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IMPROVING DIABETES OUTCOMES FOR ALL, A HUNDRED YEARS ON FROM THE DISCOVERY OF INSULIN

Report of the Global Diabetes Summit

co-hosted by the World Health Organization and the Government of Canada



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THE GLOBAL DIABETES SUMMIT

In 1921, insulin was co-discovered by Canadian researchers at the University of Toronto. This marked a revolutionary and life-saving step in transforming diabetes from a death sentence for people living with type 1 diabetes to a manageable disease, thereby saving millions of lives worldwide.

During 2021, the world celebrated the 100th anniversary of the discovery of insulin, a discovery that has changed the lives of millions of people.

To mark the centenary of the discovery of insulin, and with the support of the University of Toronto, the World Health Organization (WHO) and the Government of Canada co-hosted a Global Diabetes Summit on 14 April 2021. The Summit aimed to raise awareness of diabetes as a global challenge, and to highlight what is being done – and what more needs to be done – to scale-up prevention and treatment efforts within primary health care systems, and across diabetes care services, in a way that is affordable to all.



“Canada has a proud history of diabetes research and innovation. From the discovery of insulin in 1921 to one hundred years later, we continue working to support people living with diabetes. But we cannot take on diabetes alone.

We must each share knowledge and foster international collaboration to help people with diabetes live longer, healthier lives – in Canada and around the world.”

Patty Hajdu

Minister of Health (2019-2021), Canada

Participating in the Summit were four Heads of State, seven Ministers of Health, as well as United Nations organizations, people with lived experience of diabetes, civil society advocates and representatives of the private sector.

The format of the Global Diabetes Summit had been co-designed during an informal consultation for people living with diabetes, in March 2021, which included more than 100 participants. Through these discussions, people affected by diabetes shared their unique insights and perspectives to:

- define key policy, research and narrative issues of concern for discussion at the Summit;
- identify and participants and;
- explain how taking on board the views of people with lived experiences can strengthen interventions for diabetes care.

The highlight of the Summit was the launch of the WHO Global Diabetes Compact.

THE WHO GLOBAL DIABETES COMPACT

Diabetes is a critical challenge to global health. The global prevalence of diabetes among adults over 18 years of age rose from 4.7% in 1980 to 8.5% in 2014¹. Diabetes was the ninth leading cause of death globally 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. Between 2000 and 2016, there was a 5% increase in premature mortality from diabetes.²

Today, more than 420 million people are living with diabetes worldwide.² This number is estimated to rise to beyond half a billion by the end of the decade.³ About half of all adults with type 2 diabetes are unaware of their condition.⁴

Around nine million people live with type 1 diabetes globally, and need insulin for survival.⁵ About 60 million people with type 2 diabetes need insulin, but only about 50% of people with type 2 diabetes get the insulin they need.⁶

In order to address the rising burden of diabetes-related morbidity and mortality and coinciding with the 100th anniversary of the discovery of insulin, WHO has established the Global Diabetes Compact, a global initiative to achieve sustained improvements in diabetes prevention and care, with a particular focus on supporting low- and middle-income countries.



“The need to take urgent action on diabetes is clearer than ever. The number of people with diabetes has quadrupled in the last 40 years.

The Global Diabetes Compact will help to catalyze political commitment for action to increase the accessibility and affordability of life-saving medicines for diabetes and also for its prevention and diagnosis.”

Dr Tedros Adhanom Ghebreyesus
Director-General of the World Health Organization

The WHO Global Diabetes Compact sets a vision of reducing the risk of diabetes and ensuring that all people who are diagnosed with diabetes have access to equitable, comprehensive, affordable and quality treatment and care.

To realize this vision, the WHO Global Diabetes Compact works across several areas necessary to improve prevention and control of diabetes across the world. The workstreams are:

- improving access to essential diabetes medicines and associated health technologies, particularly insulin, in low- and middle-income countries;
- creating new technical products;
- improving health literacy, promotion and the prevention of type 2 diabetes;
- building country support;
- encouraging research and innovation; and
- developing governance and strategic partnerships to collaboratively unite stakeholders, including people living with diabetes, around a common agenda.

The WHO Global Diabetes Compact is bringing together national governments, UN organizations, nongovernmental organizations, private sector entities, academic institutions, and philanthropic foundations, people living with diabetes, and international donors to work towards a world where all people at risk for diabetes or living with diabetes can access the care they need.

Insulin has been on the WHO Model List of Essential Medicines since 1977, yet far too many cannot reliably access the insulin they need. Through the WHO Global Diabetes Compact, discussions are underway with manufacturers of insulin and other diabetes medicines and diagnostic tools to help meet demand at prices that countries can afford.



In May 2021, a resolution on diabetes was adopted at the World Health Assembly. This resolution urges WHO Member States to raise the priority given to the prevention, diagnosis and control of diabetes as well as prevention and management of risk factors for type 2 diabetes, such as obesity, and recommends the development of pathways for achieving targets for the prevention and control of diabetes.⁷

Empowered by the resolution adopted at the World Health Assembly in May 2021 which requested WHO to, inter alia, consider the potential development of global coverage targets for diabetes care, the WHO Global Diabetes Compact will quantify the corresponding costs and benefits. The Compact will also advocate for fulfilling the commitment made by governments to include diabetes prevention and treatment in primary health care and as part of universal health coverage benefit packages, as well as using research and innovation to evaluate low-cost technologies and digital solutions for diabetes care.

Since its launch, the WHO Global Diabetes Compact continues to be developed through the Department for Noncommunicable Diseases under the leadership of Dr Bente Mikkelsen, Director, Noncommunicable Diseases, WHO. In addition to the work described above, WHO has established and held the first meeting of its Technical Advisory Group on Diabetes (TAG-D), including membership of two persons living with diabetes, to advise WHO in furthering its leadership and coordination role in promoting and monitoring global action against diabetes.

Since the launch of the Global Diabetes Compact, WHO has also established the Global Diabetes Compact Forum. The Forum has been created by WHO to share and disseminate ideas, information and views that help advocate for the vision of the Global Diabetes Compact. Collaboration and cooperation between Forum members and WHO are key purposes of the Forum.

¹ Global report on diabetes. Geneva: World Health Organization; 2016

² <https://www.who.int/news-room/fact-sheets/detail/diabetes>

³ 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

⁴ Cho NH, Shaw JE, Karuranga S, Huang Y, da Rocha Fernandes JD, Ohlrogge AW, Malanda B. IDF Diabetes Atlas: Global estimates of diabetes prevalence for 2017 and projections for 2045. *Diabetes Res Clin Pract*. 2018 Apr;138:271-281. doi: 10.1016/j.diabres.2018.02.023. Epub 2018 Feb 26. PMID: 29496507

⁵ Green, A., Hede, S.M., Patterson, C.C. et al. Type 1 diabetes in 2017: global estimates of incident and prevalent cases in children and adults. *Diabetologia* 64, 2741–2750 (2021). <https://doi.org/10.1007/s00125-021-05571-8>

⁶ Basu S, Yudkin JS, Kehlenbrink S, Davies JI, Wild SH, Lipska KJ, Sussman JB, Beran D. Estimation of global insulin use for type 2 diabetes, 2018-30: a microsimulation analysis. *Lancet Diabetes Endocrinol*. 2019 Jan;7(1):25-33. doi: 10.1016/S2213-8587(18)30303-6. Epub 2018 Nov 21. Erratum in: *Lancet Diabetes Endocrinol*. 2019 Jan;7(1):e1. PMID: 30470520

⁷ https://apps.who.int/gb/ebwha/pdf_files/WHA74/A74_R4-en.pdf

BUILDING FORWARD BETTER

Four key themes emerged from discussions in the first part of the Global Diabetes Summit that will inform the work of the WHO Global Diabetes Compact moving forward:

1 The triumph of the discovery of insulin is being undone by the tragedy of unequal distribution



“Diabetes has been treatable for 100 years. It is time we ensure that the treatment is made available to all”.

Erna Solberg
Former Prime Minister of Norway (2013-2021)

Several participants spoke of the urgent need to increase access to insulin and related health products, such as blood glucose meters and test strips. While the discovery of insulin gave people living with diabetes the ability to live healthy and productive lives, one century on, far too many people continue to miss out.

2 Every person living with or at risk of diabetes needs a strong health system



“Historically, global health efforts have focused on combating infectious diseases. This focus has left the health systems and responses ill-prepared to detect and treat NCDs like diabetes, and to minimize other NCD risk factors... As we seek to better recover from the COVID-19 pandemic, we need to build stronger primary health systems that can address both infectious and noncommunicable diseases like diabetes”.

Henrietta H. Fore
Executive Director, UNICEF

Integrating diabetes services into primary health care systems is crucial to ensure people receive timely diagnoses, treatment and care. Including care for diabetes at the primary health care level can substantially improve the management of NCDs. However, many countries, particularly in low- and middle-income settings or those without comprehensive universal health coverage, are not sufficiently resourced to provide accessible and affordable NCD care and medicines within their health systems.

3 It's essential that people living with or at risk of diabetes receive a range of services, no matter who they are or where they live



"We need to ensure there is more inclusive care and management of diabetes globally [including] through adding value and emphasis of people with lived experience, and identifying them as key stakeholders. Every person deserves the right to have access to basic resources for his or her care".

Dr Apoorva Gomber
Beyond Type 1

Several interventions in the Global Diabetes Summit reached the same conclusion: it is not sufficient to improve diabetes outcomes around the world if these improvements are in high-income countries alone. Through the Global Diabetes Compact Forum and country work, information and views will be shared between WHO and members, and between members themselves, to improve access to services and the adoption of WHO technical products globally.

4 Embracing the meaningful engagement of people living with or at risk of diabetes means less death, less shattered health systems, and less economic misery.



"The price of lack of access, lack of education, and lack of affordability is, unfortunately, the loss of human life. We choose to honour all the people who have been lost. We will come together to create joint solutions that change the lives of generations to come".

Cyrine Farhat
Positive on Glucose, Lebanon

The Global Diabetes Summit also focused on operationalizing the meaningful engagement of people living with or affected by diabetes. Panel discussions were held around operationalization in the following key ways:

- moving from global to local governance, to translate international political commitments into tangible outcomes at the local level;
- fostering collaboration and partnerships, including with stakeholders from the public and private sectors to overcome issues such as barriers to access and learning from

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