

Strengthening quality of care for children who are HEU



The analysis by Amy Slogrove and colleagues in *The Lancet Global Health* contributes to increased understanding of the extent of future health needs of children in low-income and middle-income countries (LMICs) with high HIV prevalence.¹ Using 2019 UNAIDS global estimates of children who are HIV-exposed uninfected (HEU) as well as the UN Population Division estimates of the number of all children in each region or country, the authors produced four estimates: the regional or national prevalence of children who were HEU; the regional or national contribution of children who were HEU to the global population of children who were HEU; the proportion of children who were HEU and exposed to antiretroviral drugs; and the percentage change in the global population of children who were HEU between 2000 and 2018.

Of the 14.8 million (lower estimate 11.1, upper estimate 18.3) children who were HEU, 90% resided in sub-Saharan Africa and 5% resided in the Asia and Pacific region. Five countries accounted for 50% of all children with HEU globally: South Africa (3.5 million; 23.8%), Uganda (1.1 million; 7.5%), Mozambique (1.0 million; 6.6%), Tanzania (910 000; 6.1%), and Nigeria (880 000; 6.0%). The prevalence of children who were HEU exceeded 15% of the general child population in five southern African countries (eSwatini [32.4%], Botswana [27.4%], South Africa [21.6%], Lesotho [21.1%], and Namibia [16.1%]). Notably, 10.5 million (71.0%) of the 14.8 million children who were HEU were exposed to antiretroviral therapy (ART) in utero. These children are likely to be increasingly exposed to three antiretroviral drugs, considering the successful scale-up of the Option B+ policy (lifelong triple antiretroviral therapy for pregnant and lactating women) to prevent vertical HIV transmission.^{2,3} In 2018, the five countries with the highest number of children who were HEU were South Africa (3.5 million), Uganda (1.1 million), Mozambique (1.0 million), Tanzania (910 000), and Nigeria (880 000). Furthermore, between 2000 and 2018, the prevalence of children who were HEU in eastern and southern Africa increased from 3.6% to 5.5% of the child population, and the size of the population of children who were HEU more than doubled in Asia and the Pacific region, and eastern and southern Africa.

For example, between 2000 and 2018, the prevalence of children who were HEU increased by three times in eSwatini from 9.1% to 32.4% and increased by more than six times in South Africa from 2.9% to 21.6%.

Slogrove and colleagues suggest a multifaceted strategy, built on a foundation of coordinated collaboration between multilateral organisations, Ministries of health, health-care providers, researchers, and communities and families living with HIV to ensure that children who are HEU achieve the targets of the WHO Global Strategy: survive, thrive, and transform.^{1,4} The authors rightly recommend a series of preventive and monitoring strategies, including prevention of new HIV infections and unintended pregnancies in adolescent girls and women, since these drive the HIV paediatric case rate,² surveillance for pharmacovigilance, and investing in research cohorts and national monitoring.

Considering how difficult it is to sustain quality of care in LMICs,^{5,6} and the health care, political, and social issues faced by similar LMIC settings with high HIV prevalence,² it is important to establish which innovations will work to care for this growing population of children who are HEU. Should these children be treated in the same way as other children (ie, routine monitoring) or differently? On the one hand, rigorous prospective studies are needed to quantify how exposures (such as ART, HIV, background socioeconomic issues including poverty, and underlying morbidity) drive outcome disparities and to elucidate possible interventions to optimise the health of HEU children.⁷ Simultaneously, on the other hand, routine systems in these LMICs, are needed for long-term monitoring and management. Despite health system challenges, LMICs have managed to scale up ART programmes, offer reasonable care, and increase viral load suppression.⁸ Implementation science is needed to identify the feasibility, acceptability, and effectiveness of electronic tools such as longitudinal registers of pregnancies or births, electronic cohort monitoring systems, or national identifiers to monitor the health and outcomes of HEU children. Can multiple existing systems (eg, routine district health information and laboratory systems) be made interoperable, and usable by routine health workers for real-time tracking of patient's blood results? Can health workers be trained to use these systems, act on results, and provide personalised care

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within local communities? What type of multipronged approaches would enable children who are HEU, and indeed all children, to survive, thrive, and transform? Only continual dialogue and joint collaboration between facility staff, programme managers, policy makers, quality improvement officers, and researchers will enable these questions to be answered. Basic science research to track specific HEU cohorts and understand pathophysiology and outcomes, conducted in parallel with implementation science research, will aid local, national, and global understanding. Such research could facilitate action to ensure that children who are HEU survive and thrive, and that enabling environments are expanded to facilitate transformation.

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