

Improving Access to Maternity Care for Women with Opioid Use Disorders: Colocation of Midwifery Services at an Addiction Treatment Program

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Perinatal drug and alcohol use is associated with serious medical and psychiatric morbidity for pregnant and postpartum women and their newborns. Participation in prenatal care has been shown to improve outcomes, even in the absence of treatment for substance use disorders. Unfortunately, women with substance use disorders often do not receive adequate prenatal care. Barriers to accessing care for pregnant women with substance use disorders include medical and psychiatric comorbidities, transportation, caring for existing children, housing and food insecurity, and overall lack of resources. In a health care system where care is delivered by each discipline separately, lack of communication between providers causes poorly coordinated services and missed opportunities. The integration of mental health and substance use treatment services in medical settings is a goal of health care reform. However, this approach has not been widely promoted in the context of maternity care. The Dartmouth-Hitchcock Medical Center Perinatal Addiction Treatment Program provides an integrated model of care for pregnant and postpartum women with substance use disorders, including the colocation of midwifery services in the context of a dedicated addiction treatment program. A structured approach to screening and intervention for drug and alcohol use in the outpatient prenatal clinic facilitates referral to treatment at the appropriate level. Providing midwifery care within the context of a substance use treatment program improves access to prenatal care, continuity of care throughout pregnancy and the postpartum, and availability of family planning services. The evolution of this innovative approach is described. This article is part of a special series of articles that address midwifery innovations in clinical practice, education, interprofessional collaboration, health policy, and global health.

J Midwifery Womens Health 2015;60:706–712 © 2015 by the American College of Nurse-Midwives.

Keywords: pregnancy, postpartum period, substance-related disorders, integrated delivery of health care, midwifery

INTRODUCTION

Prenatal drug and alcohol use is a persistent public health problem associated with poor perinatal outcomes. Women with substance use disorders who become pregnant frequently have complex medical and psychiatric problems and often have difficulty engaging in prenatal care. Access to safe, timely, and effective care is essential to reduce risks to pregnant and postpartum women and their infants.

The integration of mental health and addiction treatment with primary medical care is a focus area of the Patient Protection and Affordable Care Act (ACA). Integrated models have demonstrated effectiveness in the treatment of comorbid HIV, substance use disorders, and tuberculosis, as well as for vulnerable populations.^{1–3} However, fewer resources have been invested to provide mental health and substance abuse services within maternity care. This article describes the location of midwifery services within the Dartmouth-Hitchcock Medical Center Perinatal Addiction Treatment Program, a collaborative, multidisciplinary program serving pregnant and postpartum women with substance use disorders in central New Hampshire and Vermont.

BACKGROUND

Newborn hospital discharge data suggest that the number of women using opioids during pregnancy in the United States

has increased by a factor of 5 over the past decade.⁴ In recent years, northern New England has seen a rapid rise in the prevalence of neonatal abstinence syndrome as a result of chronic in utero exposure.^{5,6} In New Hampshire, 2% of all live births were affected in 2009, the last year for which data are available⁷; this proportion has almost certainly increased during the past 5 years.

Approximately 12% of women seeking maternity care at Dartmouth-Hitchcock Medical Center disclose current drug or alcohol use at their first prenatal visits. Over half report chronic opioid use (unpublished Department of Obstetrics and Gynecology data, 2014). These numbers have steadily increased over the past several years. Unfortunately, there are a limited number of addiction treatment programs in New Hampshire, many of which do not take Medicaid, leaving many women of childbearing age in the medical center's service area without access to treatment.

Untreated, perinatal opioid use is associated with an increased incidence of unplanned pregnancy and adverse perinatal outcomes such as prematurity, low birth weight, placental abruption, and stillbirth.⁸ Neonatal abstinence syndrome involves central nervous system, respiratory, and gastrointestinal dysregulation, including seizures, respiratory distress, diarrhea, and weight loss. Without treatment, it can lead to serious morbidity and even mortality for affected newborns. Pharmacologic therapy is necessary to relieve symptoms for more than 50% of newborns who were chronically exposed to opioids during pregnancy, often requiring prolonged neonatal hospitalization. In general, newborns

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- ◆ Pregnant women with substance use disorders face significant barriers to accessing care, including transportation, medical and psychiatric comorbidities, and poor communication between providers.
- ◆ A coordinated, team approach is essential to provide optimal care for pregnant women with substance use disorders.
- ◆ Colocation of midwifery care in an addiction treatment program improves prenatal care attendance and coordination of care across disciplines.
- ◆ Midwives should advocate for resource allocation to improve access to care for pregnant women with substance use disorders.

of mothers who are stable in treatment and abstaining from illicit drug use are less likely to require pharmacologic intervention, in turn decreasing length of stay, emotional cost to families, and monetary cost to the health care system.^{8–10}

In 2006, the Institute of Medicine called for improving access and quality of care through the integration of mental health and treatment for substance use disorders with primary care services.^{11,12} *Integration* is defined as the systematic linkage of services, accomplished through colocation and other means of enhancing interprofessional collaboration for the management of chronic disease. *Collaboration* is defined in this context as the activity of “laboring together to achieve a common goal.”¹³

Collaboration is particularly important in the care of pregnant women with substance use disorders. Guidelines for the identification and management of perinatal substance use were released by the World Health Organization (WHO) in 2013.¹⁴ Acknowledging that multiple factors prevent pregnant women with substance use disorders from receiving appropriate care, WHO calls for the development of comprehensive programs, starting with assessment in the prenatal care setting and providing:

*[a] range of gender-sensitive prevention and treatment interventions that can respond to multiple needs, including childcare needs, comorbid mental and concurrent medical conditions, bloodborne viruses and other infectious diseases, poor diet and psychosocial problems ... homelessness, poverty, and violence.*¹⁴

Evidence-Based Care for Perinatal Substance Use Disorders

Substance use disorders occur along a continuum, from mild through moderate and severe.¹⁵ The choice of the level of care needed by a woman is based on availability of services, her willingness and ability to seek care, her intensity of use, and the type of substance(s) used and their potential impact on perinatal outcomes.¹⁶ For pregnant women with opioid use disorders, recommended treatment includes maintenance therapy with either methadone or buprenorphine due to the significant risks for the woman and fetus associated with illicit drug use and the cycle of recurrent withdrawal.^{9,14,16} Maintenance therapy with buprenorphine is associated with shorter duration of neonatal abstinence symptoms and decreased

neonatal hospitalization compared with methadone.^{9,10} Evidence-based guidelines are available describing comprehensive treatment for pregnant women.^{14,17}

The greatest improvement in perinatal outcomes is demonstrated when maternity care is combined with treatment for substance use disorders; benefits include increased prenatal care attendance and length of gestation, decreased length of hospitalization for newborns, and increased access to family planning services.^{18–21} Treatment programs that are able to offer integrated care for women improve both participation in and satisfaction with care²² and are associated with decreased costs to the health care system.^{19,20} Interviews with pregnant and postpartum women who were enrolled in such programs highlight a desire for care that encourages taking responsibility and is not judgmental and involves consistent, supportive relationships with caregivers.²²

A large, prospective study of women in the Kaiser Permanente system demonstrated that integrating treatment for substance use disorders within the maternity care setting significantly improved birth weight and length of gestation as well as decreased preterm labor, placental abruption, fetal loss, and length of neonatal hospitalization.⁸ Reducing length of stay and treatment intensity for women and their newborns more than compensated for the cost of providing additional services.^{19,20}

Women enrolled in programs integrating maternity care and substance use treatment attend more prenatal visits and are less likely to use illicit drugs at the time of birth than those who are untreated, with corresponding improvement in neonatal outcomes.²⁰ Even in the absence of treatment for substance use, participation in prenatal care in itself appears to be protective for fetuses of pregnant women with substance use disorders; length of gestation and birth weight have been shown to increase proportionally with the number of prenatal visits attended.²³ Unfortunately, pregnant women with moderate to severe substance use are in general less likely to participate in prenatal care, therefore further contributing to poor pregnancy outcomes associated with substance use.¹⁸

Barriers to Integrated Care Models

Few medical centers in the United States have the resources to support freestanding perinatal addiction treatment programs, and maternity care practices generally lack infrastructure to manage what is described by frustrated providers as an

epidemic of drug use among pregnant patients. Therefore, pregnant and postpartum women who are able to access treatment for substance use disorders usually receive this in programs that are independent of where they receive maternity care. Communication with maternity providers is often limited both by a woman's desire for privacy or to conceal her need for treatment, as well as strict Federal regulations regarding the privacy of substance use treatment records. Poor attendance at prenatal appointments makes the coordination of services even more difficult,^{8,18} resulting in fragmented care in the place of an evidence-based, integrated approach. Aggravating the situation is the fact that the staff time spent in case management and coordination between multiple treatment providers is largely nonreimbursable.

Psychiatric Comorbidity

The majority of pregnant women who enter treatment for substance use disorders have co-occurring psychiatric conditions complicating treatment.²⁴⁻²⁶ Up to 73% of pregnant women on methadone have additional psychiatric diagnoses; in some studies, 39% to 58% with depression, 43% with anxiety, and 62% with posttraumatic stress disorder (PTSD) symptoms.²⁴⁻²⁷ Trauma history, in particular childhood physical and sexual abuse, is a strong predictor of drug and alcohol dependence in women.^{28,29} Severity of childhood trauma, number of events, and level of symptoms are positively correlated with risk of relapse among women seeking drug treatment.²⁹ The presence of untreated PTSD is in itself a contributing factor to receiving inadequate prenatal care, mediated by a decreased sense of alliance with providers.³⁰

Provider Knowledge and Attitudes

The approach to prenatal drug and alcohol use taken by maternity care providers strongly impacts a woman's willingness to disclose use and attend follow-up visits.^{21,31,32} However, limited work has been done to measure provider attitudes about prenatal drug and alcohol use. A 2002 study of attitudes among physicians in Michigan toward the legal coercion of pregnant women using drugs or alcohol revealed that 95% of physicians felt that pregnant women have a moral duty to ensure a healthy newborn, 90% were in favor of compulsory treatment, and 46% thought that prenatal substance use should be considered a form of child abuse under statute.³³ In contrast, several studies involving the education of nurse-midwives, medical students, and resident physicians about prenatal substance use showed that training specific to addiction and pregnancy resulted in attitude change away from moral judgment and toward a more compassionate approach.³⁴⁻³⁶ Provider knowledge of and supportive attitudes about drug and alcohol use are specifically identified as facilitators of maternity care attendance by pregnant women with substance use disorders.^{21,31}

Legal Barriers

The most serious barriers to providing evidence-based care for pregnant women with substance use disorders are state laws and regulations regarding prosecution for prenatal drug

and alcohol use. Eighteen states include prenatal substance use as child abuse under civil statutes, and 3 states consider it grounds for civil commitment during pregnancy. Recent legislation and legal decisions in several states have moved in the direction of criminalization. In 2014, Tennessee passed legislation allowing the prosecution of prenatal substance use as a form of assault; in Alabama, the State Supreme Court recently upheld charges of chemical endangerment for prenatal substance use; and in South Carolina, the State Supreme Court has upheld charges of criminal child abuse for prenatal substance use.³⁷ In this context, the disclosure of drug or alcohol use places pregnant women at significant risk for losing custody of their children and possible incarceration. Given the potential penalties, enrollment in treatment might be perceived by women as a risk they are unwilling to take.

INTEGRATING MIDWIFERY CARE INTO ADDICTION MEDICINE IN NEW HAMPSHIRE

In 2013, the Dartmouth-Hitchcock Medical Center Perinatal Addiction Treatment Program was developed in response to growing numbers of pregnant women disclosing opioid use disorders. Many were actively seeking treatment and could not find programs accepting pregnant women or that would accept Medicaid. Some women reported being turned away by more than 20 treatment programs. Attempts by prenatal care providers to find treatment options for their patients met with similar failure, and a growing sense of urgency developed. Before the establishment of the perinatal program in 2013, a small number of these women received care through the well-established general adult addiction treatment program through the Department of Psychiatry at Dartmouth-Hitchcock. However, the addiction treatment program did not have dedicated treatment openings or provide special services for pregnant women.

In response to frustration with this lack of access, the medical center sought to develop a program capable of delivering evidence-based treatment that was both accessible and acceptable to patients. A primary objective of the program is to address and, when possible, mitigate the numerous barriers that women encounter by bringing together as many services as possible at one place and time. As with treatment of other chronic disease, optimal treatment of addiction includes collaboration across a variety of disciplines, with careful attention to care coordination and consistency.^{13,16,17} The Perinatal Addiction Treatment Program is intentionally multidisciplinary and interprofessional. Core staff include a certified nurse-midwife (CNM); a collaborating maternal-fetal medicine physician; a program director/licensed clinical social worker; an addiction psychiatrist/medical director; a pediatric hospitalist; a licensed drug and alcohol counselor; a behavioral health specialist; and 2 frontline staff who coordinate services, manage referrals, and schedule patients.

The first component of the program to be developed was the weekly antepartum and postpartum perinatal addiction clinic. Almost all referrals are for opioid use disorders. The clinic provides medication-assisted treatment for opioid dependence using buprenorphine, a medication that reduces drug cravings through mixed agonist-antagonist activity

at opioid receptors.³⁸ Participants also attend an addiction recovery group for pregnant and postpartum women and individual and/or family counseling. Each participant receives a full psychiatric evaluation and treatment for co-occurring psychiatric diagnoses. The program is currently housed at a location that is approximately a 10-minute drive from the main hospital campus.

Shortly after the program opened, prenatal care providers requested clarification about how best to identify pregnant women in need of treatment and refer them to an appropriate level of care. The 2 departments, obstetrics and gynecology and psychiatry/addiction medicine, worked together to design a structured prenatal screening program based on a screening, brief intervention, and referral for treatment model.³⁹ Implementation in the prenatal clinic was led by a multidisciplinary and interprofessional team including the addiction treatment center director; a nurse-midwife; and the registered nurses in the maternal-fetal medicine, midwifery, and general obstetrics and gynecology divisions. Resident and attending physicians, nurse practitioners, nurse-midwives, and nurses received training in screening and brief intervention techniques, as well as background education regarding substance use disorders. All prenatal patients are now screened for drug and alcohol use with validated screening questionnaires, and guidelines are in place to standardize the referral process to the perinatal addiction treatment program.

Soon after the inception of the perinatal program, participants began to ask about receiving prenatal care at the treatment center instead of having to keep appointments in different locations. It also became evident to prenatal care providers that women were more likely to attend visits at the treatment program than to attend visits at the prenatal clinic. Eight months after the perinatal treatment program opened, midwifery care was established on-site to increase access to prenatal and postpartum care.

Currently, the program serves approximately 40 pregnant and postpartum women. Women have the option to receive both prenatal and postpartum care at the program. Prenatal care is provided by a CNM on a drop-in basis, as well as through scheduled appointments. Women participating in the program are cared for collaboratively with maternal-fetal medicine specialists, unless medical or obstetric conditions require physician care exclusively. Postpartum, family planning, and primary reproductive health services are also offered. Women in the program are encouraged to establish care with primary care providers in their home communities and are also referred as needed to other medical specialties within the Dartmouth-Hitchcock network.

Women participate in the addiction recovery group each week and attend individual medication management appointments with the addiction psychiatrist. The neonatal nursery director visits every few months to provide education about the care of infants with neonatal abstinence syndrome, and the hospital-based maternal-child social worker visits monthly to help women access additional resources and insurance. The program recently received funding to provide healthy lunches and an enhanced prenatal education program. A key component of education is preparation for birth and the neonatal period, interaction with multiple providers in the inpatient setting, and the possibility of a prolonged neonatal

hospitalization if treatment for neonatal abstinence syndrome is needed. Information about Vermont and New Hampshire laws, which mandate reporting of prenatal drug use to child protective services, is shared. A schematic showing the interactions between program components is included in Figure 1.

Program Successes and Challenges

Although it is too early to report on program outcomes, the Prenatal Addiction Treatment Program has already improved coordination of care, increased satisfaction among both pregnant women and providers, and resulted in a higher proportion of recommended prenatal visits attended. Communication between the program staff, maternity care providers, pediatric care providers, and inpatient and clinic nursing staff has been intentionally built through shared education programs and multidisciplinary quality improvement meetings to improve continuity of care for women as they move between the hospital-based prenatal clinic and the perinatal treatment program and between the out-patient and in-patient environments. Working together has also resulted in a noticeable improvement in attitudes expressed by providers about women in the treatment program and a renewed commitment to improving the quality of care provided. Qualitative data also reveal satisfaction among program participants with regard to colocation of prenatal care and addiction treatment, as well as overall positive experiences with hospital staff and improved confidence caring for their newborns (D. Goodman, unpublished, 2015).

A persistent challenge for the program is the fact that, even with access to prenatal care at the perinatal addiction treatment program site, services such as ultrasound and laboratory tests must be obtained at the main hospital campus. Because the treatment program is approximately a 10-minute drive from the hospital, transportation remains a serious problem, particularly if follow-up evaluation is needed to fully assess an obstetric concern (eg, ultrasound or fetal activity testing). In this rural area, bus transportation is limited, and rides that are reimbursed by the New Hampshire Medicaid system cannot be rescheduled on short notice.

Small private grants and donations from the larger community have been helpful for specific projects such as healthy snacks, baby showers for participants, and educational materials. However, funding for continued program development represents a challenge because many of the services provided are not directly reimbursable.

Concordance of the Model with Midwifery Care

Midwives frequently care for women who use drugs and alcohol, whether disclosed by the women or not. The 2004 American College of Nurse-Midwives (ACNM) *Position Statement on Addiction in Pregnancy*⁴⁰ explicitly recognizes addiction as a chronic disease process requiring a team approach and supports legislation that protects the right to treatment without prosecution, calling for compassionate care “within a multidisciplinary environment that provides holistic care for the pregnant woman in the context of her social environment and where consideration of the health risks is paramount.” Additionally, ACNM charges midwives to advocate for public

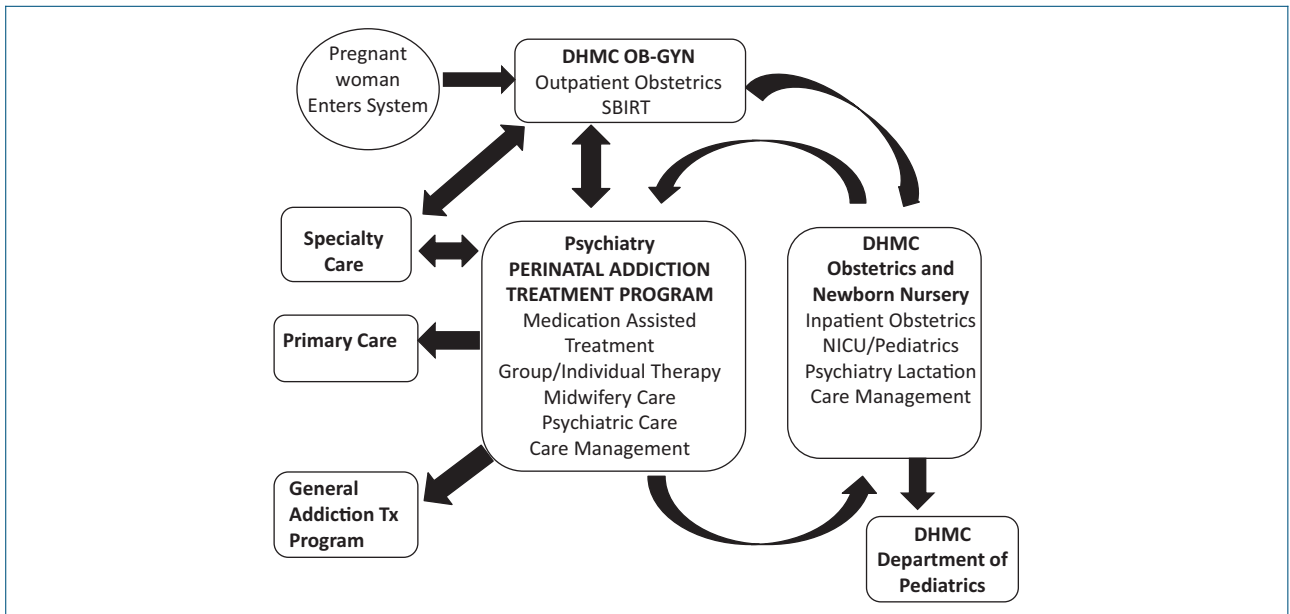


Figure 1. Coordination of Care between Inpatient and Outpatient Services and the Dartmouth-Hitchcock Perinatal Addiction Treatment Program

health programs with innovative approaches to perinatal substance use.⁴⁰

The Agency for Healthcare Research and Quality (AHRQ) calls for the treatment of chronic disease within integrated programs that provide both access to evidence-based treatment and systematic follow-up.¹³ The colocation of midwifery within a perinatal addiction treatment program reflects the model of care that is endorsed by both AHRQ and the Institute of Medicine and supported by the provisions of the ACA. This approach is consistent with the midwifery mission to “provide primary and maternity care services to help women of all ages and their newborns attain, regain, and maintain health.”⁴¹

DISCUSSION

The Perinatal Addiction Treatment Program recently celebrated its first anniversary and is actively involved in outcomes evaluation for this initial year. Key process measures include the number of prenatal visits attended by women; prenatal weight gain; adherence to treatment for substance use disorders, as evidenced by urine toxicology; treatment of concurrent psychiatric diagnoses; and tobacco use. Key outcome measures include length of gestation, birth weight, proportion of newborns requiring treatment for neonatal abstinence syndrome, and duration of treatment postpartum.

Given the complexity of perinatal substance use disorders, a multidisciplinary approach is essential for providing high-quality services. Colocating maternity care within a supportive environment, such as the addiction treatment program, increases access and facilitates smooth coordination with other services. In addition to addiction treatment and prenatal care, women attending the program also have access to psychiatric evaluation and treatment, prenatal education tailored to their needs, and assistance obtaining other resources.

Rebuilding interpersonal relationships based on trust has been identified as a primary theme in women’s addiction

recovery.^{21,22,42} Maintaining continuity through a small group of providers allows relationships to develop and increases the likelihood that women will remain in treatment into the postpartum year.³¹ Proposed future directions for the program include a partners’ group, bringing pediatric primary care on-site, and the addition of a developmental play group.

Although initial response to the Perinatal Addiction Treatment Program has been positive, it is imperative to evaluate outcomes over time and to ensure that the program is financially sustainable. Because of the relative homogeneity of our service population and the resources available at an academic medical center, the colocation model may need adaptation before it can be replicated in other contexts.

The disturbing trend toward criminalization of prenatal drug and alcohol use presents an enormous barrier to the development of evidence-based services for pregnant women with substance use disorders. It is important to acknowledge that, although the regulatory environment in New Hampshire and Vermont facilitates the existence of the Dartmouth-Hitchcock program, this is not the case in some other states. In the spirit of the ACNM *Position Statement on Addiction in Pregnancy*,⁴⁰ midwives should advocate against laws punishing pregnant women who seek treatment for drug and alcohol use disorders and in favor of accessible care for all women.

Maternity care providers can play a central role in the development and delivery of services for pregnant women with substance use disorders. The Dartmouth-Hitchcock Medical Center Perinatal Addiction Treatment Program offers one innovative approach to coordinating services, which could be easily adapted to meet the needs of a given community.

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CONFLICT OF INTEREST

The author has no financial disclosures or conflicts of interest.

ACKNOWLEDGMENTS

The author acknowledges the courage and hard work of the women who come to the Addiction Treatment Program for care, as well as the colleagues (too many to mention by name) in the Departments of Obstetrics and Gynecology, Psychiatry, and Pediatrics, who make the program possible.

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