

Eliminating HIV vertical transmission – a long road ahead

The World Health Organization (WHO)'s global goal is to end HIV and AIDS as a public health problem by 2030. As Richardson *et al.*^[1] in this issue point out, a critical but unmet step towards achieving this aim is to halt new HIV infections among children.

Elimination status requires a final vertical (perinatal and postnatal) HIV transmission rate of <5%, and an annual paediatric HIV incidence of <50 per 100 000 live births. South Africa achieved a vertical transmission rate of 3.9% in 2021, but our paediatric incidence exceeded 750 live births per 100 000 due to an antenatal HIV prevalence of 30.7%. In settings where maternal HIV prevalence is high it can be very hard to achieve the target case rate even with a low vertical transmission rate.^[2]

So far Botswana is the only high-burden country to be certified by the WHO as having achieved the so-called 'silver tier' on the 'path to elimination of HIV' criteria that were introduced in 2017.^[3] This requires an HIV case rate of <50 per 100 000 live births, a vertical HIV transmission rate of <5% and the provision of antenatal care and antiretroviral treatment to at least 90% of pregnant women. Namibia currently looks as though it will be one of the next countries to achieve this, with their Ministry of Health and Social Services launching the national roadmap for the elimination of mother-to-child-transmission of HIV and congenital syphilis. The aim is to achieve one of the tier status points on the WHO Path to Elimination targets by 2024 (personal communication, F Lule, WHO Africa Regional Office).

The concept of pre-elimination was introduced in 2017 to recognise progress in preventing vertical transmission of HIV in high-burden countries. We are a good example, with a vertical transmission rate <5%, but stubbornly high maternal HIV rates. However, validation for pre-elimination still requires at least 90% coverage across all three process indicator targets, with a rate of vertical transmission <5%. Most high-burden countries remain far from the case rate of <50 new HIV infections per 100 000 live births at the end of breastfeeding. The challenges lie in maternal HIV prevalence. As Richardson *et al.* point out, early maternal suppression through antiretroviral therapy is the foundation of preventing vertical transmission, but many women living with HIV fail to receive the sustained therapy required to do this, before and during pregnancy. The challenges to this are many, and include ongoing barriers to antiretroviral access, the time lag between introduction and implementation of revised policies, suboptimal training and knowledge of these policies by providers as guidelines have rapidly evolved, incomplete programme uptake and progressive drop-out through the cascade. As Goga *et al.*^[2] point out, as long as the maternal HIV prevalence is >10%, the target case rate cannot be achieved, even if the vertical transmission rate is reduced to 1%.

So should we be focusing entirely on achieving the target child case rate in the short term? These authors make the very valid point that the continuing gap between the current and target case rate is dampening enthusiasm of funders, policy-makers, managers and frontline service providers because they know how far they are off the target. In this increasingly competitive funding environment, driven by world events far beyond the control of the high-burden countries, perhaps it is time for a greater focus on and recognition of process targets to keep the momentum going.

On a clinical level, we obviously need to provide the best available care to our patients, and this means using labour and delivery as one of the opportunities for infant post-exposure prophylaxis.^[1] This requires recognising infants at high risk for vertical transmission at the time of delivery, since non-recognition is a missed opportunity in the pursuit of vertical elimination. In Richardson *et al.*'s study, infant high-risk status was not related to lack of maternal access to antiretroviral therapy, which was available to 83% of mothers >12 weeks before delivery. It was an absence of HIV viral load monitoring that caused the majority of high-risk deliveries.

As a country and a region, we are at the forefront of operational management of HIV, and can provide some of the best research available to global health bodies such as the WHO to help them to guide their policy directions and the operational support they provide to their member states. Donors, in turn, want the best return on their investments, seeking actions that result in concrete changes to population health status. As a grouping, those in clinical practice, those in public health policy and those of us who can act as advocates need to ensure that all evidence available is being used to guide policy, on a global and regional level. And we need to ensure that we do not get bogged down in 'targets' and use our clinical and public health experience to improve the lives of our patients and populations.

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1. Richardson TR, Esterhuizen TM, Engelbrecht AL, Slogrove AL. Recognition of infants at high risk for vertical HIV transmission at delivery in rural Western Cape Province, South Africa. *S Afr Med J* 2022;112(11):860-865. <https://doi.org/10.7196/SAMJ.2022.v112i11.16541>
2. Goga A, Singh Y, Jackson D, et al. Is elimination of vertical transmission of HIV in high prevalence settings achievable? *BMJ* 2019;364:1687. <https://doi.org/10.1136/bmj.1687>
3. Joint United Nations Programme on HIV/AIDS. Botswana leads the way for high HIV burden country certification on the path to eliminate vertical HIV transmission. Geneva: UNAIDS, 2022. https://www.unaids.org/en/resources/presscentre/featurestories/2022/july/20220727_botswana-leads-way-eliminate-vertical-HIV-transmission (accessed 17 October 2022).