



ETHIOPIA NETWORK FOR HIV/AIDS TREATMENT, CARE, & SUPPORT

ANTIRETROVIRAL THERAPY SHOWN TO BE THE MOST EFFECTIVE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION STRATEGY



Photo by Genaye Eshetu

ABOUT ENHAT-CS

The Ethiopia Network for HIV/AIDS Treatment, Care, and Support (ENHAT-CS) program is a USAID initiative funded by PEPFAR and implemented by a Management Sciences for Health (MSH)-led consortium of national and international partners. The program works in the Amhara and Tigray regions and supports the Regional Health Bureaus, *woreda* (district) health offices, health centers, and communities to deliver quality, comprehensive HIV services that are integrated with and strengthen other services, including: maternal, newborn and child health; family planning; tuberculosis; sexually-transmitted diseases; malaria; neglected tropical diseases; nutrition; mental health; and laboratory services.

ENHAT-CS supports the Government of Ethiopia to scale-up the provision of comprehensive HIV services, including antiretroviral treatment, by training nurses and health officers at health centers to perform services previously provided only by physicians at hospitals. This practice of task shifting is endorsed by the World Health Organization and has been shown to be an effective way to address shortages of human resources without compromising the quality of care.¹ ENHAT-CS continued support to 152 health centers supported by its predecessor, the HIV Care and Support Program (HCSP), and expanded comprehensive HIV service delivery to an additional 124 health centers, for a total of 276 by 2014.

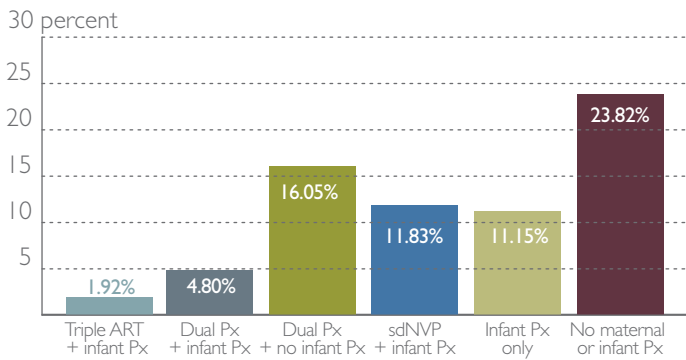
Background

Following the World Health Organization's 2013 guidelines endorsing antiretroviral therapy for all HIV-infected pregnant women, Ethiopia adopted Option B+ (initiation of triple regimen antiretroviral therapy (ART) for the duration of breastfeeding or for life regardless of a pregnant woman's CD4 count) as the national standard for prevention of mother-to-child transmission (PMTCT) of HIV in 2012. Prior to initiation of Option B+, pregnant HIV-infected Ethiopian women were provided with Option A, which provided mothers with dual ART prophylaxis beginning at 14 weeks of gestation, or immediate initiation of ART for women with a CD4 count below 350. ENHAT-CS examined vertical transmission rates by mothers' PMTCT regimens in the Tigray region of Ethiopia.

Methods

Using data from Tigray's regional database, ENHAT-CS calculated HIV infection rates among HIV-exposed infants by their mother's PMTCT regimen between September 2009 and December 2012 and determined the relative risk of a baby acquiring HIV by age of testing and the mother's PMTCT regimen.

Figure 1. HIV infection among HIV-exposed infants by type of prophylaxis (Px) (n=1,671)



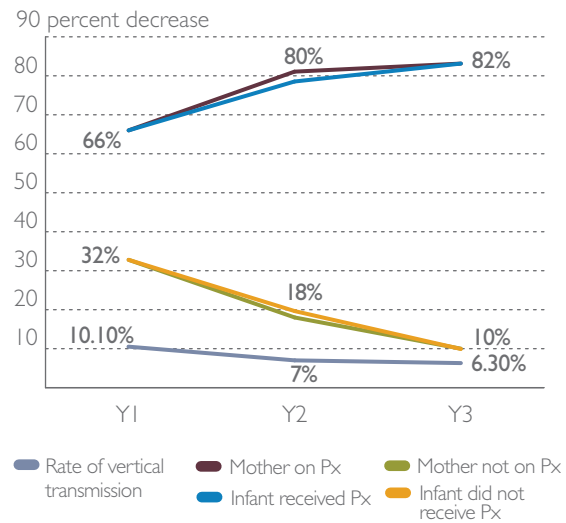
Results

There was a significant difference in HIV rates between babies tested at zero to two months (4%) and two to eight months (9%),² and babies tested past eight months (16%).³ Just two percent of babies born to mothers on triple ART tested positive for HIV, an excellent outcome compared to the other scenarios shown in Figure 1.⁴ The study also demonstrated that the rate of vertical transmission decreased 40 percent from September 2009 to December 2012, as PMTCT became more accepted and effective (Figure 2).

Implications

Triple ART regimens were found to be the most effective PMTCT regimen, whether the child received prophylaxis or not. Our study showed a 50 percent reduction in vertical HIV transmission from 2009 to 2012 as coverage of effective PMTCT services expanded. The effectiveness of triple ART is particularly

Figure 2. Decrease in vertical transmission rates by mother and infant Px over time



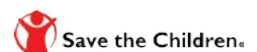
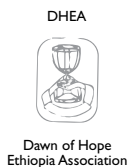
important in Ethiopia, where most women give birth at home and may not be able to give the right prophylaxis medication to their baby at the right time. These data concur with other studies showing that triple ART taken during pregnancy is the most effective maternal prophylaxis in a real world setting. Over a three-year period, as PMTCT regimens became more widely available, more used, and more effective, the percentage of HIV-exposed infants testing positive declined, demonstrating the importance of educating all pregnant women on PMTCT during ANC visits.

The fact that babies' chances of testing positive for HIV increased with age makes sense from an epidemiologic point of view; HIV-exposed infants remain at risk throughout the breastfeeding period. While it's important to test these infants as early as possible, it is equally important to continue to monitor their exposure, ensure that mothers remain on ART, and continue to test the child throughout for the duration of the exposure. ■

1. Mike Callaghan, Nathan Ford, and Helen Schneider: "A systematic review of task-shifting for HIV treatment and care in Africa" Human Resources for Health, 2010. <http://www.human-resources-health.com/content/8/1/8> (accessed 8/1/14).
2. Relative risk (RR)=0.43, CI=0.28,0.65; p=0.0001

3. Compared to testing at 0–2 months RR=0.23, CI=0.14,0.38; p<0.0001 and compared to testing at 2–8 months RR=0.55, CI=0.36,0.86; p=0.005
4. RR=0.37; CI=0.19,0.74; p=0.006

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