COMMENTARY

Tackling diabetes care at a population level

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In the run-up to its Virtual Annual Meeting in September 2020, the European Association for the Study of Diabetes (EASD) launched a series of videos on its e-Learning platform with the catchy title of Around the Diabetes World in 80 Days.1 The videos consisted of 3- to 4-min messages from (clinical or research) leaders in diabetes care from 80 different countries around the world. The national representatives were asked to summarise the challenges and opportunities in diabetes care and research in their region. Common themes that ran through the series of video messages included (1) the need for accurate ‘counting’ of individuals living with diabetes to facilitate proper organisation and delivery of services; (2) the challenge of identifying individuals living with undiagnosed diabetes, estimated to be between 30% and 50% in some countries; (3) education of healthcare professionals (especially those in primary care) to deliver high-quality diabetes care; and (4) problems with inequality of access to services either by virtue of immigration status or due to lack of health insurance.

The first step in improving the quality of diabetes care at a national level is to be able to measure it accurately. The Euro Diabetes Index was a 2014 publication from a Scandinavian Clearinghouse in which the authors collected a set of data from 30 European countries with the intention of ranking them in terms of their approach to the organisation and delivery of diabetes care.2 Similar to the themes from the EASD’s Around the Diabetes World in 80 Days videos, the criteria on which rankings were based included (1) having a national or regional diabetes registry; (2) having an approach to screening or early detection of diabetes; (3) providing access to care for all people living with diabetes; and (4) a set of measures of the outcomes of care delivered in that country. Countries that ranked highest in the Index tended to have national diabetes registries, a strong public health approach to the organisation of care and provided universal access to care. Countries that ranked lower down in the Index tended not to have some or all of these attributes.

Whatever challenges countries in Europe and North America face in improving the delivery of diabetes care, the scale of the challenge in low- and middle-income countries (LMICs) is orders of magnitude greater.3,4 A lack of resources for delivering diabetes care, inadequate training of healthcare professionals in diabetes care delivery and challenges with delivering education in self-management are just some of the issues faced in the LMIC setting. The paper by Nagpal and colleagues in the current issue highlights the scale of the problem in Delhi, the capital of India.5 The authors conducted a rigorous epidemiological survey of a representative sample of residents from across all social classes. Baseline demographic data in more than 850 individuals combined with fasting biochemical measures in 800 participants resulted in a comprehensive snapshot of the quality of diabetes care across the city. The results showed that very few participants had received standard measures such as HbA1c, Blood pressure and low density lipoprotein (LDL) Cholesterol (the so-called ABC’s of good diabetes care) in the previous 12 months. Even fewer had screening for retinopathy or foot problems. The biochemical measures showed that the majority of participants had glycaemic and lipid levels that were well above the target.

The current study builds on an earlier report (using similar population-wide sampling methodology) by the same group that looked at the quality of diabetes care in middle- and high-income areas of Delhi where health insurance was...
common. A strength of the current report was that the authors included the urban poor (mostly uninsured) as well as the urban wealthy (mostly insured). Thus, suboptimal glycaemic control (HbA$_1c$ > 10%; 42% in the earlier report vs. 58% in the current study) and suboptimal lipid control (LDL cholesterol > 100 mg/dl; 30.9% in the earlier report vs. 67.2% in the current study) were both increased. The percent of individuals with blood pressure > 140/90 mm Hg reduced from 63.2% in the earlier report to 57.3% in the current study. Apart from the blood pressure findings most measures of the quality of diabetes care in Delhi deteriorated compared with the survey undertaken 13 years earlier. Although Delhi does not have the problem of migrant population as a significant burden on its healthcare delivery system, virtual lack of health insurance makes out-of-pocket expenditure the only means to afford healthcare services. This represents an example of the Inverse Care Law (of Tudor Hart) which states that those members of society who most need healthcare are also the ones least likely to receive it. This topic and the related migration of rural to urban dwelling has been the subject of a recent commentary from the Public Health Foundation of India.

How do we interpret the findings of the Nagpal survey(s) and place them in the wider context of health and diabetes care in India? Indian healthcare systems face the double trouble of a rising burden of non-communicable diseases (NCDs), diabetes being one of them, whereas the communicable disease burden is yet to reach its nadir. In an attempt to deal with the rising burden of NCDs, the Indian Government launched the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke in 2010, focusing on the importance of leading a healthy lifestyle, early diagnosis and management. Through Ayushman Bharat, the National Health Protection Mission, the government aims to establish 150,000 primary healthcare centres and to pay for health insurance for the people with low socio-economic status who need it the most but are unable to afford it. Given the large number of people with diabetes in India (80 million per current estimates), creating and maintaining a national diabetes registry is a tough task but eventually needs to be accomplished. Although the importance of educating Indian primary healthcare physicians in the detection and treatment of diabetes is appreciated, recent (2019–20) Economic Survey data released by the Government of India reports a doctor:population ratio of 1:1456, in stark contrast to the WHO recommendation of 1:1000, underpinning a huge shortage of primary care physicians in India. Furthermore, unlike in the West, the concept of a diabetes specialist nurse is virtually non-existent in India. Training nurses to deliver preventive and therapeutic diabetes care may go a long way to improving the overall quality of diabetes care.

In his book, *In Search of the Perfect Health System*, Mark Britnell, an expert on global healthcare systems, describes some of the challenges faced by countries in organising healthcare for their citizens. These include ageing populations, increasing prevalence of chronic disease and problems with integrating care between primary and secondary care. Acknowledging that the perfect health system does not exist, Britnell imagines what it might look like if it did exist and goes on to describe strengths of many health systems including some from LMICs (see Table 1). Take home messages from Britnell’s review of 26 different national healthcare systems include (1) that you don’t have a health system imposed on you; your health system reflects you (as a society); and (2) that while healthcare professionals are key to delivering care, socio-political factors are usually the drivers of change in health systems and healthcare delivery. The COVID-19 pandemic has highlighted this with fundamental changes occurring in the organisation and delivery of care in many countries. Not only was the scale of the change impressive but the speed at which it occurred was often weeks or months where previously it might have taken years or decades. Telemedicine, rapid vaccine approval and population-wide behaviour change are just some examples of these widespread changes (many still happening) in countries around the world. Another lesson from (the communicable disease) COVID-19 that is perhaps relevant to (the NCD) diabetes is the importance of a strong public health approach to the organisation and delivery of care including efforts to prevent diabetes both at the individual and at the whole population level. When the dust settles on the COVID-19 pandemic hopefully some of this learning can be applied to improving diabetes care in wealthy countries and LMICs alike.

**TABLE 1 What the perfect health system might look like.**

| What the perfect health system might look like. |
|-----------------------------------------------|
| The world does not have a perfect health system but if it did it might look like this: |
| • Values and universal healthcare of the United Kingdom |
| • Primary care of Israel |
| • Community services of Brazil |
| • Mental health and well-being of Australia |
| • Health promotion of the Nordic countries |
| • Patient and community empowerment in parts of Africa |
| • Research and development of the United States |
| • Innovation, flair and speed of India |
| • Information, communications and technology of Singapore |
| • Choice of France |
| • Funding of Switzerland |
| • Aged care of Japan |

From *In Search of the Perfect Health System* by Mark Britnell

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