Diabetic Medicine June 2019

**Editorial**

**Global Access to Insulin**

The WHO defines access to medicines as ‘the reliable and consistent availability of appropriate essential, quality medicines at health facilities, the rational prescribing and dispensing of such medicines, and ensuring that they are affordable. Out-of-pocket payments, if any, should be well within patients’ capacity to pay, and protection against catastrophic expenditure should be ensured [1].’ Against this background, I was saddened and shocked to read earlier this month in a BBC report about the story of Alec Smith, a 26 year old man from Minneapolis, who died in 2017 less than a month after he became too old to be eligible for health care on his mother’s insurance plan [2]. Despite working full time as a restaurant manager and earning $35,000 a year, he could not afford the health insurance or insulin he needed to treat his Type 1 diabetes and died from diabetic ketoacidosis. With a vial of rapid acting insulin costing around $280 in the USA, Alec’s insulin treatment amounted to $1,300 a month. The American Diabetes Association estimates that people with diagnosed diabetes incurred average annual medical costs of $16,752, of which about $9,601 was attributable to diabetes [3].

As nearly 40% of Americans are uninsured or face high deductibles (the amount that must be met by the individual before the insurance kicks in), Alec’s story is not unique. The BBC article highlights how many Americans are unable to meet the cost of insulin, with stories of people selling their family homes and possessions or rationing their insulin to make ends meet.

Part of the problem stems from the differential costs of insulin between countries and the BBC report describes people travelling to Canada or Mexico to buy insulin at a price that is up to ten times cheaper than in the USA. Eli Lilly has recently announced that it is cutting the cost of a vial of Humalog to $137 and Sanofi have introduced a scheme to limit insulin costs to $99 a month but why Americans still pay more than Canadians remains unclear. The explanation may lie in the complex and opaque system of rebates and differences in net and list price that apply. This means that a brand of insulin with minimal cost to the person with diabetes under one insurance scheme could cost the full list price under another.

If this situation can happen in the world’s wealthiest country, what hope lies for those in less affluent parts of the world when only one in two people globally and one in seven living in Africa have access to insulin [4]. In this month’s issue, Beran et al used data from the Market intelligence data, United Nations Commodity Trade Statistics for insulin trade, and the International Medical Products Price Guide to understand more about the cost of insulin [5]. Although 34 insulin manufacturers were identified, most countries rely on a small number of supplying countries with three companies supplying 99% of the market by value and 96%of the market by volume.

The study highlighted the wide variation in price across the global market; the average government procurement price for a 10-ml, 100-IU/ml vial between 1996–2013 was US$4.3 although prices were slightly higher in Africa (US$ 4.7) and low- (US$ 6.9) and low- to middle- (US$ 4.7) income countries. Although lower than the US costs described above, they need to be placed in the context of 10% of the world’s population surviving on an average of approximately US$2 per day.

The financial barriers to insulin treatment are a travesty nearly 100 years after the discoverers of insulin sold the patent for $1 with the aim of making this essential treatment accessible to all in need. Perhaps studies such as Beran’s will allow countries to use marketing information to negotiate better prices for insulin.

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References

1. World Health Organization (WHO). Addressing the global shortage of, and access to, medicines and vaccines. Geneva: WHO, 2018.
2. The human cost of insulin in America. <https://www.bbc.co.uk/news/world-us-canada-47491964>. Last accessed 23 April 2019
3. Economic Costs of Diabetes in the U.S. in 2017. American Diabetes Association. Diabetes Care. 2018 May;41(5):917-928
4. Basu S, Yudkin JS, Kehlenbrink S, Davies JI, Wild SH, Lipska KJ, et al. Estimation of global insulin use for type 2 diabetes, 2018-30: a microsimulation analysis. Lancet Diabetes Endocrinol 2019; **7**:25—33
5. Beran et al. A perspective on global access to insulin: a descriptive study of the market, trade flows and prices. DME13947