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COVID-19 and HIV among children and adolescents: Current inequalities



A prolonged COVID-19 pandemic is deepening the inequalities that have long driven the HIV epidemic, putting vulnerable children, adolescents, pregnant women, and breastfeeding mothers at higher risk of missing HIV prevention and treatment from life-saving services. The increasing poverty, mental health problems, and abuse are raising the risk of infection for children and women. Alarming, two out of five children living with HIV worldwide are unaware of their status, and just over half of children with HIV are receiving antiretroviral treatment (UNICEF, 2021a). In this context, current inequalities in HIV testing and treatment for children living with HIV and trends in historical coverage of services to prevent mother-to-child transmission of HIV are driving annual trends in AIDS-related mortality. Reductions in AIDS-related deaths among children and adolescents are steepest among children between 0 and 9 years (down 60% from 2010), reflecting improved efforts to prevent new vertical infections and diagnose and treat children in the months after childbirth and during breastfeeding. However, among adolescents (10 to 19 years old), progress is slower, with AIDS-related deaths declining by only 37% over the same period (UNAIDS, 2021). Braitstein et al. (2021) observed that living in a street environment versus a family environment was associated with the incidence of HIV and death. Substantial inadequacies with vulnerable young people, extreme poverty, family conflict, child abuse, and neglect are the main reasons why children migrate to the streets and are susceptible to HIV.

Current studies highlight that, globally, 1.7 million adolescents are living with HIV in 2019. High population growth in many low and middle-income countries (LMICs) has created a 'youth rise' that makes essential to increase efforts to delay new infections by HIV among adolescents. Projections show that, at current rates of progress in reducing the adolescent HIV incidence rate, the number of new infections would decline from 250,000 in 2017 to nearly 183,000 in 2030 - an improvement but still far from the global targets. The situation is particularly terrible for girls. Adolescent girls are disproportionately affected by these trends, accounting for about 76% of all new HIV infections in the age group between 10 and 19 years worldwide. Girls and members of vulnerable populations tend to be at higher risk of contracting HIV as adolescents, a period when they are less likely to have access to treatment and other services (AVERT – Global Information and Education on HIV and AIDS, 2021; UNICEF, 2021b; Unidet Nations, 2021). Another situation that is important to highlight is that this year – 2021 – marks two decades of progressive reductions in the prevalence of HIV/AIDS, but as a lasting legacy, close to the 14 million children who have lost one or both parents to AIDS remain. Today, the world faces another devastating new pandemic that has left vast numbers of mourning children in its wake at unprecedented speed. The COVID-19 pandemic had, by the end of April 2021, left more than 1.5 million children experiencing the death of a caring parent or grandparent who lived in their home

and helped care for them. Without immediate action, the COVID-19 pandemic is destined to leave millions and more children orphaned (U.S. Centers for Disease Control and Prevention (CDC), 2021). The impact of these deaths on parents and caregivers differs across families, communities, and nations. With the pandemic far from over and global population vaccination delayed, COVID-19 is expected to continue bringing compressed grief mass in short periods - particularly during the highest periods - with severe consequences that last at least until the age of 18 years for affected children (Hillis et al., 2021).

The prevalence of suicidal ideation among children and adolescents living with HIV/AIDS is substantial. Children and adolescents exposed to the death of family members or friends, those with higher scores of depression, anxiety symptoms, and rule-breaking behavior, are more likely to report suicidal ideation. Those with HIV loss syndrome were less likely to report suicidal ideation. There is an urgent need for HIV care providers to screen for suicide and link them to mental health services (Namuti et al., 2021). An AIDS-free generation should be possible, but we are not there yet. HIV remains a burden. As we honor our gains in providing HIV care over the past few years, we must address the specific challenges for differentiated and long-term children and adolescents living with HIV, and realize that they cannot be treated as "typical adults with HIV" (Vreeman et al., 2021).

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FGMS, SAT, JLSM, JEBA, TIA, BSD and MLRN have contributed to the initial pilot search, planning the methodology, and writing. NBV, AAGM and MLRN have contributed to planning the methodology, data gathering, and reviewing the draft YTGP, DGSL and MLRN has contributed to planning the methodology and writing. MLRN and FGMS, SSFM revised the manuscript critically. All authors approved the final version of the manuscript.

Declaration of Competing Interest

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References

- AVERT – Global Information and Education on HIV and AIDS (2021). Children, HIV and AIDS. <https://www.avert.org/professionals/hiv-social-issues/key-affected-populations/children>.
- Braitstein, P., deLong, A., Ayku, D., Ott, M., Atwoli, L., Galarraga, O., ... Hogan, J. (2021). Association of care environment with HIV incidence and death among orphaned, separated, and street-connected children and adolescents in Western Kenya. *JAMA Network Open*, 4(9), Article e2125365. <https://doi.org/10.1001/jamanetworkopen.2021.25365>.
- Hillis, S., Unwin, H. J., Chen, Y., Cluver, L., Sherr, L., Goldman, P. S., Ratmann, O., Donnelly, C., Bhatt, S., Villaveces, A., Butchart, A., Bachman, G., Rawlings, L., Green, P., Nelson, C. A., & Flaxman, S. (2021). Global minimum estimates for COVID-19-associated orphanhood and deaths among caregivers: A modelling study. *Lancet*, 2021(398), 391–402. [https://doi.org/10.1016/S0140-6736\(21\)01253-8](https://doi.org/10.1016/S0140-6736(21)01253-8).
- Namuti, J. D., Nawgya, J. S., Bangirana, P., & Nakimuli-Mpungun, E. (2021). Prevalence and factors associated with suicidal ideation among children and adolescents attending a pediatric HIV Clinic in Uganda. *Frontiers in Sociology*, 15. <https://doi.org/10.3389/fsoc.2021.656739>.
- U.S. Centers for Disease Control and Prevention (CDC) (2021). Children: The Hidden Pandemic 2021. <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/orphanhood-report.pdf>.
- UNAIDS (2021). Slow progress on AIDS - related deaths among adolescents. https://www.unaids.org/en/resources/presscentre/featurestories/2021/october/20211004_aids-related-deaths-among-adolescents.
- UNICEF (2021a). A child was infected with HIV every two minutes in 2020. <https://www.unicef.org/press-releases/child-was-infected-hiv-every-two-minutes-2020-unicef>.
- UNICEF (2021b). World AIDS day report: Stolen childhood, lost adolescence. <https://www.childrenandhiv.org/sites/default/files/2021-11/2021%20WAD%20Report%20%28Final%29%2030%20Nov.pdf>.
- Unidet Nations (2021). Revealed: Inequalities persist in HIV prevention, child treatment services. <https://news.un.org/en/story/2021/07/1096242>.
- Vreeman, R. C., Rakhmanina, N., Nyandikp, W. M., Puthanakit, T., & Kantor, R. (2021). Are we there yet? 40 years of successes and challenges for children and adolescents living with HIV. *Journal of the International AIDS Society*, 24(6), Article e25759. <https://doi.org/10.1002/jia2.25759>.
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