

# ABM Clinical Protocol #21: Guidelines for Breastfeeding and the Drug-Dependent Woman

The Academy of Breastfeeding Medicine Protocol Committee

*A central goal of The Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.*

## Goal

**T**HE CHOICE OF BREASTFEEDING by the pregnant or newly postpartum woman with a history of past or current drug abuse is challenging for many reasons. The purpose of this protocol is to provide evidence-based guidelines for the evaluation and management of the drug-dependent woman choosing to breastfeed.

## Background

Illicit drug use and licit substance abuse remain a significant problem among women of childbearing age. The 2007 National Survey on Drug Use and Health revealed that among pregnant women 15–44 years of age in the United States, 5.2% had used illicit drugs in the past month.<sup>1</sup> The healthcare provider faced with a pregnant or recently postpartum woman with a history of current or past drug abuse and desiring to breastfeed often faces a significant challenge for multiple reasons. Substance-dependent women frequently engender behaviors or conditions that portend risk for the breastfed infant independently, in addition to the direct pharmacologic effect of the drug exposure. Polydrug use is the norm for this population, including the use of licit substances such as tobacco and alcohol. Illicit drugs are frequently cut with dangerous adulterants that can pose additional threats to the infant. Drug using populations are at higher risk for infections such as those with human immunodeficiency virus (HIV) and/or hepatitis B/C, as well as poor nutrition. Psychiatric disorders that require pharmacotherapeutic intervention are more prevalent among this population, making breastfeeding a further confounded choice, as little information is available on the relative safety of breastfeeding with many psychotropic medications. Despite the myriad factors that may make breastfeeding a difficult choice for the drug-dependent woman, the population of drug-exposed infants, at high risk for an array of medical, psychological, and developmental problems, as well as their mothers, stands to benefit significantly from this practice. Many of the above

factors may pose risks to the infant, but the benefits of human milk and breastfeeding must be weighed against these risks.

Ideally, drug-dependent women delivering an infant and desiring to breastfeed should engage in comprehensive substance abuse treatment, but this is not always the case. Substance abuse treatment for this population of women is often not available, gender specific, or comprehensive. These limitations force the perinatal provider to rely on maternal self-report and a “best guess” at adequacy of services, compliance to treatment, length of “clean” time, community support systems, etc. The choice to breastfeed may appear to indicate that the mother is less or not likely to abuse substances, but research has found this to be untrue. Data extracted from the 1988 U.S. National Maternal and Infant Health Survey indicate that heavy alcohol, marijuana, and hashish use and moderate cocaine use did not significantly deter women from choosing to breastfeed their infants.<sup>2</sup>

Perhaps principal among the challenges facing the provider for the chemically dependent woman wishing to breastfeed is the lack of evidence-based guidelines for this population. There have been several comprehensive reviews of breastfeeding among chemically dependent women, with most concluding that breastfeeding is generally contraindicated in mothers who use illegal drugs.<sup>2–6</sup> Yet, research on individual drugs of abuse is lacking and is ethically difficult to perform in any systematic fashion. Research on outcomes is complicated by the need to separate the effects of intrauterine exposure from postnatal (human milk) exposure. Pharmacokinetic data for most drugs of abuse in lactating women are sparse. Most illicit drugs are found in human milk, with varying degrees of enteral bioavailability.<sup>2</sup> Phencyclidine hydrochloride has been detected in human milk in high concentrations,<sup>7</sup> as has cocaine,<sup>8</sup> leading to infant intoxication.<sup>9</sup>  $\Delta^9$ -Tetrahydrocannabinol (THC) is present in human milk, and metabolites not found in human milk are found in infant feces, indicating that THC is absorbed and metabolized by the infant.<sup>10</sup> There may<sup>11</sup> or may not<sup>12</sup> be long-term effects on infant development from perinatal THC exposure. There is little to no evidence to describe the effects of even small

amounts of other drugs of abuse and/or their metabolites in human milk on infant development.

For opioid-dependent pregnant and postpartum women in treatment, methadone maintenance is the treatment of choice in the United States.<sup>13</sup> In contrast to other substances, concentrations of methadone in human milk and the effects on the infant have been studied, and the concentrations of methadone found in human milk are low; therefore women stable on methadone maintenance should be permitted to breastfeed if desired,<sup>14–19</sup> and irrespective of maternal methadone dose.<sup>19</sup> There are no apparent short-term<sup>18</sup> or long-term<sup>20</sup> effects of methadone in human milk on neurodevelopment. However, infants chronically exposed to opiates in utero typically experience neonatal abstinence syndrome (NAS), a constellation of signs and symptoms that includes neurologic excitability (tremors, irritability, increased wakefulness, high-pitched crying, increased muscle tone, hyperactive reflexes, seizures, frequent yawning and sneezing), gastrointestinal dysfunction (poor feeding, uncoordinated and constant sucking, vomiting, diarrhea, dehydration, poor weight gain), and autonomic signs (increased sweating, nasal stuffiness, fever, mottling of skin).<sup>21</sup> Withdrawal signs and symptoms typically present within 48–72 hours of birth following in utero opioid exposure, but these can manifest up to 4 weeks later in some infants.<sup>22</sup> Infants with significant NAS symptoms can have difficulties with breastfeeding mechanics, which can impact their ability to breastfeed.<sup>23</sup> Despite this, there is increasing evidence to support that methadone-exposed infants may benefit from breastfeeding and/or breastmilk; infants who are breastfed are less likely to have severe NAS.<sup>19,24–26</sup>

Buprenorphine is a medication used for treatment of opioid dependency during pregnancy and postpartum in some countries. There are three case studies regarding buprenorphine and breastfeeding, all of which include small numbers of participants and contain conflicting data. All, however, concur that the amounts of buprenorphine in human milk are small and unlikely to have negative effects on the developing infant.<sup>27–29</sup>

## Recommendations

Infants of drug-dependent women, at risk for multiple health and developmental difficulties, stand to benefit substantially from breastfeeding and human milk, as do their mothers. A prenatal plan preparing the mother for parenting, breastfeeding, and postpartum substance abuse treatment should be formulated for each woman. This care plan should include instruction in the consequences of relapse to drug or alcohol use during lactation, as well as teaching regarding formula preparation and bottle care should breastfeeding be contraindicated.

During the perinatal period each mother–infant dyad must be carefully and individually evaluated prior to the institution of breastfeeding. This evaluation must consider several factors, including maternal drug use and substance abuse treatment histories, medical and psychiatric status and medication needs, infant health status (to include ongoing evaluation for NAS and impact on breastfeeding), the presence or absence and adequacy of maternal family and community support systems and plans for postpartum health care, psychiatric care (if warranted) and substance abuse treatment for the mother, and pediatric care for the child. Optimally, the

chemically dependent woman who presents a desire to breastfeed should be engaged in substance abuse treatment. Maternal written consent for communication between the substance abuse treatment providers and obstetrical and pediatric healthcare providers should ideally be obtained prior to delivery. However, if it was not, then consent for bidirectional communication should occur after delivery.

Please note that the following recommendations are based largely on expert opinion because of the sparse research base on these issues.

*Women who meet all of the following criteria under the following circumstances should be supported in their decision to breastfeed their infants:*

- Women engaged in substance abuse treatment who have provided their consent to discuss progress in treatment and plans for postpartum treatment with substance abuse treatment counselor
- Women whose counselors endorse that she has been able to achieve and maintain sobriety prenatally; counselor approves of client's plan for breastfeeding
- Women who plan to continue in substance abuse treatment in the postpartum period
- Women who have been abstinent from illicit drug use or licit drug abuse for 90 days prior to delivery and have demonstrated the ability to maintain sobriety in an outpatient setting
- Women who have a negative maternal urine toxicology testing at delivery except for prescribed medications
- Women who received consistent prenatal care
- Women who do not have medical contraindication to breastfeeding (such as HIV)
- Women who are not taking a psychiatric medication that is contraindicated during lactation
- Stable methadone-maintained women wishing to breastfeed should be encouraged to do so regardless of maternal methadone dose.

*Women under the following circumstances should be discouraged from breastfeeding:*

- Women who did not receive prenatal care
- Women who relapsed into illicit drug use or licit substance misuse in the 30-day period prior to delivery
- Women who are not willing to engage in substance abuse treatment or who are engaged in treatment but are not willing to provide consent for contact with the counselor
- Women with positive maternal urine toxicology testing for drugs of abuse or misuse of licit drugs at delivery
- Women who do not have confirmed plans for postpartum substance abuse treatment or pediatric care
- Women who demonstrate behavioral qualities or other indicators of active drug use

*Women under the following circumstances should be carefully evaluated, and a recommendation for suitability or lack of suitability for breastfeeding should be determined by coordinated care plans among perinatal providers and substance abuse treatment providers:*

- Women relapsing to illicit substance use or licit substance misuse in the 90–30-day period prior to delivery, but who maintained abstinence within the 30 days prior to delivery

- Women with concomitant use of other prescription (i.e., psychotropic) medications
- Women who engaged in prenatal care and/or substance abuse treatment during or after the second trimester
- Women who attained sobriety only in an inpatient setting

While maternal prescription opioid use and buprenorphine maintenance may be safe for infants of some lactating women, the research literature is too sparse for recommendations to be made about these substances.

Women who have established breastfeeding and subsequently relapse to illicit drug use should be strongly discouraged from breastfeeding, even if milk is discarded during the time period surrounding relapse. There are no known pharmacokinetic data to establish the presence and/or concentrations of most illicit substances and/or their metabolites in human milk and effects on the infant, and this research is unlikely to occur given the ethical dilemmas it presents. The lack of pharmacokinetic data for most drugs of abuse in recently postpartum women precludes the establishment of a "safe" interval after use when breastfeeding can be reestablished for individual drugs of abuse. Additionally, women using illicit substances in the postnatal period may have impaired judgment, and secondary behavioral changes may interfere with the ability of the mother to care for or feed her infant adequately. Passive drug exposures may pose additional risks to the infant. Therefore, any woman relapsing to illicit drug use or licit substance misuse after the establishment of lactation should be provided formula. The aforementioned issues are relevant regardless of infant feeding choice, and all plans must include intensified drug treatment for the mother.

The drug-dependent woman who has successfully instituted breastfeeding should be carefully monitored, along with her infant, in the postpartum period. Ongoing substance abuse treatment, postpartum care, psychiatric care when warranted, and pediatric care are important for this group. Lactation support is particularly important for infants experiencing NAS. Communication between providers should provide an interactive network of supportive care for the dyad.

### Recommendations for Future Research

1. Case-controlled studies evaluating buprenorphine and lactation, to include investigations of concentrations of medication in maternal plasma and human milk and amount ingestible by the infant, in addition to evaluations of neurobehavior among infants of buprenorphine-maintained women.
2. Long-term randomized controlled trial evaluations of infants exposed to methadone or buprenorphine via human milk, to include infant developmental assessments.
3. Evaluations of maternal milk and plasma and infant plasma pharmacokinetic data regarding prescription opioids and lactation.
4. Long-term prospective cohort evaluations of infants exposed to marijuana via human milk, to include infant developmental evaluations in countries where this substance is legal.

### Acknowledgments

This work supported in part by National Institute on Drug Abuse grant RO1 DA019934 awarded to L.M. Jansson.

### References

1. Results from the 2007 National Survey on Drug Use and Health: National Findings. <http://www.oas.samhsa.gov/nsduh/2k7nsduh/2k7Results.cfm#2.6> (last accessed December 8, 2008).
2. Howard CR, Lawrence RA. Breast-feeding and drug exposure. *Obstet Gynecol Clin North Am* 1998;25:195–217.
3. Wilton JM. Breastfeeding and the chemically dependent woman. *NAACOGS Clin Issue Perinat Womens Health Nurs* 1992;3:667–672.
4. American Academy of Pediatrics. Committee on Drugs. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001;108:766–789.
5. Ito S. Drug therapy for breastfeeding women. *N Engl J Med* 2000;343:118–126.
6. American Academy of Pediatrics, Work Group on Breast-feeding. *Pediatrics* 1997;100:1035–1039.
7. Kaufman R, Petrucha RA, Pitts FN, et al. PCP in amniotic fluid and breast milk: Case report. *J Clin Psychiatry* 1983;44:269–270.
8. Winecker RE, Goldberger BA, Tebbett IR, et al. Detection of cocaine and its metabolites in breast milk. *J Forensic Sci* 2001;46:1221–1223.
9. Chasnoff I, Lewis DE, Squires L. Cocaine intoxication in a breast fed infant. *Pediatrics* 1987;80:836–838.
10. Perez-Reyes M, Wall ME. Presence of  $\Delta^9$ -tetrahydrocannabinol in human milk. *N Engl J Med* 1982;307:819–820.
11. Astley SJ, Little RE. Maternal marijuana use during lactation and infant development at one year. *Neurotoxicol Teratol* 1990;12:161–168.
12. Tennes K, Avitable N, Blackard C, et al. Marijuana: Prenatal and postnatal exposure in the human. *NIDA Res Monogr* 1985;59:48–60.
13. Effective Medical Treatment of Opiate Addiction. NIH Consensus Statement 1997 Nov 17–19;15(6):1–38. <http://consensus.nih.gov/1997/1998TreatOpiateAddiction108html.htm> (last accessed September 4, 2009).
14. Geraghty B, Graham EA, Logan B, et al. Methadone levels in breast milk. *J Hum Lact* 1997;13:227–230.
15. Wojnar-Horton RE, Kristensen JH, et al. Methadone distribution and excretion into breast milk of clients in a methadone maintenance programme. *Br J Clin Pharmacol* 1997;44:543–547.
16. McCarthy JJ, Posey BL. Methadone levels in human milk. *J Hum Lact* 2000;16:115–120.
17. Begg EJ, Malpas TJ, Hackett LP, et al. Distribution of R- and S-methadone into human milk during multiple, medium to high oral dosing. *Br J Clin Pharmacol* 2001;52:681–685.
18. Jansson LM, Choo RE, Harrow C, et al. Concentrations of methadone in breast milk and plasma in the immediate neonatal period. *J Hum Lact* 2007;23:184–190.
19. Jansson LM, Choo R, Velez ML, et al. Methadone maintenance and breastfeeding in the neonatal period. *Pediatrics* 2008;121:106–114.
20. Jansson LM, Choo R, Velez ML, et al. Methadone maintenance and long-term lactation. *Breastfeed Med* 2008;3:34–37.
21. American Academy of Pediatrics. Committee on Drugs. Neonatal drug withdrawal. *Pediatrics* 1998;101:1079–1088.

22. Kandall SR, Gartner LM. Late presentation of drug withdrawal symptoms in newborns. *Am J Dis Child* 1974;127:58–61.
  23. Jansson LM, Velez M, Harrow C. Methadone maintenance and lactation. *J Hum Lact* 2004;20:62–71.
  24. Ballard JL. Treatment of neonatal abstinence syndrome with breast milk containing methadone. *J Perinat Neonatal Nurs* 2002;15(4):76–85.
  25. Arlettaz R, Kashiwagi M, Das-Kundu S, et al. Methadone maintenance program in pregnancy in a Swiss perinatal center (II): neonatal outcome and social resources. *Acta Obstet Gynecol Scand* 2005;84:145–150.
  26. Abdel-Latif ME, Pinner J, Clews S, et al. Effects of breast milk on the severity and outcome of NAS among infants of drug-dependent mothers. *Pediatrics* 2006;117:1163–1169.
  27. Grimm D, Pauly E, Poschl J, et al. Bup and Norbup concentrations in human BM samples determined by liquid chromatography-tandem mass spectrometry. *Ther Drug Monit* 2005;27:526–530.
  28. Marquet P, Cheval J, Lavignasse P, et al. Buprenorphine withdrawal syndrome in a newborn. *Clin Pharmacol Ther* 1997;62:569–571.
  29. Johnson RE, Jones HE, Jasinski DR, et al. Buprenorphine treatment of pregnant opioid-dependent women: maternal and neonatal outcomes. *Drug Alcohol Depend* 2001;63:97–103.
- ABM protocols expire 5 years from the date of publication. Evidence-based revisions are made within 5 years or sooner if there are significant changes in the evidence.
- Contributor  
\*Lauren M. Jansson, M.D.
- Protocol Committee  
Maya Bunik, M.D., MSPH, FABM  
Caroline J. Chantry, M.D., FABM, Co-Chairperson  
Cynthia R. Howard, M.D., MPH, FABM, Co-Chairperson  
Ruth A. Lawrence, M.D., FABM  
Kathleen A. Marinelli, M.D., FABM, Co-Chairperson  
Nancy G. Powers, M.D., FABM
- \*Lead author
- For correspondence: abm@bfmd.org

### Appendix

*Sample hospital policy (adapted from Boston Medical Center Policy, Boston, MA, by Robin Humphreys and Bobbi Phillip, M.D., FABM) on illicit drug use and breastfeeding*

Urine toxicology screens up to 10 weeks before birth:  
POSITIVE

- Mother encouraged to formula feed
- Mother encouraged to attend infant massage class
- Breastfeeding is not recommended.
- Lactation service will not be consulted.
- Breast pump will not be provided.
- If mother insists on breastfeeding, mother will be informed that this is against medical advice. Said discussion will be documented in the medical record, and social work (SW) team will be informed; SW will communicate issue with the appropriate Social Services Agency.
- If at any time there is concern for the safety of infant, mother and infant may be separated by an attending physician (or other primary care-giver) order.

Urine toxicology screens up to 10 weeks before birth:  
NEGATIVE

AND

Compliant in all drug addiction recovery programs\* for at least 12 weeks prior to birth

AND

Compliant with standard of care prenatal visits\*\* for at least 12 weeks prior to birth

AND

Negative urine toxicology screen upon arrival to Labor and Deliver Service

THEN

- Breastfeeding encouraged
- Encourage baby to breastfeed within 1 hour of birth
- Obstetric team will inform pediatric team about patient prior to birth of baby.
- Pediatric team to obtain baby urine and meconium toxicology screens
- Pediatric team to initiate social work consult and lactation service consult

\*Compliant implies that the transfer was appropriate if there was a change in the mother's program during her pregnancy. A mother who jumped from one program to another (i.e., failed one program and started another) would not be considered compliant. One can insert specifics on local examples of drug addiction recovery programs and contact information here.

\*\*The standard of care schedule for prenatal visits for the 12 weeks prior to birth (insert specifics of the country or region for prenatal visits here, i.e., in the United States 28, 30, 32, 34, 36, 37, 38, 39, 40 weeks).