National Home Visiting Resource Center

Research Snapshot

FEBRUARY 2023

Home Visiting and the Opioid Crisis

Introduction

Opioid use is a critical and growing public health concern with significant negative impacts on pregnant and parenting caregivers. In 2017, 8.2 per 1,000 mothers had an opioid-related diagnosis at the time of their hospitalized delivery, a 131 percent increase from the rate in 2010. Similarly, 7.3 per 1,000 infants were born with neonatal opioid withdrawal syndrome (NOWS), an increase of 82 percent from the 2010 rate (Hirai et al., 2021). In 2019, approximately 7 percent of pregnant women reported using opioids during pregnancy; among those women, about 21 percent reported misusing opioids (Ko, 2020).

Opioid use during pregnancy is linked with a range of adverse infant outcomes (Yazdy et al., 2015), including NOWS, and often co-occurs with other substance use[i] and mental health challenges. Opioid use can also impair caregiving during infancy, a critical developmental period in which babies depend on caregivers to flourish. The rise of synthetic opioids such as fentanyl (National Institute on Drug Abuse, 2022) has been especially dangerous, largely accounting for increasing rates of drug overdose deaths.

Research suggests that home visiting can support caregivers with substance use disorders (SUDs),[ii] including opioid use disorder (OUD; Health Resources and Services Administration [HRSA], 2018). Home visitors are well positioned to identify and connect caregivers using opioids to comprehensive treatment options, help reduce caregiver stress, and support positive

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parenting practices and nurturing relationships with children. This brief summarizes the existing research to address key questions:

- What stressors do families using opioids face?
- What is home visiting's role in addressing opioid use?
- What challenges do home visitors encounter serving families using opioids?
- How can home visiting programs better reach and serve families using opioids?

Defining Terms

- **Opioids**: A family of prescribed and illegal drugs that can relieve pain, among other effects, through their activation of opioid receptors in the brain (Johns Hopkins Medicine, 2022). Opioids can be found in prescribed pain medications and in illicit drugs such as heroin.
- **Opioid use disorder**: A pattern of compulsive, prolonged opioid use without a medical purpose or at doses exceeding those needed for a medical condition. OUD is characterized by impaired control over use, craving, functional impairment, use in unsafe situations, and physical dependence. OUD can range from mild to severe; diagnosis requires meeting at least 2 out of 11 criteria (American Psychiatric Association, 2022).
- **Neonatal opioid withdrawal syndrome**: A diagnosis describing the symptoms of withdrawal from chronic opioid exposure that newborns exhibit within their first week of life; examples include irritability, high-pitched crying, decreased sleep, uncontrolled movements, feeding difficulties, vomiting, sweating, and fever (Patrick et al., 2020).
- **Substance use disorder**: A pattern of substance use characterized by impaired control, social impairment, risky use, and growing physical dependence. SUDs can pertain to alcohol and illicit or prescription drugs, including opioids. SUDs range from mild to severe; diagnosis requires meeting at least 2 out of 11 criteria (American Psychiatric Association, 2022).

What Stressors Do Families Using Opioids Face?

Opioid use is often associated with past adversity. According to Tilson (2018), two-thirds of SUDs trace back to adverse childhood experiences.[iii] Studies have found that mothers with OUD are more likely to have experienced childhood maltreatment compared to mothers who don't use opioids (Gannon et al., 2021; Isosävi et al., 2016; Smith et al., 2021). In one study of women receiving substance use treatment, 72 percent of mothers had witnessed domestic violence, and 39 percent had experienced sexual or physical maltreatment. Nearly a third had attempted suicide as children (Gannon et al., 2021).

Opioid use also typically correlates with other concerns impacting caregivers and children in various aspects of their life:

- **Caregiver pregnancy and postpartum experience.** Opioids are commonly prescribed for acute pain management during pregnancy (Yazdy et al., 2015) despite a demonstrated link between chronic opioid use and preterm labor, prolonged hospital stays, and maternal death (Association of Maternal and Child Health Programs, 2020). Medication-assisted treatment is recommended for pregnant mothers with OUD (Committee on Obstetric Practice, 2017), but few receive it, including only about one-third of those enrolled in publicly funded substance abuse treatment programs (Kitsantas et al., 2022; Martin et al., 2015). New mothers in recovery from OUD are also vulnerable to relapse due to elevated stress, postpartum depression and anxiety, and the loss of support received during pregnancy (Rizk et al., 2019).

- **Caregiver behavioral health.** Caregivers who report opioid use are significantly more likely to report use of alcohol, tobacco, and marijuana compared to caregivers who do not use opioids (Kozhimannil et al., 2017). National estimates indicate that 42 percent of parents with OUD have one or more co-occurring SUDs. Some also have co-occurring mental health challenges (Clemans-Cope et al., 2019). Research has linked opioid use to a higher prevalence of a range of mental health diagnoses, including depression, anxiety, and bipolar disorder (Kozhimannil et al., 2017; Shen et al., 2020; Whiteman et al., 2014). Approximately 20 percent of opioid-using caregivers report suicidal thoughts and behaviors (Clemans-Cope et al., 2019).

- **Child health and development.** Babies exposed to opioids in utero are more likely than babies not exposed to opioids to experience adverse birth outcomes, including preterm birth, birth defects, poor fetal growth, and NOWS (Centers for Disease Control and Prevention, 2022; Yazy et al., 2015). NOWS has also been linked to longer-term negative outcomes, including learning disabilities (Fill et al., 2018). Substance-exposed newborns can display impaired response to stress and difficulty regulating wakefulness, sleep, and distress (Pajulo et al., 2006; Patrick et al., 2020). Opioids can also be transmitted via breastmilk (Brancato & Cannizzaro, 2017; Forray et al., 2015).

- **Parent-child relationship**. OUD can impair caregivers biologically, physically, and emotionally—in turn, impeding their ability to parent (Smith et al., 2021). The use of opioids and other drugs is linked with brain changes that hinder the transition to parenting (Brancato & Cannizzaro, 2017; Rutherford & Mayes, 2019). It can also disrupt expected biological changes, such as the motivation to respond to a baby's distress and ability to control negative reactions to crying (Pajulo et al., 2006; Rutherford & Mayes, 2019; Watamura & Kim, 2015). Substance-using mothers also tend to be less sensitive and emotionally attentive than mothers who do not use substances and to display more negative feelings (Isosävi et al., 2016; Pajulo et al., 2006).

- **Family involvement in child welfare system.** Parental substance use is associated with higher risk of maltreatment and child welfare involvement (Dubowitz et al., 2011; Gardner, 2014; Kepple, 2017). Children of opioid users tend to have lower reunification rates than children of nonusers (Grella et al., 2009).

What Is Home Visiting's Role in Addressing Opioid Use?

Home visiting is not a substance use intervention, but it can play an essential role in the continuum of services for families with opioid use. For example, home visitors screen participants for risk factors, gather information to tailor services to family needs, provide education and support, encourage positive parenting practices, and make referrals and coordinate services (HRSA, 2018; National Home Visiting Resource Center [NHVRC], 2022).

> *Up to one-third of pregnant women enrolled in home visiting programs report using substances before pregnancy, with 13 percent reporting previous illicit drug use and 11 percent reporting substance use treatment in the previous year (Michalopoulos et al., 2019).*

To date, there is limited home visiting research focused on caregivers with OUD. Some studies have examined the role of home visiting on reducing substance use more generally, with most not finding a direct link (Turnbull & Osborn, 2012). Notable exceptions include a study by Barlow et al. (2015), which showed reduced substance use among American Indian and Alaska Native teen mothers enrolled in the Family Spirit program. This finding may be linked to Family Spirit's curriculum, which includes lessons on the effects of substance use and maternal coping (Haroz et al., 2019).

O'Malley et al. (2021) similarly found a reduction in substance use among mothers enrolled in the Team for Infants Exposed to Substance use (TIES) Program. The program focuses on mothers who are interested in addressing their substance use; it provides extensive training on substance use, motivational interviewing, and trauma-informed care and integrated community resources.

Research more commonly suggests that home visiting can strengthen aspects of families' lives often compromised by substance use, including parenting behaviors, caregiver mental health, and child health outcomes. Mothers enrolled in Family Connects reported less depression and less reliance on emergency department care for their children than mothers in a comparison group. This effect was strongest when their baby had a greater number of birth risks, including substance exposure in utero (Dodge et al., 2019). Enrollment in Durham Connects, an earlier version of Family Connects, has also been linked to positive parenting and community connections compared to enrollment in a control group (Dodge & Goodman, 2012). Barlow et al. (2015) found that children of the teen mothers enrolled in Family Spirit exhibited fewer behavioral and social-emotional issues; later analysis of the data by Haroz et al. (2019) found significant improvements in behavior only among children whose mothers reported prior substance use. This finding suggests that children whose mothers previously used substances experienced additional program benefits (Haroz et al., 2019).

Programs adapted to support the needs of caregivers with OUD have also been shown to strengthen parental behavior and reflectiveness—for example, thinking about how they react to stressors. Berlin et al. (2014) completed a small randomized controlled trial testing an adapted version of the Attachment and Biobehavioral Catch-Up home visiting model (Labella et al., 2021) for mothers with OUD. In this trial, mothers in residential substance use treatment who participated in the adapted program had increased levels of supportive parenting behaviors compared to mothers who did not receive the intervention (Berlin et al., 2014).

A randomized controlled trial examined the effectiveness of the Parents Under Pressure home visiting program for caregivers receiving medication-assisted treatment. Enrolled caregivers demonstrated reductions in child abuse potential, problematic parenting beliefs, and reported child behavior problems (Dawe & Harnett, 2007); Barlow et al. (2019) reported similar results in a later trial examining caregivers receiving treatment for a wider array of SUDs. Together, these studies demonstrate that home visiting can address early parenting challenges that arise in the context of parental substance use and buffer children from an array of adverse behavioral and physical health outcomes.

What Challenges Do Home Visitors Encounter Serving Families Using Opioids?

Home visitors do not consistently identify, address, or link families to supports for their use of opioids or other substances. West et al. (2021) noted that home visitors were more likely to address other sensitive issues such as mental health and intimate partner violence. In contrast, substance use was one of the issues for which home visitors were least likely to screen, refer, link to providers, or follow up. Home visitors may also miss substance use in families, sometimes for years. Among parents who screened positive for substance use in one study, only 14 percent of home visitor case notes from the first year reflected substance use concerns. That number rose to 19 percent at the end of the third consecutive year (Duggan et al., 2004).

A positive screen does not always lead to help. In one national evaluation of home visiting programs, substance use was not consistently addressed after families screened positive (Michalopoulos et al., 2019). Similarly, Kanda et al. (2022) found that home visitors were less likely to deliver content on drugs and alcohol to mothers with those identified risks than content on mental health or smoking. Home visitors who address substance use concerns may be more likely to do so directly than to refer mothers to community supports (Duggan et al., 2004).

Numerous factors may impede home visiting programs' ability to address the needs of caregivers using opioids:[iv]

- **Systemic barriers.** Home visitors lack guidance on substance use screens, their response to positive screens or other indicators, and referral options. Only 20 percent of local agencies report protocols on responding to positive screens (Michalopoulos et al., 2015). Substance use screening and referrals were not required in the 2016 redesign of the performance indicator benchmarks for awardees of the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program (Labiner-Wolfe et al., 2018). The 2021 update included them as optional measures (Maternal and Child Health Bureau, 2023).

Home visitors also report systemic barriers to families accessing services, such as location, lack of transportation, limited slots, and lack of child care (West et al., 2021). Treatment ineffectiveness is another concern. Nearly half of MIECHV home visitors in a national evaluation reported that substance abuse treatment providers were not effective (Michalopoulos et al., 2019).

- **Lack of training.** Home visitors are not always prepared to identify families with substance use needs or to refer them to community supports (NHVRC, 2017). For example, staff in one statewide program were found to receive little core training on sensitive topics such as domestic violence, substance use, and mental health (Duggan et al., 2004). Dauber et al. (2017a) found that home visitors felt less self-efficacy and more client-level barriers when addressing substance use compared to concerns like maternal depression. Less than 60 percent of MIECHV home visitors reported feeling well supported to address substance use (Duggan et al., 2018), and nearly 85 percent of home visitors reported a desire for more formal training on substance use (Dauber et al., 2017a). Training can help prepare and support home visitors while accounting for disparities in their professional and experiential backgrounds. Home visitors who are paraprofessionals, for example, may have limited clinical training to address complex behavioral health risks (Dauber et al., 2017a).

- **Caregiver nondisclosure**. Caregivers may be reluctant to discuss substance use with home visitors and fear losing custody of their children (Dauber et al., 2017a). Stigma and misperceptions surrounding opioid misuse may be especially prominent in marginalized communities (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). However, a trusting relationship with home visitors may eventually lead to greater levels of disclosure (Duggan et al., 2018).

How Can Home Visiting Programs Better Reach and Serve Families Using Opioids?

Home visitors can identify substance use, discuss concerns with caregivers, refer and connect them to appropriate community resources, and support them in reaching their goals. Five promising strategies can help home visiting programs better reach and serve families using opioids:

- Establishing clear screening and response protocols
- Using motivational interviewing to discuss concerns with families
- Researching and understanding community treatment options and barriers
- Offering warm handoff referrals
- Providing professional development opportunities to home visitors

Promising Strategy 1. Establishing Clear Screening and Response Protocols

Studies show that home visitors want standard procedures for addressing substance use with families with positive screens (see box below; Dauber et al., 2017b). The Screening, Brief Intervention, and Referral to Treatment (SBIRT) model is an evidence-based approach used to identify and refer individuals at risk of SUDs to services appropriate to their level of need. Effective use of the SBIRT model may result in linking individuals to treatment at lower levels of intensity before specialized treatment is needed (Association of Maternal and Child Health Programs, 2020; Babor et al., 2011; HRSA, 2018). Home visitors can incorporate SBIRT into screening procedures to provide standard guidance on addressing substance use concerns. The Home Visitation Enhancing Linkages Project (HELP) also provides a model to increase substance use screening and referrals (see sidebar on next page).

Home visiting agencies should establish clear protocols about mandatory child welfare reporting requirements in their state.[v] Some states differentiate substance use from its impacts on children—for example, abuse, neglect, exposure to illegal drug activity—before triggering a report. In 13 states, the use of any controlled substance that impairs parents' ability to provide adequate care triggers a mandated report. Twenty-four states and territories consider substance use during pregnancy to meet child abuse criteria (Child Welfare Information Gateway, 2020).

Potential Screening Tools and Methods

Standardized screening tools include the Used, Neglected, Cut Down, Objected Preoccupied, Emotional Discomfort (UNCOPE) tool (Campbell et al., 2005); the Cut, Annoyed, Guilty, and Eye-Adapted to Include Drugs (CAGE-AID) questionnaire (Ewing, 1984); and the Drug Use Screening Inventory (DUSI) tool (Tarter & Kiriscki, 1997). Nonstandardized methods include recognizing the signs of neonatal abstinence syndrome in infants or nonverbal indicators of substance use in parents, such as pupil restriction or decreased respiration (Hossain et al., 2020).

Promising Strategy 2. Using Motivational Interviewing to Discuss Concerns With Families

Caregivers must be ready for change to successfully engage in OUD treatment. Home visitors can apply principles from the stages of change model (see box on next page; Gutierrez & Czerny, 2018; Prochaska & Diclemente, 1986) to assess caregivers' current stage of change, alleviate concerns about stigma, and develop caregivers' perspectives on the role and impact of OUD in their lives.

Stages of Change Model

The stages of change model, also known as the transtheoretical model, includes five stages: precontemplation, contemplation, preparation, action, and maintenance. Each stage receives careful attention in relation to addiction recovery and motivational interviewing strategies (Del Rio Szupszynski & de Ávila, 2021; DiClemente, 2018). The model can build awareness and readiness to change while avoiding confrontation (Gutierrez & Czerny, 2018).

Promising Strategy 3. Researching and Understanding Community Treatment Options and Barriers

Home visitors can identify family needs and link caregivers to a continuum of services (see box on next page). Home visiting administrators can also explore, consolidate, and update staff on the array of substance use services available to families. Given the complexity of family needs surrounding OUD, SAMHSA recommends a comprehensive community treatment approach that integrates health, substance use treatment, child welfare, mental health, judicial, social services, and early learning resources (Hossain et al., 2020; HRSA, 2018). Home visits are increasingly included as part of a coordinated, interdisciplinary system of care (Stulac et al., 2019) provided by a comprehensive treatment team (HRSA, 2018). Many of these approaches have not yet been evaluated; efforts to evaluate the TIES Program are a notable exception (O'Malley et al., 2021).

Home Visitation Enhancing Linkages Project

HELP seeks to increase substance use screening and referrals through three key phases (Dauber et al., 2017b):

1. **Identify**. Home visitors use standardized, validated screening tools to capture maternal depression, substance use, and intimate partner violence.
2. **Connect**. Home visitors use motivational interviewing and case management to link clients with needed treatments.
3. **Support**. Home visitors support caregiver retention in treatment by monitoring and discussing experiences, providing practical support to resolve barriers, and addressing crises or relapse concerns (Dauber et al., 2017b).

A quasi-experimental pilot of HELP found that home visitors using the model were significantly more likely to discuss substance use during home visits than home visitors who were not implementing the model. Identification and referrals remained relatively low across treatment and comparison groups (Dauber et al., 2019).

Service Continuum for Caregivers With Opioid Use Disorder

- **Outpatient and intensive day treatment programs.** SAMSHA maintains a directory of opioid treatment programs, some of which include child-focused programming to support caregivers (SAMHSA, n.d.a).
- **Medication-assisted treatment**. Medications[vi] such as buprenorphine, naltrexone, and methadone can help prevent withdrawal and minimize cravings. SAMHSA (n.d.b) recommends methadone and buprenorphine as first-line treatments for pregnant women with OUD, alongside counseling and recovery support.
- **Inpatient and residential programs**. Many residential programs do not allow children to attend with their mothers, even though 70 percent of women entering substance use services have children (Werner et al., 2007). Allowing mothers to continue their caregiving role may motivate them to stay in treatment longer (Office of Women's Health, 2016). Wilder Research maintains a directory of residential treatment programs that accept caregivers and children (Wilder Research & Volunteers of America, 2019).

Promising Strategy 4. Offering Warm Handoff Referrals

Caregivers using opioids may encounter barriers to accessing, enrolling, or participating in referred services. Potential obstacles include lengthy waitlists, transportation issues, language barriers, complex enrollment procedures, and lack of child care (Dauber et al., 2017a). For Black and Indigenous families, the barriers may be even greater (see box below). There is limited research on how home visiting programs meet families' referral and service coordination needs. However, one study pointed to the benefit of warm handoffs accompanied by continuous support, encouragement, suggestions, interagency case review, information, and follow up (Goldberg et al., 2018).

Disparities in Accessing Medication-Assisted Treatment

Black individuals are more likely to use methadone clinics, which require daily, in-person visits, than to receive buprenorphine, a prescription medication that is less stigmatizing and demanding to use (Foundation for Opioid Response Efforts, 2021; Hansen et al., 2016). Potential reasons for the disparity include limited access to prescriptions, systemic racism, mistrust of health care professionals, concerns about the legal consequences of seeking treatment, and misperception and stigma surrounding addiction (SAMHSA, 2020).

Promising Strategy 5. Providing Professional Development Opportunities to Home Visitors

Home visitors may benefit from targeted training and coaching on a range of topics relevant to opioid use, including recognition of substance use, the neurobiology of substance use, motivational interviewing, medication-assisted treatment and other treatment options, and principles of harm reduction. Ondersma et al. (2017) found that the integration of e-modules addressing substance use concerns into home visiting was effective and did not require extensive home visitor training. An implementation evaluation of MIECHV found that home visitors who attended training on substance use were significantly more likely to discuss the topic with families than home visitors who did not attend such trainings (Duggan et al., 2018).

Conclusion

Combatting opioid use as a public health concern requires coordinated efforts by community leaders, advocates, organizations, and providers. Such efforts should account for families facing structural barriers to care and increased stigma around substance use and parenting. While not a substance use intervention per se, home visiting plays a critical role among the comprehensive supports needed by parents with OUD. Specifically, home visitors can support positive parenting behaviors and nurturing relationships with children, screen caregivers for indicators of opioid use, and link families to nearby treatment options.

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Notes

[i] This brief alternates between "substance use" and "substance abuse" depending on the language used in the cited research; however, we recognize the implication of the word "abuse" on judgment and stigma. Please see the National Institute on Drug Abuse's recommendations for terms to minimize stigma and bias when referring to addiction: https://nida.nih.gov/nidamed-medical-health-professionals/health-professions-education/words-matter-terms-to-use-avoid-when-talking-about-addiction.

[ii] There is a limited research base on home visiting and opioid use. While still a relatively small literature base, there is more information on home visiting and substance use broadly. Because opioid use is generally included within broadband descriptions of substance use—and because OUD impairments are similar to those of other SUDs—we have chosen to incorporate research on SUDs into our overview of effective methods and needs to best support caregivers with OUD.

[iii] Adverse childhood experiences, also known as ACES, is a set of 10 maltreatment and family dysfunction experiences linked with long-term disparities in health and achievement (Felitti et al., 1998).

[iv] Another possible explanation is that parents are already enrolled in substance use services when they initiate home visiting. There may be other, unmeasured factors not represented in this brief.

[v] See https://www.guttmacher.org/state-policy/explore/substance-use-during-pregnancy for an updated list of each state's policies on mandated reporting of substance use during pregnancy.

[vi] Naloxone is a behind-the-counter—that is, no prescription needed—opioid antagonist that can potentially reverse opioid overdoses. Most commonly administered as a nasal spray, naloxone can also be given as an injection into the muscle, under the skin, or intravenously (SAMHSA, 2023).

References

American Psychiatric Association. (2022). Substance-related and addictive disorders. In *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.) https://doi.org/10.1176/appi.books.9780890425787.x16_Substance_Related_Disorders

Association of Maternal and Child Health Programs. (2020). *Screening, Brief Intervention, and Referral to Treatment (SBIRT) for pregnant and postpartum women.* https://amchp.org/wp-content/uploads/2022/01/AMCHP-NASADAD-SBIRT-Issue-Brief-October-2020.pdf

Babor, T. F., McRee, B. G., Kassebaum, P. A., Grimaldi, P. L., Ahmed, K., & Bray, J. (2011). Screening, Brief Intervention, and Referral to Treatment (SBIRT): Toward a public health approach to the management of substance abuse. *FOCUS*, *9*(1), 130–148. https://doi.org/10.1176/foc.9.1.foc130

Barlow, A., Mullany, B., Neault, N., Goklish, N., Billy, T., Hastings, R., Lorenzo, S., Kee, C., Lake, K., Redmond, C., Carter, A., & Walkup, J. T. (2015). Paraprofessional-delivered home-visiting intervention for American Indian teen mothers and children: 3-year outcomes from a randomized controlled trial. *The American Journal of Psychiatry*, *172*(2), 154–162. https://doi.org/10.1176/appi.ajp.2014.14030332

Barlow, J., Sembi, S., Parsons, H., Kim, S., Petrou, S., Harnett, P., & Dawe, S. (2019). A randomized controlled trial and economic evaluation of the Parents Under Pressure program for parents in substance abuse treatment. *Drug and Alcohol Dependence*, *194*, 184–194. https://doi.org/10.1016/j.drugalcdep.2018.08.044

Berlin, L. J., Shanahan, M., & Appleyard Carmody, K. (2014). Promoting supportive parenting in new mothers with substance-use problems: A pilot randomized trial of residential treatment plus an attachment-based parenting program. *Infant Mental Health Journal*, *35*(1), 81–85. https://doi.org/10.1002/imhj.21427

Brancato, A., & Cannizzaro, C. (2017). Mothering under the influence: How perinatal drugs of abuse alter the mother-infant interaction. *Reviews in the Neurosciences*, *29*. https://doi.org/10.1515/revneuro-2017-0052

Campbell T., Hoffman N., Hoffmann T., & Gillaspy J. (2005). UNCOPE: A screen for substance dependence among state prison inmates. *The Prison Journal. 85*(1), 7–17. https://doi.org/10.1177/0032885504274287

Centers for Disease Control and Prevention (2022, November 28). *About opioid use during pregnancy*. https://www.cdc.gov/pregnancy/opioids/basics.html

Child Welfare Information Gateway. (2020). *Parental substance use as child abuse*. U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau. https://www.childwelfare.gov/pubPDFs/parentalsubstanceuse.pdf

Clemans-Cope, L., Lynch, V., Epstein, M., & Kenney, G. M. (2019). Opioid and substance use disorder and receipt of treatment among parents living with children in the United States, 2015–2017. *The Annals of Family Medicine*, *17*(3), 207–211. https://doi.org/10.1370/afm.2389

Committee on Obstetric Practice. (2017). Committee opinion no. 711: Opioid use and opioid use disorder in pregnancy. *Obstetrics & Gynecology*, *130*(2), 81–94. https://doi.org/10.1097/AOG.0000000000002235

Dauber, S., Ferayorni, F., Henderson, C., Hogue, A., Nugent, J., & Alcantara, J. (2017a). Substance use and depression in home visiting clients: Home visitor perspectives on addressing clients' needs. *Journal of Community Psychology*, *45*(3), 396–412. https://doi.org/10.1002/jcop.21855

Dauber, S., Hogue, A., Henderson, C. E., Nugent, J., & Hernandez, G. (2019). Addressing maternal depression, substance use, and intimate partner violence in home visiting: A quasi-experimental pilot test of a screen-and-refer approach. *Prevention Science: The Official Journal of the Society for Prevention Research*, *20*(8), 1233–1243. https://doi.org/10.1007/s11121-019-01045-x

Dauber, S., John, T., Hogue, A., Nugent, J., & Hernandez, G. (2017b). Development and implementation of a screen-and-refer approach to addressing maternal depression, substance use, and intimate partner violence in home visiting clients. *Children and Youth Services Review*, *81*, 157–167. https://doi.org/10.1016/j.childyouth.2017.07.021

Dawe, S., & Harnett, P. (2007). Reducing potential for child abuse among methadone-maintained parents: Results from a randomized controlled trial. *Journal of Substance Abuse Treatment*, *32*(4), 381–390. https://doi.org/10.1016/j.jsat.2006.10.003

Del Rio Szupszynski, K. P., & de Ávila, A. C. (2021). The Transtheoretical Model of Behavior Change: Prochaska and DiClemente's model. In A. Luiz Monezi Andrade, D. De Micheli, E. Aparecida da Sailva, F. Machado Lopes, B. de Oliveira Pinheiro, & R. Alecsander Reichert (Eds.), *Psychology of substance abuse: Psychotherapy, clinical management and social intervention* (pp. 205–216). Springer, Cham. https://doi.org/10.1007/978-3-030-62106-3

DiClemente, C. C. (2018). *Addiction and change, second edition: How addictions develop and addicted people recover*. Guilford Publications.

Dodge, K., & Goodman, B. (2012). *Durham Connects impact evaluation final report*. Pew Center on the States. https://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2013/durhamconnectsreportpdf.pdf

Dodge, K. A., Goodman, W. B., Bai, Y., O'Donnell, K., & Murphy, R. A. (2019). Effect of a community agency–administered nurse home visitation program on program use and maternal and infant health outcomes: A randomized clinical trial. *Journal of the American Medical Association Network Open*, *2*(11). https://doi.org/10.1001/jamanetworkopen.2019.14522

Dubowitz, H., Kim, J., Black, M. M., Weisbart, C., Semiatin, J., & Magder, L. S. (2011). Identifying children at high risk for a child maltreatment report. *Child Abuse & Neglect*, *35*(2), 96–104. https://doi.org/10.1016/j.chiabu.2010.09.003

Duggan, A., Fuddy, L., Burrell, L., Higman, S. M., McFarlane, E., Windham, A., & Sia, C. (2004). Randomized trial of a statewide home visiting program to prevent child abuse: Impact in reducing parental risk factors. *Child Abuse & Neglect*, *28*(6), 623–643. https://doi.org/10.1016/j.chiabu.2003.08.008

Duggan, A., Portilla, X. A., Filene, J. H., Crowne, S. S., Hill, C. J., Lee, H., & Knox, V. (2018). *Implementation of evidence-based early childhood home visiting: Results from the mother and infant home visiting program evaluation* (OPRE Report 2018-76A). U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation. https://www.acf.hhs.gov/sites/default/files/documents/opre/mihope_implementation_report_2018_10_26_508b.pdf

Ewing, J. A. (1984). Detecting alcoholism: The CAGE questionnaire. *Journal of the American Medical Association*, *252*, 1905–1907. https://jamanetwork.com/journals/jama/article-abstract/394693

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventive Medicine*, 14(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8

Fill, M. M. A., Miller, A. M., Wilkinson, R. H., Warren, M. D., Dunn, J. R., Schaffner, W., & Jones, T. F. (2018). Educational disabilities among children born with neonatal abstinence syndrome. *Pediatrics*, *142*(3). https://doi.org/10.1542/peds.2018-0562

Forray, A., Merry, B., Lin, H., Ruger, J. P., & Yonkers, K. A. (2015). Perinatal substance use: A prospective evaluation of abstinence and relapse. *Drug and Alcohol Dependence*, *150*, 147–155. https://doi.org/10.1016/j.drugalcdep.2015.02.027

Foundation for Opioid Response Efforts. (2021). *Promoting equity in access to opioid use disorder treatment and supports: A focus on Black communities*. https://forefdn.org/wp-content/uploads/2021/04/FORE_IssueBrief_CommunitiesofColor_FINAL.pdf

Gannon, M., Short, V., LaNoue, M., & Abatemarco, D. (2021). Prevalence of adverse childhood experiences of parenting women in drug treatment for opioid use disorder. *Community Mental Health Journal*, *57*(5), 872–879. https://doi.org/10.1007/s10597-020-00661-0

Gardner, S. (2014). *State-level policy advocacy for children affected by parental substance use.* State Policy and Advocacy Resource Center, Children and Family Futures. http://childwelfaresparc.org/wp-content/uploads/2014/08/State-Level-Policy-Advocacy-for-Children-Affected-by-Parental-Substance-Use.pdf

Glaze, L., & Maruschak, L. (2010). *Parents in prison and their minor children.* U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics Special Report. https://bjs.ojp.gov/content/pub/pdf/pptmc.pdf

Goldberg, J., Greenstone Winestone, J., Fauth, R., Colon, M., & Mingo, M. (2018). Getting to the warm hand-off: A study of home visitor referral activities. *Maternal and Child Health Journal*, 22(1) 22–32. https://doi.org/10.1007/s10995-018-2529-7

Grella, C. E., Needell, B., Shi, Y., & Hser, Y. I. (2009). Do drug treatment services predict reunification outcomes of mothers and their children in child welfare? *Journal of Substance Abuse Treatment*, *36*(3), 278–293. https://doi.org/10.1016/j.jsat.2008.06.010

Gutierrez, D., & Czerny, A. (2018). Transtheoretical Model for Change. In P. S, Lassiter & J. R. Culbreth, J. (Eds.), *Theory and practice of addiction counseling.* Sage Publications.

Guttmacher Institute. (2022). *Substance use during pregnancy.* https://www.guttmacher.org/state-policy/explore/substance-use-during-pregnancy

Hansen, H., Siegel, C., Wanderling, J., & DiRocco, D. (2016). Buprenorphine and methadone treatment for opioid dependence by income, ethnicity and race of neighborhoods in New York City. *Drug and Alcohol Dependence*, *164*, 14–21. https://doi.org/10.1016/j.drugalcdep.2016.03.028

Haroz, E. E., Ingalls, A., Kee, C., Goklish, N., Neault, N., Begay, M., & Barlow, A. (2019). Informing precision home visiting: Identifying meaningful subgroups of families who benefit most from Family Spirit. *Prevention Science*, *20*(8), 1244–1254. https://doi.org/10.1007/s11121-019-01039-9

Health Resources and Services Administration. (2018). *HRSA's home visiting program: Supporting families impacted by opioid use and neonatal abstinence syndrome, A resource for MIECHV awardees*. U.S. Department of Health and Human Services. https://mchb.hrsa.gov/sites/default/files/mchb/programs-impact/miechv-opioid-nas-resource.pdf

Hirai, A. H., Ko, J. Y., Owens, P. L., Stocks, C., & Patrick, S. W. (2021). Neonatal abstinence syndrome and maternal opioid-related diagnoses in the US, 2010–2017. *Journal of the American Medical Association*, *325*(2), 146–155. https://doi.org/10.1001/jama.2020.24991

Hossain, M., Akers, L., Grosso, P. D., Shenk, M., Cavanaugh, M., & Azur, M. (2020). *Touchpoints for addressing substance use issues in home visiting: Phase 1 final report* (OPRE Brief 2020-27). U.S. Department of Health and Human Services. Administration for Children and Families, Office of Planning, Research, and Evaluation. https://www.acf.hhs.gov/sites/default/files/documents/opre/touchpoints_final_report_march_2020_508.pdf

Isosävi, S., Flykt, M., Belt, R., Posa, T., Kuittinen, S., Puura, K., & Punamäki, R. L. (2016). Attachment representations among substance-abusing women in transition to motherhood: Implications for prenatal emotions and mother–infant interaction. *Attachment & Human Development*, *18*(4), 391–417. https://doi.org/10.1080/14616734.2016.1151904

Johns Hopkins Medicine. (2022, October 19). *Opioids*. The Johns Hopkins University, The Johns Hopkins Hospital. https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/opioids

Kanda, K., Blythe, S., Grace, R., Elcombe, E., & Kemp, L. (2022). Variations in sustained home visiting care for mothers and children experiencing adversity. *Public Health Nursing*, *39*(1), 71–81. https://doi.org/10.1111/phn.13014

Kepple, N. J. (2017). The complex nature of parental substance use: Examining past year and prior use behaviors as correlates of child maltreatment frequency. *Substance Use & Misuse*, *52*(6), 811–821. https://doi.org/10.1080/10826084.2016.1253747

Kitsantas, P., Aljoudi, S. M., Baker, K., Peppard, L., & Oh, K. M. (2022). Racial/ethnic differences in medication-assisted therapy for opioid use disorders among pregnant women in treatment facilities supported by state funds (SSRN Scholarly Paper No. 4103105). SSRN. https://doi.org/10.2139/ssrn.4103105

Ko, J. Y., D'Angelo, D. V., Haight, S. C., Morrow, B., Cox, S., Salvesen von Essen, B., Strahan, A., Harrison, L., Tevendale, H. D., Warner, L., Kroelinger, C. D, & Barfield, W. D. (2020). Vital signs: Prescription opioid pain reliever use during pregnancy — 34 U.S. Jurisdictions, 2019. *Morbidity and Mortality Weekly Report*, *69*, 897–903). https://doi.org/10.15585/mmwr.mm6928a1

Kozhimannil, K. B., Graves, A. J., Levy, R., & Patrick, S. W. (2017). Nonmedical use of prescription opioids among pregnant U.S. women. *Women's Health Issues*, *27*(3), 308–315. https://doi.org/10.1016/j.whi.2017.03.001

Labella, M. H., Eiden, R. D., Roben, C. K. P., & Dozier, M. (2021). Adapting an evidence-based home visiting intervention for mothers with opioid dependence: Modified Attachment and Biobehavioral Catch-up. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.675866

Labiner-Wolfe, J., Vladutiu, C. J., Peplinski, K., Cano, C., & Willis, D. (2018). Redesigning the Maternal, Infant and Early Childhood Home Visiting Program performance measurement system. *Maternal and Child Health Journal*, *22*(4), 467–473. https://doi.org/10.1007/s10995-018-2486-1

Martin, C. E., Longinaker, N., & Terplan, M. (2015). Recent trends in treatment admissions for prescription opioid abuse during pregnancy. *Journal of Substance Abuse Treatment*, *48*(1), 37–42. https://doi.org/10.1016/j.jsat.2014.07.007

Maternal and Child Health Bureau. (2023). *MIECHV data & continuous quality improvement*. U.S. Department of Health and Human Services, Health Resources and Services Administration. https://mchb.hrsa.gov/programs-impact/programs/home-visiting/miechv-data-continuous-quality-improvement

Michalopoulos, C., Lee, H., Duggan, A., Lundquist, E., Tso, A., Crowne, S. S., & Knox, V. (2015). *The Mother and Infant Home Visiting Program Evaluation: Early findings on the Maternal, Infant, and Early Childhood Home Visiting Program. A report to Congress* (OPRE Report 2015-11). U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation. https://files.eric.ed.gov/fulltext/ED558512.pdf

Michalopoulos, C., Crowne, S. S., Portilla, X. A., Lee, H., Filene, J. H., Duggan, A., & Knox, V. (2019). *A summary of results from the MIHOPE and MIHOPE-Strong Start studies of evidence-based home visiting* (OPRE Report 2019-09). U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation. https://www.acf.hhs.gov/opre/report/summary-results-mihope-and-mihope-strong-start-studies-evidence-based-home-visiting

National Home Visiting Resource Center. (2017, October). Helping home visitors address sensitive topics with families: An overview of three professional development initiatives. *National Home Visiting Resource Center Innovation Roundup Brief*. https://nhvrc.org/product/sensitive-topics/

National Home Visiting Resource Center. (2022). *2022 Home Visiting Yearbook*. James Bell Associates and the Urban Institute. https://nhvrc.org/yearbook/2022-yearbook/

National Institute on Drug Abuse. (2022, January 20). *Drug overdose death rates*. National Institutes of Health. https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates

Office on Women's Health. (2016). *White paper: Opioid use, misuse, and overdose in women.* U.S. Department of Health and Human Services. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf

O'Malley, D., Chiang, D. F., Siedlik, E. A., Ragon, K., Dutcher, M., & Templeton, O. (2021). A promising approach in home visiting to support families affected by maternal substance use. *Maternal and Child Health Journal*, *25*(1), 42–53. https://doi.org/10.1007/s10995-020-03015-0

Ondersma, S. J., Martin, J., Fortson, B., Whitaker, D. J., Self-Brown, S., Beatty, J., Loree, A., Bard, D., & Chaffin, M. (2017). Technology to augment early home visitation for child maltreatment prevention: A pragmatic randomized trial. *Child Maltreatment*, *22*(4), 334–343. https://doi.org/10.1177/1077559517729890

Pajulo, M., Suchman, N., Kalland, M., & Mayes, L. (2006). Enhancing the effectiveness of residential treatment for substance abusing pregnant and parenting women: Focus on maternal reflective functioning and mother-child relationship. *Infant Mental Health Journal*, *27*(5), 448–465. https://doi.org/10.1002/imhj.20100

Patrick, S. W., Barfield, W. D., Poindexter, B. B., Committee on Fetus and Newborn, Committee on Substance Use and Prevention, Cummings, J., Hand, I., Adams-Chapman, I., Aucott, S. W., Puopolo, K. M., Goldsmith, J. P., Kaufman, D., Martin, C., Mowitz, M., Gonzalez, L., Camenga, D. R., Quigley, J., Ryan, S. A., & Walker-Harding, L. (2020). Neonatal opioid withdrawal syndrome. *Pediatrics*, *146*(5), e2020029074. https://doi.org/10.1542/peds.2020-029074

Phu, T., Erhart, A., Kim, P., & Watamura, S. E. (2020). *Two open windows: Part II-new research on infant and caregiver neurobiologic change.* Ascend at the Aspen Institute. https://ascend-resources.aspeninstitute.org/resources/two-open-windows-part-ii-new-research-on-infant-and-caregiver-neurobiologic-change

Prochaska, J. O., & Diclemente, C. C. (1986). Toward a comprehensive model of change. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors: Processes of change* (pp. 3–27). Springer US. https://doi.org/10.1007/978-1-4613-2191-0_1

Rizk, A. H., Simonsen, S. E., Roberts, L., Taylor-Swanson, L., Lemoine, J. B., & Smid, M. (2019). Maternity care for pregnant women with opioid use disorder: A review. *Journal of Midwifery & Women's Health*, *64*(5), 532–544. https://doi.org/10.1111/jmwh.13019

Rutherford, H. J. V., & Mayes, L. C. (2019). Parenting stress: A novel mechanism of addiction vulnerability. *Neurobiology of Stress*, *11*. https://doi.org/10.1016/j.ynstr.2019.100172

Shen, Y., Lo-Ciganic, W. H., Segal, R., & Goodin, A. J. (2020). Prevalence of substance use disorder and psychiatric comorbidity burden among pregnant women with opioid use disorder in a large administrative database, 2009–2014. *Journal of Psychosomatic Obstetrics & Gynecology*, 1–7. https://doi.org/10.1080/0167482X.2020.1727882

Smith, J. C., Alderman, L., Attell, B. K., Avila Rodriguez, W., Covington, J., Manteuffel, B., DiGirolamo, A. M., Snyder, S. M., & Minyard, K. (2021). Dynamics of parental opioid use and children's health and well-being: An integrative systems mapping approach. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.687641

Stulac, S., Bair-Merritt, M., Wachman, E. M., Augustyn, M., Howard, C., Madoor, N., & Costello, E. (2019). Children and families of the opioid epidemic: Under the radar. *Current Problems in Pediatric and Adolescent Health Care*, *49*(8). https://doi.org/10.1016/j.cppeds.2019.07.002

Substance Abuse and Mental Health Services Administration. (2023, January 25). *Medications for substance use disorders*. U.S. Department of Health and Human Services. https://www.samhsa.gov/medications-substance-use-disorders

Substance Abuse and Mental Health Services Administration. (2020). *The opioid crisis and the Black/African American population: An urgent issue* (Publication No. PEP20-05-02-001). U.S. Department of Health and Human Services, Office of Behavioral Health Equity. https://store.samhsa.gov/sites/default/files/pep20-05-02-001.pdf

Substance Abuse and Mental Health Services Administration (n.d.a) *Opioid treatment program directory*. U.S. Department of Health and Human Services. https://dpt2.samhsa.gov/treatment/directory.aspx

Substance Abuse and Mental Health Services Administration (n.d.b) *Opioid use disorder and pregnancy*: *Taking helpful steps for a healthy pregnancy*. U.S. Department of Health and Human Services. https://store.samhsa.gov/sites/default/files/d7/priv/sma18-5071fs1.pdf

Tarter, R., & Kirisci, L. (1997). The Drug Use Screening Inventory for adults: Psychometric structure and discriminative sensitivity. *American Journal of Drug and Alcohol Abuse*, *23*, 207–219. https://doi.org/10.3109/00952999709040942

Tilson, E. C. (2018). Adverse childhood experiences (ACEs): An important element of a comprehensive approach to the opioid crisis. *North Carolina Medical Journal*, *79*(3), 166–169. https://doi.org/10.18043/ncm.79.3.166

Turnbull, C., & Osborn, D. A. (2012). Home visits during pregnancy and after birth for women with an alcohol or drug problem. *The Cochrane Database of Systematic Reviews*, *2012*(1). https://doi.org/10.1002/14651858.CD004456.pub3

Watamura, S. E., & Kim, P. (2015). *Two open windows: Infant and parent neurobiologic change.* Ascend at the Aspen Institute. https://ascend-resources.aspeninstitute.org/resources/two-open-windows-infant-and-parent-neurobiologic-change-2

Werner, D., Young, N. K., Dennis, K., & Amatetti, S. (2007). *Family-centered treatment for women with substance use disorders – History, key elements and challenges.* U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/sites/default/files/family_treatment_paper508v.pdf

West, A., Duggan, A., Gruss, K., & Minkovitz, C. (2021). Service coordination to address maternal mental health, partner violence, and substance use: Findings from a national survey of home visiting programs. *Prevention Science*, *22*(5), 633–644. https://doi.org/10.1007/s11121-021-01232-9

Whiteman, V. E., Salemi, J. L., Mogos, M. F., Cain, M. A., Aliyu, M. H., & Salihu, H. M. (2014). Maternal opioid drug use during pregnancy and its impact on perinatal morbidity, mortality, and the costs of medical care in the United States. *Journal of Pregnancy*, *2014*, 1–8. https://doi.org/10.1155/2014/906723

Wilder Research and Volunteers of America (2019). *Family-based residential treatment: Directory of residential substance use disorder treatment programs for parents with children*. https://voa-production.s3.amazonaws.com/uploads/pdf_file/file/2933/Wilder_VOA_directory_2019_7-12_MWS_edit__1_.pdf

Yazdy, M. M., Desai, R. J., & Brogly, S. B. (2015). Prescription opioids in pregnancy and birth outcomes: A review of the literature. *Journal of Pediatric Genetics*, *4*(2), 56–70. https://doi.org/10.1055/s-0035-1556740