

## RESEARCH ARTICLE

# Interprofessional-Shared Decision Making for Pregnant Women with Opioid Use: Results from a Provider Training

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**Abstract:** The purpose of the article is to describe an educational intervention for health professionals based on an interprofessional-shared decision making (IP-SDM) model in the women's prenatal and early postpartum care and to observe whether after the intervention there was an improvement of certain outcomes such as: acquisition of substance use disorder knowledge, stigma reduction, and referrals to an evidenced-based program.

**Background:** Providers might be unaware of this population's unique issues, such as how women make decisions about recovery, their accessibility to substance use treatment, state child welfare laws regarding prenatal substance use, and information about neonates exposed to substances.

**Objectives:** A training was developed to address perinatal providers' knowledge gaps and reduce stigma. Specific training elements included promoting universal verbal screening, information about treatment during pregnancy, and how to make recovery-related decisions utilizing an IP-SDM model.

**Methods:** This mixed-methods study was conducted with 45 perinatal providers from community health centers across Southern New England. Providers attended a one-hour training and completed pre and posttraining online surveys.

**Results:** The majority of participants who completed the online surveys have worked in obstetrical medicine for more than a decade. The findings demonstrated that providers who participated in this training increased their knowledge of child welfare laws pertaining to prenatal substance use as well as what community resources might be available to this population of women. The increased knowledge was verified through increased referrals to an evidence-based program, Healthy Families America. Moreover, stigma was reduced from pre to posttraining regarding women with substance use disorders.

**Conclusion:** Our results suggest the importance of specified training to address the unique needs of this patient population.

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## 1. INTRODUCTION

Substance use during pregnancy is a significant medical and social welfare issue that researchers have examined for decades. Specifically, the prevalence of nonmedical prescription opioid use has increased in the United States in the last decade [1, 2], with increased incidence rates reported among pregnant women [3]. According to the National Survey on Drug Use and Health, an annual average of 21,000 pregnant women between the ages of 15 and 55 misused opioids

within the month prior to taking the survey [4]. Women of childbearing age can be exposed to opioids in several ways. They might be prescribed opioid medication for acute or chronic pain or prescribed buprenorphine or methadone to treat an opioid use disorder. They might gain access to these prescription medications illicitly or they might be using heroin. Therefore, a woman's exposure to opioids can be either legal or illicit. Regardless of the type of opioid, the intended use, or the legality of use, these women have individual needs. For the purpose of this article, we will use the term *opioid exposure* to include the multiple channels through which women of childbearing age obtain opioids and the various methods by which they ingest or inject opioids.

There are specific needs unique to this population, such as decision making around treatment, accessibility to treat-

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ment, and information about the impact of opioids on the substance-exposed neonate. Further, women of childbearing age with opioid exposure often feel stigmatized by others, including medical care staff [5, 6]. Specifically, these women are recognized as “different” based on the very characteristic of being opioid dependent and the assumptions made about that status. In this project, we aimed to decrease stigma through perinatal provider education.

Utilizing an interprofessional-shared decision making (IP-SDM) framework, this educational intervention included universal verbal screening methods and information regarding substance use treatment options during pregnancy and state child welfare policies. Information was provided regarding the State of Rhode Island Department of Health's Healthy Families American Program. This evidence-based family visiting program serves perinatal and early-parenting women. The purpose of the study was to evaluate an educational intervention for health professionals based on an interprofessional-shared decision making (IP-SDM) model in the women's prenatal and early postpartum care and to observe whether after the intervention there was an improvement of certain outcomes such as acquisition of substance use disorder knowledge, stigma reduction, and referrals to an evidenced-based program.

Before describing the outcome data below, the conceptual and theoretical framework are explicated in the next section. The future development of strategies and interventions for this population suggests the need for a common language for interdisciplinary or (multidisciplinary) shared decision making models which are respectful of cultural and economic barriers and differences.

### 1.1. Theoretical Framework: Decision-Making Models

Decision-making research has shifted in the past 20 years from the framework of *hierarchical* decision making processes to *heterarchical* decision processes. The latter is defined as a process that difuses responsibility among health care providers and patients alike [7]. Patel, Daufman, and Arocha highlighted that an individual decision maker is not an isolated unit but is influenced by a social world populated by other participants who determine the decision process and outcome [8]. For example, a woman's health-related treatment decisions are often influenced by Child Protective Services, substance use treatment programs, and societal attitudes toward pregnant and parenting mothers with histories of substance use. Improved decision processes that would involve patient input, including her experiences of these contextual factors, could result in better patient care and health outcomes [8]. Pregnant women are likely to have an interest in shared decision making as they do with other aspects of their medical care.

A number of factors impact decision-making processes in medical settings. One factor is the unequal distribution of power between the medical provider and the patient. This inequity of power is shaped by such factors as differences in education, class, gender, ethnicity, the dependence that a patient often feels on a medical provider, and previous experiences of power exerted in medical situations. Women are rarely invited to participate in their medical decision making [9]. In addition, internal and external stigma are sometimes

experienced in medical settings. Freire, a Brazilian educator who advocated for self-determination for participants, described oppression as an unequal power structure in which someone occupying a dominant position determines the needs and desires of a person in a subordinate position (*i.e.*, makes that person an “object”) [10]. This inequity has the potential to decrease a person's self-esteem and autonomy, thereby restricting internal choices as well as real external choices.

Freire argued that we all need to be the “subjects” of our lives, not “objects” in the stories of others. Being the subject of one's own life leads to a sense of liberation and greater participation in identifying and implementing desired choices. Historically, medical settings appear to be arenas in which patients are often objectified by the expertise of medical providers. It has traditionally been assumed that patients take a passive role in their medical treatment. Although Freire's ideas originated in a literacy campaign, they have been further applied to health and mental health issues, such as the role of patient empowerment in health promotion strategies [11]. The researchers, utilizing Freire's conceptual framework for understanding power and empowerment, promoted the practice of identifying and including social aspects in the decision-making process related to health issues that affect the living conditions of the population.

A similar decision-making model named interprofessional-shared decision making (IP-SDM) has been developed that also encourages broadening the patient-practitioner dyad [12]. In health care, interprofessionalism is a process by which professionals across disciplines collaborate to provide an integrated and cohesive approach to patient care. In this model, health care choices are made by a team that includes the patient, family supports, and practitioners from multiple disciplines [12]. The main objective of the model is to identify the best options for the patient and to facilitate the patient's involvement in decision making. A patient's informed decision reflects the incorporation of the patient's values. This innovative model consists of the following 6 steps [12]:

- 1) The patient presents a health problem that requires a decision. A decision point at which more than one option (including maintaining the status quo) exists; benefits and harms are weighed across the options. The interprofessional (IP) team members share their knowledge and understanding with the patient.
- 2) Health care providers and patient share information about the options (exchange of information).
- 3) Values clarification, including the patient's values that may influence the decision, is employed.
- 4) The IP team, including the patient, analyzes the feasibility (time and resources) of the options before determining the patient's preference.
- 5) The patient identifies her preferred option, and the actual decision is made with the assistance and support of the IP team.
- 6) As a result of team support, the option she chooses has a favorable impact on the health outcome she values most.

The complex intersectionality of pregnancy and substance use requires a multidisciplinary, comprehensive approach that is gender specific. The proposed model suggests a potential approach for providers working with pregnant women who are exposed to opioids. The IP-SDM model creates a strategy for treating pregnant women who are opioid exposed and factors in multiple, complex medical considerations, the possible legal and societal constraints on choice, as well as the possibility of bias. Furthermore, practitioners utilizing the model seek to empower the women of a traditionally stigmatized group to actively participate in their own care. Fig. (1) provides a visual representation of the identified steps of this model.

The IP-SDM model effectively incorporates a decisional conflict paradigm that is common in pregnancies with opioid exposure. Optimal treatment and adherence to critical aspects of maternal and fetal care relies on practitioners to understand the lived experiences of women and to involve them actively in health-related decision making during pregnancy. This is especially true for women with histories of substance use, women with a substance use disorder, and women in substance use treatment.

**2. MATERIALS AND METHOD**

A training was developed for maternal health providers to increase their knowledge of perinatal substance use and reduce stigma. The training consisted of information derived

from the American College of Obstetricians and Gynecologists and research related to perinatal substance use. It is possible that providers are unaware of specific needs unique to pregnant women with opioid exposure, such as decision making regarding recovery, accessibility to substance use treatment, state child welfare laws regarding prenatal substance use, and information about neonates exposed to substances. The goals were to increase screening for substance use and to provide information about treatment, substance-exposed newborns, and resources available for both providers and patients. Additionally, the presentation was designed to decrease stigma in order to support pregnant women in their recoveries and care for their neonates.

This study was approved by Women and Infants Hospital Institutional Review Board, approval # WIH 15-0104. Two trainings were conducted in May and June of 2016. Participants provided written informed consent before participating. The research project was funded by the Rhode Island March of Dimes. An online pre and posttraining survey was developed to evaluate the provider training regarding opioid exposure in prenatal care settings. An online survey was preferred as the data collection procedure for this research project, because it provided the potential for rapid turnaround from participants [13, 14]. Demographic data were collected. Data were collected regarding primary discipline and number of years' respondents had worked in obstetrical medicine. The questions were developed to determine stigmatic atti-

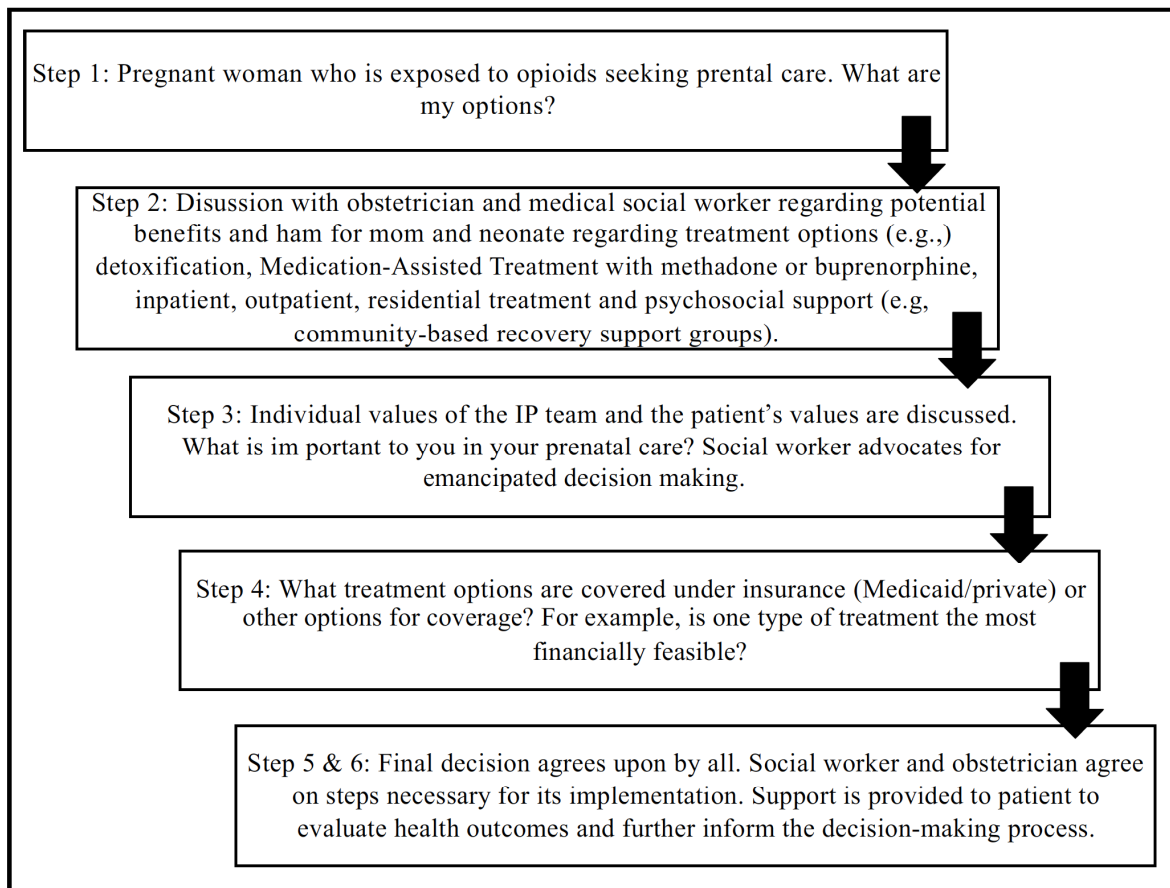


Fig. (1). Application of IP-SDM with pregnant women with opioid exposure.

tudes, practices, and knowledge about perinatal opioid exposure, IP-SDM, verbal screening tools, and information and referrals to community resources. The survey questions were developed specifically for this training and based on survey methodology. Both pretraining and posttraining were pilot tested in order to establish content validity [15].

Participants were prenatal health care providers who worked at one of two large, urban, community, prenatal care centers in Rhode Island. These centers provide healthcare for women who are publically insured. Each participant was invited to complete the pre and posttraining online questionnaires via Survey Monkey. The questionnaires each comprised 13 items and took approximately 10 minutes to complete. The pretraining survey was made available to participants 7 days prior to the training date, and the posttraining survey was available for 30 days following the training date. Neither identifying information nor email addresses were collected. The survey included questions regarding stigma, confidence addressing substance use in pregnancy, knowledge of universal screening practices and urine toxicology screening practices. Additionally there were questions about shared decision making practices with patients and knowledge of state child welfare policy regarding perinatal substance use. The pre and posttraining data were analyzed using descriptive statistics, and data visualizations were created in Tableau. Further statistical analysis of this pilot study was not conducted due to the small sample size of pre and post-test completions.

Data were obtained from the RI Department of Health regarding referrals to Healthy Families America Program

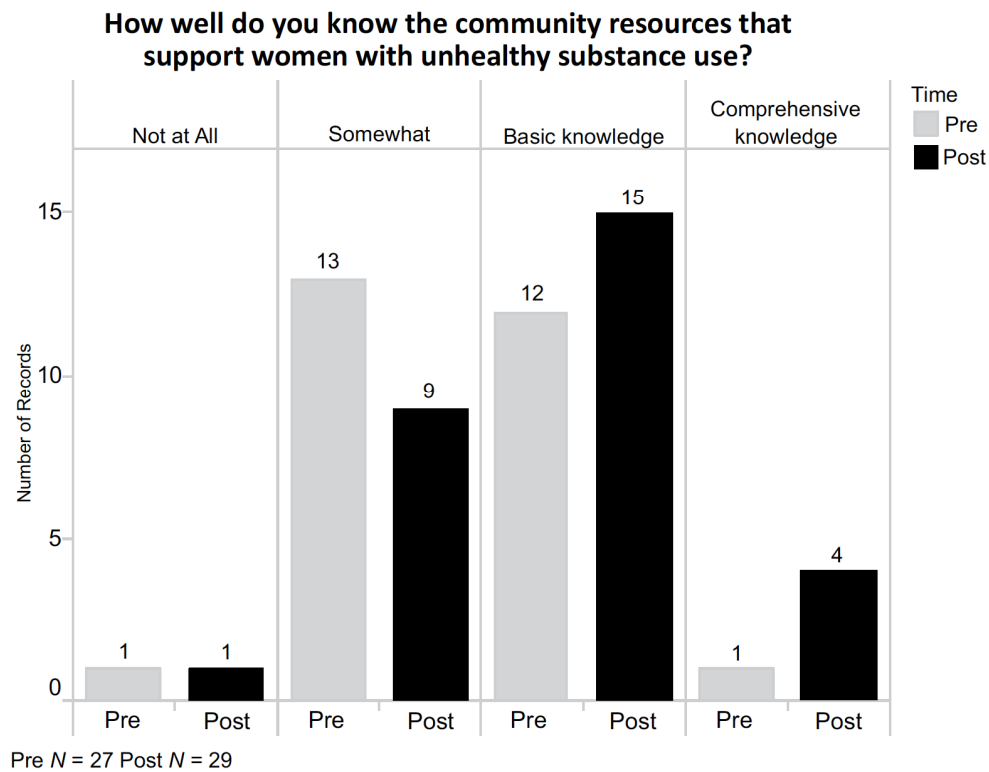
(HFAP). A representative from the Department of Health extrapolated data to determine the number of referrals from the centers represented at the trainings. These data were used to assess knowledge of and referrals to community resources (see Figs. 2 and 6).

**3. RESULTS**

The purposeful sample ( $N = 45$ ) consisted of health care providers in the obstetrical setting. There was a total of 45 maternal health care providers who received the training. Providence, RI is the second largest city in New England, and the community health centers where the training occurred serve 1 in 4 city residents. Each center averages more than 33,000 patient encounters each year; and 90% of the patients are at or below 200% of the Federal Poverty Level.

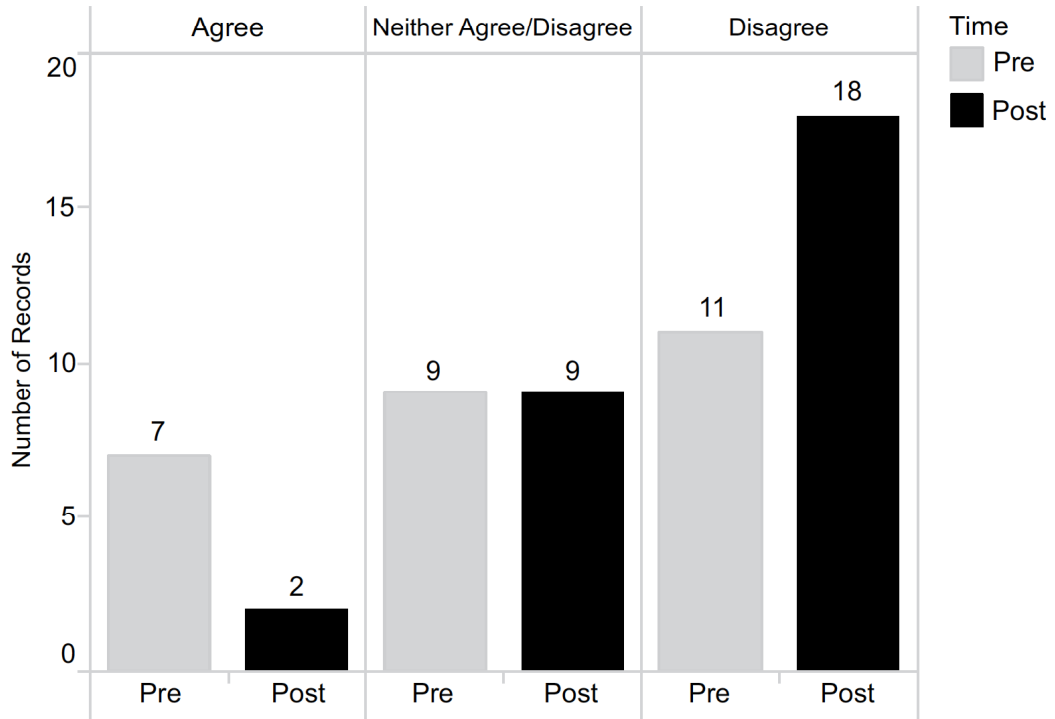
A total of 26 participants completed the pretraining survey, and 29 completed the posttraining survey. Not all questions required a response; therefore, the  $N$  for each question might differ. The majority of participants were nurses (Table 1), and the majority of the participants had worked in obstetrical medicine for 11 years or more.

Three content areas were of specific interest: knowledge regarding laws and resources, stigma reduction, and using IP-SDM. There was an increase in knowledge about child welfare laws and resources as shown in Figs. (1 and 2). Furthermore, there was stigma reduction from pre to posttraining regarding women with substance use disorders as evidenced by disagreement with the value statement, "Women who have a substance use disorder should not be able to parent," as shown in Fig. 3. Questions were presented regarding



**Fig. (2).** Knowledge of community resources.

### Women who have a substance use disorder should not be able to parent.

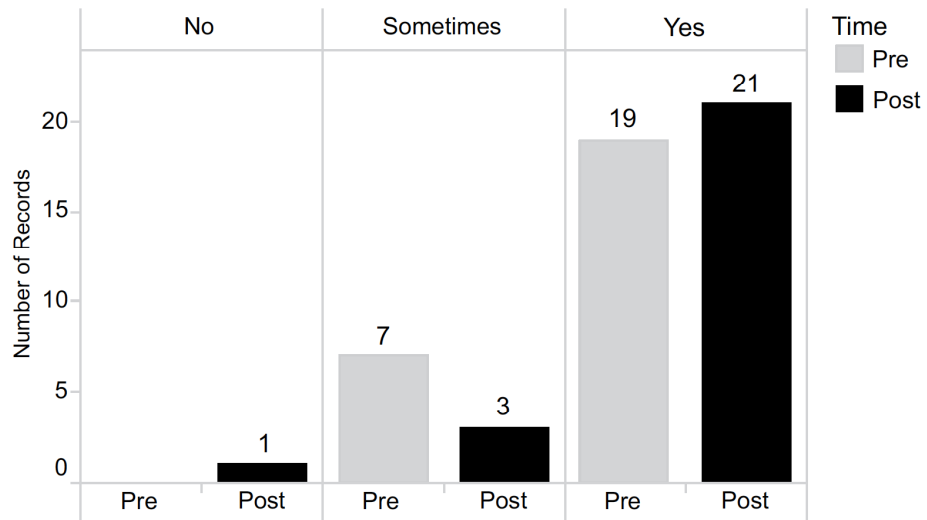


Full question text: To what extent do you agree or disagree with the following statement: Women who have a substance use disorder should not be able to parent.

Pre N = 27 Post N = 29

Fig. (3). Parenting value statement.

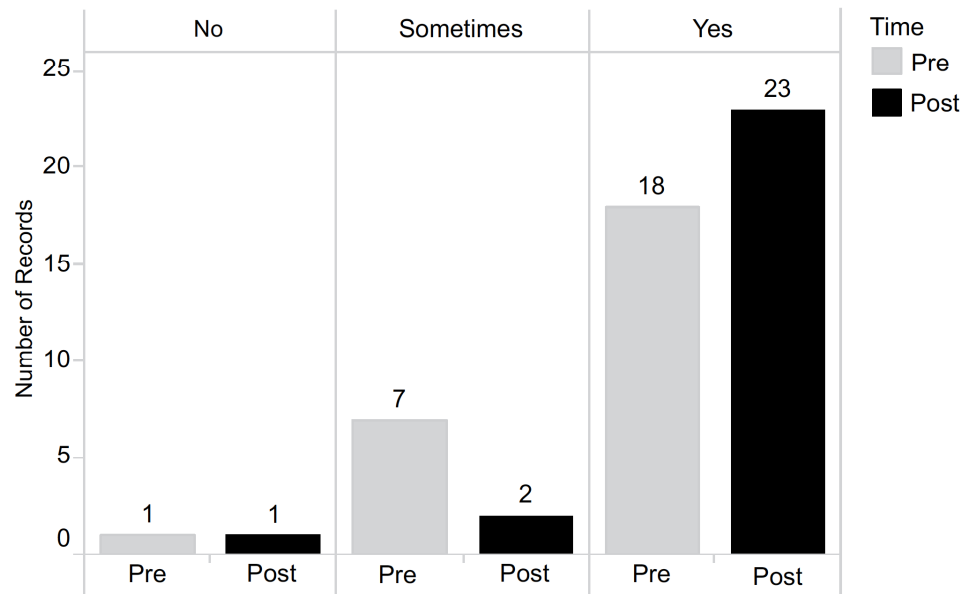
### Do you practice shared-decision making with your obstetrical patients?



Pre N = 26 Post N = 25

Fig. (4). Shared decision making.

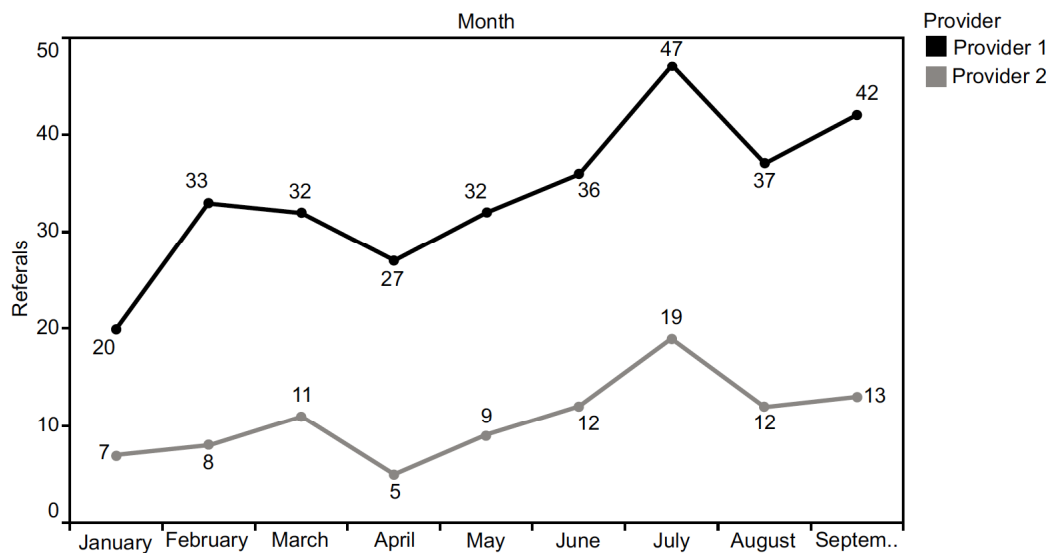
### Do you practice shared-decision making with your pregnant patients who have a substance use disorder?



Pre N = 26 Post N = 26

Fig. (5). Shared decision making with patients with SUD.

### Referrals to Healthy Families America Program (HEAP) from Training Participants January-September 2016



Number of referrals by month as reported by RI Dept. of Health

Fig. (6). Participant referrals.

shared decision making with obstetrical patients who have a substance use disorder as well as those who do not (see Figs. 4 and 5).

Fig. (6) represents the increase in provider referrals, following the trainings, to the RI Department of Health's

Healthy Families America Program (HFA). This increase was hypothesized as services were made known but there are intended and unintended outcomes when an increase in referrals, without context, results in any referrals to an agency or service providers. Women in this category may have past experiences, which leave them feeling vulnerable or suspi-

**Table 1. Participants by discipline.**

	Certified Nurse Assistant	Midwife	Nurse	Nurse Practitioner	Obstetrician	Social Worker	Total
Pre	2	1	11	4	7	1	26
Post	2	2	10	4	8	3	29

cious of any service provider. The potential that an HFA referral could cascade into a referral to a child protection agency, if not handled properly, is a factor which may influence the efficacy of this training as well.

### 3.1. Limitations

Threats to internal validity were testing and response bias, because the participants might have become familiar with the outcome measure and might have remembered responses for the posttest online survey. Further studies could use a longer time interval between administrations of the outcome. The sample is relatively small with 26 participants completing the pretraining survey and 29 completing the posttraining survey. Considering the purposeful sample of providers and that the majority of respondents were nurses, our findings may not represent the population of prenatal and early postpartum healthcare providers. The participants knew their responses were being recorded and analyzed, which may have influenced responses or non-response and contributed to a potential observer effect. Another limitation was stigma was measured through one measure. Also threats to external validity were interactions of setting and treatment.

## 4. DISCUSSION

The training demonstrated increased knowledge by professionals of child welfare laws and effective and affordable resources available for pregnant and parenting women with opioid use disorders. This was reflected in increased referrals to Healthy Families America, utilization of the IP-SDM, and stigma reduction from the health care providers. When working with this population, such an increased knowledge is critical to providing more targeted and less stigmatizing services for these women and their children. The availability of more knowledge, however, as Freire well understood many years ago, does not assure that professionals, acting across disciplines and in organizational settings or host environments, exercise such knowledge with restraint and dignity that serves the primary needs of mother and child.

Thus, it is always important to consider the contextual factors for pregnant women with opioid exposure. In order to further understand interactions between perinatal providers and patients, social constructionism—specifically the construction of stigma—was addressed in this research project. Social constructionism stresses the social aspects of knowing and the influence of cultural, historical, political, and economic conditions on dominant discourse and structures [16, 17]. In medical practice, categories and assumptions are fluid and are influenced continuously by the communities' people belong to, varying across cultures and throughout history [16, 18]. Many current theories of inequality in health care fall under the broad canopy of social constructionism. Weinberg explored the dominant discourse in a prenatal care set-

ting and how that discourse suggests what is acceptable and normative in mothering practices in the medical community [19]. Drug use is not seen as normative and often evokes strong reactions by medical providers.

Stigma is a social construction that recognizes negative differences based on a distinguishing characteristic, such as substance use during pregnancy. As a result of stigma the person is devalued or dehumanized [20]. Shame necessitates some way to manage perceptions of internal and external stigma. Managing this stigma can create ambivalence about one's self. Because people view the stigmatized person as not conforming to the standards of society, the person might live in secrecy or continual anxiety [21]. American society is highly inclined to condemn pregnant women who use substances [22]. According to Covington, stigma (*i.e.*, severe social disapproval) is the main psychological issue differentiating women's substance use from men's [23].

While it is important for health professionals to understand the stigmatization process and potentially negative impact on their patients, this is not commonly taught in graduate school education, post-clinical trainings and workshops, or a measure of patient efficacy when surveying outcomes or consequences to this population. It is well documented that deeply held cultural beliefs by some providers may generate implied or explicit forms of stigma thereby generating in punitive responses toward prescription-opioid dependent pregnant women [24]. For these reason, Carter suggests that perinatal care for women who have a substance use disorder should be less a legal issue (*e.g.*, involving Child Protective Services) and more a health issue [25]. Providers creating an atmosphere of empowerment for pregnant women may positively impact prenatal and postpartum treatment decision making. What is reasonable to suggest is that providing only stigma or shame or defensiveness or fear will further marginalize these women and concomitantly make any intervention less effective for professionals and clients.

When professionals stigmatize others, they focus almost entirely on individualized attributes and fail to understand environmental and contextual factors. In the case of opioid exposure, such moral construction can be used to categorize the pregnant woman even when she is undergoing medication-assisted treatment. Moreover, people locked in a stigmatized construct potentially understand it as the only reality, eliminating possible alternative perspectives [26]. For example, medication-assisted treatment was initially considered a temporary, harm-reduction intervention [27]. When this particular treatment option appears to be administered for an indefinite period, however, the externally imposed behavior can inextricably essentialize the woman throughout her pregnancy and postpartum period as an "addict."

Socially constructed, gender-specific expectations of women certainly exist in practice and literature. If a pregnant woman is noncompliant with recommended substance-use treatment and prenatal care, she may be considered an inadequate parent, an inadequate person, and eventually, an inadequate woman [26]. Such judgments have the potential for shaping a woman's experience of herself and her ability to make informed choices about her treatment, whether for substance use disorder or pregnancy, and about with whom she may choose to have authentic conversations. The use of the IP-SDM is one way to create opportunities for honest dialogue with pregnant women who are opioid exposed.

Shared decision making (SDM) is the process of sharing information and coming to an agreement between patients and caregivers when making a health care decision [28]. Caregivers and patients share information with each other in order to understand the likely outcomes of the options they face, to think about their values as they relate to the risks and benefits of each option, and to participate jointly in decisions about medical care. Like patient- and family-centered care, the SDM model has several positive health outcomes. For example, when patients are empowered to make choices they believe will support their recovery, the SDM model has been shown to increase the likelihood that the person will follow through on his or her chosen options and achieve goals [29].

In addition, this model has been shown to enhance cultural competence among providers, as relevant cultural beliefs and practices are more likely to be expressed and reflected in shared decision making. Moreover, SDM might serve as a risk management strategy for health care providers. For instance, shared decisions add meaning and depth to the informed consent process by providing a structure to share information, explore options, and encourage honest, two-way communication. This practice model is congruent with acknowledging the patient's values and preferences and including the patient in the decision-making process. The model is creative and innovative. However, it is rarely adopted in medical practice for pregnant women with opioid exposure.

In alignment with shared decision making, this study aimed to train and support perinatal providers as professionals with the power and privilege capacities to obtain and acquire resources which support pregnant women with opioid exposure in a too often stigma-laden environment. Future studies could evaluate the delivery of a comparable educational intervention in other institutional or primary care organizations related to mental health and social services, for example. The question is whether the efficacy of the educational program is influenced by the organizational environment or professional licensure or culture in which services are provided. In addition, substance use disorder training could be implemented in medical education programs, as well as other professional disciplines such as nursing and social work, which provide interdisciplinary support to physicians.

Current epistemological data yields the unfortunate conclusion that the increase of opioid exposure in the pregnant and early parenting population is a national medical and public health crisis, which is unlikely to abate over the next twenty years [30]. The need for further training for prenatal health care providers is especially relevant because primary

care providers and hospitals have a vested interest in providing safe and effective services for children and the prorate for accomplishing such a goal is to provide interdisciplinary services by professionals which sustain the constructive involvement of mothers with those direct-care professionals.

## CONCLUSION

This research project was designed to address the complexities of opioid exposure in pregnancy. Since 2000, opioids have claimed the lives of more than 165,000 people in the U.S. According to the Center for Disease Control, only 1 in 6 patients talks to her health care provider about unhealthy substance use [31]. Training maternal health providers about the opportunity to identify and address opioid exposure and substance use and to have meaningful conversations about maternal and fetal health is imperative to aid in the reduction of mothers' and infants' morbidity associated with perinatal substance use. Providing a universal verbal screening tool decreases the stigma and subjective selection of who is asked about substance use.

The IP-SDM is a promising model to utilize with this population in order to engage patients in accessing treatment and support. Further research could explore extending the training to address other substances and the expansion of the IP-SDM model. Our results suggest the importance of specified training to address the unique needs of this patient population. Furthermore, a significant positive outcome was the partnership developed with the providers and the Parents Support Network of Rhode Island, which is providing peer support for new mothers in recovery. Parents Support Network and Family Visiting Programs both develop trusting and mutually supportive networks and provide coordinated, comprehensive, family-centered care for pregnant and parenting women with opioid exposure and substance use disorders.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

## HUMAN AND ANIMAL RIGHTS

No Animals/Humans were used for studies that are base of this research.

## CONSENT FOR PUBLICATION

Not applicable.

## DECLARATION OF CONFLICTING INTERESTS

Heather Howard declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Katie Clark declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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