The burden of diabetes in sub Saharan Africa

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In sub Saharan Africa, diabetes has risen rapidly in the last 10 years or so [1]. It is thought to disproportionally affect younger people than in high-come settings and affect people in all sectors of society. Reliable evidence on the burden is missing. We don’t know works and does not work in diabetes control. In this week’s issue, Atun et al bring together and analyse critically the evidence in a Lancet commission. There are a number of simple and vital conclusions that emerge from this report.

Tens of studies using varying methodologies of varying quality have been done in different countries in Africa and nonetheless there remains a worrying lack of reliable evidence on key aspects of diabetes, including its prevalence. The studies report conflicting findings. Some may have hindered rather than informed policy or practice. The average diabetes prevalence reported is now a worrying 7.1%, and while this estimate has uncertainty surrounding it, it is clear that countries in Africa are facing a major public health crises with respect to diabetes. This disease and its complications could overwhelm health systems, cripple household expenditure and start to reverse some of the gains in health outcomes of recent years.

Sub Saharan Africa will need unique solutions that can only partially draw from studies done elsewhere [2]. Of note evidence on how diabetes diagnosis and management services should be organised, which the commissioners have collated carefully, is particularly scarce. It is unlikely that a single study could inform policy. Diabetes services are patchy. They continue to be hospital and doctor-led in a region where there are dire shortages of clinically qualified health care workers and where transport is limited and prohibitively expensive. Much can be learnt from the experiences of managing HIV-infection, a condition that also requires chronic care. Fifteen years ago the cost of managing a person on HIV treatment was around £10,000 per year and very few were on treatment. Today, the cost of antiretroviral treatment is around £100 or so per person per year in many African countries and through task-shifting and decentralisation of services to primary care facilities [3], strategies that were informed by research, more than 12 million people are now receiving antiretroviral therapy. However, only about 60% of people in Africa know their HIV status and just over half of HIV-infected persons who present at health facilities are alive, in care and virologically suppressed one year later [4-6].

Expenditures in diabetes clinical and public health research is very low, a fraction of that for HIV-infection. The data are scarce but the drop-off from the cascade of care is, as expected, far greater in persons with diabetes and this is not going to change unless we invest in research that can inform strategies for diagnosing and managing diabetes in the African setting. We have made so much progress against HIV against all the odds. For diabetes, we should be way ahead of the game as there are old, cheap and effective drugs such as metformin available. The costs of implementing simple effective interventions to control diabetes and associated research can be counted in millions. The commission estimates that costs of diabetes to the region was almost $20 billion in 2015, about 1.2% of cumulative GDP and that the cost will triple to $60 billion per year by 2030. These are enormous costs for a continent where resources are so scarce.

The commission recommends a sensible and simple pathway forward for diabetes control – that is to focus on managing the disease and preventing complications given the scarce resources. Primary prevention through diet and lifestyle is vital but will occur slowly, and as we have learnt for HIV, we will get better at doing prevention if we get the care and management right. It is critical that research is done to evaluate diabetes services integrated into other chronic disease control programmes, including HIV-infection and tuberculosis, as these appear to increase the risk of diabetes. Further, the challenges that patients face in accessing chronic care and those faced by the health system to deliver such care, have substantial overlap.

We also need a better understanding of the disease that we are dealing with in Africa. What are the risk factors for diabetes – for example, does diabetes occur in persons of lower BMI in Africa than in high-income settings? What is the incidence and nature of the complications? How should we diagnose diabetes? Is screening useful? What is the long-term impact of poor nutrition in fetal and early life? What is the burden and outcomes from gestational diabetes? What is the ratio of Type 1 to Type 2 diabetes? All of these and other key research questions are discussed in the commission together with a review of the limited background literature.

This commission represents a game changer in the field. It lays out the evidence, the priorities and gaps in knowledge that could enable research and control efforts to be scaled up. The ball is now in the court of researchers, research funders and the policy makers.

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