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Controlling diabetes and hypertension in sub-Saharan Africa: Lessons from HIV programmes.

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The rates of diabetes and hypertension have risen sharply in sub-Saharan Africa but only a small minority of people living with these conditions are in regular care and among those who are, blood pressure and glycaemia are generally poorly controlled ^{1,2}. Diabetes and hypertension are amenable to intervention to achieve effective control ^{1,3} but complications from these two conditions are thought to be responsible for about 2 million premature deaths in sub-Saharan Africa each year ⁴. We discuss below the lessons that diabetes and hypertension programmes in Africa could learn from HIV programmes but many of the issues raised do apply to other non-communicable diseases and to other low- and middle-income settings.

Four decades ago in sub-Saharan Africa, HIV rates started to rise. Deaths from HIV peaked at around 2 million per year in the early 2000s and at that time, people who acquired HIV had a median survival of about 10 years ⁵. Survival improved with the scale-up of combination antiretroviral therapy, which began on the continent around 2003, about a decade after its introduction in high-income countries. Today, over 19 million African people (77% of those living with HIV) are accessing antiretroviral therapy ⁶ and have a near normal lifespan.

In the early days of the scale-up of antiretroviral therapy in Africa, HIV services were largely hospital-based with patient management done by specialist physicians and patients were required to visit clinics monthly for routine laboratory and clinical monitoring. However, mostly because of the severe shortages of clinical staff and the relatively high costs of transport for people to attend hospital-based services, it soon became clear that very few patients would be able to access treatment for HIV.

A combination of factors led to changes in the provision of HIV care to make it more accessible in Africa. Patients with HIV demanded accessible care as a human right ^{7,8}. Sustained advocacy led by patients and by civil society was a central factor in creating the

political momentum for investment of HIV care. Policy-makers provided the leadership to facilitate HIV care to be devolved to primary care. Simple protocols were introduced for treating, monitoring and following-up patients that did not require the skills of experienced clinicians and patients were empowered to better understand the disease and its control⁸⁻¹⁰. A standard first line antiretroviral therapy combination was introduced with the ability to make only 1-2 drug substitutions when needed. Clinical staff of all cadres were trained in HIV management. Adherence counselling for patients was introduced to maximise the benefit of treatment and for the first time, patient medical records that were kept at health facilities were created.

Alongside this, pivotal research studies demonstrated that HIV could be managed by non-clinical staff¹¹ and did not require routine laboratory monitoring¹², evidence which the different stakeholders could use to accelerate the scale-up of antiretroviral therapy. Today, most patients with HIV attend primary health care facilities every 3 months, predominately to pick up medicines and receive adherence support and in some settings, these services are provided in the community. Of those on antiretroviral therapy, viral suppression rates are close to 90%⁶. The major challenge now is to reduce HIV incidence (and mortality) in key populations, which account for 70% of new HIV infections on the continent¹³.

In contrast, models of health care for diabetes and hypertension in Africa have not evolved and kept pace with the massive rise in demand. In some settings, diabetes is still managed in higher-level facilities by specialist physicians and accessing such services incurs catastrophic costs for patients¹⁴ (hypertension services are available at primary care). Patients have limited access to information and counselling even though diet and lifestyle behaviour is central to the control of these conditions^{15,16}. Treatment and monitoring options are many and decisions on which drug combinations to use can vary according to a clinician's preference or the availability of the drugs. Patients are often tested monthly for glycaemia if they have diabetes and monthly for blood pressure if they have hypertension but medical records are not kept at health facilities.

The care of patients with diabetes and hypertension is clinically-focused as was once the case for HIV for a brief duration, and until that changes, it will be challenging for African health services to meet the demand for diabetes and hypertension. To bring change, services for diabetes and hypertension must get the combination of stakeholders – patients, civil society members and policy-makers – to work at the same time, ideally together, as HIV programmes did.

The biggest challenge faced by diabetes and hypertension programmes across sub-Saharan Africa is the shortage of medicines^{1,3,17}. Even in countries where medicines for diabetes and hypertension are on the Essential Medicines Lists, medicines supply is erratic. Over time, countries in Africa learnt that in HIV control, access to treatments is an essential part of controlling a disease and many control efforts that do not include access to treatments can be futile. Treatment costs of people with HIV exceeded £5,000 per patient per year when antiretroviral therapy was first available, but today in Africa, this cost has fallen to less than £50 per patient per year^{8,18}. Drugs for diabetes and hypertension are already available in generic form and many cost less than HIV medicines.

The problem of erratic supply of medicines for diabetes and hypertension needs international donors and governments to once again come together to finance the initial scale up of medicines for diabetes and hypertension. They did that with HIV and today, 60% of funding of HIV programmes in low and middle-income countries is from domestic sources⁶. It also needs African governments to work together and work with international bodies such as the World Health Organisation¹⁹ to buy medicines in bulk at a regional/global level to drive down the prices of medicines for diabetes and hypertension, as was done for HIV and is now being done for COVID-19 vaccines through the COVAX scheme (Coalition for Epidemic Preparedness Innovations: <https://www.who.int/initiatives/act-accelerator/covax>).

Strong civil society involvement was a central factor in creating the political momentum for investment of HIV-care infrastructure in Africa and to developing patient-centred HIV care and this patient-centred co-design approach must be applied to diabetes and hypertension services if similar gains in compliance and usability are to be seen. The rise of HIV infections was considered a global emergency which focussed minds of the different stakeholders to a common goal of improving health outcomes for people living with HIV. The rise in deaths from diabetes and hypertension in Africa is a global emergency of today.

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