



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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Postpartum Care (Last updated October 26, 2016; last reviewed October 26, 2016)

Panel's Recommendations
<ul style="list-style-type: none">• Antiretroviral therapy (ART) is currently recommended for all HIV-infected individuals to reduce the risk of disease progression and to prevent HIV sexual transmission (AI). Decisions regarding continuing or modifying ART after delivery should be made in consultation with the woman and her HIV care provider, ideally before delivery, taking into consideration the preferred regimens for non-pregnant adults versus those for pregnant adults (AIII).• Because the immediate postpartum period poses unique challenges to antiretroviral adherence, arrangements for new or continued supportive services should be made before hospital discharge (AII).• Contraceptive counseling is a critical aspect of postpartum care (AIII).• Women with a positive expedited HIV antibody test during labor should receive intravenous (IV) zidovudine immediately (see Intrapartum Care: Women Who Present in Labor without Documentation of HIV Status) and should not breastfeed unless a confirmatory HIV test is negative.• Women with a positive rapid HIV antibody test during labor require immediate linkage to HIV care and comprehensive follow-up, including confirmation of HIV infection. If infection is confirmed, a full health assessment is warranted, including evaluation for associated medical conditions, counseling related to newly diagnosed HIV infection, continued ART, and assessment of the need for opportunistic infection prophylaxis (AII).• Breastfeeding is not recommended for HIV-infected women in the United States (AII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>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</p>

Postpartum Follow-Up of HIV-Infected Women

The postpartum period provides an opportunity to review and optimize women's health care. Comprehensive medical care and supportive services are particularly important for HIV-infected women and their families, who often face multiple medical and social challenges. Components of comprehensive care include the following services as needed:

- Primary, gynecologic/obstetric, and HIV specialty care for the HIV-infected woman;
- Pediatric care for her infant;
- Family planning services;
- Mental health services;
- Substance abuse treatment;
- Support services;
- Coordination of care through case management for a woman, her child(ren), and other family members;
and
- Prevention of secondary transmission for serodiscordant partners, including counseling on the use of condoms, antiretroviral therapy (ART) to maintain virologic suppression in the infected partner (i.e., Treatment as Prevention [TasP]), and potential use of pre-exposure prophylaxis by the uninfected partner.

Support services should be tailored to the individual woman's needs and can include case management; child care; respite care; assistance with basic life needs, such as housing, food, and transportation; peer counseling; and legal and advocacy services. Ideally, this care should begin before pregnancy and continue throughout pregnancy and the postpartum period.

Immediate linkage to care, comprehensive medical assessment, counseling, and follow-up are required for women who test positive on expedited HIV antibody assay during labor or at delivery. If test results are available during labor and delivery, the woman should receive IV zidovudine immediately. Women who test positive on a rapid HIV antibody assay should not breastfeed unless a confirmatory HIV test is negative. To minimize the delay in definitive diagnosis, the fourth-generation combined antibody-antigen test should be employed if available; specimens with a reactive antigen/antibody combination immunoassay result should be tested with a Food and Drug Administration-approved immunoassay that differentiates HIV-1 antibodies from HIV-2 antibodies per the updated Centers for Disease Control and Prevention guidance for HIV testing. Women with a new HIV diagnosis should receive the same thorough evaluation as other newly identified infected patients, including recommendation for lifelong ART, and prophylaxis for opportunistic infections as indicated. Other children and partner(s) should be referred for HIV testing. Counseling on prevention of secondary transmission to the uninfected partner should include condoms, ART for the infected partner to maintain viral suppression, and potential use of pre-exposure prophylaxis by the uninfected partner.

During the postpartum period, maternal medical services must be coordinated between obstetric care providers and HIV specialists. Decisions about changes to an ART regimen after delivery should be made in consultation with a woman and her HIV care provider, ideally prior to delivery. It is especially critical to ensure continuity of ART between the antepartum and postpartum periods. The mother should receive the medication prior to discharge because outpatient pharmacies may not stock zidovudine for neonatal administration. Special hospital programs may need to be established to support this.

ART is currently recommended for all HIV-infected individuals to reduce the risk of disease progression and to prevent HIV sexual transmission.¹ The START and TEMPRANO trials were randomized clinical trials that demonstrated that early ART can reduce the risk of disease progression even in individuals with CD4 T lymphocyte cell count >500 cells/mm³, and the HPTN 052 randomized clinical trial demonstrated that early ART can reduce risk of sexual transmission to a discordant partner by 96%.²⁻⁴ It is important to counsel a woman that no single method (including treatment) is 100% protective against HIV transmission, so safer sexual practices should be continued.

Understanding the need for lifelong ART is a priority for postpartum care, but does represent a number of specific challenges. Studies have demonstrated significant decreases in ART adherence postpartum.⁵⁻⁹ During the postpartum period, women may have difficulty with medical appointment follow-up, which can affect ART adherence. Systematic monitoring of retention in HIV care is recommended for all HIV-infected individuals, but special attention is warranted during the postpartum period. A number of studies have suggested that postpartum depression may be common among HIV-infected women.¹⁰⁻¹⁵ All women, particularly HIV-infected women, should be screened for postpartum depression using a validated tool, given the deleterious effects of depression on ART adherence. Women should be counseled that postpartum physical and psychological changes and the stresses and demands of caring for a new baby may make adherence more difficult and that additional support may be needed during this period.¹⁶⁻¹⁹

Health care providers should be vigilant in screening for signs of depression, intimate partner violence, and illicit drug or alcohol use that may require intervention to avoid problems with ART adherence. Interventions to improve adherence to medical care and ART can include medication management services, referral to psychological services, community outreach, one-on-one adherence support, group education and support, peer support, reminder devices, and home visits by HIV case managers.²⁰ Poor adherence has been shown to be associated with virologic failure, development of resistance, and decreased long-term effectiveness of ART.²¹⁻²³ In women who achieve viral suppression by the time of delivery, postpartum simplification to once-daily coformulated regimens (which are often preferred initial regimens for non-pregnant adults but for pregnant women) could promote adherence during this challenging time. Efforts to maintain adequate adherence during the postpartum period may ensure effectiveness of therapy (see the section on [Adherence in the Adult and Adolescent Antiretroviral Guidelines](#)). For women continuing ART who had received increased protease inhibitor doses during pregnancy, available data suggest that standard doses can be used

again, beginning immediately after delivery.

It is important that comprehensive family planning and preconception care be integrated into routine prenatal and health visits. Lack of breastfeeding is associated with earlier return of fertility; ovulation returns as early as 6 weeks postpartum, and earlier in some women—even before resumption of menses—putting them at risk of pregnancy shortly after delivery.²⁴ Interpregnancy intervals of less than 18 months have been associated with increased risk of poor perinatal and maternal outcomes in HIV-uninfected women.²⁵ Because of the stresses and demands of a new baby, women may be more receptive to use of effective contraception, yet simultaneously at higher risk of nonadherence to contraception and, thus, unintended pregnancy.²⁶ A dual-protection strategy (e.g., use of condoms plus a second highly effective contraceptive) is ideal for HIV-infected women because it provides simultaneous protection against unintended pregnancy, transmission of HIV to a partner, and acquisition or transmission of sexually transmitted disease.²⁷ Long-acting reversible contraceptives (LARC), such as injectables, implants, and intrauterine devices (IUDs), should be included as options.

The postpartum period is a critical time for addressing safer sex practices in order to reduce sexual transmission of HIV to HIV-uninfected partners and contraception to avoid unwanted pregnancies. Ideally these issues will be addressed during the prenatal period. **Treating the infected partner with virologically suppressive ART and providing pre-exposure prophylaxis to the uninfected partner are effective methods to reduce sexual transmission of HIV.**

The potential for drug-drug interactions between a number of antiretroviral (ARV) drugs and hormonal contraceptives is discussed in [Preconception Counseling and Care for HIV-Infected Women of Childbearing Age](#) and [Table 3](#). A systematic review conducted for the World Health Organization has summarized the research on hormonal contraception, IUD use, and risk of HIV infection and recommends the use of all contraceptive methods in women with HIV.^{28,29} Findings from a systematic review of hormonal contraceptive methods and risk of HIV transmission to uninfected partners concluded that oral contraceptives and medroxyprogesterone do not increase risk of HIV transmission in women who are on ART although data are limited and have methodological issues.³⁰ Permanent sterilization is appropriate only for women who are certain they do not desire future childbearing.

Avoidance of breastfeeding has been and continues to be a standard, strong recommendation for HIV-infected women in the United States, because maternal ART dramatically reduces but does not eliminate breastmilk transmission. Further, safe infant feeding alternatives are readily available in the United States. In addition there are concerns about other potential risks, including toxicity for the neonate or increased risk of development of ARV drug resistance, should transmission occur, due to variable passage of drugs into breastmilk. However, clinicians should be aware that women may face social, familial, and personal pressures to consider breastfeeding despite this recommendation.³¹ It is important to address possible barriers to formula feeding beginning during the antenatal period. Similarly, there are risks of HIV transmission via premastication (prechewing) of infant food.³²

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