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Converting HIV programmes into chronic care platforms?

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The response to the HIV epidemic is one of the greatest successes in the history of global health interventions.¹ In just 30 years, the widespread availability of free antiretroviral therapy (ART) in public-sector health systems has led to over 20 million people initiated on ART, including more than 5 million in South Africa in 2019.² The ART scale-up has also unmasked population ageing, especially in South Africa where treatment of HIV has led to a rapid recovery of life expectancy.¹ More recently,³ the disease-specific, or vertical programmes that typically deliver ART in public-sector health systems have also served as platforms for trialling innovative approaches to health-care delivery.

But what if, despite this success, we are still missing an opportunity to make the most of HIV treatment programmes in South Africa and elsewhere? A growing body of evidence suggests so, and these findings have implications for both research and policy. The burden of cardiovascular and metabolic disease in South Africa—and in many of the other low-income and middle-income countries that are among the hardest hit by the HIV epidemic—is already high and growing.⁴ For example, the recent South Africa Demographic and Health Survey⁵ showed that every two in three women in the country are overweight or obese (68%), along with one in three men (31%). Rates of hypertension and diabetes in South Africa are also approaching those seen in high-income countries, and in many communities the rates of cardiovascular and metabolic disease are similar in people living with HIV and those living without HIV.⁶ To achieve the sustainable development goal (SDG) target of reducing premature mortality from non-communicable diseases by a third by 2030, South Africa needs new approaches to address this high burden of chronic diseases.

One such approach is to leverage ART programmes as a health-system platform for prevention, diagnosis, and treatment of other chronic conditions such as hypertension and diabetes. Early evidence suggests that ART programmes—even in their current vertical form—are already boosting coverage with needed care for hypertension and diabetes. The first study⁷ to uncover a relationship between ART uptake and other chronic care was done in a population-based cohort of 5000 adults older than 40 years in rural Mpumalanga in South Africa, where HIV prevalence is 23%. In this population, the prevalence of overweight, hypertension, and diabetes was high in those living with HIV and those living without HIV—ART patients, however, were significantly more likely to receive hypertension screening, diagnosis and treatment, and diabetes screening and lifestyle counselling, compared with all other population groups.

In a follow-up study⁸ of people who met criteria for a diagnosis of diabetes or hypertension, those living with HIV who were virally suppressed on ART had substantially higher rates of awareness and treatment for their hypertension and lower mean systolic blood pressure and mean glucose, compared with people living without HIV. These findings were recently replicated in a rural population in another province of South Africa, KwaZulu-Natal, where researchers surveyed 8000 adults older than 15 years, among whom 26% were living with HIV.⁹ Most people living with HIV (>80%) were virally suppressed on ART. Again, the patients on ART in this survey had high hypertension prevalence (18.0%) but were significantly more likely to be aware, or in care and treated for comorbid hypertension than those who were not living with HIV.

Although current ART programmes are still mostly vertically organised, they seem to induce needed care for important chronic diseases other than HIV. Future research should identify the mechanisms by which these unintended—but highly desirable—health-system spillover effects are caused in South Africa and whether these effects are occurring elsewhere, especially in other countries in sub-Saharan Africa that have strong HIV care programmes. Future research should also identify and trial novel approaches to leverage this so-called ART advantage to build chronic-care platforms based on current ART programmes. Such studies should further assess possible negative consequences for HIV care such as increased wait times and the performance of health workers caring for people with multiple comorbid clinical conditions. This research agenda is aligned with South Africa's Ideal Clinic initiative.¹⁰ Implementation science could generate knowledge about how to best transfer and scale such integrated models of chronic care throughout sub-Saharan Africa.

This research could inform current policy debates regarding achieving and sustaining ART delivery for around 40 million people living with HIV, as the global development agenda has moved from the millennium development goals—which had a strong focus on HIV as one of three priority diseases—to the SDGs—which have a far broader focus on health systems. In addition to specific targets for HIV, cardiovascular and metabolic diseases, the third SDG aims to achieve universal health coverage for all essential health services (SDG 3.8). The questions of whether and how to integrate HIV treatment with other chronic care thus intersect with the larger policy debate on how to achieve universal health coverage in resource-poor communities worldwide. Evidence-based integration of screening, diagnosis, and care for cardiovascular and metabolic disease into ART programmes in South Africa and

other low-income and middle-income countries, would most likely be a feasible and powerful next step towards achieving universal health coverage. In the long term, innovative approaches such as chronic care platforms might be the most promising path to realising universal health coverage. These comprehensive models of care require design research and careful testing, and could take years to implement. However, such timelines should not deter from integrating care for multiple chronic diseases into existing ART programmes. As the evidence from rural South Africa shows, people with HIV—and the nurses and matrons leading vertical ART programmes—are already voting with their feet for such an approach. Governments and donors should follow their lead.

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