



World Health
Organization

Report of the sixth meeting of the

WHO Technical Advisory Group on Diabetes

virtual meeting
24-25 June 2024





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Abbreviations and acronyms

GDC	WHO Global Diabetes Compact
HbA1c	glycated haemoglobin A1c
LMICs	low- and middle-income countries
NCD	noncommunicable disease
TAG-D	WHO Technical Advisory Group on Diabetes
TPE	therapeutic patient education
WHO	World Health Organization

Overview

The World Health Organization (WHO) convened the sixth meeting of the WHO Technical Advisory Group on Diabetes (TAG-D) on 24 and 25 June 2024. The remit of TAG-D is to identify and describe challenges to WHO's work on diabetes; to advise on strategic directions for WHO to prioritize; to advise WHO on the development of global strategic documents; and to propose other strategic interventions and activities for WHO to implement. Eight of the 11 members attended the first day, and nine attended the second day. Dr Nikhil Tandon chaired the meeting, with Dr Philippa Boule as rapporteur.

All participants provided declarations of interests (DOIs); all DOIs were reviewed by WHO. Four TAG-D members declared interests that triggered further review. All declared interests were considered minimal and deemed unlikely to affect the experts' judgment.

The agenda and list of attendees can be found in Annex 1 and Annex 2, respectively.

Summary of discussions

The discussions of the sixth meeting of TAG-D were held over four sessions:

1. opening;
2. introduction to the WHO Global Diabetes Compact;
3. technical products to accelerate the achievement of the global diabetes coverage targets; and
4. monitoring of global diabetes coverage targets.

Session 1: Opening session

The TAG-D secretariat welcomed members of the second TAG-D group, informing about the group's role in supporting WHO. The TAG-D secretariat also introduced Dr Nikhil Tandon as the TAG-D chair for the current term.

The session continued with the review of TAG-D objectives and functions, which are (1):

1. to identify and describe challenges to WHO's aims and works on diabetes;
2. to advise WHO on strategic directions to be prioritized;
3. to advise WHO on the development of global strategic documents; and
4. to propose other strategic interventions and activities for implementation by WHO.

The first TAG-D group served from 2021 to 2023. The second TAG-D group was established in January 2024 and will continue its 2-year term as per the terms of reference.

To achieve the above objectives, members of the first TAG-D group met twice a year. Throughout the meetings, they provided input on WHO technical products, such as WHO operational handbook on tuberculosis and diabetes, hyperglycaemia and pregnancy guidelines and therapeutic patient education (2, 3). They also contributed to reviewing the Global Fund country proposals and drafting a WHO technical brief on the *Thermostability of human insulin* (4).

The second TAG-D group brings experts who are academic leaders, clinicians and researchers with extensive experience from all WHO regions. Their collective expertise includes, for example, the prevention of type 2 diabetes, diabetes management in humanitarian settings, access to diabetes medicines, diabetes research and programme implementation in low- and middle-income countries (LMICs). Some of the members have also played key roles in developing national, regional and global guidelines, research or implementation programmes for diabetes.

Session 2: Introduction to the WHO Global Diabetes Compact

The TAG-D secretariat gave the members an overview of the WHO Global Diabetes Compact (GDC). GDC was launched at the 2021 Global Diabetes Summit with the vision of reducing the risks of diabetes and ensuring that all people who are diagnosed with diabetes have access to equitable, comprehensive, affordable and quality treatment and care (5). GDC activities (Figure 1) are structured to support the Member States according to the World Health Assembly Resolution 74.4 Reducing the burden of noncommunicable diseases through strengthening prevention and control of diabetes (6).

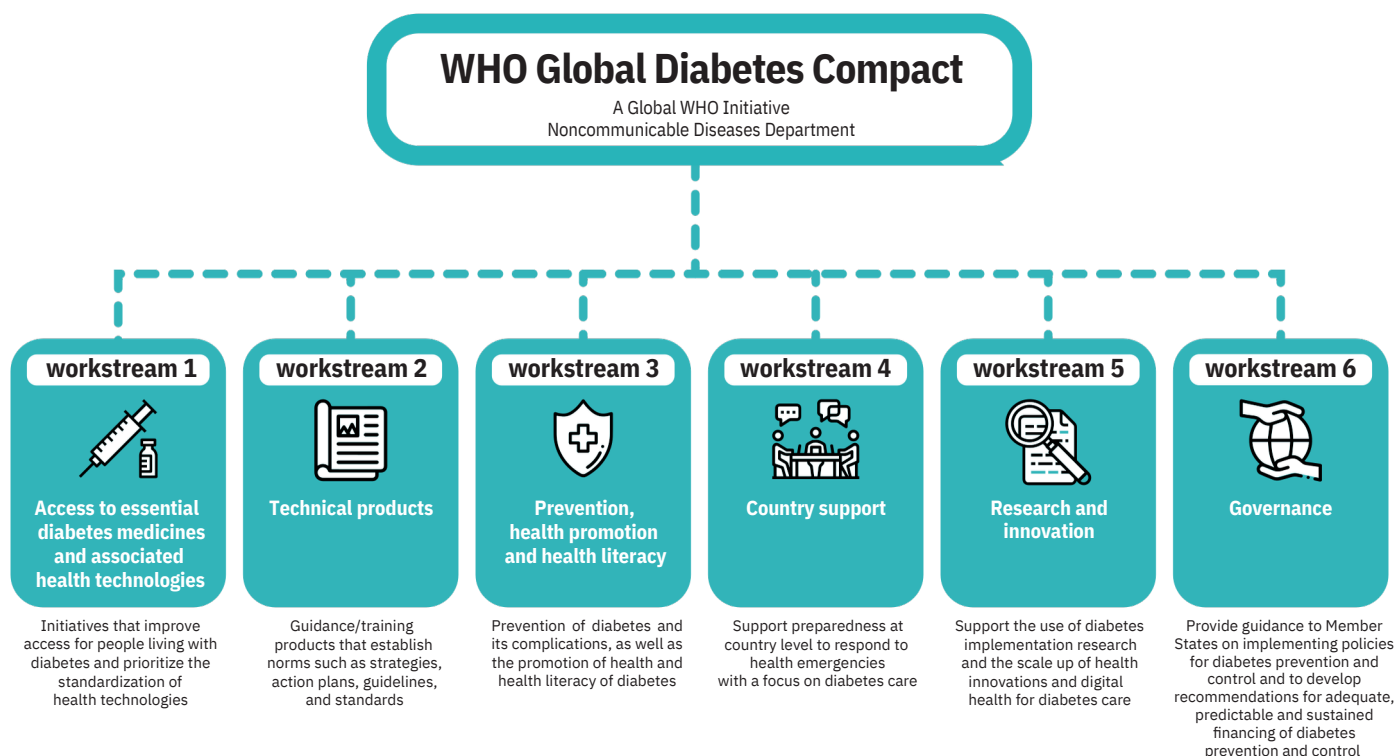


Figure 1. Workstreams of the WHO Global Diabetes Compact

Workstream 1: Access to essential medicines and associated health technologies

WHO has engaged the pharmaceutical and health technology industries to improve access to medicines and devices for noncommunicable diseases (NCDs). This engagement includes a dialogue series that resulted in a list of private sector asks, prequalification of human insulins and glargine, prequalification of blood glucose meters and glycated haemoglobin A1c (HbA1c) point-of-care tests and inclusion of personal glucose monitoring devices in the WHO 2023 Essential Diagnostics Lists (7-11). WHO is also continuing the work on the NCD Medicines Forecasting and Quantification Tool, which aims to quantify future demand for NCD medicines and health technology products.

Workstream 2: Technical products

Technical products are norms or standards, data and research that are applicable to multiple countries and developed using rigorous processes at global, regional and country level to drive impact (12). WHO's work on technical products aims to support Member States in achieving the global diabetes coverage targets (Figure 2) (13). An in-depth discussion of the technical products was later held during Session 3.



Figure 2. Global diabetes coverage targets

Workstream 3: Prevention, health promotion and health literacy

A major ongoing initiative in this workstream is the *WHO acceleration plan to stop obesity*, with 32 Member States committing to act as front-runner countries across the six WHO regions (14). WHO also published several technical products, such as the tobacco knowledge summary (15) to emphasize the adverse effects of tobacco use on diabetes and the introductory guide for therapeutic patient education (TPE) (3) to help policy-makers and health professionals improve access to effective TPE for all individuals living diabetes.

Workstream 4: Country support

The TAG-D secretariat updated TAG-D members on recent WHO country support efforts. Specific updates are provided in Table 1.

Table 1. GDC country support efforts by WHO region from June 2023 to June 2024

WHO regions	Activities
African Region	<ul style="list-style-type: none"> • Technical assistance for WHO Regional Office for Africa diabetes blueprint • Support for spotlight meetings on diabetes in Ghana and Uganda • Support World Diabetes Foundation project implementation in Ghana and Uganda • Support for review of Global Fund country applications • Review of country guidelines on diabetes
Region of the Americas	<ul style="list-style-type: none"> • Support for Regional Office for the Americas (PAHO) regional commemoration of World Diabetes Day hosted in Mexico • Support for HEARTS*/HEARTS-D** scale up in Mexico (16, 17)
South-East Asia Region	<ul style="list-style-type: none"> • Support implementation of SEAHEARTS and ambitious targets set by Member States (Bangladesh, Bhutan, India, Nepal and Timor-Leste) (18) • Review of country guidelines on type 2 diabetes
European Region	<ul style="list-style-type: none"> • Technical assistance for revision of therapeutic patient education and detection of diabetes documents • Support for high-level technical summit on global diabetes coverage targets • Support for new WHO Regional Office for Europe initiative to track progress against global coverage targets
Eastern Mediterranean Region	<ul style="list-style-type: none"> • Technical assistance for development of guidance for TPE for diabetes

*HEARTS technical package for cardiovascular disease management in primary health care

**HEARTS-D: diagnosis and management of type 2 diabetes

Workstream 5: Research and innovation

WHO is developing a prioritized research agenda to improve diabetes prevention and management in LMICs by 2030. The product is still undergoing finalization. WHO also has a Technical Advisory Group of Experts on NCD-related Research and Innovation focusing on implementation research to accelerate progress in NCD management (19).

Workstream 6: Governance, strategy and partnership

WHO has established a comprehensive engagement framework for GDC, which encompasses Member States, private sector entities, people with diabetes, non-state actors (through the Global Diabetes Compact Forum) and TAG-D (20).

To further global advocacy on NCD, including diabetes, the TAG-D secretariat introduced members to the overview of the road to the Fourth High-Level Meeting of the United Nations General Assembly on the prevention and control of NCDs in 2025. This includes key events and opportunities for involvement through web-based consultation, multi-stakeholder briefings, regional consultations and engagement platforms. This Fourth High-level Meeting will provide an opportunity to adopt a new, ambitious and achievable political declaration on NCDs towards 2050 (21).

Strategies to strengthen the GDC workstreams

To enhance the work on each workstream, TAG-D provided the following feedback:

1. Improve access to essential medicines and associated health technologies

TAG-D provided several strategies, such as collaborating with nongovernmental organizations, incorporating diabetes care into national health insurance plans, implementing pooled procurement, rationalizing drug lists, simplifying treatment protocols and exploring the benefit of single-pill combination therapies for NCDs.

TAG-D also commented that context matters when discussing access to products.

Further on the cost, TAG-D highlighted the need for market transformation to make essential medicines more accessible (22). Although WHO has tried to improve availability through prequalification, more efforts are needed to reduce the costs and enable wider access to diabetes essential medicines and associated health technologies (23, 24).

2. Support the implementation of technical products

TAG-D discussed that the development of technical products must be followed by support for implementation at the country level. This includes training healthcare providers (e.g. nurses, community health providers and allied health workers) and providing necessary equipment and infrastructure. TAG-D also advised telemedicine as a supplement to enhance the uptake of technical products and to incorporate e-learning into the training.

Specific to the technical product for monitoring of the global diabetes coverage targets, TAG-D emphasized the need for measurable, relevant and evidence-based methodologies. TAG-D also suggested leveraging digital tools like electronic registries, District Health Information Software and digital dashboards to enhance data collection and tracking of diabetes-related health outcomes (25). Further discussion on the monitoring of global targets took place during Session 4.

3. Prevent type 2 diabetes through education

TAG-D highlighted the importance of education in the prevention of type 2 diabetes and suggested that diabetes education be integrated into school-based programs, drawing lessons from past crises, such as Ebola and COVID-19 outbreaks.

Closing the second session, Dr Bente Mikkelsen, representing the TAG-D secretariat, acknowledged the significant progress on diabetes made in recent years, including the endorsement of the global diabetes coverage targets and the integration of diabetes into humanitarian contexts. The session closed with an invitation to TAG-D members to actively engage with the TAG-D secretariat and continue providing ideas and support as needed.

Session 3: Technical products to accelerate the achievement of the global diabetes coverage targets

WHO has published several technical products to support Member States in achieving global diabetes coverage targets, including:

- *HEARTS technical package for cardiovascular disease management in primary health care (17)*;
- *HEARTS-D: diagnosis and management of type 2 diabetes (16)*;
- noncommunicable diseases kit to support diabetes care in emergencies (26);
- technical brief on the *Thermostability of human insulin (4)*.
- *tuberculosis and diabetes: invest for impact information note (2)*;
- *tobacco and diabetes knowledge summary (15)*;
- *WHO 'best buys' for noncommunicable diseases (27)*;
- *WHO Essential Diagnostics List (28)*;
- *WHO Model List of Essential Medicines (11)*; and
- *WHO Package of essential noncommunicable diseases (PEN) interventions for primary care (29)*;

Among the technical products are WHO guidelines, which refer to any document produced by WHO that includes recommendations for clinical practice or public health policy. The guidelines are developed using a methodological process outlined in the WHO handbook for guideline development (30). This process is evidence-based and rigorous but also time-consuming and resource-intensive.

Following the development and implementation of technical products, there is an internal process to review and update the guidelines. This process is often conducted every five years. If regular updates are needed, WHO has an alternative approach through 'living guidelines' (31).

Strategies for technical product implementation

TAG-D shared insights suggesting that healthcare providers at the country level often do not implement WHO guidelines due to the lack of awareness or difficulty in complying with the guidelines. To overcome this issue, TAG-D suggested two strategies for WHO:

1. Improve guideline dissemination

To increase awareness of existing guidelines, TAG-D suggested enhancing dissemination through several modalities, such as organizing webinars, cooperating with local diabetes associations and professional groups, conducting regional workshops, delivering brief presentations on existing products, conducting in-person visits at the country level, translating products into multiple languages and developing a comprehensive knowledge dissemination plan.

2. Facilitate guideline review and adaptation

TAG-D noted that some countries may need to adapt technical products or guidelines to better fit their local needs and capacities. In certain countries or regions, cultural factors can affect people's acceptance of specific medical practices, such as a reluctance to use needles. In such cases, the guidelines must be adjusted to include specific recommendations for healthcare providers on how to address and overcome these barriers.

Closing the third session, the TAG-D chair reiterated the high demand for WHO to develop technical products. TAG-D will have the opportunity to contribute based on their areas of expertise. Calls for participation in this work will be issued to TAG-D members.

Session 4: Monitoring of the global diabetes coverage targets

Dr Farshad Farzadfar from the WHO NCD Department presented the upcoming monitoring framework for the global diabetes coverage targets. This framework aims to standardize practices, enhance surveillance, allocate resources, develop policies, promote awareness, track progress and foster collaboration. It will monitor health system components like determinants, service delivery, risk factor control and health outcomes.

The framework's development process was thorough, beginning with conceptualization, evidence reviews and metadata development. Key guiding principles included maintaining a systematic approach for credibility, considering prevention stages and outcomes and balancing comprehensiveness with simplicity. Indicators were selected based on their measurability within existing WHO monitoring systems and their validity and feasibility. During the development, expert panels were engaged to prioritize the most robust components, leading to the final assembly and refinement of the framework.

Potential barriers to framework implementation

TAG-D identified two key challenges for implementing the monitoring framework:

1. Variation in diagnostic modalities

Different countries use different modalities to measure the prevalence or incidence of diabetes, such as HbA1c, fasting plasma glucose, or random blood glucose. Therefore, imposing a single indicator or test modality will be a challenge. Addressing this issue,

Dr Farzadfar explained that the monitoring framework recognizes the variety of tests to diagnose type 2 diabetes, as outlined in the WHO HEARTS-D (16). Therefore, the framework allows Member States flexibility in using available tests or indicators for monitoring.

2. Capacity for data collection

Significant barriers are the inconsistency and infrequency of data collection in many countries. Dr Farzadfar reflected on the experience with the WHO STEPwise approach to surveillance (STEPS) survey (32) and described that continuity for data collection through such survey often lacks sufficient funding, leading to gaps in data availability. WHO will leverage the lessons learned from the implementation of WHO STEPS survey to inform data collection from Member States.

3. Data fragmentation across systems

Countries often use multiple health information systems that are not integrated, leading to challenges in streamlining diabetes-related data for global monitoring.

4. Sustainability of funding

Insufficient and inconsistent funding for continuous data collection, especially in lower- and middle-income countries, hinders long-term monitoring efforts.

5. Health workforce capacity

Lack of trained health workers to manage, collect and interpret data effectively, particularly in remote areas.

6. Technological infrastructure

Many countries rely on outdated or paper-based systems, which make data collection cumbersome and less reliable.

7. Inconsistent data quality

Variations in data collection methods, especially in countries with limited resources, can affect the consistency and reliability of health data across different regions.

Strategies to maximize framework implementation

To support the implementation of the global monitoring framework, TAG-D recommended several actions:

1. Maintain flexibility in data collection, allowing Member States to use feasible diagnostic methods within their context and adapting as countries expand their diagnostic capabilities.
2. Encourage investment in and mobilization of digital, user-friendly tools for data collection to improve data collection, as paper-based systems, though possible, are often cumbersome and less efficient.
3. Combine health facility-based monitoring systems with interoperable digital platforms to streamline real-time data collection and reporting on diabetes care at the facility level. This will improve patient tracking, allow better data harmonization across regions, and contribute to both local and global diabetes monitoring efforts.
4. Publish standardized guidance for Member States to use the framework to help harmonize efforts across the settings or contexts.
5. Encourage collaboration between public and private sectors to pool resources and build scalable and sustainable diabetes monitoring infrastructure.
6. Pilot the framework in countries with existing GDC projects, such as Ghana and Uganda, to understand the practical insights and refine the framework before broader implementation.

Closing the fourth session, the TAG-D secretariat responded positively to the idea of piloting the diabetes monitoring framework.

Closing remarks

The rapporteur, Dr Philippa Boule, summarized the sixth TAG-D meeting, highlighting the diverse professional backgrounds and regional representation of the members. Despite ongoing challenges in achieving global diabetes coverage targets, the efforts of WHO in developing technical products to support Member States in achieving and measuring these targets were commended.

In her closing remarks on behalf of the TAG-D Secretariat, Dr Bianca Hemmingsen thanked the TAG-D chair and rapporteur for their contributions and expressed optimism that TAG-D will continue to provide a supportive role for WHO. She acknowledged the valuable ideas generated during this initial meeting of the new cohort and extended her appreciation to all members. The meeting was formally closed by the TAG-D chair.

Next steps

The TAG-D secretariat and WHO Regional Office for Europe will convene a virtual meeting in September 2024 to discuss the current initiatives to achieve the first global diabetes coverage target. The seventh TAG-D meeting is scheduled for December 2024.

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Annex 1. Meeting agenda

Table A1.1 Agenda of the sixth meeting of TAG-D

Day 1

Time	Session title	Speakers
14:00–14:10	Welcome and presentation of agenda	Dr Shelly Chadha, Acting Unit Head, Management-Screening, Diagnosis and Treatment (MND) unit, NCD Department
14:10–14:15	Declarations of interests and confirmation of TAG-D chair	Dr Bianca Hemmingsen, Medical Officer, MND unit, NCD Department
14:15–14:20	Housekeeping and meeting rules	TAG-D Chair
14:20–14:25	Overview of TAG-D objectives and functions	Dr Bianca Hemmingsen
14:25–15:20	Members introductions <ol style="list-style-type: none"> 1. <i>What inspired you to apply and serve on TAG-D group?</i> 2. <i>What have been your experiences in strengthening diabetes responses at global, regional and country levels?</i> 3. <i>How do you see yourself contributing to WHO's works on diabetes?</i> 	TAG-D Chair
15:20–15:25	Group photograph (virtual)	All
15:25–15:40	Break	All
15:40–16:10	The Global Diabetes Compact <ul style="list-style-type: none"> • Overview of the Global Diabetes Compact • Road to 4th High-Level Meeting of the UNGA on the prevention and control of NCDs in 2025 	Ms Sanjana Marpadga, Technical Officer, MND unit, NCD Department
16:10–16:55	Discussion <ol style="list-style-type: none"> 1. <i>Are you currently engaged in work related to any of the GDC workstreams?</i> 2. <i>What strategies have you found effective to strengthen the workstream?</i> 3. <i>What are the other key initiatives to advance WHO's work on diabetes but might not be included in the GDC workstreams?</i> 	TAG-D Members, moderated by TAG-D Chair
16:55–17:00	Summary and close	TAG-D Chair and meeting rapporteur

Day 2

Time	Session title	Speakers
14:00–14:10	Welcome and recap of day 1	TAG-D Chair
14:10–14:30	General updates on WHO technical resources	Dr Bianca Hemmingsen
14:30–15:15	Discussion <i>1. What recommendations do you have for the adoption and implementation of WHO technical products in the Member States where you are working?</i> <i>2. What other technical products do countries need to enhance diabetes management and prevention and advance the progress towards global diabetes coverage targets?</i>	TAG-D Members, moderated by TAG-D Chair
15:15–15:30	Break	All
15:30–15:50	Global monitoring framework for diabetes	Dr Farshad Farzadfar, Scientist, Surveillance, Monitoring and Reporting (SMR) unit, NCD Department
15:50–16:35	Discussion <i>1. What are the potential challenges and barriers to monitoring diabetes at country level?</i> <i>2. What are your recommendations to maximize the implementation of the global monitoring framework?</i>	TAG-D Members, moderated by TAG-D Chair
16:35–16:45	Summary and recap of day 2	TAG-D Chair and meeting rapporteur
16:45–17:00	Next step and closure	Dr Bianca Hemmingsen

Annex 2. Meeting participants

TAG-D members

Dr Amanda Adler

Professor of Diabetic Medicine and Health Policy
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Dr Philippa Boule – Rapporteur

NCD Intersectional Working Group Leader
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