

# ELIMINATING MOTHER-TO-CHILD TRANSMISSION OF HIV

## OVERVIEW

Modern HIV medication now enables people living with HIV (PLHIV) to live longer, healthier lives than ever before. Antiretroviral treatment (ART) reduces the amount of HIV circulating in a person's blood – also referred to as viral load (VL) – which directly correlates with the risk of transmission from one person to another and from a pregnant woman to her infant during pregnancy, childbirth, and breastfeeding. By increasing the number of mothers on ART worldwide, the number of new infant HIV infections has declined by 60 percent over the last 15 years.<sup>1</sup> Despite this success, mother-to-child transmission rates remain at 10 percent or higher for the majority of high burden countries<sup>2</sup>. Additional work is needed to eliminate mother-to-child transmission of HIV and to ensure proper care of HIV-exposed infants, including:

- **Retaining mothers in care:** In sub-Saharan Africa alone, one quarter of deaths among pregnant or breastfeeding women is a result of HIV.<sup>3</sup> Mothers need to be retained in HIV treatment services through the end of breastfeeding, which may extend to two years or more in many resource-limited settings, to protect their own health and their infant's health. Retention in Prevention Mother-To-Child Transmission (PMTCT) programs includes providing counseling and support to promote adherence to HIV medications and to maintain viral suppression. If a mother's VL is low, transmission to the infant is much less likely. The proportion of pregnant and breastfeeding women who are virally suppressed, according to FY17 data, varies significantly by country -- from 62 percent to 97 percent<sup>4</sup>.
- **Providing comprehensive care to infants:** A key component of PMTCT programs is ensuring that all infants exposed to HIV are provided medications to prevent HIV and that these infants are tested for HIV periodically until a final test is done after the HIV exposure period (i.e. breastfeeding) ends. However, in 2017, only half of HIV-exposed infants globally were tested for HIV in the first two months of life.<sup>5</sup> Testing drops even further at 18 months. Any infants who are identified as having HIV need to be linked to HIV treatment immediately.

Eliminating mother-to-child transmission of HIV is a key challenge in the global fight against HIV and requires early identification of HIV-positive mothers, rapid ART initiation with ongoing monitoring to ensure that their viral load is low, and making sure that their HIV-exposed infants receive appropriate testing and care through the end of the breastfeeding period.

## CDC'S ROLE

The U.S. Centers for Disease Control and Prevention (CDC) plays a central role in promoting PMTCT programs that are based on the latest scientific evidence and guidelines. As part of this approach, CDC consistently promotes and implements policies and research to mitigate key challenges central to the elimination of mother-to-child transmission. One example of this is the close collaboration between CDC and the Government of Uganda in the country's pursuit of elimination goals. CDC staff in Uganda play an integral part in the country's National Validation Committee, formed in January 2018. The committee provides overall guidance and support for the World Health Organization's (WHO) certification of progress on the path to elimination of mother-to-child transmission of HIV.

CDC provides technical support in resource-limited settings, such as Uganda and other sub-Saharan African countries, and routinely conducts operational research to improve PMTCT services. For example, CDC and its partners conducted implementation research in Mozambique and Ethiopia to better understand the needs of women attending PMTCT clinics. These data show that what women value most is receiving respectful care and having access to non-HIV health services in the same visit to a clinic. CDC is now working with country staff in eSwatini and Malawi to test strategies for improving respectful care and patient engagement in PMTCT services.

To disseminate technical information and programmatic best practices, CDC staff at the agency's headquarters in Atlanta hold monthly Learning Collaborative calls with 22 country offices around the world. This forum uses a peer-to-peer approach so that country offices can discuss challenges and share promising practices that are most effective in eliminating mother-to-child HIV transmission.

<sup>1</sup> UNAIDS. On the Fast-Track to AIDS Free Generation. 2016.

<sup>2</sup> WHO. HIV Diagnosis and ARV Use in HIV-Exposed Infants: A Programmatic Update. 2018.

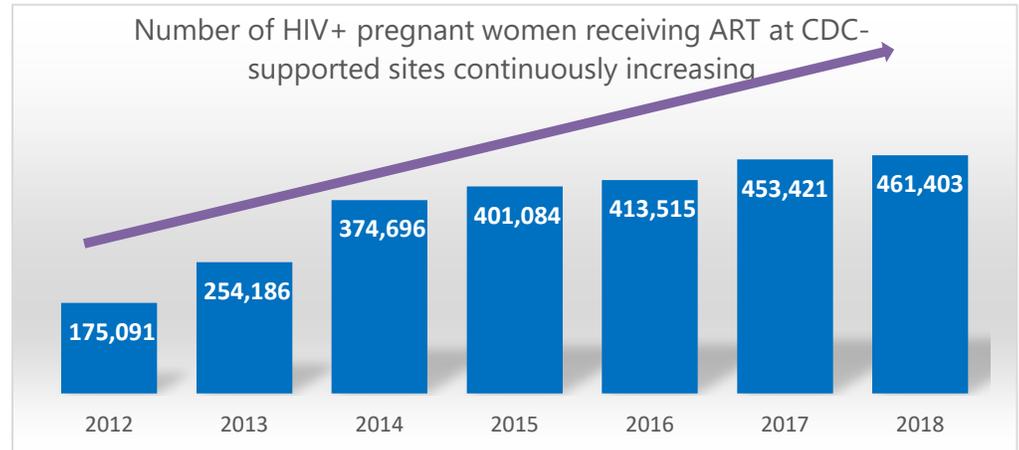
<sup>3</sup> Zaba B, Calvert C, Marston M, Isingo R, Nakiyingi-Miiró J, et al. (2013) Effect of HIV infection on pregnancy-related mortality in sub-Saharan Africa: secondary analyses of pooled community-based data from the network for Analysing Longitudinal Population-based HIV/AIDS data on Africa (ALPHA). *Lancet* 381: 1763–1771.

<sup>4</sup> PEPFAR. Monitoring, Reporting, and Evaluation data. 2017.

<sup>5</sup> WHO. HIV Diagnosis and ARV Use in HIV-Exposed Infants: A Programmatic Update. 2018.

## ACCOMPLISHMENTS / RESULTS

As an implementing agency of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), CDC has played a critical role in supporting the expansion of Option B+, a policy that provides lifelong ART to all HIV-positive pregnant and breastfeeding women. The success of this effort is demonstrated by the fact that the number of pregnant women on ART attending sites supported by CDC partners more than doubled from 175,091 in 2012 to 401,084 in 2015, and showed continued growth through 2018 (see graph).



In FY 2018, in partnership with local governments and ministries of health, CDC helped to:

- Initiate ART for 98 percent of pregnant women identified at first ANC as HIV-positive;
- Test 60 percent of HIV-exposed infants by two months of age and 89 percent by 12 months of age; and
- Link over 10,000 HIV-positive infants to treatment.

National governments' adoption of Option B+ required extensive policy discussions, and CDC staff played a key role in support of this process. For example, in 2015, CDC worked to address the concerns of the Ministry of Health of Côte d'Ivoire by using economic analysis to illustrate the cost effectiveness of Option B+. Armed with these new data, the government swiftly adopted Option B+, and developed a rapid nationwide implementation plan that was supported by the PEPFAR team.

## FUTURE EFFORTS

CDC continues to identify and address gaps in achieving elimination of mother-to-child transmission, including:

- **Addressing remaining gaps in PMTCT services for vulnerable populations, such as pregnant adolescents.** CDC is implementing a project with Kenya to provide enhanced support to pregnant adolescents and young women, including tailored health education, targeted peer and community support, and a model of care used for high-risk pregnancies in the United States. Lessons learned from this project will be shared with other countries to help address the needs of pregnant teens living with HIV.
- **Retesting pregnant and breastfeeding women who initially test HIV-negative in pregnancy.** Pregnant and breastfeeding women have a higher risk of acquiring HIV than non-pregnant women. All pregnant women should receive an HIV test at their first antenatal care visit; women who are HIV-negative at this first visit should be offered additional HIV tests through the end of breastfeeding. Because women often don't seek services for themselves during the breastfeeding period, reaching women when they bring their babies in for well child and immunization services is an important strategy for identifying women with new HIV infections. CDC is encouraging partnerships between HIV services and immunization clinics to promote stronger follow-up with mothers who may be eligible for a follow-up HIV test. This way, all HIV-exposed infants can receive comprehensive care services and all mothers at risk of transmitting the virus can be provided ART to decrease transmission and receive treatment to protect their own health.
- **Actively monitoring VL for mothers on ART.** Timely and accurate measurement of VL testing in pregnant and breastfeeding women is a critical aspect of providing appropriate PMTCT services. When laboratory systems and networks are strengthened and services enhanced, clinicians can more readily identify adherence challenges or drug resistance in patients.

## BENEFITS OF OUR WORK

HIV is a leading cause of mortality among women of reproductive age. Through CDC's work as a PEPFAR implementing agency, and by working side-by-side with ministries of health and other in-country partners, CDC has contributed to PEPFAR's efforts to prevent HIV infection in more than 2.4 million infants born to HIV-positive mothers worldwide, moving us closer to the global public health goal of reaching HIV epidemic control. CDC strives to keep mothers healthy and their babies HIV-free and to help families to be productive and contributing members of their communities.