



Supporting breastfeeding for infants born to opioid dependent mothers June 18, 2018



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Executive Summary

Infants exposed to opioids during gestation demonstrate signs of withdrawal within 3 to 5 days of birth. Maternal opioid dependency may be the result of prescribed, illicit or nonmedical drug use. Breastfeeding reduces the severity of withdrawal and the need for pharmacological management (Abdel-Latif et al., 2006; Dryden, Young, Hepburn, & Mactier, 2009; Hodgson & Abrahams, 2012; Isemann, Meinzen-Derr, & Akinbi, 2011; McQueen, Murphy-Oikonen, Gerlach, & Montelpare, 2011; O'Connor, Collett, Alto, & O'Brien, 2013; Welle-Strand, Skurtveir, & Jones, 2012). The Academy supports breastfeeding for infants with Neonatal Abstinence Syndrome (NAS) to optimize the health outcomes of the infant, some of which may continue through adolescence (Bener, Denic, & Galadari, 2001; Shamir, 2016; Singhal et al., 2002).

Background

Statement of the Issue/Problem

Prenatal opioid use has increased drastically, resulting in thousands of infants born annually who are treated for NAS. Less than 30% of their mothers choose to breastfeed (Dryden, Young, Campbell, & Mactier, 2012; Wachman, Byun, & Philipp, 2010).

Description of the Issue/Problem

Infants with NAS are a high-risk group of infants, born at all gestational ages, and often part of a challenging family dynamic. These dynamics may not allow for the mother prioritizing breastfeeding education and support. Yet these mothers need access to evidence based recommendations and support for breastfeeding if they choose that as a feeding option for their infant. Concerns about methadone in breastmilk are unfounded. Human milk concentrations of methadone (Begg,

Malpas, Hackett, & Ilett, 2001; Bogen et al., 2011) and buprenorphine (Jansson, Spencer, & McConnell, 2016; Swortwood, Scheidweiler, Barnes, Jansson, & Huestis, 2016) even at high maternal doses, are relatively low. Infants of mothers on methadone maintenance appear to have fewer signs of withdrawal and a shorter duration of treatment than those on illicit substances (Abdel-Latif et al., 2006; Dryden et al., 2009; Goler, Armstrong, Taillac, & Osejo, 2008; McQueen et al., 2011; Pizarro et al., 2011; Seligman et al., 2010). The infants of mothers treated with buprenorphine also have fewer signs of withdrawal and a shorter duration of treatment compared to those on methadone (Jones, Kaltenbach, & Heil, 2010; Pritham, Paul, & Hayes, 2012). Breastfeeding reduces the severity of NAS, even considering the negligible amounts of methadone and buprenorphine that are transferred through breastmilk (Abdel-Latif et al., 2006; Dryden et al., 2009; Hodgson & Abrahams, 2012; Isemann et al., 2011; McQueen et al., 2011; O'Connor et al., 2013; Welle-Strand et al., 2012). Infants with NAS are presumed to have an altered gut microbiome, as demonstrated by common signs of gastrointestinal distress and diarrhea (Maguire & Groer, 2016). Breastfeeding may help correct dysbiosis causing gastrointestinal distress. Missing the opportunity in the neonatal period to initiate breastfeeding can have lifelong health and attachment consequences for the dyad.

Responses and Policy Options

The American Academy of Breastfeeding Medicine (Jansson, 2009) and the American Academy of Pediatrics (Hudak & Tan, 2012) support encouraging opioid-dependent women to breastfeed if contraindications are not present. A new approach to care gaining national support is considering the mother as the central focus of care for their infant with NAS. Mothers are the prescribed treatment for the infant, providing care and comfort around the clock, including breast feeding on demand (Grossman, Berkwitz, & Osborn, 2017).

The Academy's Position

The Academy has long supported the health promotion measure of breastfeeding and human milk feeding for all infants. The Expert Panel on Breastfeeding has determined that standardized care of the infant with NAS should include breastfeeding on demand to optimize health outcomes. Additionally, education and support to this high-risk, marginalized population of women about breastfeeding should be provided by all providers starting in the antenatal period, and in the immediate postpartum period, if contraindications are not present. Personalized interventions such as peer mentors may also be employed to support women in breastfeeding choice and practice.

Recommendations

- 1 Eliminate marginalization and criminalization of women who give birth to infants exposed to opioids or other illicit substances. Instead, states should invest in gender-specific addiction treatment programs in which women can participate without separation from their children where breastfeeding may continue.
- 2 The Joint Commission should develop new quality indicators related to improve breastfeeding rates in infants born to opioid dependent mothers in all U. S. hospitals that provide labor and birth services.
- 3 The Baby Friendly Hospital Initiative should specifically include breastfeeding infants with NAS as a priority focus.
- 4 Private and public funding agencies should include breastfeeding infants with NAS as a priority area and allocate funds to address the needs of women involved in opioid dependency.
- 5 Public health program directors, planners, and local, state and federal legislators should ensure the establishment and implementation of policies and procedures that promote and support breastfeeding in infants born to opioid dependent mothers.

REFERENCES

Abdel-Latif, M. E., Pinner, J., Clews, S., Cooke, F., Lui, K., & Oei, J. (2006). Effects of breast milk on the severity and outcome of neonatal abstinence syndrome among infants of drug-dependent mothers. *Pediatrics*, *117*, e1163–e1169.

Academy of Breastfeeding Medicine Protocol C. (2009) Jansson, L. M. (2009). ABM clinical protocol #21: Guidelines for breastfeeding and the drug-dependent woman. *Breastfeeding Medicine*, *4*, 225–228.

Bener, A., Denic, S., & Galadari, S. (2001). Longer breast-feeding and protection against childhood leukaemia and lymphomas. *The European Journal of Cancer*, *37*, 234–238.

Begg, E. J., Malpas, T. J., Hackett, L. P., & Ilett, K. F. (2001). Distribution of R- and S-methadone into human milk during multiple, medium to high oral dosing. *The British Journal of Clinical Pharmacology*, *52*, 681–685.

Bogen, D. L., Perel, J. M., Helsel, J. C., Hanusa, B. H., Thompson, M., & Wisner, K. L. (2011). Estimated infant exposure to enantiomer-specific methadone levels in breastmilk. *Breastfeeding Medicine*, *6*, 377–384.

Dryden, C., Young, D., Campbell, N., & Mactier, H. (2012). Postnatal weight loss in substitute methadone-exposed infants: Implications for the management of breast feeding. *Archives of Disease in Childhood - Fetal and Neonatal Edition*, *97*, F214–F216.

Dryden, C., Young, D., Hepburn, M., & Mactier, H. (2009). Maternal methadone use in pregnancy: Factors associated with the development of neonatal abstinence syndrome and implications for healthcare resources. *BJOG: An International Journal of Obstetrics and Gynaecology*, *116*, 665–671.

Goler, NC, Armstrong, MA, Taillac, CJ, & Osejo, VM (2008). Substance abuse treatment linked with prenatal visits improves perinatal outcomes: a new standard. *Journal of Perinatology*, *28*, 597–603.

Grossman, M. R., Berkowitz, A. K., Osborn, R. R., Xu, Y., Esserman, D. A., Shapiro, E. D., & Bizzarro, M. J. (2017). An initiative to improve the quality of care of infants with neonatal abstinence syndrome. *Pediatrics*, *139* e20163360, doi:10.1542/peds.2016-3360 Epub 2017 May 18.

Hodgson, Z. G., & Abrahams, R. R. (2012). A rooming-in program to mitigate the need to treat for opiate withdrawal in the newborn. *Journal of Obstetrics and Gynaecology Canada*, *34*, 475–481.

Hudak, M. L., & Tan, R. C. (2012). Neonatal drug withdrawal. *Pediatrics*, *129*, e540–e560.

Isemann, B., Meinzen-Derr, J., & Akinbi, H. (2011). Maternal and neonatal factors impacting response to methadone therapy in infants treated for neonatal abstinence syndrome. *Journal of Perinatology*, *31*, 25–29.

Jansson, L. M., McConnell, K., Velez, M., Tuten, M., Harrow, C. A., Jones, H. E., . . . , & Huestis, M. A. (2016). Maternal Buprenorphine Maintenance and Lactation. *Journal of Human Lactation*, *32*, 675–681.

Jones, H. E., Kaltenbach, K., Heil, S. H., Stine, S. M., Coyle, M. G., Arria, A. M., O'Grady, KE., Selby, P., Martin, PR, . . . , & Fischer, G. (2010). Neonatal abstinence syndrome after methadone or buprenorphine exposure. *The New England Journal of Medicine*, *363*, 2320–2331.

Maguire, D. J., & Groer, M. W. (2016). Neonatal abstinence syndrome and the gastrointestinal tract. *Medical Hypotheses*, *97*, 11–15.

McQueen, K. A., Murphy-Oikonen, J., Gerlach, K., & Montelpare, W. (2011). The impact of infant feeding method on neonatal abstinence scores of methadone-exposed infants. *Advances in Neonatal Care: Official Journal of the National Association of Neonatal Nurses*, *11*, 282–290.

O'Connor, A. B., Collett, A., Alto, W. A., & O'Brien, L. M. (2013). Breastfeeding rates and the relationship between breastfeeding and neonatal abstinence syndrome in women maintained on buprenorphine during pregnancy. *Journal of Midwifery & Womens Health*, *58*, 383–388.

Pizarro, D., Habli, M., Grier, M., Bombrys, A., Sibai, B., & Livingston, J. (2011). Higher maternal doses of methadone does not increase neonatal abstinence syndrome. *The Journal of Substance Abuse Treatment*, *40*, 295–298.

- Pritham, U. A., Paul, J. A., & Hayes, M. J. (2012). Opioid dependency in pregnancy and length of stay for neonatal abstinence syndrome. *The Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 41, 180–190.
- Seligman, N. S., Almario, C. V., Hayes, E. J., Dysart, K. C., Berghella, V., & Baxter, J. K. (2010). Relationship between maternal methadone dose at delivery and neonatal abstinence syndrome. *The Journal of Pediatrics*, 157, 428–433 e421.
- Shamir, R. (2016). The Benefits of Breast Feeding. *Nestlé Nutrition Institute Workshop Series*, 86, 67–76.
- Singhal, A., Farooqi, I. S., O'Rahilly, S., Cole, T. J., Fewtrell, M., & Lucas, A. (2002). Early nutrition and leptin concentrations in later life. *The American Journal of Clinical Nutrition*, 75, 993–999.
- Swortwood, M. J., Scheidweiler, K. B., Barnes, A. J., Jansson, L. M., & Huestis, M. A. (2016). Simultaneous quantification of buprenorphine, naloxone and phase I and II metabolites in plasma and breastmilk by liquid chromatography-tandem mass spectrometry. *The Journal of Chromatography A*, 1446, 70–77.
- Welle-Strand, G. K., Skurtveir, S., Jones, H. E., Waal, H., Bakstad, B., Bjarkø, L., . . . & Ravndal, E. (2012). Neonatal outcomes following in utero exposure to methadone or buprenorphine: A national cohort study of opioid-agonist treatment of pregnant women in Norway from 1966 to 2009. *Drug and Alcohol Dependence*, 127(1-3), 200–206.
- Wachman, E. M., Byun, J., & Philipp, B. L. (2010). Breastfeeding rates among mothers of infants with neonatal abstinence syndrome. *Breastfeeding Medicine*, 5, 159–164.