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HIV and covid-19 in South Africa

The two pandemics must be confronted collectively and globally

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Consensus is growing that the omicron variant of SARS-CoV-2, which has 50 mutations differentiating it from the original virus, may have evolved during a prolonged infection in someone with a compromised immune system.^{1,2} Omicron's likely emergence in southern Africa has raised the question of whether this heavily mutated variant owes its origin to the HIV pandemic, which continues to be a common cause of immunodeficiency in the region.

Around 8 million of South Africa's 60 million population live with HIV, roughly a fifth of all people with HIV globally.³ A high proportion of people newly diagnosed in South Africa are at an advanced stage of HIV infection (defined as a CD4 count <200 cells/mm³), by which point the immune system is extremely vulnerable.⁴ Many people with advanced HIV in South Africa have started treatment at least once but are not in continuous care or have discontinued treatment.⁵ This underscores the complexity of living with HIV in a resource poor setting, where poverty and stigma are often compounded by unaffordable costs associated with treatment and poor access to mental health services.^{6,7} Covid-19 has only made these existing challenges harder, having resulted in reduced access to routine care and worrying falls in HIV testing, treatment, and prevention.^{8,9} Together this has left large numbers of immunocompromised people—who are at greater risk of prolonged infections—both more vulnerable to covid-19 and potentially more likely to host mutations of SARS-CoV-2.^{1,10,11}

How should we tackle these synergistic pandemics? The UN's human rights approach has been critical to the effectiveness of responses to HIV and could be constructively applied to covid-19.¹² This involves improving equitable access to all aspects of healthcare, with service users participating in decision making and providers held accountable for high quality care, while simultaneously addressing the social determinants of health, including discrimination and stigma. These concepts could be applied to covid-19 by channelling public health measures (including vaccination and contact tracing) through existing civil society structures and meaningfully involving citizens – especially marginalised groups such as people with HIV—in the process.

The legacy of South Africa's HIV activism offers a framework on which to model the community engagement that could underpin a human rights based response to covid-19. For two years, the Movement for Change and Social Justice has repurposed strategies developed by HIV activist group the Treatment Action Campaign, which in the 1990s mobilised South Africans with HIV to campaign for

their right to health through litigation, protest, advocacy, and human rights education.^{13,14} The Movement for Change and Social Justice has delivered key aspects of local public health responses to covid-19 in South Africa, while also advocating for communities and averting stigma. Further empowerment and integration of such civil society groups could transform access to covid-19 vaccination, diagnostics, and treatments in low and middle income settings.

Delivering sufficient vaccines to suppress both transmission and the emergence of variants requires ending “vaccine nationalism,” the stockpiling of vaccines for maximal national coverage at the expense of international distribution.¹⁵ As many people across Europe and North America receive a third vaccine dose, just 7% of people in Africa have had two.¹⁶ The global vaccine distribution mechanism Covax delivered fewer than half of the two billion vaccines pledged by the end of 2021, which was already an extremely modest goal.¹⁷ A prescient modelling study published in *Science* in August 2021 concluded that “unequal vaccine allocation will result in sustained transmission ... which may result in the emergence of variants with novel antigenicity and/or transmissibility.”¹⁸

The “hoard and boost” approach to variants being taken in many high income countries is as futile as it is unethical. The next variant of concern should be pre-empted by increasing vaccination rates in populations with low levels of immunity and high rates of immunocompromise, rather than tackled after its first appearance in a wealthy country.

An urgent refocus on HIV testing and prevention strategies is required to reverse covid-19's devastating effect on access to primary healthcare. People with HIV also need increased support to access treatment, which should include both specific modifications to routine care, such as dispensing for longer periods, and broader approaches to the determinants of health, such as financial and psychological support.¹⁹

Moving towards an integrated approach to the two diseases will become essential as health systems must preserve or improve HIV care while accommodating the ongoing covid-19 pandemic. Integrated health services also create opportunities to prioritise vaccination of people with HIV and others with compromised immunity. However, to avoid further stigmatisation and discrimination resulting from targeted interventions, this must be community led and delivered within existing public health structures.

As the omicron variant closes in on a world entering its fifth decade of the HIV pandemic, global leaders have the tools to end the health and wealth

inequalities that are driving both viruses. But while each pandemic continues to fan the flames of the other, neither will end unless both do.

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