

RESEARCH FOR AN AIDS FREE GENERATION:

A GLOBAL RESEARCH AGENDA FOR PAEDIATRIC HIV


An AIDS FREE generation is within reach with ‘super-fast-track targets’¹ developed to accelerate prevention and treatment of HIV among infants and children and contribute to ending AIDS by 2030. To achieve these targets, evidence is needed to inform global policy change and ensure better outcomes for infants and children across the HIV cascade.

In 2016, 2.1 million [1.7 million – 2.6 million] children were estimated to be living with HIV globally², 88% of them were living in sub-Saharan Africa. Around 50% of perinatally infected children die within the first two years of life if not started on treatment³. Yet in 2016, only 43% [36%-54%] of all children living with HIV were accessing antiretroviral treatment⁴. While the expansion of prevention of mother-to-child transmission interventions has led to fewer infants being born with HIV, many children continue to go undiagnosed and only 43% [37%-54%] of HIV-exposed infants are tested by the recommended age of two months⁵.

Critical barriers to scaling up paediatric HIV treatment and care remain, including the complexity of existing approaches to testing and treating children, lack of age-appropriate formulations to provide the most effective and tolerable drugs, and lingering difficulties around decentralizing and integrating HIV services into the broader maternal, child and reproductive health platforms. Innovative testing, treatment and service delivery strategies are needed to simplify and expand paediatric services, but evidence to support this is currently lacking.

New and better data are required to accelerate the introduction of innovations, overcome existing implementation challenges, and inform the development of normative guidance that will set the standard of care for children around the world. To overcome these barriers and challenges in a context of increasing funding constraints, efforts must be focused on generating targeted evidence that improves HIV programme implementation through a better understanding of what works for infants and children.

The World Health Organization (WHO) and the Collaborative Initiative for Paediatric HIV Education and Research (CIPHER) of the International AIDS Society (IAS) have undertaken a global research prioritization process. Through broad engagement with stakeholders, a global research agenda has been established, which is aimed at guiding research efforts and maximizing available resources. The agenda is comprised of priority research themes in the areas of testing, treatment, and service delivery for informing global policy change, and improving outcomes for infants and children living with and affected by HIV.



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METHODS

This process was based on the Child Health and Nutrition Research Initiative (CHNRI)⁶ methodology for setting priorities in health research, and was guided by a working group of experts in paediatric and adolescent HIV⁷. The scope of the exercise included children (up to 10 years of age) living with and exposed to HIV.

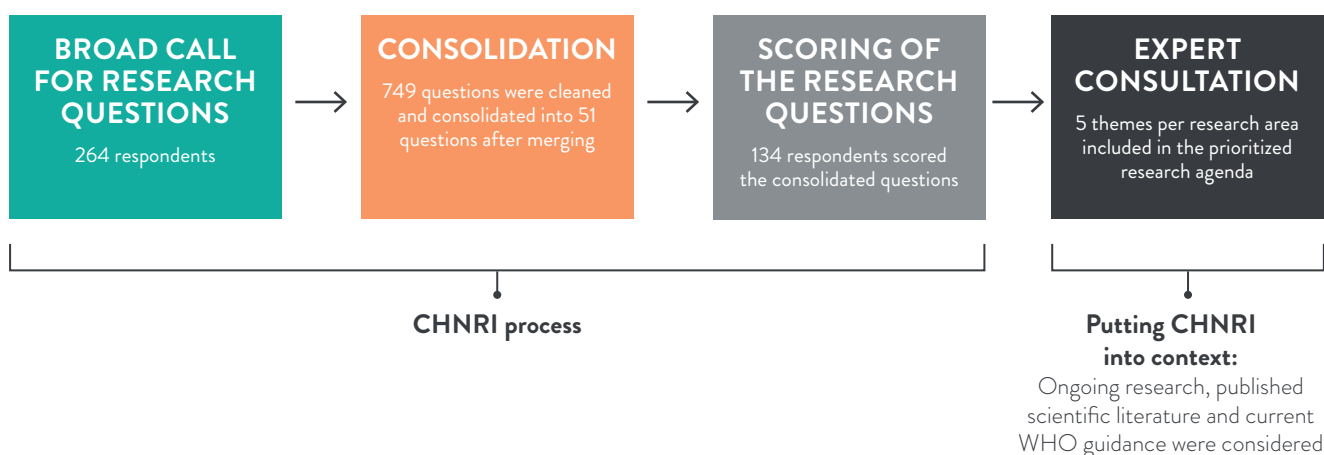
The main steps included:

A broad call for research questions: A survey calling for priority research questions and planned/ongoing studies was sent to a broad range of stakeholders⁸.

Consolidation: Submitted research questions were cleaned and consolidated through a thematic content analysis.

Scoring of the research questions: Respondents to the first survey were asked to score the consolidated lists of research questions against pre-defined CHNRI criteria, resulting in a prioritized list.

Expert consultation: To form the final research agenda, an expert consultation of researchers, UN organizations, civil society and community representatives, was held to review the top 10 ranked questions for testing, treatment and service delivery in the context of ongoing research, published scientific literature and current WHO guidance. Themes, rather than questions, were used for the final agenda.



KEY CONSIDERATIONS FOR IMPLEMENTATION OF THE RESEARCH AGENDA

The following considerations, which emerged from the research prioritization process, should be taken into account when implementing the prioritized agenda for infants and children:

- There is an urgent need to **strengthen national monitoring and evaluation systems** to obtain relevant disaggregated data (age, sex, region, mode of transmission, HIV-exposed uninfected children) for accurate monitoring of progress and challenges, informing policies and effective programme planning.
- **Better programmatic data** are needed to help assess the implementation of ongoing service delivery and determine what works best in specific contexts.
- Critically, **increased participation of civil society and community-based organizations** as key stakeholders is needed, especially in implementation research, advocacy and service delivery.
- While randomized clinical trials remain the gold standard in research, innovative approaches **to trial design** and implementation are needed to maximize their added value and expedite results.
- Innovative strategies, such as **using observational data** and big data collaborations, should be used in a broader way to inform policy and programme decision-making.
- **Modelling** can be an important tool to help bridge data gaps and optimize the data we have.
- Continuing **innovation in clinical and implementation science** is needed to provide new tools for more effective care for infants and children living with HIV.

TOP RESEARCH PRIORITIES FOR PAEDIATRIC HIV

TESTING

- Optimal placement and timing of novel diagnostic tools for point-of-care use
- Interventions to ensure timely linkage between HIV diagnosis, treatment and care
- Interventions or strategies to improve access to and uptake of HIV testing services for infants and children, particularly community-based approaches
- Factors that enable or hinder linkage to care and timely initiation of ART
- Effective, feasible and acceptable testing strategies (including routine testing at birth) at entry points other than antenatal care for identifying undiagnosed HIV-positive infants and children in different epidemic settings

TREATMENT

- Safety, efficacy, acceptability, pharmacokinetics and optimal dosing of existing and new antiretroviral drugs and formulations, particularly with novel drug delivery systems
- Strategies or interventions to improve adherence, and factors that impact their success
- Optimal prevention and clinical management of co-infections, particularly tuberculosis
- Impact of HIV infection and ART on short- and long-term outcomes, in particular non-communicable disease
- Short- and long-term virologic and immunologic outcomes of starting very early treatment in infants living with HIV (impact on functional cure)

SERVICE DELIVERY

- Strategies or interventions to improve access to, uptake of and retention in care, and factors that impact their success
- Service delivery models to improve individual and programmatic outcomes along the HIV cascade, including integration of comprehensive HIV treatment and care into the maternal and child health platform
- Psychosocial and family support strategies or interventions to improve individual and programmatic outcomes
- Strategies or interventions to improve and support parents, caregivers and healthcare providers to facilitate HIV disclosure to children, as well as factors that impact their success
- Strategies or interventions to reduce stigma and discrimination experienced by children and their caregivers



A CALL TO ACTION

Stakeholders involved in clinical and operational research in paediatric HIV can support the successful implementation of this agenda by actively engaging with the established priorities and integrating them into their activities in the following way:



For more information on the research agendas and the process that was followed, please visit:

<https://www.iasociety.org/CIPHER>

¹ PEPFAR, UNAIDS, UNICEF, WHO, Start Free, Stay Free, AIDS Free, A super-fast-track framework for ending AIDS among children, adolescents and young women by 2020, 2016.

² UNICEF, UNAIDS and WHO Global AIDS Monitoring Data, 2017.

³ Newell, ML, et al., 'Mortality of Infected and Uninfected Infants Born to HIV-Infected Mothers in Africa: A pooled analysis', The Lancet, vol. 364, no. 9441, 2 October 2004, pp. 1236–1243

⁴ UNICEF, UNAIDS and WHO Global AIDS Monitoring Data, 2017.

⁵ UNICEF, UNAIDS and WHO, Global AIDS Monitoring Data, 2017.

⁶ Rudan, I, Gibson JL, Ameratunga, S, El Arifeen, S, Bhutta ZA, et al. Setting priorities in Global Child Health Research Investments: Guidelines for Implementation of the CHNRI Method, Croat Med J, 2008, 49(6): 720-733.

⁷ The scope of the exercise included testing, treatment and service delivery for infants and children, including HIV-exposed uninfected children. HIV prevention in general, including prevention of mother-to-child transmission, was not within the scope of the process.

⁸ Including researchers, policy makers, implementers, healthcare providers, networks of young people living with HIV and community representatives.