

Prevention of Perinatal Transmission of Human Immunodeficiency Virus



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KEYWORDS

- Human immunodeficiency virus • Pregnancy • Antiretroviral medication
- Contraception • Perinatal transmission

KEY POINTS

- The reproductive health needs of all women of childbearing age should routinely address effective and appropriate contraception, safer sex practices, and elimination of alcohol, illicit drugs and tobacco should pregnancy occur.
- Combined antepartum, intrapartum, and infant antiretroviral (ARV) prophylaxis are recommended because ARV drugs reduce perinatal transmission by several mechanisms, including lowering maternal viral load and providing infant pre- and post-exposure prophylaxis.
- Scheduled cesarean delivery at 38 weeks with IV AZT decreases the risk of perinatal transmission if the HIV RNA is greater than 1000 copies/mL or if HIV levels are unknown near the time of delivery.
- Oral AZT should generally be given for at least 6 weeks to all infants perinatally exposed to HIV to reduce perinatal transmission of HIV.

PRECONCEPTION CARE

The purpose of preconception care (PCC) is to reduce unintended pregnancies, improve the health of women before conception, and encourage the use of safer conception strategies. The Centers for Disease Control and Prevention (CDC) and the American Congress of Obstetricians and Gynecologists (ACOG) recommend that PCC be performed as a part of routine medical care of all women and not something that occurs in a single visit, but rather a process that is integrated into routine health care visits to address the reproductive needs of women throughout their

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lifetime.^{1–4} PCC is critical for all women, but can be particularly beneficial for women infected by the human immunodeficiency virus (HIV).

The benefits of PCC have been well described in reducing unwanted pregnancies and improving pregnancy outcomes.^{2–4} HIV providers play an important primary role in the care of HIV-infected women, and are uniquely positioned to provide PCC and prevent unintended pregnancy. Prevention of unintended pregnancy in HIV-infected women and optimization of maternal health before a desired conception eliminates the risk of perinatal HIV transmission. However, discussions about reproductive desires frequently do not occur until after conception.^{5–7}

Prevention of Undesired Pregnancies

With the introduction of highly active combination antiretroviral therapy (cART), live birth rates in the Women's Interagency HIV study (WIHS) cohort increased by 150% on comparing the pre-cART with the cART cohort.⁸ Unfortunately, the most recent data from the United States indicate that nearly half (51%) of all pregnancies are unintended, with even higher rates associated with cohabitation, lower income, and lower education.⁹ Studies in women living with HIV have reported an even higher rate of unintended pregnancy, possibly related to similar cultural and societal factors.^{5,10–12}

Use of Contraception

HIV-infected women can potentially use all available contraceptive methods, including hormonal contraception and emergency contraception, as appropriate; thus, contraceptive counseling for HIV-infected women should be similar to that for uninfected women.¹ In general, counseling considerations of all contraceptive methods should include efficacy, safety, ease of use, cost, risks, potential noncontraceptive benefits, and protection against HIV and transmission of sexually transmitted infection (STI).¹³ Contraceptive efficacy is one of the most important criteria women use when choosing a contraceptive method.^{14–16} The World Health Organization (WHO) and the CDC have visual aids in discussing contraceptive options, and in general recommend that long active reversible contraceptive (LARC) methods, intrauterine devices (IUDs), and implants be promoted as first-tier contraceptive methods because of their superior contraceptive efficacy.^{17,18} Both the copper IUD and the levonorgestrel IUD can be safely initiated or continued in women with HIV infection who are clinically doing well on combination antiretroviral therapy (cART), including those with AIDS.^{19,20} The risk of spermicide use is generally contraindicated in HIV-infected women because of the increased risk of viral shedding and increased transmission caused by the disruption of the genital epithelium.¹³

Hormonal Contraception in Human Immunodeficiency Virus

Specific considerations for the use of systemic hormonal contraception in HIV-infected women include the potential risks of HIV disease progression, HIV transmission, and drug interactions with antiretroviral drugs (ARVs).¹ A recent systematic review of all studies evaluating the risk of HIV disease progression and hormonal contraception found only 1 of 11 studies showing an increased risk of declining CD4⁺ count or death among women using hormonal contraceptives when compared with those using the copper IUD.²¹ However, the study showing an increased risk of HIV disease progression with the use of a hormonal contraceptive had a very high rate of loss to follow-up and frequent method switching, and the intent-to-treat (ITT) analysis failed to show an association.²²

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