geq$ 5.0 mmol/L or $\geq$ 190 mg/dl or currently on medication for raised cholesterol)	27.8% (25.5-30.1)	23.9% (20.9-26.9)	31.7% (28.8-34.6)		48.4% (44.8-51.9)	38.2% (33.6-43.1)	59.5% (55.7-63.2)		20.7% (19.0-22.5)	17.0% (14.8-19.2)	24.2% (22.2-26.3)
Mean intake of salt per day (in grams) (aged group 18-69 years)	9.5 (9.4-9.6)	10.5 (10.3-10.7)	8.5 (8.4-8.6)		8.5 (8.3-8.6)	9.2 (9.0-9.4)	7.6 (7.5-7.7)		NA	NA	NA
Cardiovascular disease (CVD) risk											
Percentage aged 40-69 years with a 10-year CVD risk $\geq$ 20%, or with existing CVD**	12.5 (11.1-14.2)	10.4 (8.3-12.9)	14.7 (12.8-16.9)		23.9 (21.2-26.9)	17.9 (13.2-23.9)	27.8 (24.6-31.2)		NA	NA	NA

Summary of combined risk factors											
- Current daily smokers - less than 5 servings of fruits & vegetables per day - insufficient physical activity	- Overweight (BMI ≥ 25 kg/m²) - Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)										
Percentage with none of the above risk factors	9.6% (8.1-11.1)	7.4% (5.5-9.4)	12.0% (9.9-14.2)		7.7 (6.3-9.3)	7.1 (5.2-9.7)	8.3 (6.9-10.0)		NA	NA	NA
Percentage with three or more of the above risk factors, aged 18 to 44 years	7.9% (6.3-9.5)	11.1% (8.3-13.9)	4.3% (3.1-5.5)		8.3 (6.9-9.8)	8.5 (6.6-10.9)	8.0 (6.3-10.2)		NA	NA	NA
Percentage with three or more of the above risk factors, aged 45 to 69 years	22.9% (20.7-25.1)	25.7% (22.2-29.2)	20.1% (17.7-22.6)		19.0 (16.2-22.0)	23.9 (19.5-28.8)	13.6 (10.9-16.9)		NA	NA	NA
Percentage with three or more of the above risk factors, aged 18 to 69 years	11.9% (10.5-13.3)	14.8% (12.5-17.1)	8.7% (7.6-9.9)		11.6 (10.2-13.1)	13.1 (11.0-15.5)	9.8 (9.1-11.8)		NA	NA	NA

* For complete definitions of insufficient physical activity, refer to the GPAQ Analysis Guide (<https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/physical-activity-surveillance>) or to the WHO Global recommendations on physical activity for health (<https://www.who.int/news-room/fact-sheets/detail/physical-activity>).

** A 10-year CVD risk of $\geq 20\%$ is defined according to age, sex, blood pressure, smoking status (current smokers), total cholesterol, and previously diagnosed diabetes.

*** There was a limitation of STEPS 2016 data accessibility, and it might be different method in calculating biochemical measurement.

For additional information, please contact: STEPS Survey Coordinator: Dr. PHY Maly, Email: malyphy@gmail.com

Appendices

Appendix 1 – STEPS Questionnaire

Cambodia STEPS 2022-2023 Instrument version control WHO STEPS Instrument for Noncommunicable Disease Risk Factor Surveillance



Cambodia 2022-2023

Survey Information

Location and Date		Response	Code
	Cluster/Centre/Village ID		I1
	Cluster/Centre/Village name		I2
	Interviewer ID		I3
	Date of completion of the instrument	 dd mm year	I4

Consent, Interview Language, and Name		Response	Code
Consent has been read and obtained	Yes	1	I5
	No	2 If NO, END	
Interview Language <i>[Khmer]</i>	English	1	I6
	Khmer	2	
Time of interview (24 hour clock)	: hrs mins		I7
Family Surname			I8
First Name			I9
Additional Information that may be helpful			
Contact phone number where possible			I10

Step 1 Demographic Information

CORE: Demographic Information		
Question	Response	Code
Sex (Record Male / Female as observed)	Male 1 Female 2	C1
What is your date of birth? <i>Don't Know 77 77 7777</i>	dd mm year If Known, Go to C4	C2
How old are you?	Years	C3
In total, how many years have you spent at school and in full-time study (excluding pre-school)?	Years	C4

EXPANDED: Demographic Information		
What is the highest level of education you have completed? <i>[INSERT COUNTRY-SPECIFIC CATEGORIES]</i>	No formal schooling 1 Less than primary school 2 Primary school completed 3 Secondary school completed 4 High school completed 5 College/University completed 6 Post graduate degree 7 Refused 88	C5
What is your <i>[insert relevant ethnic group / racial group / cultural subgroup / others]</i> background ?	Khmer 1 Vietnamese 2 Chinese 3 Cham 4 Refused 88	C6
What is your marital status ?	Never married 1 Currently married 2 Separated 3 Divorced 4 Widowed 5 Cohabiting 6	C7

	Refused 88	
Which of the following best describes your main work status over the past 12 months? [INSERT COUNTRY-SPECIFIC CATEGORIES] (USE SHOWCARD)	Government employee 1 Non-government employee 2 Self-employed 3 Non-paid 4 Student 5 Homemaker 6 Retired 7 Unemployed (able to work) 8 Unemployed (unable to work) 9 Refused 88	C8
How many people older than 18 years, including yourself, live in your household?	Number of people If Not Known, Go to C11	C9

EXPANDED: Demographic Information, Continued		
Question	Response	Code
Taking the past year , can you tell me what the average earnings of the household have been? (RECORD ONLY ONE, NOT ALL 3)	Per week Go to T1	C10a
	OR per month Go to T1	C10b
	OR per year Go to T1	C10c
	Refused 88	C10d
Can you give an estimate of the annual household income (In USD) if I read some options to you? Is it [INSERT QUINTILE VALUES IN LOCAL CURRENCY] (READ OPTIONS)	< 100\$ 1 100\$ - <200\$ 2 200\$- < 300\$ 3 300\$- 400\$ 4 >400\$ 5 Don't Know 77 Refused 88	C11

Step 1 Behavioural Measurements

CORE: Tobacco Use

Now I am going to ask you some questions about tobacco use.

Question	Response	Code
Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes? (USE SHOWCARD)	Yes 1 No 2 If No, go to T8	T1

Do you currently smoke tobacco products daily ?	Yes 1 No 2	T2
How old were you when you first started smoking?	Age (years) Don't know 77 <i>If Known, go to T5a/T5aw</i>	T3
Do you remember how long ago it was?	In Years <i>If Known, go to T5a/T5aw</i>	T4a
(RECORD ONLY 1, NOT ALL 3)	OR in Months <i>If Known, go to T5a/T5aw</i>	T4b
Don't know 77	OR in Weeks	T4c
On average, how many of the following products do you smoke each day/week ? (IF LESS THAN DAILY, RECORD WEEKLY) (RECORD FOR EACH TYPE, USE SHOWCARD) Don't Know 7777	DAILY↓ WEEKLY↓	
	Manufactured cigarettes	T5a/T5aw
	Hand-rolled cigarettes	T5b/T5bw
	Pipes full of tobacco	T5c/T5cw
	Cigars, cheroots, cigarillos	T5d/T5dw
	Number of Shisha sessions	T5e/T5ew
	Other <i>If Other, go to T5other, else go to T6</i>	T5f/T5fw
	Other (please specify):	T5other/ T5otherw
During the past 12 months, have you tried to stop smoking ?	Yes 1 No 2	T6
During any visit to a doctor or other health worker in the past 12 months, were you advised to quit smoking tobacco?	Yes 1 <i>If T2=Yes, go to T12; if T2=No, go to T9</i> No 2 <i>If T2=Yes, go to T12; if T2=No, go to T9</i> No visit during the past 12 months 3 <i>If T2=Yes, go to T12; if T2=No, go to T9</i>	T7
In the past, did you ever smoke any tobacco products? (USE SHOWCARD)	Yes 1 No 2 <i>If No, go to T12</i>	T8
In the past, did you ever smoke daily ?	Yes 1 <i>If T1=Yes, go to T12, else go to T10</i> No 2 <i>If T1=Yes, go to T12, else go to T10</i>	T9

EXPANDED: Tobacco Use		
Question	Response	Code
How old were you when you stopped smoking?	Age (years) Don't Know 77 If Known, go to T12	T10
How long ago did you stop smoking? (RECORD ONLY 1, NOT ALL 3) Don't Know 77	Years ago If Known, go to T12	T11a
	OR Months ago If Known, go to T12	T11b
	OR Weeks ago	T11c
Do you currently use any smokeless tobacco products such as [snuff, chewing tobacco, betel]? (USE SHOWCARD)	Yes 1 No 2 If No, go to T15	T12
Do you currently use smokeless tobacco products daily ?	Yes 1 No 2 If No, go to T14aw	T13
On average, how many times a day/week do you use (IF LESS THAN DAILY, RECORD WEEKLY) (RECORD FOR EACH TYPE, USE SHOWCARD) Don't Know 7777	DAILY↓ WEEKLY↓	
	Snuff, by mouth	T14a/ T14aw
	Snuff, by nose	T14b/ T14bw
	Chewing tobacco	T14c/ T14cw
	Betel, quid	T14d/ T14dw
	Other If Other, go to T14other, if T13=No, go to T16, else go to T17	T14e/ T14ew
	Other (please specify): If T13=No, go to T16, else go to T17	T14other/ T14otherw
In the past , did you ever use smokeless tobacco products such as [snuff, chewing tobacco, or betel]?	Yes 1 No 2 If No, go to T17	T15
In the past , did you ever use smokeless tobacco products such as [snuff, chewing tobacco, or betel] daily ?	Yes 1 No 2	T16
During the past 30 days, did someone smoke in your home ?	Yes 1 No 2	T17

During the past 30 days, did someone smoke in closed areas in your workplace (in the building, in a work area or a specific office)?	Yes 1 No 2 Don't work in a closed area 3	T18
EXPANDED: Use of electronic cigarettes		
Previous questions asked you about tobacco products. Now I will ask you questions about electronic cigarettes (e-cigarettes). These devices heat a liquid that may or may not contain nicotine. E-cigarettes are also known as vaporizers, vapes, vape pens, vape mods (for example, e-cigar, vape pens and mods or such as VooPoo, Jodk, Yooz, Relx, VoltBar).		
EC1. Do you currently use electronic cigarettes? (for example, e-cigar, vape pens, and mods or such as VooPoo, Jodk, Yooz, Relx, VoltBar, SMOK vape) (USE SHOWCARD) EC2. Do you currently use electronic cigarettes daily? EC3. How old were you when you first started using electronic cigarettes? EC4. Do you remember how long ago it was?	Yes 1 No 2 <i>If no, go to A1</i> Yes 1 No 2 Age (years) If known, go to A1 Don't know 77 In years If known, go to A1 OR months If known, go to A1 OR weeks If known, go to A1	

CORE: Alcohol Consumption		
The next questions ask about the consumption of alcohol.		
Question	Response	Code
Have you ever consumed any alcohol such as beer, wine, spirits or fermented palm juice? (USE SHOWCARD OR SHOW EXAMPLES)	Yes 1 No 2 <i>If No, go to A16</i>	A1
Have you consumed any alcohol within the past 12 months?	Yes 1 <i>If Yes, go to A4</i> No 2	A2
Have you stopped 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 <i>If Yes, go to A16</i> No 2 <i>If No, go to A16</i>	A3
	Daily 1	A4

During the past 12 months, how frequently have you had at least one standard alcoholic drink? (READ RESPONSES, USE SHOWCARD)	5-6 days per week 2	
	3-4 days per week 3	
	1-2 days per week 4	
	1-3 days per month 5	
	Less than once a month 6	
	Never 7	
Have you consumed any alcohol within the past 30 days?	Yes 1 No 2 <i>If No, go to A13</i>	A5
During the past 30 days, on how many occasions did you have at least one standard alcoholic drink?	Number Don't know 77 <i>If Zero, go to A13</i>	A6
During the past 30 days, when you drank alcohol, how many standard drinks on average did you have during one drinking occasion? (USE SHOWCARD)	Number Don't know 77	A7
During the past 30 days, what was the largest number of standard drinks you had on a single occasion, counting all types of alcoholic drinks together?	Largest number Don't Know 77	A8
During the past 30 days, how many times did you have six or more standard drinks in a single drinking occasion?	Number of times Don't Know 77	A9
During each of the past 7 days, how many standard drinks did you have each day? (USE SHOWCARD) <i>Don't Know 77</i>	Monday	A10a
	Tuesday	A10b
	Wednesday	A10c
	Thursday	A10d
	Friday	A10e
	Saturday	A10f
	Sunday	A10g

CORE: Alcohol Consumption, continued

I have just asked you about your consumption of alcohol during the past 7 days. 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
During the past 7 days, did you consume any homebrewed alcohol, any alcohol brought over the border/from another country, any alcohol not intended for drinking, or other untaxed alcohol? <i>[AMEND ACCORDING TO LOCAL CONTEXT]</i> <i>(USE SHOWCARD)</i>	Yes 1 No 2 If No, go to A13	A11
On average, how many standard drinks of the following did you consume during the past 7 days? <i>[INSERT COUNTRY-SPECIFIC EXAMPLES]</i> <i>(USE SHOWCARD)</i> <i>Don't Know 77</i>	Homebrewed spirits, e.g. moonshine	A12a
	Homebrewed beer or wine, e.g. beer, palm, or fruit wine	A12b
	Alcohol brought over the border/from another country	A12c
	Alcohol not intended for drinking, e.g. alcohol-based medicines, perfumes, after shaves	A12d
	Other untaxed alcohol in the country	A12e

EXPANDED: Alcohol Consumption		
During the past 12 months, how often have you found that you were not able to stop drinking once you had started?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A13
During the past 12 months, how often have you failed to do what was normally expected from you because of drinking?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A14
During the past 12 months, how often have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A15
	Yes, more than monthly 1	A16

During the past 12 months , have you had family problems or problems with your partner due to someone else's drinking?	Yes, monthly	2	
	Yes, several times but less than monthly	3	
	Yes, once or twice	4	
	No	5	

CORE: Diet

The next questions ask about the fruits and vegetables that you usually eat. I have a nutrition card here that shows you some examples of local fruits and vegetables. Each picture represents the size of a serving. As you answer these questions please think of a typical week in the last year.

Question	Response	Code
In a typical week, how many days do you eat fruit ? (USE SHOWCARD)	Number of days Don't Know 77 If Zero days, go to D3	D1
How many servings of fruit do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 77	D2
In a typical week, on how many days do you eat vegetables ? (USE SHOWCARD)	Number of days Don't Know 77 If Zero days, go to D5	D3
How many servings of vegetables do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't know 77	D4

Dietary salt

With the next questions, we 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, and salty sauces such as soy sauce or fish sauce (see showcard). The following questions are on adding salt to the food right before you eat it, on how food is prepared in your home, on eating processed foods that are high in salt such as salted fish, salted meat, salted eggs instant noodle, fermented fish/prahok, baok, mam, kapi, and questions on controlling your salt intake. Please answer the questions even if you consider yourself to eat a diet low in salt.

How often do you add salt or a salty sauce such as soy sauce to your food right before you eat it or as you are eating it? (SELECT ONLY ONE) (USE SHOWCARD)	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D5
How often is salt, salty seasoning or a salty sauce added in cooking or preparing foods in your household?	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D6
How often do you eat processed food high in salt ? By processed food high in salt, I mean foods that have been altered from their natural state, such as packaged salty snacks, canned salty food including pickles and preserves, salty food prepared at a fast food restaurant,	Always 1 Often 2 Sometimes 3	D7

	cheese, bacon and processed meat <i>[add country specific examples]</i> .	Rarely	4	
	<i>[INSERT EXAMPLES]</i>	Never	5	
	<i>(USE SHOWCARD)</i>	Don't know	77	
	How much salt or salty sauce do you think you consume?	Far too much	1	D8
		Too much	2	
		Just the right amount	3	
		Too little	4	
		Far too little	5	
		Don't know	77	

EXPANDED: Diet			
Question	Response		Code
How important to you is lowering the salt in your diet?	Very important	1	D9
	Somewhat important	2	
	Not at all important	3	
	Don't know	77	
Do you think that too much salt or salty sauce in your diet could cause a health problem ?	Yes	1	D10
	No	2	
	Don't know	77	
Do you do any of the following on a regular basis to control your salt intake ? (RECORD FOR EACH)			
Limit consumption of processed foods	Yes	1	D11a
	No	2	
Look at the salt or sodium content on food labels	Yes	1	D11b
	No	2	
Buy low salt/sodium alternatives	Yes	1	D11c
	No	2	
Use spices other than salt when cooking	Yes	1	D11d
	No	2	
Avoid eating foods prepared outside of a home	Yes	1	D11e
	No	2	
Do other things specifically to control your salt intake	Yes	1 <i>If yes, go to D11other</i>	D11f
	No	2	
Other (please specify)			D11other

EXPANDED: Sugary Drink Consumption		
Question	Response	Code
During the past 7 days, how many times did you drink a can, bottle, or glass of a carbonated soft drink, such as Coca-Cola, Pepsi, Fanta, 7-Up, Sprite, Mirinda, Sarsi, Yeo's, OISHI, Booststrong, Carabao, Sting? (Do not count diet soft drinks.)	I did not drink carbonated soft drinks during the past 7 days 1 1 to 3 times during the past 7 days 2 4 to 6 times during the past 7 days 3 1 time per day 4 2 times per day 5 3 times per day 6 4 or more times per day 7	X1
For this question, sugar-sweetened drinks include sports drinks, energy drinks such as Red Bull, Bacchus, Samurai Strawberry Flavor Energy Drinks, 100% fruit juices such as fresh 100% natural juice, fruit drinks that are not 100% juice such as orange juice, sugar-sweetened flavoured milk such as Meiji and sugar-sweetened teas, coffees, or flavoured waters. For this question, DO NOT COUNT carbonated soft drinks measured in the previous question or diet or no-calorie drinks.		
During the past 7 days, how many times did you drink a can, bottle, or glass of a sugar-sweetened drink?	I did not drink sugar-sweetened drinks during the past 7 days 1 1 to 3 times during the past 7 days 2 4 to 6 times during the past 7 days 3 1 time per day 4 2 times per day 5 3 times per day 6 4 or more times per day 7	X2

CORE: Physical Activity		
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. 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, planting crops, gardening, walking/cycling to rice field, ploughing, digging, construction work, fishing or hunting for food, seeking employment. In answering the following questions 'vigorous-intensity activities' are activities that require hard physical effort and cause large increases in breathing or heart rate, and 'moderate-intensity activities' are activities that require moderate physical effort and cause small increases in breathing or heart rate.		
Question	Response	Code
Work		
Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like <i>[carrying or lifting heavy loads, digging or construction work]</i> ?	Yes 1	P1
<i>Example ploughing, digging, lifting heavy loads, or construction work (USE SHOWCARD)</i>	No 2 <i>If No, go to P 4</i>	
In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days	P2

How much time do you spend doing vigorous-intensity activities at work on a typical day?	: Hours : minutes hrs mins
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CORE: Physical Activity, Continued		
Question	Response	Code
Recreational activities		
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 (<i>leisure</i>), <i>[Insert relevant terms]</i>.		
Do you do any vigorous-intensity sports, fitness, or recreational (<i>leisure</i>) activities that cause large increases in breathing or heart rate like <i>[running or football]</i>? Example <i>running or playing football (USE SHOWCARD)</i>	Yes 1 No 2 If No, go to P 13	P10
In a typical week, how many days do you do vigorous-intensity sports, fitness, or recreational (<i>leisure</i>) activities?	Number of days	P11
How much time do you spend doing vigorous-intensity sports, fitness, or recreational activities on a typical day?	: Hours: minutes hrs mins	P12 (a-b)
Do you do any moderate-intensity sports, fitness, or recreational (<i>leisure</i>) activities that cause a small increase in	Yes 1	P13

breathing or heart rate such as brisk walking, [cycling, swimming, volleyball]? Example, cycling, swimming or volleyball (USE SHOWCARD)	No 2 If No, go to P16	
In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational (leisure) activities?	Number of days 	P14
How much time do you spend doing moderate-intensity sports, fitness or recreational (leisure) activities on a typical day?	Hours : minutes : hrs mins	P15 (a-b)

EXPANDED: Physical Activity		
Sedentary behaviour		
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. Example time spent sitting at a desk, sitting with friends, traveling by motorbike, car, tuk-tuk, watching television (USE SHOWCARD)		
How much time do you usually spend sitting or reclining on a typical day?	Hours: minutes : hrs mins	P16 (a-b)

CORE: History of Raised Blood Pressure		
Question	Response	Code
Have you ever had your blood pressure measured by a doctor or other health worker?	Yes 1	H1
	No 2 If No, go to H6	
Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?	Yes 1	H2a
	No 2 If No, go to H6	
Were you first told in the past 12 months?	Yes 1	H2b
	No 2	
In the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor or other health worker?	Yes 1	H3
	No 2	
Have you ever seen a traditional healer for raised blood pressure or hypertension?	Yes 1	H4
	No 2	
Are you currently taking any herbal or traditional remedy for your raised blood pressure?	Yes 1	H5
	No 2	

CORE: History of Diabetes		
Have you ever had your blood sugar measured by a doctor or other health worker?	Yes 1	H6
	No 2 If No, go to H12	

Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?	Yes 1 No 2 <i>If No, go to H12</i>	H7a
Were you first told in the past 12 months?	Yes 1 No 2	H7b
In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?	Yes 1 No 2	H8
Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?	Yes 1 No 2	H9
Have you ever seen a traditional healer for diabetes or raised blood sugar?	Yes 1 No 2	H10
Are you currently taking any herbal or traditional remedy for your diabetes?	Yes 1 No 2	H11

CORE: History of Raised Total Cholesterol		
Question	Response	Code
Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?	Yes 1 No 2 <i>If No, go to H17</i>	H12
Have you ever been told by a doctor or other health worker that you have raised cholesterol?	Yes 1 No 2 <i>If No, go to H17</i>	H13a
Were you first told in the past 12 months?	Yes 1 No 2	H13b
In the past two weeks, have you taken any oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health worker?	Yes 1 No 2	H14
Have you ever seen a traditional healer for raised cholesterol?	Yes 1 No 2	H15
Are you currently taking any herbal or traditional remedy for your raised cholesterol?	Yes 1 No 2	H16

CORE: History of Cardiovascular Diseases		
Have you ever had a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident)?	Yes 1 No 2	H17
	Yes 1	H18

Are you currently taking aspirin regularly to prevent or treat heart disease?	No 2	
Are you currently taking statins (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?	Yes 1 No 2	H19

CORE: Lifestyle Advice		
Question	Response	Code
During the past 12 months, have you visited a doctor or other health worker?	Yes 1 No 2 <i>If No and C1=1, go to O1</i> <i>If No and C1=2, go to CX1</i>	H20
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)		
Quit using tobacco or don't start	Yes 1 No 2	H20a
Reduce salt in your diet	Yes 1 No 2	H20b
Eat at least five servings of fruit and/or vegetables each day	Yes 1 No 2	H20c
Reduce fat in your diet	Yes 1 No 2	H20d
Start or do more physical activity	Yes 1 No 2	H20e
Maintain a healthy body weight or lose weight	Yes 1 No 2	H20f
Reduce sugary beverages in your diet	Yes 1 <i>If C1=1 go to O1</i> No 2 <i>If C1=1 go to O1</i>	H20g

CORE (for women only): Cervical Cancer Screening		
The next question asks 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.		
Have you ever had a screening test for cervical cancer, using any of the methods described above?	Yes 1 No 2 Don't know 77	CX1

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.

At what age were you first tested for cervical cancer?	Age Don't know 77 Refused 88	CX2
When was your last (most recent) test for cervical cancer?	Less than 1 year ago 1 1-2 years ago 2 3-5 years ago 3 More than 5 years ago 4 Don't know 77 Refused 88	CX3
What is the main reason you had your last test for cervical cancer?	Part of a routine exam 1 Following up on abnormal or inconclusive result 2 Recommended by healthcare provider 3 Recommended by other source 4 Experiencing pain or other symptoms 5 Other 6 Don't know 77 Refused 88	CX4
Where did you receive your last test for cervical cancer? <i>[INSERT COUNTRY-SPECIFIC CATEGORIES]</i>	National hospital 1 Provincial hospital 2 Referral hospital 3 Health center 4 Private clinic 5 Private pharmacy 6 Others 7 Don't know 77 Refused 88	CX5
What was the result of your last (most recent) test for cervical cancer?	Did not receive result 1 <i>If CX6=1, go to next section</i> Normal / Negative 2 <i>If CX6=2, go to next section</i>	CX6

	Abnormal /Positive	3	
	Suspect cancer	4	
	Inconclusive	5	
	Don't know	77	
	Refused	88	

CORE and EXPANDED: Cervical cancer			
Question	Response		Code
Did you have any follow-up visits because of your test results?	Yes	1	CX7
	No	2	
	Don't know	77	
	Refused	88	
Did you receive any treatment to your cervix because of your test result?	Yes	1	CX8
	No	2 <i>If No, go to CX10</i>	
	Don't know	77 <i>If Don't know, go to next section</i>	
	Refused	88 <i>If Refused, go to next section</i>	
Did you receive treatment during the same visit as your last test for cervical cancer?	Yes	1 <i>If Yes, go to next section</i>	CX9
	No	2 <i>If No, go to next section</i>	
	Don't know	77 <i>If Don't know, go to next section</i>	
	Refused	88 <i>If Refused, go to next section</i>	
What is the main reason you did not receive treatment?	Was not told I needed treatment	1	CX10
	Did not know how/where to get treatment	2	
	Embarrassment	3	
	Too expensive	4	
	Didn't have time	5	
	Clinic too far away	6	
	Poor service quality	7	
	Fear (afraid of procedure; afraid of social stigma)	8	
	Cultural beliefs	9	

	Family member would not allow it 10 <i>If CX10=10, go to CX10Spec, else go to next section</i> Don't know 77 Refused 88	
	Family member (please specify)	CX10Spec
What is the main reason you have never had a cervical cancer test?	Did not know how/where to get test 1 Embarrassment 2 Too expensive 3 Didn't have time 4 Clinic too far away 5 Poor service quality 6 Fear (afraid of procedure; afraid of social stigma) 7 Cultural beliefs 8 Family member would not allow it 9 <i>If CX11=9, go to CX11Spec, else go to next section</i> Don't know 77 Refused 88	CX11
	Family member (please specify)	CX11Spec

Oral Health

Oral Health		
The next questions ask about your oral health status and related behaviours.		
Question	Response	Code
How many natural teeth do you have?	No natural teeth 1 <i>If no natural teeth, go to O4</i>	O1
	1 to 9 teeth 2	
	10 to 19 teeth 3	
	20 teeth or more 4	
	Don't know 77	

How would you describe the state of your teeth?	Excellent 1 Very Good 2 Good 3 Average 4 Poor 5 Very Poor 6 Don't Know 77	O2
How would you describe the state of your gums?	Excellent 1 Very Good 2 Good 3 Average 4 Poor 5 Very Poor 6 Don't know 77	O3
How would you describe the state of your mouth (mucosa)?	Excellent 1 Very Good 2 Good 3 Average 4 Poor 5 Very Poor 6 Don't know 77	O4
Do you have any removable dentures?	Yes 1 No 2 <i>If No, go to O7</i>	O5
Which of the following removable dentures do you have? (RECORD FOR EACH)		
An upper jaw denture	Yes 1 No 2	O6a
A lower jaw denture	Yes 1 No 2	O6b
During the past 12 months, did your teeth, gums or mouth cause any pain or discomfort?	Yes 1 No 2	O7
How long has it been since you last saw a dentist?	Less than 6 months 1 6-12 months 2 More than 1 year but less than 2 years 3 2 or more years but less than 5 years 4	O8

	5 or more years 5	
	Never received dental care 6 <i>If Never, go to O10</i>	
What was the main reason for your last visit to the dentist?	Consultation / advice 1	O9
	Pain or trouble with teeth, gums or mouth 2	
	Treatment / Follow-up treatment 3	
	Routine check-up treatment 4	
	Other 5 <i>If Other, go to O9other</i>	
	Other (please specify)	O9other

Oral Health, Continued		
Question	Response	Code
How often do you clean your teeth?	Never 1 <i>If Never, go to O14a</i>	O10
	Once a month 2	
	2-3 times a month 3	
	Once a week 4	
	2-6 times a week 5	
	Once a day 6	
	Twice or more a day 7	
Do you use toothpaste to clean your teeth?	Yes 1	O11
	No 2 <i>If No, go to O13a</i>	
Do you use toothpaste containing fluoride ?	Yes 1	O12
	No 2	
	Don't know 77	
Do you use any of the following to clean your teeth ? (RECORD FOR EACH)		
Toothbrush	Yes 1	O13a
	No 2	
Wooden toothpicks	Yes 1	O13b
	No 2	
Plastic toothpicks	Yes 1	O13c
	No 2	
Thread (dental floss)	Yes 1	O13d
	No 2	
	Yes 1	

	Charcoal	No 2	O13e
	Chewstick / miswak	Yes 1 No 2	O13f
	Other	Yes 1 <i>If Yes, go to O13other</i> No 2	O13g
	Other (please specify)		O13other
	Have you experienced any of the following problems during the past 12 months because of the state of your teeth, gums or mouth? <i>(RECORD FOR EACH)</i>		
	Difficulty in chewing foods	Yes 1 No 2	O14a
	Difficulty with speech/trouble pronouncing words	Yes 1 No 2	O14b
	Mouth feels dry	Yes 1 No 2	O14c
	Have a persistent wound and/or swelling in the mouth for more than three weeks	Yes 1 No 2	O14d
	Have a red or red and white patch in the mouth	Yes 1 No 2	O14e
	Felt tense because of problems with teeth or mouth	Yes 1 No 2	O14f
	Embarrassed about appearance of teeth	Yes 1 No 2	O14g
	Avoid smiling because of teeth	Yes 1 No 2	O14h
	Sleep is often interrupted	Yes 1 No 2	O14i
	Days not at work because of teeth or mouth	Yes 1 No 2	O14j
	Difficulty doing usual activities	Yes 1 No 2	O14k
	Less tolerant of spouse or people close to you	Yes 1 No 2	O14l
	Reduced participation in social activities	Yes 1 No 2	O14m

Step 2 Physical Measurements

CORE: Blood Pressure		
Question	Response	Code
Interviewer ID		M1
Device ID for blood pressure		M2
Cuff size used	Small 1 Medium 2 Large 3	M3
Reading 1	Systolic (mmHg)	M4a
	Diastolic (mmHg)	M4b
Reading 2	Systolic (mmHg)	M5a
	Diastolic (mmHg)	M5b
Reading 3	Systolic (mmHg)	M6a
	Diastolic (mmHg)	M6b
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 No 2	M7
CORE: Height and Weight		
For women: Are you pregnant?	Yes 1 <i>If Yes, go to M 16</i> No 2	M8
Interviewer ID		M9
Device IDs for height and weight	Height	M10a
	Weight	M10b
Height	in Centimetres (cm)	M11
Weight <i>If too large for scale 666.6</i>	in Kilograms (kg)	M12
CORE: Waist		
Device ID for waist		M13
Waist circumference	in Centimetres (cm)	M14

EXPANDED: Hip Circumference and Heart Rate		
Hip circumference	in Centimeters (cm) .	M15
Heart Rate		M16a
Reading 1	Beats per minute	
Reading 2	Beats per minute	M16b
Reading 3	Beats per minute	M16c

Step 3 Biochemical Measurements

CORE: Blood Glucose		
Question	Response	Code
During the past 12 hours have you had anything to eat or drink, other than water?	Yes 1	B1
	No 2	
Technician ID		B2
Device ID		B3
Time of day blood specimen taken (24-hour clock)	Hours: minutes : hrs mins	B4
Fasting blood glucose		B5
	mg/dl .	
Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker for raised blood glucose?	Yes 1	B6
	No 2	
CORE: Blood Lipids		
Device ID		B7
Total cholesterol		B8
	mg/dl .	
During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor or other health worker?	Yes 1	B9
	No 2	
CORE: Urinary sodium and creatinine		
Had you been fasting prior to the urine collection?	Yes 1	B10

	No 2	
Technician ID		B11
Device ID		B12
Time of day urine sample taken (24-hour clock)	: Hours: minutes hrs mins	B13
Urinary sodium	mmol/l	B14
Urinary creatinine	mmol/l	B15

EXPANDED: Triglycerides and HDL Cholesterol			
Question	Response		Code
Triglycerides			B16
	mg/dl		
HDL Cholesterol			B17
	mg/dl		

EXPANDED: Urine Cotinine				
Question	Response			Code
Cotinine Testing on the Urine sample	COT10	Positive	1 If 1, go to B18c	B18a
		Negative	2 If 2, end testing	B18b
	COT200	Positive		B18c
		Negative		B18d

Tobacco Show Card



Manufactured cigarettes.



Roll-your-own (RYO) cigarettes.



Betel nut, quid



chewing tobacco



Pipe

	Cigars, e.g., cigarillos, double coronas, cheroots, stumphen, chutts and dhumtis.
 Shisha	Shisha

	E-cigarette
--	-------------

Alcohol - Standard drink

1 standard drink =



1 standard
bottle of
regular beer



1 single
measure of
spirits (30ml)



1 medium size
glass of wine
(120ml)



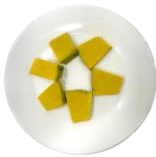
1 measure of
aperitif (60ml)

Note: net alcohol content of a **standard drink** is **approximately 10g** of ethanol.

Typical Fruit and Vegetables and Serving Sizes

FRUIT Is considered to be:	1 Serving =	Examples
Apple, banana, orange	1 medium size piece	
Chopped or cooked fruit	½ cup	

VEGETABLES are considered to be:	1 Serving =	Examples
Raw green leafy vegetables	1 cup	
Other vegetables, cooked or chopped raw	½ cup	

		
--	--	---

Serving size

One standard serving = 80 grams (translated into different units of cups depending on the type of vegetable and standard cup measures available in the country).

Note: Fruit or vegetable juice, or canned fruit should not be included. Tubers such as potatoes and cassava should not be included.

Dietary Salt

Table salt and
sea salt



Salty stock
cubes and
powders

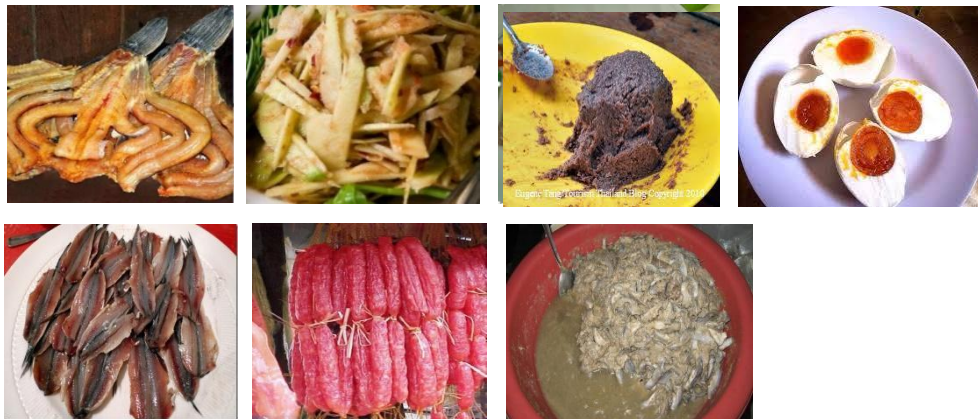


Soya sauce
and fish
sauce



Examples for
processed
food high in
salt

Packaged salty food and snacks, canned salty food, salty food prepared at a fast food restaurant.



Physical Activity

Vigorous Physical Activity at Work

Examples for
vigorous
activities at
WORK

VIGOROUS Intensity Activities

Make you breathe much harder than normal



Other
examples for
VIGOROUS
activities at
WORK

- Forestry (cutting, chopping, carrying wood)
 - Sawing hardwood
 - Ploughing
 - Cutting crops (sugar cane)
 - Gardening (digging)
 - Grinding (with pestle)
 - Labouring (shovelling sand)
 - Loading furniture (stoves, fridge)
 - Instructing spinning (fitness)
 - Instructing sports aerobics
 - Sorting postal parcels (fast pace)
 - Cycle rickshaw driving
-

Moderate Physical Activity at Work

Examples for
MODERATE
activities at
work

MODERATE Intensity Activities

Make you breathe somewhat harder than normal



Other
examples for
MODERATE
activities at
WORK

- Cleaning (vacuuming, mopping, polishing, scrubbing, sweeping, ironing)
 - Washing (beating and brushing carpets, wringing clothes (by hand))
 - Gardening
 - Milking cows (by hand)
 - Planting and harvesting crops
 - Digging dry soil (with spade)
 - Weaving
 - Woodwork (chiselling, sawing softwood)
 - Mixing cement (with shovel)
 - Labouring (pushing loaded wheelbarrow, operating jackhammer)
 - Walking with load on head
 - Drawing water
 - Tending animals
-

Vigorous Physical Activity during Leisure Time

Examples for
VIGOROUS
activities
during
LEISURE TIME

VIGOROUS Intensity Activities

Make you breathe much harder than normal



Other
examples of
VIGOROUS
activities
during LEISURE
TIME

- Soccer
 - Rugby
 - Tennis
 - High-impact aerobics
 - Aqua aerobics
 - Ballet dancing
 - Fast swimming
-

Moderate Physical Activity during Leisure Time

Examples for
MODERATE
activities
during LEISURE
TIME

MODERATE Intensity Activities

Make you breathe somewhat harder than normal



- Cycling
- Jogging
- Dancing
- Horse-riding
- Tai chi
- Yoga
- Pilates
- Low-impact aerobics
- Cricket

Appendix 2 – STEPS 2023 Data Book

Introduction

Purpose of the data book

This data book is a tool used to compile a complete set of data results relating to each question and measurement in the STEPS Instrument. The STEPS data book

- Provides detailed information for the data analyst on producing the results for the tables.
 - Provides examples of which tables to use in the country report.
 - Provides examples and suggestions on the layout of tables.
-

Format of the data book

Each page in the data book contains a different table with:

- Title and description of the table
 - Data tables for men, women and both sexes
 - Questions used to produce the table (actual question text)
 - Analysis information (Epi Info program name to produce the table).
-

Global Action Plan 2013-2020 and Global Monitoring Framework

STEPS captures 11 of the 25 indicators outlined in the Global Action Plan 2013-2020 and the Comprehensive Global Monitoring Framework for the Prevention and Control of NCDs⁴⁴, relating to 7 of the 9 global targets.

Indicators captured in STEPS are marked in **bold** and *italic* in the table below.

Tables in the data book relating to the Global Monitoring Framework

Tables in the data book relating to the Global Monitoring Framework are identified with this symbol:



⁴⁴ World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva: World Health Organization; 2013.

Framework Element	Target	Indicator
MORTALITY AND MORBIDITY		
Premature mortality from noncommunicable disease	1. A 25% relative reduction in the overall mortality from CVDs, cancer, diabetes, or chronic respiratory diseases	1. Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Additional indicator		2. Cancer incidence, by type of cancer, per 100 000 population
BEHAVIOURAL RISK FACTORS		
Harmful use of alcohol	2. At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	3. Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context 4. <i>Age-standardized prevalence of heavy episodic drinking among adolescents and adults</i> , as appropriate, within the national context 5. Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context
Physical inactivity	3. A 10% relative reduction in prevalence of insufficient physical activity	6. Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily 7. <i>Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)</i>
Salt/sodium intake	4. A 30% relative reduction in mean population intake of salt/sodium	8. <i>Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years</i>
Tobacco use	5. A 30% relative reduction in prevalence of current tobacco use	9. Prevalence of current tobacco use among adolescents 10. <i>Age-standardized prevalence of current tobacco use among persons aged 18+ years</i>
BIOLOGICAL RISK FACTORS		
Raised blood pressure	6. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	11. <i>Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg) and mean systolic blood pressure</i>
Diabetes and obesity	7. Halt the rise in diabetes & obesity	12. <i>Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose)</i> 13. Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex) 14. <i>Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/m² for overweight and body mass index ≥ 30 kg/m² for obesity)</i>
Additional indicators		15. Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years

		16. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day 17. Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥ 5.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration
Framework Element	Target	Indicator
NATIONAL SYSTEMS RESPONSE		
Drug therapy to prevent heart attacks and strokes	8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	18. Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk $\geq 30\%$, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
Essential noncommunicable disease medicines and basic technologies to treat major noncommunicable diseases	9. An 80% availability of the affordable basic technologies and essential medicines, including generics required to treat major noncommunicable diseases in both public and private facilities	19. Availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities
Additional indicators		20. Access to palliative care assessed by morphine-equivalent 21. Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programmes 22. Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programmes and policies 23. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt 24. Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants 25. Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies

Demographic Information Results

Age group by sex

Description: Summary information by age group and sex of the respondents.

Instrument question:

- Sex
- What is your date of birth?

Age group and sex of respondents								
Age Group	Men			Women			Both Sexes	
(years)	n	%		n	%		n	%
18-29	216	38.3		348	61.7		564	13.3
30-44	487	35.4		888	64.6		1375	32.4
45-59	498	36.3		875	63.7		1373	32.4
60-69	312	33.6		616	66.4		928	21.9
18-69	1513	35.7		2727	64.3		4240	100.0

	Men n (%)	Women n (%)
Rural	968(36.5)	1682 (63.5)
Urban	545(34.3)	1045 (65.7)
TOTAL	1513 (35.7)	2727(64.3)

Analysis Information:

- Questions used: C1, C2, C3
- Epi Info program name: Cagesex (unweighted)

Education

Description: Mean number of years of education among respondents.

Instrument question:

- In total, how many years have you spent at school or in full-time study (excluding pre-school)?

Mean number of years of education								
Age Group	Men			Women			Both Sexes	
(years)	n	Mean		n	Mean		n	Mean
18-29	216	8.1		348	8.5		564	8.3
30-44	487	6.7		887	5.7		1374	6.0
45-59	498	6.0		874	3.6		1372	4.5
60-69	312	3.9		615	2.4		927	2.9
18-69	1513	6.1		2724	4.6		4237	5.1

Analysis Information:

- Questions used: C4
- Epi Info program name: Ceduyears (unweighted)

Highest level of education

Description: Highest level of education achieved by the survey respondents.

Instrument question:

- What is the highest level of education you have completed?

Highest level of education								
Men								
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed
18-29	216	4.2	25.9	22.2	23.6	19.9	4.2	0.0
30-44	487	6.8	37.4	23.8	17.0	9.4	3.9	1.6
45-59	498	6.4	41.8	19.3	20.9	9.8	1.2	0.6
60-69	312	17.6	52.9	14.7	12.8	1.0	1.0	0.0
18-69	1513	8.5	40.4	20.2	18.4	9.3	2.4	0.7

Highest level of education								
Women								
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed
18-29	348	3.2	19.8	27.3	25.3	16.1	7.8	0.6
30-44	888	12.2	40.5	23.9	12.7	6.3	4.1	0.3
45-59	875	22.7	51.8	13.1	10.5	1.7	0.0	0.1
60-69	615	37.9	48.5	7.8	3.9	1.8	0.2	0.0
18-69	2726	20.2	43.3	17.2	11.6	5.1	2.3	0.2

Highest level of education								
Both Sexes								
Age Group (years)	n	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed
18-29	564	3.5	22.2	25.4	24.6	17.6	6.4	0.4
30-44	1375	10.3	39.4	23.9	14.3	7.4	4.0	0.8
45-59	1373	16.8	48.1	15.4	14.3	4.7	0.4	0.3
60-69	927	31.1	49.9	10.1	6.9	1.5	0.4	0.0
18-69	4239	16.0	42.3	18.3	14.0	6.6	2.4	0.4

Analysis Information:

- Questions used: C5
- Epi Info program name: Ceduhigh (unweighted)

Ethnicity

Description: Summary results for the ethnicity of the respondents.

Instrument Question:

- What is your [insert relevant ethnic group/racial group/cultural subgroup/others] background?

Ethnic group of respondents				
Age Group	Both Sexes			
(years)	n	% Khmer	% Vietnamese	% Cham
18-29	542	97.4	0.4	2.2
30-44	1356	97.6	0.0	2.4
45-59	1359	98.5	0.0	1.5
60-69	924	97.3	0.0	2.7
18-69	4181	97.8	0.0	2.1

Analysis Information:

- Questions used: C6
- Epi Info program name: Cethnic (unweighted)

**Marital
status**

Description: Marital status of survey respondents.

Instrument question:

- What is your marital status?

Marital status							
Age Group		Men					
(years)	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
18-29	216	54.2	43.1	0.9	0.5	1.4	0.0
30-44	487	6.2	86.4	3.7	1.6	1.8	0.2
45-59	498	1.4	88.4	4.8	0.8	4.0	0.6
60-69	312	0.3	86.2	4.2	0.6	8.3	0.3
18-69	1513	10.2	80.8	3.8	1.0	3.8	0.3

Marital status							
Age Group		Women					
(years)	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
18-29	347	29.7	57.6	10.4	1.4	0.9	0.0
30-44	888	5.2	73.9	9.1	4.6	6.5	0.7
45-59	875	5.0	60.8	7.5	6.4	20.0	0.2
60-69	616	3.7	48.7	4.1	4.4	38.6	0.5
18-69	2726	7.9	61.9	7.6	4.7	17.4	0.4

Marital status							
Age Group		Both Sexes					
(years)	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
18-29	563	39.1	52.0	6.7	1.1	1.1	0.0
30-44	1375	5.5	78.3	7.2	3.6	4.9	0.5
45-59	1373	3.7	70.8	6.6	4.4	14.2	0.4
60-69	928	2.6	61.3	4.1	3.1	28.4	0.4
18-69	4239	8.8	68.7	6.3	3.4	12.6	0.4

Analysis Information:

- Questions used: C7
- Epi Info program name: Cmaritalstatus (unweighted)

Employment status

Description: Proportion of respondents in paid employment and those who are unpaid. Unpaid includes persons who are non-paid, students, homemakers, retired, and unemployed.

Instrument question:

- Which of the following best describes your main work status over the past 12 months?

Employment status					
Men					
Age Group (years)	n	% Government employee	% Non- government employee	% Self- employed	% Unpaid
18-29	216	2.8	25.9	56.0	15.3
30-44	487	4.7	20.5	73.3	1.4
45-59	498	8.0	17.3	69.3	5.4
60-69	312	6.1	16.7	59.3	17.9
18-69	1513	5.8	19.4	66.6	8.1
Women					
Age Group (years)	n	% Government employee	% Non- government employee	% Self- employed	% Unpaid
18-29	348	2.9	25.3	38.8	33.0
30-44	888	3.3	16.7	60.2	19.8
45-59	875	1.5	11.1	58.4	29.0
60-69	616	0.5	7.5	42.5	49.5
18-69	2727	2.0	13.9	52.9	31.2
Both Sexes					
Age Group (years)	n	% Government employee	% Non- government employee	% Self- employed	% Unpaid
18-29	564	2.8	25.5	45.4	26.2
30-44	1375	3.8	18.0	64.9	13.3
45-59	1373	3.9	13.3	62.3	20.5
60-69	928	2.4	10.6	48.2	38.9
18-69	4240	3.4	15.9	57.8	22.9

Analysis Information:

- Questions used: C8
- Epi Info program name: Cworkpaid (unweighted)

Unpaid work and unemployed

Description: Proportion of respondents in unpaid work.

Instrument question:

- Which of the following best describes your main work status over the past 12 months?

Unpaid work and unemployed							
Men							
Age Group	Unemployed						
(years)	n	% Non-paid	% Student	% Home-maker	% Retired	% Able to work	% Not able to work
18-29	33	0.0	69.7	0.0	0.0	24.2	6.1
30-44	7	14.3	0.0	28.6	0.0	57.1	0.0
45-59	27	11.1	0.0	7.4	33.3	25.9	22.2
60-69	56	5.4	0.0	12.5	30.4	17.9	33.9
18-69	123	5.7	18.7	8.9	21.1	23.6	22.0
Women							
Age Group	Unemployed						
(years)	n	% Non-paid	% Student	% Home-maker	% Retired	% Able to work	% Not able to work
18-29	115	0.9	19.1	66.1	0.0	12.2	1.7
30-44	176	1.1	0.0	89.8	0.0	8.0	1.1
45-59	254	1.6	0.0	83.1	0.8	10.6	3.9
60-69	305	2.0	0.0	72.5	5.2	11.5	8.9
18-69	850	1.5	2.6	78.4	2.1	10.6	4.8
Both Sexes							
Age Group	Unemployed						
(years)	n	% Non-paid	% Student	% Home-maker	% Retired	% Able to work	% Not able to work
18-29	148	0.7	30.4	51.4	0.0	14.9	2.7
30-44	183	1.6	0.0	87.4	0.0	9.8	1.1
45-59	281	2.5	0.0	75.8	3.9	12.1	5.7
60-69	361	2.5	0.0	63.2	9.1	12.5	12.7
18-69	973	2.1	4.6	69.6	4.5	12.2	7.0

Analysis Information:

- Questions used: C8
- Epi Info program name: Cworknotpaid (unweighted)

Per capita annual income

Description: Mean reported per capita annual income of respondents in local currency.

Instrument questions:

- How many people older than 18 years, including yourself, live in your household?
- Taking the past year, can you tell me what the average earning of the household has been?

Mean annual per capita income	
n	Mean
4091	3078.9

Analysis Information:

- Questions used: C9, C10a-c
- Epi Info program name: Cmeanincome (unweighted)

Estimated household earnings

Description: Summary of participant household earnings by quintile.

Instrument question:

- If you don't know the amount, can you give an estimate of the annual household income if I read some options to you?

Estimated household earnings					
n	% Quintile 1: Under \$250	% Quintile 2: \$250-\$1000	% Quintile 3: \$1001-\$4000	% Quintile 4: \$4001-\$5000	% Quintile 5: Over \$5000
67	26.9	47.8	20.9	3.0	1.5

Analysis Information:

- Questions used: C11
- Epi Info program name: Cquintile (unweighted)

Tobacco Use**Current smoking**

Description: Current smokers among all respondents.

Instrument question:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

Percentage of current smokers										
Age Group (years)	Men				Women				Both Sexes	
	n	% Current smoker	95% CI		n	% Current smoker	95% CI		n	% Current smoker

18-29	216	32.0	24.8-39.2	348	1.5	0.0-3.2	564	17.0	12.7-21.4
30-44	487	32.3	27.7-37.0	888	1.7	0.6-2.8	1375	18.0	15.2-20.8
45-59	498	45.9	40.6-51.1	875	5.0	3.0-7.0	1373	25.8	22.6-29.0
60-69	312	44.0	37.9-50.1	616	3.2	1.5-4.8	928	22.0	18.7-25.3
18-69	1513	35.5	32.0-39.0	2727	2.4	1.2-3.5	4240	19.4	17.1-21.7

Analysis Information:

- Questions used: T1, T2, T8
- Epi Info program name: Tsmokestatus (unweighted); TsmokestatusWT (weighted)

Smoking Status

Description: Smoking status of all respondents.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- In the past, did you ever smoke any tobacco products?

Smoking status									
Men									
Age Group	Current smoker					Non-smokers			
(years)	n	% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	216	23.6	17.1-30.1	8.4	3.8-13.0	15.7	10.6-20.9	52.3	45.3-59.3
30-44	487	27.2	23.0-31.5	5.1	2.8-7.4	15.4	12.1-18.8	52.2	47.2-57.3
45-59	498	41.6	36.3-46.9	4.2	2.3-6.2	26.6	22.3-31.0	27.5	23.4-31.6
60-69	312	40.9	34.8-47.0	3.1	1.1-5.1	37.2	31.1-43.4	18.8	13.7-23.9
18-69	1513	29.4	26.1-32.6	6.2	4.1-8.2	19.1	16.6-21.6	45.4	41.9-48.8
Women									
Age Group	Current smoker					Non-smokers			
(years)	n	% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	348	1.3	0.0-3.0	0.2	0.0-0.6	0.3	0.0-0.9	98.2	96.4-100.0
30-44	888	1.5	0.4-2.5	0.2	0.0-0.6	0.3	0.0-0.6	98.0	96.9-99.1
45-59	875	4.6	2.7-6.6	0.4	0.0-0.8	3.2	1.7-4.6	91.8	89.3-94.4
60-69	616	3.2	1.5-4.8	0.0	0.0-0.0	4.2	2.3-6.0	92.7	90.2-95.2
18-69	2727	2.1	1.0-3.2	0.2	0.0-0.5	1.2	0.7-1.6	96.5	95.2-97.7
Both Sexes									
Age Group	Current smoker					Non-smokers			
(years)	n								

		% Daily	95% CI	% Non-daily	95% CI	% Former smoker	95% CI	% Never smoker	95% CI
18-29	564	12.6	8.7-16.6	4.4	2.0-6.8	8.2	5.5-10.9	74.8	70.2-79.4
30-44	1375	15.2	12.7-17.7	2.8	1.6-4.1	8.4	6.5-10.2	73.6	70.5-76.8
45-59	1373	23.5	20.3-26.6	2.3	1.3-3.4	15.1	12.7-17.5	59.1	55.8-62.4
60-69	928	20.6	17.3-23.9	1.4	0.5-2.4	19.4	16.1-22.7	58.6	54.7-62.5
18-69	4240	16.1	14.1-18.2	3.3	2.2-4.4	10.4	9.1-11.7	70.2	67.8-72.6

Analysis Information:

- Questions used: T1, T2, T8
- Epi Info program name: Tsmokestatus (unweighted); TsmokestatusWT (weighted)

Daily smoking

Description: Percentage of current daily smokers among smokers.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?

Current daily smokers among smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI	n	% Daily smokers	95% CI
18-29	66	73.7	60.9-86.5	3	85.5	54.5-100.0	69	74.2	61.6-86.9
30-44	166	84.3	77.6-90.9	13	86.4	65.5-100.0	179	84.3	78.0-90.7
45-59	228	90.8	86.4-95.1	41	92.6	84.1-100.0	269	90.9	87.0-94.9
60-69	139	93.0	88.5-97.5	18	100.0	100.0-100.0	157	93.5	89.4-97.7
18-69	599	82.7	77.4-87.9	75	90.1	79.3-100.0	674	83.1	78.0-88.2

Analysis Information:

- Questions used: T1, T2
- Epi Info program name: Tsmokefreq (unweighted); TsmokefreqWT (weighted)

Initiation and duration of smoking

Description: Mean age of initiation and mean duration of smoking, in years, among daily smokers (no total age group for mean duration of smoking as age influences these values).

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- How old were you when you first started smoking?
- Do you remember how long ago it was?

Mean age started smoking

Age Group (years)	Men				Women				Both Sexes		
	n	Mean age	95% CI		n	Mean age	95% CI		n	Mean age	95% CI
18-29	48	18.1	16.9-19.3		2	15.0	-		50	18.0	16.7-19.2
30-44	140	20.3	19.1-21.4		11	23.6	18.1-29.1		151	20.4	19.3-21.6
45-59	205	20.1	19.0-21.3		38	20.8	16.8-24.7		243	20.2	19.1-21.3
60-69	130	23.0	21.1-25.0		18	23.9	17.5-30.2		148	23.1	21.3-25.0
18-69	523	19.8	19.1-20.5		69	20.3	16.8-23.9		592	19.8	19.1-20.5

Mean duration of smoking											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean duration	95% CI		n	Mean duration	95% CI		n	Mean duration	95% CI
18-29	48	5.2	4.2-6.3		2	7.0	-		50	5.3	4.2-6.4
30-44	140	18.1	16.7-19.5		11	17.1	11.4-22.7		151	18.0	16.7-19.4
45-59	205	32.5	31.1-33.9		38	32.0	28.6-35.3		243	32.5	31.2-33.8
60-69	130	40.5	38.5-42.6		18	39.8	33.5-46.1		148	40.5	38.6-42.4

Analysis Information:

- Questions used: T1, T2, T3, T4a-c
- Epi Info program name: Tsmokeagetime (unweighted); TsmokeagetimeWT (weighted)

Manufactured cigarette smokers

Description: Percentage of smokers who use manufactured cigarettes among daily smokers and among current smokers.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- On average, how many of the following products do you smoke each day?

Manufactured cigarette smokers among daily smokers											
Age Group (years)	Men				Women				Both Sexes		
	n	% Manu- factured cigarette smoker	95% CI		n	% Manu- factured cigarette smoker	95% CI		n	% Manu- factured cigarette smoker	95% CI
18-29	48	100.0	100.0-100.0		2	100.0	100.0-100.0		50	100.0	100.0-100.0
30-44	140	95.7	92.4-99.0		11	63.2	34.0-92.5		151	94.2	90.8-97.6
45-59	204	91.2	86.7-95.8		38	79.6	56.6-100.0		242	90.1	85.0-95.3
60-69	129	80.9	73.2-88.7		17	59.8	30.4-89.3		146	79.3	71.7-86.9
18-69	521	94.6	92.7-96.5		68	79.0	68.5-89.4		589	93.6	91.6-95.6
Manufactured cigarette smokers among current smokers											

Age Group (years)	Men				Women				Both Sexes		
	n	% Manu- factured cigarette smoker	95% CI		n	% Manu- factured cigarette smoker	95% CI		n	% Manu- factured cigarette smoker	95% CI
18-29	66	94.6	88.8-100.0		3	100.0	100.0-100.0		69	94.8	89.3-100.0
30-44	166	93.6	90.0-97.2		13	58.0	29.3-86.6		179	92.0	88.4-95.6
45-59	227	88.4	83.4-93.4		41	78.6	57.3-99.9		268	87.5	82.2-92.7
60-69	137	78.8	70.5-87.1		17	59.8	30.4-89.2		154	77.4	69.4-85.4
18-69	596	91.5	88.4-94.6		74	77.7	68.6-86.9		670	90.7	87.7-93.6

Analysis Information:

- Questions used: T1, T2, T5a, T5aw
- Epi Info program name: Tsmokeman (unweighted); TsmokemanWT (weighted)

Amount of tobacco used among daily smokers by type

Description: Mean amount of tobacco used by daily smokers per day, by type.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- On average, how many of the following products do you smoke each day?

Mean amount of tobacco used by daily smokers by type									
Age Group (years)	Men								
	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
18-29	48	10.4	7.2-13.5	45	0.0	-	45	0.0	-
30-44	140	12.6	11.0-14.2	139	0.2	0.0-0.5	139	0.0	-
45-59	204	14.7	13.2-16.1	197	1.0	0.4-1.6	196	0.0	-
60-69	129	11.8	9.2-14.5	128	0.9	0.4-1.4	128	0.0	0.0-0.1
18-69	521	12.3	11.1-13.6	509	0.4	0.2-0.6	508	0.0	0.0-0.0
Age Group (years)	Men								
	n	Mean # of cigars, cheerots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI

18-29	45	0.1	0.0-0.3	45	0.0	-	45	0.0	-
30-44	139	0.3	0.0-0.6	138	0.0	-	139	0.0	-
45-59	197	0.3	0.1-0.6	196	0.0	0.0-0.1	196	0.0	-
60-69	130	0.9	0.2-1.6	129	0.1	0.0-0.3	128	0.1	0.0-0.2
18-69	511	0.3	0.2-0.5	508	0.0	0.0-0.0	508	0.0	0.0-0.0

Mean amount of tobacco used by daily smokers by type									
Age Group (years)	Women								
	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI
18-29	2	7.1	0.0-14.3	2	1.5	0.0-3.6	2	0.0	-
30-44	11	6.5	0.7-12.3	11	2.5	0.3-4.8	11	0.0	-
45-59	38	8.9	3.0-14.8	38	0.9	0.2-1.7	38	0.0	-
60-69	17	4.9	1.9-7.9	18	0.8	0.0-1.6	18	0.1	0.0-0.3
18-69	68	7.5	3.8-11.2	69	1.4	0.6-2.2	69	0.0	0.0-0.0
Age Group (years)	Women								
	n	Mean # of cigars, cheerots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
18-29	2	1.5	0.0-3.6	2	0.0	-	2	0.0	-
30-44	11	0.0	-	11	0.0	-	11	0.0	-
45-59	38	1.1	0.0-2.4	38	0.0	-	38	0.0	-
60-69	18	2.6	0.0-5.9	17	0.0	-	17	0.0	-
18-69	69	1.1	0.1-2.1	68	0.0	-	68	0.0	-

Mean amount of tobacco used by daily smokers by type									
Age Group (years)	Both Sexes								
	n	Mean # of manufactured cig.	95% CI	n	Mean # of hand-rolled cig.	95% CI	n	Mean # of pipes of tobacco	95% CI

18-29	50	10.2	7.1-13.4	47	0.1	0.0-0.2	47	0.0	-
30-44	151	12.3	10.8-13.8	150	0.3	0.1-0.6	150	0.0	-
45-59	242	14.1	12.6-15.6	235	1.0	0.4-1.5	234	0.0	-
60-69	146	11.3	8.8-13.8	146	0.9	0.4-1.4	146	0.0	0.0-0.1
18-69	589	12.0	10.8-13.2	578	0.5	0.3-0.7	577	0.0	0.0-0.0
Both Sexes									
Age Group (years)	n	Mean # of cigars, cheerots, cigarillos	95% CI	n	Mean # of shisha sessions	95% CI	n	Mean # of other type of tobacco	95% CI
18-29	47	0.2	0.0-0.4	47	0.0	-	47	0.0	-
30-44	150	0.3	0.0-0.6	149	0.0	-	150	0.0	-
45-59	235	0.4	0.1-0.7	234	0.0	0.0-0.1	234	0.0	-
60-69	148	1.0	0.3-1.7	146	0.1	0.0-0.2	145	0.1	0.0-0.2
18-69	580	0.4	0.2-0.5	576	0.0	0.0-0.0	576	0.0	0.0-0.0

Analysis Information:

- Questions used: T1, T2, T5a-T5f
- Epi Info program name: Tsmoketype (unweighted); TsmoketypeWT (weighted)

Smoked tobacco consumption

Description: Percentage of current smokers who smoke each of the following products.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- On average, how many of the following products do you smoke each day/week?

Percentage of current smokers smoking each of the following products									
Age Group (years)	Men								
	n	% Manuf. cigs.	95% CI	n	% Hand-rolled cigs.	95% CI	n	% Pipes of tobacco	95% CI
18-29	66	94.6	88.8-100.0	63	1.0	0.0-3.0	63	0.0	0.0-0.0
30-44	166	93.6	90.0-97.2	165	3.7	0.3-7.0	165	0.0	0.0-0.0
45-59	227	88.4	83.4-93.4	220	11.5	6.7-16.4	219	0.0	0.0-0.0
60-69	137	78.8	70.5-87.1	137	14.8	8.5-21.0	137	1.0	0.0-2.5
18-69	596	91.5	88.4-94.6	585	5.5	3.5-7.5	584	0.1	0.0-0.2
Age Group (years)	Men								
	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
18-29	63	2.5	0.0-6.2	63	0.0	0.0-0.0	63	0.0	0.0-0.0
30-44	165	6.5	1.7-11.2	164	0.6	0.0-1.7	165	0.0	0.0-0.0
45-59	220	5.7	1.9-9.6	219	0.4	0.0-1.2	219	0.0	0.0-0.0
60-69	139	15.7	8.5-22.9	138	1.0	0.0-3.0	137	0.7	0.0-2.0
18-69	587	5.6	3.2-8.0	584	0.4	0.0-0.8	584	0.1	0.0-0.2

Percentage of current smokers smoking each of the following products									
Age Group (years)	Women								
	n	% Manuf. cigs.	95% CI	n	% Hand-rolled cigs.	95% CI	n	% Pipes of tobacco	95% CI
18-29	3	100.0	100.0-100.0	3	41.9	0.0-100.0	3	0.0	0.0-0.0
30-44	13	58.0	29.3-86.6	13	38.6	11.0-66.2	13	0.0	0.0-0.0
45-59	41	78.6	57.3-99.9	41	15.7	3.7-27.6	41	0.0	0.0-0.0
60-69	17	59.8	30.4-89.2	18	21.0	0.0-44.3	18	8.9	0.0-26.1
18-69	74	77.7	68.6-86.9	75	28.1	5.7-50.6	75	1.0	0.0-2.9

Percentage of current smokers smoking each of the following products									
Age Group (years)	Women								
	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
18-29	3	41.9	0.0-100.0	-	-	-	-	-	-
30-44	13	10.2	0.0-30.1	-	-	-	-	-	-
45-59	41	15.2	0.0-36.0	-	-	-	-	-	-
60-69	18	36.6	8.5-64.7	-	-	-	-	-	-
18-69	75	23.3	0.0-48.3	-	-	-	-	-	-

Percentage of current smokers smoking each of the following products									
Age Group (years)	Both Sexes								
	n	% Manuf. cigs.	95% CI	n	% Hand-rolled cigs.	95% CI	n	% Pipes of tobacco	95% CI
18-29	69	94.8	89.3-100.0	66	2.8	0.0-6.8	66	0.0	0.0-0.0
30-44	179	92.0	88.4-95.6	178	5.2	1.8-8.6	178	0.0	0.0-0.0
45-59	268	87.5	82.2-92.7	261	11.9	7.3-16.6	260	0.0	0.0-0.0
60-69	154	77.4	69.4-85.4	155	15.2	9.1-21.4	155	1.6	0.0-3.6
18-69	670	90.7	87.7-93.6	660	6.9	4.3-9.5	659	0.1	0.0-0.3

Age Group (years)	Both Sexes								
	n	% Cigars, cheroots, cigarillos	95% CI	n	% Shisha	95% CI	n	% Other	95% CI
18-29	66	4.3	0.0-9.2	66	0.0	0.0-0.0	66	0.0	0.0-0.0
30-44	178	6.6	2.1-11.2	177	0.5	0.0-1.6	178	0.0	0.0-0.0
45-59	261	6.7	2.6-10.7	260	0.4	0.0-1.1	260	0.0	0.0-0.0
60-69	157	17.3	10.2-24.5	155	0.9	0.0-2.8	154	0.6	0.0-1.9
18-69	662	6.7	3.9-9.5	658	0.3	0.0-0.7	658	0.1	0.0-0.2

Analysis Information:

- Questions used: T1, T2, T5a-T5fw
- Epi Info program name: Tsmoketypeprev (unweighted); TsmoketypeprevWT (weighted)

Frequency of daily cigarette smoking

Description: Percentage of daily cigarette smokers smoking given quantities of manufactured or hand-rolled cigarettes per day.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- On average, how many of the following products do you smoke each day?

Percentage of daily smokers smoking given quantities of manufactured or hand-rolled cigarettes per day											
Age Group (years)	Men										
	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥ 25 Cigs.	95% CI
18-29	45	17.9	5.8-30.0	30.0	15.1- 44.9	26.8	14.2- 39.3	21.9	10.8- 32.9	3.5	0.0-9.8
30-44	136	12.9	6.5-19.3	20.4	13.1- 27.6	27.8	20.1- 35.6	32.4	23.8- 41.0	6.5	2.2-10.8
45-59	188	11.7	6.8-16.5	6.5	2.6-10.3	26.8	20.3- 33.3	45.2	38.2- 52.2	9.9	5.5-14.3
60-69	116	12.8	6.2-19.5	14.0	7.5-20.6	33.5	23.8- 43.3	31.5	22.3- 40.7	8.1	1.2-15.0
18-69	485	14.2	9.5-19.0	19.4	13.7- 25.0	27.7	22.2- 33.1	32.2	26.9- 37.5	6.5	3.9-9.2
Age Group (years)	Women										
	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥ 25 Cigs.	95% CI
18-29	2	0.0	0.0-0.0	49.0	0.0- 100.0	51.0	0.0- 100.0	0.0	0.0-0.0	0.0	0.0-0.0
30-44	10	17.4	0.0-44.1	30.4	0.0-69.1	26.1	0.7-51.5	26.1	0.0-55.6	0.0	0.0-0.0
45-59	34	25.3	9.4-41.2	31.0	13.1- 48.9	22.4	7.9-36.9	12.4	0.0-25.0	8.9	0.0-25.8
60-69	13	28.4	0.0-57.1	43.2	11.0- 75.5	5.0	0.0-15.3	23.3	0.3-46.4	0.0	0.0-0.0
18-69	59	16.9	6.2-27.6	36.9	10.4- 63.3	29.6	6.4-52.8	12.9	2.1-23.6	3.8	0.0-11.3
Age Group (years)	Both Sexes										
	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥ 25 Cigs.	95% CI
18-29	47	17.0	5.3-28.6	31.0	15.7- 46.2	28.0	15.1- 40.8	20.8	10.4- 31.1	3.3	0.0-9.1
30-44	146	13.1	6.9-19.3	20.8	13.8- 27.8	27.7	20.2- 35.2	32.2	23.9- 40.5	6.2	2.1-10.3
45-59	222	13.0	8.2-17.7	8.8	4.8-12.7	26.4	20.2- 32.5	42.1	35.6- 48.6	9.8	5.5-14.0
60-69	129	13.8	7.3-20.3	15.8	9.1-22.5	31.8	22.5- 41.0	31.0	22.2- 39.8	7.6	1.1-14.1
18-69	544	14.4	9.9-18.9	20.4	14.9- 26.0	27.8	22.5- 33.1	31.0	26.0- 36.0	6.4	3.9-8.8

Analysis Information:

- Questions used: T1, T2, T5a, T5b
- Epi Info program name: Tcig (unweighted); TcigWT (weighted)

Former daily smokers and former smokers

Description: Percentage of former daily smokers among all respondents and among ever daily smokers, and the mean duration, in years, since former smokers quit smoking.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- In the past did you ever smoke any tobacco products?
- In the past, did you ever smoke daily?
- How old were you when you stopped smoking?

Former daily smokers (who don't smoke currently) among all respondents											
Age Group (years)	Men				Women				Both Sexes		
	n	% Former daily smokers	95% CI		n	% Former daily smokers	95% CI		n	% Former daily smokers	95% CI
18-29	216	3.5	0.8-6.2		348	0.0	0.0-0.0		564	1.8	0.4-3.2
30-44	487	10.6	7.7-13.4		888	0.2	0.0-0.4		1375	5.7	4.2-7.2
45-59	498	25.7	21.3-30.1		875	2.6	1.4-3.7		1373	14.3	12.0-16.7
60-69	312	37.7	31.7-43.6		616	3.0	1.3-4.6		928	19.0	15.9-22.1
18-69	1513	12.3	10.4-14.2		2727	0.8	0.5-1.1		4240	6.7	5.7-7.7
Former daily smokers (who don't smoke currently) among ever daily smokers											
Age Group (years)	Men				Women				Both Sexes		
	n	% Former daily smokers	95% CI		n	% Former daily smokers	95% CI		n	% Former daily smokers	95% CI
18-29	55	12.9	3.4-22.5		2	0.0	0.0-0.0		57	12.4	3.1-21.7
30-44	196	27.9	21.4-34.4		13	10.6	0.0-26.4		209	27.3	21.0-33.6
45-59	329	38.2	31.9-44.4		58	35.6	22.0-49.2		387	37.9	32.3-43.6
60-69	240	47.9	41.1-54.8		36	48.6	29.3-67.9		276	48.0	41.7-54.3
18-69	820	29.5	25.3-33.8		109	27.1	15.2-39.0		929	29.4	25.2-33.6

Mean years since cessation											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean years	95% CI		n	Mean years	95% CI		n	Mean years	95% CI
18-29	34	3.8	2.8-4.8		1	5.0	-		35	3.8	2.9-4.8
30-44	76	11.0	9.2-12.9		3	18.0	13.4-22.6		79	11.1	9.3-12.9
45-59	125	16.9	14.8-19.0		23	15.0	9.8-20.2		148	16.7	14.7-18.7
60-69	109	20.0	16.9-23.2		25	23.0	18.7-27.4		134	20.4	17.5-23.2
18-69	344	11.3	9.9-12.6		52	16.4	12.4-20.4		396	11.5	10.2-12.9

Analysis Information:

- Questions used: T1, T2, T8, T9, T10, T11a-c
- Epi Info program name: Tsmokeexdaily (unweighted); TsmokeexdailyWT (weighted)

Cessation

Description: Percentage of current smokers who have tried to stop smoking during the past 12 months.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- During the past 12 months, have you tried to stop smoking?

Current smokers who have tried to stop smoking											
Age Group (years)	Men				Women				Both Sexes		
	n	% Tried to stop smoking	95% CI		n	% Tried to stop smoking	95% CI		n	% Tried to stop smoking	95% CI
18-29	66	66.3	53.9-78.8		3	41.9	0.0-100.0		69	65.3	54.1-76.5
30-44	166	61.9	53.6-70.2		13	55.6	25.4-85.9		179	61.6	53.4-69.8
45-59	228	47.6	40.5-54.6		41	59.2	43.8-74.5		269	48.7	42.1-55.3
60-69	139	62.3	53.2-71.4		18	76.0	52.4-99.6		157	63.4	54.8-72.0
18-69	599	60.0	54.0-66.1		75	55.7	34.2-77.2		674	59.8	54.3-65.3

Analysis Information:

- Questions used: T1, T2, T6
- Epi Info program name: Tcessation (unweighted); TcessationWT (weighted)

Advice to stop smoking

Description: Percentage of current smokers who have been advised by a doctor or other health worker to stop smoking, among those smokers who have had a visit to a doctor or other health worker in the past 12 months.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- During any visit to a doctor or other health worker in the past 12 months, were you advised to quit smoking tobacco?

Current smokers who have been advised by doctor to stop smoking											
Age Group (years)	Men				Women				Both Sexes		
	n	% Advised to stop smoking	95% CI		n	% Advised to stop smoking	95% CI		n	% Advised to stop smoking	95% CI
18-29	45	22.0	9.9-34.1		2	0.0	0.0-0.0		47	21.2	9.5-33.0
30-44	115	29.8	20.8-38.9		10	61.4	29.6-93.1		125	31.5	22.4-40.6
45-59	150	47.4	38.4-56.4		25	55.3	35.1-75.6		175	48.1	39.7-56.5
60-69	102	41.1	30.6-51.6		15	83.1	61.6-100.0		117	45.1	35.1-55.1
18-69	412	32.1	25.8-38.4		52	48.8	30.7-66.9		464	33.1	27.0-39.1

Analysis Information:

- Questions used: T1, T2, T7
- Epi Info program name: Tcessation (unweighted); TcessationWT (weighted)

Current users of smokeless tobacco

Description: Percentage of current users of smokeless tobacco among all respondents.
Instrument question:

- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?

Current users of smokeless tobacco											
Age Group (years)	Men				Women				Both Sexes		
	n	% Current users	95% CI		n	% Current users	95% CI		n	% Current users	95% CI
18-29	216	0.0	0.0-0.0		348	0.0	0.0-0.0		564	0.0	0.0-0.0
30-44	487	0.4	0.0-0.9		888	2.6	1.3-3.9		1375	1.4	0.7-2.1
45-59	498	2.1	0.2-4.1		875	15.2	12.2-18.2		1373	8.5	6.8-10.3
60-69	312	2.5	0.4-4.5		616	23.0	18.9-27.2		928	13.5	11.0-16.1
18-69	1513	0.7	0.2-1.1		2727	5.6	4.7-6.6		4240	3.1	2.6-3.6

Analysis Information:

- Questions used: T12, T13, T15
- Epi Info program name: Tsmokelessstatus (unweighted); TsmokelessstatusWT (weighted)

Status of smokeless tobacco use

Description: Status of using smokeless tobacco among all respondents.

Instrument questions:

- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
- Do you currently use smokeless tobacco products daily?
- In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel]?

Smokeless tobacco use									
Men									
Age Group (years)	n	Current user				Non user			
		% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
18-29	216	0.0	0.0-0.0	0.0	0.0-0.0	0.6	0.0-1.5	99.4	98.5-100.0
30-44	487	0.0	0.0-0.0	0.4	0.0-0.9	0.7	0.0-1.4	99.0	98.0-99.9
45-59	498	0.6	0.0-1.4	1.6	0.0-3.4	1.7	0.6-2.8	96.1	93.9-98.4
60-69	312	1.5	0.1-2.9	1.0	0.0-2.6	3.0	0.7-5.3	94.5	91.6-97.5
18-69	1513	0.2	0.0-0.4	0.5	0.1-0.9	1.0	0.4-1.6	98.3	97.6-99.0
Women									
Age Group (years)	n	Current user				Non user			
		% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
18-29	348	0.0	0.0-0.0	0.0	0.0-0.0	1.1	0.0-2.1	98.9	97.9-100.0
30-44	888	1.7	0.7-2.6	1.0	0.3-1.7	2.0	0.9-3.1	95.4	93.7-97.0
45-59	875	11.9	9.1-14.7	3.3	2.1-4.4	3.9	2.3-5.4	81.0	77.7-84.2
60-69	616	18.5	14.7-22.3	4.5	2.5-6.5	8.4	5.8-11.0	68.5	63.9-73.2
18-69	2727	4.3	3.5-5.1	1.3	0.9-1.7	2.5	1.8-3.2	91.9	90.6-93.2
Both Sexes									
Age Group (years)	n	Current user				Non user			
		% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
18-29	564	0.0	0.0-0.0	0.0	0.0-0.0	0.8	0.2-1.5	99.2	98.5-99.8
30-44	1375	0.8	0.3-1.2	0.7	0.2-1.1	1.3	0.6-1.9	97.3	96.4-98.2
45-59	1373	6.1	4.7-7.6	2.4	1.3-3.5	2.8	1.8-3.7	88.7	86.7-90.6
60-69	928	10.6	8.3-12.9	2.9	1.6-4.2	5.9	4.2-7.6	80.5	77.5-83.5
18-69	4240	2.2	1.8-2.6	0.9	0.6-1.2	1.7	1.3-2.2	95.2	94.5-95.9

Analysis Information:

- Questions used: T12, T13, T15
- Epi Info program name: Tsmokelessstatus (unweighted); TsmokelessstatusWT (weighted)

Former daily users of smokeless tobacco

Description: Percentage of former daily users of smokeless tobacco among all respondents and among ever daily users.

Instrument questions:

- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
- Do you currently use smokeless tobacco products daily?
- In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel]?
- In the past, did you ever use smokeless tobacco such as [snuff, chewing tobacco, betel] daily?

Former daily smokeless tobacco users (who don't use tobacco currently) among all respondents											
Age Group (years)	Men				Women				Both Sexes		
	n	% Former daily users	95% CI		n	% Former daily users	95% CI		n	% Former daily users	95% CI
18-29	216	0.0	0.0-0.0		348	0.1	0.0-0.3		564	0.1	0.0-0.2
30-44	487	0.3	0.0-0.8		888	1.3	0.4-2.2		1375	0.8	0.2-1.3
45-59	498	0.9	0.1-1.8		875	3.1	1.8-4.4		1373	2.0	1.2-2.8
60-69	312	2.1	0.2-4.0		616	7.4	4.7-10.1		928	4.9	3.3-6.6
18-69	1513	0.4	0.1-0.7		2727	1.7	1.2-2.1		4240	1.0	0.7-1.3

Former daily smokeless tobacco users (who don't use tobacco currently) among ever daily users											
Age Group (years)	Men				Women				Both Sexes		
	n	% Former daily users	95% CI		n	% Former daily users	95% CI		n	% Former daily users	95% CI
18-29	-	-	-		1	100.0	100.0-100.0		1	100.0	100.0-100.0
30-44	1	100.0	100.0-100.0		25	44.3	23.0-65.6		26	49.5	28.2-70.8
45-59	7	62.8	18.3-100.0		127	20.8	12.9-28.6		134	24.7	16.0-33.4
60-69	11	58.5	25.5-91.5		159	28.6	19.6-37.5		170	31.7	22.7-40.7
18-69	19	66.6	42.9-90.3		312	27.7	21.5-33.8		331	31.5	24.9-38.1

Analysis Information:

- Questions used: T12, T13, T15, T16
- Epi Info program name: Tsmokelessexdaily (unweighted); TsmokelessexdailyWT (weighted)

Amount of smokeless tobacco used among daily users by type

Description: Mean times per day smokeless tobacco used by daily smokeless tobacco users per day, by type.

Instrument questions:

- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
- Do you currently use smokeless tobacco products daily?
- On average, how many times a day do you use...?

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Age Group (years)	Women								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
18-29	-	-	-	-	-	-	-	-	-
30-44	16	0.9	0.0-2.0	16	0.0	-	16	3.4	2.4-4.3
45-59	91	0.8	0.2-1.4	89	0.2	0.0-0.4	94	3.2	2.6-3.8
60-69	115	0.5	0.2-0.8	115	0.1	0.0-0.1	117	3.6	3.0-4.2
18-69	222	0.7	0.3-1.1	220	0.1	0.0-0.2	227	3.4	2.9-3.8

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Age Group (years)	Women					
	n	Betel, quid	95% CI	n	Other	95% CI
18-29	-	-	-	-	-	-
30-44	16	0.9	0.0-1.7	16	0.0	-
45-59	95	1.9	1.1-2.6	90	0.4	0.0-0.9
60-69	118	2.1	1.6-2.6	114	0.1	0.0-0.3
18-69	229	1.8	1.3-2.3	220	0.3	0.0-0.5

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type									
Age Group (years)	Both Sexes								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
18-29	-	-	-	-	-	-	-	-	-
30-44	16	0.9	0.0-2.0	16	0.0	-	16	3.4	2.4-4.3
45-59	93	1.0	0.3-1.7	91	0.2	0.0-0.3	96	3.1	2.5-3.7
60-69	120	0.5	0.2-0.8	120	0.1	0.0-0.1	122	3.5	2.8-4.1
18-69	229	0.8	0.4-1.2	227	0.1	0.0-0.2	234	3.3	2.8-3.7

Mean times per day smokeless tobacco used by daily smokeless tobacco users by type						
Age Group (years)	Both Sexes					
	n	Betel, quid	95% CI	n	Other	95% CI
18-29	-	-	-	-	-	-
30-44	16	0.9	0.0-1.7	16	0.0	-
45-59	97	1.8	1.0-2.5	92	0.4	0.0-0.9
60-69	123	2.2	1.7-2.7	119	0.1	0.0-0.2
18-69	236	1.8	1.3-2.3	227	0.2	0.0-0.5

Analysis Information:

- Questions used: T12, T13, T14a-otherw
- Epi Info program name: Tsmokelesstype (unweighted); TsmokelesstypeWT (weighted)

Smokeless tobacco consumption

Description: Percentage of current users of smokeless tobacco who use each of the following products.

Instrument questions:

- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
- Do you currently use smokeless tobacco products daily?
- On average, how many times a day/week do you use...?

Percentage of current users of smokeless tobacco using each of the following products									
Age Group (years)	Women								
	n	% Snuff by mouth	95% CI	n	% Snuff by nose	95% CI	n	% Chewing tobacco	95% CI
18-29	-	-	-	-	-	-	-	-	-
30-44	25	23.5	5.1-41.9	24	3.1	0.0-9.2	24	82.5	68.4-96.6
45-59	128	17.1	9.2-25.0	125	4.1	0.5-7.7	131	80.7	72.7-88.7
60-69	142	19.2	10.7-27.7	142	2.2	0.0-4.8	144	81.6	74.7-88.6
18-69	295	18.8	12.2-25.4	291	3.3	0.9-5.7	299	81.3	75.8-86.7

Percentage of current users of smokeless tobacco using each of the following products						
Age Group (years)	Women					
	n	% Betel, quid	95% CI	n	% Other	95% CI
18-29	-	-	-	-	-	-
30-44	25	38.5	18.8-58.2	24	0.0	0.0-0.0
45-59	132	51.3	41.0-61.6	126	6.1	1.4-10.9
60-69	145	52.9	42.9-62.9	141	4.7	1.1-8.3
18-69	302	50.0	42.7-57.3	291	4.8	2.0-7.6

Percentage of current users of smokeless tobacco using each of the following products									
Age Group (years)	Both Sexes								
	n	% Snuff by mouth	95% CI	n	% Snuff by nose	95% CI	n	% Chewing tobacco	95% CI
18-29	-	-	-	-	-	-	-	-	-
30-44	27	23.9	6.4-41.4	26	2.6	0.0-7.8	26	74.1	53.3-95.0
45-59	134	18.3	9.7-26.9	131	3.5	0.4-6.7	137	72.4	61.1-83.6
60-69	149	18.0	9.5-26.6	149	2.0	0.0-4.4	151	79.7	72.5-86.9
18-69	310	19.1	12.5-25.7	306	2.9	0.8-5.0	314	75.0	67.5-82.5

Percentage of current users of smokeless tobacco using each of the following products						
Age Group (years)	Both Sexes					
	n	% Betel, quid	95% CI	n	% Other	95% CI
18-29	-	-	-	-	-	-
30-44	27	33.2	14.4-52.0	26	0.0	0.0-0.0
45-59	138	44.6	33.8-55.4	132	5.3	1.2-9.4
60-69	152	51.9	42.0-61.9	148	4.3	1.0-7.6
18-69	317	45.3	37.9-52.7	306	4.2	1.7-6.7

Analysis Information:

- Questions used: T12, T13, T14a-otherw
- Epi Info program name: Tsmokelesstypeprev (unweighted); TsmokelesstypeprevWT (weighted)

Current tobacco users



Description: Percentage of daily and current (daily plus non-daily) tobacco users, includes smoking and smokeless, among all respondents.

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?
- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
- Do you currently use smokeless tobacco products daily?

Current tobacco users									
Age Group (years)	Men			Women			Both Sexes		
	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI

18-29	216	32.0	24.8-39.2	348	1.5	0.0-3.2	564	17.0	12.7-21.4
30-44	487	32.4	27.8-37.1	888	4.0	2.4-5.6	1375	19.1	16.3-22.0
45-59	498	46.4	41.2-51.6	875	19.7	16.2-23.2	1373	33.3	29.8-36.8
60-69	312	45.6	39.5-51.6	616	25.0	20.8-29.1	928	34.5	30.6-38.4
18-69	1513	35.8	32.3-39.3	2727	7.7	6.3-9.1	4240	22.1	19.8-24.4

Daily tobacco users									
Age Group (years)	Men			Women			Both Sexes		
	n	% Daily users	95% CI	n	% Daily users	95% CI	n	% Daily users	95% CI
18-29	216	23.6	17.1-30.1	348	1.3	0.0-3.0	564	12.6	8.7-16.6
30-44	487	27.2	23.0-31.5	888	3.0	1.6-4.3	1375	15.9	13.3-18.4
45-59	498	42.2	36.9-47.4	875	16.3	12.9-19.7	1373	29.5	26.1-32.9
60-69	312	42.2	36.2-48.2	616	20.7	16.8-24.6	928	30.7	26.9-34.4
18-69	1513	29.6	26.4-32.7	2727	6.3	5.0-7.6	4240	18.2	16.2-20.3

Analysis Information:

- Questions used: T1, T2, T12, T13
- Epi Info program name: Tdailyuser (unweighted); TdailyuserWT (weighted)

Exposure to second-hand smoke in home in past 30 days

Description: Percentage of respondents exposed second-hand smoke in the home in the past 30 days.

Instrument question:

- In the past 30 days, did someone smoke in your home?

Exposed to second-hand smoke in home during the past 30 days									
Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-29	216	61.9	54.6-69.1	348	55.7	50.1-61.3	564	58.8	53.8-63.9
30-44	487	54.4	49.6-59.3	888	54.2	50.0-58.4	1375	54.3	51.0-57.7
45-59	498	51.6	46.7-56.5	875	55.7	51.8-59.6	1373	53.6	50.4-56.8
60-69	312	49.6	43.4-55.8	616	47.5	42.7-52.2	928	48.5	44.4-52.5
18-69	1513	56.6	52.9-60.4	2727	54.6	51.6-57.6	4240	55.6	52.9-58.4

Analysis Information:

- Questions used: T17
- Epi Info program name: Tetshome (unweighted); TetshomeWT (weighted)

Exposure to second-hand smoke in the

Description: Percentage of respondents exposed to second-hand smoke in the workplace in the past 30 days.

Instrument question:

**workplace in
past 30 days**

- During the past 30 days, did someone smoke in closed areas in your workplace (in the building, in a work area or a specific office)?

Exposed to second-hand smoke in the workplace during the past 30 days											
Age Group (years)	Men				Women				Both Sexes		
	n	% Exposed	95% CI		n	% Exposed	95% CI		n	% Exposed	95% CI
18-29	157	25.2	17.1-33.2		257	19.7	13.9-25.5		414	22.4	17.3-27.6
30-44	325	20.2	15.1-25.3		635	19.3	15.5-23.2		960	19.8	16.5-23.1
45-59	349	18.0	13.2-22.8		608	18.1	14.1-22.2		957	18.1	14.7-21.4
60-69	215	15.2	9.8-20.7		422	13.3	9.4-17.3		637	14.2	10.8-17.7
18-69	1046	21.6	17.4-25.8		1922	18.8	15.7-22.0		2968	20.2	17.4-23.1

Analysis Information:

- Questions used: T18
- Epi Info program name: Tetswork (unweighted); TetsworkWT (weighted)

Analysis Information:

- Questions used: T18c
- Epi Info program name: Tcotinine (unweighted); TcotinineWT (weighted)

Urine

cotinine test

Description: Percentage of respondents with positive urine cotinine 200 ng/mL test .

Test:

- Spot urine Cotinine test

Urine Cotinine 200 ng/mL test results											
Age Group (years)	Men				Women				Both Sexes		
	n	% Cotinine (+)	95% CI		n	% Cotinine (+)	95% CI		n	% Cotinine (+)	95% CI
18-29	191	33.3	26.0-40.7		308	2.8	0.5-5.2		499	18.6	14.1-23.2
30-44	460	32.2	27.6-36.8		817	4.7	3.1-6.3		1277	19.4	16.6-22.2
45-59	475	45.8	40.3-51.4		835	20.9	17.5-24.4		1310	33.6	29.9-37.2
60-69	302	46.6	40.1-53.0		587	28.4	24.1-32.8		889	36.9	32.9-40.9
18-69	1428	36.3	32.7-39.9		2547	9.2	7.7-10.8		3975	23.3	20.9-25.7

Analysis Information:

- Questions used: T18a
- Epi Info program name: Tcotinine (unweighted); TcotinineWT (weighted)

**Urine
cotinine test**

Description: Percentage of respondents with positive urine cotinine 10 ng/mL test .

Test:

- Spot urine Cotinine test

Urine Cotinine 10 ng/mL test results											
Age Group (years)	Men				Women				Both Sexes		
	n	% Cotinine (+)	95% CI		n	% Cotinine (+)	95% CI		n	% Cotinine (+)	95% CI
18-29	191	41.4	33.7-49.1		308	4.7	1.8-7.7		499	23.7	18.9-28.6
30-44	460	38.6	33.6-43.5		817	9.4	6.9-11.9		1277	25.0	21.8-28.2
45-59	475	50.6	45.1-56.1		834	25.4	21.6-29.2		1309	38.2	34.4-42.0
60-69	302	49.0	42.4-55.5		587	32.7	27.9-37.4		889	40.3	36.1-44.5
18-69	1428	42.8	38.8-46.7		2546	12.7	10.7-14.8		3974	28.3	25.6-31.0

Analysis Information:

- Questions used: T1 T12 T17 T18 T18c
- Epi Info program name: Tcotinine (unweighted); TcotinineWT (weighted)

**Self
reporting
tobacco
use vs
cotinine
test**

Description: Reported tobacco use vs urine cotinine test crosstabulation

Instrument questions/ test:

- T1. Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?
- Do you currently use any smokeless tobacco such as [snuff, chewing tobacco, betel]?
- Spot urine Cotinine test

Reported tobacco use vs cotinine 200 ng/mL test									
Men									
Age Group (years)	n	% Reported use and Cotinine (+)	95% CI	% No Reported use and Cotinine (+)	95% CI	% Reported use and Cotinine (-)	95% CI	% No Reported use and Cotinine (-)	95% CI
18-29	191	26.4	19.7-33.1	6.9	3.2-10.6	4.8	1.6-8.0	61.9	54.1-69.8
30-44	460	27.3	23.0-31.6	4.9	2.7-7.0	5.1	2.7-7.5	62.7	57.8-67.7
45-59	475	41.3	36.1-46.5	4.6	2.5-6.7	4.4	2.5-6.3	49.7	44.1-55.4
60-69	302	42.1	35.9-48.3	4.4	1.6-7.2	3.6	1.5-5.8	49.8	43.6-56.1
18-69	1428	30.7	27.4-34.0	5.6	3.9-7.3	4.7	3.1-6.3	59.0	55.2-62.7
Women									
Age Group (years)	n	% Reported use and Cotinine (+)	95% CI	% No Reported use and Cotinine (+)	95% CI	% Reported use and Cotinine (-)	95% CI	% No Reported use and Cotinine (-)	95% CI
18-29	308	1.7	0.0-3.7	1.2	0.0-2.4	0.0	0.0-0.0	97.2	94.8-99.5
30-44	817	2.8	1.6-4.1	1.8	0.8-2.8	0.9	0.2-1.6	94.4	92.6-96.2
45-59	834	16.6	13.4-19.8	4.4	2.8-6.0	2.6	1.3-3.9	76.4	72.8-80.1
60-69	587	22.3	18.4-26.2	6.1	4.0-8.2	3.5	2.0-5.1	68.1	63.4-72.7
18-69	2546	6.8	5.4-8.2	2.4	1.7-3.2	1.1	0.7-1.5	89.6	88.0-91.3
Both Sexes									
Age Group (years)	n	% Reported use and Cotinine (+)	95% CI	% No Reported use and Cotinine (+)	95% CI	% Reported use and Cotinine (-)	95% CI	% No Reported use and Cotinine (+)	95% CI
18-29	499	14.5	10.4-18.6	4.1	2.1-6.2	2.5	0.8-4.2	78.9	74.0-83.8
30-44	1277	15.9	13.3-18.5	3.5	2.2-4.7	3.1	1.8-4.5	77.5	74.4-80.5
45-59	1309	29.1	25.7-32.6	4.5	3.2-5.8	3.5	2.4-4.7	62.9	59.1-66.6
60-69	889	31.6	27.7-35.5	5.3	3.6-7.0	3.6	2.3-4.9	59.5	55.5-63.6
18-69	3974	19.2	17.0-21.3	4.1	3.1-5.1	3.0	2.1-3.8	73.8	71.3-76.3

Alcohol Consumption

Alcohol consumption status

Description: Alcohol consumption status of all respondents.

Instrument questions:

- Have you ever consumed any alcohol such as ...?
- Have you consumed any alcohol in the past 12 months?
- Have you consumed any alcohol in the past 30 days?

Alcohol consumption status									
Men									
Age Group (years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	216	71.8	64.6-79.1	16.4	10.6-22.1	1.6	0.0-3.2	10.2	5.5-14.9
30-44	487	80.8	77.0-84.6	9.8	7.1-12.5	5.3	3.2-7.4	4.1	1.6-6.6
45-59	498	62.9	57.8-68.1	12.3	9.2-15.5	13.2	9.8-16.5	11.6	8.0-15.1
60-69	312	42.4	36.5-48.3	10.2	6.5-13.9	31.0	25.2-36.9	16.4	11.9-21.0
18-69	1513	71.2	67.6-74.7	13.0	10.4-15.7	7.0	5.6-8.3	8.8	6.2-11.5
Women									
Age Group (years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	348	28.6	23.2-33.9	28.5	23.2-33.9	13.7	9.5-17.9	29.2	23.1-35.3
30-44	888	33.3	29.6-37.1	27.6	24.4-30.7	13.6	10.9-16.2	25.6	22.1-29.1
45-59	875	22.8	19.5-26.1	15.3	12.2-18.5	23.1	19.8-26.4	38.8	34.8-42.7
60-69	616	11.0	8.1-13.9	4.1	2.5-5.7	36.7	31.9-41.5	48.2	43.2-53.2
18-69	2727	27.5	24.7-30.3	23.7	21.2-26.2	17.3	15.3-19.4	31.5	28.3-34.7
Both Sexes									
Age Group (years)	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-29	564	50.7	45.6-55.7	22.3	18.3-26.4	7.5	5.2-9.8	19.5	15.5-23.5
30-44	1375	58.6	55.5-61.7	18.1	16.0-20.2	9.2	7.5-10.9	14.1	11.8-16.5
45-59	1373	43.3	39.9-46.6	13.8	11.5-16.1	18.0	15.6-20.5	24.9	22.1-27.8
60-69	928	25.5	22.0-29.0	6.9	4.9-8.9	34.1	30.1-38.0	33.5	29.6-37.4
18-69	4240	49.9	47.4-52.5	18.2	16.2-20.2	12.0	10.7-13.3	19.8	17.5-22.2

Analysis Information:

- Questions used: A1, A2, A5
- Epi Info program name: Aconsumption (unweighted); AconsumptionWT (weighted)

Stopping drinking due to health reasons

Description: Percentage of former drinkers (those who did not drink during the past 12 months) who stopped drinking due to health reasons, such as a negative impact of drinking on your health or as per advice of a doctor or other health worker among those respondents who drank in their lifetime, but not in the last 12 months.

Instrument questions:

- Have you consumed any alcohol in the past 12 months?
- Did you stop drinking due to health reasons, such as a negative impact of drinking on your health or as per advice of your doctor or other health worker?

Stopping drinking due to health reasons											
Age Group (years)	Men				Women				Both Sexes		
	n	% stopping due to health reasons	95% CI		n	% stopping due to health reasons	95% CI		n	% stopping due to health reasons	95% CI
18-29	4	100.0	100.0-100.0		45	43.4	27.7-59.0		49	49.5	34.5-64.5
30-44	26	79.4	61.4-97.5		127	48.8	39.4-58.2		153	58.3	49.2-67.3
45-59	66	86.4	78.1-94.8		212	57.4	49.1-65.8		278	68.2	61.7-74.7
60-69	96	71.7	62.3-81.2		218	56.7	48.2-65.1		314	63.0	56.2-69.8
18-69	192	81.7	75.2-88.2		602	50.6	44.3-56.9		794	59.9	54.6-65.1

Analysis Information:

- Questions used: A1, A2, A3
- Epi Info program name: Astopdrink (unweighted); AstopdrinkWT (weighted)

Frequency of alcohol consumption

Description: Frequency of alcohol consumption in the past 12 months among those respondents who drank in the last 12 months.

Instrument question:

- During the past 12 months, how frequently have you had at least one alcoholic drink?

Frequency of alcohol consumption in the past 12 months													
Age Group (years)	Men												
	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI

18-29	191	5.0	1.8-8.3	4.3	1.0-7.7	12.8	7.6-17.9	21.7	15.4-28.1	25.6	19.0-32.2	30.0	22.7-37.3
30-44	441	13.2	9.7-16.7	7.2	4.5-9.8	15.6	12.2-19.1	20.1	15.5-24.7	22.3	17.9-26.7	21.3	17.1-25.6
45-59	379	16.2	12.3-20.0	7.0	4.3-9.8	14.6	10.8-18.4	17.8	13.1-22.5	20.2	15.9-24.5	23.0	18.6-27.4
60-69	161	16.6	10.5-22.6	7.0	3.0-11.0	11.9	6.4-17.4	14.6	8.2-21.0	20.1	13.4-26.8	28.9	21.3-36.6
18-69	1172	10.3	8.3-12.3	5.9	4.1-7.7	14.1	11.3-16.8	20.2	16.8-23.6	23.3	19.9-26.6	25.7	22.1-29.2
Women													
Age Group (years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	204	1.0	0.0-2.3	0.0	0.0-0.0	0.9	0.0-2.2	6.6	2.6-10.5	16.0	10.5-21.4	73.4	66.7-80.2
30-44	531	3.4	1.0-5.8	0.3	0.0-0.7	4.5	2.1-6.8	7.0	4.8-9.2	18.7	14.8-22.5	64.9	60.1-69.8
45-59	318	6.5	3.7-9.2	2.1	0.4-3.8	4.1	1.7-6.5	6.6	3.1-10.2	18.3	13.3-23.2	61.0	54.1-67.8
60-69	97	14.3	5.4-23.2	0.7	0.0-2.0	3.8	0.0-7.6	8.7	1.8-15.6	17.6	8.5-26.7	51.8	39.6-64.0
18-69	1150	3.0	1.7-4.2	0.4	0.1-0.7	2.8	1.6-3.9	6.8	4.7-8.9	17.3	14.2-20.4	68.0	64.0-72.0
Both Sexes													
Age Group (years)	n	% Daily	95% CI	% 5-6 days/ week	95% CI	% 3-4 days/ week	95% CI	% 1-2 days/ week	95% CI	% 1-3 days/ month	95% CI	% < once a month	95% CI
18-29	395	3.5	1.4-5.5	2.7	0.6-4.8	8.2	5.0-11.5	15.9	11.6-20.2	21.9	17.3-26.5	46.6	40.9-52.4
30-44	972	9.6	7.2-11.9	4.6	2.9-6.3	11.5	9.2-13.8	15.2	12.2-18.3	21.0	17.8-24.2	37.5	34.0-41.0
45-59	697	13.0	10.3-15.7	5.4	3.5-7.3	11.1	8.5-13.8	14.1	10.6-17.7	19.6	16.0-23.1	35.5	31.5-39.5
60-69	258	16.0	11.0-21.0	5.4	2.4-8.5	9.9	5.7-14.1	13.1	8.2-18.1	19.5	13.8-25.1	34.7	28.0-41.4
18-69	2322	7.6	6.3-9.0	3.9	2.7-5.1	9.9	8.1-11.7	15.3	12.9-17.6	21.1	18.6-23.6	41.1	38.0-44.2

Analysis Information:

- Questions used: A1, A2, A4
- Epi Info program name: Afrequency (unweighted); AfrequencyWT (weighted)

Drinking occasions in the past 30 days

Description: Mean number of occasions with at least one drink in the past 30 days among current (past 30 days) drinkers.

Instrument question:

- During the past 30 days, on how many occasions did you have at least one alcoholic drink?

Mean number of drinking occasions in the past 30 days among current (past 30 days) drinkers											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	154	7.1	5.6-8.5		97	2.5	1.8-3.3		251	5.8	4.7-7.0
30-44	387	9.1	8.1-10.1		282	3.9	3.1-4.8		669	7.7	6.9-8.5
45-59	310	10.1	8.8-11.3		185	5.6	4.4-6.8		495	8.9	7.9-9.9
60-69	120	10.0	8.1-12.0		65	6.4	3.3-9.4		185	9.1	7.6-10.7
18-69	971	8.4	7.7-9.2		629	3.7	3.2-4.2		1600	7.2	6.6-7.8

Analysis Information:

- Questions used: A1, A2, A5, A6
- Epi Info program name: Aoccasions (unweighted); AoccasionsWT (weighted)

Standard drinks per drinking occasion

Description: Mean number of standard drinks consumed on a drinking occasion among current (past 30 days) drinkers.

Instrument question:

- During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

Mean number of standard drinks per drinking occasion among current (past 30 days) drinkers											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	154	3.7	3.4-4.0		96	1.9	1.6-2.3		250	3.2	3.0-3.5
30-44	388	4.1	3.8-4.4		284	2.1	1.9-2.3		672	3.6	3.3-3.8
45-59	313	3.7	3.3-4.1		188	1.6	1.5-1.8		501	3.2	2.8-3.5
60-69	129	3.0	2.6-3.5		66	1.7	1.2-2.2		195	2.7	2.3-3.1
18-69	984	3.8	3.6-4.0		634	1.9	1.8-2.1		1618	3.3	3.2-3.5

Analysis Information:

- Questions used: A1, A2, A5, A7
- Epi Info program name: Anumdrinkperday (unweighted); AnumdrinkperdayWT (weighted)

Average volume drinking levels among all respondents

Description: Percentage of respondents with different drinking levels.

A standard drink contains approximately 10g of pure alcohol.

Instrument questions:

- During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

Drinking at high-end level among all respondents (≥60g of pure alcohol on average per occasion among men and ≥40g of pure alcohol on average per occasion among women)											
Age Group	Men				Women				Both Sexes		
(years)	n	% ≥60g	95% CI		n	% ≥40g	95% CI		n	% high-end level	95% CI
18-29	215	14.0	9.1-18.8		343	2.8	0.8-4.9		558	8.6	5.7-11.4
30-44	486	18.3	14.5-22.2		885	4.4	2.8-6.1		1371	11.9	9.5-14.2
45-59	496	9.2	6.3-12.2		872	1.1	0.3-1.9		1368	5.2	3.6-6.8
60-69	311	3.7	1.7-5.7		615	0.8	0.0-1.5		926	2.1	1.1-3.1
18-69	1508	13.8	11.5-16.2		2715	2.8	1.8-3.8		4223	8.5	7.1-9.9
Drinking at intermediate level among all respondents (40-59.9g of pure alcohol on average per occasion among men and 20-39.9g of pure alcohol on average per occasion among women)											
Age Group	Men				Women				Both Sexes		
(years)	n	% 40-59.9g	95% CI		n	% 20-39.9g	95% CI		n	% intermediate level	95% CI
18-29	215	17.0	11.6-22.3		343	9.1	5.2-13.0		558	13.2	9.8-16.5
30-44	486	20.2	16.1-24.4		885	14.0	11.6-16.5		1371	17.3	14.8-19.9
45-59	496	11.4	8.4-14.4		872	6.9	4.9-8.8		1368	9.2	7.3-11.0
60-69	311	6.8	3.7-9.9		615	2.1	0.9-3.3		926	4.3	2.6-5.9
18-69	1508	16.3	13.6-19.0		2715	9.6	7.8-11.5		4223	13.1	11.4-14.8
Drinking at lower-end level among all respondents (<40g of pure alcohol on average per occasion among men and <20g of pure alcohol on average per occasion among women)											
Age Group	Men				Women				Both Sexes		
(years)	n	% <40g	95% CI		n	% <20g	95% CI		n	% lower-end level	95% CI
18-29	215	40.8	33.9-47.7		343	15.4	11.2-19.6		558	28.5	24.1-32.8
30-44	486	42.2	36.9-47.4		885	14.6	11.7-17.4		1371	29.3	25.9-32.6
45-59	496	42.2	37.2-47.1		872	14.7	12.1-17.2		1368	28.7	25.7-31.7
60-69	311	31.8	26.5-37.0		615	7.9	5.4-10.5		926	19.0	16.0-21.9
18-69	1508	40.9	37.5-44.4		2715	14.4	12.4-16.5		4223	28.1	25.8-30.3

Analysis Information:

- Questions used: A1, A2, A5, A7

- Epi Info program name: Acategories (unweighted); AcategoriesWT (weighted)

Average volume drinking levels among current (past 30 days) drinkers

Description: Percentage of current (past 30 days) drinkers with different drinking levels.
A standard drink contains approximately 10g of pure alcohol.

Instrument questions:

- During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

High-end, intermediate, and lower-end level drinking among current (past 30 days) drinkers							
Men							
Age Group (years)	n	% high-end (≥60g)	95% CI	% Intermediate (40-59.9g)	95% CI	% Lower-end (<40g)	95% CI
18-29	154	19.4	13.0-25.9	23.6	16.7-30.6	56.9	48.8-65.0
30-44	388	22.7	18.1-27.3	25.1	19.9-30.2	52.2	46.2-58.2
45-59	313	14.7	10.1-19.2	18.1	13.6-22.7	67.2	61.6-72.8
60-69	129	8.7	4.1-13.4	16.1	9.4-22.8	75.2	67.2-83.1
18-69	984	19.5	16.3-22.6	23.0	19.3-26.6	57.6	53.5-61.7
Women							
Age Group (years)	n	% high-end (≥40g)	95% CI	% intermediate (20-39.9g)	95% CI	% lower-end (<20g)	95% CI
18-29	96	10.4	3.1-17.7	33.3	21.3-45.4	56.3	44.2-68.4
30-44	284	13.5	8.7-18.2	42.5	36.0-48.9	44.1	37.4-50.7
45-59	188	4.9	1.5-8.4	30.3	23.4-37.2	64.8	57.5-72.1
60-69	66	7.0	0.0-14.1	19.6	9.4-29.7	73.4	61.7-85.2
18-69	634	10.5	7.0-14.1	35.8	30.2-41.5	53.6	47.9-59.4
Both sexes							
Age Group (years)	n	% high-end	95% CI	% intermediate	95% CI	% lower-end	95% CI
18-29	250	17.0	11.7-22.4	26.2	20.1-32.3	56.8	50.1-63.4
30-44	672	20.3	16.6-24.0	29.7	25.4-33.9	50.1	45.2-54.9
45-59	501	12.1	8.6-15.7	21.3	17.3-25.3	66.6	61.8-71.3
60-69	195	8.3	4.4-12.3	16.9	11.3-22.6	74.8	68.1-81.4
18-69	1618	17.1	14.4-19.8	26.3	23.2-29.5	56.5	53.0-60.1

Analysis Information:

- Questions used: A1, A2, A5, A7
- Epi Info program name: Acategories (unweighted); AcategoriesWT (weighted)

Largest number of drinks in

Description: Largest number of drinks consumed during a single occasion in the past 30 days among current (past 30 days) drinkers.

the past 30 days

Instrument question:

- During the past 30 days, what was the largest number of standard alcoholic drinks you had on a single occasion, counting all types of alcoholic drinks together?

Mean maximum number of standard drinks consumed on one occasion in the past 30 days											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean maximum number	95% CI		n	Mean maximum number	95% CI		n	Mean maximum number	95% CI
18-29	154	5.6	5.0-6.1		96	2.6	2.0-3.2		250	4.8	4.3-5.2
30-44	387	6.1	5.7-6.6		282	3.0	2.7-3.3		669	5.3	4.9-5.7
45-59	313	5.3	4.8-5.8		187	2.3	2.0-2.6		500	4.6	4.1-5.0
60-69	129	4.4	3.7-5.0		66	1.7	1.3-2.1		195	3.8	3.2-4.3
18-69	983	5.7	5.4-6.0		631	2.7	2.4-3.0		1614	4.9	4.7-5.2

Analysis Information:

- Questions used: A1, A2, A5, A8
- Epi Info program name: Alargestnum (unweighted); AlargestnumWT (weighted)

Six or more drinks on a single occasion ("heavy episodic drinking")



Description: Percentage of respondents who had six or more drinks on any occasion in the past 30 days during a single occasion among the total population.

Instrument question:

- During the past 30 days, how many times did you have **six or more** standard alcoholic drinks in a single drinking occasion?

Six or more drinks on a single occasion at least once during the past 30 days among total population											
Age Group (years)	Men				Women				Both Sexes		
	n	% ≥ 6 drinks	95% CI		n	% ≥ 6 drinks	95% CI		n	% ≥ 6 drinks	95% CI
18-29	130	51.7	41.2-62.3		255	3.6	0.8-6.4		385	25.8	20.1-31.6
30-44	282	62.1	55.4-68.8		629	5.0	3.0-7.0		911	32.8	28.8-36.8
45-59	296	36.5	30.3-42.8		694	1.1	0.4-1.9		990	16.8	13.8-19.9
60-69	215	14.3	9.1-19.4		553	0.4	0.0-0.9		768	5.9	3.7-8.0
18-69	923	49.5	44.3-54.6		2131	3.2	1.9-4.5		3054	24.5	21.6-27.3

Analysis Information:

- Questions used: A1, A2, A5, A9

- Epi Info program name: Aepisodic (unweighted); AepisodicWT (weighted)

Six or more drinks on a single occasion Description: Mean number of times in the past 30 days on which current (past 30 days) drinkers consumed six or more drinks during a single occasion.
Instrument question:

- During the past 30 days, how many times did you have **six or more** standard alcoholic drinks in a single drinking occasion?

Mean number of times with six or more drinks during a single occasion in the past 30 days among current drinkers											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of times	95% CI		n	Mean number of times	95% CI		n	Mean number of times	95% CI
18-29	69	4.1	2.7-5.4		8	0.9	0.8-1.1		77	3.8	2.5-5.1
30-44	184	5.4	4.3-6.4		28	3.9	1.5-6.3		212	5.2	4.3-6.2
45-59	113	6.2	4.7-7.8		10	2.2	1.0-3.4		123	6.1	4.6-7.5
60-69	33	2.9	2.2-3.6		4	3.4	0.0-6.9		37	2.9	2.2-3.7
18-69	399	4.9	4.1-5.7		50	2.4	1.1-3.7		449	4.7	4.0-5.4

Analysis Information:

- Questions used: A1, A2, A5, A9
- Epi Info program name: Aepisodic (unweighted); AepisodicWT (weighted)

Past 7 days drinking

Description: Frequency of alcohol consumption in the past 7 days by current (past 30 days) drinkers.

Instrument question:

- During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

Frequency of alcohol consumption in the past 7 days											
Age Group (years)	Men										
	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
18-29	151	10.4	5.3-15.5	2.7	0.0-5.4	12.8	7.3-18.3	53.2	45.0-61.4	20.9	14.4-27.4
30-44	388	11.5	8.2-14.8	10.3	7.3-13.4	16.1	11.9-20.2	51.1	45.5-56.8	11.0	7.5-14.4
45-59	314	20.0	15.4-24.6	7.9	4.8-10.9	17.9	13.7-22.2	41.3	35.8-46.8	12.9	9.5-16.3
60-69	128	19.5	12.4-26.5	8.7	3.7-13.8	18.6	11.3-25.9	39.0	30.0-48.1	14.1	7.1-21.2
18-69	981	12.8	10.2-15.4	6.7	5.0-8.4	15.1	12.4-17.9	49.8	45.7-54.0	15.5	12.4-18.6
Age Group (years)	Women										
	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
18-29	97	1.2	0.0-3.7	0.0	0.0-0.0	1.6	0.0-3.8	68.5	58.7-78.3	28.6	18.8-38.4
30-44	282	3.7	1.1-6.2	3.6	0.4-6.8	12.4	8.3-16.6	51.0	44.1-57.8	29.4	23.2-35.6
45-59	187	9.7	5.4-14.0	3.2	0.4-6.0	9.1	4.4-13.9	53.0	44.8-61.1	25.0	16.8-33.1
60-69	67	18.9	7.1-30.7	0.9	0.0-2.5	5.3	0.0-10.6	58.9	45.7-72.0	16.1	7.6-24.6
18-69	633	4.1	2.4-5.8	1.9	0.6-3.2	7.0	4.8-9.2	59.1	53.6-64.5	27.9	23.0-32.9
Age Group (years)	Both Sexes										
	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
18-29	248	7.9	4.0-11.8	2.0	0.0-3.9	9.7	5.7-13.8	57.4	50.7-64.1	23.0	17.7-28.3
30-44	670	9.4	6.9-12.0	8.6	6.2-11.0	15.1	11.8-18.4	51.1	46.5-55.7	15.8	12.7-18.9
45-59	501	17.4	13.8-21.0	6.7	4.1-9.2	15.7	12.2-19.1	44.3	39.6-49.0	16.0	12.6-19.4
60-69	195	19.3	13.3-25.3	6.9	3.0-10.8	15.5	9.8-21.2	43.7	36.0-51.3	14.6	8.8-20.5
18-69	1614	10.5	8.5-12.5	5.4	4.1-6.8	13.0	10.9-15.1	52.3	48.8-55.7	18.8	16.2-21.4

Analysis Information:

- Questions used: A1, A2, A5, A10a-g
- Epi Info program name: Apastweek (unweighted); ApastweekWT (weighted)

Part 6: Templates and Forms

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Section 3C: Data Book Template
Surveillance

WHO STEPS

Standard drinks per day in the past 7 days

Description: Mean number of standard drinks consumed on average per day in the past 7 days among current (past 30 days) drinkers.

Instrument question:

- During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

Mean number of standard drinks consumed on average per day in the past 7 days among current drinkers											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number	95% CI		n	Mean number	95% CI		n	Mean number	95% CI
18-29	151	1.2	0.9-1.5		97	0.3	0.2-0.4		248	0.9	0.7-1.2
30-44	388	1.6	1.3-1.9		282	0.6	0.4-0.8		670	1.3	1.1-1.5
45-59	314	1.6	1.3-2.0		187	0.4	0.3-0.5		501	1.3	1.1-1.6
60-69	128	1.6	1.0-2.1		67	0.5	0.3-0.6		195	1.3	0.9-1.7
18-69	981	1.4	1.3-1.6		633	0.4	0.3-0.5		1614	1.2	1.0-1.3

Analysis Information:

- Questions used: A1, A2, A5, A10a-g
- Epi Info program name: Apastweek (unweighted); ApastweekWT (weighted)

Consumption of unrecorded alcohol

Description: Percentage of respondents that consumed unrecorded alcohol (homebrewed alcohol, alcohol brought over the border, not intended for drinking or other untaxed alcohol) during the past 7 days among current (past 30 days) drinkers.

Instrument questions:

- Have you consumed any alcohol within the past 30 days?
- During the past 7 days, did you consume any homebrewed alcohol, any alcohol brought over the border, not intended for drinking or other untaxed alcohol?

Consumption of unrecorded alcohol											
Age Group	Men				Women				Both Sexes		
(years)	n	% consuming unrecorded alcohol	95% CI		n	% consuming unrecorded alcohol	95% CI		n	% consuming unrecorded alcohol	95% CI
18-29	122	14.0	7.6-20.5		67	11.4	0.5-22.4		189	13.4	7.9-18.9
30-44	348	22.7	17.6-27.7		206	13.1	7.8-18.5		554	20.6	16.3-24.8
45-59	268	15.9	10.5-21.3		142	18.9	11.8-26.0		410	16.6	12.0-21.1
60-69	113	24.6	14.8-34.5		53	17.3	5.8-28.9		166	23.0	14.3-31.6
18-69	851	18.2	14.7-21.7		468	13.5	8.4-18.7		1319	17.1	14.1-20.2

Analysis Information:

- Questions used: A1, A2, A5, A10a-g, A11
- Epi Info program name: Aunrecorded (unweighted); AunrecordedWT (weighted)

Standard drinks of unrecorded alcohol per day in the past 7 days

Description: Mean number of standard drinks of unrecorded alcohol consumed on average per day in the past 7 days among current (past 30 days) drinkers.

Instrument question:

- On average, how many standard drinks of the following did you consume during the past 7 days?

Mean number of standard drinks of unrecorded alcohol consumed on average per day in the past 7 days among current drinkers											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number	95% CI		n	Mean number	95% CI		n	Mean number	95% CI
18-29	15	1.1	0.5-1.7		4	0.5	0.0-0.9		19	1.0	0.5-1.6
30-44	72	1.0	0.7-1.3		24	0.5	0.3-0.7		96	0.9	0.6-1.1
45-59	41	0.8	0.6-1.1		27	0.4	0.2-0.5		68	0.7	0.5-0.9
60-69	22	0.8	0.4-1.2		10	0.6	0.2-0.9		32	0.8	0.4-1.1
18-69	150	1.0	0.7-1.2		65	0.5	0.3-0.6		215	0.9	0.7-1.1

Analysis Information:

- Questions used: A1, A2, A5, A10a-g, A11, A12a-e
- Epi Info program name: Ameanunrecorded (unweighted); AmeanunrecordedWT (weighted)

Percent of unrecorded alcohol from all alcohol consumed

Description: Percentage of unrecorded alcohol from all alcohol consumed during the past 7 days among current (past 30 days) drinkers.

Instrument questions:

- During each of the past 7 days, how many standard drinks did you have each day?
- During the past 7 days, did you consume any homebrewed alcohol, any alcohol brought over the border, not intended for drinking or other untaxed alcohol?
- On average, how many standard drinks of the following did you consume during the past 7 days?

Percentage of unrecorded alcohol from all alcohol consumed during past 7 days

Age Group (years)	Men		Women		Both Sexes	
	n	% unrecorded alcohol of all alcohol	n	% unrecorded alcohol of all alcohol	n	% unrecorded alcohol of all alcohol
18-29	119	10.6	62	6.1	181	10.2
30-44	343	11.4	203	7.5	546	11.0
45-59	264	6.3	139	10.9	403	6.7
60-69	110	10.2	53	18.1	163	10.9
18-69	836	10.1	457	8.1	1293	9.9

Analysis Information:

- Questions used: A1, A2, A5, A10a-g, A11, A12a-e
- Epi Info program name: Please contact the STEPS team.

Types of unrecorded alcohol

Description: Percentage of each type of unrecorded alcohol of all unrecorded alcohol consumed in the past 7 days among current (past 30 days) drinkers.

Instrument questions:

- During the past 7 days, did you consume any homebrewed alcohol, any alcohol brought over the border, not intended for drinking or other untaxed alcohol?
- On average, how many standard drinks of the following did you consume during the past 7 days?

Unrecorded alcohol consumption during the past 7 days by type						
Age Group (years)	Men					
	n	% home-brewed spirits	% home-brewed beer/wine	% brought over border	% surro-gate alcohol	% other

18-29	15	14.1		77.2		5.4		2.3		1.0
30-44	71	9.5		84.5		4.9		0.4		0.7
45-59	41	2.9		84.5		12.6		0.0		0.0
60-69	22	0.0		97.5		2.5		0.0		0.0
18-69	149	9.9		82.5		5.9		1.0		0.7
Women										
Age Group (years)	n	% home-brewed spirits		% home-brewed beer/wine		% brought over border		% surro-gate alcohol		% other
18-29	4	76.1		17.1		6.8		0.0		0.0
30-44	24	16.2		68.0		15.7		0.0		0.0
45-59	27	24.4		73.9		1.7		0.0		0.0
60-69	10	9.9		75.7		14.3		0.0		0.0
18-69	65	29.7		59.6		10.6		0.0		0.0
Both Sexes										
Age Group (years)	n	% home-brewed spirits		% home-brewed beer/wine		% brought over border		% surro-gate alcohol		% other
18-29	19	17.0		74.4		5.4		2.2		1.0
30-44	95	10.1		83.2		5.8		0.3		0.6
45-59	68	5.8		83.1		11.1		0.0		0.0
60-69	32	1.4		94.4		4.2		0.0		0.0
18-69	214	11.5		80.7		6.3		0.9		0.6

Frequency of impaired control over drinking

Description: Frequency of not being able to stop drinking once started during the past 12 months among past 12 month drinkers.

Instrument questions:

- Have you consumed any alcohol within the past 12 months?
- How often during the past 12 months have you found that you were not able to stop drinking once you had started?

Frequency of not being able to stop drinking once started during the past 12 months among past 12 month drinkers							
Men							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI

18-29	191	16.3	10.7-21.8	24.4	17.6-31.2	59.3	51.7-66.9
30-44	441	21.7	17.2-26.2	24.4	19.7-29.0	53.9	48.4-59.4
45-59	379	26.9	21.7-32.1	22.0	17.4-26.6	51.1	45.7-56.5
60-69	161	20.0	13.6-26.5	20.3	13.0-27.5	59.7	51.3-68.1
18-69	1172	20.2	17.1-23.3	23.8	20.3-27.3	56.0	51.8-60.1
Women							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	204	4.7	1.5-8.0	24.8	17.7-31.9	70.4	62.9-78.0
30-44	531	10.9	7.8-13.9	21.2	17.3-25.2	67.9	63.5-72.3
45-59	318	13.1	8.3-18.0	18.1	13.2-23.0	68.8	62.4-75.2
60-69	97	6.2	0.9-11.6	13.0	5.3-20.7	80.8	71.9-89.6
18-69	1150	8.2	6.2-10.2	22.3	18.5-26.0	69.5	65.3-73.7
Both Sexes							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	395	11.9	8.3-15.5	24.6	19.3-29.9	63.6	57.9-69.2
30-44	972	17.7	14.7-20.7	23.2	19.9-26.6	59.1	55.2-62.9
45-59	697	22.4	18.4-26.3	20.7	17.1-24.3	56.9	52.5-61.3
60-69	258	16.6	11.5-21.6	18.4	12.4-24.5	65.0	58.2-71.8
18-69	2322	15.8	13.7-17.9	23.3	20.4-26.1	60.9	57.7-64.1

Analysis Information:

- Questions used: A1, A2, A13
- Epi Info program name: Anotabletostop (unweighted); AnotabletostopWT (weighted)

Frequency of failing to do what was normally expected because of drinking

Description: Frequency of failing to do what was normally expected from you because of drinking during the past 12 months among past 12 month drinkers.

Instrument questions:

- Have you consumed any alcohol within the past 12 months?
- How often during the past 12 months have you failed to do what was normally expected from you because of drinking?

Frequency of failing to do what was normally expected from you during the past 12 months among past 12 month drinkers							
Men							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI

18-29	191	2.3	0.0-4.7	20.9	14.3-27.4	76.8	69.8-83.9
30-44	441	7.5	4.9-10.1	18.2	14.2-22.2	74.3	69.7-78.9
45-59	379	4.3	2.4-6.2	12.4	8.8-16.0	83.4	79.5-87.3
60-69	161	2.8	0.3-5.2	7.9	3.5-12.3	89.3	84.4-94.3
18-69	1172	4.5	3.1-5.9	17.9	14.7-21.2	77.5	74.0-81.1
Women							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	204	0.8	0.0-2.1	7.9	4.0-11.8	91.3	87.2-95.3
30-44	531	1.6	0.5-2.6	5.0	2.9-7.1	93.4	91.2-95.7
45-59	318	3.0	1.0-4.9	5.6	2.6-8.5	91.5	88.0-95.0
60-69	97	3.7	0.0-8.2	0.6	0.0-1.9	95.6	91.0-100.0
18-69	1150	1.5	0.7-2.2	6.3	4.3-8.3	92.2	90.1-94.4
Both Sexes							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	395	1.8	0.2-3.3	15.9	11.5-20.3	82.3	77.6-87.1
30-44	972	5.3	3.6-7.0	13.3	10.6-16.0	81.4	78.4-84.4
45-59	697	3.8	2.4-5.2	10.1	7.4-12.8	86.0	83.1-89.0
60-69	258	3.0	0.9-5.2	6.1	2.8-9.4	90.9	86.7-95.1
18-69	2322	3.4	2.4-4.4	13.7	11.4-15.9	82.9	80.4-85.4

Analysis Information:

- Questions used: A1, A2, A14
- Epi Info program name: Afailexpected (unweighted); AfailexpectedWT (weighted)

Frequency of morning drinking

Description: Frequency of needing a first drink in the morning to get going after a heavy drinking session during the past 12 months among past 12 month drinkers.

Instrument questions:

- Have you consumed any alcohol within the past 12 months?
- How often during the past 12 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Frequency of needing a first drink in the morning to get going during the past 12 months among past 12 month drinkers							
Men							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI

18-29	191	1.1	0.0-2.7	2.2	0.0-4.4	96.7	94.0-99.4
30-44	441	2.4	1.0-3.8	1.9	0.6-3.2	95.7	93.8-97.6
45-59	379	4.2	1.9-6.6	3.5	1.4-5.7	92.2	89.2-95.3
60-69	161	8.1	3.7-12.5	3.3	0.2-6.4	88.6	82.9-94.3
18-69	1172	2.4	1.4-3.4	2.4	1.2-3.5	95.2	93.8-96.7
Women							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	204	0.0	0.0-0.0	1.3	0.0-2.6	98.7	97.4-100.0
30-44	531	0.8	0.1-1.4	2.6	1.1-4.2	96.6	94.7-98.4
45-59	318	2.1	0.3-3.8	1.7	0.4-2.9	96.3	94.2-98.4
60-69	97	1.9	0.0-4.0	1.2	0.0-3.0	96.9	94.2-99.6
18-69	1150	0.6	0.3-1.0	1.8	1.0-2.7	97.5	96.6-98.5
Both Sexes							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	395	0.7	0.0-1.6	1.9	0.4-3.3	97.5	95.7-99.2
30-44	972	1.8	0.9-2.7	2.2	1.1-3.3	96.0	94.6-97.4
45-59	697	3.5	1.9-5.2	2.9	1.4-4.4	93.6	91.4-95.7
60-69	258	6.5	3.2-9.8	2.8	0.4-5.2	90.7	86.4-95.0
18-69	2322	1.7	1.1-2.4	2.2	1.4-3.0	96.1	95.1-97.1

Analysis Information:

- Questions used: A1, A2, A15
- Epi Info program name: Amorningdrink (unweighted); AmorningdrinkWT (weighted)

Frequency of problems with family/ partner due to someone else's drinking

Description: Frequency of having had problems with family or partner due to someone else's drinking in the past 12 months among all respondents.

Instrument question:

- Have you had family problems or problems with your partner due to someone else's drinking within the past 12 months?

Frequency of family/partner problems due to someone else's drinking during the past 12 months among all respondents							
Men							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI

18-29	216	0.0	0.0-0.0	3.7	1.2-6.2	96.3	93.8-98.8
30-44	487	1.7	0.3-3.1	10.8	7.6-13.9	87.5	84.1-90.9
45-59	498	1.2	0.2-2.2	7.4	4.9-9.9	91.4	88.8-94.0
60-69	312	1.3	0.0-2.7	6.0	3.4-8.6	92.7	89.5-95.9
18-69	1513	0.9	0.4-1.4	6.9	5.3-8.5	92.2	90.5-93.9
Women							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	348	0.8	0.0-1.7	6.4	3.2-9.6	92.8	89.6-96.1
30-44	888	2.2	1.2-3.3	7.0	5.1-8.9	90.8	88.7-92.9
45-59	875	2.7	1.3-4.1	4.5	3.0-6.0	92.8	90.7-94.8
60-69	616	0.5	0.0-1.1	2.5	1.1-3.8	97.0	95.6-98.5
18-69	2727	1.6	1.0-2.1	5.9	4.4-7.4	92.5	90.9-94.1
Both Sexes							
Age Group (years)	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-29	564	0.4	0.0-0.8	5.0	3.0-7.1	94.6	92.6-96.7
30-44	1375	2.0	1.1-2.8	9.0	7.1-10.9	89.0	87.0-91.1
45-59	1373	2.0	1.1-2.8	6.0	4.6-7.4	92.1	90.5-93.6
60-69	928	0.9	0.2-1.6	4.1	2.7-5.5	95.0	93.4-96.7
18-69	4240	1.2	0.9-1.6	6.4	5.3-7.5	92.4	91.2-93.5

Analysis Information:

- Question used: A16
- Epi Info program name: Afamproblem (unweighted); AfamproblemWT (weighted)

Diet

Mean number
of days of fruit
and vegetable
consumption

Description: mean number of days fruit and vegetables consumed.

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- In a typical week, on how many days do you eat vegetables?

Mean number of days fruit consumed in a typical week

Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of days	95% CI		n	Mean number of days	95% CI		n	Mean number of days	95% CI
18-29	216	2.0	1.8-2.3		347	3.2	2.9-3.5		563	2.6	2.4-2.8
30-44	479	2.5	2.3-2.7		882	3.2	3.0-3.4		1361	2.8	2.7-3.0
45-59	498	2.7	2.5-3.0		868	3.0	2.8-3.2		1366	2.9	2.7-3.0
60-69	308	2.8	2.5-3.1		607	3.1	2.9-3.3		915	2.9	2.8-3.1
18-69	1501	2.4	2.2-2.5		2704	3.1	3.0-3.3		4205	2.7	2.6-2.9

Mean number of days vegetables consumed in a typical week											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of days	95% CI		n	Mean number of days	95% CI		n	Mean number of days	95% CI
18-29	216	5.4	5.2-5.7		348	5.5	5.2-5.7		564	5.5	5.3-5.6
30-44	487	5.7	5.6-5.9		886	5.6	5.5-5.7		1373	5.7	5.6-5.8
45-59	498	5.5	5.3-5.6		875	5.4	5.3-5.5		1373	5.4	5.3-5.6
60-69	311	5.3	5.1-5.6		615	5.4	5.2-5.5		926	5.4	5.2-5.5
18-69	1512	5.5	5.4-5.7		2724	5.5	5.4-5.6		4236	5.5	5.4-5.6

Analysis Information:

- Questions used: D1, D3
- Epi Info program name: Ddays (unweighted); DdaysWT (weighted)

Mean number of
servings of fruit
and vegetable
consumption

Description: mean number of fruit, vegetable, and combined fruit and vegetable servings on average per day.

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Mean number of servings of fruit on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of servings	95% CI		n	Mean number of servings	95% CI		n	Mean number of servings	95% CI

18-29	216	0.9	0.8-1.1		345	1.3	1.2-1.5		561	1.1	1.0-1.3
30-44	478	1.2	1.0-1.4		882	1.4	1.2-1.5		1360	1.3	1.1-1.4
45-59	498	1.2	1.0-1.4		867	1.3	1.1-1.4		1365	1.2	1.1-1.4
60-69	308	1.1	1.0-1.3		606	1.2	1.0-1.3		914	1.1	1.0-1.3
18-69	1500	1.1	1.0-1.2		2700	1.3	1.2-1.4		4200	1.2	1.1-1.3
Mean number of servings of vegetables on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of servings	95% CI		n	Mean number of servings	95% CI		n	Mean number of servings	95% CI
18-29	216	2.4	2.0-2.7		348	2.2	2.0-2.4		564	2.3	2.1-2.4
30-44	486	2.9	2.5-3.2		885	2.4	2.2-2.6		1371	2.6	2.4-2.9
45-59	498	2.4	2.1-2.7		873	2.4	2.1-2.6		1371	2.4	2.2-2.6
60-69	311	2.1	1.9-2.4		615	2.0	1.8-2.2		926	2.1	1.9-2.3
18-69	1511	2.5	2.3-2.7		2721	2.3	2.1-2.4		4232	2.4	2.3-2.5

Mean number of servings of fruit and/or vegetables on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean number of servings	95% CI		n	Mean number of servings	95% CI		n	Mean number of servings	95% CI
18-29	216	3.3	2.9-3.6		348	3.5	3.2-3.8		564	3.4	3.1-3.6
30-44	486	4.0	3.6-4.5		886	3.7	3.4-4.1		1372	3.9	3.6-4.2
45-59	498	3.6	3.2-4.0		874	3.6	3.3-4.0		1372	3.6	3.3-3.9
60-69	311	3.2	2.9-3.6		615	3.2	2.8-3.5		926	3.2	2.9-3.5
18-69	1511	3.6	3.3-3.8		2723	3.6	3.4-3.8		4234	3.6	3.4-3.8

Analysis Information:

- Questions used: D1, D2 , D3, D4
- Epi Info program name: Dservings (unweighted); DservingsWT (weighted)

Fruit and vegetable consumption per day

Description: Frequency of fruit and/or vegetable consumption.

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Number of servings of fruit and/or vegetables on average per day									
Age Group (years)	Men								
	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-29	216	10.8	6.4-15.2	42.0	35.1-48.8	32.2	25.7-38.6	15.0	10.1-20.0
30-44	486	5.7	3.6-7.8	43.9	39.1-48.7	28.3	24.2-32.4	22.1	18.1-26.2
45-59	498	8.9	6.2-11.6	46.6	41.6-51.5	26.8	22.3-31.3	17.7	13.9-21.6
60-69	311	13.3	9.0-17.6	44.2	38.0-50.4	23.9	19.1-28.7	18.6	13.8-23.4
18-69	1511	8.9	6.9-11.0	43.6	40.2-47.0	29.3	26.0-32.6	18.1	15.3-20.9
Age Group (years)	Women								
	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-29	348	7.4	4.5-10.3	49.3	43.1-55.5	21.7	16.7-26.8	21.6	16.7-26.4
30-44	886	6.4	4.7-8.0	45.4	41.5-49.4	27.4	23.9-30.8	20.8	17.7-24.0
45-59	874	9.2	7.2-11.2	45.3	41.3-49.4	25.3	21.9-28.7	20.2	16.9-23.6
60-69	615	11.2	8.6-13.8	50.8	46.5-55.0	23.1	19.6-26.6	14.9	11.5-18.4
18-69	2723	7.7	6.3-9.2	47.4	44.4-50.5	24.3	21.8-26.7	20.6	18.0-23.1
Age Group (years)	Both Sexes								
	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-29	564	9.2	6.4-11.9	45.6	41.0-50.1	27.1	22.8-31.4	18.2	14.7-21.7
30-44	1372	6.0	4.6-7.4	44.6	41.3-47.9	27.9	25.0-30.7	21.5	18.6-24.5
45-59	1372	9.0	7.2-10.8	46.0	42.6-49.3	26.1	23.2-28.9	19.0	16.3-21.6
60-69	926	12.1	9.6-14.6	47.7	44.0-51.5	23.5	20.5-26.5	16.6	13.8-19.5
18-69	4234	8.3	7.0-9.7	45.5	43.2-47.8	26.9	24.6-29.1	19.3	17.3-21.4

Analysis Information:

- Questions used: D1, D2 , D3, D4
- Epi Info program name: Dfiveormore (unweighted); DfiveormoreWT (weighted)

Fruit and vegetable
consumption per
day



Description: Percentage of those eating less than five servings of fruit and/or vegetables on average per day.

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Less than five servings of fruit and/or vegetables on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	% < five servings per day	95% CI		n	% < five servings per day	95% CI		n	% < five servings per day	95% CI
18-29	216	85.0	80.0-89.9		348	78.4	73.6-83.3		564	81.8	78.3-85.3
30-44	486	77.9	73.8-81.9		886	79.2	76.0-82.3		1372	78.5	75.6-81.4
45-59	498	82.3	78.4-86.1		874	79.8	76.4-83.1		1372	81.0	78.4-83.7
60-69	311	81.4	76.6-86.2		615	85.1	81.6-88.5		926	83.4	80.5-86.2
18-69	1511	81.9	79.1-84.7		2723	79.4	76.9-82.0		4234	80.7	78.6-82.7

Analysis Information:

- Questions used: D1, D2, D3, D4
- Epi Info program name: Dfiveormore (unweighted); DfiveormoreWT (weighted)

**Adding salt
at meal**

Description: Percentage of all respondents who always or often add salt or salty sauce to their food before eating or as they are eating.

Instrument question:

- How often do you add salt or a salty sauce such as soya sauce to your food right before you eat it or as you are eating it?

Add salt always or often before eating or when eating											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	212	31.7	25.1-38.4		344	38.6	32.8-44.4		556	35.1	30.2-40.0
30-44	481	42.2	37.0-47.5		882	35.8	31.9-39.8		1363	39.2	35.7-42.7
45-59	491	37.1	32.5-41.7		867	32.6	28.4-36.7		1358	34.9	31.5-38.2
60-69	310	39.9	33.5-46.4		610	26.6	22.3-30.9		920	32.8	28.8-36.7
18-69	1494	36.8	33.2-40.4		2703	35.6	32.4-38.8		4197	36.2	33.5-38.9

Analysis Information:

- Question used: D5
- Epi Info program name: Deating (unweighted); DeatingWT (weighted)

Adding salt when cooking

Description: Percentage of all respondents who always or often add salt to their food when cooking or preparing foods at home.

Instrument question:

- How often is salt, salty seasoning or a salty sauce added in cooking or preparing foods in your household?

Add salt always or often when cooking or preparing food at home											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	193	33.7	26.1-41.3		343	56.3	50.1-62.5		536	45.3	40.0-50.7
30-44	438	45.8	39.9-51.6		885	55.3	51.2-59.4		1323	50.5	46.5-54.5
45-59	449	39.4	33.8-44.9		872	48.0	43.9-52.0		1321	43.8	40.2-47.4
60-69	286	43.7	36.9-50.4		608	41.9	37.1-46.8		894	42.7	38.6-46.8
18-69	1366	39.5	35.1-43.8		2708	53.2	49.9-56.5		4074	46.5	43.3-49.7

Analysis Information:

- Question used: D6
- Epi Info program name: Dooking (unweighted); **DcookingWT** (weighted)

Salty processed food consumption

Description: Percentage of all respondents who always or often eat processed foods high in salt.

Instrument question:

- How often do you eat processed food high in salt?

Always or often consume processed food high in salt											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	215	22.3	16.5-28.1		346	29.8	23.9-35.6		561	26.0	21.9-30.1
30-44	486	28.8	24.3-33.3		886	29.4	26.2-32.6		1372	29.1	26.2-31.9
45-59	498	23.3	19.6-27.0		873	26.3	22.9-29.7		1371	24.8	22.2-27.4
60-69	311	29.4	23.6-35.1		615	23.8	19.8-27.7		926	26.4	22.6-30.1
18-69	1510	25.1	22.1-28.2		2720	28.5	25.7-31.2		4230	26.8	24.7-28.8

Analysis Information:

- Question used: D7
- Epi Info program name: Dprocessed (unweighted); **DprocessedWT** (weighted)

Salt consumption

Description: Percentage of all respondents who think they consume far too much or too much salt.

Instrument question:

- How much salt or salty sauce do you think you consume?

Think they consume far too much or too much salt											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	9.6	5.4-13.8		348	12.4	8.5-16.3		564	11.0	7.9-14.1
30-44	487	12.0	8.9-15.2		887	10.7	8.3-13.1		1374	11.4	9.4-13.4
45-59	498	12.6	9.5-15.8		875	9.7	7.4-12.0		1373	11.2	9.2-13.2
60-69	312	17.0	12.4-21.6		613	5.5	3.6-7.4		925	10.8	8.4-13.2
18-69	1513	11.5	9.4-13.6		2723	10.8	8.9-12.7		4236	11.2	9.6-12.7

Self-reported quantity of salt consumed											
Age Group (years)	Men										
	n	% Far too much	95% CI	% Too much	95% CI	% Just the right amount	95% CI	% Too little	95% CI	% Far too little	95% CI
18-29	216	0.0	0.0-0.0	9.6	5.4-13.8	87.1	82.3-91.9	3.3	0.6-6.0	0.0	0.0-0.0
30-44	487	0.0	0.0-0.0	12.0	8.9-15.2	81.8	77.8-85.8	6.2	3.6-8.7	0.0	0.0-0.0
45-59	498	0.5	0.0-1.1	12.2	9.1-15.3	81.8	78.0-85.6	5.4	3.3-7.5	0.1	0.0-0.3
60-69	312	0.0	0.0-0.0	17.0	12.4-21.6	76.1	70.7-81.5	6.6	3.5-9.7	0.3	0.0-0.9
18-69	1513	0.1	0.0-0.2	11.4	9.3-13.5	83.6	81.1-86.2	4.9	3.3-6.4	0.0	0.0-0.1
Age Group (years)	Women										
	n	% Far too much	95% CI	% Too much	95% CI	% Just the right amount	95% CI	% Too little	95% CI	% Far too little	95% CI
18-29	348	0.3	0.0-0.9	12.1	8.2-15.9	82.5	78.0-86.9	5.1	2.5-7.7	0.0	0.0-0.0
30-44	887	0.1	0.0-0.2	10.6	8.2-13.1	81.4	78.3-84.5	7.7	5.6-9.7	0.2	0.0-0.5
45-59	875	0.1	0.0-0.2	9.7	7.4-11.9	84.3	81.5-87.0	5.8	4.0-7.5	0.3	0.0-0.5
60-69	613	0.2	0.0-0.6	5.3	3.4-7.2	83.9	80.4-87.4	10.3	7.3-13.3	0.3	0.0-0.7
18-69	2723	0.2	0.0-0.4	10.6	8.8-12.5	82.6	80.3-85.0	6.4	5.0-7.9	0.1	0.0-0.2
Self-reported quantity of salt consumed											
Age Group (years)	Both Sexes										
	n	% Far too much	95% CI	% Too much	95% CI	% Just the right amount	95% CI	% Too little	95% CI	% Far too little	95% CI

18-29	564	0.2	0.0-0.5	10.8	7.7-13.9	84.9	81.3-88.4	4.2	2.2-6.1	0.0	0.0-0.0
30-44	1374	0.0	0.0-0.1	11.4	9.4-13.4	81.6	79.0-84.2	6.9	5.2-8.6	0.1	0.0-0.2
45-59	1373	0.3	0.0-0.6	10.9	9.0-12.9	83.0	80.6-85.5	5.6	4.2-7.0	0.2	0.0-0.3
60-69	925	0.1	0.0-0.3	10.7	8.3-13.1	80.3	77.1-83.5	8.6	6.4-10.8	0.3	0.0-0.6
18-69	4236	0.1	0.0-0.3	11.0	9.5-12.5	83.1	81.2-85.1	5.6	4.5-6.8	0.1	0.0-0.1

Analysis Information:

- Question used: D8
- Epi Info program name: Dsaltquantity (unweighted); DsaltquantityWT (weighted)

Lowering salt Description: Percentage of respondents who think lowering salt in diet is very, somewhat or not at all important.

Instrument question:

- How important to you is lowering the salt in your diet?

Importance of lowering salt in diet							
Men							
Age Group				%		%	
(years)	n	% Very important	95% CI	Somewhat important	95% CI	Not at all important	95% CI
18-29	181	69.9	63.0-76.7	26.7	20.3-33.2	3.4	0.6-6.2
30-44	361	70.7	65.6-75.9	26.8	21.8-31.9	2.4	0.9-3.9
45-59	419	67.8	62.7-73.0	29.8	24.9-34.8	2.3	0.0-4.6
60-69	261	64.7	57.5-72.0	32.6	25.4-39.8	2.7	0.2-5.1
18-69	1222	69.4	65.9-72.9	27.8	24.3-31.3	2.8	1.5-4.2
Women							
Age Group				%		%	
(years)	n	% Very important	95% CI	Somewhat important	95% CI	Not at all important	95% CI
18-29	303	76.8	71.8-81.8	22.1	17.5-26.8	1.1	0.0-2.6
30-44	760	81.1	78.0-84.3	17.1	14.1-20.0	1.8	0.6-3.0
45-59	753	76.4	72.6-80.3	23.1	19.2-26.9	0.5	0.0-1.0
60-69	526	76.1	71.9-80.2	22.6	18.5-26.8	1.3	0.2-2.5
18-69	2342	78.0	75.4-80.6	20.8	18.4-23.2	1.2	0.5-1.9

Importance of lowering salt in diet

Age Group (years)	Both Sexes						
	n	% Very important	95% CI	% Somewhat important	95% CI	% Not at all important	95% CI
18-29	484	73.3	69.2-77.4	24.4	20.5-28.3	2.2	0.7-3.8
30-44	1121	75.9	72.9-79.0	22.0	19.0-24.9	2.1	1.2-3.0
45-59	1172	72.1	68.8-75.4	26.5	23.3-29.7	1.4	0.2-2.6
60-69	787	70.9	66.7-75.1	27.2	23.0-31.4	1.9	0.6-3.3
18-69	3564	73.7	71.4-76.0	24.3	22.1-26.5	2.0	1.2-2.8

Analysis Information:

- Question used: D9
- Epi Info program name: Dlower (unweighted); DlowerWT (weighted)

Salt knowledge

Description: Percentage of respondents who think consuming too much salt could cause a serious health problem.

Instrument question:

- Do you think that too much salt or salty sauce in your diet could cause a health problem?

Think consuming too much salt could cause serious health problems											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	78.2	72.2-84.2		348	91.4	88.3-94.6		564	84.7	81.1-88.3
30-44	487	74.8	70.3-79.4		888	89.1	86.8-91.5		1375	81.5	78.7-84.3
45-59	498	76.8	72.9-80.8		875	85.4	82.8-88.1		1373	81.1	78.6-83.5
60-69	312	78.0	72.7-83.3		616	85.1	81.8-88.3		928	81.8	78.7-84.8
18-69	1513	76.8	73.7-79.9		2727	89.1	87.4-90.7		4240	82.8	80.9-84.6

Analysis Information:

- Question used: D10
- Epi Info program name: Dhealth (unweighted); DhealthWT (weighted)

Controlling salt intake

Description: Percentage of respondents who take specific action on a regular basis to control salt intake.

Instrument question:

- Do you do any of the following on a regular basis to control your salt intake?

Limit consumption of processed foods											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	52.7	45.5-59.8		348	58.6	52.5-64.7		564	55.6	51.0-60.1
30-44	487	53.9	48.8-59.0		888	59.5	55.6-63.4		1375	56.5	52.9-60.1
45-59	498	56.5	51.6-61.3		875	61.7	57.7-65.7		1373	59.0	55.5-62.5
60-69	312	55.8	50.1-61.6		616	61.2	56.6-65.9		928	58.7	55.1-62.4
18-69	1513	54.0	50.2-57.9		2727	59.7	56.7-62.7		4240	56.8	54.1-59.4

Look at the salt or sodium content on food labels											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	18.0	12.5-23.4		348	18.3	13.5-23.1		564	18.1	14.5-21.7
30-44	487	12.6	8.9-16.4		888	16.6	14.0-19.3		1375	14.5	12.1-16.9
45-59	498	13.3	10.2-16.4		875	15.2	12.2-18.3		1373	14.2	11.9-16.6
60-69	312	12.8	8.7-16.9		616	12.3	9.1-15.6		928	12.5	9.9-15.2
18-69	1513	15.0	12.3-17.6		2727	16.7	14.4-19.0		4240	15.8	14.0-17.7

Buy low salt/sodium alternatives											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	20.1	14.7-25.5		348	37.7	32.4-43.0		564	28.8	24.9-32.6
30-44	487	30.5	25.5-35.6		888	37.7	34.1-41.3		1375	33.9	30.7-37.1
45-59	498	31.1	26.4-35.8		875	37.4	33.7-41.2		1373	34.2	31.1-37.2
60-69	312	29.5	23.6-35.4		616	34.1	29.5-38.6		928	32.0	28.1-35.8
18-69	1513	26.3	23.1-29.4		2727	37.4	34.7-40.1		4240	31.7	29.4-33.9

Use spices other than salt when cooking											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	47.7	40.0-55.4		348	60.0	54.2-65.9		564	53.7	48.5-59.0
30-44	487	53.0	47.3-58.7		888	57.8	53.7-61.9		1375	55.2	51.3-59.1
45-59	498	47.1	41.8-52.4		875	52.1	47.9-56.2		1373	49.5	45.9-53.2
60-69	312	42.5	36.0-49.0		616	49.0	44.0-54.1		928	46.0	41.6-50.4
18-69	1513	49.0	44.6-53.4		2727	56.9	53.5-60.3		4240	52.8	49.6-56.1

Avoid eating foods prepared outside of a home											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	41.7	34.6-48.9		348	48.2	42.2-54.2		564	44.9	40.4-49.4
30-44	487	44.2	39.7-48.6		888	54.9	50.9-58.9		1375	49.2	45.9-52.5
45-59	498	46.2	41.2-51.1		875	49.7	45.5-53.9		1373	47.9	44.4-51.3
60-69	312	52.0	45.6-58.4		616	52.5	47.7-57.2		928	52.3	48.0-56.5
18-69	1513	44.1	40.4-47.7		2727	50.9	47.7-54.2		4240	47.4	44.8-49.9

Do other things specifically to control your salt intake											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	216	2.2	0.3-4.0		348	7.8	4.7-10.9		564	4.9	3.1-6.8
30-44	487	3.1	1.2-5.1		888	3.2	1.9-4.4		1375	3.1	2.0-4.3
45-59	498	3.8	2.0-5.6		875	4.4	2.6-6.3		1373	4.1	2.7-5.5
60-69	312	1.9	0.2-3.7		616	3.1	1.2-5.0		928	2.6	1.1-4.0
18-69	1513	2.8	1.6-4.0		2727	5.3	3.8-6.9		4240	4.0	3.0-5.1

Analysis Information:

- Questions used: D11a-f
- Epi Info program name: Dcontrol (unweighted); DcontrolWT (weighted)

Frequency of sugar-sweetened beverages

Description: Percentage of those who drank carbonated soft drinks or any other sugar-sweetened drinks during last 7 days.

Instrument questions:

- During the past 7 days, how many times did you drink any carbonated soft drink such as Coca Cola, Fanta, Sprite, Sting?
- During the past 7 days, how many times did you drink any other sugar-sweetened drinks, such as sports drinks, energy drinks, fruit juices, sugar-sweetened tea, coffee and flavoured waters? For this question, DO NOT COUNT carbonated soft drinks measured in the previous question or diet or no calorie drinks.

Percentage of those who drank carbonated soft drinks during the past 7 days											
Age Group (years)	Men										
	n	% No SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	216	19.7	13.2-26.2	46.4	39.2-53.6	11.7	7.4-16.1	15.7	10.6-20.7	6.5	2.9-10.1
30-44	487	47.4	42.2-52.6	31.6	27.1-36.1	6.7	4.3-9.0	9.8	6.8-12.8	4.5	2.3-6.7
45-59	498	61.2	56.0-66.5	24.1	19.9-28.3	2.9	1.6-4.3	7.3	4.7-9.8	4.5	2.5-6.5
60-69	312	67.8	61.9-73.8	22.5	17.1-27.9	4.1	1.5-6.6	4.1	1.8-6.4	1.5	0.3-2.7
18-69	1513	40.0	36.2-43.7	35.7	32.2-39.1	7.9	5.8-10.0	11.4	8.9-13.8	5.1	3.4-6.9

Percentage of those who drank carbonated soft drinks during the past 7 days											
Age Group (years)	Women										
	n	% No SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	348	40.0	34.1-45.8	43.5	37.6-49.4	4.2	2.1-6.3	10.4	6.7-14.2	1.9	0.1-3.8
30-44	888	58.2	54.4-62.0	29.4	25.9-32.9	4.7	3.1-6.2	6.3	4.5-8.0	1.5	0.6-2.3
45-59	875	68.9	65.0-72.9	22.7	19.2-26.2	2.5	1.4-3.5	4.3	2.8-5.7	1.6	0.7-2.5
60-69	616	75.9	71.9-80.0	17.2	13.8-20.6	2.5	0.9-4.1	3.1	1.6-4.6	1.3	0.1-2.4
18-69	2727	54.1	51.0-57.2	33.0	30.0-36.0	3.9	2.8-4.9	7.4	5.6-9.1	1.7	0.8-2.6

Percentage of those who drank carbonated soft drinks during the past 7 days											
Age Group (years)	Both Sexes										
	n	% No SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	564	29.6	25.0-34.3	45.0	40.0-49.9	8.0	5.6-10.5	13.1	10.1-16.1	4.3	2.2-6.3
30-44	1375	52.5	49.0-55.9	30.6	27.5-33.7	5.7	4.3-7.1	8.1	6.4-9.9	3.1	1.9-4.3
45-59	1373	65.0	61.5-68.5	23.4	20.5-26.3	2.7	1.9-3.5	5.8	4.3-7.3	3.1	2.0-4.2
60-69	928	72.2	68.6-75.7	19.6	16.5-22.8	3.2	1.7-4.7	3.6	2.3-4.9	1.4	0.5-2.2
18-69	4240	46.8	44.1-49.6	34.4	31.9-36.9	5.9	4.8-7.1	9.4	8.0-10.9	3.5	2.5-4.4

Percentage of those who drank other sugar-sweetened drinks during the past 7 days											
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Age Group (years)	Men										
	n	% No other SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	216	39.1	31.1-47.1	36.9	30.1-43.7	8.3	4.1-12.6	10.5	5.9-15.1	5.2	2.0-8.3
30-44	487	32.2	27.4-37.0	34.8	30.0-39.6	10.9	8.0-13.8	15.9	12.1-19.6	6.2	3.9-8.5
45-59	498	34.9	30.4-39.4	32.4	27.9-36.9	8.5	5.6-11.4	16.4	13.0-19.9	7.8	5.3-10.4
60-69	312	31.0	25.3-36.7	27.7	22.4-33.0	9.6	6.2-13.0	22.4	17.3-27.4	9.3	5.1-13.5
18-69	1513	35.5	31.4-39.6	34.7	31.3-38.2	9.3	7.1-11.4	14.2	11.8-16.6	6.3	4.5-8.1

Percentage of those who drank other sugar-sweetened drinks during the past 7 days											
Age Group (years)	Women										
	n	% No other SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	348	28.7	23.1-34.3	41.3	35.3-47.4	9.4	5.6-13.3	16.3	11.8-20.8	4.2	1.8-6.5
30-44	888	34.4	30.8-38.0	35.9	32.5-39.2	8.7	6.4-11.0	17.4	14.6-20.2	3.7	2.2-5.2
45-59	875	40.7	36.8-44.7	36.1	32.2-40.0	5.6	3.9-7.4	13.3	10.8-15.7	4.2	2.5-5.9
60-69	616	42.1	37.5-46.8	37.8	33.4-42.2	3.6	2.0-5.1	14.7	11.5-17.9	1.8	0.6-3.0
18-69	2727	33.9	31.1-36.7	38.4	35.5-41.2	8.0	6.2-9.8	15.9	13.7-18.2	3.9	2.7-5.0

Percentage of those who drank other sugar-sweetened drinks during the past 7 days											
Age Group (years)	Both Sexes										
	n	% No other SSBs	95% CI	% 1-3 times during past 7 days	95% CI	% 4-6 times during past 7 days	95% CI	% 1 time per day	95% CI	% 2+ times per day	95% CI
18-29	564	34.0	29.0-39.0	39.1	34.6-43.6	8.9	5.9-11.9	13.3	9.8-16.8	4.7	2.5-6.9
30-44	1375	33.2	30.1-36.3	35.3	32.3-38.3	9.8	8.0-11.7	16.6	14.2-19.0	5.1	3.6-6.5
45-59	1373	37.7	34.6-40.8	34.2	31.1-37.4	7.1	5.3-8.8	14.9	12.7-17.1	6.0	4.5-7.6
60-69	928	37.0	33.3-40.7	33.1	29.8-36.5	6.3	4.5-8.1	18.2	15.3-21.2	5.3	3.2-7.4
18-69	4240	34.7	32.0-37.4	36.5	34.3-38.7	8.7	7.2-10.1	15.0	13.3-16.8	5.1	3.9-6.3

Analysis Information:

- Questions used: X1, X2
- Epi Info program name: D_SSB_WT (weighted)

Physical Activity

Introduction

A population's physical activity (or inactivity) can be described in different ways. The two most common ways are

- (1) to estimate a population's mean or median physical activity using a continuous indicator such as MET-minutes per week or time spent in physical activity, and
- (2) to classify certain percentages of a population in specific groups by setting up cut-points for a specific amount of physical activity.

When analyzing GPAQ data, both continuous as well as categorical indicators are used.

Metabolic Equivalent (MET)

METs (Metabolic Equivalents) are commonly used to express the intensity of physical activities, and are also used for the analysis of GPAQ data.

Applying MET values to activity levels allows us to calculate total physical activity. MET is the ratio of a person's working metabolic rate relative to the resting metabolic rate. One MET is defined as the energy cost of sitting quietly, and is equivalent to a caloric consumption of 1 kcal/kg/hour. For the analysis of GPAQ data, existing guidelines have been adopted: It is estimated that, compared to sitting quietly, a person's caloric consumption is four times as high when being moderately active, and eight times as high when being vigorously active.

Therefore, for the calculation of a person's total physical activity using GPAQ data, the following MET values are used:

Domain	MET value
Work	• Moderate MET value = 4.0 • Vigorous MET value = 8.0
Transport	Cycling and walking MET value = 4.0
Recreation	• Moderate MET value = 4.0 • Vigorous MET value = 8.0

WHO global recommendations on physical activity for health

For the calculation of the categorical indicator on the recommended amount of physical activity for health, the total time spent in physical activity during a typical week and the intensity of the physical activity are taken into account.

Throughout a week, including activity for work, during transport and leisure time, adults should do at least

- 150 minutes of moderate-intensity physical activity OR
- 75 minutes of vigorous-intensity physical activity OR
- An equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes.

Former
recommen-
dations for
comparison
purposes

For comparison purposes, tables presenting cut-offs from former recommendations are also included in GPAQ data analysis.

The three levels of physical activity suggested for classifying populations were low, moderate, and high. The criteria for these levels are shown below.

- **High**

A person reaching any of the following criteria is classified in this category:

- Vigorous-intensity activity on at least 3 days achieving a minimum of at least 1,500 MET-minutes/week OR
- 7 or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 3,000 MET-minutes per week.

- **Moderate**

A person not meeting the criteria for the "high" category, but meeting any of the following criteria is classified in this category:

- 3 or more days of vigorous-intensity activity of at least 20 minutes per day OR
- 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day OR
- 5 or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 600 MET-minutes per week.

- **Low**

A person not meeting any of the above mentioned criteria falls in this category.

Not meeting WHO
recommendations on
physical activity for health
("Insufficient physical
activity")



Description: Percentage of respondents not meeting WHO recommendations on physical activity for health (respondents doing less than 150 minutes of moderate-intensity physical activity per week, or equivalent).

Instrument questions

- activity at work
- travel to and from places
- recreational activities

Not meeting WHO recommendations on physical activity for health											
Age Group (years)	Men				Women				Both Sexes		
	n	% not meeting recs	95% CI		n	% not meeting recs	95% CI		n	% not meeting recs	95% CI
18-29	216	9.6	5.2-13.9		348	15.1	10.6-19.7		564	12.3	9.1-15.5
30-44	487	4.1	2.3-5.9		888	6.9	5.1-8.8		1375	5.4	4.1-6.7
45-59	497	6.6	4.3-8.8		868	7.4	5.4-9.5		1365	7.0	5.4-8.6
60-69	309	14.7	10.2-19.2		609	15.4	12.0-18.9		918	15.1	12.2-18.0
18-69	1509	7.5	5.4-9.6		2713	11.1	8.9-13.4		4222	9.3	7.7-10.9

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Pnotmeetingrecs (unweighted); PnotmeetingrecsWT (weighted)

**Levels of total
physical
activity
according to
former
recommen-
dations**

Description: Percentage of respondents classified into three categories of total physical activity according to former recommendations.

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

Level of total physical activity according to former recommendations							
Age Group		Men					
(years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-29	216	15.2	9.7-20.7	8.5	4.5-12.6	76.3	70.0-82.6
30-44	487	6.7	4.4-8.9	10.9	7.9-13.9	82.4	78.9-85.9
45-59	497	10.5	7.8-13.2	18.8	15.0-22.6	70.7	66.4-75.0
60-69	309	17.7	12.9-22.5	25.6	20.3-30.9	56.7	50.6-62.9
18-69	1509	11.6	9.0-14.2	12.4	10.2-14.6	76.0	72.7-79.2
Age Group		Women					
(years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-29	348	20.7	15.6-25.7	31.8	25.5-38.0	47.6	40.4-54.7
30-44	888	9.6	7.3-11.9	27.2	23.6-30.8	63.3	59.3-67.2
45-59	868	9.7	7.4-12.0	26.2	22.5-29.8	64.1	60.2-68.1
60-69	609	17.5	13.9-21.0	31.8	27.8-35.8	50.8	46.2-55.4
18-69	2713	14.9	12.4-17.3	29.3	26.2-32.4	55.9	52.1-59.6
Age Group		Both Sexes					
(years)	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-29	564	17.9	13.9-21.8	19.9	16.1-23.8	62.2	57.0-67.5
30-44	1375	8.0	6.4-9.7	18.5	16.0-21.0	73.5	70.6-76.3
45-59	1365	10.1	8.3-12.0	22.4	19.7-25.1	67.5	64.4-70.5
60-69	918	17.6	14.6-20.5	28.9	25.6-32.2	53.5	49.7-57.4
18-69	4222	13.2	11.2-15.2	20.6	18.6-22.6	66.2	63.4-69.0

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Ptotallevels (unweighted); PtotallevelsWT (weighted)

Total
physical
activity-
mean

Description: Mean minutes of total physical activity on average per day.

Instrument questions

- activity at work
- travel to and from places
- recreational activities

Mean minutes of total physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean minutes	95% CI		n	Mean minutes	95% CI		n	Mean minutes	95% CI
18-29	216	305.8	269.4-342.2		348	178.7	153.7-203.7		564	243.6	218.6-268.5
30-44	487	321.7	300.3-343.1		888	219.8	202.7-236.9		1375	274.1	258.2-289.9
45-59	497	257.4	236.0-278.7		868	206.8	190.7-222.9		1365	232.6	219.0-246.3
60-69	309	191.3	168.3-214.4		609	156.4	142.3-170.6		918	172.5	159.6-185.4
18-69	1509	294.4	275.1-313.7		2713	195.0	181.0-209.0		4222	246.1	232.4-259.8

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Ptotal (unweighted); PtotalWT (weighted)

Total
physical
activity-
median

Description: Median minutes of total physical activity on average per day.

Instrument questions

- activity at work
- travel to and from places
- recreational activities

Median minutes of total physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)
18-29	216	265.0	68.6-518.6		348	107.1	34.3-270.0		564	180.0	42.9-402.9
30-44	487	300.0	137.1-480.0		888	154.3	60.0-336.4		1375	240.0	85.7-430.0
45-59	497	217.1	77.1-398.6		868	143.6	60.0-300.0		1365	180.0	68.6-360.0
60-69	309	135.0	45.0-302.9		609	108.6	40.0-240.0		918	120.0	40.0-261.4
18-69	1509	260.0	85.7-471.4		2713	124.3	45.7-300.0		4222	184.3	60.0-394.3

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Ptotal (unweighted); PtotalmedianWT (weighted)

Domain-specific
physical
activity-
mean

Description: Mean minutes spent in work-, transport- and recreation-related physical activity on average per day.

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

Mean minutes of work-related physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean minutes	95% CI		n	Mean minutes	95% CI		n	Mean minutes	95% CI
18-29	216	229.4	197.7-261.2		348	132.8	113.7-151.9		564	182.1	161.4-202.8
30-44	487	261.6	243.1-280.0		888	173.7	159.8-187.7		1375	220.5	207.4-233.7
45-59	497	205.5	186.1-224.9		868	157.9	144.6-171.1		1365	182.2	170.2-194.2
60-69	309	148.4	127.5-169.4		609	110.7	99.0-122.4		918	128.1	116.5-139.7
18-69	1509	230.3	213.7-246.9		2713	148.5	138.0-158.9		4222	190.5	179.5-201.5

Mean minutes of transport-related physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Mean minutes	95% CI		n	Mean minutes	95% CI		n	Mean minutes	95% CI
18-29	216	45.5	31.8-59.1		348	42.0	32.0-51.9		564	43.8	34.6-52.9
30-44	487	50.4	40.7-60.1		888	39.9	31.8-47.9		1375	45.5	38.4-52.5
45-59	497	41.6	34.7-48.5		868	41.4	34.9-47.9		1365	41.5	36.2-46.7
60-69	309	36.4	29.1-43.7		609	38.3	32.0-44.5		918	37.4	32.5-42.4
18-69	1509	45.8	38.2-53.3		2713	40.9	35.3-46.5		4222	43.4	38.1-48.7

Mean minutes of recreation-related physical activity on average per day										
Age Group (years)	Men				Women				Both Sexes	
	n	Mean minutes	95% CI		n	Mean minutes	95% CI		n	Mean minutes

18-29	216	30.9	23.3-38.5	348	3.9	2.3-5.6	564	17.7	13.4-22.0
30-44	487	9.8	7.6-11.9	888	6.2	4.7-7.7	1375	8.1	6.7-9.5
45-59	497	10.3	7.0-13.7	868	7.6	5.7-9.5	1365	9.0	7.0-11.0
60-69	309	6.5	4.8-8.2	609	7.5	5.8-9.2	918	7.0	5.8-8.3
18-69	1509	18.4	15.0-21.7	2713	5.6	4.7-6.6	4222	12.2	10.3-14.1

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Psetspecific (unweighted); PsetspecificWT (weighted)

Domain-specific physical activity - median

Description: Median minutes spent on average per day in work-, transport- and recreation-related physical activity.

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

Median minutes of work-related physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)
18-29	216	184.3	30.0-420.0		348	60.0	17.1-180.0		564	120.0	25.7-300.0
30-44	487	240.0	90.0-420.0		888	120.0	34.3-248.6		1375	180.0	60.0-360.0
45-59	497	154.3	42.6-360.0		868	111.4	30.0-240.0		1365	120.0	30.0-300.0
60-69	309	75.0	12.9-240.0		609	60.0	15.7-180.0		918	60.0	15.0-180.0
18-69	1509	188.6	34.3-390.0		2713	85.7	25.7-240.0		4222	120.0	30.0-312.9
Median minutes of transport-related physical activity on average per day											
Age Group (years)	Men				Women				Both Sexes		
	n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)		n	Median minutes	Inter-quartile range (P25-P75)
18-29	216	7.1	0.0-51.4		348	10.0	0.0-42.9		564	8.6	0.0-51.4
30-44	487	15.0	0.0-60.0		888	10.0	0.0-30.0		1375	10.7	0.0-51.4
45-59	497	17.1	0.0-60.0		868	20.0	0.0-60.0		1365	17.1	0.0-60.0
60-69	309	15.0	0.0-51.4		609	17.1	0.0-40.0		918	17.1	0.0-42.9
18-69	1509	10.0	0.0-60.0		2713	10.7	0.0-40.0		4222	10.0	0.0-51.4

Median minutes of recreation-related physical activity on average per day

Age Group (years)	Men				Women				Both Sexes		
	n	Median minutes	Inter-quartile range (P25- P75)		n	Median minutes	Inter-quartile range (P25- P75)		n	Median minutes	Inter-quartile range (P25- P75)
18-29	216	4.3	0.0-42.9		348	0.0	0.0-0.0		564	0.0	0.0-17.1
30-44	487	0.0	0.0-4.3		888	0.0	0.0-0.0		1375	0.0	0.0-0.0
45-59	497	0.0	0.0-4.3		868	0.0	0.0-1.4		1365	0.0	0.0-2.9
60-69	309	0.0	0.0-2.9		609	0.0	0.0-0.0		918	0.0	0.0-1.4
18-69	1509	0.0	0.0-17.1		2713	0.0	0.0-0.0		4222	0.0	0.0-8.6

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Psetspecific (unweighted); PsetspecificmedianWT (weighted)

No physical activity by domain

Description: Percentage of respondents classified as doing no work-, transport- or recreational-related physical activity.

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

No work-related physical activity											
Age Group (years)	Men				Women				Both Sexes		
	n	% no activity at work	95% CI		n	% no activity at work	95% CI		n	% no activity at work	95% CI
18-29	216	9.4	5.1-13.7		348	8.2	5.0-11.5		564	8.8	5.9-11.8
30-44	487	5.3	3.1-7.4		888	5.7	4.0-7.3		1375	5.5	4.0-6.9
45-59	497	9.7	6.7-12.7		868	6.8	4.8-8.8		1365	8.3	6.4-10.1
60-69	309	16.7	11.8-21.5		609	13.7	10.4-16.9		918	15.0	12.1-18.0
18-69	1509	8.6	6.4-10.7		2713	7.6	6.0-9.2		4222	8.1	6.6-9.6

No transport-related physical activity											
Age Group (years)	Men				Women				Both Sexes		
	n	% no activity for transport	95% CI		n	% no activity for transport	95% CI		n	% no activity for transport	95% CI

18-29	216	42.9	36.0-49.8		348	38.7	31.9-45.6		564	40.8	35.9-45.8
30-44	487	37.4	32.1-42.7		888	39.0	34.7-43.3		1375	38.2	34.2-42.1
45-59	497	35.9	30.7-41.2		868	28.2	24.2-32.1		1365	32.1	28.6-35.7
60-69	309	38.4	32.0-44.8		609	29.6	25.1-34.2		918	33.7	29.6-37.8
18-69	1509	39.4	35.3-43.6		2713	36.1	32.2-39.9		4222	37.8	34.6-41.0

No recreation-related physical activity											
Age Group (years)	Men				Women				Both Sexes		
	n	% no activity at recreatio n	95% CI		n	% no activity at recreation	95% CI		n	% no activity at recreation	95% CI
18-29	216	49.9	42.1-57.8		348	81.7	76.4-86.9		564	65.5	60.3-70.6
30-44	487	73.2	68.8-77.6		888	77.2	74.0-80.4		1375	75.1	72.2-78.0
45-59	497	73.2	69.0-77.5		868	74.7	71.2-78.2		1365	73.9	71.0-76.9
60-69	309	74.3	69.3-79.2		609	75.5	71.6-79.3		918	74.9	71.7-78.1
18-69	1509	63.7	59.8-67.5		2713	78.5	75.8-81.1		4222	70.9	68.3-73.4

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Pnoactivitybyset (unweighted); PnoactivitybysetWT (weighted)

Composition of total physical activity

Description: Percentage of work, transport and recreational activity contributing to total activity.

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

Composition of total physical activity							
Age Group (years)	Men						
	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-29	204	68.7	63.6-73.8	15.3	11.9-18.7	16.0	12.2-19.8
30-44	477	77.0	74.1-79.8	17.7	15.0-20.3	5.4	3.9-6.8
45-59	482	72.6	69.4-75.7	19.8	17.1-22.4	7.7	5.7-9.7
60-69	286	66.5	62.3-70.7	26.7	22.8-30.6	6.8	4.6-8.9
18-69	1449	72.1	69.5-74.7	17.7	15.8-19.6	10.2	8.5-12.0

Composition of total physical activity							
Women							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-29	338	73.2	69.3-77.1	23.6	19.8-27.3	3.3	1.8-4.7
30-44	866	76.5	74.2-78.8	18.9	16.7-21.1	4.6	3.6-5.6
45-59	852	70.2	67.7-72.7	24.4	22.0-26.9	5.3	4.1-6.6
60-69	570	65.4	62.0-68.9	28.1	25.1-31.2	6.5	4.7-8.2
18-69	2626	73.0	71.1-75.0	22.6	20.8-24.5	4.3	3.6-5.1

Composition of total physical activity							
Both Sexes							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-29	542	70.9	67.7-74.1	19.4	16.8-22.0	9.7	7.5-11.8
30-44	1343	76.7	74.7-78.8	18.2	16.3-20.2	5.0	4.0-6.0
45-59	1334	71.4	69.3-73.5	22.1	20.1-24.0	6.5	5.3-7.7
60-69	856	65.9	63.1-68.8	27.5	24.9-30.1	6.6	5.2-8.0
18-69	4075	72.6	70.9-74.3	20.1	18.6-21.6	7.3	6.3-8.3

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Pcomposition(unweighted); PcompositionWT (weighted)

No vigorous
physical
activity

Description: Percentage of respondents not engaging in vigorous physical activity.

Instrument questions:

- activity at work
- recreational activities

No vigorous physical activity											
Age Group (years)	Men				Women				Both Sexes		
	n	% no vigorous activity	95% CI		n	% no vigorous activity	95% CI		n	% no vigorous activity	95% CI
18-29	216	24.5	18.4-30.7		348	89.5	85.8-93.1		564	56.3	51.1-61.5
30-44	487	30.1	25.4-34.8		888	78.8	75.5-82.1		1375	52.8	49.3-56.4
45-59	497	44.6	39.5-49.6		868	83.1	79.9-86.2		1365	63.4	60.1-66.7
60-69	309	63.1	57.5-68.8		609	88.4	85.7-91.2		918	76.8	73.6-79.9
18-69	1509	32.7	29.2-36.2		2713	84.9	82.9-86.9		4222	58.1	55.3-60.8

Analysis Information:

- Questions used: P1-P15b
- Epi Info program name: Pnovigorous(unweighted); PnovigorousWT (weighted)

Sedentary

Description: Minutes spent in sedentary activities on a typical day.

Instrument question:

- sedentary behaviour

Minutes spent in sedentary activities on average per day					
Men					
Age Group					Inter-quartile
(years)	n	Mean minutes	95% CI	Median minutes	range
					(P25-P75)
18-29	216	164.1	143.6-184.6	120.0	60.0-201.0
30-44	487	131.5	119.2-143.8	120.0	60.0-180.0
45-59	498	123.0	112.8-133.2	110.0	60.0-150.0
60-69	312	139.1	126.1-152.2	120.0	60.0-180.0
18-69	1513	143.8	133.8-153.8	120.0	60.0-180.0

Minutes spent in sedentary activities on average per day					
Women					
Age Group					Inter-quartile
(years)	n	Mean minutes	95% CI	Median minutes	range
					(P25-P75)
18-29	348	158.5	141.4-175.5	120.0	60.0-240.0
30-44	888	136.9	125.9-148.0	120.0	60.0-180.0
45-59	875	132.7	122.2-143.3	120.0	60.0-180.0
60-69	616	126.6	116.2-137.0	110.0	60.0-180.0
18-69	2727	144.3	134.9-153.7	120.0	60.0-180.0

Minutes spent in sedentary activities on average per day					
Both Sexes					
Age Group					Inter-quartile
(years)	n	Mean minutes	95% CI	Median minutes	range
					(P25-P75)

18-29	564	161.3	147.3-175.4	120.0	60.0-210.0
30-44	1375	134.0	125.4-142.7	120.0	60.0-180.0
45-59	1373	127.8	119.8-135.7	120.0	60.0-180.0
60-69	928	132.4	124.3-140.4	120.0	60.0-180.0
18-69	4240	144.0	136.5-151.5	120.0	60.0-180.0

Analysis Information:

- Question used : P16a-b
- Epi Info program name: Psedentary (unweighted); PsedentaryWT and PsedentarymedianWT (weighted)

History of Raised Blood Pressure

Blood pressure measurement and diagnosis

Description: Blood pressure measurement and diagnosis among all respondents.

Instrument questions:

- Have you ever had your blood pressure measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- Have you been told in the past 12 months?

Blood pressure measurement and diagnosis									
Men									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	216	48.2	41.4-55.0	48.9	42.1-55.8	2.1	0.0-4.2	0.8	0.0-1.9
30-44	487	32.7	28.2-37.2	58.6	53.7-63.6	3.2	1.5-4.8	5.5	3.1-7.9
45-59	498	31.2	26.5-35.9	45.3	40.5-50.0	5.1	3.2-7.0	18.4	14.7-22.1
60-69	312	17.2	12.8-21.7	40.6	34.6-46.6	11.5	7.6-15.4	30.6	25.3-36.0
18-69	1513	37.8	34.5-41.1	50.9	47.6-54.2	3.6	2.5-4.7	7.7	6.3-9.0
Women									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI

18-29	348	29.7	24.4-35.0	68.4	63.1-73.8	1.0	0.0-2.3	0.9	0.0-1.8
30-44	888	18.6	15.5-21.7	73.2	69.8-76.5	3.2	2.0-4.5	5.0	3.6-6.4
45-59	875	15.7	12.7-18.6	52.6	48.5-56.6	6.7	4.9-8.6	25.0	21.8-28.2
60-69	616	14.0	10.5-17.5	43.7	39.5-48.0	5.7	3.7-7.7	36.6	32.7-40.6
18-69	2727	22.3	19.8-24.9	64.8	62.1-67.5	3.2	2.4-3.9	9.7	8.6-10.9
Both sexes									
Age Group (years)	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	564	39.2	34.6-43.8	58.5	53.9-63.0	1.5	0.3-2.8	0.8	0.1-1.6
30-44	1375	26.1	23.3-28.9	65.4	62.4-68.4	3.2	2.1-4.3	5.3	3.8-6.8
45-59	1373	23.6	20.6-26.5	48.9	45.6-52.1	5.9	4.6-7.2	21.7	19.1-24.2
60-69	928	15.5	12.7-18.3	42.3	38.9-45.7	8.4	6.2-10.5	33.8	30.6-37.1
18-69	4240	30.3	28.1-32.5	57.7	55.4-59.9	3.4	2.7-4.1	8.7	7.7-9.6

Analysis Information:

- Questions used: H1, H2a, H2b
- Epi Info program name: Hbloodpressure (unweighted); HbloodpressureWT (weighted)

Blood pressure treatment among those diagnosed

Description: Raised blood pressure treatment results among those previously diagnosed with raised blood pressure.

Instrument questions:

- Have you ever had your blood pressure measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- In the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor or other health worker?

Currently taking drugs (medication) for raised blood pressure prescribed by doctor or health worker among those diagnosed											
Age Group	Men				Women				Both Sexes		
(years)	n	% taking meds	95% CI		n	% taking meds	95% CI		n	% taking meds	95% CI
18-29	6	39.0	0.0-81.5		6	17.2	0.0-48.3		12	30.6	0.9-60.3
30-44	42	27.5	10.5-44.6		80	38.2	27.0-49.4		122	32.4	21.5-43.3
45-59	121	70.0	60.8-79.1		276	71.5	65.2-77.8		397	70.8	65.7-76.0
60-69	126	69.2	59.9-78.6		261	81.7	76.3-87.1		387	76.0	70.7-81.3
18-69	295	55.8	47.5-64.0		623	64.4	59.1-69.7		918	60.2	55.5-65.0

Analysis Information:

- Questions used: H1, H2a, H3
- Epi Info program name: Hbloodpressure (unweighted); HbloodpressureWT (weighted)

Blood
pressure
advice by a
traditional
healer

Description: Percentage of respondents who have sought advice or received treatment from a traditional healer for raised blood pressure among those previously diagnosed with raised blood pressure.

Instrument questions:

- Have you ever had your blood pressure measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- Have you ever seen a traditional healer for raised blood pressure?
- Are you currently taking any herbal or traditional remedy for your high blood pressure?

Seen a traditional healer among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% seen trad. healer	95% CI		n	% seen trad. healer	95% CI		n	% seen trad. healer	95% CI
18-29	6	0.0	0.0-0.0		6	0.0	0.0-0.0		12	0.0	0.0-0.0
30-44	42	2.1	0.0-6.1		80	2.1	0.0-5.2		122	2.1	0.0-4.7
45-59	121	9.5	4.2-14.9		276	5.7	1.7-9.7		397	7.4	4.1-10.6
60-69	126	5.3	0.6-10.0		261	6.2	2.7-9.7		387	5.8	2.9-8.6
18-69	295	5.6	3.0-8.3		623	4.8	2.5-7.1		918	5.2	3.4-6.9

Currently taking herbal or traditional remedy for raised blood pressure among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% taking trad. meds	95% CI		n	% taking trad. meds	95% CI		n	% taking trad. meds	95% CI
18-29	6	0.0	0.0-0.0		6	0.0	0.0-0.0		12	0.0	0.0-0.0
30-44	42	1.0	0.0-3.1		80	0.7	0.0-2.1		122	0.9	0.0-2.2
45-59	121	11.9	5.0-18.7		276	6.7	3.5-10.0		397	9.0	5.5-12.4
60-69	126	4.9	1.0-8.8		261	6.6	3.0-10.1		387	5.8	3.1-8.4
18-69	295	6.2	3.1-9.2		623	5.1	3.1-7.0		918	5.6	3.9-7.3

Analysis Information:

- Questions used: H1, H2a, H4, H5
- Epi Info program name: Hraisedbptrad (unweighted); HraisedbptradWT (weighted)

History of Diabetes

Blood sugar measurement and diagnosis

Description: Blood sugar measurement and diagnosis among all respondents.

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- Have you been told in the past 12 months?

Blood sugar measurement and diagnosis									
Age Group (years)	Men								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	216	79.3	73.5-85.2	18.3	12.7-23.9	1.6	0.0-3.4	0.8	0.0-1.9
30-44	487	66.6	62.1-71.2	28.9	24.5-33.2	1.9	0.3-3.5	2.6	0.7-4.5
45-59	498	56.6	51.7-61.5	33.4	28.6-38.1	3.6	1.9-5.4	6.4	4.1-8.6
60-69	312	47.6	41.3-54.0	36.5	30.4-42.5	2.5	0.6-4.5	13.3	9.2-17.5
18-69	1513	68.7	65.6-71.8	25.9	22.9-28.8	2.2	1.2-3.1	3.3	2.4-4.2
Age Group (years)	Women								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	348	65.0	59.3-70.7	34.3	28.7-40.0	0.2	0.0-0.6	0.4	0.0-1.2
30-44	888	51.9	48.2-55.5	43.7	40.1-47.3	1.5	0.5-2.5	3.0	1.8-4.1
45-59	875	39.5	35.7-43.3	46.4	42.7-50.1	1.9	1.0-2.7	12.3	9.8-14.8
60-69	616	35.0	30.8-39.3	42.8	38.4-47.2	4.0	2.4-5.6	18.2	14.1-22.2
18-69	2727	53.6	50.7-56.5	40.2	37.4-43.1	1.2	0.8-1.6	4.9	4.0-5.9
Age Group (years)	Both sexes								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	564	72.3	67.9-76.7	26.1	21.8-30.5	0.9	0.0-1.9	0.6	0.0-1.3
30-44	1375	59.7	56.8-62.7	35.8	33.0-38.7	1.7	0.8-2.7	2.8	1.6-3.9
45-59	1373	48.2	44.7-51.6	39.8	36.5-43.0	2.8	1.7-3.8	9.3	7.6-11.0
60-69	928	40.8	37.0-44.7	39.9	36.3-43.5	3.3	2.1-4.5	15.9	13.1-18.8
18-69	4240	61.4	59.0-63.7	32.9	30.6-35.1	1.7	1.2-2.3	4.1	3.4-4.7

Analysis Information:

- Questions used: H6, H7a, H7b
- Epi Info program name: Hdiabetes (unweighted); HdiabetesWT (weighted)

Diabetes treatment among those diagnosed

Description: Diabetes treatment results among those previously diagnosed with raised blood sugar or diabetes.

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?
- Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?

Currently taking insulin prescribed for diabetes among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% taking insulin	95% CI		n	% taking insulin	95% CI		n	% taking insulin	95% CI
18-29	5	0.0	0.0-0.0		3	0.0	0.0-0.0		8	0.0	0.0-0.0
30-44	17	0.0	0.0-0.0		39	2.6	0.0-7.8		56	1.2	0.0-3.6
45-59	55	9.4	1.1-17.7		119	8.3	1.2-15.4		174	8.8	3.0-14.6
60-69	44	4.6	0.0-10.1		129	14.2	8.3-20.1		173	10.5	6.2-14.9
18-69	121	4.2	0.9-7.5		290	8.4	4.4-12.3		411	6.4	3.6-9.1

Currently taking drugs (medication) prescribed for diabetes among those previously diagnosed											
Age Group	Men				Women				Both Sexes		
(years)	n	% taking meds	95% CI		n	% taking meds	95% CI		n	% taking meds	95% CI
18-29	5	0.0	0.0-0.0		3	51.6	0.0-100.0		8	10.8	0.0-31.3
30-44	17	12.0	0.0-26.0		39	30.9	16.1-45.7		56	20.8	9.9-31.7
45-59	55	54.2	39.5-68.9		119	62.6	52.9-72.4		174	59.1	50.9-67.3
60-69	44	66.1	50.2-82.0		129	65.6	56.7-74.5		173	65.8	57.8-73.7
18-69	121	35.0	24.0-46.1		290	56.0	48.8-63.2		411	45.9	38.9-53.0

Analysis Information:

- Questions used: H6, H7a, H8, H9
- Epi Info program name: Hdiabetes (unweighted); HdiabetesWT (weighted)

Diabetes advice by traditional healer

Description: Percentage of respondents who are have sought advice or treatment from a traditional healer for diabetes among those previously diagnosed.

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- Have you ever seen a traditional healer for diabetes or raised blood sugar?
- Are you currently taking any herbal or traditional remedy for your diabetes?

Seen a traditional healer for diabetes among those previously diagnosed										
Age Group (years)	Men				Women				Both Sexes	
	n	% seen trad. healer	95% CI		n	seen trad. healer	95% CI		n	% seen trad. healer

18-29	5	0.0	0.0-0.0		3	0.0	0.0-0.0		8	0.0	0.0-0.0
30-44	17	0.0	0.0-0.0		39	6.8	0.0-14.7		56	3.1	0.0-6.9
45-59	55	4.7	0.0-10.0		119	3.9	0.0-8.9		174	4.2	0.6-7.9
60-69	44	3.9	0.0-9.8		129	4.8	0.0-10.2		173	4.5	0.4-8.5
18-69	121	2.4	0.2-4.6		290	4.6	1.4-7.8		411	3.6	1.6-5.5

Currently taking herbal or traditional treatment for diabetes among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% taking trad. meds	95% CI		n	% taking trad. meds	95% CI		n	% taking trad. meds	95% CI
18-29	5	0.0	0.0-0.0		3	0.0	0.0-0.0		8	0.0	0.0-0.0
30-44	17	0.0	0.0-0.0		39	8.0	0.0-16.1		56	3.7	0.0-7.6
45-59	55	10.2	1.0-19.4		119	13.2	6.0-20.4		174	11.9	6.4-17.5
60-69	44	12.2	0.8-23.6		129	3.8	0.0-8.0		173	7.0	1.9-12.1
18-69	121	5.9	1.9-9.9		290	8.7	4.9-12.5		411	7.4	4.6-10.2

Analysis Information:

- Questions used: H6, H7a, H10, H11
- Epi Info program name: Hdiabetestrad (unweighted); HdiabetestradWT (weighted)

History of Raised Total Cholesterol

Cholesterol measurement and diagnosis

Description: Total cholesterol measurement and diagnosis among all respondents.

Instrument questions:

- Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised cholesterol?
- Have you been told in the past 12 months?

Total cholesterol measurement and diagnosis									
Age Group (years)	Men								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	216	91.3	87.4-95.2	8.2	4.4-12.0	0.0	0.0-0.0	0.5	0.0-1.6
30-44	487	81.3	77.4-85.3	13.3	9.6-17.0	2.5	1.1-4.0	2.8	1.3-4.4
45-59	498	76.9	72.8-81.1	12.8	9.5-16.2	3.3	1.6-5.0	6.9	4.4-9.5
60-69	312	67.2	60.9-73.6	21.8	16.1-27.5	3.1	1.1-5.1	7.9	4.6-11.3
18-69	1513	83.7	81.2-86.1	11.6	9.4-13.9	1.7	1.0-2.3	3.0	2.1-3.9
Age Group (years)	Women								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	348	91.0	87.6-94.5	5.8	3.1-8.6	0.7	0.0-2.2	2.4	0.5-4.2
30-44	888	75.6	72.3-78.8	15.6	12.9-18.4	3.0	1.8-4.2	5.8	4.1-7.6
45-59	875	66.3	62.2-70.4	19.3	16.1-22.4	4.3	2.8-5.9	10.1	7.7-12.4
60-69	616	59.3	54.8-63.8	21.4	17.5-25.3	6.1	4.0-8.2	13.1	9.7-16.5
18-69	2727	78.9	76.7-81.2	12.7	11.0-14.5	2.6	1.7-3.5	5.8	4.7-6.9
Age Group (years)	Both sexes								
	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-29	564	91.2	88.4-94.0	7.0	4.6-9.4	0.4	0.0-1.1	1.4	0.4-2.5
30-44	1375	78.6	76.0-81.3	14.4	12.0-16.8	2.7	1.8-3.7	4.2	3.0-5.4
45-59	1373	71.7	68.5-74.9	16.0	13.6-18.4	3.8	2.6-5.0	8.5	6.7-10.3
60-69	928	63.0	58.9-67.1	21.6	18.1-25.0	4.7	3.3-6.2	10.7	8.3-13.1
18-69	4240	81.4	79.5-83.3	12.2	10.7-13.7	2.1	1.6-2.7	4.4	3.6-5.1

Analysis Information:

- Questions used: H12, H13a, H13b
- Epi Info program name: Hchol (unweighted); HcholWT (weighted)

Cholesterol treatment among those diagnosed

Description: Cholesterol treatment results among those previously diagnosed with raised cholesterol.

Instrument questions:

- Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised cholesterol?
- In the past two weeks, have you taken oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health worker?

Currently taking oral treatment (medication) prescribed for raised total cholesterol among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% taking meds	95% CI		n	% taking meds	95% CI		n	% taking meds	95% CI
18-29	1	0.0	0.0-0.0		8	6.8	0.0-20.4		9	5.8	0.0-17.3
30-44	28	8.4	0.0-18.1		77	20.8	10.8-30.8		105	15.7	8.7-22.7
45-59	51	24.6	11.8-37.5		130	19.1	11.7-26.4		181	21.4	14.0-28.8
60-69	36	30.7	14.3-47.1		116	34.9	24.5-45.3		152	33.5	24.5-42.6
18-69	116	18.2	10.3-26.1		331	20.7	15.2-26.2		447	19.7	15.1-24.4

Analysis Information:

- Questions used: H12, H13a, H14
- Epi Info program name: Hchol (unweighted); HcholWT (weighted)

Cholesterol advice by traditional healer

Description: Percentage of respondents who have sought advice or treatment from a traditional healer for raised cholesterol among those previously diagnosed.

Instrument questions:

- Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised cholesterol?
- Have you ever seen a traditional healer for raised cholesterol?
- Are you currently taking any herbal or traditional remedy for your raised cholesterol?

Seen a traditional healer for raised cholesterol among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% seen trad. healer	95% CI		n	% seen trad. healer	95% CI		n	% seen trad. healer	95% CI
18-29	1	0.0	0.0-0.0		8	0.0	0.0-0.0		9	0.0	0.0-0.0
30-44	28	0.0	0.0-0.0		77	6.1	0.5-11.7		105	3.6	0.2-6.9
45-59	51	0.0	0.0-0.0		130	2.7	0.0-6.7		181	1.6	0.0-3.8
60-69	36	1.3	0.0-4.0		116	5.4	1.3-9.6		152	4.1	1.1-7.0
18-69	116	0.2	0.0-0.6		331	3.9	1.5-6.3		447	2.5	1.0-4.0

Currently taking herbal or traditional treatment for raised cholesterol among those previously diagnosed											
Age Group (years)	Men				Women				Both Sexes		
	n	% taking trad. meds	95% CI		n	% taking trad. meds	95% CI		n	% taking trad. meds	95% CI

18-29	1	0.0	0.0-0.0		8	0.0	0.0-0.0		9	0.0	0.0-0.0
30-44	28	3.3	0.0-10.0		77	0.7	0.0-2.0		105	1.8	0.0-4.6
45-59	51	0.0	0.0-0.0		130	0.0	0.0-0.0		181	0.0	0.0-0.0
60-69	36	4.0	0.0-11.8		116	3.9	0.3-7.5		152	3.9	0.4-7.5
18-69	116	1.9	0.0-4.7		331	0.9	0.2-1.7		447	1.3	0.1-2.4

Analysis Information:

- Questions used: H12, H13a, H15, H16
- Epi Info program name: Hcholtrad (unweighted); HcholtradWT (weighted)

History of Cardiovascular Diseases

History of cardiovascular diseases

Description: Percentage of respondents who have ever had a heart attack or chest pain from heart disease (angina) or a stroke among all respondents.

Instrument questions:

- Have you ever had a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident)?

Having ever had a heart attack or chest pain from heart disease or a stroke											
Age Group (years)	Men				Women				Both Sexes		
	n	% CVD history	95% CI		n	% CVD history	95% CI		n	% CVD history	95% CI
18-29	216	9.3	5.2-13.3		348	14.7	10.1-19.3		564	11.9	8.8-15.1
30-44	487	10.8	7.7-13.9		888	14.6	12.0-17.2		1375	12.6	10.5-14.6
45-59	498	7.3	4.9-9.7		875	11.9	9.6-14.2		1373	9.6	7.9-11.2
60-69	312	14.2	9.9-18.5		616	16.4	13.1-19.6		928	15.4	12.9-17.9
18-69	1513	9.7	7.6-11.8		2727	14.3	12.0-16.5		4240	11.9	10.3-13.6

Analysis Information:

- Question used: H17
- Epi Info program name: Hcvd (unweighted); HcvdWT (weighted)

Prevention and treatment of heart disease

Description: Percentage of respondents who are currently taking aspirin or statins regularly to prevent or treat heart disease.

Instrument questions:

- Are you currently taking aspirin regularly to prevent or treat heart disease?
- Are you currently taking statins (Lovostatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?

Currently taking aspirin regularly to prevent or treat heart disease											
Age Group	Men				Women				Both Sexes		
(years)	n	% taking aspirin	95% CI		n	% taking aspirin	95% CI		n	% taking aspirin	95% CI
18-29	216	0.0	0.0-0.0		348	0.0	0.0-0.0		564	0.0	0.0-0.0
30-44	487	0.5	0.0-1.1		888	0.6	0.0-1.1		1375	0.6	0.1-1.1
45-59	498	0.9	0.0-1.9		875	0.7	0.2-1.2		1373	0.8	0.2-1.3
60-69	312	1.2	0.0-2.7		616	2.3	0.6-4.0		928	1.8	0.6-3.0
18-69	1513	0.4	0.1-0.8		2727	0.5	0.2-0.8		4240	0.5	0.2-0.7

Currently taking statins regularly to prevent or treat heart disease											
Age Group	Men				Women				Both Sexes		
(years)	n	% taking statins	95% CI		n	% taking statins	95% CI		n	% taking statins	95% CI
18-29	216	0.0	0.0-0.0		348	0.0	0.0-0.0		564	0.0	0.0-0.0
30-44	487	0.1	0.0-0.3		888	1.7	0.6-2.8		1375	0.8	0.3-1.4
45-59	498	1.6	0.3-2.8		875	2.5	1.4-3.6		1373	2.0	1.1-3.0
60-69	312	2.1	0.4-3.8		616	4.0	2.3-5.8		928	3.1	1.8-4.4
18-69	1513	0.5	0.2-0.8		2727	1.3	0.9-1.8		4240	0.9	0.6-1.2

Analysis Information:

- Questions used: H18, H19
- Epi Info program name: Hcvdmeds (unweighted); HcvdmedsWT (weighted)

Lifestyle Advice

Lifestyle advice

Description: Percentage of respondents who received lifestyle advice from a doctor or health worker during the past three years among all respondents.

Instrument question:

- During the past three years, has a doctor or other health worker advised you to do any of the following?

Advised by doctor or health worker to quit using tobacco or don't start											
Age Group	Men				Women				Both Sexes		
(years)	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	35.8	23.9-47.8		187	27.1	19.7-34.4		262	30.6	23.8-37.3
30-44	210	39.0	31.7-46.2		491	31.5	26.4-36.6		701	35.0	30.6-39.5
45-59	237	54.4	47.4-61.3		534	33.1	28.5-37.6		771	42.6	38.5-46.7
60-69	174	55.7	48.1-63.3		419	36.3	30.5-42.1		593	44.4	39.9-48.9
18-69	696	42.8	37.5-48.1		1631	30.6	26.9-34.2		2327	35.9	32.7-39.2

Advised by doctor or health worker to reduce salt in the diet											
Age Group	Men				Women				Both Sexes		
(years)	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	29.9	18.9-40.9		187	55.8	47.8-63.8		262	45.4	38.6-52.2
30-44	210	42.1	34.8-49.4		491	58.0	53.2-62.9		701	50.4	46.0-54.8
45-59	237	59.5	53.3-65.8		534	68.1	63.7-72.5		771	64.3	60.5-68.1
60-69	174	63.0	55.3-70.7		419	72.4	67.4-77.3		593	68.5	64.2-72.7
18-69	696	43.7	38.6-48.9		1631	60.7	57.1-64.3		2327	53.3	50.1-56.5

Advised by doctor or health worker to eat at least five servings of fruit and/or vegetables each day											
Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	51.9	38.8-65.1		187	62.2	53.5-70.9		262	58.1	50.4-65.8
30-44	210	48.8	41.1-56.6		491	57.2	52.1-62.2		701	53.2	48.4-58.0
45-59	237	53.3	46.3-60.3		534	57.5	52.5-62.5		771	55.6	51.4-59.9
60-69	174	58.0	49.0-67.1		419	59.8	53.9-65.6		593	59.0	54.0-64.1
18-69	696	51.7	45.9-57.5		1631	59.5	55.3-63.6		2327	56.1	52.4-59.8

Advised by doctor or health worker to reduce fat in the diet											
Age Group	Men				Women				Both Sexes		
(years)	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	43.8	31.3-56.3		187	46.9	38.6-55.2		262	45.6	38.5-52.8
30-44	210	37.6	29.7-45.5		491	49.2	44.1-54.4		701	43.7	39.0-48.4
45-59	237	49.1	42.2-55.9		534	60.1	55.5-64.7		771	55.2	51.0-59.3
60-69	174	48.4	40.2-56.6		419	56.7	51.2-62.1		593	53.2	48.4-58.0
18-69	696	43.2	37.8-48.6		1631	51.4	47.5-55.2		2327	47.8	44.4-51.1

Advised by doctor or health worker to start or do more physical activity											
Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	34.9	23.5-46.4		187	45.3	36.9-53.7		262	41.2	33.8-48.5
30-44	210	45.8	38.4-53.3		491	52.7	48.0-57.4		701	49.4	44.8-54.0
45-59	237	55.0	48.4-61.5		534	60.3	55.4-65.3		771	57.9	53.8-62.1
60-69	174	67.8	60.1-75.6		419	65.7	60.5-71.0		593	66.6	62.1-71.1
18-69	696	46.2	40.9-51.4		1631	52.7	48.9-56.6		2327	49.9	46.3-53.4

Advised by doctor or health worker to maintain a healthy body weight or to lose weight

Age Group (years)	Men				Women				Both Sexes		
	n	% advised	95% CI		n	% advised	95% CI		n	% advised	95% CI
18-29	75	20.6	11.0-30.2		187	29.2	21.6-36.8		262	25.7	19.4-32.1
30-44	210	25.2	18.6-31.9		491	39.7	34.8-44.6		701	32.8	28.5-37.1
45-59	237	39.0	32.4-45.5		534	43.4	38.4-48.4		771	41.4	37.1-45.7
60-69	174	42.8	34.7-50.9		419	40.3	34.8-45.8		593	41.3	36.5-46.2
18-69	696	28.3	23.7-32.9		1631	36.4	33.0-39.9		2327	32.9	29.8-35.9

Analysis Information:

- Questions used: H20a-f
- Epi Info program name: Hlifestyle (unweighted); HlifestyleWT (weighted)

Cervical Cancer Screening

Cervical cancer screening

Description: Percentage of female respondents who have ever had a screening test for cervical cancer among all female respondents.

Instrument question:

- Have you ever had a screening test for cervical cancer, using any of these methods described above?

Age Group (years)	Women		
	n	% ever tested	95% CI
18-29	303	7.6	4.4-10.9
30-44	811	20.2	16.7-23.6
45-59	762	17.7	14.2-21.3
60-69	518	11.0	7.8-14.3
18-69	2394	13.8	11.7-15.9

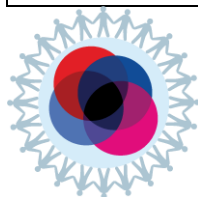
Analysis Information:

- Question used: CX1
- Epi Info program name: Hcervcancer (unweighted); HcervcancerWT (weighted)

screening among women aged 30-49 years	Description: Percentage of female respondents aged 30-49 years who have ever had a screening test for cervical cancer among all female respondents aged 30-49 years. Instrument question: Have you ever had a screening test for cervical cancer, using any of these methods described above?
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Age Group (years)	Women		
	n	% ever tested	95% CI

30-49	996	20.3	17.2-23.5
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Analysis Information:

- Question used: CX1
- Epi Info program name: Hcervcancer (unweighted); HcervcancerWT (weighted)

Physical Measurements

Blood pressure

Description: Mean blood pressure among all respondents, including those currently on medication for raised blood pressure.

Instrument question:

- Reading 1-3 systolic and diastolic blood pressure



Mean systolic blood pressure (mmHg)											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	216	118.5	117.0-120.0		345	105.7	104.6-106.8		561	112.3	111.1-113.4
30-44	484	121.8	120.3-123.3		887	112.7	111.7-113.7		1371	117.6	116.6-118.5
45-59	497	124.2	122.6-125.8		873	121.8	120.5-123.0		1370	123.0	121.9-124.1
60-69	311	127.0	124.7-129.4		612	123.7	121.9-125.4		923	125.2	123.7-126.7
18-69	1508	121.2	120.4-122.1		2717	112.5	111.7-113.2		4225	117.0	116.3-117.6

Mean diastolic blood pressure (mmHg)											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	216	72.7	71.3-74.1		345	69.7	68.8-70.6		561	71.3	70.4-72.1
30-44	484	77.9	76.6-79.2		887	75.4	74.6-76.2		1371	76.7	76.0-77.5
45-59	497	78.8	77.7-79.9		873	78.7	77.9-79.5		1370	78.8	78.1-79.5
60-69	311	77.4	76.2-78.6		612	77.2	76.3-78.1		923	77.3	76.6-78.0
18-69	1508	75.9	75.1-76.7		2717	73.8	73.3-74.4		4225	74.9	74.4-75.4

Analysis Information:

- Questions used: M4a, M4b, M5a, M5b, M6a, M6b
- Epi Info program name: Mbloodpressure (unweighted); MbloodpressureWT (weighted)

Raised blood pressure

Description: Percentage of respondents with raised blood pressure.

Instrument question:

- Reading 1-3 systolic and diastolic blood pressure
- During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?

SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg									
Age Group	Men			Women			Both Sexes		
(years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	7.3	3.6-11.1	335	1.5	0.3-2.8	542	4.5	2.4-6.6
30-44	477	16.3	12.2-20.3	854	8.8	6.7-10.9	1331	12.8	10.4-15.2
45-59	471	19.7	15.7-23.8	848	17.9	15.0-20.8	1319	18.8	16.3-21.3
60-69	304	20.9	15.8-25.9	566	16.0	12.5-19.4	870	18.3	15.4-21.2
18-69	1459	13.6	11.3-15.9	2603	8.1	7.0-9.2	4062	10.9	9.6-12.3
SBP $\geq$ 160 and/or DBP $\geq$ 100 mmHg									
Age Group	Men			Women			Both Sexes		
(years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	1.2	0.0-2.8	335	0.0	0.0-0.0	542	0.6	0.0-1.4
30-44	477	3.7	1.9-5.6	854	1.8	0.9-2.8	1331	2.9	1.8-3.9
45-59	471	5.7	3.7-7.8	848	4.1	2.6-5.5	1319	4.9	3.6-6.1
60-69	304	7.0	3.6-10.4	566	5.0	2.8-7.1	870	5.9	3.8-8.0
18-69	1459	3.3	2.2-4.3	2603	1.7	1.3-2.2	4062	2.5	2.0-3.1
SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg or currently on medication for raised blood pressure									
Age Group	Men			Women			Both Sexes		
(years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	207	8.5	4.5-12.5	335	1.8	0.4-3.2	542	5.2	3.0-7.5
30-44	477	18.1	13.8-22.4	854	11.3	9.1-13.5	1331	14.9	12.4-17.5
45-59	471	31.5	26.8-36.1	848	36.2	32.3-40.2	1319	33.8	30.7-37.0
60-69	304	44.5	38.0-51.0	566	47.4	43.0-51.8	870	46.0	42.3-49.7
18-69	1459	18.4	15.9-21.0	2603	15.0	13.5-16.5	4062	16.8	15.2-18.3
SBP $\geq$ 160 and/or DBP $\geq$ 100 mmHg or currently on medication for raised blood pressure									
Age Group	Men			Women			Both Sexes		
(years)	n	%	95% CI	n	%	95% CI	n	%	95% CI

18-29	207	2.3	0.0-4.6		335	0.3	0.0-1.0		542	1.3	0.1-2.5
30-44	477	6.0	3.5-8.5		854	4.7	3.3-6.2		1331	5.4	3.8-7.0
45-59	471	22.7	18.5-26.9		848	26.6	23.0-30.2		1319	24.6	21.9-27.3
60-69	304	34.9	28.8-40.9		566	40.9	36.6-45.1		870	38.0	34.3-41.7
18-69	1459	9.5	7.9-11.2		2603	10.0	8.8-11.2		4062	9.7	8.6-10.9

Analysis Information:

- Questions used: H1, H2a, H3, M4a, M4b, M5a, M5b, M6a, M6b, M7
- Epi Info program name: Mraisedbp (unweighted); MraisedbpWT (weighted)

Blood pressure diagnosis, treatment and control

Description: Raised blood pressure diagnosis, treatment and control among those with raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg) or on medication for raised blood pressure.

Instrument questions:

- Have you ever had your blood pressure measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?
- Reading 1-3 systolic and diastolic blood pressure

Raised blood pressure diagnosis, treatment and control among those with raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90 mmHg) or on medication for raised blood pressure									
Men									
Age Group (years)	n	% with raised blood pressure, not previously diagnosed	95% CI	% with previously diagnosed raised blood pressure, not on medication	95% CI	% with previously diagnosed raised blood pressure, on medication but not controlled	95% CI	% with previously diagnosed raised blood pressure, on medication and blood pressure controlled	95% CI
18-29	16	82.6	64.1-100.0	3.8	0.0-11.1	0.0	0.0-0.0	13.6	0.0-31.4
30-44	79	69.7	57.9-81.4	14.6	6.2-23.1	5.7	1.2-10.2	9.9	0.8-19.1
45-59	156	37.8	29.5-46.2	3.8	1.0-6.6	21.1	14.0-28.2	37.3	28.2-46.4
60-69	133	19.5	12.6-26.4	13.1	6.1-20.0	14.3	8.3-20.4	53.1	44.1-62.1
18-69	384	53.9	46.8-60.9	8.9	5.3-12.5	11.0	7.8-14.1	26.3	20.4-32.2
Women									
Age Group (years)	n	% with raised blood pressure, not previously diagnosed	95% CI	% with previously diagnosed raised blood pressure, not on medication	95% CI	% with previously diagnosed raised blood pressure, on medication but not controlled	95% CI	% with previously diagnosed raised blood pressure, on medication and blood pressure controlled	95% CI

18-29	7	82.0	50.4-100.0	0.0	0.0-0.0	0.0	0.0-0.0	18.0	0.0-49.6
30-44	100	62.0	52.0-72.1	8.8	3.4-14.2	7.3	2.3-12.4	21.8	12.6-31.0
45-59	311	26.1	20.5-31.6	8.1	4.5-11.8	15.1	10.7-19.4	50.7	44.7-56.7
60-69	275	13.8	9.6-18.0	6.0	2.6-9.4	13.9	9.2-18.6	66.3	59.8-72.8
18-69	693	34.3	29.7-38.8	7.4	5.1-9.6	12.2	9.4-15.1	46.1	41.5-50.7
Both Sexes									
Age Group (years)	n	% with raised blood pressure, not previously diagnosed	95% CI	% with previously diagnosed raised blood pressure, not on medication	95% CI	% with previously diagnosed raised blood pressure, on medication but not controlled	95% CI	% with previously diagnosed raised blood pressure, on medication and blood pressure controlled	95% CI
18-29	23	82.5	66.6-98.4	3.2	0.0-9.0	0.0	0.0-0.0	14.3	0.0-30.2
30-44	179	67.0	58.2-75.8	12.6	6.9-18.3	6.3	2.9-9.7	14.1	7.2-21.0
45-59	467	31.6	26.6-36.5	6.1	3.8-8.4	17.9	13.7-22.1	44.4	39.2-49.6
60-69	408	16.4	12.6-20.3	9.2	5.4-13.0	14.1	10.1-18.1	60.2	54.8-65.6
18-69	1077	45.3	40.5-50.1	8.2	5.9-10.5	11.5	9.2-13.8	34.9	30.7-39.1

Analysis Information:

- Questions used: H1, H2a, H3, M4a, M4b, M5a, M5b, M6a, M6b, M7
- Epi Info program name: Mraisedbp (unweighted); MraisedbpWT (weighted)

Mean heart rate Description: Mean heart rate (beats per minute).

Instrument question:

- Reading 1-3 heart rate

Mean heart rate (beats per minute)											
Age Group	Men				Women				Both Sexes		
(years)	n	mean	95% CI		n	mean	95% CI		n	mean	95% CI
18-29	216	72.6	71.0-74.2		345	78.8	77.6-80.1		561	75.6	74.6-76.7
30-44	484	71.4	70.2-72.5		887	76.5	75.7-77.3		1371	73.8	73.0-74.5
45-59	497	73.3	72.2-74.4		873	74.1	73.4-74.9		1370	73.7	73.0-74.4
60-69	311	73.3	71.9-74.7		612	75.7	74.8-76.7		923	74.6	73.7-75.5
18-69	1508	72.4	71.6-73.2		2717	76.9	76.3-77.6		4225	74.6	74.0-75.1

Analysis Information:

- Questions used: M16a, M16b, M16c
- Epi Info program name: Mheartrate (unweighted); MheartrateWT (weighted)

Height,
weight and
BMI

Description: Mean height, weight, and body mass index among all respondents (excluding pregnant women).

Instrument questions:

- For women: Are you pregnant?
- Height
- Weight

Mean height (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
18-29	215	167.4	166.4-168.5		319	156.3	155.6-157.0
30-44	483	165.9	165.2-166.5		867	155.4	155.0-155.8
45-59	497	164.7	164.0-165.4		871	154.3	153.8-154.7
60-69	309	163.2	162.5-164.0		612	152.7	152.3-153.1
18-69	1504	166.1	165.6-166.6		2669	155.3	155.0-155.6

Mean weight (kg)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
18-29	216	60.2	58.4-62.0		319	52.2	51.1-53.4
30-44	484	64.1	62.7-65.4		867	58.2	57.3-59.0
45-59	497	62.5	61.4-63.7		871	57.5	56.7-58.2
60-69	309	60.6	59.2-62.0		612	54.7	53.7-55.6
18-69	1506	61.9	60.9-62.9		2669	55.3	54.7-56.0

Mean BMI (kg/m²)											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	215	21.5	20.9-22.0		318	21.4	21.0-21.9		533	21.4	21.1-21.8
30-44	483	23.2	22.8-23.7		867	24.1	23.7-24.4		1350	23.6	23.3-23.9
45-59	496	23.0	22.7-23.4		870	24.1	23.8-24.5		1366	23.6	23.3-23.8
60-69	308	22.8	22.3-23.2		608	23.5	23.1-23.9		916	23.2	22.9-23.4
18-69	1502	22.4	22.1-22.7		2663	23.0	22.7-23.2		4165	22.7	22.5-22.9

Analysis Information:

- Questions used: M8, M11, M12
- Epi Info program name: Mbmi (unweighted); MbmiWT (weighted)

BMI categories

Description: Percentage of respondents (excluding pregnant women) in each BMI category.



Instrument questions:

- For women: Are you pregnant?
- Height
- Weight

BMI classifications									
Men									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-29	215	16.8	11.5-22.1	71.8	65.7-77.9	9.4	5.2-13.5	2.0	0.2-3.9
30-44	483	6.8	4.2-9.4	66.1	61.4-70.8	24.0	19.9-28.1	3.1	1.2-4.9
45-59	496	8.9	5.9-11.8	64.6	59.6-69.5	22.0	17.9-26.1	4.6	2.5-6.7
60-69	308	11.3	7.7-15.0	63.0	57.6-68.4	23.0	17.8-28.1	2.7	0.7-4.7
18-69	1502	11.6	9.0-14.2	68.0	64.7-71.2	17.5	15.0-20.0	2.9	1.9-4.0

BMI classifications									
Women									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-29	318	20.0	15.3-24.6	67.3	61.8-72.8	9.1	5.5-12.7	3.6	1.5-5.8
30-44	867	7.6	5.6-9.7	55.2	51.6-58.8	29.9	26.6-33.2	7.3	5.3-9.2
45-59	870	6.2	4.6-7.9	56.0	52.3-59.8	30.3	26.5-34.1	7.4	5.5-9.3
60-69	608	10.8	8.0-13.6	55.6	51.0-60.1	27.7	23.7-31.6	6.0	4.0-7.9
18-69	2663	12.5	10.5-14.6	60.2	57.6-62.8	21.5	19.3-23.7	5.7	4.6-6.9

BMI classifications									
Both Sexes									
Age Group (years)	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI

18-29	533	18.3	14.8-21.8	69.7	65.7-73.6	9.2	6.5-12.0	2.8	1.4-4.1
30-44	1350	7.2	5.5-8.8	61.1	58.0-64.1	26.7	24.0-29.5	5.0	3.6-6.4
45-59	1366	7.6	5.8-9.3	60.4	57.2-63.5	26.1	23.2-28.9	6.0	4.6-7.4
60-69	916	11.1	8.8-13.3	59.0	55.5-62.5	25.5	22.4-28.6	4.4	3.0-5.9
18-69	4165	12.1	10.4-13.7	64.3	62.2-66.4	19.4	17.7-21.1	4.3	3.5-5.0

Analysis Information:

- Questions used: M8, M11, M12
- Epi Info program name: Mbmiclass (unweighted); MbmiclassWT (weighted)

BMI ≥25



Description: Percentage of respondents (excluding pregnant women) classified as overweight (BMI≥25).

Instrument questions:

- For women: Are you pregnant?
- Height
- Weight

BMI≥25											
Age Group (years)	Men				Women				Both Sexes		
	n	% BMI≥25	95% CI		n	% BMI≥25	95% CI		n	% BMI≥25	95% CI
18-29	215	11.4	7.0-15.8		318	12.7	8.5-16.9		533	12.0	8.9-15.1
30-44	483	27.0	22.6-31.5		867	37.2	33.6-40.7		1350	31.7	28.8-34.7
45-59	496	26.6	22.2-30.9		870	37.7	33.8-41.7		1366	32.1	29.1-35.1
60-69	308	25.6	20.3-31.0		608	33.6	29.3-38.0		916	29.9	26.6-33.3
18-69	1502	20.4	17.6-23.2		2663	27.2	24.8-29.7		4165	23.7	21.7-25.6

Analysis Information:

- Questions used: M8, M11, M12
- Epi Info program name: Mbmiclass (unweighted); MbmiclassWT (weighted)

Waist circumference

Description: Mean waist circumference among all respondents (excluding pregnant women).

Instrument questions:

- For women: Are you pregnant?
- Waist circumference measurement

Waist circumference (cm)								
Age Group		Men				Women		
(years)	n	Mean	95% CI		n	Mean	95% CI	

18-29	216	76.1	74.7-77.6		319	72.7	71.5-73.9
30-44	484	82.1	81.0-83.2		867	80.0	79.2-80.9
45-59	497	83.6	82.4-84.7		871	83.2	82.3-84.1
60-69	309	83.3	81.9-84.8		612	83.6	82.5-84.7
18-69	1506	80.0	79.1-80.9		2669	78.0	77.3-78.7

Analysis Information:

- Questions used: M8, M14
- Epi Info program name: Mwaist (unweighted); MwaistWT (weighted)

Hip circumference Description: Mean hip circumference among all respondents (excluding pregnant women).

Instrument questions:

- For women: Are you pregnant?
- Hip circumference measurement

Hip circumference (cm)							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
18-29	216	90.1	88.9-91.4		319	90.4	89.4-91.5
30-44	484	92.7	91.8-93.6		867	94.9	94.2-95.7
45-59	497	92.3	91.6-93.1		871	94.6	93.9-95.3
60-69	309	91.2	90.2-92.2		612	93.5	92.6-94.3
18-69	1506	91.5	90.8-92.2		2669	92.9	92.4-93.5

Analysis Information:

- Questions used: M8, M15
- Epi Info program name: Mhip (unweighted); MhipWT (weighted)

Waist / hip ratio Description: Mean waist-to-hip ratio among all respondents (excluding pregnant women).

Instrument questions:

- For women: Are you pregnant?
- Waist circumference measurement
- Hip circumference measurement

Mean waist / hip ratio							
Age Group (years)	Men				Women		
	n	Mean	95% CI		n	Mean	95% CI
18-29	216	0.8	0.8-0.9		319	0.8	0.8-0.8
30-44	484	0.9	0.9-0.9		867	0.8	0.8-0.8
45-59	497	0.9	0.9-0.9		871	0.9	0.9-0.9
60-69	309	0.9	0.9-0.9		612	0.9	0.9-0.9
18-69	1506	0.9	0.9-0.9		2669	0.8	0.8-0.8

Analysis Information:

- Questions used: M8, M14, M15
- Epi Info program name: Mwaisthipratio (unweighted); MwaisthipratioWT (weighted)

Biochemical Measurements

Mean fasting blood glucose

Description: mean fasting blood glucose results including those currently on medication for diabetes (non-fasting recipients excluded).

Instrument questions:

- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement

Mean fasting blood glucose (mmol/L)										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI	n	Mean	95% CI
18-29	187	4.4	4.3-4.6		316	4.3	4.2-4.4	503	4.4	4.3-4.5
30-44	440	5.0	4.8-5.1		825	5.0	4.8-5.1	1265	5.0	4.9-5.1
45-59	464	5.4	5.2-5.6		828	5.7	5.5-5.9	1292	5.5	5.4-5.7
60-69	290	5.9	5.5-6.2		569	6.0	5.7-6.3	859	5.9	5.7-6.2
18-69	1381	4.9	4.8-5.0		2538	4.9	4.8-5.0	3919	4.9	4.8-5.0

Mean fasting blood glucose (mg/dl)										
Age Group (years)	Men				Women			Both Sexes		
	n	Mean	95% CI		n	Mean	95% CI	n	Mean	95% CI

18-29	187	79.9	77.1-82.8		316	77.7	75.7-79.7		503	78.9	76.9-80.8
30-44	440	89.5	87.0-91.9		825	89.6	86.9-92.3		1265	89.5	87.6-91.5
45-59	464	97.0	93.0-101.1		828	102.9	99.8-106.0		1292	99.9	97.2-102.6
60-69	290	105.5	99.6-111.5		569	107.8	102.4-113.3		859	106.8	102.7-110.9
18-69	1381	87.9	85.8-89.9		2538	88.8	87.0-90.6		3919	88.3	86.8-89.9

Analysis Information:

- Questions used: B1, B5
- Epi Info program name:
 - measurement in mmol/L: Bglucose (unweighted); BglucoseWT (weighted)
 - measurement in mg/dl: BglucoseMg (unweighted); BglucoseMgWT (weighted)

Raised blood glucose



Description: Categorization of respondents into blood glucose level categories and percentage of respondents currently on medication for raised blood glucose (non-fasting recipients excluded).

Instrument questions:

- In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?
- Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?
- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement
- Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker?

Impaired Fasting Glycaemia*											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	187	2.1	0.0-4.3		316	0.9	0.0-1.9		503	1.5	0.3-2.8
30-44	440	5.3	3.3-7.4		825	3.4	1.8-5.1		1265	4.4	3.1-5.7
45-59	464	9.4	6.4-12.3		829	9.2	6.9-11.5		1293	9.3	7.4-11.2
60-69	291	9.2	5.8-12.7		571	9.8	7.1-12.5		862	9.5	7.2-11.8
18-69	1382	5.0	3.6-6.4		2541	4.0	3.2-4.9		3923	4.5	3.7-5.4

Raised blood glucose or currently on medication for diabetes**											
Age Group	Men				Women				Both Sexes		
(years)	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	187	0.9	0.0-2.2		316	1.6	0.2-2.9		503	1.2	0.2-2.2
30-44	440	5.7	3.6-7.9		825	5.4	3.7-7.1		1265	5.6	4.1-7.0
45-59	464	11.1	7.9-14.3		829	15.6	12.7-18.5		1293	13.3	11.1-15.6
60-69	291	19.0	13.8-24.2		571	20.8	16.9-24.8		862	20.0	16.7-23.3
18-69	1382	5.5	4.3-6.7		2541	7.1	5.9-8.3		3923	6.3	5.4-7.2

Currently on medication for diabetes

Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	191	0.0	0.0-0.0		322	0.4	0.0-1.1		513	0.2	0.0-0.5
30-44	461	0.6	0.0-1.2		840	1.6	0.7-2.4		1301	1.0	0.5-1.5
45-59	478	5.9	3.7-8.0		846	10.6	7.9-13.2		1324	8.2	6.3-10.0
60-69	302	10.7	6.8-14.6		589	16.4	12.5-20.2		891	13.8	11.0-16.5
18-69	1432	2.0	1.4-2.6		2597	4.1	3.2-4.9		4029	3.0	2.4-3.5

* Impaired fasting glycaemia is defined as either plasma venous value: ≥ 6.1 mmol/L (110mg/dl) and < 7.0 mmol/L (126mg/dl) capillary whole blood value: ≥ 5.6 mmol/L (100mg/dl) and < 6.1 mmol/L (110mg/dl)

** Raised blood glucose is defined as either plasma venous value: ≥ 7.0 mmol/L (126 mg/dl) capillary whole blood value: ≥ 6.1 mmol/L (110 mg/dl)

Analysis Information:

- Questions used: H8, H9, B1, B5, B6

Epi Info program name:

- measurement in mmol/L: Bglucose (unweighted); BglucoseWT (weighted)
- measurement in mg/dl: BglucoseMg (unweighted); BglucoseMgWT (weighted)

Blood glucose
diagnosis and
treatment

Description: Raised blood glucose diagnosis and treatment among all respondents.

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?
- Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?
- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement
- Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker?

Raised blood glucose diagnosis and treatment among all respondents							
Men							
Age Group (years)	n	% with raised blood glucose, not previously diagnosed	95% CI	% with previously diagnosed raised blood glucose, not on medication	95% CI	% with previously diagnosed raised blood glucose, on medication	95% CI

18-29	187	0.9	0.0-2.2	2.6	0.3-4.9	0.0	0.0-0.0
30-44	441	5.2	3.1-7.3	4.4	1.8-7.0	0.6	0.0-1.2
45-59	464	5.3	3.0-7.5	4.8	2.8-6.9	5.4	3.3-7.5
60-69	293	10.3	6.2-14.5	5.1	2.3-7.9	10.9	6.9-14.9
18-69	1385	3.7	2.7-4.7	3.8	2.4-5.2	1.9	1.3-2.5
Women							
Age Group (years)	n	% with raised blood glucose, not previously diagnosed	95% CI	% with previously diagnosed raised blood glucose, not on medication	95% CI	% with previously diagnosed raised blood glucose, on medication	95% CI
18-29	316	1.2	0.0-2.4	0.3	0.0-0.9	0.4	0.0-1.1
30-44	825	2.9	1.6-4.2	3.1	1.8-4.5	1.5	0.6-2.4
45-59	831	5.7	4.0-7.4	5.2	3.5-6.9	9.8	7.3-12.4
60-69	575	5.6	3.5-7.6	7.5	5.0-10.1	15.9	12.0-19.9
18-69	2547	3.0	2.2-3.8	2.8	2.1-3.4	3.9	3.0-4.7
Raised blood glucose diagnosis and treatment among all respondents							
Both Sexes							
Age Group (years)	n	% with raised blood glucose, not previously diagnosed	95% CI	% with previously diagnosed raised blood glucose, not on medication	95% CI	% with previously diagnosed raised blood glucose, on medication	95% CI
18-29	503	1.0	0.1-1.9	1.5	0.3-2.8	0.2	0.0-0.5
30-44	1266	4.1	2.9-5.4	3.8	2.3-5.3	1.0	0.5-1.6
45-59	1295	5.5	4.0-6.9	5.0	3.7-6.3	7.6	5.9-9.3
60-69	868	7.8	5.6-10.0	6.4	4.6-8.3	13.6	10.9-16.4
18-69	3932	3.4	2.7-4.0	3.3	2.5-4.1	2.9	2.3-3.4

Analysis Information:

- Questions used: H6, H7a, H8, H9, B1, B5, B6
- Epi Info program name:
 - measurement in mmol/L: Bglucose (unweighted); BglucoseWT (weighted)
 - measurement in mg/dl: BglucoseMg (unweighted); BglucoseMgWT (weighted)

Total cholesterol



Description: Mean total cholesterol among all respondents including those currently on medication for raised cholesterol.

Instrument question:

- Total cholesterol measurement

Mean total cholesterol (mmol/L)											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	179	3.8	3.7-4.0		314	4.2	4.0-4.3		493	4.0	3.9-4.1
30-44	448	4.3	4.2-4.4		826	4.4	4.3-4.5		1274	4.3	4.3-4.4
45-59	462	4.4	4.3-4.5		839	4.8	4.7-4.9		1301	4.6	4.5-4.7
60-69	292	4.5	4.4-4.7		585	5.0	4.9-5.1		877	4.8	4.7-4.9
18-69	1381	4.1	4.0-4.2		2564	4.4	4.4-4.5		3945	4.3	4.2-4.3

Mean total cholesterol (mg/dl)											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	179	147.2	141.4-153.0		314	161.0	155.9-166.1		493	153.9	149.7-158.1
30-44	448	164.9	161.1-168.7		826	171.2	167.7-174.7		1274	167.9	165.0-170.8
45-59	462	170.6	166.2-175.0		839	185.2	181.6-188.7		1301	177.9	175.0-180.8
60-69	292	175.3	168.5-182.0		585	193.9	188.8-199.1		877	185.5	181.1-190.0
18-69	1381	159.3	156.1-162.6		2564	171.8	168.8-174.7		3945	165.4	162.8-168.0

Analysis Information:

- Questions used: B8
- Epi Info program name:
 - measurement in mmol/L: Btotalipids (unweighted); BtotalipidsWT (weighted)
 - measurement in mg/dl: BtotalipidsMg (unweighted); BtotalipidsMgWT (weighted)

Raised total cholesterol



Description: Percentage of respondents with raised total cholesterol.

Instrument questions:

- Total cholesterol measurement

Total cholesterol $\geq$ 5.0 mmol/L or $\geq$ 190 mg/dl

Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	179	13.3	7.9-18.8		314	19.1	14.0-24.2		493	16.1	12.3-19.9
30-44	448	24.7	20.5-28.9		826	27.8	24.2-31.4		1274	26.2	23.1-29.3
45-59	462	28.2	23.6-32.9		839	42.3	38.3-46.2		1301	35.2	32.1-38.4
60-69	292	30.0	23.5-36.5		585	49.0	43.9-54.1		877	40.4	36.3-44.6
18-69	1381	21.0	18.1-23.9		2564	28.9	26.1-31.7		3945	24.9	22.6-27.2
Total cholesterol $\geq$ 6.2 mmol/L or $\geq$ 240 mg/dl											
Age Group (years)	Men				Women				Both Sexes		
	n	%	95% CI		n	%	95% CI		n	%	95% CI
18-29	179	0.7	0.0-2.1		314	4.3	2.0-6.6		493	2.4	1.1-3.8
30-44	448	5.0	2.8-7.1		826	5.4	3.4-7.4		1274	5.2	3.7-6.7
45-59	462	6.4	3.8-8.9		839	10.9	8.4-13.4		1301	8.6	6.8-10.4
60-69	292	7.5	3.6-11.4		585	16.7	13.0-20.3		877	12.5	9.7-15.4
18-69	1381	3.6	2.5-4.8		2564	7.0	5.7-8.3		3945	5.3	4.4-6.2

Analysis Information:

- Questions used: B8
- Epi Info program name:
 - measurement in mmol/L: Btotalipids (unweighted); BtotalipidsWT (weighted)
 - measurement in mg/dl: BtotalipidsMg (unweighted); BtotalipidsMgWT (weighted)

Raised total cholesterol

Description: Percentage of respondents with raised total cholesterol and percentage of respondents currently on medication for raised cholesterol.

Instrument questions:

- Total cholesterol measurement
- During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor or other health worker?

Total cholesterol ≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol									
Age Group	Men			Women			Both Sexes		
(years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	179	13.3	7.9-18.8	314	19.1	14.0-24.2	493	16.1	12.3-19.9
30-44	448	24.7	20.5-28.9	826	28.7	25.0-32.4	1274	26.9	23.8-30.0
45-59	462	28.2	23.6-32.9	839	43.6	39.6-47.6	1301	36.7	33.4-39.9
60-69	292	30.0	23.5-36.5	585	50.8	45.7-55.8	877	41.8	37.6-46.0
18-69	1381	21.0	18.1-23.9	2564	29.6	26.8-32.4	3945	25.5	23.2-27.8

Total cholesterol ≥ 6.2 mmol/L or ≥ 240 mg/dl or currently on medication for raised cholesterol									
Age Group	Men			Women			Both Sexes		
(years)	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	179	0.7	0.0-2.1	314	4.3	2.0-6.6	493	2.4	1.1-3.8
30-44	448	5.0	2.8-7.1	826	6.6	4.3-8.8	1274	6.0	4.4-7.6
45-59	462	6.4	3.8-8.9	839	13.1	10.4-15.7	1301	10.5	8.4-12.6
60-69	292	7.5	3.6-11.4	585	20.4	16.3-24.5	877	15.2	12.1-18.3
18-69	1381	3.6	2.5-4.8	2564	8.1	6.7-9.5	3945	6.1	5.1-7.1

Analysis Information:

- Questions used: B8, B9
- Epi Info program name:
 - measurement in mmol/L: Btotalipids (unweighted); BtotalipidsWT (weighted)
 - measurement in mg/dl: BtotalipidsMg (unweighted); BtotalipidsMgWT (weighted)

Introduction to intake of salt per day

Levels of sodium and creatinine in spot urine samples are used in STEPS to estimate population 24 hour salt intake, using the INTERSALT equation:

Estimated 24 hour sodium (Na) intake in mmol for males: $23.51 + 0.45 \times \text{spot Na concentration (mmol/L)} - 3.09 \times \text{spot creatinine concentration (mmol/L)} + 4.16 \times \text{BMI} + 0.22 \times \text{Age}$

Estimated 24 hour sodium (Na) intake in mmol for females: $3.74 + 0.33 \times \text{spot Na concentration (mmol/L)} - 2.44 \times \text{spot creatinine concentration (mmol/L)} + 2.42 \times \text{BMI} + 2.34 \times \text{Age} - 0.03 \times \text{Age}^2$

The 24 hour sodium values in mmol are divided by 17.1 in order to get grams of salt.

WHO recommendation

The WHO recommendation is less than 5 grams of salt or 2 grams of sodium per person per day.

Intake of salt per day



Description: Mean intake of salt in grams per day among all respondents

Instrument question:

- Are you pregnant?
- Had you been fasting prior to urine collection?
- Urinary sodium measurement
- Urinary creatinine measurement

Mean salt intake (g/day)											
Age Group	Men				Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	166	10.3	9.9-10.7		254	8.3	8.1-8.6		420	9.4	9.2-9.7
30-44	410	10.5	10.3-10.8		715	8.9	8.8-9.1		1125	9.8	9.6-9.9
45-59	409	10.7	10.5-10.9		737	8.2	8.0-8.3		1146	9.5	9.3-9.6
60-69	257	10.5	10.2-10.8		527	7.1	7.0-7.2		784	8.6	8.4-8.8
18-69	1242	10.5	10.3-10.7		2233	8.4	8.3-8.5		3475	9.5	9.4-9.6

Analysis Information:

- Questions used: M8, B10, B14, B15
- Epi Info program name: Bsalt (unweighted); BsaltWT (weighted)

High density lipoprotein (HDL)

Description: Mean HDL among all respondents and percentage of respondents with low HDL.

Instrument question:

- HDL cholesterol measurement

Mean HDL (mmol/L)											
Age Group		Men			Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	189	1.0	1.0-1.1		321	1.2	1.2-1.2		510	1.1	1.1-1.1
30-44	457	1.0	1.0-1.1		838	1.1	1.1-1.2		1295	1.1	1.1-1.1
45-59	472	1.0	1.0-1.1		842	1.1	1.1-1.1		1314	1.1	1.0-1.1
60-69	299	1.0	1.0-1.0		589	1.1	1.1-1.1		888	1.1	1.0-1.1
18-69	1417	1.0	1.0-1.0		2590	1.2	1.1-1.2		4007	1.1	1.1-1.1
Mean HDL (mg/dl)											
Age Group		Men			Women				Both Sexes		
(years)	n	Mean	95% CI		n	Mean	95% CI		n	Mean	95% CI
18-29	189	38.7	36.8-40.7		321	46.2	44.5-47.8		510	42.3	40.9-43.6
30-44	457	39.5	38.3-40.7		838	44.1	43.1-45.1		1295	41.7	40.8-42.5
45-59	472	39.6	38.5-40.8		842	42.8	41.8-43.7		1314	41.2	40.4-42.0
60-69	299	38.9	37.5-40.3		589	43.0	41.8-44.3		888	41.2	40.2-42.1
18-69	1417	39.2	38.2-40.1		2590	44.6	43.8-45.4		4007	41.8	41.1-42.5

Percentage of respondents with HDL <1.03mmol/L or <40 mg/dl			
Age Group (years)	Men		
	n	%	95% CI
18-29	189	61.8	53.9-69.8
30-44	457	58.5	53.2-63.8
45-59	472	58.8	53.9-63.7
60-69	299	60.4	54.2-66.6
18-69	1417	60.1	56.0-64.1
Percentage of respondents with HDL <1.29mmol/L or <50 mg/dl			
Age Group (years)	Women		
	n	%	95% CI
18-29	321	63.1	57.0-69.1
30-44	838	70.8	67.4-74.3
45-59	842	75.6	72.1-79.1
60-69	589	76.1	72.0-80.2
18-69	2590	69.0	66.0-72.0

Analysis Information:

- Questions used: B16
- Epi Info program name:
 - measurement in mmol/L: Bhdlipids (unweighted); BhdlipidsWT (weighted)
 - measurement in mg/dl: BhdlipidsMg (unweighted); BhdlipidsMgWT (weighted)

Cardiovascular disease risk

CVD risk

Description: 10-year cardiovascular disease (CVD) risk* among respondents aged 40-69 years

Instrument questions: combined from Step 1, 2 and 3

- Gender, age
- Smoking status
- Systolic blood pressure measurements
- History of diabetes
- Total cholesterol measurements
- Body mass index

Percentage of respondents by level of 10-year CVD risk							
Age Group (years)	Men						
	n	<10%	95% CI	10-20%	95% CI	≥20%	95% CI
40-54	490	98.7	97.4-99.3	1.3	0.7-2.6	-	-
55-69	459	73.4	68.2-78.0	24.1	19.7-29.0	2.5	1.4-4.5
40-69	949	90.0	87.9-91.8	9.1	7.4-11.1	0.9	0.5-1.5
Age Group (years)	Women						
	n	<10%	95% CI	10-20%	95% CI	≥20%	95% CI
40-54	856	99.1	96.5-99.8	0.9	0.2-3.5	-	-
55-69	899	90.1	87.8-92.0	9.2	7.5-11.4	0.7	0.2-1.8
40-69	1755	95.6	94.3-96.6	4.2	3.2-5.4	0.3	0.1-0.7
Age Group (years)	Both Sexes						
	n	<10%	95% CI	10-20%	95% CI	≥20%	95% CI
40-54	1346	98.9	97.6-99.5	1.1	0.5-2.4	-	-
55-69	1358	82.3	79.5-84.7	16.2	13.9-18.8	1.5	0.9-2.6
40-69	2704	92.8	91.5-93.8	6.7	5.7-7.8	0.6	0.3-1.0

* 10-year CVD risk is defined according to age, sex, smoking status, blood pressure, history of diabetes, total cholesterol, and body mass index.

Analysis Information:

- Questions used: C1, C2, C3, T1, H6, H7a, H17, M4a, M5a, M6a, M7, B1, B8
- Epi Info program name: Please contact the STEPS team.

CVD risk of ≥20% or existing CVD

Description: Percentage of respondents aged 40-69 years with a 10-year cardiovascular disease (CVD) risk* ≥20% or with existing CVD

Instrument questions: combined from Step 1, 2 and 3

- Gender, age
- Smoking status
- Systolic blood pressure measurements
- History of diabetes
- Total cholesterol measurements
- Body mass index

Percentage of respondents with a 10-year CVD risk $\geq 20\%$ or with existing CVD									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	492	8.8	6.2-12.3	858	14.0	11.4-17.1	1350	11.3	9.3-13.5
55-69	462	13.4	10.5-17.1	900	15.8	13.2-18.8	1362	14.7	12.6-17.1
40-69	954	10.4	8.3-12.9	1758	14.7	12.8-16.9	2712	12.5	11.1-14.2

* A 10-year CVD risk of $\geq 20\%$ is defined according to age, sex, smoking status, blood pressure, history of diabetes, total cholesterol, and body mass index.

Analysis Information:

- Questions used: C1, C2, C3, T1, H6, H7a, H17, M4a, M5a, M6a, M7, B1, B8
- Epi Info program name: Please contact the STEPS team.

Drug therapy and counseling for those with CVD risk $\geq 20\%$ or existing CVD



Description: Percentage of eligible persons (defined as aged 40-69 years with a 10-year cardiovascular disease (CVD) risk* $\geq 20\%$, including those with existing CVD) receiving drug therapy and counseling** (including glycaemic control) to prevent heart attacks and strokes.

Instrument questions: combined from Step 1, 2 and 3

- Gender, age
- Smoking status
- Systolic blood pressure measurements
- History of diabetes
- Total cholesterol measurements
- Body mass index

Percentage of eligible persons receiving drug therapy and counseling to prevent heart attacks and strokes									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
40-54	41	12.4	5.1-27.3	125	17.5	11.7-25.3	166	15.4	10.3-22.4
55-69	66	41.4	28.8-55.3	142	40.3	31.8-49.4	208	40.8	33.0-49.1
40-69	107	25.4	16.9-36.2	267	27.1	22.0-33.0	374	26.4	21.4-32.0

* A 10-year CVD risk of $\geq 20\%$ is defined according to age, sex, smoking status, blood pressure, history of diabetes, total cholesterol, and body mass index.

**Counseling is defined as receiving advice from a doctor or other health worker to quit using tobacco or not start, reduce salt in diet, eat at least five servings of fruit and/or vegetables per day, reduce fat in diet, start or do more physical activity, maintain a healthy body weight or lose weight.

Analysis Information:

- Questions used: C1, C2, C3, T1, T8T10, T11a-c, H6, H7a, H8, H9, H13a, H14, H17, H18, H19, H20a-f, M4a, M5a, M6a, M7, B1, B8
- Epi Info program name: Please contact the STEPS team.

Summary of Combined Risk Factors

Summary of Combined Risk Factors

Description: Percentage of respondents with 0, 1-2, or 3-5 of the following risk factors:

- Current daily smoking
- Less than five servings of fruit and/or vegetables per day
- Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)
- Overweight or obese (BMI ≥ 25 kg/m²)
- Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP).

Instrument questions: combined from Step 1 and Step 2

Summary of Combined Risk Factors							
Men							
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	681	8.1	5.7-10.6	80.8	77.5-84.0	11.1	8.3-13.9
45-69	766	5.4	3.3-7.4	68.9	65.0-72.8	25.7	22.2-29.2
18-69	1447	7.4	5.5-9.4	77.8	75.1-80.5	14.8	12.5-17.1
Women							
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	1141	13.9	11.1-16.7	81.8	78.7-84.9	4.3	3.1-5.5
45-69	1392	7.2	5.2-9.1	72.7	69.8-75.6	20.1	17.7-22.6
18-69	2533	12.0	9.9-14.2	79.2	76.8-81.6	8.7	7.6-9.9
Both Sexes							
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	1822	10.8	8.9-12.8	81.2	78.9-83.6	7.9	6.3-9.5
45-69	2158	6.3	4.9-7.7	70.8	68.4-73.3	22.9	20.7-25.1
18-69	3980	9.6	8.1-11.1	78.5	76.5-80.4	11.9	10.5-13.3

Analysis Information:

- Questions used: T1, T2, D1-D4, P1-P15b, M4a-M6b, M7, M8, M11, M12
- Epi Info program name: Raisedrisk (unweighted); RaisedriskWT (weighted)

Oral Health

Percentage of respondents having natural teeth

Description: Percentage of respondents who have no natural teeth, 1-9 natural teeth, 10-19 natural teeth, or 20 or more natural teeth.

Instrument question:

- How many natural teeth do you have?

Percentage of respondents with natural teeth									
Men									
Age Group (years)	n	% ≥ 20 natural teeth	95% CI	% 10 - 19 natural teeth	95% CI	% 1 - 9 natural teeth	95% CI	% No natural teeth	95% CI
18-29	212	97.0	94.4-99.6	3.0	0.4-5.6	0.0	0.0-0.0	0.0	0.0-0.0
30-44	479	95.6	92.8-98.3	4.0	1.4-6.7	0.4	0.0-0.9	0.0	0.0-0.0
45-59	490	83.4	79.8-87.1	10.4	7.4-13.5	5.7	3.4-8.1	0.4	0.0-1.1
60-69	309	60.4	53.5-67.2	26.0	20.5-31.4	10.7	6.7-14.6	3.0	0.3-5.8
18-69	1490	91.4	89.9-92.9	6.3	4.9-7.6	2.0	1.4-2.6	0.3	0.0-0.5
Women									
Age Group (years)	n	% ≥ 20 natural teeth	95% CI	% 10 - 19 natural teeth	95% CI	% 1 - 9 natural teeth	95% CI	% No natural teeth	95% CI
18-29	343	94.6	91.0-98.2	5.2	1.6-8.8	0.2	0.0-0.5	0.0	0.0-0.0
30-44	871	87.6	84.8-90.4	10.0	7.4-12.7	2.3	1.3-3.3	0.0	0.0-0.1
45-59	856	67.7	63.1-72.4	21.1	17.3-24.9	9.8	6.9-12.6	1.4	0.3-2.5
60-69	600	44.6	39.6-49.5	24.9	19.7-30.1	25.0	20.5-29.5	5.5	3.0-8.1
18-69	2670	82.8	80.8-84.8	11.6	9.9-13.2	4.9	4.0-5.7	0.8	0.5-1.0
Both Sexes									
Age Group (years)	n	% ≥ 20 natural teeth	95% CI	% 10 - 19 natural teeth	95% CI	% 1 - 9 natural teeth	95% CI	% No natural teeth	95% CI
18-29	555	95.8	93.6-98.0	4.1	1.9-6.3	0.1	0.0-0.3	0.0	0.0-0.0
30-44	1350	91.9	89.9-94.0	6.8	4.8-8.7	1.3	0.7-1.8	0.0	0.0-0.0
45-59	1346	75.8	72.6-78.9	15.6	12.9-18.4	7.7	5.9-9.5	0.9	0.2-1.6
60-69	909	51.7	47.4-55.9	25.4	21.7-29.1	18.6	15.7-21.5	4.4	2.5-6.3
18-69	4160	87.3	85.6-89.0	8.8	7.4-10.3	3.4	2.8-3.9	0.5	0.3-0.7

Analysis Information:

- Questions used: O1
- Epi Info program name: Onatural (unweighted); OnaturalWT (weighted)

Percentage of respondents having poor or very poor state of teeth

Description: Percentage of respondents having a poor or very poor state of teeth among those having natural teeth.

Instrument question:

- How would you describe the state of your teeth?

Percentage of respondents having poor or very poor state of teeth among those having natural teeth											
Age Group (years)	Men				Women				Both Sexes		
	n	% having poor or very poor state of teeth	95% CI		n	% having poor or very poor state of teeth	95% CI		n	% having poor or very poor state of teeth	95% CI
18-29	11	39.0	2.1-75.9		22	46.6	18.1-75.1		33	43.7	21.6-65.9
30-44	28	56.0	38.8-73.3		135	44.5	32.6-56.4		163	48.3	37.9-58.8
45-59	99	48.5	36.8-60.2		305	57.9	50.2-65.5		404	54.6	47.8-61.3
60-69	136	59.5	49.6-69.4		339	66.4	60.2-72.5		475	63.8	58.3-69.4
18-69	274	51.4	42.6-60.1		801	55.0	49.3-60.8		1075	53.7	48.6-58.9

Analysis Information:

- Questions used: O2
- Epi Info program name: Ohealthteeth (unweighted); OhealthteethWT (weighted)

Percentage of respondents having poor or very poor state of gums

Description: Percentage of respondents having a poor or very poor state of gums among those having natural teeth.

Instrument question:

- How would you describe the state of your teeth?

Percentage of respondents having poor or very poor state of gums among those having natural teeth											
Age Group (years)	Men				Women				Both Sexes		
	n	% having poor or very poor state of gums	95% CI		n	% having poor or very poor state of gums	95% CI		n	% having poor or very poor state of gums	95% CI
18-29	215	12.4	6.9-17.9		348	14.6	8.4-20.8		563	13.5	9.3-17.7
30-44	485	15.0	9.4-20.5		886	13.1	10.5-15.6		1371	14.1	10.6-17.6
45-59	495	17.8	13.6-22.0		873	21.6	17.8-25.3		1368	19.6	16.6-22.7
60-69	312	24.4	18.5-30.3		614	27.8	23.4-32.2		926	26.3	22.5-30.1
18-69	1507	15.1	12.2-18.1		2721	16.6	13.5-19.7		4228	15.8	13.5-18.2

Analysis Information:

- Questions used: O3
- Epi Info program name: Ohealthgums (unweighted); OhealthgumsWT (weighted)

Percentage of
respondents
having
removable
dentures

Description: Percentage of respondents having removable dentures.

Instrument question:

- Do you have any removable dentures?

Percentage of respondents having removable dentures											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having removable dentures	95% CI		n	% Having removable dentures	95% CI		n	% Having removable dentures	95% CI
18-29	216	3.7	0.8-6.7		348	0.4	0.0-0.9		564	2.1	0.6-3.6
30-44	487	3.0	1.0-5.1		888	4.1	2.6-5.6		1375	3.5	2.2-4.9
45-59	498	6.7	4.0-9.5		875	12.0	8.6-15.4		1373	9.3	7.0-11.6
60-69	312	6.5	3.4-9.6		616	13.6	9.8-17.5		928	10.5	7.7-13.2
18-69	1513	4.3	2.6-6.0		2727	5.0	3.9-6.1		4240	4.6	3.5-5.7

Analysis Information:

- Questions used: O4, O5a, O5b
- Epi Info program name: Odentures (unweighted); OdenturesWT (weighted)

Type of
removable
dentures among
those having
removable
dentures

Description: Percentage of respondents who have an upper jaw denture, a lower jaw denture, or an upper and a lower jaw denture among those having removable dentures.

Instrument questions:

- Do you have any removable dentures?
- Which of the following removable dentures do you have?

Percentage of respondents having an upper jaw denture among those having removable dentures											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having an upper jaw denture	95% CI		n	% Having an upper jaw denture	95% CI		n	% Having an upper jaw denture	95% CI
18-29	7	59.8	20.5-99.1		3	67.7	13.9-100.0		10	60.6	25.5-95.6
30-44	13	64.5	31.9-97.0		41	68.5	50.0-87.1		54	66.6	48.8-84.4
45-59	31	53.9	30.3-77.5		100	66.5	55.6-77.3		131	61.8	50.9-72.8
60-69	24	79.8	55.5-100.0		81	88.9	80.8-97.0		105	86.4	77.5-95.3
18-69	75	61.0	42.8-79.2		225	72.2	64.0-80.4		300	66.9	57.4-76.4

Percentage of respondents having a lower jaw denture among those having removable dentures											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having a lower jaw denture	95% CI		n	% Having a lower jaw denture	95% CI		n	% Having a lower jaw denture	95% CI
18-29	7	17.9	0.0-50.5		3	32.3	0.0-86.1		10	19.3	0.0-48.5
30-44	13	40.5	9.7-71.4		41	28.6	11.8-45.4		54	34.2	17.9-50.5
45-59	31	50.2	26.9-73.5		100	64.3	50.9-77.7		131	59.1	48.0-70.2
60-69	24	75.7	55.6-95.7		81	66.6	52.6-80.6		105	69.1	58.4-79.9
18-69	75	39.0	21.2-56.9		225	54.8	46.2-63.3		300	47.3	37.2-57.4
Percentage of respondents having an upper and a lower jaw denture among those having removable dentures											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having an upper and a lower jaw denture	95% CI		n	% Having an upper and a lower jaw denture	95% CI		n	% Having an upper and a lower jaw denture	95% CI
18-29	7	0.0	0.0-0.0		3	0.0	0.0-0.0		10	0.0	0.0-0.0
30-44	13	17.3	0.0-35.0		41	13.1	3.1-23.0		54	15.0	5.8-24.2
45-59	31	21.2	4.5-37.9		100	40.5	30.1-50.9		131	33.4	24.2-42.5
60-69	24	57.0	31.2-82.9		81	58.8	44.6-73.0		105	58.3	47.0-69.7
18-69	75	16.3	7.3-25.4		225	36.4	29.5-43.4		300	26.9	20.4-33.4

Analysis Information:

- Questions used: O4, O5a-b
- Epi Info program name: Odentures (unweighted); OdenturesWT (weighted)

Percentage of respondents having oral pain or discomfort

Description: Percentage of respondents who have pain or discomfort caused by their teeth or mouth during the past 12 months.

Instrument question:

- During the past 12 months, did your teeth or mouth cause any pain or discomfort?

Percentage having oral pain or discomfort											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having oral pain or discomfort	95% CI		n	% Having oral pain or discomfort	95% CI		n	% Having oral pain or discomfort	95% CI
18-29	216	43.4	35.1-51.8		348	51.9	44.9-58.8		564	47.6	42.3-52.9
30-44	487	44.4	38.0-50.9		888	49.1	45.0-53.1		1375	46.6	42.4-50.8
45-59	498	41.4	36.0-46.7		875	51.4	46.7-56.0		1373	46.3	42.7-49.9
60-69	312	52.4	45.6-59.1		616	52.3	47.4-57.2		928	52.3	47.9-56.8
18-69	1513	43.9	39.7-48.2		2727	51.0	47.5-54.4		4240	47.4	44.5-50.2

Analysis Information:

- Questions used: O6
- Epi Info program name: Opain (unweighted); OpainWT (weighted)

Percentage of respondents having seen a dentist during the past 12 months

Description: Percentage of respondents having seen a dentist during the past 12 months.

Instrument question:

- How long has it been since you last saw a dentist?

Percentage of respondents having seen a dentist during the past 12 months									
Age Group (years)	Men				Women			Both Sexes	
	n	% having seen a dentist during the past 12 months	95% CI		n	% having seen a dentist during the past 12 months	95% CI	n	% having seen a dentist during the past 12 months
18-29	216	15.1	8.8-21.5		348	15.6	10.8-20.4	564	15.3
30-44	487	12.4	8.6-16.1		888	18.7	15.5-21.8	1375	15.3
45-59	498	11.9	8.8-15.1		875	17.8	14.6-21.0	1373	14.8
60-69	312	13.3	8.1-18.4		616	17.1	13.9-20.4	928	15.4
18-69	1513	13.4	10.5-16.4		2727	17.1	15.0-19.2	4240	15.2

Analysis Information:

- Questions used: O7
- Epi Info program name: Odentalvisit (unweighted); OdentalvisitWT (weighted)

Percentage of respondents who have never received dental care

Description: Percentage of respondents who have never received dental care.

Instrument question:

- How long has it been since you last saw a dentist?

Percentage of respondents who have never received dental care									
Age Group (years)	Men				Women			Both Sexes	
	n	% never received dental care	95% CI		n	% never received dental care	95% CI	n	% never received dental care
18-29	216	62.6	54.4-70.9		348	50.8	43.6-58.0	564	56.8
30-44	487	57.7	51.7-63.7		888	44.7	40.1-49.4	1375	51.7
45-59	498	63.9	58.2-69.5		875	48.9	44.3-53.5	1373	56.5
60-69	312	58.0	52.0-64.1		616	50.0	44.1-56.0	928	53.6
18-69	1513	60.9	56.6-65.3		2727	48.5	44.8-52.1	4240	54.9

Analysis Information:

- Questions used: O7
- Epi Info program name: Odentalvisit (unweighted); OdentalvisitWT (weighted)

Main reason for last visit to the dentist among those who ever visited a dentist

Description: Main reason for last visit to the dentist among those who ever visited a dentist.

Instrument question:

- What was the reason for your last visit to the dentist?

Main reason for last visit to the dentist among those who ever visited a dentist											
Men											
Age Group (years)	n	% Consultation/ advice	95% CI	% Pain or trouble with teeth or gums	95% CI	% Follow-up treatment	95% CI	% Routine check-up treatment	95% CI	% Other	95% CI
18-29	5	0.0	0.0-0.0	58.1	43.8-72.5	27.9	15.4-40.4	7.4	0.0-15.4	5	0.0
30-44	2	0.5	0.0-1.3	68.9	61.2-76.6	28.3	20.5-36.2	1.7	0.1-3.3	2	0.5
45-59	6	1.3	0.0-3.0	70.5	62.5-78.6	22.7	16.0-29.4	1.3	0.0-3.1	6	1.3
60-69	3	2.0	0.0-4.9	78.8	70.5-87.0	17.9	10.1-25.8	0.0	0.0-0.0	3	2.0
18-69	16	0.6	0.1-1.0	65.8	59.6-72.0	26.4	20.5-32.4	3.7	0.6-6.8	16	0.6
Women											
Age Group (years)	n	% Consultation/ advice	95% CI	% Pain or trouble with teeth or gums	95% CI	% Follow-up treatment	95% CI	% Routine check-up treatment	95% CI	% Other	95% CI
18-29	8	5.1	0.2-10.0	56.7	47.2-66.1	32.0	22.7-41.2	3.4	0.0-6.8	8	5.1
30-44	23	2.2	0.6-3.9	62.0	56.2-67.8	26.5	21.3-31.7	4.1	1.6-6.7	23	2.2
45-59	9	1.7	0.4-3.0	67.7	62.0-73.3	25.4	20.4-30.4	2.9	0.9-4.8	9	1.7
60-69	8	1.4	0.0-3.0	69.5	63.0-76.0	26.3	20.1-32.5	0.9	0.0-2.1	8	1.4
18-69	48	3.2	1.2-5.2	61.6	57.2-66.1	28.4	24.0-32.8	3.3	1.7-4.9	48	3.2
Both sexes											
Age Group (years)	n	% Consultation/ advice	95% CI	% Pain or trouble with teeth or gums	95% CI	% Follow-up treatment	95% CI	% Routine check-up treatment	95% CI	% Other	95% CI

18-29	13	2.9	0.1-5.7	57.3	48.8-65.8	30.2	22.3-38.1	5.2	1.2-9.2	13	2.9
30-44	25	1.4	0.5-2.4	65.3	60.4-70.2	27.4	22.6-32.1	3.0	1.5-4.5	25	1.4
45-59	15	1.5	0.5-2.6	68.9	63.9-73.9	24.2	20.0-28.4	2.2	0.8-3.5	15	1.5
60-69	11	1.7	0.2-3.2	73.3	67.7-78.8	22.9	17.6-28.3	0.6	0.0-1.3	11	1.7
18-69	64	2.0	0.9-3.2	63.5	59.7-67.3	27.5	23.7-31.3	3.5	1.8-5.1	64	2.0

Analysis Information:

- Questions used: O7, O8
- Epi Info program name: Oreasonvisit (unweighted); OreasonvisitWT (weighted)

Percentage
cleaning teeth
at least once /
at least twice a
day

Description: Percentage of respondents cleaning their teeth at least once / at least twice a day.

Instrument question:

- How often do you clean your teeth?

Percentage of respondents cleaning their teeth at least once a day											
Age Group (years)	Men				Women				Both Sexes		
	n	% cleaning teeth at least daily	95% CI		n	% cleaning teeth at least daily	95% CI		n	% cleaning teeth at least daily	95% CI
18-29	11	85.0	64.4-100.0		22	100.0	100.0-100.0		33	94.3	86.4-100.0
30-44	28	100.0	100.0-100.0		136	97.0	94.1-99.8		164	98.0	96.1-99.9
45-59	100	84.6	76.9-92.2		306	93.2	88.3-98.2		406	90.2	86.1-94.3
60-69	137	85.3	77.5-93.0		347	84.6	78.6-90.5		484	84.8	79.9-89.7
18-69	276	88.2	83.0-93.4		811	93.0	90.5-95.5		1087	91.3	88.9-93.7

Percentage of respondents cleaning their teeth at least twice a day											
Age Group (years)	Men				Women				Both Sexes		
	n	% cleaning teeth at least twice a day	95% CI		n	% cleaning teeth at least twice a day	95% CI		n	% cleaning teeth at least twice a day	95% CI
18-29	11	47.7	12.8-82.7		22	89.2	73.4-100.0		33	73.5	54.6-92.4
30-44	28	59.4	41.8-77.0		136	75.3	65.2-85.4		164	70.0	60.8-79.2
45-59	100	48.7	37.3-60.2		306	68.9	62.3-75.5		406	61.8	55.5-68.1
60-69	137	46.6	36.4-56.9		347	56.2	49.2-63.1		484	52.7	46.6-58.7
18-69	276	50.3	42.2-58.5		811	70.3	65.1-75.6		1087	63.2	58.4-68.1

Analysis Information:

- Questions used: O9
- Epi Info program name: Ofreqclean (unweighted); OfreqcleanWT (weighted)

Analysis Information:

- Questions used: O10
- Epi Info program name: Otoothpaste (unweighted); OtoothpasteWT (weighted)

Percentage of
respondents
using toothpaste
containing
fluoride

Description: Percentage of respondents using toothpaste containing fluoride among those using toothpaste.

Instrument question:

- Do you use toothpaste containing fluoride?

Percentage of respondents using toothpaste containing fluoride among those using toothpaste									
Age Group (years)	Men				Women			Both Sexes	
	n	% using toothpaste containing fluoride	95% CI		n	% using toothpaste containing fluoride	95% CI	n	% using toothpaste containing fluoride
18-29	160	82.9	76.0-89.7		253	81.5	75.2-87.9	413	82.2
30-44	355	77.0	70.7-83.2		592	76.9	72.5-81.3	947	76.9
45-59	352	69.7	63.1-76.2		504	69.9	64.4-75.5	856	69.8
60-69	194	65.2	56.7-73.7		313	48.8	41.5-56.1	507	57.3
18-69	1061	77.2	73.3-81.2		1662	76.0	72.4-79.5	2723	76.6

Analysis Information:

- Questions used: O10, O11
- Epi Info program name: OfLOURIDE (unweighted); OfLOURIDEWT (weighted)

Percentage
using a various
tools to clean
teeth among
those cleaning
their teeth

Description: Percentage of respondents who use a tooth brush, wooden toothpicks, plastic toothpicks, thread (dental floss), charcoal, chewstick/miswak or something else to clean their teeth among those cleaning their teeth.

Instrument question:

- Which of the following do you use to clean your teeth?

Percentage of respondents using various tools to clean teeth												
Age Group (years)	Men											
	n	% Tooth- brush	95% CI	n	% Wooden tooth-picks	95% CI	n	% Plastic tooth- picks	95% CI	n	% Thread (dental floss)	95% CI
18-29	210	97.7	95.5-99.9	210	48.2	40.6-55.7	210	4.3	0.9-7.8	210	2.7	0.5-4.9
30-44	469	96.2	93.7-98.6	469	66.2	60.8-71.6	469	4.7	2.1-7.2	469	4.9	2.3-7.4
45-59	447	87.5	82.6-92.5	447	74.4	69.0-79.9	447	6.3	3.2-9.4	447	6.3	3.4-9.1
60-69	243	85.9	80.5-91.3	243	65.3	57.5-73.1	243	2.0	0.4-3.6	243	1.6	0.0-3.2
18-69	1369	94.6	92.9-96.2	1369	60.3	56.2-64.5	1369	4.7	2.9-6.5	1369	4.1	2.6-5.6

Percentage of respondents using various tools to clean teeth									
Age Group (years)	Men								
	n	% Charcoal	95% CI	n	% Chewstick/ miswak	95% CI	n	%Other	95% CI
18-29	210	1.1	0.0-2.5	210	2.2	0.3-4.1	210	8.8	3.8-13.8
30-44	469	1.5	0.4-2.7	469	2.4	0.9-4.0	469	19.3	14.7-23.9
45-59	447	1.5	0.3-2.8	447	5.6	1.8-9.3	447	18.7	13.9-23.6
60-69	243	3.2	1.2-5.2	243	3.4	0.2-6.7	243	18.8	12.7-24.9
18-69	1369	1.4	0.7-2.2	1369	3.0	1.7-4.3	1369	14.8	11.7-18.0

Percentage of respondents using various tools to clean teeth												
Age Group (years)	Women											
	n	% Tooth-brush	95% CI	n	% Wooden tooth-picks	95% CI	n	% Plastic tooth-picks	95% CI	n	% Thread (dental floss)	95% CI
18-29	328	99.3	98.4-100.0	328	34.7	28.8-40.7	328	5.6	2.1-9.1	328	5.0	2.5-7.4
30-44	781	97.1	95.7-98.4	781	51.0	46.8-55.3	781	4.2	2.5-5.8	781	5.4	3.6-7.3
45-59	651	91.1	88.4-93.9	651	61.5	56.3-66.8	651	3.0	1.5-4.5	651	3.5	2.1-4.9
60-69	416	79.6	74.6-84.7	416	54.1	48.6-59.5	416	3.1	0.7-5.5	416	3.4	1.1-5.7
18-69	2176	95.9	94.8-96.9	2176	45.8	42.1-49.6	2176	4.5	2.9-6.2	2176	4.7	3.4-6.1

Percentage of respondents using various tools to clean teeth									
Age Group (years)	Women								
	n	% Charcoal	95% CI	n	% Chewstick/ miswak	95% CI	n	%Other	95% CI
18-29	328	1.6	0.0-4.0	328	1.9	0.0-3.8	328	8.5	4.8-12.2
30-44	781	1.3	0.4-2.3	781	2.1	0.9-3.4	781	15.9	12.3-19.4
45-59	651	3.7	1.8-5.6	651	5.4	3.0-7.7	651	21.1	16.6-25.6
60-69	416	3.2	1.3-5.2	416	7.0	3.5-10.4	416	22.9	17.9-27.8
18-69	2176	2.0	0.8-3.1	2176	2.9	1.7-4.2	2176	14.0	11.3-16.7

Percentage of respondents using various tools to clean teeth												
Age Group (years)	Both Sexes											
	n	% Tooth-brush	95% CI	n	% Wooden tooth-picks	95% CI	n	% Plastic tooth-picks	95% CI	n	% Thread (dental floss)	95% CI
18-29	538	98.5	97.3-99.7	538	41.6	36.8-46.5	538	5.0	2.5-7.4	538	3.8	2.0-5.6
30-44	1250	96.6	95.0-98.1	1250	59.5	55.6-63.5	1250	4.4	2.7-6.2	1250	5.1	3.4-6.8
45-59	1098	89.1	86.0-92.3	1098	68.7	64.7-72.7	1098	4.8	3.0-6.7	1098	5.0	3.2-6.8
60-69	659	82.7	79.0-86.4	659	59.6	54.9-64.2	659	2.6	1.1-4.0	659	2.5	1.1-3.9
18-69	3545	95.2	94.1-96.3	3545	53.6	50.7-56.5	3545	4.6	3.4-5.9	3545	4.4	3.3-5.5

Percentage of respondents using various tools to clean teeth										
Age Group (years)	Both Sexes									
	n	% Charcoal	95% CI	n	% Chewstick/ miswak	95% CI	n	% Other	95% CI	
18-29	538	1.3	0.0-2.7	538	2.0	0.5-3.6	538	8.7	5.6-11.7	
30-44	1250	1.4	0.7-2.2	1250	2.3	1.2-3.4	1250	17.8	14.4-21.2	
45-59	1098	2.5	1.4-3.7	1098	5.5	3.0-8.0	1098	19.8	16.3-23.3	
60-69	659	3.2	1.8-4.6	659	5.2	2.7-7.7	659	20.9	17.0-24.7	
18-69	3545	1.7	1.0-2.3	3545	3.0	1.9-4.0	3545	14.5	12.1-16.8	

Analysis Information:

- Questions used: O12a-g
- Epi Info program name: Ocleaningtool (unweighted); OcleaningtoolWT (weighted)

Percentage of respondents having difficulty in chewing foods

Description: Percentage of respondents having difficulty in chewing foods during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Difficulty in chewing foods?

Percentage of respondents having difficulty in chewing foods during the past 12 months									
Age Group (years)	Men			Women			Both Sexes		
	n	% Difficulty in chewing foods	95% CI	n	% Difficulty in chewing foods	95% CI	n	% Difficulty in chewing foods	95% CI
18-29	216	28.1	21.0-35.3	348	37.6	30.7-44.4	564	32.8	27.5-38.1
30-44	487	29.8	24.7-35.0	888	43.3	38.9-47.8	1375	36.0	32.4-39.7
45-59	498	43.5	38.5-48.5	875	54.9	50.6-59.2	1373	49.1	45.2-52.9
60-69	312	63.0	56.4-69.5	616	68.8	64.7-72.9	928	66.2	62.7-69.7
18-69	1513	34.0	30.5-37.5	2727	45.4	42.1-48.7	4240	39.6	37.0-42.1

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents having difficulty with speech/trouble pronouncing words

Description: Percentage of respondents having difficulty with speech/trouble pronouncing words during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Difficulty with speech/trouble pronouncing words?

Percentage of respondents having difficulty with speech/trouble pronouncing words during the past 12 months									
Age Group (years)	Men				Women			Both Sexes	
	n	% Difficulty with speech/ pronouncing words	95% CI		n	% Difficulty with speech/ pronouncing words	95% CI	n	95% CI
18-29	216	13.0	7.9-18.0		348	12.4	7.6-17.2	564	12.7 9.2-16.2
30-44	487	11.7	7.9-15.5		888	15.9	12.6-19.2	1375	13.6 10.7-16.5
45-59	498	20.6	15.8-25.3		875	24.6	20.4-28.9	1373	22.6 19.1-26.0
60-69	312	24.3	18.1-30.4		616	26.4	21.9-30.8	928	25.4 21.8-29.0
18-69	1513	14.8	11.9-17.6		2727	17.1	14.7-19.5	4240	15.9 13.9-17.9

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents feeling tense because of problems with teeth or mouth

Description: Percentage of respondents feeling tense because of problems with teeth or mouth during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Felt tense because of problems with teeth or mouth?

Percentage of respondents feeling tense because of problems with teeth or mouth during the past 12 months									
Age Group (years)	Men				Women			Both Sexes	
	n	% Feeling tense because of problems with teeth or mouth	95% CI		n	% Feeling tense because of problems with teeth or mouth	95% CI	n	95% CI
18-29	216	26.2	19.4-32.9		348	35.4	28.4-42.4	564	30.7 25.6-35.8
30-44	487	24.2	18.3-30.1		888	31.2	27.0-35.4	1375	27.4 23.5-31.3
45-59	498	29.3	24.6-34.0		875	36.5	32.0-41.1	1373	32.8 29.4-36.3
60-69	312	27.8	21.7-34.0		616	36.9	31.8-42.0	928	32.9 28.8-37.0
18-69	1513	26.2	22.6-29.9		2727	34.5	31.1-37.9	4240	30.2 27.6-32.9

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents being embarrassed about appearance of teeth

Description: Percentage of respondents being embarrassed about appearance of teeth during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Embarrassed about appearance of teeth?

Percentage of respondents being embarrassed because of appearance of teeth during the past 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	% Embarrassed because of appearance of teeth	95% CI		n	% Embarrassed because of appearance of teeth	95% CI		n	% Embarrassed because of appearance of teeth	95% CI
18-29	216	16.2	10.4-21.9		348	26.1	19.2-33.0		564	21.1	16.6-25.5
30-44	487	16.4	12.3-20.5		888	23.9	19.8-28.0		1375	19.8	16.6-23.1
45-59	498	27.3	22.2-32.3		875	29.0	24.9-33.1		1373	28.1	24.4-31.8
60-69	312	20.9	15.3-26.4		616	33.2	27.7-38.7		928	27.7	23.4-32.0
18-69	1513	18.7	15.6-21.9		2727	26.6	23.3-29.9		4240	22.6	20.1-25.1

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents avoiding smiling because of teeth

Description: Percentage of respondents avoiding smiling because of teeth during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Avoid smiling because of teeth?

Percentage of respondents avoiding smiling because of teeth during the past 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	% Avoiding smiling because of teeth	95% CI		n	% Avoiding smiling because of teeth	95% CI		n	% Avoiding smiling because of teeth	95% CI
18-29	216	19.8	13.5-26.0		348	16.5	11.1-21.9		564	18.2	14.3-22.0
30-44	487	13.7	9.9-17.6		888	22.6	18.6-26.6		1375	17.8	14.7-20.9
45-59	498	21.5	16.9-26.1		875	27.1	23.0-31.3		1373	24.3	20.8-27.8
60-69	312	17.4	12.3-22.6		616	30.7	25.7-35.8		928	24.8	21.1-28.5
18-69	1513	17.9	14.7-21.1		2727	21.7	18.8-24.6		4240	19.8	17.4-22.1

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Part 6: Templates and Forms

6-3C-239

Section 3C: Data Book Template
Surveillance

WHO STEPS

Percentage of respondents with interruptions in sleep

Description: Percentage of respondents whose sleep was often interrupted during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Sleep is often interrupted?

Percentage of respondents with interruptions in sleep during the past 12 months									
Age Group (years)	Men				Women			Both Sexes	
	n	% Sleep often interrupted	95% CI		n	% Sleep often interrupted	95% CI	n	% Sleep often interrupted
18-29	216	21.4	15.2-27.6		348	27.0	20.6-33.5	564	24.2
30-44	487	18.4	13.9-22.8		888	26.5	22.6-30.5	1375	22.1
45-59	498	23.1	18.4-27.9		875	31.0	26.7-35.3	1373	27.0
60-69	312	28.2	21.5-34.8		616	28.0	23.7-32.4	928	28.1
18-69	1513	21.2	17.9-24.4		2727	27.8	24.6-30.9	4240	24.4
									19.7-28.7
									18.8-25.5
									23.3-30.6
									24.2-32.0
									21.9-26.8

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents with days not at work because of teeth or mouth

Description: Percentage of respondents with days not at work because of teeth or mouth during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Days not at work because of teeth or mouth?

Percentage of respondents with days not at work because of teeth or mouth during the past 12 months									
Age Group (years)	Men				Women			Both Sexes	
	n	% With days not at work	95% CI		n	% With days not at work	95% CI	n	% With days not at work
18-29	216	9.1	4.3-13.9		348	10.8	6.3-15.4	564	9.9
30-44	487	9.6	6.5-12.7		888	13.2	10.2-16.3	1375	11.3
45-59	498	13.8	9.8-17.8		875	20.0	16.0-24.0	1373	16.8
60-69	312	13.1	8.7-17.5		616	15.6	11.4-19.8	928	14.5
18-69	1513	10.4	8.0-12.8		2727	13.8	11.2-16.4	4240	12.1
									6.6-13.3
									8.8-13.7
									13.8-19.9
									11.5-17.5
									10.1-14.0

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents having difficulty doing usual activities

Description: Percentage of respondents having difficulty doing usual activities during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Difficulty doing usual activities?

Percentage of respondents having difficulty doing usual activities during the past 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having difficulty doing usual activities	95% CI		n	% Having difficulty doing usual activities	95% CI		n	% Having difficulty doing usual activities	95% CI
18-29	216	9.4	5.0-13.8		348	11.9	6.9-16.9		564	10.6	7.4-13.9
30-44	487	9.1	6.3-11.8		888	14.0	10.9-17.0		1375	11.3	9.0-13.6
45-59	498	13.7	9.9-17.5		875	20.4	16.4-24.3		1373	17.0	14.1-19.9
60-69	312	16.3	11.2-21.4		616	16.2	12.3-20.2		928	16.2	13.2-19.3
18-69	1513	10.6	8.2-12.9		2727	14.6	11.8-17.3		4240	12.5	10.6-14.4

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of respondents being less tolerant of spouse or people close to them

Description: Percentage of respondents having been less tolerant of spouse or people close to them during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Less tolerant of spouse or people close to you?

Percentage of respondents having been less tolerant of spouse or people close to them during the past 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having been less tolerant	95% CI		n	% Having been less tolerant	95% CI		n	% Having been less tolerant	95% CI
18-29	216	10.0	5.2-14.8		348	14.2	8.9-19.5		564	12.1	8.4-15.7
30-44	487	10.7	7.1-14.3		888	15.7	12.3-19.2		1375	13.0	10.3-15.7
45-59	498	15.2	11.2-19.2		875	18.3	14.5-22.2		1373	16.7	13.7-19.8
60-69	312	10.8	6.5-15.2		616	13.8	10.3-17.4		928	12.5	9.7-15.2
18-69	1513	11.3	8.6-14.0		2727	15.5	12.6-18.3		4240	13.3	11.1-15.6

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Percentage of
respondents
having reduced
participation in
social activities

Description: Percentage of respondents having reduced participation in social activities during the past 12 months.

Instrument questions:

- Have you experienced any of the following problems during the past year because of the state of your teeth?
- Reduced participation in social activities?

Percentage of respondents having reduced participation in social activities during the past 12 months											
Age Group (years)	Men				Women				Both Sexes		
	n	% Having reduced participation in social activities	95% CI		n	% Having reduced participation in social activities	95% CI		n	% Having reduced participation in social activities	95% CI
18-29	216	5.7	2.1-9.2		348	9.8	4.9-14.7		564	7.7	4.6-10.8
30-44	487	6.4	3.6-9.2		888	9.4	6.9-11.9		1375	7.8	5.7-9.9
45-59	498	6.8	4.1-9.4		875	12.5	9.6-15.4		1373	9.6	7.4-11.8
60-69	312	7.3	4.1-10.5		616	11.5	8.1-14.9		928	9.6	7.3-11.9
18-69	1513	6.2	4.3-8.1		2727	10.4	7.9-12.8		4240	8.2	6.6-9.9

Analysis Information:

- Questions used: O13a-j
- Epi Info program name: Oproblem (unweighted); OproblemWT (weighted)

Appendix 3 – Equipment for Step 2 and Step 3 data collection



SECA scale for measuring weight



Myo-tape for measuring hip and waist circumference



Ultrasonic height measuring device



Boso Medicus sphygmomanometer used for measuring blood pressure and heart rate



CardioChek Plus (PA) analyzer with test strips for measuring fasting total cholesterol, HDL and blood glucose



Urine container for collection of samples for Urine Cotinine rapid testing and for testing for urine sodium and creatinine at NIPH Laboratory