

WHO DISCUSSION PAPER  
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DRAFT RECOMMENDATIONS TO  
STRENGTHEN AND MONITOR DIABETES RESPONSES  
WITHIN NATIONAL NONCOMMUNICABLE DISEASE PROGRAMMES,  
INCLUDING POTENTIAL TARGETS

## CHALLENGES AND OPPORTUNITIES

1. Never in the past has our knowledge been so profound and the modalities to prevent diabetes and treat all people living with diabetes so great. And yet, many people and communities in need of effective prevention, life-enhancing and live-saving treatment for diabetes do not receive them:

- a) There is growing awareness and concern about the large and escalating burden of diabetes. The global age-adjusted prevalence of diabetes among adults over 18 years of age rose from 4.7% in 1980 to 8.5% in 2014.<sup>1</sup> Today, more than 420 million people are living with diabetes worldwide. This number is estimated to rise to 570 million by 2030 and to 700 million by 2045.<sup>2</sup> One in two adults with diabetes are unaware of their condition and are at great risk of debilitating complications that can be prevented through diagnosis and proper disease management.
- b) The increasing prevalence of diabetes is largely caused by the increasing prevalence of obesity and concurrent physical inactivity. The prevalence of overweight and obesity among children and adolescents aged 5-19 has risen dramatically from 4% in 1975 to over 18% in 2016.<sup>3</sup> Only 40% of countries have an operational policy addressing overweight and obesity.<sup>4</sup>
- c) Contrary to the other main noncommunicable diseases (NCDs) the premature mortality for diabetes has increased by 5% from 2000 to 2016.<sup>5</sup>
- d) The global cost of diabetes for 2015 has been estimated at US\$1.31 trillion or 1.8% of global gross domestic product (GDP). While the main drivers of cost are hospital inpatient and outpatient care, indirect costs accounted for 34.7% of the total burden, mostly attributable to production losses due to labour-force dropout and premature mortality.<sup>6</sup>
- e) **Twenty-seven percent of countries do not have an operational policy, strategy or action plan for diabetes, and 20% do not have it for reducing unhealthy diet and physical inactivity.**
- f) Limited progress has been seen for diabetes towards target 3.8 of the Sustainable Development Goals on achieving universal health coverage (UHC). The WHO UHC Monitoring Report (2019) shows that diabetes health services are conspicuous by their lack of progress as part of universal

<sup>1</sup> Global report on diabetes. Geneva: World Health Organization; 2016

<sup>2</sup> Saeedi P, Petersohn I, Salpea P, Malanda B, Karuranga S, Unwin N, Colagiuri S, Guariguata L, Motala AA, Ogurtsova K, Shaw JE, Bright D, Williams R; IDF Diabetes Atlas Committee. Global and regional diabetes prevalence estimates for 2019 and projections for 2030 and 2045: Results from the International Diabetes Federation Diabetes Atlas, 9th edition. *Diabetes Res Clin Pract* 2019;157:107843

<sup>3</sup> <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

<sup>4</sup> Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2019 global survey. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO

<sup>5</sup> World health statistics 2020: monitoring health for the SDGs, sustainable development goals. Geneva: World Health Organization; 2020

<sup>6</sup> Bommer C, Heesemann E, Sagalova E, Manne-Goehler J, Atun R, Bärnighausen T et al. The global economic burden of diabetes in adults aged 20–79 years: a cost-of-illness study. *Lancet Diabetes Endocrinol* 2017; 5: 423–30

health coverage in comparison to those for communicable diseases.<sup>1</sup> Only two-thirds of countries report having time-bound NCD targets, which may include targets of no increase in diabetes and obesity and improved access to medicines and technologies, in line with the nine voluntary global targets of the WHO Global Monitoring Framework.

- g) **In general, primary health-care facilities in low-income countries do not have the basic technologies needed to diagnose and manage diabetes.**<sup>1</sup> Essential medicines for diabetes are generally available in about 80% of facilities of the public health care sector.
- h) Insulins and associated health technology products remain unaffordable in many countries particularly to patients paying out of pocket or to health systems in many LMIC that are unable to provide sustained and equitable coverage for all people with diabetes due to high prices of these products. Effective public policymaking to improve access to affordable medicines and health products requires the use of evidence from accurate analysis of sound and transparent data on prices and availability.<sup>23</sup>
- i) The COVID-19 pandemic has revealed the fragility of overstretched health care systems. A WHO survey indicated that half of countries surveyed had partially or completely disrupted services for diagnosis and treatment for diabetes and diabetes-related complications. One-third of countries did not have diabetes in their emergency preparedness plans.<sup>4</sup>
- j) Data on diabetes derived from monitoring and surveillance systems in most countries are sparse and inadequate. Only 56% of countries have recently conducted a diabetes prevalence survey. While 50% of countries, mostly high-income ones, report having diabetes registries, their predominantly hospital-based nature and limited coverage do not provide sufficient information on diabetes outcomes.<sup>5</sup> Less than two-thirds of low-income countries report having vital registration systems to capture information on cause of death and the reliability of the information on diabetes is doubtful. Most countries do not have a system in place to evaluate national actions or programmes.
- k) Only one-third of countries report having a policy or plan for NCD research and research is among the least-funded key actions of the Global action plan for the prevention and control of noncommunicable diseases.

2. Opportunities exist to facilitate solutions to the challenges. The main opportunities are:

- a) **Tracer for all NCDs:** optimal management of diabetes requires coordinated inputs from a range of health professionals, access to essential medicines and technologies and a system that supports patient empowerment. This has relevance beyond diabetes and diabetes could serve as a tracer condition for general comprehensiveness and strength of national responses to NCDs.
- b) **A solid basis for scaling up:** 85% of countries report having staff dedicated to diabetes in their NCD unit/branch/department; 73% of countries report having an operational policy, strategy or action plan on diabetes, increasing from 45% in 2010. Eighty percent of countries report having operational policies or strategies for reducing unhealthy diet and physical inactivity. Eighty-four percent report having national diabetes management guidelines that are used in at least 50% of health facilities.

<sup>1</sup> <https://www.who.int/data/monitoring-universal-health-coverage>

<sup>2</sup> Babar ZUD, Ramzan S, El-Dahiyat F, Tachmazidis I, Adebisi A and Hasan SS. The availability, pricing, and affordability of essential diabetes medicines in 17 low-, middle-, and high-income countries. *Frontiers in pharmacology* 2019;10:1375.

<sup>3</sup> <https://www.who.int/publications/i/item/9789240011878>

<sup>4</sup> The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment. Geneva: World Health Organization; 2020

<sup>5</sup> [https://apps.who.int/iris/bitstream/handle/10665/204871/9789241565257\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/204871/9789241565257_eng.pdf?sequence=1)

- c) **Improving accountability:** Setting time-bound national targets and indicators for diabetes and obesity prevention and control, complementary to existing NCD targets could stimulate accelerated implementation of existing policies and introduction of new ones.
- d) **Towards universal health coverage:** the global push towards universal health coverage to achieve SDG target 3.8 is an opportunity to include diabetes prevention and control in benefit packages and address diabetes more effectively and equitably, and ensuring financial protection of the most vulnerable.
- e) **A new perspective on NCDs:** The COVID-19 pandemic has disproportionately affected people with diabetes and this can provide an impetus to better integrate diabetes in pandemic and other emergency preparedness and response.
- f) **Marking the 100 year anniversary of insulin :** The establishment of the Global Diabetes Compact offers an opportunity for the global diabetes community to come together to reflect on addressing barriers in accessing insulin and associated health technologies, including the promotion of convergence and harmonization of regulatory requirements for insulin and other medicines and health products for the treatment of diabetes; and assessment of the feasibility and potential value of establishing a web-based tool to share information relevant to the transparency of markets for diabetes medicines and health products.
- g) **Harnessing digital technologies:** Increasing use of digital technologies could facilitate monitoring and surveillance, enhancing the capacity to assess and report on risk factors, availability and real need of essential medicines, diabetes outcomes and national responses.
- h) **Promoting inclusiveness:** Participation of individuals with diabetes and their carers provides essential expertise to positively impact policy design, and powerful narratives to raise awareness of diabetes among the public and build commitment among policymakers. The involvement and active participation of people living with diabetes in the Global Diabetes Compact provides a platform and model for their meaningful participation in decision making.

## LESSONS LEARNED

3. Lessons learned in implementing activities for the prevention, control and monitoring of diabetes include:
  - a) **Diabetes through a pandemic lens:** The disruption of services by the COVID-19 pandemic and particular vulnerability of people with diabetes have shown that countries need not only to restore the health care system to the level it was before. Member States need to build back better to integrate diabetes management, including diabetes complications, into primary health care and relevant health programmes and work with global financial institutions to include funding for diabetes as a critical comorbidity.<sup>1</sup>
  - b) **Monitoring outcomes:** Improving the accuracy and availability of data on the prevalence of diabetes, access to prevention interventions, care and essential medicines, and complications of diabetes is needed to evaluate the effects of diabetes policy and initiatives. WHO has initiated regular national WHO STEPwise Approach to NCD Risk Factor Surveillance

<sup>1</sup> Responding to non-communicable diseases during and beyond the COVID-19 pandemic. Geneva: World Health Organization and the United Nations Development Programme, 2020 (WHO/2019-nCoV/Non-communicable\_diseases/Policy\_brief/2020.1). Licence: CC BY-NC-SA 3.0 IGO.

(STEPS) in order to improve monitoring of NCD risk factors.<sup>1</sup> However, these surveys do not fully capture the performance of the health system. This will require guidance and support for improving the availability and quality of data in health facilities.

## STRENGTHENING DIABETES RESPONSES

### 4. Recommended actions for Member States:

#### a) Strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of diabetes:

- Strengthen the capacity of ministries of health to exercise a strategic leadership and coordination role in diabetes policy development that engages all stakeholders across government, civil society, people living with diabetes, and the private sector, ensuring that issues relating to the prevention and control of diabetes receive a coordinated, comprehensive and integrated response.
- Provide sufficient national budgetary allocation for diabetes prevention and control, and identify financing mechanisms to reduce out-of-pocket expenditure.
- Strengthen the design and implementation of policies for diabetes by ensuring that existing national UHC benefit packages and NCD multisectoral strategy/policy/action plans contain the necessary provisions for diabetes prevention and management.
- Consider setting national diabetes coverage targets, building on the guidance provided by WHO, to progressively cover more people with quality diabetes care, increase accountability, and periodically assess national capacity for the prevention and control of diabetes.

#### b) Reduce modifiable risk factors for diabetes and underlying social determinants:

- Accelerate implementation of policies and strategies to reduce risk factors for diabetes and its complications.
- Promote health literacy and strengthen involvement of people living with NCDs in clinical decision-making with a focus on health-professional-patient communication.
- Consider disproportionate diabetes burdens among subpopulations and address the underlying social determinants that expose these populations to greater risk of developing diabetes and its complications, substandard care, or lack of access to essential diabetes medicines.

#### c) Strengthen and orient health systems to address the prevention and control of diabetes through people-centered primary health care and universal health coverage:

- Expand the delivery of and prioritize primary health care as a cornerstone of sustainable, people-centered, community-based and integrated diabetes care.
- Set minimum standards of diabetes management across the continuum of care with a focus on primary health care, while strengthening referral systems between primary and other levels of care.

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<sup>1</sup> <https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps>

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- Consider adopting global coverage targets to be achieved by 2030\* to stimulate early detection and improved management, and consider their adaptation to local circumstances.
  - Strengthen health workforce and institutional capacity to detect early and manage diabetes, including diagnosis and management of diabetes related complications, provision of psycho-social support, promotion of self-care, and provision of palliative care and rehabilitation.
  - Ensure availability and affordability of essential medicines and priority devices by bundling medicines, insulin delivery devices and blood glucose monitoring devices as part of national benefit packages.
  - Ensure uninterrupted treatment of people living with diabetes in humanitarian emergencies.
  - Evaluate the impact of innovative digital health solutions.
  - Include PLWD in decision making processes on policies, strategies and implementation of diabetes prevention and control.
- d) Promote and support national capacity for high-quality research and development for the prevention and control of diabetes**
- Explore the reasons for little progress on NCD research and options to address them.
5. Recommended actions for **International Partners**, including the private sector:
- a) Strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of diabetes:**
- Maintain visibility of diabetes on the global health and development agenda.
  - Align international cooperation on diabetes with national plans concerning non-communicable diseases in order to strengthen aid effectiveness and the development impact of external resources in support of diabetes.
  - Civil society to foster accountability and support countries in regular review of progress of national diabetes roadmaps toward the achievement of national diabetes targets.
- b) Reduce modifiable risk factors for diabetes and underlying social determinants:**
- Advocate for and support population-based policies, health promotion activities and health literacy campaigns.
  - Advocate for and help implement and evaluate community-based diabetes prevention and control initiatives.
- c) Strengthen and orient health systems to prevent and control of diabetes through people-centered primary health care and universal health coverage:**
- Commit to support of activities that improve affordability and availability of essential medicines and basic technologies for diagnosis, management, and self-care of people with diabetes.

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- Support and scale up implementation of digital health solutions based on country need assessments.
  - Invite the private sector to strengthen its commitment and contribution to the prevention and management of diabetes by participating in WHO prequalification programmes for insulin and self-monitoring devices, to register and publish their contributions, including through the reporting mechanism WHO will use to register and publish these contributions, and to participate in international pooled-procurement mechanisms for diabetes medicines (once established) led by the United Nations and other intergovernmental organizations, and international financing mechanisms.
- d) Promote and support national capacity for high-quality research and development for the prevention and control of diabetes**
- Invest in and support national capacity for research on diabetes prevention and control relevant to the implementation of recommendations.
6. Recommended actions for **WHO**:
- a) Strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of diabetes**
- Convene and lead partners through the Global Diabetes Compact to raise awareness, create synergies for action, and harness the collective capacity of global, regional and national actors working to improve diabetes prevention and control.
  - Support country activities for including diabetes in UHC and develop recommendations for adequate, predictable, and sustained financing of diabetes prevention and control, including in resource-constrained settings, and to address the needs of disadvantaged and marginalized populations.
  - Scale-up meaningful engagement of people with diabetes in the design, implementation and evaluation of programmes and services for diabetes.
- b) Reduce modifiable risk factors for diabetes and underlying social determinants:**
- Provide guidance on prevention of type 2 diabetes through health promotion and health literacy.
- c) Strengthen and orient health systems to prevent and control of diabetes through people-centered primary health care and universal health coverage:**
- Support country adaptation and implementation of WHO diabetes management guidelines.
  - Develop technical and normative products to cover the whole spectrum of diabetes care and facilitate implementation of evidence-based digital solutions.
  - Develop bundled management-enhancing solutions with the private sector, prequalification of insulin, pooled procurement, and harmonization of regulatory requirements.
  - Develop guidance for enabling uninterrupted treatment of diabetes in humanitarian emergencies.

- Estimate the cost of achieving the global coverage targets.

**d) Promote and support national capacity for high-quality research, innovation and development for the prevention and control of diabetes**

- Develop a plan for supporting national research in diabetes prevention and control.
- Support prioritization of research agenda for diabetes prevention and control and promote implementation research to assess effectiveness of individual and population-wide interventions to prevent and control diabetes and obesity.
- Support countries in developing diabetes-related research policies or plans that include community-based research and an evaluation of the impact of interventions and policies.

### **SETTING DIABETES COVERAGE TARGETS**

7. The Secretariat, supported by an academic group, developed an approach to setting diabetes coverage targets based on which it drafted a proposal<sup>1</sup>. The draft proposed coverage targets were discussed at a technical consultation to seek additional expert advice on refining the methods and results. The expert consultation was held on 28-29 July 2021 and a technical paper will be submitted for publication.

8. Following this process, the Secretariat recommends that five voluntary global diabetes coverage targets be established for achieved by 2030:

- 80% of people with diabetes are diagnosed.
- 80% of people with diagnosed diabetes have good control of glycaemia.
- 80% of people with diagnosed diabetes have good control of blood pressure.
- 60% of people with diabetes receive statins.
- 100% of people with type 1 diabetes have access to insulin and blood glucose self-monitoring.

9. Modelling projections have demonstrated that:

- Achieving the target levels of diagnosis, treatment, and control of 3 targets (glycemia, blood pressure, and statin use) of at least 60% results in a gain in median DALY of 38 per 1000 persons over 10 years, whereas achieving a target of 80% results in a gain in median DALYs of 64 per 1000 persons over 10 years.
- In most regions, improving treatment and control without screening reduces CVD deaths by 25-35% and improving diagnosis, treatment, and control reduces the most common cause of deaths (CVD) by more than 40%.

10. Achieving the five voluntary global diabetes coverage targets will contribute to the achievement of SDG target 3.4 (one-third premature mortality reduction from noncommunicable diseases). The five targets are also aligned with the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020<sup>2</sup>, the UN High-Level Meeting on Prevention and Control of Noncommunicable Diseases (2018)<sup>3</sup> and health systems strengthening for social protection and universal health coverage, as set out in United Nations General Assembly resolution 72/81.

11. The methodology used to develop the targets is summarized in a technical paper which is available on WHO's website.

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<sup>1</sup> Gregg E, Buckley J, Ali MK, Davies J, Flood D, Griffiths B et al. Target Setting to Reduce the Global Burden of Diabetes Mellitus by 2030: The Current Status and Scientific Rationale (unpublished data)

<sup>2</sup> WHO. Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020. Available at: [http://apps.who.int/iris/bitstream/handle/10665/94384/9789241506236\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/94384/9789241506236_eng.pdf?sequence=1)

<sup>3</sup>2018 Political Declaration on NCDs. Available at : [https://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/73/2](https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/73/2)

## MONITORING DIABETES RESPONSES

### Recommended actions to monitor the trends and determinants of diabetes and evaluate progress in their prevention and control

12. Recommended actions for **Member States**:
  - Develop and strengthen surveillance and monitoring systems for diabetes and other NCD risk factors, guided by WHO NCD surveillance framework.
  - Develop and strengthen monitoring systems to evaluate the treatment gap and clinical outcomes (morbidity and mortality) and health system performance (capacity and interventions) through the systematic collection of standardized routine facility-based diabetes care indicators.
13. Recommended actions for **International Partners**, including the private sector:
  - Support the development and maintenance of surveillance systems and promote the use of information and communications technology.
  - Invest in information systems that link various sources of information on management and outcomes.
14. Recommended actions for **WHO**:
  - Continue monitoring NCD risk factor dynamics and country capacity to prevent and control NCDs, including diabetes.
  - Develop a monitoring framework and tool for monitoring the performance of health care system through monitoring of processes of care and outcomes at the level of health facilities.
  - Support the development and maintenance of surveillance systems and promote the use of information and communications technology.

### ACTION BY THE EXECUTIVE BOARD

15. The Executive Board is invited to adopt the recommendations for Member States, international partners and WHO (paragraphs 4 to 6, and 12 to 14), as well as the five voluntary global diabetes coverage targets (paragraph 8), and recommend their endorsement at the World Health Assembly.

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