

Addressing and improving the continuum of care for HIV-affected children: challenges and solutions

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In 2011, Ambassador Eric Goosby of the U.S. President's Emergency Plan for AIDS Relief and Michel Sidibe, the Executive Director of the Joint United Nations Programme on HIV and AIDS, announced a Global Plan for eliminating new HIV infections in children and keeping their mothers alive [1]. The elimination of maternal-to-child transmission (EMTCT) or Global Plan calls for three topline goals – decreasing new pediatric infections due to vertical transmission by 90%, halving maternal deaths, and halving pediatric deaths from HIV and AIDS by 2015 [1]. In June 2011, all United Nations member states committed to these targets. The Inter-agency Task Team, a 32-organization partnership co-convened by the United Nations Children's Fund and WHO, is charged with coordinating technical support to countries, developing supportive guidance and tools and monitoring progress, with an emphasis on 22 countries that account for 90% of the total annual number of new HIV infections among children. This series of 11 articles addressing pediatric HIV care and treatment was created by the nearly 60 members of the Interagency Task Team Child Survival Working Group.

The Global Plan strengthens previous international commitments to reduce the rate of vertical transmission with concomitant decreases in mortality from HIV and AIDS and mortality in mothers living with HIV and children younger than 5 years [2]. But the current elimination strategy has focused primarily on the expansion of HIV testing and counseling of pregnant women and the provision of antiretroviral therapy (ART) to those living with HIV to protect their health and prevent HIV transmission to their infants [1,2]. While a galvanizing call to action for the HIV community, something is missing: despite WHO guidelines calling for

100% treatment coverage for all infected children younger than 5 years, early infant diagnosis and pediatric treatment have thus far been neglected [3,4].

Pediatric HIV is in danger of becoming a neglected disease [5], in that the primary focus on prevention of maternal-to-child transmission (PMTCT) has inadvertently perpetuated poor access to treatment for those children who still are inevitably acquire HIV, despite the expansion of new approaches to PMTCT and advancements in treatment regimens realized in the last several years [3,6]. The reduction of MTCT rates seen in the developed world is now possible in the developing world, but the EMTCT response has yet to capture the experiences of more than 3 million children who are already living with HIV and suffer from disproportionately higher rates of morbidity and mortality. New ideas are needed that can propel programming to diagnose, link, and retain infected children in care, particularly those missed by current PMTCT programming, and provide optimal care for those children who do get diagnosed and linked to care and treatment services.

Despite the evolution of PMTCT, most low-income and middle-income countries continue to experience significant vertical transmission as the success of PMTCT programming is predicated on women's access to the PMTCT gateway via antenatal care (ANC) and smooth, consistent implementation of programs. Even wherein encouraging increases from 50 to 60% ANC coverage for women are seen, these data often reflect only initial enrollment and initiation into PMTCT programs and not completion of a multifaceted PMTCT cascade. Nor does it address issues of adherence and retention in care of women initiated in PMTCT or high levels of lost to

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follow-up. Indeed, a recent meta-analysis of the magnitude of loss to follow-up in sub-Saharan African PMTCT programs was larger than previously thought. An estimated 49% of HIV-positive pregnant women are lost between registration and delivery, whereas about 34% of HIV-exposed infants are lost to follow-up by 3 months and 45% of infants are lost after HIV testing [7]. Programs focusing solely on maternal interventions fail to address the ongoing vulnerabilities that millions of infants and children continue to experience as a result of HIV exposure and birth within an HIV-affected household.

Although an extensive literature exists around PMTCT programming, far less is available addressing pediatric HIV infection and care. This series of articles represent a combination of clinical and programmatic evidence to describe the life cycle of pediatric HIV and provide a backdrop for the generation of new ideas to improve diagnosis, linkage, and retention of infected children in care. Even if the ambitious EMTCT goal of a 90% reduction in new pediatric infections is reached, roughly 40,000 infants will continue to be infected each year [1]. Although prevention of new infections remains a priority, it should not preclude efforts to improve care and treatment for those currently living with HIV and those that will continue to be infected in the future. Simplified treatment strategies for adults and pregnant women have allowed for dramatic scale-up in ART coverage in adults, although similar increases have yet to be seen for the millions of children living with HIV. Policy issues such as the unveiling of a Treatment 2.0 approach toward greater simplification of pediatric treatment and the difficulties and challenges on how to finance pediatric HIV programming are critical to consider.

Evidence shows that in young infants, early treatment results not only in viral control but also in preservation of the immune system [8]. The recent report of a potential cure when ART was given in the first day of life [9] emphasizes the importance of early identification of infected newborns not only to improve their health outcomes but also to provide a chance for a functional cure. Initiation of early treatment requires early identification of those in need of ART. However, diagnosis of infants and young children requires sophisticated laboratory systems. Case finding efforts and strategies for linking and retaining infants and children in care beyond PMTCT are rare. Strategies have emerged to allow for the scale-up of early infant diagnosis, but many positive children are still diagnosed only after they have reached an advanced stage of disease progression. Better systems for earlier identification of positive children are an urgent priority, given their high risk for morbidity and mortality.

Health systems must include comprehensive services to ensure children are retained in care and able to reach

their maximal potential. Psychosocial and nutrition interventions are as critical to health and well-being as are medical care for treatment of HIV infection and concomitant illnesses. The success of our pediatric programming will mean the emergence of a unique population of perinatally infected adolescents, which will hold a new set of challenges to be addressed and which deserve a supplement of their own (<http://www.jiasociety.org/index.php/jias/pages/view/thematicadolescents>).

The themes emerging from this collection are straightforward and within our grasp. To be sure, there is an urgent need to strengthen earlier diagnosis of newborns to identify exposed and infected children and strategies for getting those children into HIV care and treatment services sooner than has been the norm. There is also a need to provide comprehensive, integrated programs – HIV is not just a medical disease but a social one. Better alignment of HIV diagnostic and treatment services for infants and children younger than 5 years with broader child health services, such as Expanded Program on Immunization, nutritional assessments, and community-based and facility-based platforms for sick children, are necessary. HIV pediatric programming needs to be affordable and feasible, with recognition that it is a lifelong issue, with multiple decision points at which care needs to be changed or reimaged.

An AIDS-free generation is possible. To achieve it, we must protect children from HIV infection – from birth through adolescence – and keep children who are living with HIV free from AIDS through the provision of lifelong treatment and care.

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Conflicts of interest

None declared.

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