SECTION 2
FACTSHEET #
11

BREASTFEEDING CONSIDERATIONS FOR INFANTS AT RISK FOR NEONATAL ABSTINENCE SYNDROME

CLINICAL SCENARIO

A mother with an infant at risk for neonatal abstinence syndrome (NAS) seeks advice on whether to breastfeed.

CLINICAL ACTION STEPS

Stable Mother and Breastfeeding

Upon delivery, women who are stable on buprenorphine, buprenorphine/naloxone combination, or methadone should be advised to breastfeed, if appropriate.

Although naltrexone in breastmilk has not been studied extensively in the United States, the benefits of breastfeeding are generally thought to outweigh any risk from naltrexone exposure. The decision to breastfeed while on naltrexone should be made collaboratively with the new mother after a full discussion of the lack of research and individual considerations.

Medical Considerations

An infant with NAS who cannot maintain adequate hydration or who loses weight despite optimal management should be evaluated to rule out other medical conditions, and consideration should be given to transferring the infant to a neonatal intensive care unit.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Stable Mother and Breastfeeding

- **Levels of buprenorphine and methadone are very low in breast milk.** Few studies have focused on breastfeeding as an outcome of opioid agonist pharmacotherapy for pregnant women with opioid use disorder (OUD) (Abrahams et al., 2007; Debelak, Morrone, O'Grady, & Jones, 2013; Johnson et al., 2001). Buprenorphine and methadone levels in breast milk are very low when the mother is on pharmacotherapy and pose little risk to infants (Ilett et al., 2012; Jansson et al., 2008a, 2008b, 2016).

- **The decision to use the combination buprenorphine/naloxone product while breastfeeding is a shared decision, but one that ultimately must be made by the patient once she understands the risks and benefits to herself and her newborn.** Available data suggest that naloxone does not affect lactation hormone levels in breastfeeding mothers. The mother's use of buprenorphine with naloxone is not a reason for discontinuing breastfeeding (Cholst, Wardlaw, Newman, & Frantz, 1984; Johnson, Andrews, Seckl, & Lightman, 1990). Naloxone's poor bioavailability when taken either sublingually or transmucosally in the buprenorphine/naloxone combination product (Ilett et al., 2012) makes it even less likely to transfer to the neonate via breast milk.

Recent studies suggest that maternal and infant outcomes on the combination buprenorphine/naloxone product do not differ from those of buprenorphine only (Debelak et al., 2013; Dooley et al., 2016; Gawronski et al., 2014; Jumah et al., 2016; Lund et al., 2013; Wiegand et al., 2015). Small nonclinically meaningful amounts of naloxone are present in cord blood (Wiegand et al., 2016). No increased birth defect risks have been reported after naloxone was used in pregnant women as an antidote to opioid overdose (Bailey, 2003). However, no long-term follow-up studies that investigate neurodevelopment in infants exposed to buprenorphine/naloxone in utero have been published.

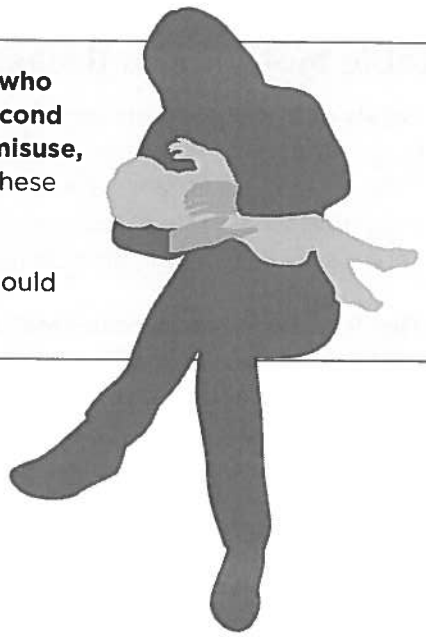
Breastfeeding has many positive physical and behavioral health effects for mother and infant.

- **The effects, if any, of naltrexone on child development are not known.** There are at least 25 published prenatal naltrexone implant exposure cases, and all show normal birth outcomes (Hulse, Arnold-Reed, O'Neil, & Hansson, 2003; Hulse, O'Neil, & Arnold-Reed, 2004; Jones, Chisolm, Jansson, & Terplan, 2012). A mother's preference for beginning antagonist therapy may be considered if she resumes pharmacotherapy in the postpartum period. However, only one case study has reported examining how much naltrexone is secreted into breast milk (Chan, Page-Sharp, Kristensen, O'Neil, & Ilett, 2004). In this case, only very low levels of the naltrexone metabolite were detected in the infant plasma (1.1 micro g/L), and the infant appeared to be healthy, was meeting developmental milestones on time, and showed no adverse effects.

- **Healthcare professionals should take time to talk about the benefits of breastfeeding.** Any breastfeeding, however brief, can decrease the infant's need for pharmacological treatment for NAS and the length of pharmacological therapy and hospitalization (Abdel-Latif et al., 2006; Bagley, Wachman, Holland, & Brogly, 2014; Jansson et al., 2008a, 2008b; Reece-Stremtan, et al., 2015; Ruwanpathirana et al., 2015). The benefit that the infants with NAS derive from breastfeeding is attributed to the act of breastfeeding (e.g., making skin-to-skin contact, holding infant closely) rather than to the amount of maternal opioid agonist secreted into the breast milk (Kaltenbach & Jones, 2016).

- **Mothers need to know when they *should or should not* breastfeed.** Although a stable mother being treated for OUD with pharmacotherapy is encouraged to breastfeed her infant, there are some situations where breastfeeding is not recommended (e.g., the mother is HIV-positive, has tuberculosis, has cracked or bleeding nipples, is hepatitis C-positive, has returned to illicit drug use including cannabis). Mothers who are hepatitis B surface antigen-positive or who are infected with the hepatitis C virus may breastfeed (American Academy of Pediatrics [AAP], Section on Breastfeeding, 2012; Centers for Disease Control and Prevention [CDC], 2015). CDC (2016) describes other **situations in which a mother should avoid breastfeeding**.

Careful consideration regarding breastfeeding is needed for women who present to prenatal care and/or SUD treatment during or after the second trimester, women who return to illicit substance use/licit substance misuse, and women who attained abstinence only in an inpatient setting. In these cases, a recommendation for lactation should be determined with the collaborative care team and the new mother. **Factsheet #16: Maternal Return to Substance Use** provides more guidance on breastfeeding should the mother return to substance use.



The American College of Obstetricians and Gynecologists (ACOG) recommends against maternal cannabis use (Committee on Obstetric Practice, ACOG, 2017) as does a recent National Academies of Science report (National Academies of Sciences, Engineering, & Medicine, 2017). New research is expected on both maternal cannabis smoking and ingestion of tetrahydrocannabinol, the principal psychoactive component of cannabis, due to the legalization of cannabis use in several states. Until research on this issue is provided, pregnant women and new mothers should be counseled to avoid cannabis, as well as alcohol and nicotine, for either recreational or medicinal purposes (Committee on Obstetric Practice, ACOG, 2017; Jansson, Bunik, & Bogen, 2015; Reece-Stremtan et al., 2015; Volkow, Compton & Wargo, 2017; World Health Organization [WHO], 2014). **Exhibit FS #11.1** provides examples of when a mother with OUD might be advised to breastfeed and when breastfeeding is not recommended.

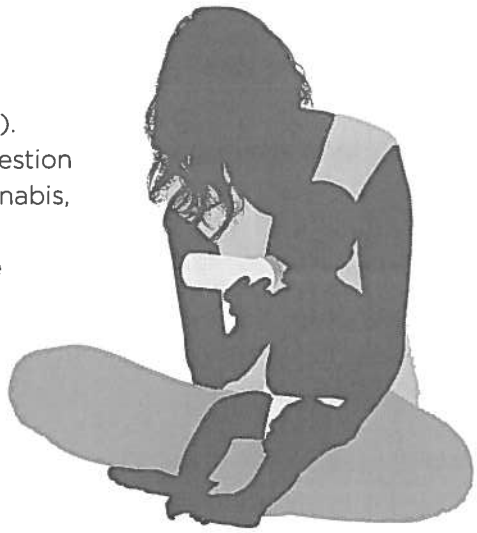


Exhibit FS #11.1: Breastfeeding Recommendations

Factors	Breastfeeding May Not Be Recommended*
The mother is enrolled in a medication-assisted treatment program (with either buprenorphine or methadone) with significant social support and plans to continue treatment. She has demonstrated that she is stable in treatment.	The mother has a medical condition or takes medications that are contraindicated for lactation.
The mother has given written informed consent for healthcare professionals to discuss her SUD treatment.	The mother did not receive prenatal care
The mother's pain management medications after delivery are not contraindicated for newborns.	Close to delivery, the mother has a pattern of regular illicit drug use or licit substance use meeting criteria for an active SUD.
The mother's urine toxicology results were negative except for prescribed medications at delivery.	The mother is not willing to engage in SUD treatment or is engaged in treatment but is not willing to provide consent for contact with anyone in the program.
The mother has received consistent prenatal care.	The mother's urine toxicology results were positive for substances or their metabolites indicating recent use of alcohol or other substances that are not prescribed to her for the treatment of a medical condition.
The mother plans to consider SUD treatment in the postpartum period.	The mother does not have confirmed plans for postpartum SUD treatment and pediatric care.
The mother has been advised of the risk and benefits of taking antidepressants, anxiolytics, and mood stabilizers during the breastfeeding period.	The mother demonstrates behaviors or other indicators of an active SUD
If the infant has significant NAS, lactation support is available.	

* If the mother meets one or more of these criteria, further evaluation should be conducted to determine whether she can support safe infant breastfeeding. Evidence is accumulating to recommend eliminating cannabis use during pregnancy, while breastfeeding, or through secondhand smoke exposure (Jansson, Bunik, & Bogen, 2015).

Sources: AAP, Section on Breastfeeding, 2012; CDC, 2016; Committee on Obstetric Practice, ACOG, 2017; Hudak et al., 2012; Jansson et al., 2008a, 2008b, 2016; Jansson & Velez, 2015; Reece-Stremtan et al., 2015; WHO, 2014.

WEB RESOURCES ON THIS TOPIC

ABM Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, Revised 2015
This ABM protocol provides evidence-based guidelines for the evaluation and management of women with SUDs who are considering breastfeeding. It includes information on methadone and buprenorphine.

Baby Friendly Hospital Initiative-USA
This global initiative was launched by WHO and the United Nations Children's Fund in 1991 to encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding and mother–infant bonding.

Breastfeeding Initiatives: Family Resources
This AAP webpage lists breastfeeding resources for families; some resources are in Spanish.

Childbirth, Breastfeeding, and Infant Care: Methadone and Buprenorphine
This brochure urges pregnant women who use heroin or abuse opioid prescriptions to seek medication-assisted treatment with methadone or buprenorphine. It discusses how methadone therapy works and women's issues such as breastfeeding, opioid withdrawal, birth control, and child protection services.

Clinician Consultation Center Substance Use Warmline
The University of California, San Francisco's, Clinician Consultation Center provides Substance Use Warmline consultation to health center providers. This is a free, real-time clinician-to-clinician telephone consultation, addressing the care and treatment of substance abuse, chronic pain, and behavioral health. Access the Warmline toll-free at: 1-855-300-3595 (Monday-Friday, 10 a.m.-6 p.m. EDT).

Drug Entry Into Human Milk
This InfantRisk Center webpage describes in detail the mechanisms of drug entry into human milk and provides some general rules on breastfeeding.

Drugs and Lactation Database (LactMed)
This National Library of Medicine searchable database provides information on medications and other chemicals to which breastfeeding mothers may be exposed.

LactMed
This website provides the most current and comprehensive information on transference of substances to breast milk.

Medications and Breastfeeding: Tips for Giving Accurate Information to Mothers
This two-page AAP document discusses clinical points to consider when prescribing medications to breastfeeding mothers.

Policy Statement: Breastfeeding and the Use of Human Milk
This AAP-updated policy statement discusses the benefits of breastfeeding for mother and child.

SIDS and Other Sleep-Related Infant Deaths
This 2016 AAP policy statement on sudden infant death syndrome (SIDS) and other sleep-related infant deaths provides recommendations for a safe infant sleeping environment.

When Should a Mother Avoid Breastfeeding?
This CDC webpage provides links to information about illnesses and conditions that contraindicate breastfeeding.