CLINICAL GUIDELINES PROGRAM
NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV · HCV · SUBSTANCE USE · LGBT HEALTH

HIV Testing During Pregnancy, at Delivery, and Postpartum

Lead author: Rodney L. Wright, MD, MS, with the Medical Care Criteria Committee; updated July 2020

Contents

HIV Testing During Pregnancy, at Delivery, and Postpartum

Purpose of This Guideline

Timely diagnosis of HIV and rapid initiation of antiretroviral therapy are crucial to reducing the risk of perinatal HIV transmission and maintaining the health of pregnant patients and their infants. This guideline was developed by the New York State (NYS) Department of Health (DOH) AIDS Institute (AI) to provide evidence-based recommendations regarding HIV testing during pregnancy and at delivery and to promote universal HIV screening for all pregnant patients to achieve the following:

- Ensure universal HIV screening early in pregnancy, during the third trimester, and during labor for individuals who do not have a documented negative HIV status.
- Encourage third-trimester testing for syphilis and HIV testing.
- Encourage HIV testing for pregnant and postpartum patients who exhibit symptoms of acute HIV.
- Increase uptake of pre-exposure prophylaxis among pregnant patients who do not test positive for HIV but who are at high risk of HIV acquisition during pregnancy and postpartum.

→ KEY POINT
• Clinicians in NYS can call the Clinical Education Initiative (CEI Line) to speak with an experienced HIV care provider regarding maternal/fetal exposure. The CEI Line is available 24/7. – Call 1-866-637-2342, press “2”

Guideline development: This guideline was developed by the NYSDOH AI Clinical Guidelines Program, which is a collaborative effort between the NYSDOH AI Office of the Medical Director and the Johns Hopkins University School of Medicine, Division of Infectious Diseases.

Established in 1986, the goal of the Clinical Guidelines Program is to develop and disseminate evidence-based, state-of-the-art clinical practice guidelines to improve the quality of care throughout NYS for people who have HIV, hepatitis C virus, or sexually transmitted infections; people with substance use issues; and members of the LGBTQ community. NYSDOH AI guidelines are developed by committees of clinical experts through a consensus-driven process.

The NYSDOH AI charged the Medical Care Criteria Committee with developing evidence-based clinical recommendations for HIV testing during labor and delivery. The resulting recommendations are based on an extensive review of the medical literature and reflect consensus among this panel of experts. Each recommendation is rated for strength and for quality of the evidence (see below). If recommendations are based on expert opinion, the rationale for the opinion is included.

NYSDOH AI Clinical Guidelines Program Ratings Scheme, Updated June 26, 2019 [a]

Strength of Recommendation Ratings	
A	Strong recommendation
B	Moderate recommendation
C	Optional
Quality of Supporting Evidence Ratings	
1	Indicates that the evidence supporting a recommendation is derived from published results of at least one randomized trial with clinical outcomes or validated laboratory endpoints.

NYSDOH AI Clinical Guidelines Program Ratings Scheme, Updated June 26, 2019 [a]

*	Indicates that the evidence supporting a recommendation is strong because it is based on a self-evident conclusion(s) or conclusive, published in vitro data, or because the recommendation articulates well-established, accepted practice that cannot be tested because ethics would preclude a clinical trial.
2	Indicates that the evidence supporting a recommendation is derived from published results of at least one well-designed, nonrandomized clinical trial or observational cohort study with long-term clinical outcomes.
2†	Indicates that the evidence supporting a recommendation has been extrapolated from published results of well-designed studies (including nonrandomized clinical trials) conducted in populations other than those specifically addressed by a recommendation. One example would be results of studies conducted predominantly in a subpopulation (e.g., one gender) that the committee determines to be generalizable to the population under consideration in the guideline. When this rating is assigned to a recommendation, the source(s) of the extrapolated evidence and the rationale for the extrapolation are provided in the guideline text.
3	Indicates that a recommendation is based on the expert opinion of the committee members. The rationale for the recommendation is provided in the guideline text.

a. With the June 2019 update, the ratings for quality of supporting evidence were expanded to add the * rating and the 2† rating.

NYS Public Health Law

☆ NEW YORK STATE PUBLIC HEALTH LAW

Partner Notification

- Clinicians must discuss partner notification with patients who have been recently diagnosed with HIV, and the discussion must be documented in the medical record and on the *Medical Provider Reporting Form (DOH-4189)*, as required by *Public Health Law, Article 21, Title III, Section 2130*.

Universal HIV Screening

- Clinicians in prenatal care settings must provide HIV-related information and recommend HIV testing for all pregnant patients, including those who present in labor if their HIV status is not documented.
  - Immediately arrange an expedited HIV test, with consent, for patients in labor when no HIV test result is documented for the current pregnancy, with results available as soon as possible.

HIV Testing

- Any patient who does not have a documented HIV test result during the current pregnancy and who is not known to have HIV must, with their consent, receive expedited HIV testing during labor; results must be available within 12 hours of consent and preferably within 60 minutes. All birth facilities must have the capacity to provide and perform expedited HIV testing.
  - Facilities should use a U.S. Food and Drug Administration–approved HIV screening test, with results available preferably within 1 hour and no longer than 12 hours; the most sensitive screening test available should be used to allow for detection of early or acute HIV.
  - Ensure that expedited HIV test results are available prior to delivery to allow maximum benefits of intrapartum antiretroviral prophylaxis for the fetus.
- Supplemental diagnostic testing must be obtained for all preliminary positive HIV test results in pregnant patients.
- If a patient who presents in labor declines an HIV test, the infant is required to have an expedited HIV antibody screen at birth, with or without consent, with results available as soon as possible but no later than 12 hours after birth.
- If the infant HIV test is reactive for HIV antibodies, a plasma sample should be collected from the infant for HIV-1 nucleic acid testing. See *New York Codes, Rules and Regulations (NYCRR) Title 10, Section 69-1.3*.
- The *DOH-4068 Maternal-Pediatric HIV Prevention and Care Program Test History and Assessment* form must be completed for every pregnant individual presenting for delivery.

☆ NEW YORK STATE PUBLIC HEALTH LAW

Antiretroviral Prophylaxis

- The hospital shall determine the need for, and ensure provision of, HIV prophylaxis and/or treatment per standard of care to prevent transmission to the infant, and shall record such in both the birth parent's and newborn's health records. See *New York Codes, Rules and Regulations (NYCRR) Title 10, Section 405.21*.

Partner Notification

Clinicians can provide assistance with partner notification through direct referral to:

- The New York State and County Health Department *Partner Services (PS) Programs*.
- The New York City Department of Health *Contact Notification Assistance Program (CNAP)*.

More information on partner notification assistance and resources is also available at *HIV/AIDS Laws & Regulations*.

Universal Screening and Testing in Pregnancy

☑ RECOMMENDATIONS

Universal Screening and Testing in Pregnancy

- When screening pregnant patients for HIV, clinicians should use a U.S. Food and Drug Administration–approved 4th-generation antigen/antibody combination immunoassay. (A2)
  - See the NYSDOH AI guideline *HIV Testing > Steps in the HIV Diagnostic Testing Algorithm* and *Q/A: HIV Testing*.
- Clinicians should refer patients who test positive for HIV to an experienced HIV care provider who can manage antiretroviral therapy (ART) initiation (ideally within 3 days). (A3)
  - See the NYSDOH AI guideline *When to Initiate ART, With Protocol for Rapid Initiation*.
- For patients who test negative for HIV early in pregnancy, clinicians should perform repeat testing in the third trimester. (A2)

To help ensure timely diagnosis of HIV and implementation of effective measures to prevent perinatal transmission of HIV, New York State Public Health Law mandates that all prenatal care settings regulated by the NYSDOH—including hospitals, diagnostic and treatment centers, health maintenance organizations, and birthing centers—provide information about HIV and recommend HIV testing, preferably at the first prenatal visit, to all individuals who present for care. Settings not regulated by the NYSDOH, such as some private offices, should also provide information about HIV and recommend voluntary HIV testing in accordance with NYSDOH, U.S. Department of Health and Human Services, and American College of Obstetrics and Gynecology standards of care for all pregnant individuals [ACOG 2018; AIDS*info* 2020].

→ KEY POINTS

- Diagnosing HIV and initiating ART at the time of diagnosis are crucial to reducing the risk of perinatal HIV transmission and maintaining the health of pregnant patients.
- HIV screening at the first prenatal visit increases the likelihood that HIV will be diagnosed, ART will be initiated early during pregnancy, and viral suppression can be attained.
- Repeat HIV testing during the third trimester is prudent when:
  - A patient reports behavior that confers high risk for HIV acquisition, such as substance use or involvement with a new sex partner whose HIV status is not known.
  - A sexually transmitted infection is diagnosed, which increases the likelihood that recent HIV infection will be identified.
- Routine screening for chlamydia, gonorrhea, and syphilis can be combined with HIV testing at the initial visit and in the third trimester.

→ KEY POINTS

- Hepatitis C virus screening should be performed in all patients who are pregnant or planning to get pregnant; screening should be repeated during each pregnancy. (See the NYSDOH guideline *Treatment of Chronic HCV With Direct-Acting Antivirals > Pregnancy and HCV*.)
- This Committee encourages healthcare providers to recommend HIV testing for sex partner(s) of pregnant patients. During the first prenatal visit, when a clinician provides counseling about HIV and other health conditions, the care provider can suggest that a patient's sex partner(s) undergo testing for HIV. The same suggestion can be made if a patient reports having new sex partners during pregnancy.

PrEP to Prevent HIV

☑ RECOMMENDATION

PrEP to Prevent HIV

- If a patient requests pre-exposure prophylaxis (PrEP) or reports engaging in behaviors that confer risk of HIV acquisition, clinicians should assess for PrEP candidacy or refer the patient for assessment. (A1) PrEP is not contraindicated during pregnancy or while breastfeeding an infant.
  - See the NYSDOH AI guideline *PrEP to Prevent HIV and Promote Sexual Health > Candidates for PrEP*.

In addition to HIV screening as part of routine antenatal care, other prevention strategies should be available to pregnant and breastfeeding patients who are at high risk of acquiring HIV, including assessment for PrEP candidacy. PrEP significantly decreases the risk of HIV transmission in heterosexual serodifferent couples [Baeten, et al. 2012].

Although available data suggest that use of tenofovir disoproxil fumarate/emtricitabine (TDF/FTC; brand name Truvada) as PrEP does not increase the risk of birth defects, studies of bone mineral density (BMD) in infants born to women taking TDF-containing antiretroviral regimens have provided conflicting results [Vigano, et al. 2011; Siberry, et al. 2015]. One study suggested a decrease in BMD of up to 15% in infants exposed to TDF in utero compared with infants who were not exposed to TDF [Siberry, et al. 2015], whereas another study found no association between in utero TDF exposure and infant BMD [Vigano, et al. 2011].

→ KEY POINTS

- Maternal HIV acquisition and acute infection confer a significant risk of HIV transmission to an infant who is being breastfed. Of maternal seroconversion-associated transmissions that occurred between 2007 and 2018, 4 of 11 were attributed to breastfeeding among women who acquired HIV early postpartum [NYSDOH 2019].
- When used as prescribed, PrEP effectively prevents HIV acquisition.
- When indicated, PrEP should be prescribed as part of a comprehensive prevention plan that includes counseling and education about adherence to PrEP medications, ongoing monitoring with laboratory tests, and discussion of risk-reduction strategies (for more information regarding PrEP, see the NYSDOH AI guideline *PrEP to Prevent HIV and Promote Sexual Health*).
- Repeat screening for HIV and other sexually transmitted infections (chlamydia, gonorrhea, and syphilis) is part of routine PrEP management.
- The use of antiretroviral medications during pregnancy is monitored through the *Antiretroviral Pregnancy Registry*.

Testing for Acute HIV

☑ RECOMMENDATIONS

Testing for Acute HIV

- Clinicians should maintain a high level of suspicion for acute HIV in all pregnant patients who present with a compatible clinical syndrome. (A3)
  - See the NYSDOH AI guideline *Diagnosis and Management of Acute HIV > Presentation and Diagnosis*.
- When a patient presents with symptoms suggestive of acute HIV infection, the clinician should perform an HIV test immediately, even if a previous HIV screening test result during the current pregnancy was nonreactive. (A2)
- When screening for acute HIV, clinicians should obtain plasma HIV RNA testing in conjunction with HIV serologic testing, preferably with a 4th-generation HIV antigen/antibody combination immunoassay; the plasma HIV RNA test should be performed even if the HIV serologic screening test result is nonreactive or indeterminate. (A2)
- If a patient's plasma HIV RNA test result indicates a viral load ≥5,000 copies/mL, the clinician should make a presumptive diagnosis of acute HIV, even if the results of screening and antibody differentiation tests are nonreactive or indeterminate. (A2)

Repeat HIV testing in patients who have a negative HIV test result early in pregnancy and assessment for acute HIV during pregnancy are important for reducing the risk of perinatal HIV transmission. Between 2007 and 2018, 11 of 45 (24.4%) perinatal transmissions to infants in New York State were associated with acute HIV infection acquired during pregnancy or during the postpartum period through breastfeeding [NYSDOH 2017].

When a pregnant patient presents with symptoms suggestive of acute HIV, a plasma HIV RNA assay should be performed in conjunction with an HIV serologic screening test to diagnose acute HIV. A 4th-generation HIV antigen/antibody combination immunoassay is the recommended serologic test.

- For specific recommendations and expanded guidance on diagnosing and managing acute HIV, see the NYSDOH AI guideline *Diagnosis and Management of Acute HIV*.

Third Trimester Testing

☑ RECOMMENDATIONS

Third Trimester Testing

- Clinicians should perform repeat HIV testing in the third trimester of pregnancy, preferably between weeks 34 and 36, for all patients with a negative HIV test result early in pregnancy. (A2)
- Clinicians should repeat HIV testing in the third trimester in patients who have engaged in behaviors that put them at risk of HIV acquisition during pregnancy or have acquired other sexually transmitted infections. (A2)

The NYSDOH recommends that all prenatal care providers routinely recommend repeat HIV testing in the third trimester, preferably between weeks 34 and 36, for all pregnant individuals in New York State, regardless of location, who tested negative for HIV early in prenatal care [NYSDOH 2007]. The Centers for Disease Control and Prevention (CDC) and American College of Obstetrics and Gynecology (ACOG) recommend repeat HIV testing in the third trimester in areas with high incidence or prevalence of HIV; New York State is listed as an area of high HIV prevalence [Branson, et al. 2006; ACOG 2018]. The CDC and ACOG recommend repeat testing for chlamydia, gonorrhea, and syphilis in the third trimester if the patient is at risk [Workowski 2015; ACOG 2018]. Assessment for acute HIV is strongly recommended in patients who present with compatible symptoms.

Syphilis testing: The NYSDOH recommends that clinicians obtain serologic screening for syphilis for pregnant patients with HIV at the first prenatal visit, during the third trimester (28 to 32 weeks of gestation), and at delivery. See the NYSDOH guideline *Management of Syphilis in Patients with HIV > Screening*.

HIV Testing and Management Checklist

CLINICAL GUIDELINES PROGRAM
HIV Testing During Pregnancy, at Delivery, and Postpartum 7/20

New York State Department of Health
AIDS Institute Clinical Guidelines Program
www.hivguidelines.org

Checklist for HIV Testing and Management for Patients Who Present in Labor and Their Newborns

From the New York State Department of Health AIDS Institute guideline *HIV Testing During Pregnancy, at Delivery, and Postpartum*. www.hivguidelines.org. July 2020

❑ Repeat HIV Testing

- Offer and recommend repeat HIV testing for patients in labor who do not have documented third-trimester HIV test results, who have engaged in or whose partners have engaged in behaviors that confer risk for HIV, or who have acquired a sexually transmitted infection during the current pregnancy.

❑ Provide Counseling and Education About Antiretroviral (ARV) Prophylaxis

- Counsel regarding the use of ARV prophylaxis in the birth parent and the infant.
- Provide education about the benefits of ARV prophylaxis for any patient with HIV who declines it for themselves or their newborn.

❑ Manage a Reactive HIV Screening Test Result

- Obtain HIV diagnostic testing according to the CDC *Recommended Laboratory HIV Testing Algorithm for Serum or Plasma Specimens*.
- Initiate maternal HIV prophylaxis; immediate initiation is recommended.
- Administer newborn prophylaxis as soon as possible after birth. See DHHS *Management of Infants Born to Women with HIV Infection*.
- Discuss the meaning of a preliminary positive HIV test result.
- Do not delay prophylaxis while awaiting results of confirmatory serologic testing.
- Inform the birth parent that HIV can be transmitted through breast milk and that breastfeeding is not recommended until they are confirmed to be HIV negative.

❑ Manage a Confirmed HIV Diagnosis in the Parent

- If a supplemental HIV test confirms an HIV diagnosis in the parent, ensure an HIV diagnostic test of the infant is obtained within 48 hours of birth. Send the infant's specimen to the Pediatric HIV Testing Service at the Wadsworth Center for nucleic acid testing to detect HIV-1 RNA or DNA.
- Make arrangements for the parent with newly diagnosed HIV to see an experienced HIV care provider and, if indicated, provide referrals for case management and support services as well.
- Ensure that the HIV-exposed infant is discharged from care with ARV medications, not just a prescription.
- Make arrangements for the infant's medical follow-up with an experienced pediatric HIV care provider.

❑ Resources

- Wadsworth Center Order Desk to Obtain a Pediatric HIV Test Kit: 518-474-4175
- Clinical Education Initiative (CEI) Line: 866-637-2342
- NYSDOH AI Clinical Guidelines Program: www.hivguidelines.org

NEW YORK STATE LAW

- Clinicians in prenatal care settings must provide HIV-related information and recommend HIV testing for all pregnant patients, including those who present in labor and do not have documented HIV status.
- Immediately arrange an expedited HIV test, with consent, for patients in labor when no HIV test result is documented for the current pregnancy, with results available as soon as possible.
- If a patient who presents in labor declines an HIV test, the infant is required to have an expedited HIV antibody screen at birth, with or without consent, with results available as soon as possible but no later than 12 hours after birth.
- If the infant's HIV test is reactive for HIV antibodies, a plasma sample should be collected from the infant for HIV-1 nucleic acid testing. (See *New York Codes, Rules and Regulations [NYCRR] Title 10, Section 69-1.3*.)
- The hospital shall determine the need for, and ensure provision of, HIV prophylaxis and/or treatment per standard of care to prevent transmission to the infant, and shall record such in both the birth parent's and newborn's health records. (See *New York Codes, Rules and Regulations [NYCRR] Title 10, Section 405.21*.)

Patients Who Present in Labor and Newborns

☑ RECOMMENDATIONS

Patients Who Present in Labor and Newborns

- Clinicians should offer and recommend repeat HIV testing during labor and delivery and counsel regarding the use of antiretroviral prophylaxis in the birth parent and the infant, for any patient in labor who (A2):
  - Is not known to have HIV and who does not have documented third-trimester HIV test results.
  - Has engaged in or whose partners have engaged in behaviors that confer risk of HIV acquisition or who has acquired sexually transmitted infections during the current pregnancy.
- If the result of the expedited HIV test for a patient in labor is reactive, the clinician should:
  - Obtain HIV diagnostic testing according to the CDC *Recommended Laboratory HIV Testing Algorithm for Serum or Plasma Specimens*. (A1)
  - Initiate maternal HIV prophylaxis (A1); immediate initiation is recommended. (A3)
  - Administer newborn prophylaxis [a] as soon as possible after birth. (A2)
- If supplemental diagnostic testing confirms that a patient who is in labor has HIV, the clinician should:
  - Ensure an HIV diagnostic test of the infant has been obtained within 48 hours of birth. The infant's specimen should be sent to the Pediatric HIV Testing Service at the Wadsworth Center for nucleic acid testing to detect HIV-1 RNA or DNA. (B3)
  - Make arrangements for the patient with newly diagnosed HIV to see an experienced HIV care provider and, if indicated, provide referrals for case management and support services as well. (A3)
    - See NYSDOH AI *HIV Testing, Reporting and Confidentiality in New York State 2017-18 Update: Fact Sheet and Frequently Asked Questions > FAQ 11*.
  - Ensure that the HIV-exposed infant is discharged from care with antiretroviral medications, not just a prescription. (B3)
    - See the NYSDOH AI guideline *Diagnosis of HIV in Exposed Infants*.
  - Make arrangements for the infant's medical follow-up with an experienced pediatric HIV care provider. (A3)
    - See the NYSDOH AI guideline *Diagnosis of HIV in Exposed Infants*.

a. See Department of Health and Human Services (DHHS) *Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States > Management of Infants Born to Women with HIV Infection*.

→ SELECTED GOOD PRACTICE REMINDERS

Patients Who Present in Labor and Newborns

- If the result of the expedited HIV test for a patient in labor is reactive:
  - Discuss the meaning of a preliminary positive HIV test result.
  - Do not delay prophylaxis while awaiting results of confirmatory serologic testing.
  - Inform the birth parent that HIV can be transmitted through breast milk and that breastfeeding is contraindicated until they are confirmed to be HIV negative. Refer the birth parent to a lactation specialist to assist with education and support for maintenance of breast milk supply, if so desired, so breastfeeding may be initiated if HIV infection is excluded.
- Provide education about the benefits of antiretroviral prophylaxis for any patient with HIV who declines it for themselves or their newborn.

U.S. Food and Drug Administration (FDA)-approved 4th-generation HIV antigen/antibody combination immunoassays are recommended for expedited HIV testing during labor and delivery. These tests screen for HIV-1 and HIV-2 antibodies and

for the HIV-1 p24 antigen. Because the p24 antigens produced by the virus may be detectable before an individual produces antibodies, 4th-generation immunoassays are capable of detecting acute HIV-1.

→ KEY POINTS

- The peripartum period is the final opportunity to provide antiretroviral prophylaxis and decrease the risk for perinatal HIV transmission to exposed infants of individuals who have not been previously identified as having HIV.
- Providing information about HIV and recommending HIV testing as early as possible in pregnancy is ideal.

HIV testing of pregnant patients and their infants in the peripartum period functions as a safety net, ensuring screening for the small number of individuals not tested earlier in pregnancy or who seroconverted during pregnancy after the initial negative HIV test result.

Preliminary positive HIV test results: Although not diagnostic of HIV, most preliminary positive HIV test results are true-positive results; the precise ratio of true-positive to false-positive test results will depend on the test used and the local prevalence of HIV. When a preliminary positive result from a rapid HIV test occurs during labor and delivery, a second rapid test may be performed using a different, FDA-approved rapid test device to obtain quick verification of the initial result. If both rapid HIV test results are reactive, the likelihood of infection is high. Regardless of whether 1 or 2 rapid HIV tests are performed, supplemental testing after a preliminary positive result is required to establish a diagnosis of HIV (see the NYSDOH AI guideline *HIV Testing > Steps in the HIV Diagnostic Testing Algorithm* for maternal testing). Clinicians should collect a plasma sample from infants with a preliminary positive result and should obtain HIV-1 nucleic acid testing.

Antiretroviral prophylaxis for pregnant patients is more likely to benefit the infant when started as soon as a patient tests positive for HIV; the benefit of infant prophylaxis decreases when initiation is delayed [Wade, et al. 1998; Fiscus, et al. 1999]. These factors underscore the importance of initiating antiretroviral prophylaxis in pregnant patients and their infants as soon as possible and highlight the need for ongoing assessment of risk and HIV screening for patients who breastfeed. For specific prophylaxis regimens, see DHHS *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.*

All Recommendations

☑ All RECOMMENDATIONS: HIV Testing During Pregnancy, at Delivery, and Postpartum

Universal Screening and Testing in Pregnancy

- When screening pregnant patients for HIV, clinicians should use a U.S. Food and Drug Administration–approved 4th-generation antigen/antibody combination immunoassay. (A2)
  - See the NYSDOH AI guideline *HIV Testing > Steps in the HIV Diagnostic Testing Algorithm* and *Q/A: HIV Testing*.
- Clinicians should refer patients who test positive for HIV to an experienced HIV care provider who can manage antiretroviral therapy (ART) initiation (ideally within 3 days). (A3)
  - See the NYSDOH AI guideline *When to Initiate ART, With Protocol for Rapid Initiation*.
- For patients who test negative for HIV early in pregnancy, clinicians should perform repeat testing in the third trimester. (A2)

PrEP to Prevent HIV

- If a patient requests pre-exposure prophylaxis (PrEP) or reports engaging in behaviors that confer risk of HIV acquisition, clinicians should assess for PrEP candidacy or refer the patient for assessment. (A1) PrEP is not contraindicated during pregnancy or while breastfeeding an infant.
  - See the NYSDOH AI guideline *PrEP to Prevent HIV and Promote Sexual Health > Candidates for PrEP*.

Testing for Acute HIV

- Clinicians should maintain a high level of suspicion for acute HIV in all pregnant patients who present with a compatible clinical syndrome. (A3)
  - See the NYSDOH AI guideline *Diagnosis and Management of Acute HIV > Presentation and Diagnosis*.
- When a patient presents with symptoms suggestive of acute HIV infection, the clinician should perform an HIV test immediately, even if a previous HIV screening test result during the current pregnancy was nonreactive. (A2)
- When screening for acute HIV, clinicians should obtain plasma HIV RNA testing in conjunction with HIV serologic testing, preferably with a 4th-generation HIV antigen/antibody combination immunoassay; the plasma HIV RNA test should be performed even if the HIV serologic screening test result is nonreactive or indeterminate. (A2)
- If a patient's plasma HIV RNA test result indicates a viral load ≥5,000 copies/mL, the clinician should make a presumptive diagnosis of acute HIV, even if the results of screening and antibody differentiation tests are nonreactive or indeterminate. (A2)

Third Trimester Testing

- Clinicians should perform repeat HIV testing in the third trimester of pregnancy, preferably between weeks 34 and 36, for all patients with a negative HIV test result early in pregnancy. (A2)
- Clinicians should repeat HIV testing in the third trimester in patients who have engaged in behaviors that put them at risk of HIV acquisition during pregnancy or have acquired other sexually transmitted infections. (A2)

Patients Who Present in Labor and Newborns

- Clinicians should offer and recommend repeat HIV testing during labor and delivery and counsel regarding the use of antiretroviral prophylaxis in the birth parent and the infant, for any patient in labor who (A2):
  - Is not known to have HIV and who does not have documented third-trimester HIV test results.
  - Has engaged in or whose partners have engaged in behaviors that confer risk of HIV acquisition or who has acquired sexually transmitted infections during the current pregnancy.
- If the result of the expedited HIV test for a patient in labor is reactive, the clinician should:
  - Obtain HIV diagnostic testing according to the CDC *Recommended Laboratory HIV Testing Algorithm for Serum or Plasma Specimens*. (A1)
  - Initiate maternal HIV prophylaxis (A1); immediate initiation is recommended. (A3)
  - Administer newborn prophylaxis [a] as soon as possible after birth. (A2)

☑ All RECOMMENDATIONS: HIV Testing During Pregnancy, at Delivery, and Postpartum

- If supplemental diagnostic testing confirms that a patient who is in labor has HIV, the clinician should:
  - Ensure an HIV diagnostic test of the infant has been obtained within 48 hours of birth. The infant's specimen should be sent to the Pediatric HIV Testing Service at the Wadsworth Center for nucleic acid testing to detect HIV-1 RNA or DNA. (B3)
  - Make arrangements for the patient with newly diagnosed HIV to see an experienced HIV care provider and, if indicated, provide referrals for case management and support services as well. (A3)
    - See NYSDOH AI *HIV Testing, Reporting and Confidentiality in New York State 2017-18 Update: Fact Sheet and Frequently Asked Questions > FAQ 11*.
  - Ensure that the HIV-exposed infant is discharged from care with antiretroviral medications, not just a prescription. (B3)
    - See the NYSDOH AI guideline *Diagnosis of HIV in Exposed Infants*.
  - Make arrangements for the infant's medical follow-up with an experienced pediatric HIV care provider. (A3)
    - See the NYSDOH AI guideline *Diagnosis of HIV in Exposed Infants*.

a. See Department of Health and Human Services (DHHS) *Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States > Management of Infants Born to Women with HIV Infection*.

References

ACOG. Committee Opinion No. 752 Summary: Prenatal and Perinatal Human Immunodeficiency Virus Testing. *Obstet Gynecol* 2018;132(3):805-806. [PMID: 30134421] https://pubmed.ncbi.nlm.nih.gov/30134421

AIDS*info*. Recommendations for the use of antiretroviral drugs in pregnant women with HIV infection and interventions to reduce perinatal HIV transmission in the United States. 2020 https://aidsinfo.nih.gov/guidelines/html/3/perinatal-guidelines/0/ [accessed 2020 Mar 5]

Baeten JM, Donnell D, Ndase P, et al. Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. *N Engl J Med* 2012;367(5):399-410. [PMID: 22784037] https://pubmed.ncbi.nlm.nih.gov/22784037

Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep* 2006;55(RR-14):1-17; quiz CE11-14. [PMID: 16988643] https://pubmed.ncbi.nlm.nih.gov/16988643

Fiscus SA, Schoenbach VJ, Wilfert C. Short courses of zidovudine and perinatal transmission of HIV. *N Engl J Med* 1999;340(13):1040-1041; author reply 1042-1043. [PMID: 10189281] https://pubmed.ncbi.nlm.nih.gov/10189281

NYSDOH. Health alert: Steps to further reduce mother-to-child HIV transmission in New York State. 2007 https://www.health.ny.gov/diseases/aids/providers/testing/docs/healthalert.pdf [accessed 2019 Jun 10]

NYSDOH. 2017. Unpublished data.

NYSDOH. 2019. Unpublished data.

Siberry GK, Jacobson DL, Kalkwarf HJ, et al. Lower newborn bone mineral content associated with maternal use of tenofovir disoproxil fumarate during pregnancy. *Clin Infect Dis* 2015;61(6):996-1003. [PMID: 26060285] https://pubmed.ncbi.nlm.nih.gov/26060285

Vigano A, Mora S, Giacomet V, et al. In utero exposure to tenofovir disoproxil fumarate does not impair growth and bone health in HIV-uninfected children born to HIV-infected mothers. *Antivir Ther* 2011;16(8):1259-1266. [PMID: 22155907] https://pubmed.ncbi.nlm.nih.gov/22155907

Wade NA, Birkhead GS, Warren BL, et al. Abbreviated regimens of zidovudine prophylaxis and perinatal transmission of the human immunodeficiency virus. *N Engl J Med* 1998;339(20):1409-1414. [PMID: 9811915] https://pubmed.ncbi.nlm.nih.gov/9811915

Workowski KA. Centers for Disease Control and Prevention sexually transmitted diseases treatment guidelines. *Clin Infect Dis* 2015;61 Suppl 8:S759-762. [PMID: 26602614] https://pubmed.ncbi.nlm.nih.gov/26602614