



Policy Matters

Federal and State Policy Efforts to Address Maternal Opioid Misuse: Gaps and Challenges



Jennifer B. Saunders, MSW^{a,*}, Marian P. Jarlenski, MPH, PhD^b, Robert Levy, MD^c,
 Katy B. Kozhimannil, MPA, PhD^a

^a Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, Minnesota

^b Department of Health Policy and Management, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania

^c Department of Family Medicine and Community Health, School of Medicine, University of Minnesota, Minneapolis, Minnesota

Article history: Received 7 April 2017; Received in revised form 16 October 2017; Accepted 19 October 2017

ABSTRACT

Background: Opioid misuse during pregnancy is increasingly common and is associated with preterm birth and neonatal abstinence syndrome. As such, there is increased policy attention on reducing opioid misuse and increasing detection and treatment of opioid use disorder around the time of childbirth.

Methods: We conducted a review of peer-reviewed and grey literature to identify policy strategies to address opioid misuse among pregnant women; to describe current federal and state laws that impact women before pregnancy, during pregnancy, at birth, and postpartum; and to identify gaps and challenges related to these efforts.

Results: We identify two gaps in current efforts: 1) limited attention to prevention of opioid misuse among reproductive-age women, and 2) lack of policies addressing opioid misuse among postpartum women. We also discuss barriers to accessing care for women who misuse opioids, including provider shortages (e.g., too few addiction medicine specialists accept pregnant women or Medicaid beneficiaries as patients), logistical barriers (e.g., lack of transportation, child care), stigma, and fear of legal consequences.

Conclusions: As policymakers pursue strategies to address the opioid epidemic, the unique needs of pregnant and postpartum women and barriers to treatment should be addressed.

© 2017 Jacobs Institute of Women's Health. Published by Elsevier Inc.

Opioid misuse—using opioid pain medicine not as prescribed or for the feeling it causes—has spurred a deadly epidemic, with overdose deaths and opioid use disorder rates rapidly increasing (Association of State and Territorial Health Officials, 2014a; Rudd, Aleshire, Zibbell, & Gladden, 2016). As more women have misused prescription or illicit opioids, the numbers of pregnant women

misusing opioids and infants exposed to opioids prenatally have increased (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016). Opioid use during pregnancy is associated with risks to the woman and infant, including preterm birth and neonatal abstinence syndrome (NAS)—a condition occurring when an infant shows signs of withdrawal from substances ingested by the woman (Dowell, Haegerich, & Chou, 2016; Hudak, Tan, The Committee on Drugs, & The Committee on the Fetus and Newborn, 2012). Nationally, 78% of newborns with NAS—who often require longer, complex, and costly care—and 60% of women who gave birth to infants with NAS have Medicaid coverage (Patrick et al., 2012). Only one-fifth of individuals with an opioid use disorder receive any treatment, further driving health care, law enforcement, and social services costs (Angelotta, Weiss, Angelotta, & Friedman, 2016; Jones et al., 2010; Wall et al., 2000). Policymakers have a stake in reducing the consequences of the opioid epidemic, especially given the role of public financing for these costs (Association of State and Territorial Health Officials, 2014a; Government Accountability Office, 2015; Hoback, 2016).

Funding Statement: This research was supported in part by a Faculty Seed Grant to Dr. Kozhimannil and Dr. Levy from the University of Minnesota Academic Health Center. Dr. Jarlenski was supported by the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) Program (K12 HD043441). The funder had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; or the decision to submit the manuscript for publication. The content is solely the responsibility of the authors and does not represent the official views of any funding organizations.

* Correspondence to: Jennifer B. Saunders, MSW, Division of Health Policy and Management, School of Public Health, University of Minnesota-Twin Cities, 420 Delaware St. SE, Minneapolis, MN 55455. Phone: (612) 624-6669; fax: (612) 626-6931.

E-mail address: saunder252@umn.edu (J.B. Saunders).

Effective clinical and policy efforts may reduce opioid misuse during pregnancy through prevention, early identification of misuse, or increased access to treatment and support services (Krans & Patrick, 2016). Opioid misuse is an especially challenging policy issue because it requires coordination of efforts across public health, health care, criminal justice, drug enforcement, and social services (Hoback, 2016). Challenges faced by women in accessing health care and other services are amplified around the time of pregnancy, and may be complicated by stigma, fear of judgment, and competing demands from their family, health, or employment. Policymakers have prioritized designing and implementing policies to address the opioid epidemic, generally, but whether and how these policies address the needs of pregnant and reproductive-age women is not known. We conducted a review of literature and policies with three goals: 1) to identify current policy strategies used to address opioid misuse among pregnant women, 2) to summarize the current landscape of federal and state laws impacting this population, and 3) to identify policy gaps and implementation challenges related to these efforts.

Methods

We reviewed the published literature and grey literature to identify policy strategies and federal and state policy examples regarding opioid misuse among pregnant women. Definitions of opioid misuse are often inconsistent; we define opioid misuse to include the nonmedical use of a prescribed opioid medication (e.g., use for the feeling it causes), use of illicit opioids (e.g., heroin), and clinical diagnoses of opioid use disorder (Volkow & McLellan, 2016). The peer-reviewed literature search was conducted using Ovid MEDLINE with expanded terms related to policy (i.e., “policy,” “health policy,” “policy making,” “public policy,” “United States Office of National Drug Control Policy,” or “social control, formal”), pregnancy (i.e., “pregnancy,” “prenatal care,” “maternal-fetal relations,” “pregnant women,” “pregnancy outcome,” “maternal-fetal exchange,” or “abnormalities, drug-induced”), drugs (i.e., “street drugs,” “nonprescription drugs,” and “substance-related disorders”), and the “United States” for articles between 1946 and May 2016, and limited to English language and humans, resulting in 442 articles. Results were further limited to the 25 articles specific to opioids, buprenorphine, or methadone. A second, narrow search was conducted with the same policy and pregnancy-related terms, but with opioid-specific expanded terms (i.e., “prescription drugs,” and “analgesics, opioid,” “opioid-related disorders,” or “opioid”), resulting in 2 additional, nonduplicated articles. We reviewed 21 article abstracts published after 2000 for policy relevance; articles were included in the analysis if they described state- or federal-level efforts to address opioid misuse among pregnant women, including barriers to accessing care.

We used the Google search engine between May and September 2016 to identify grey literature—non-peer-reviewed reports, government documents, and online publications—that summarized state or federal policy related to opioid misuse among pregnant women. We identified federal and state government entities and related professional organizations with a direct interest in this issue (i.e., state governors, legislators, health officials; federal executive branch agencies; and a nonpartisan congressional agency) and searched for their publications using the following terms: “National Governors Association,” “National Conference of State Legislatures,” “Association of State and Territorial Health Officials,” “White House,” “Centers

for Disease Control and Prevention,” “Substance Abuse and Mental Health Services Administration,” and “Government Accountability Office,” in combination with “policy,” “opioid,” and “pregnant women,” resulting in approximately 7,000 to 3 million hits per search. Each entity’s website was also searched to ensure that all recent, relevant publications were captured. Executive summaries or introductions of documents were reviewed for relevance to state and/or federal approaches to addressing pregnant women who use opioids, including “best practices,” policy options, or promising and innovative models. Cited sources in reports and articles from these searches provided five additional publications for analysis.

A SAMHSA report we identified in the grey literature provided a framework that we used to characterize current state and federal opioid-related policies impacting women around the time of childbirth. SAMHSA’s framework identified five major time periods during which interventions can reduce the impacts of substance exposure among infants and assist pregnant women with opioid use disorder: before pregnancy, during pregnancy, at birth, during infancy, and throughout childhood (Association of State and Territorial Health Officials, 2014a; SAMHSA, 2016; Young et al., 2009). This 2016 framework updated the original 2009 version, which was developed in collaboration with the National Center on Substance Abuse and Child Welfare and the Administration on Children, Youth and Families to characterize interventions for reducing the impact of exposure to substances among infants (SAMHSA, 2016; Young et al., 2009). We selected this framework to guide our analysis because it offers a lifecourse perspective centering around the time of childbirth, and lends a useful structure for recognizing areas with weak support for pregnant and postpartum women who misuse opioids. In addition, policy efforts on this issue often fall into two domains: 1) public health and safety efforts to prevent or reduce opioid misuse, or 2) health care delivery system efforts to promote access to opioid use disorder treatment for women before or during pregnancy, or to treat opioid-exposed infants, and we characterized policies into these two domains for our analysis (Murphy et al., 2016). Table 1 provides a summary of general policy strategies for addressing opioid misuse around the time of childbirth identified in our literature review and specific examples of federal and state policies within these categories. We also identified gaps in current efforts and barriers to successful policy implementation.

Federal Policy Efforts

The executive branch and congressional efforts regarding opioid misuse among women around the time of childbirth that we identified are summarized in Table 1. Strategies to address opioid misuse before pregnancy are efforts for the general population that also happen to include reproductive-age women. One exception is the Centers for Disease Control and Prevention’s campaign that encourages providers to discuss patient’s pregnancy status and contraceptive use when prescribing opioids, which is important because 86% of pregnancies are unintended among women who misuse opioids (Finer & Zolna, 2016; Gallagher, Shin, & Roohan, 2016; Heil et al., 2011). The federal efforts we identified range from establishing best practices (e.g., SAMHSA’s reports) to improving treatment access, authorizing grants to states, and requiring the U.S. Department of Health and Human Services (HHS) to address research or program gaps (e.g., Comprehensive Addiction and Recovery Act of 2016, Protecting Our Infants Act of 2015, and the 21st Century Cures Act of 2016;

Table 1
General Policy Strategies and Specific Federal and State Policies*

Strategy	Example(s) of Policies to Address Opioid Misuse	Type of Policy Example	
		Federal	State
Before pregnancy/reproductive age			
Increase awareness among clinicians and women of reproductive age about opioid misuse	The CDC developed a campaign to increase awareness among clinicians and women of reproductive age about the potential harms that may result from using prescription opioids during pregnancy (CDC, 2015).	†	
During pregnancy			
Develop treatment guidelines for prescribing opioids during pregnancy	Pennsylvania and the state's medical society developed guidelines for pain management and the use of opioids during pregnancy and after delivery (Commonwealth of Pennsylvania and the Pennsylvania Medical Society, 2016).	†	†
Promote early identification of women who use substances, including opioids, during or before pregnancy	In 2007 and 2008, CMS added procedure codes to Medicaid to allow health care providers, including obstetricians, to be reimbursed for a structured assessment of alcohol and drug use, and brief intervention (Association of State and Territorial Health Officials, 2015; O'Brien & Phillips, 2011). Since then, at least 20 states have added these codes to permit providers to obtain such reimbursements (O'Brien & Phillips, 2011). The ACOG recommends routine universal screening using a validated questionnaire before and throughout pregnancy (American College of Obstetricians and Gynecologists Committee on Ethics, 2015).	†	†
Develop treatment guidelines and best practices for pregnant women who misuse opioids or have an opioid use disorder	SAMHSA's <i>Advancing the Care of Pregnant and Parenting Women with Opioid Use Disorder and their Infants: A Foundation for Clinical Guidance</i> was developed by a steering committee of experts and researchers, and provides a clinical guide for health care providers for treating women with opioid use disorder and infants exposed to opioids (Request for Comment on Report Entitled: <i>Advancing the Care of Pregnant and Parenting Women With Opioid Use Disorder and Their Infants: A Foundation for Clinical Guidance</i> , 2016). POIA directed HHS to develop recommendations for preventing and treating opioid use disorders among pregnant women and the effects of opioid use disorder on infants; the recommendations were anticipated in May 2016, but have not yet been published (Protecting Our Infants Act of 2015, Public Law 114-91, 114th Cong., 2015). National professional organizations (e.g., ACOG, ASAM) have also developed clinical guidelines and recommendations regarding opioid misuse during pregnancy and neonatal withdrawal (American Congress of Obstetricians and Gynecologists, n.d.-b; American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women, American Society of Addiction Medicine, 2012; Hudak et al., 2012; Kampman & Jarvis, 2015; American College of Obstetricians and Gynecologists Committee on Ethics, 2015).	†	
Develop guidelines and best practices for child welfare and other service providers who serve pregnant women who misuse opioids	The SAMHSA report, <i>A Collaborative Approach to the Treatment of Pregnant Women with Opioid Use Disorders: Practice and Policy Considerations for Child Welfare and Collaborating Service Providers</i> , promotes a collaborative approach across agencies—including child welfare, health care, substance use treatment, and others—to identify, treat, and assist pregnant and postpartum women who use opioids and their infants (National Center on Substance Abuse and Child Welfare, n.d.).	‡	
Increase access to treatment, and provide family-based services (e.g., individual, group, and family counseling and follow-up services) for pregnant and postpartum women	CARA established a pilot program of grants to states to provide family-based services (e.g., individual, group, and family counseling and follow-up services) for pregnant and postpartum women who have an opioid or other substance use disorder; the act authorizes up to \$4 million annually for fiscal 2016 to fiscal 2020 for the pilot program (National Association of State Alcohol and Drug Abuse Directors, Inc., 2016; Comprehensive Addiction and Recovery Act of 2016 (CARA), S. 524, 114th Cong., 2016). Under the law, the state programs must, at a minimum, provide individual, group, and family counseling, and follow-up services to prevent relapse, but may also offer additional services, such as prenatal and postpartum health care, employment counseling, and case management (National Association of State Alcohol and Drug Abuse Directors, Inc., 2016). The 21st Century Cures Act (Public Law 114-255, 114th Cong., 2016) authorized \$1 billion over two years for states to improve access to treatment and other efforts to address the opioid epidemic (21st Century Cures Act, Public Law 114-255, 114th Cong., 2016).	†	
Increase access to treatment by providing pregnant women with priority access to services and specify that treatment providers cannot refuse serving pregnant women if the services are appropriate	Among several provisions to address the opiate epidemic in the state, Kentucky Senate Bill 192 of 2015 specifies that substance use disorder treatment or recovery service providers that receive state funds must give pregnant women priority access to substance use disorder treatment services and cannot refuse serving pregnant women if the services are appropriate (KY S. 192, Chapter 66, 2015).		†
Integrate opioid use disorder treatment and mental health treatment into primary care, and/or provide wraparound services	Ohio's Department of Mental Health and Addiction Services created a pilot program in 2013—Maternal Opiate Medical Support—to provide women with children who are eligible for Medicaid with addiction counseling and treatment, care coordination, and wraparound services, such as assistance with housing (Association of State and Territorial Health Officials, 2014b). Vermont has made efforts to increase screening for opioid misuse and to increase access to medication-assisted treatment by having buprenorphine prescribers working with nurses and behavioral health and mental health counselors to allow patients to receive services within their communities under the state's Medicaid Health Home Program (Association of State and Territorial Health Officials, 2014a).		†

(continued on next page)

Table 1 (continued)

Strategy	Example(s) of Policies to Address Opioid Misuse	Type of Policy Example	
		Federal	State
Deter opioid misuse among pregnant women by criminalizing opioid use during pregnancy	<p>The Dartmouth-Hitchcock Medical Center Perinatal Addiction Treatment Program was developed in 2013 to serve pregnant and postpartum women seeking substance use treatment—primarily for opioid use disorder—in New Hampshire and Vermont (Goodman, 2015). The program offers midwifery care co-located with an addiction treatment program to allow for coordination of care across providers and to reduce barriers to treatment for pregnant and postpartum women (Goodman, 2015).</p> <p>In 2014, Tennessee enacted Senate Bill 1391 (Tenn. Pub. Chap. No. 820, 108th General Assembly) to allow for the prosecution of a woman for using an illegal substance while pregnant that results in her child being “born addicted to or harmed by” the drug (Guttmacher Institute, 2016; Tenn. Gen. Assemb. S. 1391, 2014). (The law was not renewed in 2016 and is no longer in effect.)</p> <p>In Alabama and South Carolina, laws pertaining to child endangerment and chemical endangerment have been interpreted to allow prosecution of women using substances during pregnancy (Guttmacher Institute, 2016; Miranda et al., 2015).</p> <p>In several states, prenatal drug use is grounds for the termination of parental rights (Guttmacher Institute, 2016).</p>		†
Allow civil commitment, such as inpatient treatment programs, for pregnant women who misuse substances	Minnesota, South Dakota, and Wisconsin allow civil commitment, such as inpatient treatment programs, for pregnant women who misuse substances, including opioids (Miranda et al., 2015).		†
At birth			
Develop best practices and guidelines for treating infants exposed to substances/infants with NAS	<p>Clinicians and stakeholders (including state health department staff and the Title V maternal and child health director) in Maine voluntarily convened to develop a comprehensive guide for health care providers to care for drug-exposed infants during pregnancy through the first year of life after they identified that there was significant variation in treatment across the state (Association of State and Territorial Health Officials, 2013). The Snuggle ME Project released final guidelines in 2013 and provided trainings on screening for newborns exposed to substances, treatment, and care coordination (Association of State and Territorial Health Officials, 2013).</p> <p>A 2012 AAP clinical report provides information about the clinical presentation and treatment options for infants with NAS (Hudak et al., 2012).</p> <p>In 2012, the VON, a nonprofit organization, launched quality improvement initiatives focused on NAS; VON currently partners with states and regions to promote a standardized universal NAS curriculum for health care providers that work with substance-exposed infants (Association of State and Territorial Health Officials, 2015). In 2015, 5 state quality improvement collaboratives participated in partnerships with VON: Alaska, Massachusetts, Michigan, New Hampshire/Vermont, and Wisconsin (Association of State and Territorial Health Officials, 2015).</p> <p>CARA directs the GAO to report on the best practices for treating infants with NAS (Comprehensive Addiction and Recovery Act of 2016 (CARA), S. 524, 114th Cong., 2016).</p>	†	†
Bolster data collection on the incidence of NAS	<p>Ohio's legislature addressed the misuse of prescription opioids and the state's rise in NAS cases by enacting House Bill 315 in 2014, which requires hospitals to report cases of newborns “diagnosed as opioid dependent at birth” to the state's Department of Health (Ohio Gen. Assemb. H. 315, 2014).</p> <p>Tennessee's state health commissioner improved the state's surveillance efforts of NAS by making NAS a reportable condition in 2013 and used the data to understand trends in Medicaid claims regarding pregnant women who misuse opioids and NAS (Association of State and Territorial Health Officials, 2014a).</p> <p>POIA directs HHS to continue to provide technical assistance to states to improve data collection and surveillance of NAS, and to promote information dissemination to the public and health care providers on prenatal opioid use and NAS (Protecting Our Infants Act of 2015, Public Law 114-91, 114th Cong., 2015).</p> <p>CARA directs the GAO to report on the prevalence of NAS (Comprehensive Addiction and Recovery Act of 2016 (CARA), S. 524, 114th Cong., 2016).</p>	†	†
Require health care providers to notify child protection systems when they identify a newborn affected by withdrawal symptoms or substance use	<p>CARA amends CAPTA and KCFSA, and requires states to establish policies and procedures for infants affected by substance use as a condition for eligibility of receiving federal child abuse prevention grants (Children's Bureau, Administration for Children and Families, 2003; Association of State and Territorial Health Officials, 2014a). CARA also specifies that a plan of safe care for an infant “identified as being affected by substance abuse or withdrawal symptoms” should address the health and substance use disorder treatment needs of the infant's family or caregivers (Comprehensive Addiction and Recovery Act of 2016 (CARA), S. 524, 114th Cong., 2016).</p>	†	

Abbreviations: AAP, American Academy of Pediatrics; ACOG, American College of Obstetricians and Gynecologists; ASAM, American Society for Addiction Medicine; CAPTA, Child Abuse Prevention and Treatment Act; CARA, Comprehensive Addiction and Recovery Act; CDC, Centers for Disease Control and Prevention; CMS, Centers for Medicare and Medicaid Services; GAO, Government Accountability Office; HHS, U.S. Department of Health and Human Services; KCFSA, Keeping Children and Families Safe Act; NAS, neonatal abstinence syndrome; POIA, Protecting Our Infants Act; SAMHSA, Substance Abuse and Mental Health Services Administration; VON, Vermont Oxford Network.

* This table summarizes the authors' analysis of peer-reviewed and grey literature, identifying general strategies and specific examples of state and federal policy efforts related to opioid misuse among women of reproductive age, during pregnancy, at childbirth, and after birth 2000–2016.

† Health care delivery system intervention.

‡ Public health and safety intervention.

Enomoto, 2016). Federal laws also require health care providers to notify child protection service systems to address the needs of “infants born with and identified as being affected by substance abuse or withdrawal symptoms resulting from prenatal drug exposure” (*Comprehensive Addiction and Recovery Act of 2016 (CARA)*, S. 524, 114th Cong., 2016).

State Policy Efforts

State policymakers have made broad efforts to address the opioid epidemic at the public health and safety level (e.g., prescription drug monitoring programs) and the health care system level (e.g., efforts to expand health insurance coverage for substance use disorder treatment; Murphy, et al., 2016). Legislatures, governors, and state agencies have also taken specific steps to combat increasing trends in opioid misuse among pregnant women and NAS (Hoback, 2016). The strategies and policies we identified in the literature, summarized in Table 1, improve access or reduce barriers to treatment or services, and integrate opioid use disorder treatment into primary care (Association of State and Territorial Health Officials, 2014a; Association of State and Territorial Health Officials, 2014b; Goodman, 2015; KY S. 192, Chapter 66, 2015). A key tool for policymakers to address the opioid epidemic has been changes to state Medicaid coverage and payment policies, and some efforts specifically targeted pregnant women (see Table 1 for examples; Bachrach, Boozang, & Lipson, 2016; Bernstein & Minor, 2017). State agencies and medical professional associations have co-developed recommendations and guidelines regarding pain management during pregnancy, opioid use disorder treatment among pregnant and postpartum women, and treatment for NAS; and some states have bolstered their data systems to document cases of NAS (Association of State and Territorial Health Officials, 2013; Association of State and Territorial Health Officials, 2014a; Association of State and Territorial Health Officials, 2015; Commonwealth of Pennsylvania and the Pennsylvania Medical Society, 2016; Ohio Gen. Assemb. H. 315, 2014). In contrast with prevention and treatment strategies, some states have instituted criminal or child welfare-related laws (Gutmacher Institute, 2016; Jarlenski, et al., 2017; Miranda, Dixon, & Reyes, 2015).

Gaps in Policy

This review of current federal and state policies reveals two important gaps: 1) few policies focus on prevention of opioid misuse among reproductive-age women, and 2) policies targeted to postpartum women who misuse opioids are lacking.

The first missed opportunity is a lack of attention to reproductive-age women within efforts to prevent opioid misuse despite considerable investment by policymakers. Prescription drug misuse is increasing among women owing to higher rates of risk factors than men, including biological differences (e.g., vulnerability to the reinforcing effects of opiates), mental health issues, and physical, emotional, or sexual abuse (Green et al., 2009). Women are also more frequently prescribed medications that have potential for misuse (Green et al., 2009; Lynch, Roth, & Carroll, 2002).

Additionally, few policies target the postpartum period, yet women continue to need support and services to maintain healthy behaviors and prevent relapse as they face barriers to accessing treatment, which are further described elsewhere in this article. Clear recommendations for managing pain after childbirth among women with past or current opioid misuse are also lacking.

Challenges to Successful Policy Implementation

Effectively implementing policies to address opioid misuse among pregnant women can be difficult owing to the 1) systemic, inherent challenges of policymaking on controversial, complex topics, and 2) barriers faced by pregnant women in accessing existing resources.

First, policymakers face political, ethical, administrative, and financial challenges in developing, enacting, and implementing effective policies given the political context, inadequate research to inform decisions, and limited resources (Atkins, Siegel, & Slutsky, 2005). Policymakers must choose whether to prioritize preventive public health efforts or health care treatment strategies; to concentrate resources on broad efforts for all opioid users or specific efforts for vulnerable subpopulations (e.g., pregnant women); or to favor deterrents to drug use and consequences for traffickers or to promote treatment and care-seeking.

A separate but related issue is the belief that opioid misuse is a matter of personal responsibility rather than a medical condition (Kennedy-Hendricks, McGinty, & Barry, 2016). In this view, public spending for prevention and treatment is unwarranted, and policy efforts emphasize criminalizing opioid misuse among pregnant women (Kennedy-Hendricks et al., 2016). Even without consensus about the best approach, there is widespread bipartisan attention to the problem and a willingness to seek solutions, especially given substantial constituent support for opioid-related policies (Barry et al., 2016; Blendon, McMurtry, Benson, & Sayde, 2016). Numerous policies have recently been enacted, but the need to quickly respond to the epidemic has led to inadequate implementation planning, programs without adequate resources, insufficient funding, and a lack of enforcement provisions.

Second, within this complex policy environment, women face barriers to accessing existing programs or services. Pregnant women face substantial stigma at substance use disorder treatment facilities or prenatal care visits because of potential risk of harm to the fetus and questions about their parenting capacity (Goodman, 2015; Terplan, Kennedy-Hendricks, & Chisolm, 2015). Policies requiring mandatory reporting of nonmedical substance use by pregnant women, as well as punitive measures, may contribute to the stigma and fear that women experience, and result in avoidance or delay of care as they try to cease substance use, or concealment of substance use from their providers (American College of Obstetricians and Gynecologists Committee on Ethics, 2015; Kremer & Arora, 2015).

Providers may be reluctant to screen or make referrals to treatment owing to inadequate time, the many other diseases and conditions that must be screened for, personal beliefs and attitudes about substance use, inadequate training, lack of knowledge about community treatment options, or the belief that their practice does not serve women who misuse substances (Wright et al., 2016). Health care providers who treat reproductive-age women also face barriers to screening for opioid use disorder and providing treatment referrals, including a lack of time and knowledge about treatment options, lack of specialized training, and not being authorized to prescribe specific treatments (Friedmann, McCullough, & Saitz, 2001; Harris & Yu, 2016). Furthermore, reproductive-age women with opioid use disorder are often treated by psychiatrists, who may be unlikely to discuss contraception use (Blehar & Oren, 1995; Mittal et al., 2015). Women need improved health care delivery models that integrate behavioral health and reproductive and

maternity care to meet their comprehensive health care needs (Poleshuck & Woods, 2014).

Many women must juggle employment and childcare responsibilities with time required to access treatment (Goodman, 2015). Most inpatient treatment programs do not allow women to bring children; rare programs that do have very limited capacity (American Congress of Obstetricians and Gynecologists, n.d.-a). Women also report difficulty finding treatment programs that accept pregnant patients or Medicaid beneficiaries (Angelotta et al., 2016; Goodman, 2015). Furthermore, different treatment regimens pose varying access challenges; methadone, a highly controlled substance, must be administered in a clinic, requiring frequent office visits (Kremer & Arora, 2015).

Limitations

We analyzed the published literature and grey literature to characterize federal and state policies regarding opioid misuse among pregnant and postpartum women, identify gaps in these efforts, and identify challenges in developing and implementing policies specific to this population. This analysis, however, has several limitations, including 1) a narrow scope of policy-focused literature included in the analysis, 2) a limited review of federal and state statutes, and 3) exclusion of state-specific reports or documents, state Medicaid and Medicaid managed care plans, and federal, state, county, or local budgets from the review. A systematic and comprehensive review of state-by-state legislation, statutes, administrative rules, Medicaid state plans and amendments, and federal rules and statutes would provide a fuller analysis of policies and treatment barriers specific to pregnant and postpartum women.

Implications for Policy and/or Practice

Policy makers may wish to address the missed opportunities and gaps identified above by 1) expanding innovative treatment models, 2) improving cross-agency coordination, and 3) leveraging existing policy efforts to specifically target the needs of pregnant and postpartum women. These implications are drawn from the evidence we reviewed and may directly address the gaps identified. First, efforts to improve care for pregnant women who use opioids, such as wrap-around services (e.g., mental health counseling, nutrition, social service referrals) and programs to integrate treatment with primary care could be developed or expanded to increase availability within communities (Association of State and Territorial Health Officials, 2014a). Community support services for pregnant and postpartum women (e.g., city and county services, community health workers) must be coordinated with clinical care to address housing, employment, education, and childcare barriers to support sustained treatment and recovery (SAMHSA, 2016). Second, a 2015 Government Accountability Office report recommended improved coordination across federal agencies, such as by appointing a specific HHS agency or division to lead and coordinate efforts across agencies (Government Accountability Office, 2015). Third, the bipartisan support and momentum for addressing the opioid epidemic can be leveraged to eliminate barriers faced by pregnant women. In 2016, for example, an HHS rule change increased access to buprenorphine by allowing approved practitioners to treat up to 275 patients—the previous cap was 100 patients (Medication assisted treatment for opioid use disorders (42 CFR Part 8; Final Rule), 2016). Increasing the number and capacity of obstetric providers that provide buprenorphine treatment, in combination with other efforts that prioritize access for pregnant

women and expand integrated obstetric and addiction care models, may improve access to care for pregnant women (Saia et al., 2016).

Overall, policymakers have made substantial efforts within public health and health care delivery systems to address the opioid epidemic, but these efforts do not fully address childbearing women's needs. Notably, policies are lacking to prevent opioid misuse among reproductive-age women and to support postpartum women who misuse opioids. Successful policy implementation is impeded by political realities and barriers faced by women, including employment and childcare responsibilities, inadequate access to treatment programs that accept pregnant patients or those with Medicaid coverage, and fear of legal consequences and stigma. Policy efforts can address these challenges by increasing coordination across state and federal governments and across agencies within each level of government, and increasing support for postpartum women and prevention efforts among reproductive-age women. Addressing the needs of pregnant and postpartum women who misuse opioids is vital for successfully fighting the public health opioid crisis.

References

- 21 st Century Cures Act, Public Law 114-255, 114th Cong. (2016).
- American College of Obstetricians and Gynecologists Committee on Ethics. (2015). Committee opinion no. 633: Alcohol abuse and other substance use disorders: Ethical issues in obstetric and gynecologic practice. *Obstetrics & Gynecology*, 125, 1529–1537.
- American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women; American Society of Addiction Medicine. (2012). ACOG Committee Opinion No. 524: Opioid abuse, dependence, and addiction in pregnancy. *Obstetrics & Gynecology*, 119, 1070–1076.
- American Congress of Obstetricians and Gynecologists. (n.d.-a). Improving Treatment for Pregnant and Postpartum Women Act. Available: http://www.acog.org/About_ACOG/ACOG_Departments/Government_Relations_and_Outreach/~media/Departments/Government%20Relations%20and%20Outreach/2016CLCReqReading.pdf. Accessed: October 21, 2016.
- American Congress of Obstetricians and Gynecologists. (n.d.-b). *Pregnant women & prescription drug abuse, dependence and addiction*. Washington, DC: American Congress of Obstetricians and Gynecologists.
- Angelotta, C., Weiss, C., Angelotta, J., & Friedman, R. (2016). A moral or medical problem? The relationship between legal penalties and treatment practices for opioid use disorders in pregnant women. *Women's Health Issues*, 26(6), 595–601.
- Association of State and Territorial Health Officials. (2013). *Maine CDC Snuggle ME guidelines developed to standardize care for families of drug-affected babies*. Arlington, VA: Association of State and Territorial Health Officials.
- Association of State and Territorial Health Officials. (2014a). *Neonatal abstinence syndrome: How states can help advance the knowledge base for primary prevention and best practices of care*. Arlington, VA: Association of State and Territorial Health Officials.
- Association of State and Territorial Health Officials. (2014b). *Ohio takes comprehensive approach to reducing prescription drug abuse and neonatal abstinence syndrome (NAS)*. Arlington, VA: Association of State and Territorial Health Officials.
- Association of State and Territorial Health Officials. (2015). *How State Health Departments Can Use The Spectrum Of Prevention To Address Neonatal Abstinence Syndrome: Companion report*. Arlington, VA: Association of State and Territorial Health Officials.
- Atkins, D., Siegel, J., & Slutsky, J. (2005). Making policy when the evidence is in dispute. *Health Affairs*, 24(1), 102–113.
- Bachrach, D., Boozang, P., & Lipson, M. (2016). *Medicaid: States' most powerful tool to combat the opioid crisis*. State Health Reform Assistance Network. Princeton, NJ: Robert Wood Johnson Foundation.
- Barry, C., Kennedy-Hendricks, A., Gollust, S., Niederdeppe, J., Bachhuber, M., Webster, D., & McGinty, E. (2016). Understanding Americans' views on opioid pain reliever abuse. *Addiction*, 111(1), 85–93.
- Bernstein, A., & Minor, N. (2017). Medicaid responds to the opioid epidemic: Regulating prescribing and finding ways to expand treatment access. *Health Affairs Blog*. Available: <http://healthaffairs.org/blog/2017/04/11/mcicaid-re-sponds-to-the-opioid-epidemic-regulating-prescribing-and-finding-ways-to-expand-treatment-access/>. Accessed: June 25, 2017.
- Blehar, M., & Oren, D. (1995). Women's increased vulnerability to mood disorders: Integrating psychology and epidemiology. *Depression*, 3(1-2), 3–12.
- Blendon, R., McMurtry, C., Benson, J., & Sayde, J. (2016). The Opioid Abuse Crisis Is A Rare Area Of Bipartisan Consensus. *Health Affairs Blog*. Available: <http://>

- healthaffairs.org/blog/2016/09/12/the-opioid-abuse-crisis-is-a-rare-area-of-bipartisan-consensus/. Accessed: February 14, 2017.
- Centers for Disease Control and Prevention (CDC). (2015). *Opioid painkillers widely prescribed among reproductive age women* [Press release]. Available: <http://www.cdc.gov/media/releases/2015/p0122-pregnancy-opioids.html>. Accessed: October 2, 2016.
- Children's Bureau, Administration for Children and Families. (2003). *The Child Abuse Prevention and Treatment Act: Including Adoption Opportunities & the Abandoned Infants Assistance Act as Amended by the Keeping Children and Families Safe Act of 2003*. Washington, DC: U.S. Department of Health and Human Services.
- Commonwealth of Pennsylvania and the Pennsylvania Medical Society. (2016). *Prescribing guidelines for Pennsylvania: Obstetrics & gynecology pain treatment*. Harrisburg, PA: Pennsylvania Medical Society.
- Comprehensive Addiction and Recovery Act of 2016 (CARA), S. 524, 114th Cong. (2016). Washington, DC: U.S. Government Printing Office.
- Dowell, D., Haegerich, T., & Chou, R. (2016). CDC guideline for prescribing opioids for chronic pain — United States, 2016. *MMWR Recommended Reports*, 65(RR-1), 1–49.
- Enomoto, K. (2016). *A healthier start: addressing neonatal abstinence syndrome and opioid misuse during pregnancy*. Available: <http://blog.samhsa.gov/2016/08/02/a-healthier-start-addressing-neonatal-abstinence-syndrome-and-opioid-misuse-during-pregnancy/#.V7ahol6tpPN>. Accessed: August 19, 2016.
- Finer, L., & Zolna, M. (2016). Declines in unintended pregnancy in the United States, 2008–2011. *New England Journal of Medicine*, 374, 843–852.
- Friedmann, P., McCullough, D., & Saitz, R. (2001). Screening and intervention for illicit drug abuse: A National survey of primary care physicians and psychiatrists. *Archives of Internal Medicine*, 161(2), 248–251.
- Gallagher, B., Shin, Y., & Roohan, P. (2016). Opioid prescriptions among women of reproductive age enrolled in Medicaid — New York, 2008–2013. *MMWR*, 65(16), 415–417.
- Goodman, D. (2015). Improving access to maternity care for women with opioid use disorders: Colocation of midwifery services at an addiction treatment program. *Journal of Midwifery & Women's Health*, 60, 706–713.
- Government Accountability Office. (2015). *Prenatal drug use and newborn health: Federal efforts need better planning and coordination*. Washington, DC: U.S. Government Printing Office.
- Green, T., Grimes Serrano, J., Licari, A., Budman, S., & Butler, S. (2009). Women who abuse prescription opioids: Findings from the Addiction Severity Index-Multimedia Version® Connect prescription opioid database. *Drug and Alcohol Dependence*, 103(1–2), 65–73.
- Guttman Institute. (2016). *Substance abuse during pregnancy*. New York: Guttman Institute. Available: <http://www.guttmaninstitute.org/state-policy/explore/substance-abuse-during-pregnancy>. Accessed: May 19, 2016.
- Harris, B., & Yu, J. (2016). Attitudes, perceptions and practice of alcohol and drug screening, brief intervention and referral to treatment: A case study of New York State primary care physicians and non-physician providers. *Public Health*, 139, 70–78.
- Heil, S. H., Jones, H. E., Arria, A., Kaltenbach, K., Coyle, M., Fischer, G., ... Martin, P. (2011). Unintended pregnancy in opioid-abusing women. *Journal of Substance Abuse Treatment*, 40, 199–202.
- Hoback, J. (2016). *Overdosed on opioids. State Legislatures*. Denver, CO: National Conference of State Legislatures.
- Hudak, M., Tan, R., & The Committee on Drugs, & The Committee on the Fetus and Newborn (2012). Neonatal drug withdrawal. *Pediatrics*, 129, e540–e560.
- Jarlsenski, M., Hogan, C., Bogen, D., Chang, J., Bodnar, L., & Van Nostrand, E. (2017). Characterization of U.S. state laws requiring health care provider reporting of perinatal substance use. *Women's Health Issues*, 27, 264–270.
- Jones, H., Kaltenbach, K., Heil, S., Stine, S., Coyle, M., Arria, A., ... Fischer, G. (2010). Neonatal abstinence syndrome after methadone or buprenorphine exposure. *New England Journal of Medicine*, 363, 2320–2331.
- Kampman, K., & Jarvis, M. (2015). American Society of Addiction Medicine (ASAM) national practice guideline for the use of medications in the treatment of addiction involving opioid use. *Journal of Addiction Medicine*, 9, 1–10.
- Kennedy-Hendricks, A., McGinty, E., & Barry, C. (2016). Effects of competing narratives on public perceptions of opioid pain reliever addiction during pregnancy. *Journal of Health Politics, Policy and Law*, 41(5), 873–916.
- Krans, E., & Patrick, S. (2016). Opioid use disorder in pregnancy: Health policy and practice in the midst of an epidemic. *Obstetrics & Gynecology*, 128(1), 4–10.
- Kremer, M., & Arora, K. (2015). Clinical, ethical, and legal considerations in pregnant women with opioid abuse. *Obstetrics & Gynecology*, 126(3), 474–478.
- KY S. 192, Chapter 66. (2015).
- Lynch, W., Roth, M., & Carroll, M. (2002). Biological basis of sex differences in drug abuse: Preclinical and clinical studies. *Psychopharmacology*, 164(2), 121–137.
- Medication assisted treatment for opioid use disorders (42 CFR Part 8; Final Rule). (2016). *Federal Register*, 81(131), 44712–44739.
- Miranda, L., Dixon, V., & Reyes, C. (2015). *How states handle drug use during pregnancy*. ProPublica. Available: <https://projects.propublica.org/graphics/maternal-drug-policies-by-state>. Accessed: April 25, 2017.
- Mittal, L., Erlick Robinson, G., Greene, J., Nadelson, C., Fitelson, E., Occhiogrosso, M., ... Benders-Hadi, N. (2015). *Contraception and mis-conceptions*. Psychiatric Times.
- Murphy, K., Becker, M., Locke, J., Kelleher, C., McLeod, J., & Isasi, F. (2016). *Finding solutions to the prescription opioid and heroin crisis: A road map for states*. Washington, DC: National Governors Association Center for Best Practices.
- National Association of State Alcohol and Drug Abuse Directors, Inc. (2016). *Comprehensive Addiction and Recovery Act of 2016 (S. 524), as approved by the Senate: A Section-by-Section Analysis*. Available: <http://nasadad.org/wp-content/uploads/2016/07/CARA-Section-by-Section-May-2016.pdf>. Accessed: August 21, 2016.
- National Center on Substance Abuse and Child Welfare. (n.d.). Opioid Use Disorders and Medication-Assisted Treatment. Available: <https://ncsacw.samhsa.gov/resources/opioid-use-disorders-and-medication-assisted-treatment/default.aspx>. Accessed: August 19, 2016.
- O'Brien, M., & Phillips, S. (2011). *Substance exposed newborns: Addressing social costs across the lifespan*. Brandeis University, The Heller School for Social Policy and Management. Waltham, MA: The Massachusetts Health Policy Forum.
- Ohio Gen. Assemb. H. 315. (2014).
- Patrick, S., Schumacher, R., Benneyworth, B., Krans, E., McAllister, J., & Davis, M. (2012). Neonatal abstinence syndrome and associated health care expenditures: United States, 2000–2009. *JAMA*, 307, 1934–1940.
- Poleshuck, E., & Woods, J. (2014). Psychologists partnering with obstetricians and gynecologists: Meeting the need for patient-centered models of women's health care delivery. *American Psychologist*, 69(4), 344–354.
- Protecting Our Infants Act of 2015, Public Law 114-91, 114th Cong. (2015).
- Request for Comment on Report Entitled: Advancing the Care of Pregnant and Parenting Women With Opioid Use Disorder and Their Infants: A Foundation for Clinical Guidance. (2016). 81 Fed. Reg. 51205.
- Rudd, R., Aleshire, N., Zibbell, J., & Gladden, R. (2016). Increases in drug and opioid overdose deaths — United States, 2000–2014. *MMWR*, 64(50), 1378–1382.
- Saia, K., Schiff, D., Wachman, E., Mehta, P., Vilkins, A., Sia, M., ... Bagley, S. (2016). Caring for pregnant women with opioid use disorder in the USA: Expanding and improving treatment. *Curr Obstet Gynecol Rep*, 5, 257–263.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2016). *A collaborative approach to the treatment of pregnant women with opioid use disorder*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Tenn. Gen. Assemb. S. 1391. (2014).
- Terplan, M., Kennedy-Hendricks, A., & Chisolm, M. (2015). Prenatal substance use: Exploring assumptions of maternal unfitness. *Substance Abuse*, 9(Suppl 2), 1–4.
- Volkow, N., & McLellan, A. (2016). Opioid abuse in chronic pain: Misconceptions and mitigation strategies. *New England Journal of Medicine*, 374, 1253–1263.
- Wall, R., Rehm, J., Fischer, B., Brands, B., Gliksman, L., Stewart, J., ... Blake, J. (2000). Social costs of untreated opioid dependence. *Journal of Urban Health*, 77(4), 688–722.
- Wright, T., Terplan, M., Ondersma, S., Boyce, C., Yonkers, K., Chang, G., & Creanga, A. (2016). The role of screening, brief intervention, and referral to treatment in the perinatal period. *American Journal of Obstetrics and Gynecology*, 215(5), 539–547.
- Young, N., Gardner, S., Otero, C., Dennis, K., Chang, R., Earle, K., & Amatetti, S. (2009). *Substance-exposed infants: State responses to the problem*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Author Descriptions

Jennifer B. Saunders, MSW, is a doctoral student in Health Services Research, Policy and Administration at the University of Minnesota School of Public Health. Her research interest is health policy that impacts reproductive-age women and their families.

Marian P. Jarlsenski, MPH, PhD, conducts research at the University of Pittsburgh that seeks to advance knowledge about how health policies affect access to care, clinical practice, and health behaviors that ultimately affect maternal and child health outcomes.

Robert Levy, MD, is an Assistant Professor in the Department of Family Medicine and Community Health at the University of Minnesota Medical School. He is a family physician and addiction medicine specialist who treats pregnant women for substance use disorders.

Katy B. Kozhimannil, MPA, PhD, conducts research at the University of Minnesota to inform the development, implementation, and evaluation of health policy that impacts health care delivery, quality, and outcomes during critical times in the lifecourse, including pregnancy and childbirth.