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Endemic diabetes in the world's poorest people



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In many ways, type 2 diabetes is the model disease of the modern non-communicable disease (NCD) movement. Calls for urgent action to address type 2 diabetes have highlighted the alarming increase in obesity worldwide, driven by ageing, urbanisation, and economic development. Epidemic has been the keyword, with an estimated 381 million adults with diabetes in 2013 projected to increase to 592 million by 2035.¹ In some regions, diabetes now affects a third of the adult population. Nearly all of the NCD monitoring targets agreed on at the 2013 World Health Assembly aim, in part, to halt this surge of unhealthy lifestyles and its devastating consequences.²

For the world's poorest people—the roughly 1 billion living on less than US\$1.25 per day—diabetes represents a different challenge. Located predominantly in sub-Saharan Africa and south Asia, the poor are mostly subsistence farming families with very low rates of obesity.³ As a result, the poorest billion are less likely to have typical type 2 diabetes. Instead, they have long endured a weakly documented burden of type 1 diabetes, affecting as much as 0.1% of school-aged children, and atypical forms of diabetes affecting more than 1% of normal-to-underweight adults.^{4,5} A child with type 1 diabetes in this setting will often survive for less than a year.⁶ By contrast, a child with diabetes in the USA can expect to live into old age. The scarcity of diagnosis and treatment for relatively rare, complex, and inadequately researched disorders, such as diabetes, is an endemic emergency for the poor.

We are optimistic that this situation will improve. The political process started by the UN in 2011 has opened a window to address both the epidemic of diabetes linked to changing lifestyles, and the endemic challenge of diabetes in the world's poorest people. NCDs are likely to be included in the Sustainable Development Goals guiding development after 2015.⁷ Several low-income

countries, such as those convened by Rwanda in 2013, have already committed to equitable strategies for NCD control that include children and young adults.⁸

In 2014, The Leona M and Harry B Helmsley Charitable Trust began support for two initiatives working over a 3-year period to develop systematic solutions to some of the bottlenecks to good diabetes diagnosis, treatment, and care the world's poorest people face.

The first initiative is a study called Addressing the Challenge and Constraints of Insulin Sources and Supply (ACCISS), led by Health Action International, Boston University, and the University of Geneva. This project focuses on the restricted availability and high price of insulin. Although most worldwide efforts to address insulin access have focused on product donation, the lowest available price for insulin is still around \$50 per year in most countries, which is many times higher than the annual price of other generic drugs used to treat chronic diseases. The ACCISS study responds to the International Insulin Foundation's call for 100% availability of insulin by 2022, which represents the centennial anniversary of the discovery of insulin.⁹ The results of the study will map the global insulin market, develop innovative models of supply, and develop an advocacy network to eliminate barriers to worldwide insulin access. If successful, the project will improve availability to insulin and substantially reduce the price of quality assured insulin, which varies greatly between countries.

The second initiative, led by Partners In Health, addresses health-system constraints of care for complex chronic disorders. So far, integrated interventions for diabetes in resource-poor settings have focused on treatment with oral drugs for type 2 diabetes as part of programmes that also include other low-risk disorders. Partners In Health, together with public-sector partners in Rwanda and Haiti, has been able to improve the reliability of insulin management at

district hospitals by training dedicated teams of nurses to provide an integrated set of high-complexity chronic care services.¹⁰ In addition to care of insulin-dependent patients, these services provided by the dedicated teams include care for patients with heart failure; chronic respiratory disease; anticoagulation management; basic echocardiography to diagnose rheumatic heart disease and cardiomyopathies; and pain management and palliative care for patients with cancer. Over the next 3 years, in cooperation with the Rwanda Biomedical Center and Rwanda Ministry of Health, the Rwanda Diabetes Association, the University of Rwanda, the Fondation Haïtienne de Diabète et de Maladies Cardio-Vasculaires, the Kay Mackenson Center, and the Haitian Ministry of Health, Partners In Health will strengthen this model of integrated care for complex, chronic conditions at secondary facilities in Haiti and Rwanda, and also support further decentralisation of services in rural areas to promote earlier detection and treatment of diabetes and its complications in children and young adults.

Finally, Partners In Health will work with a network of low-income and middle-income countries and technical experts to review what is known about the diabetes burden and integrated interventions in extremely poor populations. A conference to report findings from this effort is planned for early 2017.

The global disparity in management and survival of children and young adults with diabetes should serve as a powerful stimulus to plan and finance integrated improvements in health systems for the poorest billion people worldwide. Improvement of the availability and reduction of the price of quality-assured insulin will be both a requirement and result of this process.

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NICE draft type 2 diabetes guidelines: a cause for concern

Recently, the American Diabetes Association (ADA) and European Association for the Study of Diabetes (EASD) published an update to a position statement on the management of hyperglycaemia in type 2 diabetes.¹ In January, 2015, the UK National Institute for Health and Care Excellence (NICE) released for consultation a draft of its updated guideline on type 2 diabetes in

adults.² Both had the same objectives and presumably reviewed much of the same evidence, but although the ADA/EASD consensus has been widely accepted, areas of the draft NICE guidelines surrounding the management of hyperglycaemia have attracted widespread criticism and raised substantial concern among diabetes experts.^{3–5} So, what has gone wrong?

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