

# Antepartum Care for Individuals With HIV

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Panel's Recommendations
<ul style="list-style-type: none"><li>• In addition to the standard antepartum assessments for all pregnant people, the initial evaluation of people with HIV should include an assessment of HIV disease status and recommendations for HIV-related medical care (AI). See <a href="#">Initial Evaluation and Continued Monitoring of HIV-Related Assessments During Pregnancy</a> and <a href="#">Table 4</a> for the recommended schedule of HIV-related laboratory tests during pregnancy.</li><li>• Amniocentesis, if clinically indicated, may be performed on pregnant people with HIV after thorough patient-centered counseling about the risks, benefits, and alternatives. The pregnant person should be receiving an effective antiretroviral (ARV) regimen and, ideally, have HIV RNA levels that are undetectable (BIII). If a pregnant person with detectable HIV RNA levels requires amniocentesis, consultation with an expert in the management of HIV during pregnancy should be considered (BIII). Data are inadequate to guide decision-making about other invasive diagnostic or therapeutic procedures; an individualized process of shared decision-making is recommended.</li><li>• People with HIV should be counseled on the known benefits and potential risks of all medications, including ARV drugs used during pregnancy and postpartum. Counseling about the importance of adherence should be addressed at each visit (AIII).</li><li>• Coordination of services among prenatal care providers, primary care, HIV specialty care providers, and, when appropriate, mental health and substance use disorder treatment services, intimate partner violence support services, and public assistance programs is essential to care and enables adherence to antiretroviral therapy (AII).</li><li>• During pregnancy, providers should initiate counseling about key intrapartum and postpartum considerations, including mode of delivery, lifelong HIV therapy, family planning and contraceptive options, infant feeding, infant ARV prophylaxis, and timing of infant diagnostic testing (AIII).</li></ul>
<p><i>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</i></p> <p><i>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</i></p>

In addition to the standard antepartum assessments for all pregnant people, the initial evaluation of people with HIV should include an assessment of HIV disease status and recommendations for HIV-related medical care (see [Recommendations for the Use of Antiretroviral Drugs During Pregnancy: Overview](#)). See [Initial Evaluation and Continued Monitoring of HIV-Related Assessments During Pregnancy](#) and [Laboratory Testing for Initial Assessment and Monitoring of People With HIV Receiving Antiretroviral Therapy](#) for the recommended schedule of HIV-related laboratory tests during pregnancy. Initial assessment and ongoing care for pregnant individuals with HIV should include the following items (see [Table 4. Antepartum Screenings and Assessments for Pregnant People With HIV](#)):

- Review of prior HIV-related illnesses and past CD4 T lymphocyte (CD4) cell counts and plasma HIV RNA levels;
- Current CD4 count;
- Current plasma HIV RNA level;

- Assessment of the need for prophylaxis against opportunistic infections, such as *Pneumocystis jirovecii* pneumonia (see the [Adult and Adolescent Opportunistic Infections Guidelines](#));
- Screening for hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV), and tuberculosis (see [Hepatitis B Virus/HIV Coinfection](#) and [Hepatitis C Virus/HIV Coinfection](#));
- Screening for and treatment of sexually transmitted infections (STIs), such as syphilis, *Chlamydia trachomatis*, *Trichomonas vaginalis*, and *Neisseria gonorrhoea*<sup>1-3</sup>; Repeat STI testing in the third trimester may be indicated based on individual risk factors or as required by state laws.
- Assessment of the need for HAV, HBV, influenza, pneumococcus, Tdap (tetanus, diphtheria, acellular pertussis), or SARS-CoV-2 immunizations (including boosters). Counseling on the importance of vaccinations for all pregnant individuals, and specifically for people with HIV, should be addressed and vaccinations provided when indicated<sup>4-6</sup>; consideration of other vaccinations, such as for meningococcus, may be warranted based on individual patient considerations. Human papillomavirus vaccination may be indicated postpartum if not previously vaccinated.
- Complete blood cell count and renal and liver function testing;
- HLA-B\*5701 testing, if the use of abacavir is anticipated (see [Table 14. Antiretroviral Drug Use in Pregnant People With HIV: Pharmacokinetic and Toxicity Data in Human Pregnancy and Recommendations for Use in Pregnancy](#));
- History of prior or current antiretroviral (ARV) drug use or experience with adverse events or toxicities. Counseling should also address prior or anticipated challenges with adherence;
- Screening for depression and anxiety (see [Screening for Perinatal Depression](#)), as well as for substance use disorders, and referral for mental health care services if indicated<sup>7</sup>;
- Assessment of the need for supportive care (e.g., social services, mental health services, substance use disorder treatment services, smoking cessation services, other community-based resources) for pregnancy-specific needs, as well as to help ensure lifelong adherence to antiretroviral therapy (ART);
- Screening for intimate partner violence and assessment of the need for referrals for supportive care;
- Assessment of gender identity, pronouns used, desired terminology for anatomy, and use of testosterone or other gender-affirming hormonal therapy<sup>8,9</sup> (see [Perinatal HIV Prevention for Transgender and Gender Diverse People Assigned Female Sex at Birth](#) and [Transgender People With HIV](#));
- Assessment of the HIV status of sexual partner(s) and referral of partner(s) for HIV testing and ARV treatment or prophylaxis as needed (see [Pre-Exposure Prophylaxis \[PrEP\] to Prevent HIV During Periconception, Antepartum, and Postpartum Periods](#)); and
- Referral of children for HIV testing if HIV status is unknown.

## Prenatal Screening, Diagnosis, and Therapy

According to the American College of Obstetricians and Gynecologists (ACOG), prenatal genetic screening and diagnostic testing options should be discussed and offered to all pregnant people

regardless of age or risk of chromosomal abnormality. After review and discussion, every patient has the right to pursue or decline prenatal genetic screening and diagnostic testing.<sup>10</sup> Prenatal screening for aneuploidy should be offered using noninvasive methods with high sensitivity and low false-positive rates, as recommended by ACOG. Counseling on noninvasive genetic screening options is no different for people with HIV than for those without HIV. Noninvasive screening can be accomplished using any of the following:

- Cell-free DNA screening with or without nuchal translucency; *or*
- Serum analyte screening alone or combined with nuchal translucency (sequential or integrated).

Patients with HIV who desire or have indications for diagnostic testing during pregnancy (e.g., abnormal ultrasound or aneuploidy screening) should be counseled about the potential risk of perinatal HIV transmission along with other risks of the procedure so that they can make informed decisions about invasive testing. Although the data on women who are receiving ART are limited, the risk of perinatal HIV transmission does not appear to increase with the use of amniocentesis or other invasive diagnostic procedures in women who have virologic suppression on ART.<sup>11,12</sup> This is in contrast to the era before effective ART, during which invasive procedures, such as amniocentesis and chorionic villus sampling, were associated with a twofold to fourfold increase in the risk of perinatal transmission of HIV.<sup>13-16</sup> Although no transmissions occurred among 159 reported cases of amniocentesis or other invasive diagnostic procedures performed in women who were on effective ART, a small increase in the risk of transmission cannot be ruled out.<sup>17-20</sup>

At a minimum, it should be recommended that pregnant patients receive effective ART before undergoing any invasive prenatal testing. Patients ideally should have undetectable HIV RNA levels at the time of the procedure, and every effort should be made to avoid inserting the needle through, or very close to, the placenta. Families often make complex personal decisions about continuing a pregnancy after a prenatal diagnosis, and those decisions are made even more complex by evolving state laws regarding access to abortion. A patient-centered discussion regarding delaying diagnostic procedures to allow for viral suppression should also consider the impact of that delay on the options available to a patient for terminating a pregnancy, if that is something they are considering. If a patient with detectable HIV RNA levels requires invasive prenatal testing, consultation with an expert in the management of HIV during pregnancy should be considered (see [Intrapartum Care for People With HIV](#)).

Fetal therapy is an area of maternal-fetal medicine in which insufficient data exist about the risk of HIV transmission through such procedures as selective fetoscopic laser photocoagulation, vesicoamniotic or thoracoamniotic shunts, intrauterine transfusions, *in utero* repair of neural tube defects, and other invasive procedures. In the absence of evidence to guide these decisions, it is recommended that patients with HIV who may require advanced care for fetal abnormalities receive consultation at specialized centers where they can receive coordinated, multidisciplinary counseling. As with the above discussion regarding prenatal diagnosis, it is recommended that individuals have achieved viral suppression prior to procedures.

## The National Perinatal HIV Hotline

The national [Perinatal HIV/AIDS](#) hotline (1-888-448-8765) is a federally funded service that provides free clinical consultation to providers who are caring for pregnant people with HIV and their infants.

## Antiretroviral Therapy Adherence Support During Pregnancy

In general, the recommendations for the use of ART in people who are pregnant are the same as for those who are not pregnant. However, the [Perinatal Guidelines](#) do differ from the [Adult and Adolescent Antiretroviral Guidelines](#) in some instances where regimen selection has been modified based on concerns about specific drugs or limited experience with newer drugs during pregnancy (see [Table 6. What to Start: Initial Antiretroviral Regimens During Pregnancy for People Who Are Antiretroviral-Naive](#) and [Table 7. Situation-Specific Recommendations for Use of Antiretroviral Drugs in Pregnant People and Nonpregnant People Who Are Trying to Conceive](#) and [Recommendations for Use of Antiretroviral Drugs During Pregnancy: Overview](#)).

Clinicians and patients should discuss the substantial benefits of ARV drugs for maternal health and for reducing the risk of HIV transmission to infants; this helps put the potential risks of using these drugs into perspective (see [Table 14. Antiretroviral Drug Use in Pregnant People With HIV: Pharmacokinetic and Toxicity Data in Human Pregnancy and Recommendations for Use in Pregnancy](#) and [Appendix B: Supplement: Safety and Toxicity of Individual Antiretroviral Agents in Pregnancy](#)). Counseling of pregnant patients about ARV drug use should be directive and noncoercive, and providers should help patients make informed decisions regarding the use of ARV drugs.

**Counseling** about regimens should include information about the following:

- Maternal risk of **HIV** disease progression and the benefits and risks of therapy for maternal health<sup>21</sup>;
- The benefits of ART for preventing perinatal transmission of HIV<sup>22</sup>;
- The benefits of using ART to achieve and maintain viral suppression, which reduces the risk of sexual transmission of HIV to partners who do not have HIV<sup>23</sup>;
- The need for strict adherence to the prescribed ARV drug regimen to avoid drug resistance, optimize health outcomes, and minimize the risk of perinatal HIV transmission;
- The potential adverse effects of ARV drugs for pregnant people, fetuses, and infants, including potential interactions with other medications the patient may already be receiving (see [Recommendations for Use of Antiretroviral Drugs During Pregnancy: Overview](#))<sup>24-27</sup>;
- The limited long-term outcome data for infants who were exposed to ARV drugs *in utero*, especially for newer ARV drugs; *and*
- The importance of considering pregnancy-specific challenges to adherence, such as nausea and vomiting or adverse social determinants of health. Patients should be advised to remain in close communication with their providers about these challenges.

Counseling **at the onset of antepartum care and at each subsequent visit** should emphasize the importance of adherence to the ARV drug regimen to minimize the development of resistance and support the effectiveness of ART in achieving viral suppression. Patients with poor adherence during pregnancy are more likely to have detectable viral loads at delivery.<sup>28</sup> **In addition, multiple adverse social determinants of health, including housing instability,<sup>29</sup> nondisclosure of HIV status,<sup>30,31</sup> lack of social support,<sup>32</sup> and other factors, are known to affect adherence. As a result, adherence counseling should include careful attention to the patient's social needs, social support, and mental health.**

## Patient Counseling and Coordination of Care

Coordination of services among **antepartum** care providers, primary care and HIV specialty care providers, mental health and substance use disorder treatment services, social services, and public assistance programs is essential to ensure that patients with HIV are well supported during all stages of their pregnancies and the postpartum period. Medical care of pregnant people with HIV requires coordination and communication between HIV specialists and obstetric providers.

Anticipatory guidance provided during pregnancy for people with HIV is generally similar to **counseling that is recommended for individuals without HIV.**<sup>33</sup> However, **HIV-specific antepartum counseling** should include current knowledge about risk factors for perinatal HIV transmission. Risk of perinatal transmission of HIV has been associated with potentially modifiable factors, including **tobacco use**, substance use disorders, alcohol consumption, and genital tract infections. **In addition to improving maternal health, cessation of tobacco and drug use and treatment of STIs and other genital tract infections may reduce the risk of perinatal transmission.** **Other risk factors for ART nonadherence, such as housing instability, food insecurity, mental health disorders,**<sup>34</sup> **and intimate partner violence,**<sup>35</sup> **also require particular attention for patients with HIV.** Patients should be screened for mental health conditions, assessed for the risk of intimate partner violence, and counseled about disclosure of their HIV status when needed.<sup>36</sup> It is important to be aware that COVID-19 may increase the risk of depression, substance use, and intimate partner violence at a time when the frequency of in-person health care services has decreased (see [Guidance for COVID-19 and People With HIV](#)).

Fears of stigma and violence that could result from undesired disclosure require comprehensive, culturally informed services to assist pregnant and postpartum patients who are planning to disclose their status,<sup>37,38</sup> and patients who have not disclosed their status require support to maintain privacy during healthcare encounters (including telemedicine visits and in-person care). Transgender and gender-diverse individuals may have specific concerns **and needs for added support related to receiving services in settings designed for the care of cisgender women and pregnant women** (see [Perinatal HIV Prevention for Transgender and Gender Diverse People Assigned Female Sex at Birth](#)).

In addition, providers should counsel patients with HIV about what to expect during labor, delivery, and the postpartum period. This **counseling** should include discussing the mode of delivery and the possible use of intrapartum zidovudine, as well as **unique disclosure circumstances that may occur in the context of intrapartum care.** **Guidance must also address reproductive choice** and postpartum contraceptive options. Providers also should discuss the possibility of simplifying a patient's ARV regimen after delivery, which can help promote long-term adherence to ART. Discussions regarding the prevention of postnatal transmission to the neonate also should include recommendations about infant feeding, neonatal ARV prophylaxis, infant diagnostic HIV testing, and the avoidance of pre-mastication of food (see [Infant Feeding for Individuals with HIV in the United States](#)). **Anticipatory guidance about postpartum care also must include plans for transitioning health care from the obstetric team to the long-term health care team.**

**Table 4. Antepartum Screenings and Assessments for Pregnant People With HIV<sup>a</sup>**

Antepartum screenings and assessments	At Entry Into Antenatal Care	At Each Visit	As Clinically Indicated
Assessment of ART adherence, adherence challenges, and facilitators	✓	✓	✓
Assessment of the need for prophylaxis against opportunistic infections, e.g., <i>Pneumocystis jirovecii</i> pneumonia <sup>b</sup>	✓		✓
Screening for HAV, HBV, and HCV and assessment of vaccination or treatment needs <sup>c</sup>	✓		
Assessment and provision of other vaccination needs, e.g., influenza, pneumococcus, Tdap, or SARS-CoV-2 (including boosters)	✓		✓
Tuberculosis screening <sup>d</sup>	✓		✓
STI screening, e.g., syphilis, <i>Chlamydia trachomatis</i> , <i>Trichomonas vaginalis</i> , and <i>Neisseria gonorrhoea</i>	✓		✓ <sup>e</sup>
Screening for depression and anxiety	✓		✓
Screening for IPV	✓		✓
Assessment of the patient's gender identity and pronouns <sup>f</sup>	✓		
Assessment of the need for supportive care, e.g., social services, mental health services, substance use disorder treatment services, smoking cessation	✓	✓	✓

<sup>a</sup> Provide or refer for needed services based on the results of screenings and assessments, e.g., immunizations, treatment, referrals.

<sup>b</sup> Prophylaxis against *Pneumocystis jirovecii* pneumonia is recommended during pregnancy when CD4 count is <200 cells/mL. See [Adult and Adolescent Opportunistic Infections Guidelines](#).

<sup>c</sup> See [Hepatitis B Virus/HIV Coinfection](#) and [Hepatitis C Virus/HIV Coinfection](#) for guidance regarding immunizations and treatment.

<sup>d</sup> Includes screening for active and latent tuberculosis; stepwise screening for active tuberculosis may begin with exposure history and symptom screening (see [Mycobacterium tuberculosis Infection and Disease](#)). If screening for latent tuberculosis was performed and negative in the last year, repeat testing is not necessary for those at low risk for repeated or ongoing exposure to people with active tuberculosis.

<sup>e</sup> Repeat STI screening, particularly for syphilis, chlamydia, and gonorrhea, is often repeated in the third trimester (see [Recommended Clinician Timeline for Screening for Syphilis, HIV, HBV, HCV, Chlamydia, and Gonorrhea](#)).

<sup>f</sup> See [Perinatal HIV Prevention for Transgender and Gender Diverse People Assigned Female Sex at Birth](#) for additional guidance.

**Key:** HAV = hepatitis A virus; hepatitis B virus = HBV; hepatitis C virus = HCV; IPV = intimate partner violence; STI = sexually transmitted infection; Tdap = tetanus, diphtheria and pertussis vaccine

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