



Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States

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Perinatal Transmission of HIV and Maternal HIV RNA Copy Number (Last updated July 31, 2012; last reviewed July 31, 2012)

Panel's Recommendation

- All HIV-infected pregnant women should be counseled about and administered antiretroviral drugs during pregnancy for prevention of perinatal transmission, regardless of their HIV RNA levels (**AI**).

Rating of Recommendations: A = Strong; B = Moderate; C = Optional

Rating of Evidence: I = One or more randomized trials with clinical outcomes and/or validated laboratory endpoints; II = One or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; III = Expert opinion

Mother-to-child transmission has been observed across the entire range of plasma HIV RNA levels.^{1,2} HIV RNA levels correlate with risk of transmission even in women treated with antiretroviral (ARV) agents.³⁻⁵ Although the risk of perinatal transmission in women with undetectable HIV RNA levels appears to be extremely low, transmission has been reported even in women with very low or undetectable levels of maternal HIV RNA **on antiretroviral therapy (ART)**.³⁻⁵ Additionally, although HIV RNA may be an important risk factor for transmission, other factors also appear to play a role.⁶⁻⁸

Although there is a general correlation between viral loads in plasma and in the genital tract, **discordance between blood and genital tract virus has also been reported; low level cervico-vaginal HIV RNA and DNA shedding has been detected even in women treated with ART who have undetectable plasma viral load, particularly in the presence of genital tract coinfections.**⁹⁻¹¹ Penetration of ARV drugs into the female genital tract has been shown to vary between drugs.¹²⁻¹⁴ If exposure to HIV in the maternal genital tract during delivery is a risk factor for perinatal transmission, plasma HIV RNA levels may not always be an accurate indicator of risk. Long-term changes in one body compartment with ARV drugs may or may not be associated with comparable changes in other compartments. Additional studies are needed to determine the effect of ARV drugs on genital tract viral load and the association between such effects and the risk of perinatal transmission of HIV.

Because transmission can occur even when HIV RNA copy numbers are low or undetectable, all HIV-infected women should be counseled about and administered ARV drugs during pregnancy, regardless of their HIV RNA levels.

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