Reauthorise PEPFAR to prevent death, orphanhood and suffering for millions of children

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As researchers on HIV/AIDS and pediatric health, nothing is more central to our work than preserving children's lives. In light of the current challenge to the 5-year reauthorization of PEPFAR[1], we use 2023 UNAIDS estimates on prevalence of AIDS-orphaned children, infant HIV-infections, and incidence of adult and child AIDS deaths[2] to estimate PEPFAR's impact on child survival and health. We focus on sub-Saharan Africa: the region receiving >90% of PEPFAR funds and containing two thirds of all people living with HIV.[2] We note that PEPFAR provides support through and in partnership with the Global Fund to Fight AIDS, Tuberculosis and Malaria (to which PEPFAR is the largest donor), national governments, UNAIDS and other UN agencies.

PEPFAR has dramatically reversed the devastating impact of HIV/AIDS on children newly orphaned (Fig 1A). Loss of a parent is associated with education loss, child abuse, and child sexual exploitation, with consequent elevated risk of HIV infection.[3] Using UNAIDS 2023 data, we estimate numbers of children newly orphaned by AIDS per year before and after PEPFAR by regressing orphanhood prevalence on previous-year orphanhood prevalence and adult (15-49 years) AIDS deaths. Incidence of orphanhood in Sub-Saharan Africa increased rapidly from 1990, reaching a peak of 1.6 million newly AIDS-orphaned children (ages 0-17 years) during 2004. In this year, PEPFAR began to prevent parental deaths via a massive antiretroviral rollout reaching 28 countries in Sub-Saharan Africa.[4] From 2005, incidence of AIDS orphanhood has reduced annually to 382,000 in 2021.

UNAIDS data shows that 10.3 million AIDS-orphaned children in Sub-Saharan Africa remain in need of support (Fig 1B). Globally, 13.9 million children are orphaned by AIDS,[2] alongside 7.5 million children orphaned due to COVID-associated excess deaths.[5] PEPFAR includes 10% of bilateral funds dedicated to care of orphaned and vulnerable children,[6] including nutritious food, school fees, small loans and savings clubs for caregivers, and psychosocial support. Failure to reauthorise will mean that this support will no longer be guaranteed.

The PEPFAR era has brought five-fold reductions in new HIV infections amongst infants and young children (Fig 1C). PEPFAR reduces pediatric infections through prevention of parent-to-child transmission programs, and through antiretroviral rollout, which suppresses viral load and hence transmission of HIV to partners and children. New HIV infections amongst infants and young children 0-36 months in Sub-Saharan Africa doubled during the 1990s from 250,000 in 1990 to 470,000 per year, then reduced to 110,000 by 2022[2]. As an example, Figure 1C shows incident HIV infections in children aged 0-36 months in Lesotho.[2] We see rapid reductions in pediatric infections in the PEPFAR era, despite increasing numbers of women living with HIV: 4,600 children were infected per year in 2004, reduced to <500 per year in 2022.

Since PEPFAR's implementation, infant and young child AIDS-deaths have fallen by 80% (Fig 1D). Using data provided by UNAIDS, we examine deaths amongst children aged 0-36 months from 1990-2022. PEPFAR prevents child deaths through preventing infections, and providing antiretrovirals to children born with HIV – without which 50% of infants will die before age 2.[7] Figure 1D shows that deaths amongst children aged 0-36 months in Sub-Saharan Africa more than double during the 1990s, to 240,000 per year in 2004, then after PEPFAR implementation reduce five-fold to 47,000 in 2022[2].

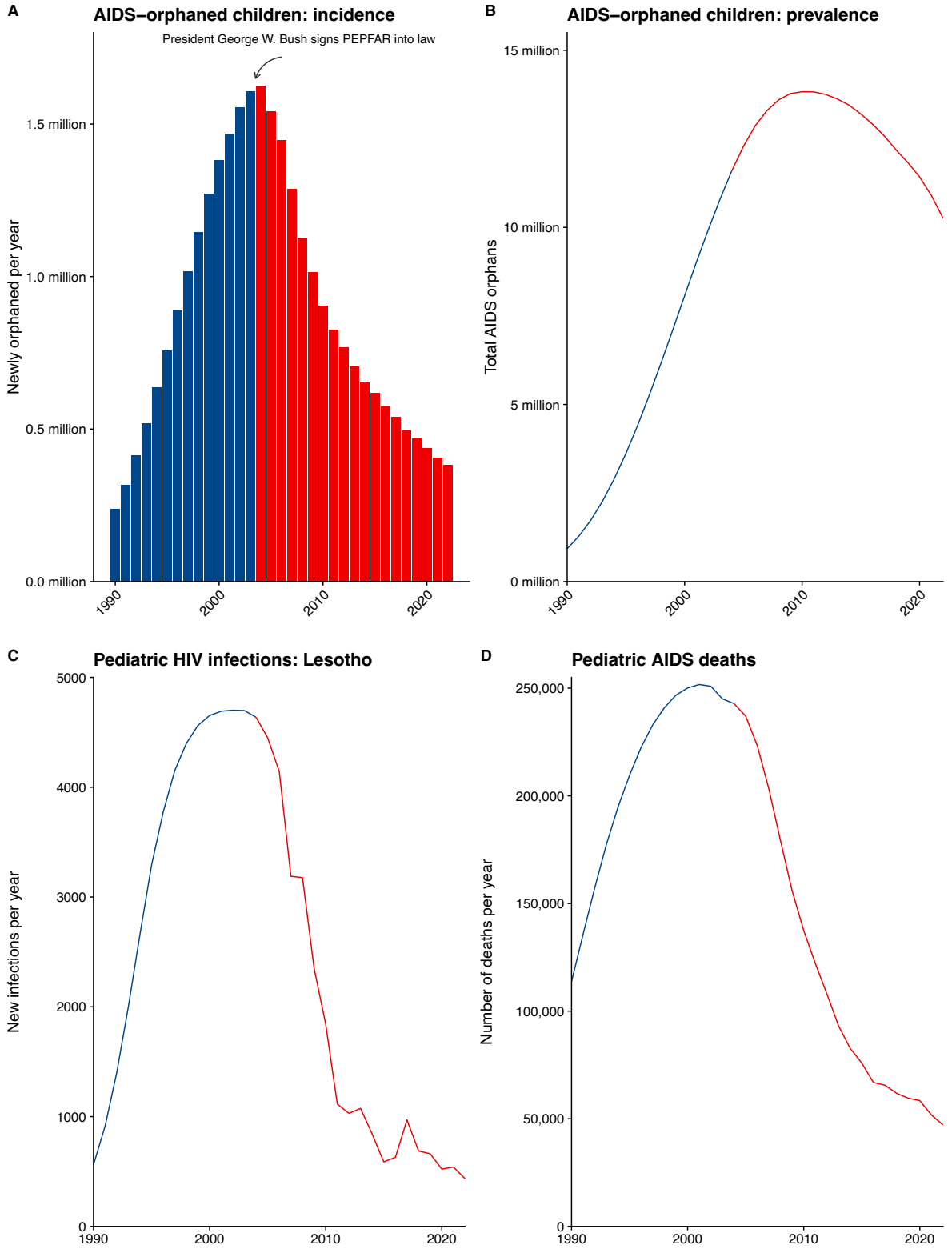
PEPFAR has supported 7.1 million orphaned and vulnerable children and their caregivers, and provides 700,000 children per year with antiretroviral medication,[8] as well as psychosocial and nutritional support to maintain on treatment. Its direct impacts extend further to reduction of subsequent negative outcomes on children's lives, such as avoidance of HIV-related developmental delays, family breakdown and separation, abuse and mental health distress, and reduction of poverty-driven sexual exploitation of children.[9]

But the job is far from done. During COVID-19 lockdowns, PEPFAR innovated to provide continuity of HIV care and child abuse prevention,[10] but now needs to develop preparedness for future pandemics. Only 56% of children aged 0-14 living with HIV in Sub-Saharan Africa have access to antiretroviral treatment.[2] Prevention of parental and child deaths requires sustained provision of antiretroviral medication and prevention of parent-to-child transmission. PEPFAR is working, where feasible, to support sustainable shifts towards national government ownership of antiretroviral programs, but evidence shows that successful transitions require planning and investments in national financial, technical and logistical capacity. Abrupt halting of development aid can cause health system collapse.[11] PEPFAR, the Global Fund to fight AIDS, TB and Malaria, and national governments comprise a critical partnership for global health security.[12]

In 2022, PEPFAR provided lifesaving antiretroviral medication to 20 million people[13] – most of them parents and children. Epidemiological models for 0-14 year olds predict that a six month interruption in supply would cause an additional 107,300 pediatric HIV-infections and additional 44,300 childhood AIDS deaths within a year.[14]

Loss of PEPFAR would inevitably result in death, orphanhood and suffering for millions of children.

Figure 1. A) Incidence of AIDS orphanhood in sub-Saharan Africa (children aged 0-17 newly orphaned per year) Source: regression model estimates based on linear regression with no intercept term, 1-year lagged orphanhood prevalence, new AIDS deaths for ages 15-49 based on UNAIDS data; B) Prevalence of AIDS orphanhood in sub-Saharan Africa (children aged 0-17 maternally and/or paternally orphaned) Source: https://aidsinfo.unaids.org/; C) New HIV infections due to vertical transmission (children aged 0-36 months), Lesotho, 1990-2022,
Source: https://aidsinfo.unaids.org/ indicator "New HIV infections (0-14) Male+Female"; D) Pediatric AIDS deaths in Sub-Saharan Africa. Source: UNAIDS data (children aged 0-36 months). Replication code is available at https://github.com/MLGlobalHealth/PEPFAR-letter.



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