

Scoping Review of Barriers and Facilitators of Breastfeeding in Women on Opioid Maintenance Therapy

Margaret Doerzbacher, Mickey Sperlich, Amy Hequembourg, and Yu-Ping Chang

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Correspondence

Margaret Doerzbacher, RN,
NNP-BC, 3435 Main St.,
317-B Wende Hall, State
University of New York,
Buffalo, NY 14214.
mdoerzba@buffalo.edu

Keywords

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ABSTRACT

Objective: To synthesize the literature on the barriers and facilitators of breastfeeding among women on opioid maintenance therapy (OMT) to inform nursing interventions and improve breastfeeding outcomes.

Data Sources: We searched 11 databases using the following key terms: *breastfeeding, barriers, facilitators, promotion, and opioid.*

Study Selection: We included articles published in English since 2015 that addressed barriers and facilitators of breastfeeding in women on OMT. We did not limit our search to specific types of studies. Our search produced 65 records. After reviewing titles and abstracts, we assessed 21 full-text articles and excluded seven for lack of data related to our key terms. As a result, we included five qualitative studies, three reviews, three mixed-methods studies, two retrospective cohort studies, and one case report (14 articles) in our final review.

Data Extraction: We extracted data from each article and sorted them in a table for analysis and synthesis. Data included study purpose, research questions, design and methodology, and findings specifically pertaining to the identification of barriers and facilitators of breastfeeding for women on OMT.

Data Synthesis: We identified three themes related to facilitators of and barriers to breastfeeding: *Information, Support, and Health Care System Factors.*

Conclusion: The results of our review suggest that most barriers and facilitators of breastfeeding in women on OMT are manageable with improved health care practices. Primary and acute care health professionals should modify practices to minimize barriers to breastfeeding. Nurses should provide better breastfeeding education and preparation, sensitive care in the immediate postpartum period, and extended follow-up after hospital discharge for women on OMT.

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Margaret Doerzbacher, RN, NNP-BC, is a clinical instructor, School of Nursing, Division of Family, Community, and Health Systems Sciences, University at Buffalo, State University of New York, Buffalo, NY.

Mickey Sperlich, PhD, MSW, CPM, is an assistant professor, School of Social Work, University at Buffalo, State University of New York, Buffalo, NY.

(Continued)

Although breastfeeding has been shown to have significant benefits for all mothers and infants (American Academy of Pediatrics, 2012), these benefits have been particularly significant for women on opioid maintenance therapy (OMT) for opioid use disorder (OUD) and their newborns (Bogen & Whalen, 2019; McQueen & Murphy-Oikonen, 2016; Pritham, 2013; Wu & Carre, 2018). For the neonate exposed to methadone or buprenorphine, breastfeeding was associated with less severe neonatal opioid withdrawal syndrome (NOWS) and shorter length of hospital stay (McQueen et al., 2011). For all women, breastfeeding reduced the risk of several illnesses later in life and had positive effects on psychological health, including improved bonding and infant

attachment, maternal confidence, and decreasing the risk of postpartum depression (American Academy of Pediatrics, 2012; Bogen & Whalen, 2019). For women on OMT, breastfeeding as a way to improve the health of their newborns can be an incentive to remain in treatment for OUD (Saia et al., 2016) and may improve psychological, developmental, and social outcomes (Bogen & Whalen, 2019). Unfortunately, reported breastfeeding initiation rates in this group have varied from 24% (Wachman et al., 2010) to 76% (O'Connor et al., 2013). Although they often express the intention to breastfeed in the prenatal period, many women on OMT do not continue beyond the first week after birth (Saia et al., 2016; Wachman et al., 2010; Yonke et al.,

Despite the benefits of breastfeeding for women on opioid maintenance therapy and their newborns, many do not reach their breastfeeding goals.

2019). For the improved health of women on OMT and their infants, it is vital for nurses and other health care professionals to understand the barriers to breastfeeding that exist in this population and ways to facilitate breastfeeding success.

Opioid Maintenance Therapy

Opioid maintenance therapy is the use of opioid agonists (methadone or buprenorphine) to treat OUD and was recommended for pregnant women with OUD (American College of Obstetricians and Gynecologists, 2017). The purpose of OMT is to treat withdrawal symptoms and cravings in people with opioid dependence. Pregnant women with OUD who received OMT had more consistent prenatal care, better nutrition, less risky behaviors, and better pregnancy outcomes than those who did not receive treatment (Cleveland, 2016). In the postpartum period, continued OMT reduces the risk of relapse and engages women with the health care system for the management of other issues such as psychiatric disorders and social challenges (American College of Obstetricians and Gynecologists, 2017). When women are stable on OMT, not using illicit drugs, and have no other medical contraindications, they should be encouraged to breastfeed (American College of Obstetricians and Gynecologists, 2017).

Potential Benefits of Breastfeeding

Maternal Benefits

In their policy statement on breastfeeding, the American Academy of Pediatrics (2012) summarized the benefits of breastfeeding for all women, including reduced risk for breast cancer, ovarian cancer, Type 2 diabetes, cardiovascular disease, postpartum depression, and rheumatoid arthritis. Some evidence suggests that breastfeeding among healthy women is associated with improved mental health outcomes, including reduced anxiety (Godfrey & Lawrence, 2010; Mikšić et al., 2020). Because women with OUD also have greater rates of comorbid mental illness, this association may be especially valuable. In their literature review, Jansson et al. (2004) reported that mothers with OUD maintained on methadone could benefit from the

positive effect of improved attachment to their newborns that may occur with breastfeeding. The greatest benefit to breastfeeding in women on OUD, however, may be related to its positive psychological effects. Women with OUD often experience low self-esteem, poor self-efficacy, and feelings of guilt and shame. Experiencing positive mothering relationships with their newborns, enhanced through breastfeeding, may improve their self-confidence and coping abilities (Cleveland et al., 2016; Dozier et al., 2012).

Infant Benefits

The effects of breastfeeding during OMT are particularly relevant to the opioid-exposed newborn. A common misconception is that breastfeeding perpetuates the newborn's exposure to a harmful substance. Based on previous research showing that the amount of drug that passes to the infant in breast milk is less than 1% of the dose present in the mother's serum, the Association of Women's Health, Obstetric and Neonatal Nurses (2016) concluded that medications used in OMT are safe during breastfeeding. More importantly, breastfeeding decreased the incidence and severity of neonatal opioid withdrawal after birth, the need for pharmacologic treatment, and the length of hospital stay for neonates born to women on OMT (Bogen & Whalen, 2019; McQueen et al., 2011; O'Connor et al., 2013; Wu & Carre, 2018).

In addition to benefits related to withdrawal, breastfeeding for opioid-exposed infants has long-term benefits. In a longitudinal study, children who were breastfed as infants were significantly less likely to experience maltreatment from their mothers than children who were not breastfed (Kremer & Kremer, 2018). Breastfeeding was associated with improved maternal sensitivity and attachment, which have long-term effects on the mental health and psychological development of the infant (Papp, 2014). For infants at risk for adverse developmental outcomes secondary to maternal OUD, these effects of breastfeeding can be quite significant (Bogen & Whalen, 2019).

Rates of Breastfeeding for Women on OMT

Estimates of how many women on OMT initiate and maintain breastfeeding vary considerably. In their review of nine studies with samples of 22 to 437 women, Tsai and Doan (2016) found that 8% to 81% of women on OMT initiated breastfeeding. In their chart review of 276 infants of

Amy Hequembourg, PhD, is the Assistant Dean for Diversity and Inclusion and an associate professor, School of Nursing, Division of Family, Community and Health Systems Sciences, University at Buffalo, State University of New York, Buffalo, NY.

Yu-Ping Chang, PhD, RN, FGSA, FAAN, FIAAN, is the Patricia H. and Richard E. Garman Endowed Professor and the Associate Dean for Research and Scholarship, School of Nursing, Division of Family, Community and Health Systems Sciences, University at Buffalo, State University of New York, Buffalo, NY.

225 mothers on OMT, [Wachman et al. \(2010\)](#) reported
 226 that 24% of the women who met institution-
 227 specific breastfeeding eligibility criteria initiated
 228 breastfeeding; of those, 60% stopped breast-
 229 feeding within 1 week. The findings of this study
 230 are similar to those reviewed by [Yonke et al.](#)
 231 [\(2019\)](#), who reported that even when women on
 232 OMT intend to breastfeed, few continue to
 233 breastfeed successfully after hospital discharge.
 234 Given that lactogenesis is not fully established for
 235 5 to 7 days, further understanding of the factors
 236 that contribute to the early cessation of breast-
 237 feeding among women on OMT is warranted.

239 Barriers to Breastfeeding

240 Women with OUD are more likely than other
 241 women to have lower levels of education, lower
 242 incomes, less stable living arrangements, and
 243 fewer physical and social resources ([Cleveland &](#)
 244 [Grossman, 2019](#)). These factors likely add to their
 245 struggle to successfully adapt to developmental
 246 changes of the perinatal period, cope with new-
 247 borns with NOWS, and meet the demands of their
 248 own addiction treatment.

250 Unlike other primates, humans are dependent on
 251 social learning to successfully initiate and sustain
 252 breastfeeding ([Whipps et al., 2018](#)). Social and
 253 cultural pressures to feed infants using commer-
 254 cial formula have created several generations of
 255 women without breastfeeding experience.
 256 Consequently, many women do not have role
 257 models from whom they can learn the necessary
 258 skills. Social norms that dismiss breastfeeding as
 259 unnecessary and invaluable and focus instead on
 260 the value of women as members of the workforce
 261 make breastfeeding less feasible for women who
 262 need to return to work and may not live in stable
 263 and supportive environments ([Smith, 2018](#)). Ten-
 264 sions between social norms created guilt and
 265 shame among many women regarding their infant
 266 feeding choices ([Thomson et al., 2015](#)). Guilt and
 267 shame may be further complicated for women
 268 with OUD who may experience public stigma for
 269 having exposed their newborns to opioids; such
 270 stigma may decrease a woman's self-efficacy
 271 and make it difficult for her to navigate the
 272 lactation process ([Cleveland et al., 2016;](#)
 273 [McGlothen & Cleveland, 2018](#)).

274 Trauma and poor mental health can be additional
 275 barriers to breastfeeding in women on OMT. Ac-
 276 cording to [Saia et al. \(2016\)](#), 50% to 80% of
 277 women with any substance use disorder have
 278 histories of physical, sexual, or emotional trauma.

281 For women on OMT, the childbearing experience
 282 can cause significant psychological distress
 283 ([Howard et al., 2018](#)). In a study of women in the
 284 postpartum period with histories of sexual assault
 285 ($N = 994$), [Kendall-Tackett et al. \(2013\)](#) found that
 286 those who breastfed had less risk of symptoms of
 287 depression and poor sleep quality than those who
 288 did not exclusively breastfeed or who bottle-fed.
 289 These authors also found that breastfeeding
 290 buffered the negative effects of maternal symp-
 291 toms of depression on the infant. Additionally, in
 292 their review of eight studies, [Channell Doig et al.](#)
 293 [\(2020\)](#) found that women with extensive his-
 294 tories of trauma, especially those with post-
 295 traumatic stress disorder resulting from childhood
 296 trauma, were less likely to sustain breastfeeding
 297 and less likely to exclusively breastfeed, which
 298 may be related to triggers of past trauma that
 299 elicited trauma responses. In two previous re-
 300 views, authors examined feeding choices among
 301 women on OMT ([Graves et al., 2016](#)) and among
 302 women with infants with NOWS ([Holmes et al.,](#)
 303 [2017](#)) and identified barriers to breastfeeding
 304 for women on OMT as part of their overall
 305 findings.

307 Facilitators of Breastfeeding

308 Fewer researchers have investigated inter-
 309 ventions to facilitate breastfeeding Q4
 310 compared with those who have focused on
 311 barriers. [Doerzbacher and Chang \(2019\)](#) found
 312 a lack of evidence-based interventions
 313 currently in use to increase breastfeeding
 314 among women with OUD in their systematic
 315 review of four studies. The significant inter-
 316 ventions all focused on alternative models of
 317 care, including integrated addiction and pre-
 318 natal care, rooming in during the postpartum
 319 hospitalization, and outpatient management of
 320 opioid treatment for NOWS. These findings
 321 suggest that to improve breastfeeding rates
 322 among women on OMT, care should be more
 323 holistic and well coordinated.

324 Health care professionals have presumed that
 325 prenatal counseling, implementation of Baby-
 326 Friendly requirements, and hospital policies to
 327 support breastfeeding in women taking metha-
 328 done or buprenorphine would lead to increased
 329 rates of successful breastfeeding. Research is
 330 limited regarding the effect of giving birth in a
 331 Baby-Friendly hospital for women on OMT; how-
 332 ever, [Stephen et al. \(2020\)](#) found significantly
 333 lower breastfeeding rates for women on OMT
 334 compared to women not taking opioids, despite
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337 giving birth in a hospital with Baby-Friendly
338 designation.
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340 For women on OMT, the right combination of
341 supportive factors may be difficult to achieve
342 without person-centered, evidence-based in-
343 terventions. A clearer understanding of the
344 unique barriers and facilitators of breastfeed-
345 ing among women on OMT may provide the
346 necessary evidence to guide development of
347 more tailored interventions or approaches to
348 care. To that end, the aim of our scoping review
349 was to synthesize what is known about the
350 barriers and facilitators of breastfeeding
351 among women on OMT to inform further
352 research and nursing interventions as well as to
353 ultimately improve breastfeeding outcomes in
354 this group.
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356 Methods

357 To facilitate a broader understanding of the needs
358 of women on OMT who intend to breastfeed, we
359 chose a scoping review to explore related litera-
360 ture. We used the principles described by
361 Peterson et al. (2017) and the Preferred Report-
362 ing Items for Systematic Reviews and Meta-
363 Analyses (PRISMA) Extension for Scoping Re-
364 views Checklist (Tricco et al., 2018) to guide our
365 methods. These methods include clearly defining
366 a research question in the context of current
367 knowledge, establishing inclusion and exclusion
368 criteria with rationales, conducting the literature
369 search and documenting the process, selecting
370 studies and charting the data, and summarizing
371 or synthesizing the data. The process concludes
372 with reporting the outcome.
373

374 We sought to answer the question, "What is
375 known about the barriers and facilitators that
376 women on OMT face when they initiate breast-
377 feeding?" We included sources if they provided
378 quantitative or qualitative data specific to barriers
379 and facilitators of breastfeeding in women on
380 OMT. References published before 2015 (the
381 approximate peak of the current opioid crisis) and
382 those not published in English were excluded. To
383 identify all possible sources, we searched multi-
384 ple databases, including PubMed, CINAHL, Web
385 of Science, American Psychological Association
386 PsycInfo, Psychologic and Behavioral Science
387 Collection, APA Psych Archive, MEDLINE with full
388 text, and Social Work Abstracts. Search terms
389 included "breastfeeding" and "opioid" or "sub-
390 stance use" in combination with "barriers," "fa-
391 cilitators," or "promotion." We initially searched in
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the autumn of 2019 and then repeated the search
in 2020 and winter of 2021.

Our search resulted in 62 potential articles for
review; we reviewed reference lists and article
citations and identified three additional articles.
We removed 30 duplicates, and after screening,
we excluded nine others for irrelevance. After full-
text review of the remaining 21 articles, we
excluded seven that lacked data related to our
key search terms. As a result, we included 14
studies in our review and synthesis. The search
process is summarized in Figure 1. We extracted
data from each article and organized them in an
evidence table to begin the analysis process. For
each article, we identified the purpose or
research question, design, sample, setting,
measures, and outcomes. We then compared the
results, sorted them into emergent themes, and
organized them into a flow chart that facilitated
the resulting synthesis.

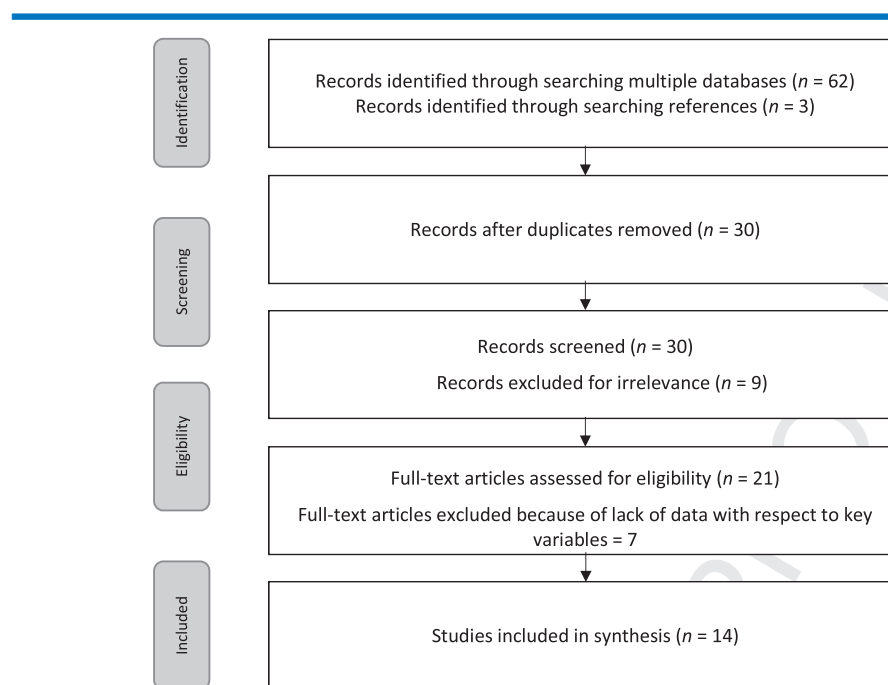
Results

Characteristics of Studies

After screening titles for relevance and dupli-
cates, we chose 14 articles for inclusion in the
review, including five qualitative studies, three
reviews (one systematic, one literature review,
one review of evidence), three mixed-methods
studies, two retrospective cohort studies, and
one case report. Ten of the 14 articles are new
sources of information specific to barriers and
facilitators of breastfeeding for women on OMT
that were not included in previous reviews.

Five of the included studies were qualitative, and
sample sizes ranged from 6 to 40 participants.
Two mixed-methods studies included 14 and 30
participants; two quantitative studies included
228 and 564 mother–newborn dyads. The review
articles included 9, 10, and 46 studies. The
studies took place primarily in urban settings, but
the settings were mixed in terms of inpatient/
outpatient, specialty setting, or integrated/iso-
lated care. Two studies were conducted in the
United Kingdom. The remaining studies and re-
views were conducted in the United States. Of the
articles we identified for inclusion in this scoping
review, only one (Graves et al., 2016) is consid-
ered the greatest strength of evidence, a sys-
tematic review. One was a literature review (Tsai &
Doan, 2016), and one was a review of evidence
(Holmes et al., 2017). Half of the studies were
cross-sectional and qualitative in nature (Cook &
Larson, 2019; Demirci et al., 2015; Hicks et al.,

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472 **Figure 1.** Selection of sources of evidence.

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475 2018; Howard et al., 2018; MacVicar et al., 2017;
476 McGlothen et al., 2018; Yonke et al., 2020).
477 Although this design provides in-depth descriptions of the experiences of the participants,
478 the effects and interaction of factors cannot be described or explained, which introduces a
479 greater risk of bias. The remaining four studies included two retrospective cohort studies, a
480 mixed-methods feasibility study, and a case report. Each source is described in greater detail
481 in Supplementary Table S1, including design, sample, measures, and outcomes. We identified
482 three emergent themes: *Information*, *Support*, and *Health Care System Factors*. Barriers and
483 facilitators of breastfeeding for women on OMT were evident within each theme; these are
484 detailed in the following sections and summarized in Table 1.

495 *Information*

496 **Inaccurate or Inadequate Information.** Mis-
497 information and inadequate information were the most frequently identified barriers to successful
498 breastfeeding among women on OMT. Inaccurate information and misconceptions were
499 conveyed by the media, family, friends, and professional health care sources. Women and
500 their social contacts had persistent misconceptions about the safety of breastfeeding
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during treatment with methadone or buprenorphine. For example, Howard et al. (2018) reported that some women erroneously believed that breastfeeding on OMT would increase the severity of NOWS. Demirci and colleagues (2015) noted that some women believed that their newborns could become “high” or even overdose on the medication transferred through breast milk. Furthermore, family and friends did not support breastfeeding based on a misunderstanding of its safety while on OMT (Demirci et al., 2015).

Inadequate information resulted from a lack of knowledge and the receipt of inconsistent information. Women reported that they did not receive adequate information and education about breastfeeding from prenatal care providers (Hicks et al., 2018). Some prenatal care providers were not aware of current breastfeeding guidelines for women on OMT (American College of Obstetricians and Gynecologists, 2017); as a result, women received conflicting information from different sources about the safety of breastfeeding while taking methadone or buprenorphine (Holmes et al., 2017; MacVicar et al., 2017). In the hospital setting, pediatricians did not always provide clear, consistent information about NOWS management. Women felt that they needed more information and preparation for

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The most important factors related to breastfeeding success in women on opioid maintenance therapy were related to education and support from the health care system.

managing withdrawal signs in their newborns and expressed that they received information “too late” to make informed decisions about breastfeeding (Hicks et al., 2018).

Accurate Information. For women, understanding why breastfeeding was the best option for their newborns, despite use of OMT, was a facilitator of breastfeeding and a motivator to continue to breastfeed. In two qualitative studies, authors identified breastfeeding as a motivator to remain in treatment and potentially prevent relapse (Cook & Larson, 2019; Howard et al., 2018). Because the interplay between the newborn’s withdrawal signs and breastfeeding was a significant concern, pediatricians who provided helpful information about the newborn’s condition, treatment, and prognosis were perceived as trustworthy (Demirci et al., 2015).

Support

Person-Centered Support From Family and Peers. Sensitive, person-centered support was the most frequently identified facilitator of breastfeeding for women with OUD. When family members and peers provided encouragement and guidance, women were more likely to choose and continue breastfeeding (Demirci et al., 2015; Hicks et al., 2018). Women also described needing support to balance the demands of their own treatment with those of caring for their infants, which in turn facilitated breastfeeding (Cook & Larson, 2019).

Being Treated With Dignity and Respect. Hospital staff members who treated women on OMT with respect and dignity and were sensitive to their unique needs were seen as supporting efforts to breastfeed (MacVicar et al., 2017). Assigned lactation consultants and nurses who helped women learn how to breastfeed were essential to breastfeeding success. A person-centered approach to care that accounted for women’s and infants’ individualized feeding needs preserved women’s dignity, and they were more likely to successfully breastfeed at discharge (MacVicar et al., 2017, 2018).

Health Care System Factors

In several studies, researchers reported that the health care environment may present significant barriers to breastfeeding for women on OMT. Schiff et al. (2018) found that hospital characteristics were the greatest predictor of breastfeeding initiation among women on OMT. These characteristics included more relaxed breastfeeding guidelines, which led to more supportive environments for this group of women. Alternatively, length of infant hospitalization was negatively associated with breastfeeding continuation. In two studies, hospital practices that did not provide rooming-in opportunities for mothers of newborns with NOWS or required transfer of the newborn to another unit for NOWS management resulted in lower breastfeeding rates at discharge (Cook & Larson, 2019; MacVicar et al., 2018).

Supportive Hospital Environment. Hospital resources and guidelines that supported rooming-in or provided a quiet and private setting facilitated breastfeeding by limiting environmental stimulation and increasing privacy for the woman on OMT and her newborn (Howard et al., 2018). Patrick et al. (2020) concluded that environments that are bright and noisy may overstimulate newborns with NOWS neurologically and promote agitation; less stimulating settings may facilitate normal sleep/wake cycles, allow for focused and coordinated suck and swallow responses, and improve the ability of the newborn to be consoled.

Integrated Obstetric Care and Substance Abuse Treatment. We found that that combined OUD treatment and obstetric care support successful breastfeeding (Schiff et al., 2018; Tsai & Doan, 2016). Tsai and Doan (2016) reported on two studies in which authors reported breastfeeding initiation rates of 70% or more and breastfeeding continuation rates of 66% and 50% at 6 and 8 weeks, respectively. They concluded that the two most effective interventions to support breastfeeding were keeping mothers and newborns together and combined obstetric and addiction care programs. They hypothesized that an integrated model of care might reduce some of the barriers to breastfeeding because women would access all care in a single, infant-friendly setting. Finally, a quality improvement program that included revisions to breastfeeding guidelines and well-coordinated obstetric care, addiction treatment, and mental health services within a large health

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Table 1: Themes and Subthemes Related to Barriers and Facilitators of Breastfeeding for Women on Opioid Maintenance Therapy

Themes and Subthemes	Examples
<i>Information</i>	
<i>Inaccurate or Inadequate Information</i>	Breastfeeding increases the severity of NOWS.
<i>Accurate Information</i>	It is considered safe/advantageous to breastfeed on OMT.
<i>Support</i>	
<i>Person-Centered Support From Family and Peers</i>	Support to choose breastfeeding and meet the demands of treatment while caring for a newborn
<i>Being Treated With Dignity and Respect</i>	Lactation consultation provided by those knowledgeable about OMT/NOWS
<i>Health Care System Factors</i>	
<i>Supportive Hospital Environment</i>	Rooming in for privacy and less stimulation
<i>Integrated Obstetric Care and Substance Abuse Treatment</i>	Combined OUD treatment and obstetric care as well as revisions to breastfeeding guidelines
<i>Approach to Managing Neonatal Opioid Withdrawal Syndrome</i>	Understanding the effects of NOWS, such as weight loss and how this may erroneously be interpreted as insufficient milk production
<i>Unsupportive Nursing Care</i>	Judgmental attitudes, discrimination, and microaggressions leading to stigma, discouragement and breastfeeding discontinuation

Note. NOWS = neonatal opioid withdrawal syndrome; OMT = opioid maintenance therapy; OUD = opioid use disorder.

care system resulted in increased breastfeeding rates among women on OMT (Schiff et al., 2018). An unexpected finding, however, was that hospitals that were designated as Baby-Friendly did not have improved breastfeeding rates for women on OMT (Tsai & Doan, 2016).

Approach to Managing Neonatal Opioid Withdrawal Syndrome. We found that the challenges of managing NOWS was another barrier that impeded women's breastfeeding efforts. From a neurologic standpoint, newborns with NOWS frequently have disorganized feeding patterns with poorly coordinated suck, swallow, and breathing reflexes that are necessary for effective nipple latch and sucking (Jansson & Velez, 2012). The neurologic effects of opioid withdrawal also leave the newborn irritable and difficult to console. If care providers do not approach management of the dyad coping with NOWS with an understanding of these challenges, the mother is more likely to become discouraged and choose to discontinue early. Authors of three studies found that for a woman who is already anxious, the problems associated with NOWS make breastfeeding a daunting task,

and women can quickly become discouraged, leading to early discontinuation (Demirci et al., 2015; Howard et al., 2018; MacVicar et al., 2018). Additionally, NOWS is associated with diarrhea, which in turn contributes to greater-than-normal newborn weight loss in the first postnatal week. The authors of two studies concluded that without a clear understanding of the effects of NOWS, weight loss can be interpreted as insufficient milk production, and women may be advised to discontinue breastfeeding or may decide to do so on their own (Holmes et al., 2017; Howard et al., 2018). Finally, Hicks et al. (2018) and Schiff et al. (2018) reported that when a newborn must remain in the hospital for management of NOWS after the mother has been discharged, separation from the newborn makes breastfeeding more difficult.

Unsupportive Nursing Care. The health care system itself created significant impediments to successful breastfeeding for women on OMT in several studies. A general lack of support during the perinatal period was a significant yet modifiable barrier (Demirci et al., 2015). Several researchers reported that this included

785 inappropriate nursing care, such as judgmental
786 or discriminatory attitudes toward mothers with
787 substance use problems, a lack of sensitivity to
788 the unique needs of the dyad, and micro-
789 aggressions that undermined the woman's efforts
790 to breastfeed (Demirci et al., 2015; Howard et al.,
791 2018; MacVicar et al., 2017, 2018). The women
792 were also cognizant of a lack of understanding of
793 current guidelines and addiction treatment ap-
794 proaches among hospital staff and a general lack
795 of sensitivity to their unique needs (Graves et al.,
796 2016). Because women on OMT already feel
797 vulnerable during their recovery from childbirth,
798 facing stigma from those who care for them was
799 discouraging and exacerbated their feelings of
800 guilt and inadequacy (Graves et al., 2016;
801 Howard et al., 2018; MacVicar et al., 2017).

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803 Finally, when nurses did not provide information
804 and sensitive encouragement focused on their
805 specific needs, women on OMT felt stigmatized
806 and discouraged and were likely to discontinue
807 breastfeeding (Cook & Larson, 2019; Demirci
808 et al., 2015; Hicks et al., 2018; McGlothen et al.,
809 2018). In some studies, women reported that
810 nurses did not understand the nature of addic-
811 tion, which resulted in a lack of trust between the
812 women and their nurses (Graves et al., 2016;
813 MacVicar et al., 2017).

814 Discussion

815 Information

816 In Healthy People 2020, the U.S. Department of
817 Health and Human Services (2010) recognized
818 that among the general population, many women
819 initiate breastfeeding but encounter barriers that
820 prevent them from continuing. In their report on
821 the role of law and policy to implement the
822 Healthy People 2020 goals, Barraza et al. (2020)
823 identified better maternity care and provider
824 training as essential to attaining breastfeeding
825 goals in the United States. We found that better
826 maternity care through improved education for
827 health care professionals is critical for breast-
828 feeding success among women on OMT. We
829 found that barriers and facilitators to breastfeed-
830 ing among women on OMT are related to the
831 absence or presence of accurate information and
832 person-centered support for the woman, a
833 conclusion reached by Clark (2019) in her review
834 of policy and practice regarding breastfeeding
835 among women on OMT. Accurate information
836 about the benefits of breastfeeding that is pro-
837 vided throughout pregnancy and during the im-
838 mediate postpartum period is critical to a

841 woman's choice of and preparation for breast-
842 feeding. This includes information regarding the
843 safety of breastfeeding for her newborn and the
844 normal process of lactation. Women should be
845 provided with information about the signs of
846 NOWS, the nonpharmacologic management of
847 these signs, and the potential need for pharma-
848 cologic treatment. Education about breastfeeding
849 needs to be consistent, repeated over time, and
850 specific to the nature of breastfeeding in the
851 context of OUD treatment. Women who under-
852 stand the benefits of breastfeeding for them-
853 selves and their newborns are more likely to be
854 motivated to make the effort to be successful.
855 Nurses in perinatal settings and those who work
856 in addiction treatment are invaluable resources
857 for the provision of evidence-based information
858 that women need to be successful with breast-
859 feeding during and beyond the immediate post-
860 partum period.

861 To provide this education and support, nurses
862 and other health care professionals need
863 continuing education regarding the safety, ben-
864 efits, and outcomes of breastfeeding for women
865 on OMT and their newborns. Content regarding
866 the perinatal care of women on OMT should be
867 included in specialty nurse certification pro-
868 grams. Nurses in all perinatal settings need to be
869 informed of the evidence that supports breast-
870 feeding in women on OMT as well as interventions
871 to meet the specific needs of this population.

872 Support

873 Women who receive consistent support from
874 professional sources are more likely to initiate and
875 sustain breastfeeding. However, we found that
876 insensitive and judgmental attitudes persist
877 among hospital caregivers. Clark (2019) also
878 found that nurses and other health care pro-
879 fessionals could be barriers to breastfeeding by
880 not providing support, giving inaccurate infor-
881 mation, and being judgmental. Although not
882 associated with breastfeeding specifically,
883 Cleveland et al. (2016) also found that women
884 with SUD frequently reported hurtful and even
885 traumatic experiences with nurses in the perinatal
886 setting.

887 Although family members and peers may also
888 provide social support, given that women on OMT
889 may experience attendant life challenges,
890 including unstable living conditions and relative
891 lack of resources, such support may not be
892 available. Therefore, support from health care
893 professionals needs to be coordinated,
894
895
896

897 consistent, and person centered throughout the
898 continuum of care during pregnancy, the peri-
899 natal hospitalization, the postpartum period, and
900 the infant's first year. This should include
901 emotional support and encouragement and in-
902 terventions to meet social needs such as housing
903 and learning to care for the infant. Ideally, support
904 from the health care team would also be trauma
905 informed.

907 *Health Care System Factors*

908 Prenatal care and addiction treatment should be
909 integrated and easily accessible. Integrated care
910 in a single setting improves and simplifies access
911 for women on OMT who are trying to balance care
912 for their own OUD as well as their pregnancies.
913 An integrated care model also facilitates collabor-
914 ation among providers and improves the accu-
915 racy and consistency of information and
916 person-centered support across all stages of
917 the pregnancy, including the postpartum period
918 (Ordean & Kahan, 2011). Krans et al. (2018)
919 evaluated outcomes of an integrated pregnancy
920 and recovery treatment program and found that
921 women in the program were more likely than
922 those who were not to attend postpartum follow-
923 up and to continue to breastfeed during hospi-
924 talization for birth. In a large study of healthy
925 pregnant women, integrated health care was
926 associated with increased rates of breastfeeding
927 initiation (Henninger et al., 2017). However,
928 maintenance of breastfeeding fell steeply once
929 contact with the integrated care setting was dis-
930 continued, which suggested that continuing
931 support during the postpartum period and the
932 infant's first year is necessary. As such, integrated
933 care is being used in emerging models of inter-
934 vention for supporting breastfeeding among
935 women on OMT (Doerzbacher & Chang, 2019)
936 and needs further research.

937
938 Hospital-based support during and after birth
939 should be available in a calming and private
940 environment for the dyad, without separating the
941 mother and newborn. Rooming in improved
942 breastfeeding rates and reduced infant length of
943 stay and the need for pharmacologic treatment
944 for NOWS (Abrahams et al., 2007; McKnight
945 et al., 2016; Newman et al., 2015). Even if the
946 newborn requires treatment for NOWS, current
947 evidence supports keeping the mother and
948 newborn together and facilitating the mother's
949 role in the newborn's care for more positive out-
950 comes (Cleveland & Grossman, 2019). In the
951 hospital, nurses, midwives, obstetricians, and
952 pediatricians must provide evidence-based care

that includes accurate information about breast-
feeding newborns who are at risk for NOWS and
the specific needs of women on OMT.

Notably, implementing Baby-Friendly practices
has not always been successful in increasing
breastfeeding among women on OMT. For
instance, Stephen et al. (2020) found that
although breastfeeding initiation rates were in the
expected range for women on OMT in one Baby-
Friendly hospital, rates of breastfeeding at
6 months were dramatically lower compared to
those of control individuals (23% vs. 53%), which
underscored the need to better understand the
barriers and facilitators of continued breastfeed-
ing for women on OMT.

It is important to point out the similarities of our
findings to those of Jansson et al., published in
2004. They reported that women on OMT faced
barriers related to the quality of care provided by
health care professionals, lack of breastfeeding
role models, lack of social support, low self-
esteem and feelings of guilt, and a lack of edu-
cation about breastfeeding in the context of OMT.
They also described the characteristics of NOWS
that interfere with breastfeeding and interventions
that can mitigate them. It is discouraging that
since 2004, some women with OUD who are
working to remain in treatment still face these
same obstacles and fail to receive appropriate
care.

Contributions to Nursing Science

Our review adds to the science of nursing care for
women on OMT by providing evidence that
informed, sensitive, person-centered perinatal
care is essential to promote positive breastfeed-
ing outcomes for women on OMT. Women and
newborns must be cared for as dyads, and the
developing relationship between them needs to
be supported. Clinicians should be aware that
their own personal attitudes affect outcomes in
this population. We found evidence of in-
consistencies in clinical practice that should be
addressed to ensure that all women on OMT and
their newborns receive the optimal standard of
care. Some clinicians continue to be influenced
by social stigma associated with childbearing
women on OMT, and their misunderstanding of
the need for breastfeeding in this context should
be remedied through education.

Women, their life partners, and others also need
to be educated about the value of breastfeeding,
especially in the setting of OMT, and of the basic

Nurses must be prepared to provide sensitive support for women on opioid maintenance therapy to empower them to successfully breastfeed their newborns.

knowledge that it is safe and beneficial for the newborn. Lactation specialists should be designated for this group to guide breastfeeding skills, especially when there is an absence of role models available to the woman. Given that many women on OMT may also be survivors of childhood maltreatment, an individualized approach might also include attention to trauma-informed lactation support, including awareness of the effect of physical contact in lactation counseling, and providing emotionally safe spaces for survivors of trauma to process their reactions to trauma and the effects this may have on their intention to breastfeed or ability to sustain breastfeeding (Channell Doig et al., 2020).

Recommendations for Research

Recommendations for future research varied considerably among the reviewed articles, which reflects the lack of clarity in our understanding of this problem. Several authors recommended continued qualitative research to further explore the experiences of women in treatment for OUD (Cook & Larson, 2019; Graves et al., 2016; MacVicar et al., 2018; McGlothen et al., 2018; Tsai & Doan, 2016). Others recommended descriptive studies to explore health care professionals' knowledge and attitudes about breastfeeding in this population (Demirci et al., 2015; Graves et al., 2016; McGlothen et al., 2018).

Current understanding of breastfeeding among women on OMT is incomplete. We found no studies in which the authors clearly explained why so many women on OMT who intend to breastfeed stop within the first week after giving birth. The fact that most women on OMT intend to breastfeed but fail to sustain breastfeeding through the critical first week suggests specific, time-sensitive factors that prevent them from achieving their goals. Studies on how these factors converge, particularly in the early postpartum period, will add depth to our understanding so that tailored interventions may address specific barriers at the right time. There is a clear need for longitudinal studies to explore the changes in intent to breastfeed in the immediate postpartum

period, the experience of barriers to breastfeeding, and factors that are effective to support breastfeeding in specific situations.

Limitations

In this scoping review, we found a wide variety of sources of information about barriers and facilitators of breastfeeding for women on OMT, but this made analysis and synthesis challenging. Furthermore, our review did not provide an understanding of how factors converge during the immediate postpartum period, which made it difficult to identify priorities for action. Alternatively, the consistency of findings among our sources generates common themes that can be a foundation for future research and interventions.

Conclusion

Our results show that a lack of information among women, their families, and members of the health care team is the most significant barrier to successful breastfeeding in this population. Non-supportive health care system factors that do not meet the unique needs of women on OMT and their newborns are also important barriers. Alternatively, providing accurate information and adequate support from family and friends, dedicated lactation specialists, and sensitive attitudes on the part of committed health care professionals improve breastfeeding rates. Continuing education for nurses who work with this population will be necessary before specific interventions based on these findings can be developed and implemented.

Women with OUD represent a vulnerable population that needs support from nurses and other health care professionals in many areas. Breastfeeding is one activity that can promote positive physical, psychological, and social outcomes for women and their infants. So they can be successful, nurses should proactively provide them with accurate information and support.

SUPPLEMENTARY MATERIAL

Note: To access the supplementary material that accompanies this article, visit the online version of the *Journal of Obstetric, Gynecologic, & Neonatal Nursing* at <http://jognn.org> and at <https://doi.org/10.1016/j.jogn.2021.09.004>.

CONFLICT OF INTEREST

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