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Minding the Gap: Setting Research Priorities related to HIV Testing, Treatment, and Service Delivery among Adolescents

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An estimated 2.1 million adolescents (ages 10–19) live with HIV, with 80% residing in sub-Saharan Africa [1]. Recently, adolescents have moved to the forefront of the global health and HIV agendas by their emphasis in major global strategies, including the United Nations Global Strategy for Women's, Children's, and Adolescents' Health [2], the Agenda for Sustainable Development [3], and Start Free, Stay Free, AIDS Free [4]. Despite this, critical research gaps remain as the available evidence indicates that adolescents living with HIV have higher rates of loss to follow-up [5], poorer adherence [6], and increased requirements for psychosocial support [7] compared to people living with HIV in other age groups.

Given limited resources, there is a need to prioritize research and support decision-making for health investments, especially for research in low- and middle-income countries. The Child Health and Nutrition Research Initiative (CHNRI) method was developed in 2005 to address this need and has since become the most widely used research priority setting methodology with over 50 applications, mainly in global child health [8, 9]. In brief, this method involves 1) defining the health issue, affected population, and timeframe for expected impact; 2) identifying experts including researchers, policy-makers, program managers, and funders to participate and submit research questions related to description, discovery, development, and delivery; and 3) scoring the questions based on criteria such as

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answerability, effectiveness, deliverability, reduction of disease burden, and impact on equity to produce a prioritized research agenda [9].

The World Health Organization has recently supported priority setting exercises using the CHNRI method on adolescent health topics including sexual and reproductive health [10], communicable diseases, injuries and violence, mental health, non-communicable disease management, nutrition, physical activity, substance use, and health policy [11]. These exercises have produced a list of priority research questions for adolescent health in low- and middle-income countries, which have been further analyzed qualitatively [12] to identify platforms for the delivery of adolescent health interventions, vulnerable populations, and relation to the United Nations Global Strategy for Women's, Children's, and Adolescents' Health, 2016–2030 [2]. Furthermore, the CHNRI methodology has been adapted to define adolescent health implementation research priorities at the national level in South Africa [13].

A recent application of the CHNRI priority setting method in adolescent health involved a collaboration between the World Health Organization (WHO) and the Collaborative Initiative for Paediatric HIV Education and Research (CIPHER) of the International AIDS Society to produce a global research agenda related to HIV testing, treatment, care and support among adolescents through 2030, which is published in a supplement in the *Journal of Acquired Immune Deficiency Syndrome* this month [14]. This comprehensive exercise generated 986 research questions on adolescent HIV from 323 experts based in 67 countries across all WHO regions, which were distilled into a prioritized research agenda. A novel methodological adaptation of the CHNRI method in this exercise was the consideration of the prioritized questions in the context of existing WHO policies, systematic reviews, recently published research, and ongoing or planned research [15]. This led to the identification of priority themes in the three adolescent HIV topic areas: testing, treatment, and service delivery.

In adolescent HIV testing, the top themes focused on interventions research, including the further development of strategies and interventions to improve access, uptake of HIV testing, and linkage of newly diagnosed adolescents to HIV treatment, especially for key populations [14]. Another top theme involved research to better understand the safety, accessibility, feasibility, and effectiveness of HIV self-testing among adolescents. At a policy level, age of consent policies were identified as potential barriers preventing adolescents from accessing HIV services, and further research on policies and laws regarding age of consent for HIV testing may be warranted.

In HIV treatment, research on strategies to sustain high levels of adherence and how to most effectively monitor adherence among adolescents were identified as top research priorities. Although non-adherence has been identified as a key challenge in the care of adolescents with HIV, evidence to support specific interventions is limited [16]. Understanding the safety, efficacy, and acceptability of novel drug delivery systems was also identified as a priority research theme. Finally, research on the prevention and clinical management of co-infections such as tuberculosis and on the impact of HIV and antiretroviral therapy (ART) on

short- and long-term outcomes of adolescents such as risk of non-communicable diseases were prioritized.

In HIV service delivery, the top priority theme involved research on interventions to improve retention in care as adolescents and young adults have been shown to have higher loss to follow-up rates than other age groups [5]. Strategies or interventions to support pregnant adolescents living with HIV and sexual and reproductive health outcomes in adolescents living with HIV were also identified as research priorities. Finally, given the numerous psychosocial stressors associated with living with HIV [7], the development of psychosocial support interventions for adolescents living with HIV was a priority research theme.

This prioritized research agenda is a call to action that can be supported through dissemination across global networks, particularly to potential funders. Although the suggested research topics are of global importance, the choice of research in specific settings should be adapted to the local context, and the supplement includes an article on the role of implementation science in adolescent HIV research [17]. Furthermore, the supplement provides specific guidance on the meaningful engagement of youth [18] given the need to assess the acceptability of the research topics to relevant stakeholders including adolescents themselves. The global research agenda for adolescent HIV reflects the input of over 300 experts around the world and provides a unique view into critical knowledge gaps needed to inform evidence-based policies and programs for adolescent HIV. The challenge now for the adolescent health community is to work towards closing these critical gaps by 2030.

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References

1. UNAIDS. Estimates [Online]. 2017. Available at: http://aidsinfo.unaids.org
2. United Nations. Global Strategy for Women's, Children's, and Adolescents' Health (2016-2030): Survive, Thrive, Transform. New York: United Nations Press; 2015. Every Woman, Every Child.
3. United Nations. Transforming our world: the 2030 Agenda for Sustainable Development. New York: United Nations Press; 2015.
4. PEPFAR, UNAIDS, UNICEF, WHO. A super-fast-track framework for ending AIDS among children, adolescents and young women by 2020. Geneva, Switzerland: UNAIDS; 2016. Start Free, Stay Free, AIDS Free.
5. Auld AF, Agolory SG, Shiraishi RW, et al. Antiretroviral therapy enrollment characteristics and outcomes among HIV-infected adolescents and young adults compared with older adults–seven African countries, 2004–2013. MMWR Morb Mortal Wkly Rep. 2014; 63:1097–1103. [PubMed: 25426651]
6. Nachega JB, Hislop M, Nguyen H, et al. Antiretroviral therapy adherence, virologic and immunologic outcomes in adolescents compared with adults in southern Africa. J Acquir Immune Defic Syndr. 2009; 51:65–71. [PubMed: 19282780]
7. Ramaiya MK, Sullivan KA, O'Donnell K, et al. A Qualitative Exploration of the Mental Health and Psychosocial Contexts of HIV-Positive Adolescents in Tanzania. PLoS One. 2016; 11:e0165936. [PubMed: 27851797]
8. Yoshida S. Approaches, tools and methods used for setting priorities in health research in the 21(st) century. J Glob Health. 2016; 6:010507. [PubMed: 26401271]

9. Rudan I, Yoshida S, Chan KY, et al. Setting health research priorities using the CHNRI method: VII. A review of the first 50 applications of the CHNRI method. J Glob Health. 2017; 7:011004. [PubMed: 28685049]

10. Hindin MJ, Christiansen CS, Ferguson BJ. Setting research priorities for adolescent sexual and reproductive health in low- and middle-income countries. Bull World Health Organ. 2013; 91:10–18. [PubMed: 23397346]

11. Nagata JM, Ferguson BJ, Ross DA. Research Priorities for Eight Areas of Adolescent Health in Low- and Middle-Income Countries. J Adolesc Health. 2016; 59:50–60. [PubMed: 27235375]

12. Nagata JM, Hathi S, Ferguson BJ, et al. Research Priorities for Adolescent Health in Low-and Middle-Income Countries: A Mixed-Methods Synthesis of Two Separate Exercises. Journal of global health. 2018

13. Ferguson BJ, Dick B, Mullick S, et al. Adapting the Child Health and Nutrition Research Initiative Methodology to define adolescent health implementation research priorities in South Africa. 2017

14. Armstrong A, Nagata J, Baggely R, et al. A global research agenda for adolescent HIV. J Acquir Immune Defic Syndr. 2018; 78(suppl 1):S16–S21. [PubMed: 29994915]

15. Irvine C, Armstrong A, Nagata JM, et al. Setting global research priorities in paediatric and adolescent HIV using the Child Health and Nutrition Research Initiative (CHNRI) methodology. J Acquir Immune Defic Syndr. 2018; 78(suppl 1):S3–S9. [PubMed: 29994913]

16. MacPherson P, Munthali C, Ferguson J, et al. Service delivery interventions to improve adolescents' linkage, retention and adherence to antiretroviral therapy and HIV care. Trop Med Int Health. 2015; 20:1015–1032. [PubMed: 25877007]

17. Mark D, Geng E, Vorkoper S, et al. Making implementation science work for children and adolescents living with HIV. J Acquir Immune Defic Syndr. 2018; 78(suppl 1):S58–S62. [PubMed: 29994921]

18. Oliveras C, Cluver L, Bernays S, et al. Nothing about us without RIGHTS—meaningful engagement of children and youth: From research prioritization to clinical trials, implementation science, and policy. J Acquir Immune Defic Syndr. 2018; 78(suppl 1):S27–S31. [PubMed: 29994917]