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Preventing Mother-To-Child Transmission of HIV

Mother-to-child transmission of HIV is the most significant source of HIV infection in young children. This week's edition of HIV/AIDS Today reviews this mode of transmission and current recommendations on reducing the risk.

MOTHER-TO-CHILD TRANSMISSION RISK

A pregnant woman who is HIV-positive can pass the virus on to her baby in the uterus, during childbirth, or through breastfeeding. In the absence of prenatal intervention, the risk of MTCT of HIV is between 15% and 30%. This risk can rise as high as 30% to 45% when a child is exposed to the virus through prolonged breastfeeding.ⁱ

PREVENTION WITH ANTIRETROVIRAL DRUGS

When a woman is HIV-positive, the risk of transmission of HIV to the fetus can be reduced with the use of antiretroviral drugs. Depending on prior history of HIV treatment, an HIV-positive pregnant woman may begin taking anti-HIV drugs as early as the second trimester to reduce the level of virus in her blood. If she does not take these medications during the pregnancy, the risk of transmission can still be reduced by up to 50% with the administration of a short course of similar drugs to the mother and baby at the time of delivery. The most frequently used drugs are zidovudine (also known as AZT) or nevirapine.ⁱⁱ

Although over 100 countries have implemented national mother-to-child-transmission prevention program policies and strategies, less than 8% of pregnant women worldwide have access to these prevention services.ⁱⁱⁱ

In the United States and other developed countries, widespread use of mother-to-child-transmission prevention strategies has contributed to a 95% decline in the number of perinatally acquired AIDS cases between 1994 and 2005.^{iv}

BREASTFEEDING

HIV-positive mothers can reduce the risk of mother-to-child-transmission further by substituting infant formula for breast milk when feeding their newborn.

However, in many developing countries, infant formula has not yet been shown to be a feasible strategy because of cost or lack of clean water. In general, in developing countries where safe alternatives to breastfeeding are not readily available, exclusive breastfeeding is encouraged, as the benefits



Source: <http://www.pepfar.gov>

of breastfeeding in terms of decreased illness and death due to other infectious diseases greatly outweigh the potential risk of HIV transmission. In addition, there is a potential for stigmatization in settings where breastfeeding is a cultural norm.^v

HIV TESTING

The main risk factor for mother-to-child-transmission is lack of awareness of HIV status. Of the estimated 120,000 to 160,000 HIV-infected women in the United States, 80% are of childbearing age. Because approximately 25% of all people infected with HIV do not know their HIV status, many of these women may not know they are infected.^{vi} The Centers for Disease Control recommends routine voluntary testing of all pregnant women as a primary prevention mechanism. In addition, voluntary rapid HIV testing is recommended to women in labor whose HIV serostatus is unknown.^{vii} In developing countries, an estimated 1,100 children are infected with HIV each day, largely as a result of lack of access of pregnant women to testing and preventive interventions.

ENDNOTES

ⁱ Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, Divisions of HIV/AIDS Prevention, *Perinatal HIV Prevention Program: Background* (accessed on Feb. 14, 2008) (online at <http://www.cdc.gov/hiv/projects/perinatal/background.htm>).

ⁱⁱ Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, Divisions of HIV/AIDS Prevention, *Mother-to-Child (Perinatal) HIV Transmission and Prevention* (May 2006) (online at <http://www.cdc.gov/hiv/resources/factsheets/perinat1.htm>).

ⁱⁱⁱ World Health Organization, *PMTCT High-Level Global Partners Forum 2007* (online at www.who.int/hiv/mtct/MTCT_GPF-ConceptNoteNov07.pdf); Joint United Nations Programme On HIV/AIDS, *Prevention of mother-to-child transmission of HIV* (online at <http://www.unaids.org/en/PolicyAndPractice/Prevention/PMTCT/default.asp>).

^{iv} National Institutes of Health, NIAID Division of AIDS. *Mother-To-Infant Transmission* (online at <http://www.niaid.nih.gov/daids/prevention/infant.htm>).

^v National Institutes of Health, *supra* note ^{iv}.

^{vi} Centers for Disease Control and Prevention, *supra* note ⁱⁱ

^{vii} *Id.*