

Is Mother/Infant HIV Transmission Preventable?

What are the risks for mother/infant transmission?

Mother-to-infant HIV transmission, also called perinatal transmission, is spread from an HIV+ woman to her baby during pregnancy, in the birth process or by breastfeeding. The chances of an HIV+ woman passing the virus to her child ranges from 16-40% without treatment.

Worldwide in 1997, 2.1 million women became infected with HIV. Approximately 590,000 children also became HIV+, the majority of them via perinatal transmission. In 1997, in developing countries, 25-35% of children born to HIV+ mothers were HIV+. [1](#)

In the US in 1997, 13,105 women and 473 children and infants were newly diagnosed with AIDS, with over 27 times as many cases of AIDS in adult women as pediatric cases. [2](#) It is clear that a very important component of perinatal transmission must be prevention for adult women at risk for HIV.

Are all women equally at risk?

No. Global economic inequities ensure a wide gap between women in developing nations and women in industrialized nations with regard to HIV prevention, counseling and testing, and access to AZT and other drugs which could prevent perinatal transmission. In the US in 1994, the Public Health Service recommended HIV counseling and voluntary testing and AZT therapy for all pregnant women. Since then, there has been a substantial decline in perinatal transmission in the US, from 901 cases in 1992 to 516 in 1996. [3](#)

Most HIV+ children are born in developing countries. Worldwide, it is estimated that 1,600 children under the age of 15 are infected with HIV each day. Four out of five HIV+ women in the world live in sub-Saharan Africa, along with an estimated 87% of all HIV+ children.

Can perinatal transmission be significantly reduced?

Yes. We know what can help reduce the risk of HIV transmission from mother to child: prevent HIV from occurring in the mother; provide voluntary HIV testing; provide free or low-cost prenatal care; provide access to anti-HIV drugs during pregnancy; encourage HIV+ mothers not to breastfeed and provide viable alternatives to breastfeeding.

Perinatal transmission is best prevented by effective, affordable HIV prevention programs for women. This can include a multitude of efforts, including sexuality education, condom distribution, HIV counseling and testing, education and employment opportunities for sex workers, peer support and STD diagnosis and treatment.

Perinatal transmission cannot be prevented if a woman is unaware that she is HIV+. More than 9 out of 10 HIV+ women in developing countries do not know they are infected.¹ In the US, many women first find out they are HIV+ during prenatal screening, or once their child is born and tests positive for HIV. Access to voluntary HIV testing and counseling using trained peer counselors must be made available for all women to help them make informed choices.

Access to good health care both before and after birth is critical to reducing perinatal HIV transmission. [4](#) Unfortunately, this is not the case for many women in the US and most women around the world. Globally, 32% of all women receive no institutionalized prenatal care,¹ and 40% of all women deliver their babies outside a hospital setting.

In the US clinical trial known as "076", treating HIV+ pregnant women with AZT during pregnancy and delivery, and treating the infant with AZT after birth, was shown to cut rates of perinatal transmission by two-thirds, from 25.5% to 8.3%. [5](#) These women did not breastfeed. However, some women in the US may choose not to use AZT, may have problems adhering to the regimen, or may not be able to afford or access the drugs. [6](#)

What about breastfeeding?

Breastfed HIV- infants of HIV+ mothers are at substantial risk for HIV. One report shows 5% of children in developing countries become HIV+ through breastfeeding, and HIV transmission risk increases 3% per child year as breastfeeding continues. [7](#) Bottle feeding or breast milk substitutes may prevent infection of 10% of children exposed perinatally, if safe and available. [8](#)

Breastfeeding is usually the healthiest choice for both infants and mothers. For infants, breastfeeding has nutritional and psychological benefits, and can prevent disease and infection. For mothers, breastfeeding can increase time between births and protects against ovarian and breast cancers. [9](#)

Bottle feeding requires clean water for mixing formula. Many women in developing countries do not have access to clean water or sanitation. Many women also cannot afford formula and therefore cannot refrain from breastfeeding. The United Nations Programme on AIDS has recently recommended that HIV+ women refrain from breastfeeding if their children are "ensured uninterrupted access to nutritionally adequate breast-milk substitutes that are safely prepared and fed to them." [9](#)

In developing countries where breast feeding is the norm, bottle-feeding may be seen as a flag for a women's HIV status, which may invite stigma or other negative repercussions. Breastfeeding is not such an issue in the US and other industrialized countries, where clean water and formula are available and widely used.

What's being done?

A recent study of 939 babies born to HIV+ mothers in New York state found that even an abbreviated regimen of AZT was effective in reducing HIV transmission. Transmission rates for mothers and babies not receiving AZT was 26.6%, compared to 6.1% when treatment was begun before birth, 10% when begun during birth, 9.3% when begun within the first 48 hours after delivery, and 18.4% when begun after 48 hours. This study has important implications for women without prenatal care or women diagnosed late in pregnancy. [10](#)

At the Bay Area Perinatal AIDS Center (BAPAC) at San Francisco General Hospital, in San Francisco, CA, HIV+ mothers receive antiretroviral therapy and further treatment/control of maternal HIV disease, and babies are given AZT for six weeks following birth. None of the 71 HIV+ mothers transmitted HIV to their infants, and none of the mothers breastfed. [11](#)

In Thailand, AZT treatment was offered to pregnant women in the last four weeks of pregnancy. This clinical trial showed a reduction in transmission from mother-to-child by 51%. [12](#) The women were given safe alternatives to breast milk and did not breastfeed. The four-week treatment was a shorter course than the US study, and showed that a less expensive and complicated AZT regimen is still effective. This was an important finding for many countries where the high cost of AZT is a barrier to treatment.

What still needs to be done?

HIV is a preventable disease. Perinatal transmission is best prevented by effective, affordable HIV prevention programs for women. However, discussions of perinatal transmission must not ignore the needs of the woman other than as a vehicle for giving birth. Education and empowerment for all women in every country is essential, along with access to good medical care and nutrition for women and their children whether they are HIV+ or HIV-.

Successes in reducing mother/infant HIV transmission in the US and the success of the Thailand study give a clear signal that now is the time to act. Funding is needed to secure AZT or other antiretroviral treatment for all HIV+ pregnant women across the world who choose to take it. In addition, all women must have access to voluntary HIV testing and counseling. Mandatory or coercive approaches to testing and treatment for mothers and/or newborns are not appropriate or useful in HIV prevention. Programs addressing perinatal transmission should ensure treatment for the woman while she is pregnant, and treatment for mother and infant after delivery.

Says who?

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