ADVANCED EDITED VERSION

ANNEX 11

MAJOR OBSTACLES TO ACHIEVING THE DIABETES-RELATED TARGETS IN THE WHO GLOBAL ACTION PLAN ON THE PREVENTION AND CONTROL OF NCDS (2013-2030)

The context

1. An estimated 1.6 million people died worldwide of diabetes in 2016. Diabetes mortality has shown a 5% increase between the ages of 30 and 70 years globally between 2000 and 2016. In high-income countries the premature mortality rate due to diabetes decreased from 2000 to 2010 but then increased in 2010–2016. In lower-middle-income countries, the premature mortality rate due to diabetes increased across both periods.

2. The global prevalence of diabetes among adults over 18 years of age rose from 4.7% in 1980 to 8.5% in 2014. Today, more than 420 million people are living with diagnosed diabetes worldwide. This number is estimated to rise to 570 million by 2030 and to 700 million by 2045. Diabetes was the ninth leading cause of death in 2019, following a significant percentage increase of 70% since 2000. Diabetes is also responsible for the largest rise in male deaths among the top 10 causes of death, with an 80% increase since 2000.

3. The rising mortality rates from diabetes are associated with – among other factors – the increasing prevalence of type 2 diabetes, due to increasing consumption of unhealthy diets, prevalence of obesity and declining levels of physical activity which are major risk factors for diabetes. Since 2000, the age-standardized prevalence of obesity among adults (18 years and older) globally has increased 1.5 times and the crude prevalence in children (5–19 years) has more than doubled (from 2.9% to 6.8%) in 2016. Tobacco smokers are 30–40% more likely to develop type 2 diabetes than non-smokers.

4. Since the outbreak of COVID-19, people living with noncommunicable diseases including diabetes are more vulnerable to becoming severely ill or dying from COVID-19. More than 50% of countries included in a rapid assessment survey conducted in 2020 on impact of the COVID-19 pandemic on noncommunicable disease resources and services[1] reported disruption of services to treat diabetes and its complications in the phase of cluster and community transmission.

5. One in two adults with diabetes is unaware of their condition. Four out of five adults with undiagnosed diabetes live in developing countries. People who are unaware that they are living with diabetes are at great risk of debilitating complications that can be prevented through diagnosis and proper disease management. Diabetes is also a challenge in emergencies and disasters and in migrant populations owing to a lack of adequate health services and continuity of care and changing life style among migrants in non-emergency situations.

6. Adults with diabetes have a two- to three-fold increased risk of heart attacks and strokes. Reduced blood flow and neuropathy (nerve damage) in the feet increases the chance of foot ulcers, infection and eventual need for limb amputation. Diabetic retinopathy is an important cause of blindness and occurs as a result of long-term accumulated damage to the small blood vessels in the retina. Diabetes is the cause of 2.6% of global blindness. Diabetes is among the leading causes of kidney failure.

[1] https://www.who.int/publications/i/item/ncds-covid-rapid-assessment

7. Basic technologies such as tools for blood glucose testing are not generally available in public sector primary health care in the 50 poorest countries. Limited access in many low- and middle-income countries to primary health care professionals trained in diabetes means that high numbers of undiagnosed, untreated and uncontrolled cases will continue to inflict preventable suffering and direct and indirect financial costs.

8. All people with type 1 diabetes and about 60 million people with type 2 diabetes need insulin. One hundred years after discovery of insulin, only about 50% of people with type 2 diabetes get the insulin they need, often because they personally and their country's health systems cannot afford it. The WHO's global survey to assess national capacity for the prevention and control of noncommunicable diseases[2] reveals that in 2019 less than half of low-income countries have general availability of insulin in the public sector.

9. The WHO UHC Monitoring Report (2019)[3] shows that diabetes health services are conspicuous by their lack of progress as part of universal health coverage in comparison to those for communicable diseases.

10. Pathway analysis shows that every country has options, but no country can make progress on diabetes through a single intervention. Access to insulin is necessary but not sufficient, as holistic approaches are needed to ensure access to early diagnosis and appropriate diabetes care. In addition, comprehensive approaches to tackling the modifiable risk factors of diet and physical activity requires strengthening in most countries.

The major obstacles faced by countries in achieving the diabetes-related targets in the WHO global action plan for the prevention and control of noncommunicable diseases (2013-2020)

11. The global action plan provides a set of nine targets. Two are directly related to diabetes: one on reducing premature mortality from NCDs including diabetes; and the other is to halt the rise in obesity and diabetes. Sustainable Development Goal target 3.4 is on reduction of premature mortality from NCDs including diabetes. Target 3.8, to achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all, is also related to diabetes. Although these selected targets are directly related to diabetes, other targets on physical activity and tobacco use will also be discussed in this context. Target 3.a is on strengthening the implementation of the WHO Framework Convention on Tobacco Control. The major obstacles faced by countries to achieving the diabetes-related targets in the global action plan and the 2030 Agenda for Sustainable Development are set out below.

12. ***Global NCD target 1: a 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases. SDG target 3.4: one third reduction in premature mortality from NCDs including diabetes., SDG target 3.8 on UHC***

(a) This targets reflect all the efforts in the prevention and management of diabetes and provides insight into the impact of multiple interventions. Only less than 20 countries are on course to meet the SDG target 3.4 at the current rate. Progress towards achieving this target will help to reduce mortality from diabetes and its complications such as cardiovascular and renal diseases.

(b) Increasing prevalence of risk factors, such as obesity and physical inactivity, and the insufficient decrease in tobacco use and unhealthy diets high in energy, sugar and fats are contributing to the increasing rates of diabetes. In many low- and middle-income countries,

[2] https://www.who.int/ncds/surveillance/ncd-capacity/en/

[3] https://www.who.int/data/monitoring-universal-health-coverage

people do not know about diabetes, which is often diagnosed only when they experience a complication. Limitations in primary health care in preventing, detecting, diagnosing and managing diabetes and associated comorbidities such as hypertension are a major obstacle in reducing the mortality from diabetes.

(c) The main opportunity is the move towards universal health coverage and achieving SDG target 3.8. Countries should ensure that prevention and management of diabetes is a part of the universal health coverage benefit package and that nobody should be limited in accessing services owing to financial limitations. Special recognition is needed for people with type 1 diabetes as their survival depends on insulin, and the health-care system should ensure that they have access to insulin and other medications.

13. ***Global NCD target 2: halt the rise in diabetes and obesity.***

(a) Obesity is a growing public health concern in the world. It is a risk factor for diabetes and many other conditions, such as cardiovascular diseases and cancer. Obesity in childhood is an important risk factor for the early onset of diabetes. Halting the rising prevalence of diabetes will not happen unless the obesity pandemic is controlled. Low- and middle-income countries should implement regulations and legislation to curb obesity before the prevalence rises to unmanageable levels. Particular attention should focus on childhood obesity prevention, following the recommendations of WHO's Commission on Ending Childhood Obesity.[4]

(b) Rapid and unplanned urbanization along with changing patterns of employment lead to unfavourable changes in living conditions and dietary practices. Many determinants, including commercial pressures, promote risk factors and these are often difficulties for governments to act on given the close interrelationship with other areas. Countries should consider the social determinants of health and adhere to the "health in all policies" approach.

14. ***Global NCD target 3: at least 50% of eligible people receive medicinal treatment (including glycaemic control) and counselling to prevent heart attacks and strokes.***

(a) Diabetes is a multisystemic disease; in addition to disturbances to glucose metabolism, micro- and macro-vascular complications must be managed if the target is to be met.

(b) The main limitation to achieving the target is the inadequacy of health systems, especially at the primary health care level, for comprehensive management of diabetes. Detection of diabetes, protocol-based management, and access to medicines and medical devices supported by efforts to ensure compliance, adherence to dietary counselling, control of blood pressure and lipid concentrations to reduce cardiovascular risk and other complications, checking for complications such as vision impairment, foot ulcers and others, and monitoring and reporting using an agreed set of indicators – all can make the difference.

(c) The WHO HEARTS technical package[5] has a module on diabetes[6] and the updated cardiovascular risk assessment charts will help countries to improve diabetes management. The total cardiovascular risk approach enables integrated management of hypertension, diabetes and other cardiovascular risk factors in primary care, and targets available resources at those most likely to develop heart attacks, strokes and diabetes complications. Integrated management is the main opportunity at the

[4] Report of the Commission on Ending Childhood Obesity. Implementation plan: executive summary. Geneva: World Health Organization; 2017 (https://apps.who.int/iris/bitstream/handle/10665/259349/WHO-NMH-PND-ECHO-17.1-eng.pdf).

[5] HEARTS technical package. Geneva: World Health Organization (https://www.who.int/cardiovascular_diseases/hearts/en/, accessed 10 March 2021).

[6] HEARTS D: diagnosis and management of type 2 diabetes. Geneva: World Health Organization; 2020 (https://www.who.int/publications/i/item/who-ucn-ncd-20.1, accessed 10 March 2021).

national level to overcome obstacles to cardiovascular health as well as resulting in better health outcomes for diabetes.

15. ***Global NCD target 4: an 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases (including diabetes) in both public and private facilities. SDG target 3.8: universal health coverage.***

(a) Uninterrupted access to quality-assured, affordable medicines and technology is a prerequisite for good control of diabetes and prevention of its complications.
(b) The main obstacle to achieving the above-mentioned targets is the lack of service delivery for diabetes especially in primary health care, weak infrastructure and poor cold storage which leads to insufficient quantities of basic technologies and essential medicines, unstable supply chains, and suboptimal financial and other resources.
(c) Sustained action towards universal health coverage, including adapting the WHO HEARTS technical package and the menu of interventions, supported by domestic financing can help to move towards these targets.

16. ***Global NCD target 5: a 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years.. SDG target 3.a on reducing tobacco use.***

(a) Commitment to tobacco control is crucial to reducing the onset of type 2 diabetes caused by tobacco use or exposure to second-hand tobacco smoke.
(b) SDG target 3.a calls for countries to strengthen the implementation of the WHO Framework Convention on Tobacco Control.
(c) Despite significant advances globally, progress in meeting the global target set by governments to reduce the prevalence of tobacco use by 30% by 2025 remains off track. Currently, only 32 countries are on track to reach the 30% reduction target.

The Global Diabetes Compact

17. On 14 November 2020, WHO announced the launch of the Global Diabetes Compact on 14 April 2021to address the major obstacles to achieving the diabetes related targets. The Compact will:

(a) bring all partners together
(b) bring together all WHO's tools available for the prevention and management of diabetes, both existing and new, into one package
(c) on prevention side, give particular focus to reducing obesity, especially among young people
(d) on treatment side, emphasize improving access to diabetes medicines and technologies, in particular in low- and middle-income countries; the keys to success of the Compact will be alignment and united action across all sectors (public, private and philanthropic) and the setting of coverage targets for treatment of diabetes in a similar way as for other disease areas like HIV/AIDS and cervical cancer
(e) actively involve people living with diabetes in its further development of the WHO Global Diabetes Compact
(f) aim to close knowledge gaps and stimulate innovations related to technology and leapfrogging for those most vulnerable, including people in humanitarian settings.

Access to insulin

18. Insulin was discovered as a treatment for diabetes almost 100 years ago and has been on the WHO Model List of Essential Medicines since 1977. Despite an ample supply of insulin, its prices are currently a barrier to treatment in most low- and middle-income countries. Three manufacturers control most of the global market for insulin, setting prices that are prohibitive for many people and countries.

19. People with type 1 diabetes need insulin for survival and to maintain their blood concentrations of glucose at levels that reduce the risk of common complications such as blindness and kidney failure. People with type 2 diabetes need insulin for controlling blood glucose concentrations to avoid complications when oral medicines become less effective as the illness progresses. About 60 million people with type 2 diabetes need insulin, but only half of them access it, often owing to high prices.

20. Data collected by WHO in 2016-2019 from 24 countries on four continents showed that human insulin was available in only 61% of health facilities. The situation for analogue insulin was worse, with availability in a mere 13% of health facilities. The data showed that a month's supply of insulin would cost a worker in Accra, Ghana, the equivalent of 5.5 days of pay per month - 22% of his/her earnings. Even in a few wealthy countries, people often have to ration insulin, which can be deadly for people who do not get the right quantity of the medicine.

21. WHO prequalification of insulin is expected to boost access by increasing the flow of quality-assured products on the international market, providing countries with greater choice and patients with lower prices.

22. The launch of WHO's prequalification programme for insulin is one of several steps WHO has taken to reduce the burden of diabetes.

Recommendations on how to strengthen the prevention of diabetes in countries

23. Governments are encouraged to strengthen policy measures to:

(a) reduce childhood obesity through using regulatory, fiscal and other measures to promote: intake of healthy foods that are high in energy, fats, sugars and sodium; physical activity; preconception and pregnancy care; infant and young child feeding; healthy schools and weight management

(b) increase levels of physical activity through implementation of the recommendations of WHO's global action plan on physical activity 2018-2030, especially focused on services and programmes to reach those identified to be at risk of diabetes, with importance given to policy action for promoting walking, cycling and active recreation and reduced sedentary behaviour; and furthermore strengthen health literacy targeted with a particular focus on populations with low health awareness and/or literacy; and address the social and commercial determinants of health

(c) pursue health-in-all-policies approaches, equity-based approaches and life-course approaches; promote meaningful civil society engagement to develop ambitious national diabetes responses; and include people living with diabetes in shaping the public health response

(d) promote approaches to preventing diabetes through policies and practices , across whole populations and within specific settings such as school, home, or the workplace.

Recommendations on how to strengthen early detection and treatment of obesity and diabetes, including management of complications, in countries

24. Governments are encouraged to strengthen policy measures to:

(a) include the diagnosis and management of obesity and diabetes as an essential service in primary health care supported by the health system building blocks.

(b) include diabetes as a comorbidity of TB, HIV and other conditions and leverage existing global financial institutions

(c) use the momentum of building back better after the disruption of services by the COVID-19 pandemic to get diabetes management on all relevant programmes and work with global financial institutions to include funding for diabetes as a critical comorbidity.

25. WHO and partners should support expanding access to insulin and other essential medical products and technology by enabling the manufacture of generics and strengthening the country capacity for supply chain management.

Recommendations on how to strengthen surveillance of diabetes, in countries

26. Governments are encouraged to strengthen policy measures to:

(a) conduct national population-based surveys once every five years, or in accordance with the local context, to track the trends in diabetes and risk factors, including measurement of blood glucose concentrations
(b) adapt the clinical monitoring indicators for diabetes and ensure that they are part of the national health information systems
(c) use digital technology and other resources for improving clinical management of diabetes
(d) consider setting up diabetes registries where appropriate.
(e) ensure that diabetes is recorded as the primary or underlying cause of death in death certification and analyse the impact of diabetes on mortality.

= = =