



## Failing to address access to insulin in its centenary year would be a catastrophic moral failure

"I need to be blunt: the world is on the brink of a catastrophic moral failure—and the price of this failure will be paid with lives and livelihoods in the world's poorest countries."<sup>1</sup> This statement, from WHO Director-General Tedros Adhanom Ghebreyesus, made as he opened the annual WHO Executive Board meeting in January, 2021, concerned the inadequate access to COVID-19 vaccines for low-income and middle-income countries (LMICs).<sup>1</sup> But the same phrasing—that of moral failure—could equally be applied to the absence of concrete action on access to insulin in 2021.

2021 marks the centenary of the discovery of insulin.<sup>2</sup> About 70 million people worldwide require insulin for survival or better management of their diabetes. However, the availability and affordability of insulin remain poor in many contexts because of various global and national factors.<sup>3</sup> As noted by former WHO Director-General Margaret Chan, "People with diabetes who depend on life-saving insulin pay the ultimate price when access to affordable insulin is lacking."<sup>4</sup>

At the 2021 WHO Executive Board meeting, a draft decision<sup>5</sup> emphasised diabetes as a global health challenge. Although highlighting the importance of diabetes in this way is important, the document failed to provide any recommendations on the issue of access to insulin. In this respect, the only relevant part of the text was a statement concerning the encouragement of "Member States and the Secretariat to recognise and to celebrate in 2021, as appropriate, including in the margins of the Seventy-fourth World Health Assembly, the centenary of the discovery of insulin".<sup>5</sup>

A centenary can be a time for celebration. Although insulin has changed the lives of countless people with diabetes (both type 1 and type 2), the time for celebration has not yet arrived. Instead, this centenary should be a time to address the underlying issues that result in many of the people who are in the greatest need of insulin not being able to access it. The global community needs to align with the spirit of Frederick Banting, Charles Best, and James B Collip, who sold the patent rights for insulin to the University of Toronto for US\$1 each, with Banting reportedly saying "Insulin belongs to the world, not to me."<sup>6</sup>

Some important steps have been taken in the past couple of years, including the addition of insulin to WHO's prequalification programme and the launch of WHO's Global Diabetes Compact. Governments around the world provide diabetes care and insulin, to varying degrees, based on available resources, health-system capacity, and political will. Non-governmental and civil society organisations and academic groups have launched campaigns, done research, provided care, and managed donation programmes. Even the private sector has launched various initiatives, from differential pricing to donations.

However, in 2021 there needs to be a new set of ambitious global and national actions, building on previous commitments such as: the International Covenant on Economic, Social and Cultural Rights; the Political Declaration of the Third High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases; the Sustainable Development Goals; and WHO's triple billion targets. To reaffirm these commitments and address the complex issues hampering access to insulin worldwide, concrete actions for improving access to insulin for WHO, its member states, and the global community must be presented at the 2021 World Health Assembly (May 24 to June 1) in the current draft decision on diabetes or in a specific resolution on insulin (panel).

These actions need to tackle both global and national factors. Globally, the insulin market is dominated by three multinational companies, affecting national

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For more on the WHO insulin prequalification programme see <https://www.who.int/news/item/13-11-2019-who-launches-first-ever-insulin-prequalification-programme-to-expand-access-to-life-saving-treatment-for-diabetes>

For more on the WHO Global Diabetes Compact see <https://www.who.int/news-room/events/detail/2020/11/14/default-calendar/world-diabetes-day-2020-introducing-the-global-diabetes-compact>

### Panel: Action on access to insulin in the centenary year

- Despite having been discovered 100 years ago, access to insulin remains challenging in many settings worldwide
- The centenary in 2021 should not only serve to commemorate and celebrate the discovery of insulin, but should also be used as an opportunity to advocate and demand urgent action to address the underlying factors limiting access
- At the 2021 World Health Assembly, concrete actions for improving access to insulin for WHO, its member states, and the global community need to be presented in the current draft decision on diabetes or in a specific resolution on insulin

availability and affordability.<sup>7</sup> High prices need to be addressed by improving transparency on pricing and cost of production; promoting local production where appropriate; increasing uptake of biosimilar insulins through the strengthening of regulatory processes; developing pooled procurement mechanisms; and providing impetus for differential pricing mechanisms. The private sector has a pivotal role in aligning with these actions. A new business model should be a priority for all LMICs, including differential pricing, total price transparency, and independent monitoring. The largest increase in diabetes prevalence in the future will be in LMICs, thus providing a large-volume market, but this market is currently seen as having low monetary value. Companies in other sectors have capitalised on this large-volume, low-value challenge.<sup>8</sup>

Health systems need to ensure access to quality care for people with type 1 and type 2 diabetes, which requires investments by governments and donors. The specificities of access to insulin and diabetes care in humanitarian emergencies also need to be included in the global diabetes agenda.<sup>9</sup> National diabetes programmes, developed in consultation with people with diabetes, should be included in an overall non-communicable diseases strategy that incorporates access to insulin, other medicines, delivery devices, self-monitoring equipment, and care in alignment with the universal health coverage agenda. Countries also need to improve supply-chain management for insulin, from its selection, procurement, distribution, and prescription to its use. To ensure an affordable price for individuals, not only does procurement need to be strengthened, but mark-ups within the supply chain should be removed in the public sector and regulated in the private sector.

Innovation can be a driver for improving diabetes care. All innovations should have the individual with diabetes in mind and access should be considered an integral part of the development of new medicines, treatments, and self-monitoring equipment. Where necessary, flexibilities with respect to intellectual property should be used to avoid undue barriers to access. Innovation should encompass not only new insulins or self-monitoring equipment but also new ways of delivering diabetes care. Civil society and academia are part of this innovation ecosystem. Additionally, civil society has a crucial role as an independent voice; free of conflicts of interest and led by the perspectives and needs of

people with diabetes, civil society is able to hold WHO, governments, and the private sector accountable.

In 1925, Robert D Lawrence described the prognosis of type 1 diabetes in his book *The Diabetic Life* by stating: “Now modern discoveries, particularly insulin, have completely changed the outlook.”<sup>10</sup> Although this statement rings true for many people with type 1 diabetes in high-income settings, their peers in LMICs still face a desperate situation in that, more often than not, this century-old discovery is neither available or affordable to them. We need to be blunt—urgent action is required to address access to insulin and to avoid another catastrophic moral failure in 2021.

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- Ghebreyesus T. WHO Director-General's opening remarks at 148th session of the Executive Board. Jan 18, 2021. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-148th-session-of-the-executive-board> (accessed Jan 28, 2021).
- Hegele RA, Maltman GM. Insulin's centenary: the birth of an idea. *Lancet Diabetes Endocrinol* 2020; **8**: 971–77.
- Beran D, Lazo-Porras M, Mba CM, Mbanya JC. A global perspective on the issue of access to insulin. *Diabetologia* 2021; published online Jan 24. <https://doi.org/10.1007/s00125-020-05375-2>.
- WHO. Global report on diabetes. Geneva: World Health Organization, 2016.
- WHO. Addressing diabetes as a public health problem. Executive Board, 148th session, agenda item 6. Jan 21, 2021. [https://apps.who.int/gb/ebwha/pdf\\_files/EB148/B148\(6\)-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/EB148/B148(6)-en.pdf) (accessed Feb 2, 2021).
- Delle Palme R. Insulin patent sold for \$1. Banting House. Dec 14, 2018. <https://bantinghousehsc.wordpress.com/2018/12/14/insulin-patent-sold-for-1/> (accessed Jan 8, 2021).
- Beran D, Ewen M, Laing R. Constraints and challenges in access to insulin: a global perspective. *Lancet Diabetes Endocrinol* 2016; **4**: 275–85.
- Simanis E. Reality check at the bottom of the pyramid. Harvard Business Review. June, 2012. <https://hbr.org/2012/06/reality-check-at-the-bottom-of-the-pyramid> (accessed Feb 2, 2021).
- Bouille P, Kehlenbrink S, Smith J, Beran D, Jobanputra K. Challenges associated with providing diabetes care in humanitarian settings. *Lancet Diabetes Endocrinol* 2019; **7**: 648–56.
- Lawrence RD. *The diabetic life*. London: J & A Churchill, 1925.