



Infant Feeding for Persons Living With and at Risk for HIV in the United States: Clinical Report

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Pediatricians and pediatric health care professionals caring for infants born to people living with and at risk for HIV infection are likely to be involved in providing guidance on recommended infant feeding practices. Care team members need to be aware of the HIV transmission risk from breastfeeding and the recommendations for feeding infants with perinatal HIV exposure in the United States. The risk of HIV transmission via breastfeeding from a parent with HIV who is receiving antiretroviral treatment (ART) and is virally suppressed is estimated to be less than 1%. The American Academy of Pediatrics recommends that for people with HIV in the United States, avoidance of breastfeeding is the only infant feeding option with 0% risk of HIV transmission. However, people with HIV may express a desire to breastfeed, and pediatricians should be prepared to offer a family-centered, nonjudgmental, harm reduction approach to support people with HIV on ART with sustained viral suppression below 50 copies per mL who desire to breastfeed. Pediatric health care professionals who counsel people with HIV who are not on ART or who are on ART but without viral suppression should recommend against breastfeeding. Pediatric health care professionals should recommend HIV testing for all pregnant persons and HIV preexposure prophylaxis to pregnant or breastfeeding persons who test negative for HIV but are at high risk of HIV acquisition.

abstract

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BACKGROUND

Each year in the United States, nearly 5000 individuals capable of becoming pregnant are newly diagnosed with HIV infection, and nearly 5000 people with HIV give birth.¹⁻³ It is critical that pediatric health care professionals are aware of recommendations for determining the HIV infection status of persons who are pregnant and counseling on

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feeding of infants exposed to HIV in the United States. Breastfeeding* provides numerous health benefits to infants. In addition to providing optimal infant nutrition, human milk provides the infant with protection against morbidity and mortality from infectious diseases, allergic conditions, obesity, diabetes mellitus, malignancies, autoimmunity, and sudden infant death syndrome and may improve neurodevelopmental outcomes.^{4,5} Furthermore, there are benefits to the breastfeeding parent, including protection against breast and ovarian cancer, hypertension, and type 2 diabetes mellitus.⁶ For these reasons, the American Academy of Pediatrics (AAP) supports breastfeeding, along with appropriate complementary foods introduced at approximately 6 months, as long as desired for 2 years or beyond.⁷

However, because of the potential for HIV transmission via human milk, the Centers for Disease Control and Prevention (CDC) has recommended against breastfeeding for people with HIV in the United States beginning in 1985.⁸⁻¹⁰ Since that time, in the United States and other high-income settings, people with HIV have been advised to avoid breastfeeding. Meanwhile, low- and middle-income countries have developed guidelines that differ from those of high-income countries. Studies in resource-limited settings demonstrating increased morbidity and mortality in HIV-exposed infants receiving replacement feeding (including formula and other nonhuman milk alternatives) prompted the World Health Organization to recommend that in settings without the availability of safe drinking water and accessible and affordable formula, people with HIV should breastfeed their infants. Initially, rapid weaning (over a few days) was recommended at 6 months of age; however, abrupt (defined as a sudden decrease in the frequency of breastfeeding over a few days) or early weaning (weaning before 4 to 6 months of age) was determined to result in lower rates of HIV-free survival in infants.¹¹⁻¹³ Additional research demonstrated that maternal antiretroviral treatment (ART) or infant antiretroviral (ARV) prophylaxis during breastfeeding was effective in reducing the risk of HIV transmission to infants.¹⁴⁻²¹ Since 2016, World Health Organization guidance has recommended breastfeeding through 12 to 24 months of age with ART for the breastfeeding parent with HIV and/or infant ARV prophylaxis.²²

In the United States and other high-income countries, where safe and affordable formula and safe drinking water

are generally available (although not universally), malnutrition is rare, and mortality associated with respiratory and gastrointestinal infections is low, the risk of HIV transmission has historically been believed to outweigh the benefits of breastfeeding.^{23,24} However, in 2023, the Department of Health and Human Services Panel on Treatment of HIV During Pregnancy and Prevention of Perinatal Transmission (HHS Panel) updated its recommendations to provide guidance for people with HIV who desire to breastfeed. This decision recognizes the widespread use of early and more effective ART in people with HIV and a clearer understanding of the risk of HIV transmission via breastfeeding in the setting of viral suppression in the breastfeeding person.²⁴

PERINATAL HIV TESTING AND INFANT FEEDING COUNSELING

Determining the HIV infection status of all persons who are pregnant or desire to breastfeed is critical to address the health needs of the parent, implement HIV treatment and other interventions to prevent transmission as early as possible, and inform infant care and infant feeding discussions. In the United States, the majority of pregnant people with HIV are aware of their HIV infection status before pregnancy, giving health care professionals and patients adequate time for infant feeding discussions.¹ However, up to one-third of persons who are pregnant and have HIV may be unaware of their diagnosis; thus, awareness of the recommendations for HIV testing of pregnant persons and their impact on infant management, including feeding counseling, is important for pediatric providers.^{2,25}

Opt-out HIV testing (in which HIV is included in standard prenatal screening laboratory tests performed for all pregnant persons unless they specifically decline) is associated with higher screening rates than opt-in testing (in which pretest counseling is provided and consent for HIV testing must be obtained); therefore, opt-out testing is recommended for all pregnant persons in the United States during the initial antenatal care visit.^{24,26} Repeat testing may be considered in the third trimester and is recommended for people receiving care in jurisdictions with high HIV incidence (≥ 1 case per 1000 pregnant persons per year²⁷), for people at increased risk of HIV acquisition, and for people with signs or symptoms of acute HIV infection. State laws vary in their approach to perinatal HIV testing, with some states requiring HIV testing in the third trimester and some requiring testing of the parent during labor and delivery or of the newborn, if the HIV infection status was previously undocumented.²⁸ The CDC recommends that a rapid HIV test with opt-out consent should be performed for any person in labor with undocumented HIV infection status during the current pregnancy.²⁷ Expedited testing (antibody or

*The term "breastfeeding" is used throughout this document. We acknowledge that some people may prefer other terminology, including "chestfeeding." Pediatric health care professionals are encouraged to assess and utilize a person's preferred language regarding infant feeding. This guidance on infant feeding may also be used in cases of use of human milk by a nonbirthing parent with the primary goal of minimizing risk of HIV transmission to the infant.

antibody/antigen test available in <1 hour) of the laboring person is preferred over HIV testing of the infant. A positive rapid test result requires confirmation, but results should not delay interventions. A laboring person with a positive HIV rapid test result should promptly begin receiving ARV prophylaxis to prevent intrapartum HIV transmission.

The CDC and the HHS panel recommend that pregnant or breastfeeding persons with negative HIV test results who are at particularly high risk of seroconversion (eg, people who inject drugs or who have sexual partners with known HIV infection who are not virally suppressed on ART) should have frequent HIV testing (eg, every 3 months throughout the breastfeeding period), be offered HIV pre-exposure prophylaxis (PrEP), and be counseled on HIV prevention and the potential risk of HIV transmission to their infant.^{24,29} PrEP for the prevention of HIV is safe and effective in persons at risk for HIV who are pregnant or breastfeeding. Indications for PrEP include condomless sex with a partner with HIV who is not virally suppressed or whose viral suppression is unknown, condomless sex with 1 or more partners whose HIV infection status is unknown, recent bacterial sexually transmitted infection, or injection drug use.^{24,29} PrEP should be offered to people who request it, regardless of whether they report behaviors that put them at risk for HIV infection.²⁹ Both oral and long-acting injectable PrEP options exist, but only oral PrEP is approved for use in pregnancy and breastfeeding. The safety and efficacy of injectable PrEP in these populations is being studied.³⁰

RISK OF HIV TRANSMISSION TO INFANTS THROUGH BREASTFEEDING

Globally, an estimated 30% of perinatal HIV transmission occurs through breastfeeding, primarily from persons with HIV who are not on ART or who are on ART but not virally suppressed.^{31,32} In the absence of ART or infant ARV prophylaxis, the risk of HIV transmission to infants through human milk appears to be highest in the first 4 to 6 weeks of life, ranging between 5% and 6%.^{33,34} Risk continues, but declines to around 0.9% per month for the duration of breastfeeding.³⁵ Transmission risk is higher for people who acquire HIV (acute HIV infection) during lactation than for those with preexisting infection.^{36,37} Other factors associated with increased risk of HIV transmission via human milk include high plasma and human milk viral load and low CD4+ T-lymphocyte count in the breastfeeding parent.^{35,38-43}

Before the use of effective ART, increased HIV transmission was observed with longer breastfeeding duration, breast abnormalities (eg, mastitis, nipple cracking and bleeding), and oral lesions in the infant, including thrush.^{35,44-48} Mixed feeding (providing a combination of human milk, formula, and/or other foods) in the absence of effective ART has

been associated with increased HIV transmission. This increased rate may be a result of disrupted infant gut integrity associated with consuming substances other than human milk, decreases in the amount of antiviral or anti-inflammatory substances typically consumed in human milk, or other mechanisms.^{41,44,49-52} Abrupt weaning has also been associated with a higher risk of HIV transmission, which may be a result of increased HIV shedding into human milk in the setting of the inflammation that occurs with engorgement and mastitis.^{12,53,54} Importantly, the risk of transmission in each of these scenarios has not been evaluated when the breastfeeding parent is receiving ART and has a suppressed viral load.

ARV medications, given either to the pregnant or breastfeeding person with HIV, their infant, or both, are critical to the prevention of perinatal transmission and have been described in detail.^{24,55} Studies in both high-income and low- and middle-income settings have demonstrated that either ART used by breastfeeding people with HIV and/or infant ARV prophylaxis during breastfeeding significantly reduce postnatal transmission risk to <5%; the risk is <1% among breastfeeding people who are on ART with a suppressed viral load.⁵⁶⁻⁶¹ The PROMISE study, conducted in 6 African countries and India, compared ART in breastfeeding people with HIV versus daily infant nevirapine prophylaxis through 18 months of age or breastfeeding cessation if weaned earlier.⁵⁶ ART for breastfeeding people with HIV and infant ARV prophylaxis were found to be equally effective for prevention of HIV transmission. Overall, the risk of HIV transmission to breastfeeding infants was very low at 0.3% at 6 months and 0.6% at 12 months of life in both arms.

Globally, millions of infants have been exposed to ARV drugs either in utero and/or during breastfeeding, and there is no evidence of long-term toxicity or sequelae. ARV drugs have differential penetration into human milk, with most drugs demonstrating lower concentrations but some drugs achieving higher concentrations than in plasma.⁶²⁻⁶⁶ Although clinical trials of infants receiving ARV prophylaxis or with in utero exposure to ART in resource-limited countries have generally shown low rates of infant toxicity, reports of infant anemia or neutropenia, elevated liver enzymes, and rashes have been described that typically self-resolve upon discontinuation of the ARV drug.^{15,16,56} In addition, ARV drug resistance can develop in infants who acquire HIV despite prophylaxis.^{67,68} In general, infant ARV exposures in utero and postnatally are not significantly associated with any long-term adverse effects and the benefits of HIV prevention are thought to outweigh the risks of infant toxicity. Therefore, infant ARV prophylaxis is routinely used around the globe for infants born to parents with HIV.

Despite the demonstrated benefits of ARV medications for prevention of perinatal HIV transmission, neither ART in the breastfeeding person nor ARV prophylaxis in the infant completely eliminates the risk of HIV transmission during

breastfeeding. Breastfeeding transmission, although rare, has been documented despite viral suppression (undetectable plasma HIV RNA concentrations) in people with HIV on ART.^{69,70} There are also reports of low-level detectable HIV virus (<100 copies per mL) in human milk while the plasma viral load is undetectable, although the clinical significance of this in terms of risk of transmission to the infant is unknown.⁶⁰ In addition to cell-free HIV RNA, human milk contains parental immune cells that may harbor cell-associated HIV DNA provirus that could potentially be capable of establishing infection in the infant after consumption.⁷¹⁻⁷³ These studies raise concern for persistent HIV viral reservoirs in human milk that are not eliminated with ART. Therefore, in the United States, the AAP recommends that people with HIV be advised that complete replacement of human milk with infant formula or certified, banked donor human milk are the only infant feeding options that completely eliminate the risk of postnatal HIV transmission via human milk.

ADDRESSING THE DESIRE TO BREASTFEED AMONG PEOPLE WITH HIV IN THE UNITED STATES

In the United States and other high-income settings, there is a growing number of reports of people with HIV desiring to breastfeed,⁷⁴⁻⁷⁶ with motivations including a desire to bond with their infant, an opportunity to provide optimal infant nutrition and health benefits, the ability to fulfill their role as a parent, and the need to meet cultural expectations.^{77,78} Importantly, some people with HIV report concerns that within their communities, not breastfeeding will effectively disclose their HIV infection status to family and friends. Among immigrant and refugee populations, the discordance between infant feeding guidelines in the United States and their country of birth may result in confusion, especially among parents who breastfed previous infants. Some of these parents may plan to return to their home country postpartum and will have difficulty adhering to United States guidelines after returning. The potential for health disparities has also been considered as it relates to the guidance to avoid breastfeeding: in high-income settings, people with HIV are more likely to be Black and other People of Color, who are already at higher risk of morbidity and mortality associated with diseases such as obesity, asthma, and diabetes. Avoidance of breastfeeding, which is protective against these conditions, could compound the risk of adverse health outcomes in an already vulnerable population.⁷⁹ Finally, some providers have reported that people with HIV who desire to breastfeed and are not supported by their medical providers may breastfeed without disclosing to their medical team. This practice may result in an inability of the medical team to offer support and monitoring to reduce the risk of breastfeeding transmission and risks disengagement from care.⁷⁶ Given all of these factors, there has been a growing initiative in high-income settings to involve parents with

HIV in discussions around infant feeding choices and use of a risk-reduction approach in families who decide to breastfeed.^{80,81}

It is likely that the rate of HIV transmission observed in clinical trials performed in low- and middle-income country settings would be similarly low in the United States in the scenario that a person on ART with a suppressed viral load desired to breastfeed.⁵⁶ Diverse approaches to counseling, monitoring, and providing infant ARV prophylaxis to people with HIV in high-income settings who choose to breastfeed have been described.^{75,82-88} Although there is now support from several policy-making bodies in high-income countries (including the HHS Panel and the British HIV Association) for breastfeeding in people with HIV who have viral suppression on ART, there is no consensus among pediatric HIV experts regarding the best approach.^{24,85,89-91} The 2023 HHS Panel guidelines state that avoidance of breastfeeding is the only feeding option that eliminates the risk of postnatal HIV transmission to infants but that people who are virally suppressed on ART who wish to breastfeed should be supported in their decision.

MANAGEMENT OF PEOPLE WITH HIV WHO DESIRE TO BREASTFEED

Infant feeding discussions should begin as early as possible and involve a multidisciplinary team that might include the pediatric primary care provider (once identified), a pediatric HIV expert, the breastfeeding parent's HIV care and obstetric providers, and lactation consultants. It should be clearly communicated that replacement feeding (with formula or certified, banked donor human milk) is the only option that eliminates HIV transmission. The parent's motivations for breastfeeding should be explored and counseling provided on the risks and benefits of each feeding option, including breastfeeding, formula feeding, or certified, banked donor human milk.⁹² Every effort needs to be made to provide counseling to people with HIV and their partners in a non-judgmental, respectful way, recognizing potential drivers for their decisions such as avoidance of stigma, prior experience with breastfeeding, and cultural contributors. Parents who desire to breastfeed should be informed that although the risk of HIV transmission via breastfeeding is likely highest in the first 4 to 6 weeks, there is a smaller but ongoing risk of transmission throughout breastfeeding. ART that results in an undetectable HIV viral load significantly reduces the risk of transmission via breastfeeding, but there are rare cases of HIV transmission in the absence of documented HIV in the plasma of the breastfeeding person at the time HIV infection is identified in the infant.^{56,70} Additional information to discuss during counseling includes certain situations that may increase the risk of HIV transmission via human milk such as thrush, mastitis, and mixed feeding; but importantly, there are no data on whether these scenarios increase transmission in the setting of effective ART and a

suppressed viral load. Finally, the counseling team may discuss mental health and financial supports for the parent with HIV who desires to breastfeed, if indicated.

The health care team should maintain frequent and open communication with breastfeeding parents with HIV to facilitate safer breastfeeding and provide ongoing monitoring for complications during the breastfeeding period. Lactation specialists are an integral part of the multidisciplinary team and should be covered by health insurance or supported by alternative funding when possible. Lactation specialists can provide advice to help establish a sufficient milk supply to ensure exclusive breastfeeding and reduce complications such as mastitis or nipple trauma which could theoretically increase the risk of HIV transmission. Rapid identification of lapses in parental ART and infant ARV prophylaxis or breastfeeding complications (eg, parental mastitis or infant oral thrush) is important to ensure prompt intervention is provided to minimize transmission risk.

There is no consensus on the optimal composition and duration of infant ARV prophylaxis during breastfeeding, and this question is unlikely to be answered through prospective clinical trials, given the already very low risk of transmission through breastfeeding among persons with HIV on fully suppressive ART. Several approaches to prolonged infant prophylaxis during breastfeeding have anecdotally been reported in high-income settings, including 3-drug ARV prophylaxis throughout the duration of breastfeeding, triple drugs for 4 to 6 weeks followed by nevirapine monoprophyllaxis for the remainder of breastfeeding, or nevirapine alone throughout breastfeeding.^{83,84} However, there is no evidence that infant prophylaxis beyond 6 weeks adds additional benefit in a breastfeeding parent who maintains viral suppression⁹³ and other groups in high-income settings have described using even shorter courses of infant prophylaxis (eg, 4 weeks or less).^{86–88} Prolonged infant prophylaxis during breastfeeding is recommended by some pediatric HIV experts as an additional layer of protection, particularly in the circumstance of intermittent small viral load increases (viral load >50 and <200 copies per mL) or episodes of viral nonsuppression (viral load \geq 200 copies per mL) in the breastfeeding person.

Desired duration of breastfeeding should be discussed, and timing of transition to infant formula, complementary foods, and/or whole milk should be addressed depending on the infant's age at time of weaning. It is unknown if mixed feeding (ie, giving complementary foods or formula in addition to human milk) increases the risk of HIV transmission in the setting of suppressed HIV in the breastfeeding person. Weaning should occur gradually, with a transition to formula or other age-appropriate diet occurring over 2 to 4 weeks.²² A possible approach to weaning may be to recommend replacement of 1 daily feeding with formula or age-appropriate solids every 3 to 4 days.

Flash heating pasteurization (heating milk in a water bath and removing it when water reaches a rolling boil, then allowing it to cool) has been studied as a potential method for pasteurizing expressed human milk. However, although flash-heat pasteurization destroys cell-free HIV, it may not destroy all cell-associated HIV in human milk.⁹⁴ Of note, similar to all pasteurization processes, flash heating results in partial reduction of bioactive (ie, immunoglobulin) substances in human milk.⁹⁵ Furthermore, it is time-consuming and labor-intensive to flash heat every feed for an infant and may feel stigmatizing for the parent with HIV who is providing the milk; therefore, infant feeding of expressed flash-heat treated human milk from a person with HIV is not a reliable approach to reduce the risk of HIV transmission.

For additional guidance on the counseling and management of breastfeeding in people with HIV, accessing the HHS Panel guidelines is recommended as well as consultation with the local pediatric HIV experts where available.⁹⁶ The National Perinatal HIV Hotline (1-888-448-8765) is a federally funded service providing referrals and free clinical consultation to all providers caring for pregnant and breastfeeding people with HIV and their infants.

SPECIAL CONSIDERATIONS

Acute HIV Infection During Breastfeeding

Acute HIV infection during the postpartum period among breastfeeding people contributes a substantial proportion of new pediatric HIV infections globally. Acute HIV infection while breastfeeding is associated with an increased risk of HIV transmission compared with breastfeeding among people with chronic HIV infection because of the high level of virus in the blood during acute infection.^{31,97}

Premastication of Food by Persons With HIV

Premastication (prechewing) or prewarming in the mouth of food given to infants and toddlers has been reported in the United States.⁹⁸ Cases of possible HIV transmission to children via premasticated food chewed by caregivers with HIV who had oral bleeding have been reported in the United States.^{99–101} However, all reported cases are either from persons with HIV infections diagnosed before implementation of lifelong effective ART and routine HIV viral load monitoring or in persons with unsuppressed HIV.

Accidental Exposure to Human Milk From a Person With HIV

Recommendations for management of accidental exposure of an infant to human milk from a nonparent are available from the CDC (<http://www.cdc.gov/breastfeeding>). HIV transmission from a single human milk exposure has not been documented. Overall, the risk of HIV transmission in the case of an infant consuming human milk from a person other than the biological parent in the United States is low because few people with known HIV infection breastfeed

their infants. Certified, banked donor human milk is also unlikely to contain HIV, as HIV screening of milk donors and heat treatment of human milk is performed by milk banks.⁹² As per other AAP guidance, sharing of nonpasteurized human milk through informal arrangement (eg, directed, internet-based, etc) is discouraged.^{92,102}

CONCLUSIONS

When considering infant feeding recommendations for people with HIV, pediatricians and other pediatric health care professionals should be aware of the potential for HIV transmission through human milk. Knowledge of the HIV infection status and risk factors for HIV transmission among persons who are pregnant or desire to breastfeed is essential to informing infant feeding recommendations, and universal opt-out HIV screening is recommended for all people of childbearing age and pregnant people in the United States.^{26,27} The AAP recommends that for people with HIV in the United States, replacement feeding (with formula or certified, banked donor human milk) is the only option that is 100% certain to prevent postnatal transmission of HIV. However, pediatric health care professionals should be prepared to provide infant feeding counseling and a family-centered, culturally sensitive, harm reduction approach for people with HIV on ART with sustained viral suppression who desire to breastfeed.

RECOMMENDATIONS

1. Pediatric health care professionals should be aware of the potential risk of HIV transmission during the antepartum, intrapartum, and postpartum periods (including while breastfeeding) for infants born to people with HIV.
2. Pediatric health care professionals should be aware of the recommendation for routine, opt-out HIV testing for all pregnant people in the United States.
3. For any person in labor or postpartum with undocumented HIV infection status during the index pregnancy:
 - a. Perform HIV testing as soon as possible, unless the person declines.
 - b. If HIV rapid test results are positive:
 - i. Infant feeding options should be discussed. If the person desires to breastfeed, human milk should be expressed and stored until a confirmatory HIV test result is available. The infant should receive formula or certified, banked donor human milk while awaiting confirmatory test results. Skin-to-skin care can be initiated to maintain milk supply.
 - ii. Consultation with a pediatric HIV expert (ie, National Perinatal Hotline, 1-888-448-8765) is recommended to determine whether infant ARV prophylaxis is indicated. Infant prophylaxis should ideally be initiated within 6 hours of birth.

- iii. If HIV infection is ruled out with confirmatory testing, breastfeeding can safely be initiated.
 - iv. If acute HIV infection is suspected, an HIV RNA polymerase chain reaction test (eg, HIV viral load test) should be obtained as part of confirmatory testing before breastfeeding is initiated.
 - c. If HIV rapid test results are negative, breastfeeding can be initiated.
 - d. If rapid HIV testing during labor is not available or the pregnant person declines testing, providers should consider potential risk factors for HIV acquisition (eg, intravenous drug use or high-risk sexual exposures) versus the benefits of initiating early breastfeeding.
4. For pregnant and postpartum people with HIV:
 - e. Health care professionals should advise parents with HIV that the only method of infant feeding that eliminates the risk of postnatal HIV transmission to the infant is complete avoidance of breastfeeding.
 - f. Health care professionals should explore and address barriers to replacement feeding (with infant formula or certified, banked donor human milk), including the need for financial support.
 - g. Health care professionals should be prepared to counsel people with HIV who express a desire to breastfeed their infant. Counseling should include the following:
 - i. Explore reasons for wanting to breastfeed and provide guidance to address parental goals where possible (eg, alternative ways of bonding with the infant, approaches to avoiding HIV infection status disclosure, validating parental role regardless of infant feeding approach);
 - ii. Educate parents regarding the potential risk of HIV transmission throughout the duration of breastfeeding and inform parents that ART and infant ARV prophylaxis significantly reduce, but do not eliminate, this risk.
 - h. Breastfeeding should be supported for people with HIV who strongly desire to breastfeed after comprehensive counseling if all of the following criteria are met:
 - i. ART was initiated early in or before pregnancy;
 - ii. There is evidence of sustained viral suppression in the parent (HIV viral load <50 copies per mL);
 - iii. The parent demonstrates a commitment to consistently taking their own ART and to giving infant ARV prophylaxis;
 - iv. The parent has continuous ART access.
 - i. Involvement of a multidisciplinary team in the counseling and management of a breastfeeding parent with HIV is recommended. For example, this team might include the pediatric providers who will care for the infant, the breastfeeding parent's HIV care and obstetric providers, lactation consultants, and a pediatric HIV expert.
 - j. Providers should recommend the following strategies to reduce the risk of HIV transmission via breastfeeding:

- i Exclusive breastfeeding (no formula or other foods) through the first 6 months;
 - ii Continuous ART for the breastfeeding parent with sustained undetectable viral load throughout the duration of breastfeeding;
 - iii Regular assessment of viral load in the breastfeeding parent (eg, every 1–2 months);
 - iv Infant ARV prophylaxis in consultation with a pediatric HIV expert;
 - v Gradual weaning over 2 to 4 weeks, rather than abruptly.
- k. Breastfeeding infants should be screened for HIV using nucleic acid testing (eg, plasma HIV RNA or DNA polymerase chain reaction) at 14 to 21 days, 1 to 2 months, and 4 to 6 months of life and then every 2 months throughout lactation and at 4 to 6 weeks and 3 and 6 months after weaning.
- l. Breastfeeding infants who receive extended ARV prophylaxis beyond 4 to 6 weeks of life should periodically be screened for hematologic and liver toxicity, as these complications can be associated with ARV drugs that are commonly used for infant prophylaxis (eg, a baseline complete blood count and liver enzymes can be obtained at the onset of infant prophylaxis and repeated after 2 to 4 weeks, then repeated only if abnormal or if clinically indicated).
- m. A decision to breastfeed by a person with HIV who is on ART and virally suppressed should not constitute grounds for a referral to child protective services agencies.
- n. Breastfeeding is not recommended for people with HIV who are not on ART or who do not take ART consistently, people without a sustained undetectable HIV viral load, or people newly diagnosed with HIV infection in pregnancy or postpartum. Those who choose to breastfeed despite this recommendation should receive ongoing intensive counseling and consultation with a team of experts (eg, pediatric HIV expert, social worker, ethicist, etc) to engage the person with HIV in a culturally effective manner that seeks to address both their health as well as the child's.
- o. Parents with HIV who are not virally suppressed on ART should avoid pre-mastication of food for infants. This recommendation should be discussed in a culturally sensitive and nonjudgmental manner.
5. For pregnant and postpartum people who do not have HIV but who are at high risk of acquiring HIV (eg, people who inject drugs or who have sexual partners living with HIV who are not virally suppressed):
- p. Counseling should be provided regarding the potential risk of HIV transmission to an infant through human milk if HIV acquisition were to occur while breastfeeding.
 - q. Frequent HIV testing should be performed during pregnancy and breastfeeding (eg, every 3 months).
 - r. Education about HIV prevention should be provided and HIV preexposure prophylaxis (PrEP) should be offered.
6. If acute HIV infection is suspected in a person who is breastfeeding:
- s. The infant should not consume human milk from that person until HIV infection is confirmed or ruled out. Human milk can be expressed and stored until a confirmatory HIV test result is available. The infant should receive formula or certified banked donor breast milk while awaiting confirmatory test results. Skin-to-skin care can be initiated to maintain milk supply.
 - t. If HIV infection is ruled out, breastfeeding can resume.
 - u. If HIV infection is confirmed:
 - i Breastfeeding should be discontinued;
 - ii The infant should undergo HIV testing, with follow-up testing at 4 to 6 weeks and 3 and 6 months after breastfeeding cessation if the initial test result is negative;
 - iii Consultation with a pediatric HIV expert (ie, National Perinatal Hotline, 1-888-448-8765) is recommended regarding decisions about post-exposure ARV prophylaxis for the infant;
 - iv The breastfeeding parent with HIV should be promptly linked to care and receive ART, psychosocial support, and counseling on breastfeeding cessation.

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