CLINICAL GUIDANCE FOR TREATING PREGNANT AND PARENTING WOMEN WITH OPIOID USE DISORDER AND THEIR INFANTS

DEPARTMENT OF HEALTH & HUMAN SERVICES • USA

Substance Abuse and Mental Health Services Administration
SAMHSA
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Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants

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Background

The nation's opioid epidemic continues to compromise the health and well-being of individuals, families, and communities. Federal policymakers and agencies are developing, implementing, and funding strategies focused on turning the tide (**U.S. Department of Health and Human Services** [HHS], 2016]) to address opioid misuse, opioid use disorder (OUD), fatal and non-fatal drug overdoses, prenatal substance exposure, dissolution or breakup of families, and financial ruin experienced in communities nationwide.

Epidemiology

In 2015, more than 27 million people in the United States reported current use of an illicit drug or misuse of prescription drugs in the past 30 days (Center for Behavioral Health Statistics and Quality [CBHSQ], 2016). The number of women of childbearing age, defined as ages 15–44, who reported past-month heroin use increased to 109,000 in 2013–2014, an increase of 31 percent from 2011–2012 (CBHSQ, 2015, Table 6.71A). The number of women ages 15–44 who reported past-month misuse of prescription pain relievers such as OxyContin© increased to 98,000 in the same period, an increase of 5.3 percent (CBHSQ, 2015, Table 6.71A). The Centers for Disease Control and Prevention (CDC) estimates that one-third of reproductive-age women enrolled in Medicaid and more than one-quarter of those with private insurance filled a prescription for an opioid pain medication each year between 2008 and 2012 (Ailes et al., 2015). The prevalence of OUD during pregnancy more than doubled between 1998 and 2011 to 4 per 1,000 deliveries (Maeda, Bateman, Clancy, Creanga, & Leffert, 2014).

Neonatal abstinence syndrome (NAS) is a group of physiologic and neurobehavioral signs of withdrawal that may occur in a newborn who was exposed to psychotropic substances (e.g., opioids) in utero. Opioid use, whether resulting from prescription misuse or from illicit use, has consequences for the mother–infant dyad, with anywhere from 50 to 80 percent of opioid-exposed infants developing NAS (Jones, Chisolm, Jansson, & Terplan, 2012; Patrick, Dudley, et al., 2015).

From 2009 to 2012, the number of infants diagnosed with NAS increased from 3.4 to 5.8 per 1,000 hospital births, with more than 20,000 infants diagnosed with NAS in 2012 (Patrick, Davis, Lehmann, & Cooper, 2015). The rate of NAS per 1,000 hospital births is not uniform across the nation; rates in rural regions are generally higher than those in urban regions (Villapiano, Winkelman, Kozhimannil, Davis, & Patrick, 2017). The increase in numbers of infants with NAS, along with other complications, and approach the hospital takes to treating NAS contributes to substantially increased hospital costs, with an average mean charge of $93,400 in 2012 dollars (Patrick, Davis, et al., 2015).

Barriers to Treatment

Women with OUD and their infants face critical barriers to optimal care such as legal consequences in several states with statutes that sanction pregnant women with OUD. The goal of these efforts is to protect the fetus or infant from opioid exposure (Guttmacher Institute, 2017; House, Coker, & Stowe, 2016) but these legal consequences may drive women away from available care, seeking care or continuing to engage in care thereby potentially leading to worse outcomes for both the fetus and mother (Angelotta, Weiss, Angelotta & Friedman, 2016). The dichotomy between such policies and recommendations of healthcare professionals (e.g., American Academy of Addiction Psychiatry, 2015; American Society of Addiction Medicine [ASAM], 2015; Committee on Healthcare for Underserved Women, ASAM, & American College of Obstetricians and Gynecologists [ACOG], 2011; Patrick, Schiff, & American Academy of Pediatrics [AAP] Committee on Substance Use and Prevention, 2017) with regard to substance use disorder (SUD) screening and treatment, reporting of substance use during pregnancy and the postpartum period, and involvement of child protection services can be confusing (House et al., 2016). The shame associated with OUD during pregnancy and motherhood and the misinformation

among healthcare professionals and systems that results in reluctance to provide care for such women, are also significant barriers. Together, these barriers can prevent women from receiving essential prenatal care or treatment for their OUD until they are close to delivery or in labor. Barriers can also prevent the woman from receiving essential care during the postpartum period. Without treatment, pregnant women with OUD face increased risks of preterm delivery, low infant birth weight, and transmitting HIV to their infants (Binder & Vavrinková, 2008).

Effective Interventions and Guidelines

Effective interventions for OUD, including medication-assisted treatment (MAT), do exist, and healthy outcomes can occur for both the mother and the infant, but only when healthcare professionals can recognize and treat SUDs, which include OUD, and substance exposure in infants. The Substance Abuse and Mental Health Services Administration (SAMHSA) developed the clinical guidance in this document to meet an urgent need among professionals who care for women with OUD and substance-exposed infants for reliable, useful, and accurate information that can be applied in clinical practice to optimize the outcome for both mother and infant.

Currently, guidelines for treatment of pregnant women with OUD are available at global, country, and state levels (e.g., **Commonwealth of Pennsylvania**, 2016; **Council of the Society of Obstetricians and Gynaecologists of Canada**, 2011; **New South Wales Ministry of Health, Australia**, 2006; **Norwegian Directorate of Health**, 2011; **Vermont Department of Health, Division of Alcohol and Substance Abuse Programs, & Department of Vermont Health Access**, 2010; **World Health Organization** [WHO], 2014). SAMHSA has published two guides specifically for pregnant women with OUD in recent years: **Methadone Treatment for Pregnant Women** (SAMHSA, 2014) and **A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers** (SAMHSA, 2016a). A recent CDC guideline (Dowell, Haegerich, & Chou, 2016) addresses issues in opioid prescribing, focusing on nonpharmacologic therapy and nonopioid pharmacologic therapy in the treatment of chronic pain in the general population. The CDC guideline recommends that, if opioids must be prescribed for acute pain, the effective dosage should be used for 3 or fewer days and rarely more than 7 days (Dowell et al., 2016, Box 1, Item #6). The CDC guideline does not specifically address the issue of OUD in pregnant women. ASAM **National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use** devotes a chapter to special pharmacotherapy concerns for pregnant and parenting women (ASAM, 2015).

The urgent need for clinical guidance supporting the individualized management of pregnant and parenting women with OUD was reinforced during the development of this Guide by audience responses to presentations of preliminary recommendations at the 2016 annual conferences of ASAM and the American Association for the Treatment of Opioid Dependence. At these conferences, SAMHSA staff and expert panel members (**Exhibit A.1**) provided updates on the completion of the RAND/UCLA Appropriateness Method (RAM) report and the development of this Guide. Conference attendees reaffirmed the need for resources such as this Guide to provide information on the most current pharmaceutical treatments, specifically MAT, to support recovery from opioid use in pregnant women and treatment for infants exposed to opioids in utero.

This Guide provides comprehensive, national guidance for the optimal management of pregnant and parenting women with OUD and their infants based on the recommendations of experts reviewing the limited evidence available for this population as of 2017. In the past, only one option was available for OUD treatment in pregnant women. Today, more options are available, so healthcare professionals need to provide more education to their patients and obtain their detailed informed consent to ensure decision-making is shared between the pregnant woman or new mother and the healthcare professional. This Guide will help healthcare professionals and patients determine the most clinically appropriate action for a particular circumstance, with

Exhibit A.1: Expert Panelists*

Name, Degree	Affiliation
Shahid Ali, MD, MBBS	Meharry Medical College Rainbow Program
Diana Coffa, MD	Department of Family and Community Medicine, University of California San Francisco, School of Medicine
Deborah Finnell, DNS, PMHNP-BC, CARN-AP, FAAN	Department of Acute and Chronic Care, Johns Hopkins University School of Nursing
Lauren Jansson, MD	Department of Pediatrics, Johns Hopkins University School of Medicine, and Center for Addiction and Pregnancy, Johns Hopkins Bayview Medical Center
Hendrée E. Jones, PhD, Chair	University of North Carolina at Chapel Hill School of Medicine, Department of Obstetrics and Gynecology, and the UNC Horizons Program
Marjorie Meyer, MD, FACOG	Maternal–Fetal Medicine Division, University of Vermont College of Medicine
Stephen Patrick, MD, MPH, MS, FAAP	Departments of Pediatrics and Health Policy, Division of Neonatology, Vanderbilt University School of Medicine
Charles Schauberger, MD, MS, FACOG, CPE	Gundersen Health System, La Crosse, Wisconsin
Mishka Terplan, MD, MPH, FACOG	Department of Obstetrics and Gynecology, Virginia Commonwealth University School of Medicine

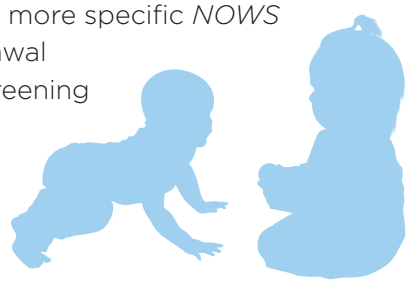
*The expert panel comprised health professionals and scientists representing diverse geographic areas and disciplines, including family practice, neonatology, nursing, obstetrics/gynecology, pediatrics, psychology, and psychiatry.

the expectation that the healthcare professionals will make individualized treatment decisions. A cornerstone of the Guide is that a healthy pregnancy results in a healthy infant and mother. The Guide recognizes the mother and infant as a dyad, and the recommendations are provided in light of what actions will optimize the outcomes for the mother–infant dyad as a whole, with guidance provided from preconception to several months postpartum and for the first few years of infant development.

Definition of Terms

The **Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition**, defines OUD as "a problematic pattern of opioid use leading to clinically significant impairment or distress" (American Psychiatric Association, 2013). People with OUD typically experience a strong desire for opioids, inability to control or reduce use, continued use despite interference with major obligations or social functioning, use of larger amounts over time, development of tolerance, spending a great deal of time to obtain and use opioids, and withdrawal symptoms that occur after stopping or reducing use, such as negative mood, nausea or vomiting, muscle aches, diarrhea, fever, and insomnia (SAMHSA, 2015). The term *infant* is used in this document for infants at birth to the first 12 months, and the majority of the postnatal materials are focused on infants younger than 12 months, although there are some recommendations for developmental assessments in young children.

Fetuses exposed to tobacco, alcohol, prescription medications (e.g., benzodiazepines), and illicit substances may exhibit signs of physiologic withdrawal from these substances after birth. NAS is a nonspecific term assigned to this type of presentation in the newborn. It is widely applied clinically and in the published literature to infants withdrawing from opioids. However, the more specific term *neonatal opioid withdrawal syndrome* (NOWS) is becoming more widely used. The utility of the more specific *NOWS* term is to more accurately identify the numbers of infants experiencing withdrawal from opioid exposure in utero. This distinction is important because specific screening and treatment protocols can be used to promote the best outcomes for these infants whereas infants not exposed to opioids may require different assessment (e.g., Neonatal Intensive Care Unit Network Neurobehavioral Scale) and management (e.g., other medication to treat withdrawal).



However, the published literature uses the more general NAS term, and, in clinical practice, prenatally substance-exposed infants are typically exposed to multiple substances. The research publications relied on to support this Guide almost universally studied pregnant women with SUD, rather than OUD only. As such, this Guide uses the term *NAS* when referring to the withdrawal symptoms expressed by infants delivered to mothers with SUD, including OUD.

Creation of the Guide

This Guide recommends feasible, standard approaches to the care of pregnant and parenting women with OUD and their infants that can be adopted in care settings throughout the United States. It also provides clinical guidance for healthcare professionals seeking to optimize outcomes for women and infants in their care. The following sections briefly describe the rationale for selecting the RAND/UCLA Appropriateness Method ([RAM]; Fitch et al., 2001) to accomplish these goals and how RAM results were clinically translated into this Guide. Healthcare professionals may need to adjust their approaches and processes as higher quality evidence and new information about OUD treatments become available.

The rationale for applying RAM to the creation of this Guide is twofold. First, randomized clinical trials—the "gold standard" for evidence-based medicine—are generally not conducted with this population. Second, even when such trials do exist, they may not provide direct evidence at a sufficient level of detail to apply to the range of patients that healthcare professionals see in their daily practice. Where there was no robust evidence for a particular practice or treatment approach, RAM reviewers rated the treatment options based on their expertise and clinical experience with the patient population.

> The expert panelists and Federal Steering Committee did not review the use of the long-acting forms of buprenorphine because they had not been approved by FDA at the time of the RAM review.

Exhibit A.2: Guidelines Used To Inform the RAM Process

- **Clinical Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, Revised 2015** (Reece-Stremtan, Marinelli, & Academy of Breastfeeding Medicine, 2015)
- **Clinical Report: Neonatal Drug Withdrawal (revised)—Guidance for the Clinician in Rendering Pediatric Care** (Hudak, Tan, AAP Committee on Drugs, & AAP Committee on Fetus and Newborn, 2012)
- Committee Opinion No. 524: Opioid abuse, dependence, and addiction in pregnancy. Committee on Healthcare for Underserved Women, American Society of Addiction Medicine, & American College of Obstetricians and Gynecologists. (2012, reaffirmed 2016).
- **Guidelines for the Identification and Management of Substance Use and Substance Use Disorders in Pregnancy** (WHO, 2014)
- **National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use** (ASAM, 2015)

Exhibit A.3: Scientific Advisors for the Expert Panel

Name, Degree	Affiliation
Sonia Hernandez-Diaz, MD, DrPH	Pharmacoepidemiology Program, Harvard School of Public Health
Karol Kaltenbach, PhD, Emeritus	Pediatrics, Sidney Kimmel Medical College Thomas Jefferson University
Walter Ling, MD	Psychiatry and Biobehavioral Sciences and Integrated Substance Abuse Program, University of California Los Angeles, David Geffen School of Medicine

Exhibit A.4: Agencies and Offices Participating in the FSC

Assistant Secretary for Planning and Evaluation, HHS	National Institutes of Health, HHS
Centers for Disease Control and Prevention, HHS	Office of National Drug Control Policy, The White House
Centers for Medicare & Medicaid Services, HHS	Office of the Assistant Secretary for Health, HHS
Federal Bureau of Prisons, U.S. Department of Justice	Office on Women's Health, HHS
Food and Drug Administration, HHS	Substance Abuse and Mental Health Services Administration, HHS
Health Resources and Services Administration, HHS	U.S. Department of Defense
Indian Health Service, HHS	U.S. Department of Veterans Affairs

RAM Methodology

The expert panelists' evidence review and rating processes were informed by an extensive literature review (Klaman et al., 2017), evidence from 5 published guidelines (**Exhibit A.2**), expertise of 3 scientific advisors (**Exhibit A.3**) who participated in discussions during the in-person expert panel work session but did not rate the items under consideration, and input from the Federal Steering Committee (FSC) representing 14 agencies, including SAMHSA (**Exhibit A.4**).

The members of the FSC oversaw the entire RAM process and development of the RAM report and provided agency perspectives when needed.

The expert panel and FSC considered the use of methadone, buprenorphine, buprenorphine/naloxone, and naltrexone in pregnant and parenting women with OUD as well as the option of medically-supervised withdrawal. They did not review the use of the long-acting buprenorphine implant (Probuphine®) because it had not been approved at the time of the RAM review. In addition, the product labeling states that the buprenorphine implant dose cannot be adjusted, so it may not be the best treatment option for pregnant patients who frequently need dose adjustments in later stages of pregnancy (Braeburn Pharmaceuticals, Inc., 2016).

Limitations to the RAM Process and Gaps Identified in the Research

Few clinical trials have been conducted on pregnant or parenting women with OUD. In many cases, only a few papers exist on this specific topic, and some papers had insufficient statistical power to support strong recommendations promoting or discouraging a particular intervention. The RAM process revealed that there was a limited evidence base for nearly two-thirds of the clinical actions expected in the management of the mother–infant dyad in the context of OUD. Accordingly, expert panelists had to rate the clinical decisions based on summary statements from other guidelines and the literature, in tandem with their own clinical experience and advice from the scientific advisors and FSC members. A thorough review of the gaps identified in the research on pregnant women with OUD is available in Klaman et al. (2017).

A detailed report on the RAM process was made available for public comment for 30 days (SAMHSA, 2016b). Relevant comments and suggestions from the public were incorporated into the Guide during its development.

Because of the lack of robust evidence to inform guidance on clinical actions for pregnant women, expert panelists used the RAND/UCLA Appropriateness Method to establish the best recommendations possible at the time.

Healthcare professionals can use the Guide to help women and their families consider their options and make critical decisions for themselves and their infants. All RAM participants were mindful of patient autonomy throughout the deliberation process. Given the principle of patient autonomy, pregnant and parenting women are free to make decisions based on their understanding of their illness, its process, and its outcomes. However, because of the nature of the maternal–fetal dyad and mother–infant dyad, RAM participants were also attentive to the complexity of offering the best treatment options for the mother and the infant and balancing the needs of both patients (Velez & Jansson, 2008). The release of this Guide is an important step toward ensuring that healthcare professionals have access to and are aware of research relevant to the care of pregnant and parenting women who have OUD and their infants.

How To Use the Clinical Guide

With even the soundest of evidence, research findings can be difficult to apply clinically. In practice, unique patient variables, the mother's preferences, the experience of the clinician, and available resources must be considered.

Exhibit A.5: Factsheets in Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants

Section I: Prenatal Care

- Factsheet #1: Prenatal Screenings and Assessments
- Factsheet #2: Initiating Pharmacotherapy for Opioid Use Disorder
- Factsheet #3: Changing Pharmacotherapy During Pregnancy
- Factsheet #4: Managing Pharmacotherapy Over the Course of Pregnancy
- Factsheet #5: Pregnant Women With Opioid Use Disorder And Comorbid Behavioral Health Disorders
- Factsheet #6: Addressing Polysubstance Use During Pregnancy
- Factsheet #7: Planning Prior to Labor and Delivery
- Factsheet #8: Peripartum Pain Relief

Section II: Infant Care

- Factsheet #9: Screening and Assessment for Neonatal Abstinence Syndrome
- Factsheet #10: Management of Neonatal Abstinence Syndrome
- Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome
- Factsheet #12: Infant Discharge Planning
- Factsheet #13: Early Interventions Strategies and Developmental Assessments

Section III: Maternal Postnatal Care

- Factsheet #14: Adjusting Pharmacotherapy Dose Postpartum
- Factsheet #15: Maternal Discharge Planning
- Factsheet #16: Maternal Return to Substance Use

The Guide consists of Part A: Introduction, Part B: Clinical Guidance (Factsheets 1–16), Part C: Conclusion, and Appendices A–D. References are located at the end of Part A and at the end of each section in Part B. Appendix C compiles all the references cited and resources mentioned throughout the Guide for easy reference.

As shown in **Exhibit A.5**, the factsheets in Part B are grouped into three categories: Section I: Prenatal Care (Factsheets #1–8); Section II: Infant Care (Factsheets #9–13); and Section III: Maternal Postnatal Care (Factsheets #14–16).

Each factsheet contains four elements, as detailed in **Exhibit A.6**. The concise recommendations in this Guide (the Clinical Action Steps) are accompanied by Supporting Evidence and Clinical Considerations that are more discursive and can assist the healthcare professional in making evidence-informed decisions that are individualized to the needs of each patient and local circumstances.

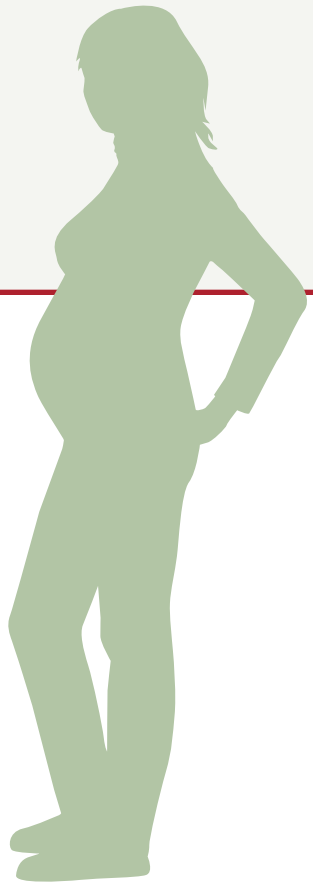
Exhibit A.6: Factsheet Elements

I. **Clinical Scenario**
Presents a brief statement to orient the healthcare professional to the situation under consideration.

II. **Clinical Action Steps**
Present recommendations that are derived directly from the rated clinical decisions in the RAM report and describe what can, might, or should not be done when caring for women and their infants.

III. **Supporting Evidence and Clinical Considerations**
Present strengths and weaknesses of the evidence supporting the clinical action steps. This section describes how to address or tailor recommended actions to unique patient variables and preferences, the necessary clinical experience of the provider, and available community resources. Guidance is based on expert panel and FSC discussions and additional information on treatment recommendations. *For the most part, the topics in this section lack sufficient evidence to recommend a clear course of action. Instead, they detail elements that must be taken into consideration when making a decision with the pregnant woman or new mother about the best course of action.*

IV. **Web Resources**
Provide links to additional online information.



There are three appendices: Appendix A is a compilation of suitable development assessments for opioid-exposed infants and children; Appendix B is a glossary and list of acronyms; and Appendix C is a master list of references.

Users may download the Guide as a single PDF document and print out sections and factsheets of particular interest. Text in **boldface** indicates that more information about the item or the item itself is hyperlinked and can be downloaded directly from this document. The term FS # is used in the factsheets to number exhibits (e.g., FS #1.1 indicates the first exhibit in Factsheet #1). Healthcare professionals are encouraged to sign up at **www.samhsa.gov** to receive **updates on information** in the factsheets.

WEB RESOURCES

2015 National Drug Threat Assessment Summary
This Drug Enforcement Administration report provides recent data on drug availability and usage, including heroin and controlled substances.

Advancing the Care of Women With Opioid Use Disorder While Pregnant or Parenting: Clinical Indications for Developing a National Guide
This SAMHSA report describes the process by which clinical indications were prepared and the review of current treatment for pregnant and parenting women with OUD.

ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use
This ASAM publication provides information on evidence-based treatment of OUD.

Children's Bureau Information Memorandum (IM)
The purpose of this information memorandum from the Administration for Children & Families is to inform states of the enactment of the 2016 Comprehensive Addiction and Recovery Act (Public Law 114-198) and provide basic information on the resulting changes in the Child Abuse Prevention and Treatment Act for child abuse or neglect prevention and treatment programs. This memorandum outlines related best practices.

Fact Sheet—FDA Opioids Action Plan
This 2016 Food and Drug Administration publication details the plans the agency has developed to combat opioid abuse, dependence, and overdose in the United States.

Protecting Our Infants Act Report to Congress
This SAMHSA report provides information on the Act mandating that HHS conduct a review of planning and coordination activities related to prenatal opioid exposure and NAS; develop recommendations for the identification, prevention, and treatment of prenatal opioid exposure and NAS; and develop a strategy to address gaps, overlap, and duplication among federal programs and coordination efforts to address NAS.

Substance Use Disorder
This SAMHSA website provides the facts on common SUDs such as those related to alcohol, tobacco, cannabis, stimulants, hallucinogens, and opioids.

TIP addressing Medications for Opioid Use Disorder. In press.
SAMHSA will release a new TIP on addressing medications for opioid use disorder in early 2018. Please check the SAMHSA Store for the new TIP.

U.S. Department of Health and Human Services Final Rule
This SAMHSA report describes the final rule that expands access to pharmacotherapy by allowing eligible healthcare professionals to request approval to treat up to 275 patients under section 303(g)(2) of the Controlled Substance Act. The final rule also includes requirements to ensure that patients receive the full array of evidence-based MAT services and to minimize the risk that the treatment medications are misused or diverted.

Final Report: Opioid Use, Misuse, and Overdose in Women
This HHS Office on Women's Health publication provides an overview of the prevention, treatment, and recovery issues for women who misuse opioids, have OUD, and/or overdose on opioids.

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Part B: Factsheets

Part B consists of 16 factsheets organized into three sections:

Section I: Prenatal Care

- Factsheet #1: Prenatal Screenings and Assessments
- Factsheet #2: Initiating Pharmacotherapy for Opioid Use Disorder
- Factsheet #3: Changing Pharmacotherapy During Pregnancy
- Factsheet #4: Managing Pharmacotherapy Over the Course of Pregnancy
- Factsheet #5: Pregnant Women With Opioid Use Disorder And Comorbid Behavioral Health Disorders
- Factsheet #6: Addressing Polysubstance Use During Pregnancy
- Factsheet #7: Planning Prior to Labor and Delivery
- Factsheet #8: Peripartum Pain Relief

Section II: Infant Care

- Factsheet #9: Screening and Assessment for Neonatal Abstinence Syndrome
- Factsheet #10: Management of Neonatal Abstinence Syndrome
- Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome
- Factsheet #12: Infant Discharge Planning
- Factsheet #13: Early Interventions Strategies and Developmental Assessments

Section III: Maternal Postnatal Care

- Factsheet #14: Adjusting Pharmacotherapy Dose Postpartum
- Factsheet #15: Maternal Discharge Planning
- Factsheet #16: Maternal Return to Substance Use

Section I: Prenatal Care

Section I consists of eight factsheets:

Factsheet #1: Prenatal Screenings and Assessments

Factsheet #2: Initiating Pharmacotherapy for Opioid Use Disorder

Factsheet #3: Changing Pharmacotherapy During Pregnancy

Factsheet #4: Managing Pharmacotherapy Over the Course of Pregnancy

Factsheet #5: Pregnant Women With Opioid Use Disorder and Comorbid Behavioral Health Disorders

Factsheet #6: Addressing Polysubstance Use During Pregnancy

Factsheet #7: Planning Prior to Labor and Delivery

Factsheet #8: Peripartum Pain Relief

Each factsheet contains four components.

I. **Clinical Scenario**
Presents a brief statement to orient the reader to the situation under consideration.

II. **Clinical Action Steps**
Present recommendations that are derived directly from the rated clinical decisions in the RAND/UCLA Appropriateness Method report and describe what can, might, or should not be done when caring for women and their infants.

III. **Supporting Evidence and Clinical Considerations**
Present strengths and weaknesses of the evidence supporting the clinical action steps. This section describes how to address or tailor recommended actions to unique patient variables and preferences, the clinical experience of the provider, and available community resources. Guidance is based on expert panel and Federal Steering Committee discussions and additional information from published articles. *For the most part, the topics in this section lack sufficient evidence to recommend a clear course of action. Instead, they detail elements that must be taken into consideration when making a decision with the pregnant woman or new mother about the best course of action.*

IV. **Web Resources**
Provide links to additional online information.

FACTSHEET #1: Prenatal Screenings and Assessments

CLINICAL SCENARIO: A pregnant woman with opioid use disorder (OUD) presents for care.

- Screenings
- Prescription drug monitoring program
- Social, medical, and legal consequences
- Prenatal care access and OUD
- Pharmacotherapy, pregnancy, and care coordination
- Opportunities for positive change
- Adjusting to pharmacotherapy, other medications, and pregnancy
- OUD and HIV/AIDS, viral hepatitis infection, and sexually transmitted infections

FACTSHEET #2: Initiating Pharmacotherapy for Opioid Use Disorder

CLINICAL SCENARIO: A pregnant woman with OUD requests treatment.

- Medication-assisted treatment (MAT)
- Patient education
- Addressing infant safety and pharmacotherapy
- Pharmacotherapy and withdrawals and cravings
- Substance Abuse and Mental Health Services Administration treatment directories
- Informed consent for pregnant patients
- Individualized treatment plans
- Discussing treatment-specific potential legal, social, and medical consequences, including neonatal abstinence syndrome (NAS)

FACTSHEET #3: Changing Pharmacotherapy During Pregnancy

CLINICAL SCENARIO: A pregnant woman wishes to discuss changing her existing pharmacotherapy for OUD or wants to undergo medically supervised withdrawal from opioids.

- Prioritizing patient stability
- Medically supervised withdrawal concerns and considerations
- Discussing changes to opioid agonist treatment
- NAS severity and maternal pharmacotherapy dose not correlated
- Expanding actions for improving maternal and infant health
- Evolving positions on transitioning between combination buprenorphine/naloxone and buprenorphine-only products
- Changes in pharmacotherapy and potential return to substance use
- Daily interactions and observed dosing
- Discouraging perinatal pharmacotherapy withdrawal

FACTSHEET #4: Managing Pharmacotherapy Over the Course of Pregnancy

CLINICAL SCENARIO: A pregnant woman treated with pharmacotherapy for OUD is experiencing withdrawal or cravings.

- Common pharmacotherapy adjustments
- Pregnancy and medication metabolism increases
- Pharmacotherapy dose not associated with NAS
- Benefits of counseling
- Role for peer support specialists
- Support with mutual-aid groups accepting of pharmacotherapy

FACTSHEET #5: Pregnant Women with Opioid Use Disorder and Comorbid Behavioral Health Disorders

CLINICAL SCENARIO: A pregnant woman with opioid use disorder (OUD) and comorbid behavioral health disorders needs help managing these conditions.

- Balancing maternal mental health needs and fetal polypharmacy considerations
- Comorbid mental health conditions common with OUD
- Considering possible drug interactions
- Complexity of treating comorbid substance use and mental health disorders
- Antidepressants, anticonvulsants, anxiolytics, and NAS
- Risks of combining benzodiazepines with opioid agonist treatment
- Widespread discrimination, prejudice, and bias against people with substance use and/or mental disorders

FACTSHEET #6: Addressing Polysubstance Use During Pregnancy

CLINICAL SCENARIO: A pregnant women with OUD requires help on (1) a return to opioid use; (2) her use of alcohol, cocaine, cannabis, or tobacco; (3) her comorbid misuse of prescribed medications, including benzodiazepines, amphetamines, or other pharmacotherapies, whether licitly or illicitly obtained; and (4) the impact of these medications and other substances on her health and that of the fetus.

- Return to opioid use
- Return to other substance use
- Return to substance use is common and often a dynamic process
- Polysubstance use concerns for women and infants
- A variety of prescription and illicit substances can affect NAS
- Pregnancy, medication metabolism, and dose adjustment
- Smoking and association with poorer pregnancy, fetal development, and postnatal infant outcomes
- Cannabis and low birth weight infants
- Coordination with hospital resources and comprehensive healthcare plans

FACTSHEET #7: Planning Prior to Labor and Delivery

CLINICAL SCENARIO: A pregnant woman with OUD has questions about NAS, support services, and postpartum planning.

- Patient education on NAS
- Healthy home environment
- Contraception, unintended pregnancies, and planning future pregnancies
- Explaining opioid withdrawal and tolerance
- Discussing various steps to maximize maternal and fetal health
- Including breastfeeding benefits in delivery planning
- Community-based supports for mothers in recovery
- Consumer-, patient-, and peer-based community supports

FACTSHEET #8: Peripartum Pain Relief

CLINICAL SCENARIO: A pregnant woman with OUD, in treatment or not, needs pain relief during her labor, delivery, and postpartum period.

- Pain management options
- Differentiating OUD pharmacotherapy and pain management
- Documenting pain discussion in medical records
- Analgesia adequacy and ensuring pain relief
- Contraindicated medications

SECTION 1
FACTSHEET #
1

PRENATAL SCREENINGS AND ASSESSMENTS

CLINICAL SCENARIO

A pregnant woman with opioid use disorder (OUD) presents for care.

CLINICAL ACTION STEPS

Screenings

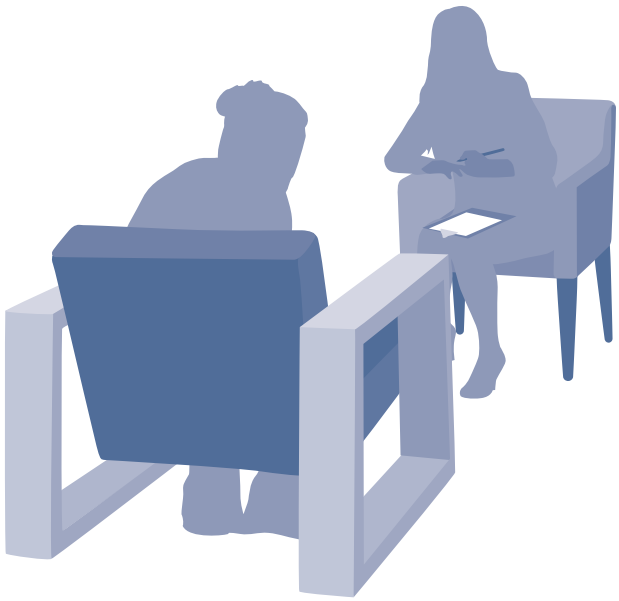
When a pregnant woman presents requesting prenatal care and help with her substance use disorder, conduct a careful, empathetic, and nonjudgmental interview with her that lets her know that all new patients are asked the same questions about substance use. Because polysubstance use is common, a validated screening instrument for other substance use may also be given to the patient for self-completion and reviewed by a healthcare professional. This screening should be conducted in a clinically appropriate and therapeutic manner. To ensure that information is gathered and addressed effectively, screening may be part of a formal **screening, brief intervention, and referral to treatment** (SBIRT) protocol such as that created by the Substance Abuse and Mental Health Services Administration (SAMHSA).

Prescription Drug Monitoring Program (PDMP)

A review of data in the state's PDMP to identify all reported medications that have been prescribed to the woman needs to be included as part of the initial visit and rechecked over the course of the care.

Medical, Social, and Legal Consequences

Pregnant women with OUD should receive counseling and education on the medical and social consequences of pharmacotherapy for OUD, continued use of legal and illicit substances while pregnant, and withdrawal from opioids while pregnant with inherent risks to mother and fetus of relapse.



Owing to differing state, county and local laws and regulations, there is no universal approach to assessing the social and legal consequences of legitimate pharmacotherapy for OUD or other substance use during pregnancy.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Screenings

- **Types of screenings vary.** The World Health Organization's (WHO's) **Guidelines for the Identification and Management of Substance Use and Substance Use Disorders in Pregnancy** recommends that healthcare professionals ask *all* pregnant women about their use of alcohol and other substances (i.e., past, present, prescribed, licit, and illicit use) as early as possible in the pregnancy and at every follow-up visit (WHO, 2014). Healthcare professionals need to determine whether any of their pregnant patients are currently taking (or have recently taken) methadone, buprenorphine or other long-acting opioids (Breen et al., 2003; Chasnoff, 2003; Kraus et al., 2011).

> The mother's history should include illicit and licit substance use before and during pregnancy with special attention to high-risk behaviors such as injecting drug use, current exposure to interpersonal violence, and behavioral health history such as anxiety, depression, or trauma.

- **Interviews and Instruments**
  A complete substance use history is essential to establishing a safe and appropriate treatment plan that the woman and the healthcare professionals can agree on (Federation of State Medical Boards [FSMB], 2013). This history combines interviews and results from standardized assessment instruments. Ideally, the history would include (SAMHSA, 2015):
  - The nature of the patient's SUDs.
  - Underlying or co-occurring diseases or conditions.
  - The effect of opioid use on the patient's physical and psychological functioning.
  - Outcomes of past treatment episodes

Exhibit FS #1.1 provides a list of common paper-and-pencil screening tools for substance use.

- **Toxicology Screens**
  The pregnant woman should be asked to provide informed consent for urine, blood, or saliva screenings for substance use. Although oral informed consent is used in many labor-and-delivery clinics, a signed paper or electronic form is preferred. The healthcare professional should review with the pregnant woman the risks and limitations of each type of test and the need for confirmatory testing for any positive results (e.g., using gas chromatography/mass spectrometry confirmation) and ensure that she understands the process and meaning of test results before specimen collection (e.g., known false-positive test results may be due to cross-reactions of other substances such as cold medicines, which can produce a positive amphetamine result). It is helpful to ask the pregnant woman what, if anything, she expects might be detected and to give her an opportunity to describe her substance use patterns and behavior. The toxicology screen should be obtained even when substance use is self-reported so that a baseline can be confirmed. In addition to the routine HIV, sexually transmitted infections, and hepatitis screens ordered for all pregnant women, other laboratory tests should be ordered when an SUD is possible. The standard testing for sexually transmitted infections (e.g., syphilis) done at the initial prenatal assessment may be repeated in the third trimester or at delivery.

Exhibit FS #1.1: Examples of Instruments To Detect Substance Use in Pregnant Women

Measure	Substance/ Health Problem Screened	# of Items	Method of Administration	Training in Administration Necessary?	Validation Sample(s)	Sensitivity	Specificity
4P's Plus©[a] and Integrated 5P's	**Integrated 5P's:** Violence, mental health, tobacco, alcohol, and illicit substances	5	Paper-and-pencil	No	Inpatient and outpatient	87%	76%
Substance Use Risk Profile–Pregnancy (SURP-P[b,c,d])	Alcohol and substances	3	Paper-and-pencil	No	Prenatal clinic	Low risk: 80–100% High risk: 48–100%	Low risk: 61–64% High risk: 84–86%
Tolerance, Annoyed, Cut-down, Eye-opener (T-ACE)	Alcohol	4	Paper-and-pencil	No	Prenatal clinic	60–91%[d]	37–79%[d]
Tolerance, Worried, Eye-opener, Amnesia, K[C]ut-down (TWEAK)	Alcohol	5	Paper-and-pencil	No	Prenatal clinic	59–92%[d]	64–92%[d]

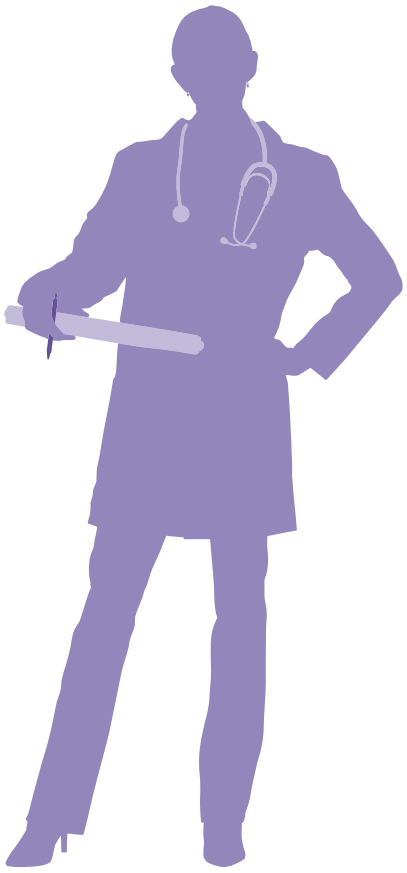
[a]Only the 4P's Plus screening tool includes psychometrics; the 5P's tool is in the public domain.

[b]The SURP-P does not have an online version. See Yonkers et al. (2010) to review the instrument.

[c]Alcohol, marijuana, cocaine, sedatives, and opioids..

[d]Sensitivities and specificities vary depending on the cut point used to determine risk.

Sources: 4P's Plus: Ewing 1990; Chasnoff et al., 2005; Integrated 5P's: Finkelstein, Hutchins & Mahoney, 2004; SURP-P: Yonkers et al., 2010; T-ACE: Sokol, Martier & Ager, 1989; TWEAK: Russell & Skinner, 1988.



PDMPs

- **State-based PDMPs collect data from pharmacies on prescriptions of controlled substances.** Using PDMP data, it is possible to determine whether patients are going to multiple doctors to get prescriptions for controlled substances (Patrick, Fry, Jones, & Buntin, 2016). Healthcare professionals should consult their state's **PDMP** for the patient's prescription drug use history. Periodically, checking the PDMP database can confirm the controlled prescription medications the patient reports taking and detect unreported use of other controlled prescription medications that may be hazardous in pregnancy (FSMB, 2013). State boards of medicine and pharmacy can provide information about how to access the PDMP.

Common laboratory tests for pregnant women with possible SUD include:*

- Urine toxicology screen for opioids and illicit drugs used in the community that includes confirmatory testing.
- Urine screen for alcohol that includes confirmatory testing.
- Screen for HIV, hepatitis B and C, and sexually transmitted infections
- Liver enzymes and serum bilirubin test to detect liver disease.
- Serum creatinine levels test to detect silent renal disease.

*Sources: Gourlay, Heit, & Caplan, 2010; Saitz, 2009; SAMHSA, 2015

If drug use is possible or confirmed, WHO recommends conducting a brief intervention (WHO, 2014). SAMHSA's evidence-based **SBIRT** protocol identifies, reduces, and prevents alcohol and illicit drug use. SBIRT builds on a behavioral intervention foundation known as motivational interviewing. More about motivational interviewing is available in SAMHSA's **Quick Guide for Clinicians Based on TIP 34: Brief Interventions and Brief Therapies for Substance Abuse** (SAMHSA, 2001).

Social, Medical, and Legal Consequences

- **Too often, pregnant woman with OUD receive no, or very little, prenatal care.** With no healthcare professional to monitor their pregnancy, women with OUD may present in a hospital emergency department late in pregnancy or in labor. This happens because women may not recognize they were pregnant, fear being incarcerated for illicit drug use or for exposing their fetus to illicit drugs, lack funds to pay for services, transportation or daycare, and/or fear losing custody of their other children (Howard, 2016).

Attending to the woman's immediate needs is important. For any pregnancy, the healthcare professional's priority is to ensure the well-being of the woman and fetus. In the context of a possible SUD, learning as much as possible about her opioid use (i.e., type, amount, route, duration, and time of last use) provides the foundation for possible treatment. It is critical to know whether she is on pharmacotherapy for OUD and, if so, which medication she receives so that it can be continued as appropriate. If she is receiving or desires SUD treatment, obtain her consent to communicate with her treatment provider or have a care manager facilitate an effective referral.

RESOURCES TO REVIEW

- **Public Policy Statement on Women, Alcohol and Other Drugs, and Pregnancy** (American Society of Addiction Medicine [ASAM], 2011)
- Treatment Improvement Protocol (TIP) 35: **Enhancing Motivation for Change in Substance Abuse Treatment** (SAMHSA, 1999)

- **For women who are already on pharmacotherapy for OUD and then become pregnant, it is important to coordinate care with all healthcare professionals.** It could be useful to complete a paper or electronic consent form such as those provided at **https://pcssmat.org/opioid-resources/clinical-tools/** to secure the sort of information releases that will be necessary to coordinate care among healthcare professionals who write pharmacotherapy prescriptions, those who may manage other behavioral health issue, and those providing prenatal care. Electronic systems for managing patient consent to share protected health information are also an option. One example is SAMHSA's **Consent2Share**.

Other Evidence/Considerations

- **Pregnancy is a time of great potential for positive change.**
  A woman with OUD may be motivated to enter treatment not only out of concern for the health of the fetus but also because during pregnancy she can envision a different future for herself and her child. In the past, it was generally believed that people with OUD could not successfully stop smoking or using other substances while they discontinued opioid use. However, when people are motivated to change, either to achieve a positive outcome or to avoid a negative one, they may be more successful at discontinuing substance use if all the addictive substances that they are using are addressed at once, whether alcohol, tobacco, or illicit drugs, including opioids. SUD is recognized to be a chronic disease with expected lapses. The pregnant and postpartum woman with OUD should be encouraged to keep trying, through a combination of pharmacotherapy and behavioral interventions, not abstinence, to reach the goal of ending substance use.

  SAMHSA offers clinical materials to assess clients' or patients' readiness to change and to end their substance use. Use motivational interviewing to identify and support positive changes to all health behaviors, starting with the riskiest ones.

  However, it is important to recognize that immediate and simultaneous discontinuation of all substances (e.g., alcohol, benzodiazepines, opioids) may not be feasible or even safe, particularly during pregnancy because of the additional risk to the developing fetus, which may also be going through withdrawal unmonitored. Withdrawal from one or multiple substances may require inpatient care (ASAM, 2015; Commonwealth of Pennsylvania, 2016; Jones et al., 2008, 2016; McCarthy, Leamon, Willits, & Salo, 2015; Meyer & Phillips, 2015).

  SUD is recognized to be a chronic disease with expected lapses. The pregnant and postpartum woman with OUD should be encouraged to keep trying, through pharmacotherapy and behavioral interventions, not abstinence, to reach the goal of ending substance use.

- **Women who are new to pharmacotherapy for OUD may struggle to adjust to the changes related to pregnancy as well as those related to taking a new medication**. For women new to treatment, receiving support and information about what to expect from treatment can ensure that their transition from the emergency department, or other settings where she may initially present, to the outpatient treatment environment is successful and care is coordinated with all treating healthcare professionals over time. Always give patients information on the recovery support and resources available in the community for pregnant and parenting women. This information may be available through your **State Opioid Treatment Authority** or a local **recovery community organization**.

- **Women with OUD are at higher risk for HIV/AIDS and viral hepatitis infection than women who do not use substances**. Screening for HIV/AIDS and hepatitis B and C should be standard at any initial assessment, regardless of the stage of pregnancy, and may be done by the SUD treatment provider or prenatal healthcare professional. A significant body of literature informs treatment for HIV/AIDS in pregnant women; in many cases, the principles of such medical care also apply to pregnant women with OUD. Appropriate consent should be obtained to share the test results, coordinate care, and avoid burdening the patient with unnecessary repeat testing.

  In the context of OUD, it is important to know that methadone has significant pharmacokinetic interactions with many drugs, including HIV antiretroviral agents (McCance-Katz, Sullivan, & Nallani, 2010). If a patient is new to pharmacotherapy for OUD or wishes to resume

CONTENT TO REVIEW

Review FS#3 for a discussion of the risks associated with medically-supervised withdrawal. This link provides examples of the sort of information releases that will be necessary to coordinate care: **https://pcssmat.org/opioid-resources/clinical-tools/**.

pharmacotherapy for OUD and is HIV-positive, consider using buprenorphine as the first-line treatment. Buprenorphine appears to have fewer clinically significant interactions with antiretroviral medications (Lee, Kresina, Campopiano, Lubran, & Clark, 2015). However, if a patient with co-occurring HIV/AIDS and OUD is already on a stable, therapeutic dose of methadone, she should not be switched to buprenorphine treatment, because of the potential for destabilization while making this transition (Bruce, Moody, Altice, Gourevitch, & Friedland, 2013; McCance-Katz et al., 2010).

RESOURCE TO REVIEW

Some HIV medications interact with OUD pharmacotherapy. All healthcare professionals must learn which HIV medications will interact with which opioid agonist medications and be prepared to work with other treating healthcare professionals to responsively make appropriate dose adjustments as needed. More information is available in *Exhibit 3. Potential Interactions Between Buprenorphine and HIV Medications* in **Advisory: Sublingual and Transmucosal Buprenorphine for Opioid Use Disorder: Review and Update** (SAMHSA, 2016) and McCance-Katz (2011).

WEB RESOURCES ON THIS TOPIC

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This SAMHSA document provides information on the treatment of pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Advisory: Sublingual and Transmucosal Buprenorphine for Opioid Use Disorder: Review and Update
This 2016 SAMHSA publication gives an overview of the use of sublingual and transmucosal buprenorphine treatment for OUD.

Clinician Consultation Center Substance Use Warmline
The University of California, San Francisco's, Clinician Consultation Center provides Substance Use Warmline consultation to health center providers. This is a free, real-time clinician-to-clinician telephone consultation, addressing the care and treatment of substance abuse, chronic pain, and behavioral health. Access the Warmline toll-free at: 1-855-300-3595 (Monday-Friday, 10 a.m.-6 p.m. EDT).

Clinical Drug Testing in Primary Care (Technical Assistance Publication [TAP] 32)
This 2012 SAMHSA TAP provides information that healthcare professionals need when deciding whether to introduce drug testing in their practices and gives guidance on implementing drug testing.

Consent2Share
This web-based application will be available in 2017 for patients to give their healthcare professionals consent to share their personal health information across the health system.

Medication Assisted Treatment (MAT)
This SAMHSA website provides up-to-date information on MAT, including opioid treatment programs and additional information on behavioral therapy and medications to treat SUDs.

Obstetric Care for Women with Opioid Use Disorder
The Council on Patient Safety in Women's Health Care is a consortium that promotes safe health care for every woman. This Safety Bundle is designed to facilitate standardization of clinical, scientific, and patient safety advances. The processes presented are subject to change as new information emerges.

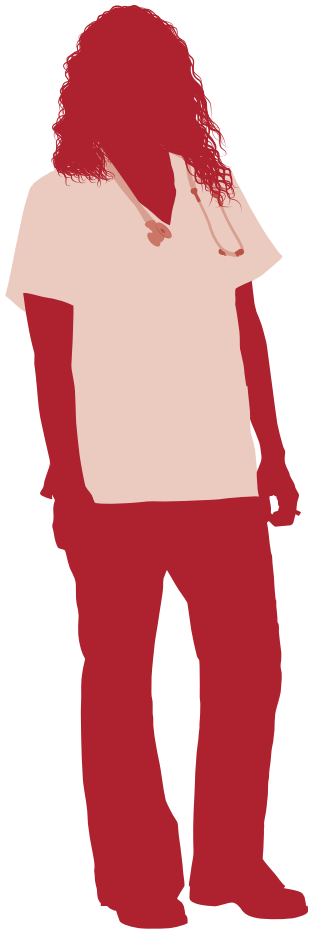
Public Policy Statement on Women, Alcohol and Other Drugs, and Pregnancy
This 2011 ASAM publication provides the organization's policy on care for women with SUDs.

Quick Guide for Clinicians Based on TIP 34: Brief Interventions and Brief Therapies in Substance Abuse
This quick guide was developed to accompany SAMHSA's TIP 34: *Brief Interventions and Brief Therapies in Substance Abuse*. It is based entirely on the TIP and is designed to meet the needs of the busy clinician for concise, easily accessed how-to information.

TIP 35: Enhancing Motivation for Change in Substance Abuse Treatment
This SAMHSA TIP is intended to help clinicians influence the change process in their patients by incorporating motivational interventions into SUD treatment programs. The document describes different motivational interventions that can be used at all stages of change.

Vermont Guidelines for Medication Assisted Treatment for Pregnant Women
This document provides healthcare professionals with basic information on managing OUD in pregnant women.

Viral Hepatitis and Young Persons Who Inject Prescription Opioids and Heroin
This Centers for Disease Control and Prevention website details the threat of hepatitis B and C in people who misuse opioids, especially those who inject these drugs.



PDMP Resources
PDMP Training and Technical Assistance Center (TTAC)
This website provides a variety of services and resources to fight the misuse, abuse, and diversion of prescription drugs. It also has information on the Prescription Behavior Surveillance System, an early warning tool to measure trends in controlled substance prescribing and dispensing and to provide information about medical use and possible nonmedical prescription drug abuse and diversion.

PDMP TTAC State Profiles
This webpage provides links to PDMP profiles for each state and links to each state's PDMP database. Although access to PDMP information varies by state, generally the information is available only to prescribing clinicians, law enforcement, and, sometimes, patients.

Screening Tool Resources
SBIRT
This SAMHSA webpage provides information and links to resources about SBIRT that clinicians can use to identify, reduce, and prevent alcohol and illicit drug problems.

4P's Plus/Integrated 5P's

The 4P's Plus screen is not available in the public domain. Instead, healthcare professionals can use the Institute for Health and Recovery's Integrated 5P's tool, which was adapted specifically for pregnant women. The questions in the 5P's tool ask the pregnant woman about her parents' and her partner's past and present alcohol and drug use in a nonthreatening manner.

SURP-P

The Substance Use Risk Profile-Pregnancy Scale screens for hazardous substance use in pregnant women. The scale has three questions; healthcare professionals assess women with a positive screen to determine which women need intervention and treatment.

T-ACE

The Tolerance, Annoyed, Cut-down, Eye-opener screen detects alcohol use in pregnant women. It takes approximately 1 minute to administer and is frequently part of a routine patient questionnaire completed while waiting for a prenatal appointment.

TWEAK

The Tolerance, Worried, Eye-opener, Amnesia, K[C]ut-down screen is a five-item scale to assess alcohol consumption during pregnancy. It takes less than 1 minute to administer and can be incorporated into waiting room procedures.

SECTION 1
FACTSHEET #
2

INITIATING PHARMACOTHERAPY FOR OPIOID USE DISORDER

CLINICAL SCENARIO

A pregnant woman with opioid use disorder (OUD) requests treatment.

CLINICAL ACTION STEPS

Medication-Assisted Treatment (MAT)

A pregnant woman with OUD should be offered MAT consisting of pharmacotherapy with methadone or buprenorphine and evidence-based behavioral interventions.

There is insufficient information about the safety of extended-release injectable naltrexone during pregnancy and the effects of intrauterine exposure to this medication. The expert panel did not agree on whether women on naltrexone should continue to use it during pregnancy. Women stable on naltrexone can be offered treatment with buprenorphine or methadone to prevent return to substance use if they choose to discontinue naltrexone injections. However, this transition must be carefully managed because patients on long-acting naltrexone are no longer opioid tolerant and the falling naltrexone level will result in increasing agonist activity over time during cross-titration.

Patient Education

As soon as a pregnant woman is diagnosed with OUD, healthcare professionals should review and discuss the risks and benefits of each antagonist and agonist treatment option with her. Healthcare professional should inform her that pharmacotherapy is strongly recommended and that treatment without any pharmacotherapy is complicated by poor fetal health, high rates of return to substance use, and the consequences such as risk of overdose.

Healthcare professionals should inform the pregnant woman of the possibility of neonatal abstinence syndrome (NAS) and counsel her on its diagnosis, management, and consequences. The woman should also receive education on ways to optimize the well-being of the fetus such as tobacco cessation and early pediatric care after delivery and hospital discharge. Healthcare professionals should ensure that she is aware of nonpharmacological interventions that should be provided to her infant to reduce NAS symptoms, including rooming-in.

The pregnant woman should be informed of the potential medical and social consequences of each form of therapy, specifically of the consequences that relate to NAS and unmonitored prenatal withdrawal.

No Known Risk of Increased Birth Defects With Pharmacotherapy for OUD

The woman should be informed that experts do not agree on whether intrauterine exposure to buprenorphine, buprenorphine/naloxone, or methadone results in lasting developmental or other problems for the infant. A woman receiving either buprenorphine or methadone should be informed that the benefits of pharmacotherapy for OUD during pregnancy outweigh the risks of untreated OUD. Healthcare professionals may want to reassure women that, to date, research has not shown that buprenorphine and methadone can cause an increase in birth defects and has minimal long-term neurodevelopmental impact.

She should be informed that tobacco and alcohol exposure are known to be harmful to her and the fetus and should be provided with support to limit or preferably discontinue exposure to these substances.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

MAT

- **Pharmacotherapy, combined with behavioral interventions, helps people who misuse opioids avoid experiencing withdrawal symptoms or overwhelming cravings when the opioid misuse is stopped.** By blocking cyclic withdrawal symptoms associated with the misuse of short-acting opioids, methadone or buprenorphine can provide a more stabilized intrauterine environment. In addition, starting on pharmacotherapy can help the pregnant woman stop injecting drugs, a primary route of infection for people who use drugs. By controlling the symptoms of OUD (e.g., withdrawal, cravings), the pregnant woman can regain control, reengage in important obligations and activities in her life, and rebuild a stable social environment for herself and her family. Behavioral interventions are also recommended to provide maximum support for long-term recovery. Additional information on these therapies can be found at **www.SAMHSA.gov/treatment**.

- **SAMHSA maintains nationwide directories of healthcare professionals who help people overcome substance use disorders (SUDs).** Pregnant women and new mothers can seek treatment for OUD at behavioral health treatment centers or opioid treatment programs. SAMHSA's web-based **Behavioral Health Treatment Services Locator** and **Opioid Treatment Program Directory** provide information about locations of treatment facilities for SUDs in the United States and U.S. territories.

RESOURCES TO REVIEW

- **Medication-Assisted Treatment Website**
- **Substance Use Disorders**
- **Treatments for Substance Use Disorders**

FACTSHEETS TO REVIEW

- **Factsheet #6: Addressing Polysubstance Use During Pregnancy, Exhibit FS #6.1**, for additional discussion on tobacco use cessation and treatment options to address other substance use
- **Factsheet #9: Screening and Assessment for Neonatal Abstinence Syndrome** for information on the time course of NAS expression
- **Factsheet #10: Management of Neonatal Abstinence Syndrome** for strategies to reduce NAS symptoms

Patient Education

- **Conversations about informed consent with pregnant women who have OUD or who are on pharmacotherapy for opioid use can be complex**. Informed consent helps patients understand the likelihood that a specific pharmacotherapy will help them. Research indicates that often patients do not completely comprehend the risk statements that they are given (Krumholz, 2010). All patients receiving prenatal or medical treatment must give their informed consent to be treated and indicate that they understand the treatment that is being provided, the risks and benefits of the treatment, the risk of not treating the OUD, and what to do in an emergency.

  Experts do agree that any change in type of pharmacotherapy or a decision to continue or stop a particular medication during pregnancy should be made only when informed by the patient's specific needs and concerns. In either case, the woman's fully informed consent should be obtained after review of the risks and benefits of the course of treatment selected.

  Consent requires patient education including answering questions and verifying understanding in order to support informed, and patient-centered, shared decision-making. Healthcare professionals should inform the pregnant women with OUD about the effects of pharmacotherapy for opioid use on the fetus, options for pharmacotherapy (i.e., different medications and scenarios), the risks of not treating OUD, the

likelihood the baby will develop NAS, and the possibility that NAS can worsen with the pregnant woman's use of other substances, especially tobacco (Jones et al., 2013a; Patrick et al., 2015). Through discussion, the healthcare professional and the woman can make a shared decision about her course of treatment.

- **Treatment plans need to be individualized**. Each pregnant woman with OUD who is in treatment needs her own individualized plan that is developed in collaboration with her healthcare team. The plan needs to include elements such as which medications are being used and why; referrals and coordination of care such as scheduling help and follow-up appointments with other healthcare professionals; family involvement and whether family therapy is indicated; and a plan to treat co-occurring medical or behavioral health disorders that addresses her goals and motivations to engage in treatment (Jones et al., 2016; SAMHSA, 2014, 2015; World Health Organization [WHO], 2014). The plan should be based on shared decision-making, in which pregnant women seeking treatment and recovery can weigh that information against their personal preferences and values (SAMHSA, 2016b). The plan should also seek to optimize treatment issues that are relevant to the developing fetus and infant, particularly protocols for addressing an infant's possible NAS and healthy early development.

While distinct from informed consent, treatment agreements can be a useful tool to ensure clear communication and expectations about the chosen treatment. A treatment agreement document typically includes:

- Risks and benefits of treatment and no treatment.
- Schedules for follow-up office visits and laboratory tests to monitor the patient's progress and health status.
- Goals for behavioral treatment, social and family engagement, or mutual-aid group meeting attendance.
- Opportunities for involvement of family members or significant others in treatment.
- Symptoms that should be reported to the prescribing physician.
- A plan for treating co-occurring medical or psychiatric conditions, as well as other SUDs including tobacco.
- Expectations for maintenance of pharmacotherapy and engagement in other therapies and, if needed, more intensive levels of care.

CONTENT TO REVIEW

This link provides sample treatment agreements and consent forms: **https://pcssmat.org/opioid-resources/clinical-tools/**.

- **Healthcare professionals should educate women and their family members about potential legal, social, and medical consequences of each treatment option, specifically the risks of NAS**. NAS is a medical condition that can be diagnosed and effectively treated with available interventions. Avoidance of NAS should not be the deciding factor in the initiation or dose of pharmacotherapy for OUD during pregnancy. The dose of medication does not appear to impact the risk or severity of NAS (Jones, Jansson, O'Grady, & Kaltenbach, 2013b; Jones et al., 2014; Lund et al., 2013; Patrick et al., 2015). Consequently the dose of medication should be titrated to control withdrawal, limit cravings and prevent return to opioid use.

  Women who are pregnant and have OUD or another SUD may be fearful of the legal consequences they may face if they seek SUD treatment. Policies on whether and when to assume custody of a newborn or older child whose mother has untreated OUD vary by state, county, and even hospital (American Academy of Addiction Psychiatry, 2015; Guttmacher Institute, 2017; House, Coker, & Stowe, 2016). Healthcare professionals and office staff need to be aware of the regulations in their region (SAMHSA, 2016a).

- **Initiating pharmacotherapy needs to be individualized to each patient's medical condition**. Protocols can provide a useful starting point, but healthcare professionals should evaluate the patient and review results of the initial screening with her to determine whether she has other medical conditions or polysubstance use and individualize the initiation of pharmacotherapy. Withdrawal from one or multiple substances may require inpatient care (ASAM, 2015; Commonwealth of Pennsylvania, 2016; Jones et al., 2008, 2016; McCarthy, Leamon, Willits, & Salo, 2015; Meyer & Phillips, 2015).

  Individuals who select buprenorphine for pharmacotherapy need to be aware of the potential for spontaneous or precipitated withdrawal during pharmacotherapy induction (ASAM, 2015) and must be exhibiting clinical withdrawal symptoms before administration of the first dose. Many clinics now offer induction to buprenorphine as an outpatient service and sometimes as partial home induction. Partial home induction for pregnant women lacks sufficient evidence at this time.

  Women who select methadone for pharmacotherapy need to be aware that achieving a stable therapeutic dose can take days to weeks. Some programs will choose to admit a pregnant woman to the hospital with a diagnosis of high-risk pregnancy to titrate her dose of methadone more quickly under continuous medical supervision and minimize the chance that she may attempt to cope with unrelieved withdrawal by using illicit opioids.

RESOURCE TO REVIEW

American Society of Addiction Medicine (ASAM) National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use to obtain more information on evidence-based treatment of OUD

FACTSHEET TO REVIEW

Tobacco use cessation is critical to the health of the dyad and must be addressed with specific interventions. Buprenorphine or methadone pharmacotherapy does not reduce cigarette smoking rates in pregnant women (Chisolm et al., 2012). See **Factsheet #6: Addressing Polysubstance Use During Pregnancy** for more information on tobacco cessation programs in pregnant women.

RESOURCE TO REVIEW

Treatment for pregnant women with OUD should promote and facilitate family, community, and social support as well as social inclusion by cultivating strong links with available childcare, economic supports, education, housing, and other relevant services as reviewed in **A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers** (SAMHSA, 2016a).

No Known Risk of Increased Birth Defects With Pharmacotherapy Medications

- **Currently, research indicates no known risk of increased birth defects associated with the use of buprenorphine or methadone**. A woman receiving either buprenorphine or methadone should be informed that the benefits of pharmacotherapy for OUD during pregnancy outweigh the risks of untreated OUD.

Healthcare professionals may want to reassure women that, to date, research has not shown that buprenorphine and methadone can cause an increase in birth defects (Committee on Healthcare for Underserved Women, ASAM, & American College of Obstetricians and Gynecologists, 2017; Holbrook & Rayburn, 2014) and has minimal long-term neurodevelopmental impact (ASAM, 2015).

Exhibit FS #2.1: : Decision Considerations When Selecting an Opioid Agonist Medication for a Pregnant Woman

Considerations	Buprenorphine	Methadone
Patient Selection	May be preferable for patients who are new to treatment because it is easier to transfer from buprenorphine to methadone (it can be very difficult to transfer from methadone to buprenorphine), who do not like or want methadone, or who have requested this medication.	May be preferable for patients who do not like or want buprenorphine treatment or who have requested this medication.
Care	Includes a prenatal healthcare professional, parenting classes, and SUD treatment.	Includes a prenatal healthcare professional, parenting classes, and SUD treatment.
Dispensing	May be prescribed in an office setting with weekly or biweekly prescribing/dispensing or provided in an opioid treatment program.	Requires daily visits to a federally certified opioid treatment program; take-home medication is provided for patients meeting specific requirements.
Treatment Retention	Some studies show treatment dropout is higher than that for methadone.	Some studies show treatment retention is higher than that for buprenorphine.
Risk of Medication Interaction	Few known interactions with other medications; risk of interaction is greatest with central nervous system (CNS) depressants and CYP3A4 inhibitors (e.g., clarithromycin, itraconazole, ketoconazole, atazanavir). If these medications must be used, the clinic should monitor the patient daily for increased effect of buprenorphine; healthcare professionals should be aware that the development of sign and symptom varies and depends on a variety of factors. Other agonist/antagonist medications (e.g., butorphanol, dezocine, nalbuphine, pentazocine) and full antagonists will result in precipitated withdrawal.	Medications that use CYP450 enzymes are commonly involved in a methadone-medication interaction. Methadone is metabolized primarily by CYP3A4 and CYP2B6. There is evidence that other CYP450 enzymes are also involved including CYP2D6. Known interactions with other medications in pregnant women are detailed in McCance-Katz (2011). If these medications must be used, the clinic should monitor the patient daily for increased or decreased effect of methadone; healthcare professionals should be aware that the development of sign and symptom varies and depends on a variety of factors. Other agonist/antagonist medications (e.g., butorphanol, dezocine, nalbuphine, pentazocine) and full antagonists will result in precipitated withdrawal.
Starting Dose	2–4 mg	20–30 mg
Target Dose	Daily, 16 mg or product equivalent to 16 mg, is the most common dosage. The optimal dose will be determined by regular assessment of the individual and her response to treatment.	Daily, 80–120 mg. The optimal dose will be determined by regular assessment of the individual and her response to treatment.
Interval at Which Dose May Be Increased	Daily, but dose changes should not be made without patient assessment.	3 days is a common interval in a clinical practice, but dose changes should not be made without patient assessment.

Considerations	Buprenorphine	Methadone
Risk of Overdose and Death	Generally lower risk compared with full opioid agonists; overdose is possible when combined with other CNS depressants. Continued buprenorphine treatment reduces mortality after release from incarceration (Degenhardt et al., 2014). Buprenorphine treatment reduces the risk of death in people dependent on opioids (Gibson et al., 2008) and drug-related mortality in the first 4 weeks of treatment, a high-risk period (Kimber, Larney, Hickman, Randall & Degenhardt, 2015).	Generally greater risk of overdose compared with mixed agonist/antagonist opioids; overdose is possible when combined with other CNS depressants. Continued methadone treatment reduces mortality after release from incarceration (Degenhardt et al., 2014). Methadone significantly reduces the risk of drug-related mortality compared with no treatment (Evans et al., 2015). Methadone treatment reduces the risk of death in people dependent on opioids (Gibson et al., 2008) and drug-related mortality in the first 4 weeks of treatment, a high-risk period (Kimber et al., 2015).
Risk of Sedation	Sedation is possible but typically milder than that with full mu opioid agonists.	Sedation is possible and may be greater than that with partial agonist opioids (Walsh, Preston, Bigelow, & Stitzer, 1995).
Ability To Fill a Prescription at a Local Pharmacy	Is possible depending on pharmacy availability.	Can be filled in a certified pharmacy to treat pain, but methadone for the treatment of OUD cannot generally be obtained from a pharmacy in the United States. It must be administered or dispensed for treatment of OUD at a certified opioid treatment program.
Treatment in a Healthcare Professional's Office	Healthcare professionals who request a waiver to prescribe buprenorphine from SAMHSA and receive a unique Drug Enforcement Administration registration number for this purpose may prescribe buprenorphine for the treatment of opioid use disorder in an office-based setting.	May be possible under federal regulation if specific program criteria are fulfilled and relevant state and federal permission is sought.
Risk of NAS	Approximately 50% of exposed neonates are treated for NAS; NAS may be milder with buprenorphine compared with full mu opioid agonists such as most opioid analgesics and methadone.	Approximately 50% of exposed neonates are treated for NAS.
Time to NAS Onset	American Academy of Pediatrics (AAP) recommends monitoring prenatally opioid-exposed neonates for a minimum of 4–7 days after delivery (Hudak, Tan, & AAP, 2012).	AAP recommends monitoring prenatally opioid-exposed neonates for a minimum of 4–7 days after delivery (Hudak, Tan, & AAP, 2012).
Duration of NAS	Most studies show shorter NAS duration compared with methadone.	Most studies show longer NAS duration compared with buprenorphine.
Breastfeeding Considerations	Generally safe if the mother is stable and the **ABM Clinical Protocol #21 breastfeeding with SUD guidelines** are met.	Generally safe if the mother is stable and the **ABM Clinical Protocol #21 breastfeeding with SUD guidelines** are met.
Neurodevelopmental Outcomes of Exposed Children	Available research suggests there is not a linear cause and effect relationship between prenatal buprenorphine exposure and developmental problems when compared with other opioids; the research base is limited.	Available research suggests there is not a linear cause and effect relationship between prenatal methadone exposure and developmental problems when compared with other opioids; the research base is limited.

WEB RESOURCES ON THIS TOPIC

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This SAMHSA document provides information on the treatment of pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Addiction Technology Transfer Center (ATTC) Network
The ATTC is a nationwide, multidisciplinary resource for professionals in the addictions treatment and recovery services field. Established in 1993 by SAMHSA, the ATTC Network comprises 10 Regional Centers, 4 National Focus Area Centers, and a Network Coordinating Office. The ATTC is a resource for webinars, websites, and printed materials related to treating OUD.

Advisory: Sublingual and Transmucosal Buprenorphine for Opioid Use Disorder: Review and Update
This 2016 SAMHSA publication gives an overview of the use of sublingual and transmucosal buprenorphine treatment for OUD.

ATTC: Tools for Treatment, Family-Centered Behavioral Health Support for Pregnant & Postpartum Women
This **Pregnant and Postpartum Women Project ECHO** is the first of its kind to address the behavioral health needs of pregnant and postpartum women, taking a family-centered approach to the recovery process that includes family members ranging from the infant to older children, fathers, and extended family.

Baby Friendly Hospital Initiative-USA
This global initiative was launched by WHO and the United Nations Children's Fund in 1991 to encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding and mother–infant bonding.

Behavioral Health Treatment Services Locator
This searchable database for treatment services is updated every year based on responses to SAMHSA's National Survey of Substance Abuse Treatment Services and National Mental Health Services Survey.

Clinician Consultation Center Substance Use Warmline
The University of California, San Francisco's, Clinician Consultation Center provides Substance Use Warmline consultation to health center providers. This is a free, real-time clinician-to-clinician telephone consultation, addressing the care and treatment of substance abuse, chronic pain, and behavioral health. Access the Warmline toll-free at: 1-855-300-3595 (Monday-Friday, 10 a.m.-6 p.m. EDT).

Clinical Opiate Withdrawal Scale (COWS)
This assessment tool measures the adequacy of the initial pharmacotherapy induction dose. It can be re-administered throughout the induction process to monitor the pregnant woman's progress.

Follow Directions: How to Use Methadone Safely
This SAMHSA publication describes the use of methadone in MAT for OUD. It includes information on how to use methadone safely, the dangers of methadone overdose, and life-threatening methadone side effects.

Legal Action Center

The mission of this nonprofit law and policy organization includes fighting discrimination against people with histories of SUD. The center's website links to numerous resources for healthcare professionals, patients, employers, and criminal justice personnel. Among these resources are a **sample treatment letter** that healthcare professionals can use to support patients ordered off pharmacotherapy by criminal justice and child welfare agencies and a document explaining how state **driving under the influence** (DUI) laws treat drivers taking methadone or buprenorphine and what legal strategies are available to drivers charged with a DUI offense for driving while on these medications.

Medication-Assisted Treatment

This SAMHSA website provides up-to-date information on MAT, including opioid treatment programs and additional information on behavioral therapy and medications to treat SUDs.

Medication-Assisted Treatment Models of Care for Opioid Use Disorder

This Agency for Healthcare Research and Quality research protocol describes the available literature on MAT models of care, methods for effective MAT implementation, and key issues and gaps in the evidence base.

Medication Assisted Treatment of Opioid Use Disorder Pocket Guide

This SAMHSA product includes guidelines for physicians using MAT for patients with OUD. It discusses approved medications, screening and assessment tools, and best practices for patient care.

Methadone Treatment for Pregnant Women

This SAMHSA brochure provides basic information on methadone treatment, the possibility and treatment of infant withdrawal, breastfeeding on methadone, the consequences of continued drug use, and birth control.

National Center on Substance Abuse and Child Welfare (NCSACW)

SAMHSA and the Administration for Children & Families jointly fund NCSACW, which is a national resource center providing information, expert consultation, training, and technical assistance to child welfare, dependency court, and substance abuse treatment professionals to improve the safety, permanency, well-being, and recovery outcomes for children, parents, and families.

National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use

This ASAM publication provides information on evidence-based treatment of OUD.

Non-punitive Treatment for Pregnant and Breast-feeding Women with Substance Use Disorder

This position statement from the American Nurses Association (ANA) Center for Ethics and Human Rights recognizes substance addiction is a treatable illness and ANA's commitment to prevention and treatment as primary solutions to perinatal substance abuse and addiction.

Opioid Overdose Prevention Toolkit: Information for Prescribers

This SAMHSA toolkit is for healthcare professionals, treatment providers, local communities and governments, and first responders. It contains materials to develop practices and policies to prevent opioid-related overdoses and deaths.

Opioid Treatment Program Directory
The dropdown menu on this SAMHSA website links users to information on the availability of opioid treatment programs in the United States and its territories.

Providers' Clinical Support System for Medication Assisted Treatment (PCSS-MAT)
This website describes the overarching goal of PCSS-MAT, which is to make the most effective treatments available to patients in a variety of settings, including primary care, psychiatric care, SUD treatment, and pain management settings. This network provides mentors and training webinars.

Providers' Clinical Support System for Opioid Therapies (PCSS-O)
PCSS-O is a consortium of major stakeholders and constituency groups with interests in safe and effective use of opioid medications. PCSS-O makes available, at no cost, continuing medical education programs on the safe and effective use of opioids for treatment of chronic pain and safe and effective treatment of OUD.

Treatment Improvement Protocol (TIP) 35: Enhancing Motivation for Change in Substance Abuse Treatment
This SAMHSA TIP is intended to help clinicians influence the change process in their patients by incorporating motivational interventions into SUD treatment programs. The document describes different motivational interventions that can be used at all stages of change.

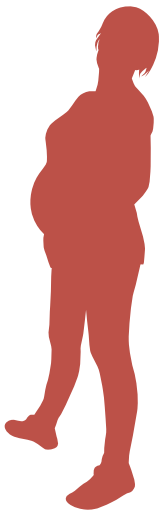
TIP addressing Medications for Opioid Use Disorder. In Press.
SAMHSA will release a new TIP on addressing medications for opioid use disorder in early 2018. Please check the SAMHSA Store for the new TIP.

TIP 43: Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs
This 2012 SAMHSA TIP gives a detailed description of medication-supervised treatment for addiction to opioids, including comprehensive maintenance treatment and medically supervised withdrawal. Screening, assessment, and administrative and ethical issues are also covered. This publication is due to be revised in 2017.

Treatments for Substance Use Disorders
This SAMHSA webpage provides a list of treatments and services for SUDs.

Turn the Tide: Prescribing Opioids for Chronic Pain
This Surgeon General's pocket guide provides tools and resources to help clinicians decide whether to prescribe opioids and alternative treatments. It explains how to calculate dosage and medication changes.

Vermont Child Health Improvement Program: Improving Care of Opioid-Exposed Newborns (ICON)
This website provides easy access to Vermont state-based resources for health professionals caring for women with OUD. **The Care Notebook & Construction Guide**, a resource guide for mothers with OUD, can be customized to adjust to the procedures of individual clinics.



SECTION 1
FACTSHEET #
3

CHANGING PHARMACOTHERAPY DURING PREGNANCY

CLINICAL SCENARIO

A pregnant woman wishes to discuss changing her existing pharmacotherapy for OUD or wants to undergo medically supervised withdrawal from opioids.

CLINICAL ACTION STEPS

Maintaining Patient Stability Is Paramount
Pregnancy alone is not an indication to change a woman who is stable on an opioid agonist to another opioid agonist.

A pregnant woman who is experiencing cravings or withdrawal should have the effectiveness of her pharmacotherapy dose evaluated, and the dose possibly adjusted. Changing from one opioid agonist to another is rarely, if ever, warranted on the basis of cravings or unrelieved withdrawal alone. Cravings can occur even when OUD is well managed. Women who experience cravings despite optimal pharmacotherapy should receive additional behavioral interventions to address new or aggravated stressors.

Experts do not agree on whether a woman on buprenorphine/naloxone for OUD who states the intention to become pregnant or is in the early stages of pregnancy should be switched from the combination buprenorphine/naloxone product to the buprenorphine-only product. Experts do agree that any change from buprenorphine/naloxone to the buprenorphine-only product or a decision to continue on a buprenorphine/naloxone product during pregnancy should be made only when informed by the patient's specific needs and concerns. In either case, the woman's fully informed consent should be obtained after review of the risks and benefits of the course of treatment selected.

There is insufficient information about the safety of extended-release injectable naltrexone during pregnancy and the effects of intrauterine exposure to this medication. The expert panel did not agree on whether women on naltrexone should continue to use it during pregnancy. Women stable on naltrexone can be offered treatment with buprenorphine or methadone to prevent return to substance use if they choose to discontinue naltrexone injections. However, this transition must be carefully managed because patients on long-acting naltrexone are no longer opioid tolerant and the falling naltrexone level will result in increasing agonist activity over time during cross-titration.

Medically Supervised Withdrawal Is NOT Recommended
Pregnant women with OUD, with or without a history of pharmacotherapy for OUD, should be advised that medically supervised withdrawal from opioids is associated with high rates of return to substance use and is not the recommended course of treatment.

If a pregnant woman on pharmacotherapy for OUD decides to move forward with medically supervised withdrawal, it can be conducted in a controlled setting in any trimester in the pregnancy if the benefits outweigh the risks. However, the woman should be informed that discontinuing pharmacotherapy is associated with high rates of return to substance use poorer fetal health and is not the recommended course of treatment.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Maintaining Patient Stability Is Paramount

- **Requests to change opioid agonist should prompt careful consideration.** Significant problems such as adverse drug reaction, intolerance of the current pharmacotherapy, or drug–drug interaction may require consideration of changing opioid agonist. The anticipated benefit of any medication change must be balanced against the risk of destabilization. Destabilization may result in return to substance use.

  It is important to understand the pregnant woman's motivations for requesting a change in her medication. They may include pressure from family and friends, the cost of the medication, time needed for other responsibilities vs. time needed to participate in treatment, fear of prejudice and discrimination, or concerns for the developing fetus and later child development. She may feel that her current medication is not working because she is experiencing previously unreported withdrawal symptoms, cravings, or return to substance use. If this is the case, adjusting the dose of the current medication is likely the most appropriate action along with increasing social and behavioral supports.

  If there is no indication of return to substance use, withdrawal symptoms, or cravings, identify the underlying fears and pressures and help her strategize about how to manage them. Talk about the risk of not receiving pharmacotherapy. If withdrawal is agreed on, create a safety plan to help prevent a return to substance use and resume pharmacotherapy if return to substance use occurs or is likely.

- **Neonatal abstinence syndrome (NAS) expression and severity are not correlated with maternal pharmacotherapy dose.** In some cases, a woman may want to change or reduce her medication in hopes of reducing the risk or severity of NAS in her infant. In a meta-analysis, Cleary et al. (2010) found that the severity of NAS was unrelated to methadone dose and suggest that the practice of reducing maternal methadone medication to protect the fetus is unwarranted. A similar finding was reported in women taking buprenorphine during their pregnancy (Patrick et al., 2015).

  Healthcare professionals can assure the pregnant woman that, to date, no evidence links the dose of either methadone or buprenorphine with a number of measures of severity of NAS, such as peak NAS score; total amount of infant treatment medication (morphine); length of neonatal hospital stay; duration of pharmacotherapy for NAS; estimated gestational age at delivery; Apgar score at 5 minutes; and neonatal physical parameters of head circumference, length, and birth weight (Jones, Jansson, O'Grady, & Kaltenbach, 2013; Jones et al., 2014; Lund et al., 2013).

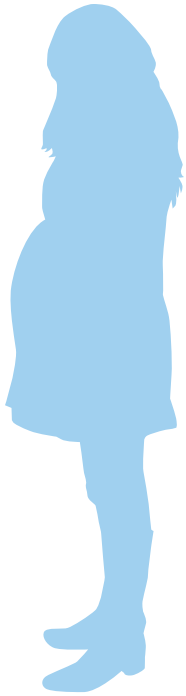
- **Healthcare professionals should discuss in detail the risk of return to substance use if the pregnant woman chooses to change her pharmacotherapy during her pregnancy.** If changing agonist therapy is imperative (e.g., the pharmacotherapy is no longer accessible), the woman should be informed that any change in medication represents a period of vulnerability to return to substance use. Behavioral and recovery supports should be maximized. Changing from buprenorphine to methadone can be accomplished using a standard approach to methadone induction. Changing from

FACTSHEET TO REVIEW

- **Factsheet #2: Initiating Pharmacotherapy for Opioid Use Disorder** for information on treatment options
- **Factsheet #6: Addressing Polysubstance Use During Pregnancy** for discussion on tobacco use cessation
- **Factsheet #9: Screening and Assessment for Neonatal Abstinence Syndrome** for information on the potential for NAS with pharmacotherapy for OUD
- **Factsheet #10: Management of Neonatal Abstinence Syndrome, Exhibit Factsheet#10.2**, for factors that influence NAS expression, severity, and pharmacological and nonpharmacological treatment options

methadone to buprenorphine requires that the methadone be tapered, and several days of abstinence may be required before therapy with buprenorphine is initiated (Jones, Suess, Jasinski, & Johnson, 2006). If, as the methadone dose is lowered, the patient begins to experience withdrawal that interferes with her functioning or leads to return to substance use, it is advisable to discontinue the taper and restabilize her on methadone. The added risk of return to substance use during pregnancy cannot be overstated.

Whatever the reasons for changing pharmacotherapy, discuss them and help the woman understand why a medication change may—or may not—be possible.



- **Positions are evolving on using the combination product (buprenorphine/naloxone) throughout the pregnancy, rather than transitioning the pregnant woman to the buprenorphine-only product for the duration of her pregnancy.** Historically, pregnant women who had been on the combination product (buprenorphine/naloxone) were transitioned to the buprenorphine-only product for the remainder of their pregnancy. One reason for the change in pharmacotherapy was to protect the fetus from exposure to naloxone. Another reason was that a woman who is not stable and who injects the combination product at any time (prenatal or postnatal) can have induced precipitated withdrawal, owing to the intravenous bioavailability of naloxone (Park, Meltzer-Brody, & Suzuki, 2012).

  Evidence is now building that newborn outcomes are not negatively affected by using the combination product during gestation and that pregnant women may not need to transition to the buprenorphine-only product during pregnancy to protect the fetus (Debelak, Morrone, O'Grady, & Jones, 2013; Dooley et al., 2016; Gawronski et al., 2014; Jumah et al., 2016; Lund et al., 2013; Wiegand et al., 2015). Pregnant women and their healthcare professionals should make a decision with regard to the use of the buprenorphine/naloxone combination product in the context of pregnancy based on the benefit vs. the risk to the dyad.

Medically Supervised Withdrawal Is NOT Recommended

- **Pregnant women with OUD should not be encouraged to withdraw from pharmacotherapy for OUD during their pregnancy or shortly after delivery.** Pharmacotherapy is the recommended standard of care, and it is the best option for a pregnant woman with OUD. Remaining on pharmacotherapy will help her avoid a return to substance use, which has the potential for overdose or death. A decision to withdraw from pharmacotherapy should be made with great care on a case-by-case basis, and additional supports such as close observation should be put in place.

  Withdrawal of pharmacotherapy for OUD and tapering during pregnancy have a high failure rate (American Society of Addiction Medicine, 2015; Jones, O'Grady, Malfi, & Tuten, 2008; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014; World Health Organization, 2014), and expectant women with OUD often return to opioid misuse and its attendant risks (e.g., Kaltenbach, Berghella, & Finnegan, 1998; Mattick, Breen, Kimber, & Davoli, 2009). A Norwegian study (Ravndal & Amundsen, 2010) of the mortality risk after inpatient medically supervised withdrawal in a nonpregnant population found that the elevated risk of dying from an overdose within the first 4 weeks of discharge was so dramatic that prevention measures should be instituted.

  Medically supervised withdrawal is associated with a high rate of return to substance use, putting both the pregnant woman and the fetus at risk. Medically supervised withdrawal should be avoided whenever possible. **Factsheet #6: Addressing Polysubstance Use During Pregnancy** provides more information on return to substance use.

  Return to substance use exposes the fetus to the stress of ongoing drug use and other maternal factors related to active SUD. However, some studies support the idea that at least a minority of women are

successful at completing medically supervised withdrawal and remaining in drug-free treatment until delivery (e.g., Lund et al., 2012).

Despite the concern about return to opioid use, some women will want to try medically supervised withdrawal, or their community resources will only support medically supervised withdrawal. If medically supervised withdrawal is attempted, healthcare professionals should anticipate providing the pregnant woman with intensive behavioral and social supports such as those available in residential treatment centers, which provide close monitoring and support to avoid return to substance use.

Other Evidence/Considerations

- **The healthcare professional should discuss other actions the pregnant woman can take to improve the health of the fetus and herself.** Several actions are available to the pregnant woman on pharmacotherapy for OUD to help the developing fetus and her own health. The pregnant woman should give up or limit cigarettes, alcohol, and drugs. She should be provided with **tobacco use cessation** treatment services (Minnes, Lang, & Singer, 2011; SAMHSA, 2011) and other substance use disorder (SUD) treatment services to accomplish this.

When discussing options to maximize the health of the pregnant woman and infant, remind the pregnant woman that she CAN take several steps to protect her health and the fetus:

- She can enroll in a tobacco cessation program, and participate in treatment programs for comorbid alcohol, other substance use disorders as needed.
- She can maintain a healthy weight and take prenatal vitamins as prescribed.
- She can learn how NAS is diagnosed and treated.
- She can learn which nonpharmacological interventions can reduce the incidence and severity of NAS.
- She can inform and prepare herself for breastfeeding.
- She can enroll in parenting classes recommended by her prenatal healthcare professional.

Daily interactions and observed dosing should be considered possible behavioral interventions regardless of whether the woman is receiving buprenorphine or methadone. The level of care should be tailored to the woman's response to therapy and not necessarily tied to a specific medication.

WEB RESOURCES ON THIS TOPIC

Advisory: Tobacco Use Cessation During Substance Abuse Treatment Counseling
This 2011 SAMHSA document offers SUD counselors an introduction to tobacco use cessation during SUD treatment. It discusses screening and effective treatment approaches to quitting, including cessation medications and practical and supportive counseling.

Drug Interaction Checkers:

- **Buprenorphine Interaction Checker (Medscape)**
- **HIV/AIDS Medication Interactions (U.S. Department of Health and Human Services)**
- **Methadone Interaction Checker. Medscape**
- **Naltrexone Interaction Checker. Medscape**

Individuals can type in the name of any drug and determine whether there is an interaction with methadone, buprenorphine, or naltrexone or with HIV/AIDS medications.

Smokefree.gov
This tobacco cessation program is supported by the National Cancer Institute and can be accessed on mobile and online platforms. It provides a variety of ways to personalize support through smartphone apps, text messaging, websites, social media accounts, and access to trained counselors.

Smoking and Mental Illness Among Adults in the United States
This is an updated Center for Behavioral Health Statistics and Quality report detailing the rate of cigarette smoking in adults with mental illness vs. adults without mental illness and the differences in tobacco cessation rates between the two groups. It is based on data from SAMHSA's 2014 National Survey on Drug Use and Health (NSDUH) report. The SAMHSA NSDUH report is an annual survey of 68,000 people ages 12 and older on a wide range of behavioral health issues.

Treatment Improvement Protocol (TIP) addressing Medications for Opioid Use Disorder. In Press.
SAMHSA will release a new TIP on addressing medications for opioid use disorder in early 2018. Please check the SAMHSA Store for the new TIP.

TIP 43: Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs
This 2012 SAMHSA TIP gives a detailed description of medication-supervised treatment for addiction to opioids, including comprehensive maintenance treatment and medically supervised withdrawal. Screening, assessment, and administrative and ethical issues are also covered. This publication is due to be revised in 2017.

SECTION 1
FACTSHEET #
4

MANAGING PHARMACOTHERAPY OVER THE COURSE OF PREGNANCY

CLINICAL SCENARIO

A pregnant woman treated with pharmacotherapy for opioid use disorder (OUD) is experiencing withdrawal or cravings.

CLINICAL ACTION STEPS

Need for Periodic Adjustments of Pharmacotherapy for OUD

A pregnant woman will likely need periodic adjustments to the dose of her pharmacotherapy in response to the physiological changes of pregnancy to prevent reemergence of withdrawal symptoms. The behavioral interventions provided may also need to be increased or adjusted to prevent return to substance use and promote effective strategies for coping with cravings and triggers. By offering the pregnant woman information and the opportunity to discuss her concerns, healthcare professionals can support her in arriving at a treatment plan that is effective both in preventing withdrawal or return to substance use and in bringing about abstinence from other substances, especially tobacco.

Dose of Pharmacotherapy Does NOT Affect Degree of Neonatal Abstinence Syndrome (NAS)

The pregnant woman will need reassurance that the amount or dose of the medication used to treat her OUD is not associated with the degree of NAS the baby may experience. However, she must also be informed that tobacco use is associated with the degree of NAS the baby may experience.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Need for Periodic Adjustments of Pharmacotherapy for OUD

- **Medication metabolism rate increases as the pregnancy progresses.** As the pregnancy progresses, doses of methadone typically need adjusting upward, particularly in the third trimester (Albright et al., 2011; Jones et al., 2008). These dose increases are needed because the rate of methadone clearance is increased when progesterone levels are elevated during pregnancy. The increased clearance rates result in decreased blood levels of methadone (Park, Meltzer-Brody, & Suzuki, 2012). Dividing the dose of methadone in half (split dosing) can help manage the impact of metabolic changes on the methadone level for women in the third trimester of pregnancy (Bogen et al., 2013; Jansson et al., 2008).

  Pregnant women using buprenorphine typically have a similar need for increased dose in the third trimester (Jones et al., 2005). No standardized approach to dose increases with either methadone or buprenorphine can be recommended, because these adjustments need to be individualized based on patient assessment.

Dose of Pharmacotherapy Does NOT Affect Degree of NAS

- **NAS expression and severity are not correlated with maternal pharmacotherapy dose.** A woman may want to change or reduce her medication in hopes of reducing the chance or severity of NAS in her infant. Randomized trials of the medications have found no relationship between methadone or buprenorphine dose and outcomes such as NAS peak score; total morphine needed to treat NAS; neonatal hospital stay duration; number of days that pharmacotherapy was given for NAS; estimated gestational age at delivery; Apgar score at 5 minutes; and neonatal head circumference, length, and weight at birth (Jones, Jansson, O'Grady, & Kaltenbach, 2013; Jones et al., 2014; Lund et al., 2013).

Other Evidence and Considerations

- **Counseling can encourage and motivate women to continue with treatment, while enhancing coping skills and reducing the risk of a return to substance use.** Counseling helps people learn how to make healthful decisions; handle setbacks, triggers, and stress; and move forward with their lives. A pregnant woman using pharmacotherapy for OUD should also have access to and be encouraged to talk with a behavioral health professional, either one-on-one or in a group with others in treatment. Behavioral health treatments may include cognitive behavioral therapy (CBT), family therapy, and contingency management (CM) to name just a few. Additional information on these therapies can be found at **SAMHSA's Behavioral Health Treatments and Services** website. Optimally, the woman's care would be provided by a coordinated team of healthcare professionals including OB/GYNs, substance use disorder (SUD) treatment specialists, nurses, case managers, and peer recovery coaches.

- **SAMHSA recommends that people seeking recovery from substance use have access to peer support specialists.** Pharmacotherapy can significantly stabilize patients, but patients may still have unmet needs for long-term recovery (Chang, Carroll, Behr, & Kosten, 1992). An example of how to meet these needs is to connect patients with peer support specialists (PSS) in the community. PSS are individuals who are in recovery and have undergone training and certification to ensure that they operate within the bounds of sound practice, especially in terms of privacy and confidentiality (Chinman et al., 2014). PSS can help others in recovery from a serious mental illness, an SUD, or co-occurring behavioral health and substance use disorders, across the treatment continuum (SAMHSA, 2009). The PSS approach is relatively new, and evidence about its effectiveness is still limited (Barlow et al., 2015; Sanders, Trinh, Sherman, & Banks 1998).

  In some states, Medicaid or other payers reimburse for PSS services; in some instances, PSS staff may be volunteers. In other circumstances they are hired by healthcare organizations, such as hospitals and rehabilitation centers, inpatient and outpatient facilities, day treatment programs, and community programs (Salzer, Schwenk, & Brusilovskiy, 2010).

RESOURCE TO REVIEW

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers (SAMHSA, 2016). This document provides information on treating pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Recovery requires more than pharmacotherapy. SAMHSA has established a **working definition of recovery** that defines recovery as a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential. Recovery is built on access to evidence-based clinical treatment and recovery support services for all populations. To optimize chances of achieving full recovery, SAMHSA recommends having the individual engage in a variety of behavioral therapies (e.g., CBT, CM, family therapy) to determine the best fit.

- **Many people seek support from organizations known as mutual-aid, mutual-support, or 12-step programs.** These organizations, which are generally set up and run by volunteers, can provide a supportive environment that helps some people maintain recovery. Women on pharmacotherapy for OUD are encouraged to seek out programs where pharmacotherapy is accepted as complementary to traditional 12-step treatment programs and are supportive of using pharmacotherapy.

FACTSHEETS TO REVIEW

- **Factsheet #3: Changing Pharmacotherapy During Pregnancy** for more information on changes the pregnant woman can make to ensure a healthy pregnancy
- **Factsheet #6: Addressing Polysubstance Use During Pregnancy** for additional discussion on tobacco use cessation
- **Factsheet #10: Management of Neonatal Abstinence Syndrome, Exhibit Factsheet#10.2**, for factors that influence NAS expression, severity, and pharmacological and nonpharmacological treatment options

WEB RESOURCES ON THIS TOPIC

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This document provides information on treating pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Core Competencies for Peer Workers in Behavioral Health Services
On this website, SAMHSA defines peer workers and recovery and lists several categories of core competencies for peer workers.

Methadone Treatment for Pregnant Women
This SAMHSA brochure provides basic information on methadone treatment, the possibility and treatment of infant withdrawal, breastfeeding on methadone, the consequences of continued drug use, and birth control.

National Alliance for Medication Assisted Recovery
This organization is led by people in recovery and supports all pathways to recovery, including medication. Recovery Community Centers offer peer support and opportunities to socialize with others in recovery.

Treatment Improvement Protocol (TIP) 35: Enhancing Motivation for Change in Substance Abuse Treatment
This SAMHSA TIP is intended to help clinicians influence the change process in their patients by incorporating motivational interventions into SUD treatment programs. The document describes different motivational interventions that can be used at all stages of change.

TIP 40: Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction
This 2007 SAMHSA TIP offers practice guidelines to help physicians make decisions about using buprenorphine to treat opioid addiction. It includes information on patient assessment; protocols for opioid withdrawal; and the treatment of pregnant women, teens, and polysubstance users. This publication is due to be revised in 2017.

TIP 43: Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs
This 2012 SAMHSA TIP gives a detailed description of medication-supervised treatment for addiction to opioids, including comprehensive maintenance treatment and medically supervised withdrawal. Screening, assessment, and administrative and ethical issues are also covered. This publication is due to be revised in 2017.

SECTION 1
FACTSHEET #
5

PREGNANT WOMEN WITH OPIOID USE DISORDER AND COMORBID BEHAVIORAL HEALTH DISORDERS

CLINICAL SCENARIO

A pregnant woman with opioid use disorder (OUD) and comorbid behavioral health disorders needs help managing these conditions.

CLINICAL ACTION STEPS

Comorbid behavioral health disorders are common and may also require pharmacotherapy

A woman with comorbid behavioral health disorders that would typically require her to take benzodiazepines, selective serotonin reuptake inhibitors (SSRIs), amphetamines, and/or other pharmacotherapies may need to continue these medications during her pregnancy. Decisions regarding use of such pharmacotherapy must balance the pregnant woman's mental health needs with the impact of psychotropic medications on the developing fetus. Healthcare professionals should help her understand the risks and benefits of continuing vs. discontinuing such pharmacotherapy to her baby, her physical health, and her health and recovery, with input from specialists as appropriate.

Healthcare professionals should also discuss whether any of the other needed medications carry with them a risk of producing a specific withdrawal syndrome, impact the expression or severity of neonatal abstinence syndrome (NAS) due to opioid exposure, may affect the infant's development, or have consequences for breastfeeding.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Comorbid behavioral health disorders are common and may also require pharmacotherapy

- **Depression and other psychiatric disorders are common among women with OUD.** Research has found that the majority of women entering treatment for OUD have a history of sexual assault, trauma, or domestic violence and/or come from homes where their caregivers used drugs (Committee on Healthcare for Underserved Women, American Society of Addiction Medicine [ASAM], & American College of Obstetricians and Gynecologists [ACOG], 2012, 2017; Covington, 2008). Therefore, when obtaining a psychosocial history to evaluate pregnant women for OUD, follow the Substance Abuse and Mental Health Services Administration's (SAMHSA's) screening, brief intervention, and referral to treatment (SBIRT) practice and screen them for trauma, depression, anxiety, and tobacco and alcohol use. Maintaining a caring and nonjudgmental approach to such screening may produce the most inclusive and accurate disclosure (ASAM, 2015; Banderali et al., 2015; McLafferty et al., 2016).
- **Prescribers need to keep in mind possible drug interactions with pharmacotherapies for OUD.** Research on adult males and nonpregnant women finds that when pharmacotherapies for OUD are concurrently used with psychotropic medications, problematic pharmacokinetic drug interactions may occur. Examples include the potential for respiratory depression when benzodiazepines are combined with either methadone or buprenorphine, prolonged QTc when SSRIs or tricyclic antidepressants are concurrently used with methadone, and serotonin syndrome when monoamine oxidase inhibitors are used with either buprenorphine or methadone (reviewed in Saber-Tehrani, Bruce, & Altice, 2011).

In pregnant women, these interactions may be further compounded by a cascade of physiological changes such as increased hepatic and renal blood flow and increased plasma volume. These changes may alter medication needs and exacerbate drug interactions; however, few studies address these issues (McCance-Katz, 2011).

- **Selecting the best management for pregnant women who have OUD and concurrent depression and/or anxiety is a complex decision.** Healthcare professionals are aware of the consequences of unaddressed depression for mother–infant interactions, the pregnant woman's own health and well-being, and the baby's development (Committee on Healthcare for Underserved Women, ASAM, & ACOG, 2012; Yonkers et al., 2009). However, the impact on the fetus and newborn of chronic exposure to multiple psychotropic drugs is not fully understood at this time. This lack of understanding extends to whether the infant's development will be impacted.

  Although healthcare professionals and patient decision-making about the use of antidepressants and anxiolytics during pregnancy is complex given the real and possible risks of in utero exposure including increased severity of NAS, these risks must be weighed against the risks of untreated depression or anxiety, their contribution to risk of return to substance use and the risks of abrupt cessation of either type of medication.

- **Some antidepressants, anticonvulsants, and anxiolytics may impact the expression and severity of NAS.** Many psychiatric medications are associated with specific withdrawal syndromes in the newborn. For example, infants whose mothers received SSRIs during pregnancy are at risk for manifesting clinical signs of drug toxicity including NAS during their first week of life (Chisolm & Payne, 2016; Committed on Healthcare for Underserved Women, ASAM, & ACOG, 2012; Hudak, Tan, American Academy of Pediatrics [AAP] Committee on Drugs, & AAP Committee on Fetus and Newborn, 2012; Patrick et al., 2015).

  NAS due to in utero exposure may also be exacerbated when a pregnant woman takes antidepressants or anxiolytics (Chisolm & Payne, 2016; Kaltenbach et al., 2012). There has also been a report that gabapentin, an anticonvulsant, can exacerbate NAS (Fujii et al., 2013). Both depression and continuous use of SSRIs during pregnancy are associated with premature birth (Weisner et al., 2009).

  Expectant mothers receiving treatment with buprenorphine or methadone who use benzodiazepines should work with a psychiatrist to stabilize their anxiety and reduce their use of benzodiazepines if possible (Lee, Kresina, Campopiano, Lubran, & Clark, 2015; World Health Organization, 2014), with a gradual taper of a long-acting benzodiazepine (e.g., diazepam) toward the goal of being benzodiazepine free at delivery. The mother's stability and well-being should not be adversely impacted in service of achieving this goal however as unrelieved anxiety is associated with return to substance use and may directly have adverse effects on the fetus. Infants persistently exposed to benzodiazepines in utero should be expected to manifest a benzodiazepine withdrawal syndrome and managed accordingly.

- **The dose of individual psychiatric medications should be evaluated for possible adjustment in the third trimester.** Just as with opioid agonists, the pharmacokinetic changes and increased volume of distribution associated with the third trimester of pregnancy can lead to decreased serum levels, so it may be necessary to increase some antidepressant medications in the third trimester to keep depression from worsening or recurring (Sit, Perel, Helsel, & Wisner, 2008; Sit, Perel, Luther, & Wisner, 2010).

RESOURCE TO REVIEW

A significant body of literature exists on treating and managing co-occurring depression and anxiety in pregnant and postpartum women. However, little has been published on treating and managing co-occurring behavioral health problems in pregnant women who have OUD. What is known about the impact of these conditions and their management during pregnancy should inform decision making for pregnant women with OUD as well. Figures 4 and 5 in Chisolm and Payne (2016) provide a recent review of the use of psychotropic drugs during pregnancy.

See **Factsheet #15: Maternal Discharge Planning** for more information on postnatal comorbid mental disorders.

Other Evidence and Considerations

- **Discrimination and bias against people who live with serious mental illness or OUD are widespread—not only among the general public, but among healthcare professionals, community leaders, and the media.** Discrimination is the unfair treatment of people for any number of reasons, whereas bias involves stigmatizing attitudes (Botticelli & Koh, 2016; Clement et al., 2013). Bias and discrimination stem from similar roots: misperceptions, misunderstandings, and misinformation. Individuals who have a substance use disorder (SUD) or severe mental illness may have their own negative perceptions of their illness, which could be based on personal experiences with others—including friends and family—or inaccurate public information. The potent combination of discrimination and bias may compound the reluctance and fear that pregnant women with OUD or severe mental illness often experience when deciding whether to seek help for these disorders. Medical care should never be denied to pregnant women with OUD or behavioral health disorders. Healthcare professionals should take great care that program policies and procedures do not inadvertently reinforce these fears and reluctance (SAMHSA, 2016). Healthcare professionals are advised to review training materials produced by the **U.S. Department of Health and Human Services** and **SAMHSA** to address these issues, as well as **Changing the Language of Addiction** for specific recommendations on terminology to use when referring to individuals with SUD.

Combining benzodiazepines with either methadone or buprenorphine is not recommended because of the risk of enhanced respiratory depression (ASAM 2015; Lee et al., 2015). See **Factsheet #6: Addressing Polysubstance Use During Pregnancy** for additional information on how to address benzodiazepine misuse during pregnancy.

WEB RESOURCES ON THIS TOPIC

Current Understanding of the Interaction of Benzodiazepines and Buprenorphine
This Providers' Clinical Support System continuing medical education course reviews the dangers of combining benzodiazepines and buprenorphine.

General Principles for the Use of Pharmacological Agents to Treat Individuals with Co-Occurring Mental and Substance Use Disorders
This SAMHSA document provides information to assist in planning, delivering, and evaluating pharmacological approaches to supporting the recovery of individuals with co-occurring mental and substance use disorders.

Moms' Mental Health Matters
The National Institute of Child Health and Human Development website provides information and materials for new mothers and clinicians, including action plans to treat postpartum depression.

SBIRT: Screening, Brief Intervention, and Referral to Treatment
This SAMHSA webpage provides information and links to resources about SBIRT that clinicians can use to identify, reduce, and prevent alcohol and illicit drug problems.

Treating for Two
The Centers for Disease Control and Prevention's Treating for Two initiative aims to improve the health of women and babies by identifying the safest treatment options for managing common conditions before and during pregnancy. The program focuses on all drugs, not just illicit drugs, and pharmacotherapy for recovery.

Use of Psychiatric Medications During Pregnancy and Lactation
This ACOG document provides general recommendations and conclusions on the use of psychiatric medications by pregnant and breastfeeding women with mental disorders.

SECTION 1
FACTSHEET #
6

ADDRESSING POLYSUBSTANCE USE DURING PREGNANCY

CLINICAL SCENARIO

A pregnant woman with opioid use disorder (OUD) requests help on (1) a return to opioid use; (2) her use of alcohol, cocaine, cannabis, or tobacco; (3) her comorbid **misuse** of prescribed medications, including benzodiazepines, amphetamines, or other pharmacotherapies, whether licitly or illicitly obtained; and (4) the impact of these medications and other substances on her health and that of the fetus.

CLINICAL ACTION STEPS

Return to Opioid Use During Pregnancy

A pregnant woman on pharmacotherapy for OUD who returns to opioid use should have the effectiveness of the dose of her medication, and possibly the choice of medication, evaluated. She may also benefit from receiving a higher level of care, such as residential treatment, as long as her pharmacotherapy is not disrupted. A pregnant woman who is experiencing cravings or withdrawal should be evaluated for a possible medication dose or schedule change to prevent a possible return to substance use. Changing from one opioid agonist to another is rarely, if ever, warranted on the basis of cravings or unrelieved withdrawal alone.

Changing the type of pharmacotherapy (buprenorphine to methadone or vice versa) cannot be specifically recommended or advised against based on current evidence but may be considered if the interventions recommended above are fully implemented but unsuccessful, particularly if the woman reports continued cravings in the absence of unrelieved withdrawal **and** is receiving maximum behavioral and social supports. Most importantly, the woman should be reassured and encouraged to remain in treatment and work to stop the opioid use.

Return to Other Substance Use During Pregnancy

A pregnant woman on pharmacotherapy for OUD who has concurrent other substance use or who returns to use of one or more other substances should receive (1) behavioral interventions targeting the use of the substance(s) and (2) pharmacotherapy, if available and safe in pregnancy for the substance(s) she is using.

The woman experiencing a return to other substance use may also benefit from a higher level of care (e.g., residential treatment) provided her pharmacotherapy is not disrupted.

Polysubstance Use Concerns for Pregnant Women and Infants

Women who misuse benzodiazepines, amphetamines, or other pharmacotherapies—whether licitly or illicitly obtained—or who have a substance use disorder (SUD) involving alcohol, cocaine, cannabis, or tobacco should receive education on, and have the opportunity to discuss, the known or suspected impact of prenatal exposure to these substances on the fetus and their own health.

A woman with an SUD should be offered appropriate evidence-based behavioral, pharmacological, and social services to support the discontinuation of these substances, especially nicotine and alcohol. The healthcare professional can take this opportunity to discuss the known associated risk of neonatal abstinence syndrome (NAS), developmental problems, and impact on breastfeeding when using these substances.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Return to Opioid Use During Pregnancy

- **A return to substance use is a common occurrence among people with an SUD.** Returning to substance use is a common occurrence with OUD especially early in treatment when the medication dose is still being stabilized and the woman is acquiring basic skills to cope with triggers and cravings. Given that returning to substance use is predictable and common, doing so should not be viewed as a setback or failure, but as an indication of the need to reassess the patient and adjust the treatment plan. Such adjustments may include engaging community and behavioral supports. Many people find that, for lasting recovery, they need to control stress, avoid places and situations where they once used drugs (triggers), and even end relationships with people involved with drugs. When making these changes, people in recovery may find that peers—such as other mothers in recovery who experienced a pregnancy affected by OUD—can help them in a way that healthcare professionals cannot. Limited but promising research supports the role of peers who are in recovery from an SUD (Barlow et al., 2015; Sanders, Trinh, Sherman, & Banks, 1998). Personal safety and adequate food and housing are also essential to both short and long-term recovery.

- **Medication metabolism rate increases as the pregnancy progresses.** Dividing the dose of methadone from once daily to twice daily (split dosing) takes advantage of the long-acting properties of methadone to help manage the impact of metabolic changes on the methadone level for women in the third trimester of pregnancy. Metabolism is accelerated during pregnancy resulting in larger clearances of medications (Albright et al., 2011; Bogen et al., 2013; Jansson et al., 2008; Jones et al., 2008; Park, Meltzer-Brody, & Suzuki, 2012).

  Pregnant women treated with buprenorphine typically have a similar need for increased dose in the third trimester (Jones et al., 2005). No standardized approach to dose increases with either methadone or buprenorphine can be recommended, because these adjustments need to be tailored to each patient.

Return to Other Substance Use During Pregnancy

- **Many people in treatment or recovery return to substance use one or more times before being able to remain free of substance use.** The risk of return to substance use is highest in the first 6 to 12 months after stabilization is achieved and then diminishes gradually over the years. A return to use of depressant drugs (e.g., alcohol, benzodiazepines) is highly concerning given the risk for respiratory depression when combined with opioid agonist therapy. Use of stimulants (e.g.,

Patients and healthcare professionals must learn to recognize that, although return to substance use is discouraging, it is not a failure. People who return to substance use often reestablish a substance-free lifestyle, continue to participate in treatment, and achieve long-term recovery. Healthcare professionals and programs should not view a woman's return to substance use as a reason to discontinue treatment. In fact, efforts to maintain the woman's engagement in treatment should be redoubled in these circumstances.

As the pregnancy progresses, doses of methadone typically need adjusting upward, particularly in the third trimester. Dividing the dose into a twice daily schedule may also help keep the methadone blood levels clinically therapeutic. Any adjustment of dose or schedule needs to be based on evaluation of the patient.

Return to substance use is rarely caused or triggered by a single factor. It is more often the result of an interaction of physiological and environmental factors and is best seen as a dynamic process in which the patient's strengths and vulnerabilities are affected by other external and internal factors (SAMHSA, 2014). Consequently the therapeutic response needs to encompass an array of services.

methamphetamine, cocaine) may destabilize and cause erratic behavior that interferes with effective engagement in previously effective treatment and services. Healthcare professionals may need to increase the intensity of other treatments if return to use appears imminent (SAMHSA, 2014).

Polysubstance Use Concerns for Pregnant Women and Infants

- **Decades of evidence of the dangers of smoking during pregnancy document its adverse effects on pregnancy, fetal development, and postnatal infant outcomes.** A tobacco use cessation program is one of the most important therapies to begin when a woman enters OUD treatment. Between 88 and 95 percent of pregnant women receiving pharmacotherapy for OUD continue to smoke (Akerman et al., 2015), and smoking cigarettes is known to cause more severe NAS and have lasting developmental effects. Heavy daily smoking in pregnant women is associated with compromised birth outcomes such as lower birth weight, small birth length, lower Apgar scores, and increased lengths of hospital stays and number of days medicated for NAS (Jones et al., 2013; Patrick et al., 2015; Winklbaur et al., 2009). Individual reports document ways to reduce nicotine consumption in pregnant women with OUD, but insufficient evidence exists for recommending one tobacco cessation treatment approach over another (Akerman et al., 2015).

- **Women with OUD frequently misuse other substances that can exacerbate NAS.** Nicotine and benzodiazepines may worsen the symptoms of NAS (Bagley, Wachman, Holland, & Brogly, 2014; Bakstad, Sarfi, Welle-Strand, & Ravndal, 2009; Jones et al., 2013; Kaltenbach et al., 2012). Healthcare professionals should provide behavioral support to reduce, and ideally stop, the misuse of other substances. Among the interventions that reduce and end other substance use are cognitive behavioral approaches—including motivational interviewing and dialectical behavioral therapy—and contingency management. The World Health Organization's (WHO's) **Guidelines for the Identification and Management of Substance Use and Substance Use Disorders in Pregnancy** extensively discusses additional interventions to reduce substance use (WHO, 2014).

Factors to consider when making a treatment plan if a pregnant woman returns to substance use:

- What environmental factors may have contributed to the return to substance use? Did use occur because others around her were using? Was she coerced to use? Under these circumstances, behavioral interventions may be more appropriate than dose increase.
- At what stage of pregnancy is the woman? The later the pregnancy stage, the more likely the need for an increased pharmacotherapy dose or change in dosing schedule.
- Are blood levels of the medication in a therapeutic range?
- What other medication is she taking? Are there any potential interactions that would change the metabolism of the opioid medication that are contributing to her return to substance use?
- Are issues of personal safety or inadequate food or housing contributing to the return to substance use?

Should return to substance use occur, healthcare professionals can consider multiple options for treating it, including:

- Examining social, medical, or behavioral factors that contribute to the woman's substance use.
- Increasing or changing the intensity of psychosocial services.
- Assessing the effectiveness of current pharmacotherapy.
- Engaging a coordinated team of healthcare professionals including obstetricians, nurses, case managers, and peer recovery coaches.

A variety of evidence-based treatments can be offered to pregnant women, regardless of the substance use disorder (SUD). These include providing treatment in the early stages of pregnancy, and offering residential or outpatient treatment for significant lengths of time. Recently, motivational interviewing and contingency management, with a focus on the mother-infant dyad and integration with child protective services and the courts have been added to the list of possible approaches (Lester & Twomey, 2008). Note that it is recommended that these services be offered with simultaneous access to child care and parenting classes. **Exhibit FS #6.1** summarizes treatment approaches for several SUDs.

Exhibit FS #6.1: Management Options for SUDs Other Than OUD During Pregnancy

Substance	Treatment Approaches	Comments	References
Alcohol	• Withdrawal management: Benzodiazepine (e.g., diazepam) for medication-assisted withdrawal • Pharmacotherapy: • The US Food and Drug Administration approved naltrexone, disulfiram, and acamprosate to treat alcohol use disorder. • Psychosocial treatment during and after withdrawal	• Alcohol is associated with fetal alcohol spectrum disorders and is the number one cause of preventable developmental delays in children. • In non-pregnant patients, behavioral interventions for risky/harmful alcohol use are an effective component of care. The effectiveness of these interventions has not been well studied in pregnant or postpartum women. Although pregnant women are counseled to cease drinking alcohol, little specific evidence-based guidance is available on how to manage alcohol withdrawal in pregnancy. Management should be based on alcohol withdrawal for non-pregnant women. • Alcohol withdrawal cannot be managed with behavioral therapies alone. A long-acting benzodiazepine similar to one that would be used with benzodiazepine detoxification can be used in addition to behavioral treatments. • No published studies have compared the safety or efficacy of disulfiram, acamprosate and naltrexone for alcohol use disorder in pregnant women.	Bhat & Hadley, 2015 Bhuvaneswar, Chang, Epstein, & Stern, 2007 Christensen, 2008 Whitlock, Polen, Green, & Klein, 2004 DeVido, Bogunovic & Weiss, 2015
Amphetamines/ Methamphetamines	• Behavioral interventions such as cognitive behavioral therapy, contingency management, and motivational interviewing	• There is no effective pharmacotherapy for withdrawal or maintenance of abstinence from stimulants. • Peer support is a helpful component of the treatment and recovery process	Rawson, Gonzales, & Brethen, 2002 Sherman, Sanders & Yearde, 1998
Benzodiazepines	• Gradual taper with a long-acting benzodiazepine (e.g., diazepam) with the goal of being benzodiazepine free at birth • Psychosocial treatment during dose reduction and after taper is complete	• A long-acting benzodiazepine similar to one that would be used with alcohol detoxification can be used in addition to behavioral treatments. For withdrawal, behavioral treatments alone are not sufficient. • May require long term treatment for underlying depression/ anxiety.	McElhatton, 1994
Cannabis	• Behavioral interventions such as cognitive behavioral therapy and contingency management	• There is no known effective pharmacotherapy.	Budney, Roffman, Stephens, & Walker, 2007 Conner et al., 2016
Cocaine	• Behavioral interventions such as cognitive behavioral therapy, contingency management, and motivational interviewing	• There is no known effective pharmacotherapy. • Peer support is a helpful component of the treatment and recovery process	Farkas & Parran, 1993 Sherman, Sanders & Yearde, 1998

Substance	Treatment Approaches	Comments	References
Tobacco	• Nicotine replacement therapy (NRT) • Bupropion • Varenicline • Behavioral interventions such as cognitive behavioral therapy, contingency management, and especially voucher-based reinforcement • 5As (Ask, Advise, Assess, Assist, Arrange) as a brief intervention	• Data are very limited for NRT (nicotine gum, transdermal nicotine patches, nicotine nasal spray, nicotine lozenge, and nicotine inhaler), bupropion (Wellbutrin®), and varenicline (CHANTIX®) use in pregnancy. These medications should be used during pregnancy only if the benefit outweighs the risk to the fetus.	Cressman, Pupco, Kim, Koren, & Bozzo, 2012; Forinash, Pitlick, Clark, & Alstat, 2010; Minnes, Lang, & Singer, 2011 Osadchy, Kazmin, & Koren, 2009

- **When caring for pregnant women with OUD, a comprehensive plan of care should be developed that lists each health and social problem, how it will be addressed, and who is responsible for addressing it.** Evaluation for pharmacological treatment for other SUDs should be provided in conjunction with medical, social, and environmental interventions (Fanucchi & Lofwall, 2016; SAMHSA, 2016). A comprehensive assessment of the patient for medical conditions commonly associated with substance use should be conducted. Such an assessment includes examining the patient for medical conditions linked to injection drug use such as infective endocarditis, osteomyelitis, HIV, and hepatitis B and C. Each risk or problem identified should have a corresponding plan to address it and minimize its lasting effect on the pregnant woman and the fetus.

Other Evidence/Considerations

- **Maternal cannabis smoking is associated with low birth weight infants.** American College of Obstetricians and Gynecologists (ACOG) recommends against maternal cannabis use (**Committee on Obstetric Practice**, ACOG, 2017) as does a recent National Academies of Sciences, Engineering, and Medicine (2017) **report**. Evidence shows that maternal cannabis smoking induces low birth weight in the infants (Fegusson, Horwood, & Northstone, 2002; Gray et al., 2010; Gunn et al., 2016). Low birth weight is also linked to maternal use of nicotine, alcohol, cocaine, and opioid misuse (Behnke, Smith, Committee on Substance Abuse, & Committee on Fetus and Newborn, 2013; Gouin, Murphy, Shah, & Knowledge Synthesis Group on Determinants of Low Birth Weight and Preterm Births, 2011).

FACTSHEETS TO REVIEW

- **Factsheet #5: Comorbid Psychiatric Illness During Pregnancy** for additional resources on behavioral health treatment plans for pregnant women with OUD.
- **Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome, Exhibit FS #11.1** provides examples of when a mother with OUD might be advised to breastfeed and when breastfeeding is not recommended.

RESOURCE TO REVIEW

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers (SAMHSA, 2016). This document provides information on treating pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

New research is expected on both maternal cannabis smoking and ingestion of tetrahydrocannabinol, the principal psychoactive component of cannabis, due to the legalization of cannabis use in several states. Until research on this issue is complete, pregnant and new mothers should be counseled to avoid cannabis (as well as alcohol and nicotine), for either recreational or medical purposes (Committee on Obstetric Practice, ACOG, 2017; Jansson, Bunik, & Bogen, 2015; Reece-Stremtan et al., 2015; Volkow, Compton, & Wargo, 2017; WHO, 2014).

WEB RESOURCES ON THIS TOPIC

Advisory: Tobacco Use Cessation During Substance Abuse Treatment Counseling
This 2011 SAMHSA document offers SUD counselors an introduction to tobacco use cessation during SUD treatment. It discusses screening and effective treatment approaches to quitting, including cessation medications and practical and supportive counseling.

Alcohol Alert: Alcohol and Other Drugs
This National Institute on Alcohol Abuse and Alcoholism publication includes information on the epidemiology of alcohol and drug addiction, the genetics and shared factors of alcohol and drug use disorders, challenges to diagnosing SUDs, and addiction terminology.

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This document provides information on treating pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Committee Opinion No. 722: Marijuana Use During Pregnancy and Lactation
The ACOG Committee on Obstetric Practice summarizes recent clinical and scientific advances related to cannabis use in pregnant women.

Current Understanding of the Interaction of Benzodiazepines and Buprenorphine
This Providers' Clinical Support System continuing medical education course reviews the dangers of combining benzodiazepines and buprenorphine.

Health Effects of Cannabis and Cannabinoids: The current state of evidence and recommendations for research
The National Academies of Sciences, Engineering, and Medicine published this report in 2017 to summarize the recent changes in cannabis legalization, production and use and provides a review of the scientific evidence related to health effects. It concludes with a suggested research agenda.

Treating for Two
The Centers for Disease Control and Prevention's Treating for Two initiative aims to improve the health of women and babies by identifying the safest treatment options for managing common conditions before and during pregnancy. The program focuses on all drugs, not just illicit drugs, and pharmacotherapy for recovery.

Treatment Improvement Protocol 40 (TIP): Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction

This 2007 SAMHSA TIP offers practice guidelines to help physicians make decisions about using buprenorphine to treat opioid addiction. It includes information on patient assessment; protocols for opioid withdrawal; and the treatment of pregnant women, teens, and polysubstance users. This publication is due to be revised in 2017.

TIP 43: Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs

This 2012 SAMHSA TIP gives a detailed description of medication-supervised treatment for addiction to opioids, including comprehensive maintenance treatment and medically supervised withdrawal. Screening, assessment, and administrative and ethical issues are also covered. This publication is due to be revised in 2017.

WHO Guidelines for the Identification and Management of Substance Use and Substance Use Disorders in Pregnancy

This WHO guideline reviews the use of numerous illicit substances in pregnant women and details specific guidelines for the care and treatment of pregnant women and their infants.

SECTION 1
FACTSHEET #
7

PLANNING PRIOR TO LABOR AND DELIVERY

CLINICAL SCENARIO

A pregnant woman with opioid use disorder (OUD) has questions about neonatal abstinence syndrome (NAS), support services, and postpartum planning.

CLINICAL ACTION STEPS

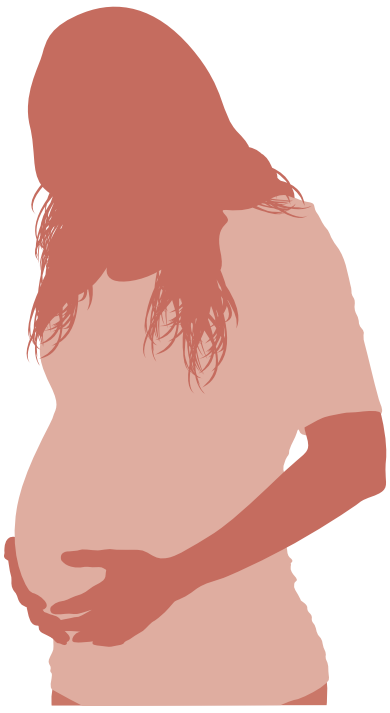
Patient Education on NAS
A pregnant woman with OUD should receive the same education and information that all pregnant patients receive (e.g., tour of labor and delivery suites, newborn nursery).

Healthcare professionals should inform the pregnant woman of the possibility of neonatal abstinence syndrome (NAS) and counsel her on its diagnosis, management, and consequences. The woman should also receive education on ways to optimize the well-being of the fetus such as tobacco cessation and early pediatric care after delivery and hospital discharge. Healthcare professionals should ensure that she is aware of nonpharmacological interventions that should be provided to her infant to reduce NAS symptoms, including rooming-in.

Caregivers of opioid-exposed infants should be informed that while the infant may carry a genetic risk for substance use disorder the fact of experiencing NAS as an infant does not increase the risk of developing a substance use disorder in life.

Healthy Home Environment
Caregivers should be informed about and supported in providing a stable, healthy home environment to enhance protective factors and reduce social risk factors that may impact the future risk for substance use disorder in the child.

Contraception
Women with OUD should be counseled about contraception and have immediate, easy access to the contraceptive of their choice after delivery.



SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Patient Education on NAS

- **Some infants exposed to methadone or buprenorphine in utero experience opioid withdrawal after birth.** NAS is a treatable condition, but caregivers and healthcare professionals need to be alert to signs of NAS in the infants of women with OUD so that therapy can begin as necessary. Infant withdrawal usually begins a few days after the baby is born but may begin as late as 2 to 4 weeks after birth. All caregivers should know what symptoms indicate the onset of NAS and when to seek additional medical care for the infant. Clear communication about NAS between the new mother and pediatricians, neonatologists, or family practice doctors, in addition to support from OB/GYNs, midwives, and nurse practitioners, is critical.

  Predicting the risk of NAS for infants of mothers with OUD is difficult, because several substances in addition to opioid exposure can influence the presentation of NAS, such as smoking tobacco (Jones et al., 2013a) and using other substances (Patrick et al., 2015). Infant-related variables can affect the infant's NAS course, such as genetics, gender, and gestational age (Wachman et al., 2013, 2015). NAS is an expected and treatable outcome of opioid agonist or partial agonist pharmacotherapy to treat OUD during pregnancy. Recent studies have shown NAS associated with pharmacotherapy is not worse than that experienced after untreated heroin use (Buckley, Razaghi, & Haber, 2013). Being treated with an opioid agonist such as buprenorphine or methadone, by itself, is not a basis for determining parental fitness or child safety.

  A woman may want to change or reduce her medication in hopes of reducing the chance or severity of NAS in her infant. Randomized trials of the medications have found no relationship between methadone or buprenorphine dose and outcomes such as NAS peak score; total morphine needed to treat NAS; neonatal hospital stay duration; number of days that pharmacotherapy was given for NAS; estimated gestational age at delivery; Apgar score at 5 minutes; and neonatal head circumference, length, and weight at birth (Jones, Jansson, O'Grady, & Kaltenbach, 2013b; Jones et al., 2013b; 2014; Lund et al., 2013). In a meta-analysis, Cleary et al. (2010) and Patrick et al. (2015) found the severity of NAS was unrelated to methadone dose. The practice of minimizing or even reducing maternal opioid agonist medication to protect the fetus is unnecessary and should be avoided.

When discussing options to maximize the health of the pregnant woman and infant, remind the pregnant woman that she CAN take several steps to protect her health and the fetus:

- She can enroll in a tobacco cessation program, and participate in treatment programs for comorbid alcohol, other substance use disorders as needed.
- She can maintain a healthy weight and take prenatal vitamins as prescribed.
- She can learn how NAS is diagnosed and treated.
- She can learn which nonpharmacological interventions can reduce the incidence and severity of NAS.
- She can inform and prepare herself for breastfeeding.
- She can enroll in parenting classes recommended by her prenatal healthcare professional.

FACTSHEETS TO REVIEW

Reducing the dose of pharmacotherapy will not reduce NAS expression or severity. No relationship was found between either methadone or buprenorphine dose and significant infant outcomes, including NAS expression or severity. The dose of pharmacotherapy should be optimized to suppress withdrawal, minimize cravings and prevent a return to substance use. **Factsheet #2 Initiating Pharmacotherapy For Opioid Use Disorder and Factsheet #10: Management of Neonatal Abstinence Syndrome, Exhibit FS #10.2**, lists factors that influence NAS expression, severity, and pharmacological and nonpharmacological treatment options.

- **When planning for delivery, healthcare professionals should take time to talk about the benefits of breastfeeding.** Breastfeeding has positive physical and behavioral health results for mother and baby. When appropriate, any amount of breastfeeding, however brief, can decrease NAS severity, reduce the infant's need for pharmacological treatment, and decrease the length of pharmacological therapy and hospitalization (Abdel-Latif et al., 2006; Bagley, Wachman, Holland, & Brogly, 2014; Jansson et al., 2008a, 2008b; Reece-Stremtan, Marinelli, & Academy of Breastfeeding Medicine, 2015; Ruwanpathirana et al., 2015). Introduce the concept of breastfeeding in the last trimester and assure the mother that a team will be available at the hospital to facilitate her breastfeeding, including a lactation consultant. However, not all women with SUD are appropriate candidates for breastfeeding.

Planning for labor and delivery should include inviting members of the collaborative team to meet with the pregnant woman before delivery. Many clinics have a pediatrician/neonatologist on staff to discuss what to expect after birth. This consultation builds trust between the pregnant woman and her care team. This is an opportune time to introduce the pregnant woman to a lactation consultant if one is available. Teaching the mother how to score NAS in her infant and to participate in the NAS scoring is also beneficial. **Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome** provides a discussion on when to breastfeed and when not to breastfeed.

Healthy Home Environment

- *Women may be eligible for visits from the* **Federal Home Visiting Program***, funded by the* **Administration for Children & Families' (ACF's) Early Head Start (EHS) programs** *and Health Resources and Services Administration's (HRSA's)* **Healthy Start program***, a network of more than 100 grantees nationwide.* Each member program focuses on providing services to families in the nation's poorest neighborhoods. These services attempt to reduce infant mortality, advocate for an end to health disparities, engage fathers, and encourage preconception health.

Discharge plans should be compatible with and support the plan of safe care for mother and infant; this includes addressing potential maternal comorbid medical or mental disorders. See Factsheet #15: Maternal Discharge Planning, for a more extensive discussion about implementing a plan of safe care.

Contraception

- **Preventing unintended pregnancies and planning for future pregnancies is critical.** Healthcare professionals should offer all women, including those with OUD, non-coercive contraceptive counseling and discuss different forms of birth control and the effectiveness of each method before they are discharged from the hospital. Whether a woman is on pharmacotherapy for OUD or continues to misuse opioids, a conversation about the importance of contraception is critical. Women of reproductive age who have OUD experience a high rate of unintended pregnancy (Heil et al., 2011). One study found that only about half of the women with current opioid use were using contraception; the majority of women were not using long-acting reversible contraception (LARC) options, such as implants or intrauterine devices (IUDs) (Terplan, Hand, Hutchinson, Salisbury-Afshar, & Heil, 2015).

Ideally, each new mother should have the option to receive a long-acting reversible contraceptive prior to leaving the hospital. At a minimum, women should receive non-coercive contraceptive counseling and the option to leave the hospital with a prescription for contraception, contraceptive supplies, or a contraception plan (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014).

The American College of Obstetricians and Gynecologists (ACOG), 2017) and the American College of Nurse-Midwives and other nurse professional societies **recommend** offering immediate postpartum LARC to reduce unintended or short-interval pregnancy (Committee on Healthcare for Underserved Women, American Society of Addiction Medicine, & ACOG, 2017). LARC can consist of IUDs or implants. Although there is a higher chance of expulsion

with the immediate placement of an IUD after delivery, a risk–benefit analysis concluded that, because many women do not attend their 6-week postpartum visit (at which time a LARC is often provided), insertion while still at the hospital after delivery is an excellent time to implant the device. Concerns with **Medicaid** reimbursement are an issue, but many states are now providing policy statements on reimbursement at time of insertion.

Healthcare professionals can encourage women already in treatment to consider planning their next pregnancy with the healthcare team to make sure they are on safe medications, their treatment status is stable, and they are ready for the stresses of motherhood on top of treatment or recovery.

Other Evidence/Considerations

- **In some communities, programs to support women with OUD offer services for mothers who are in recovery.** Examples of relevant programs within medication-assisted treatment services include peer support, medication education, family support and education for childrearing, escape from interpersonal violence, and stable housing. The support and practical help these programs provide can make a difference in the day-to-day life of a mother and her infant. Healthcare professionals might check with local child protection services or opioid treatment programs (OTPs) to determine whether such programs are available in their area. OTPs can be located through SAMHSA's Opioid Treatment Program Directory **Opioid Treatment Program Directory**.

- **People who are in recovery from SUD or who live with behavioral health disorders often find support, encouragement, and community in consumer-/patient-led organizations.** These organizations, which are generally set up and run by volunteers, can provide a supportive environment that helps some people maintain recovery. Women on pharmacotherapy for OUD are encouraged to seek out programs where pharmacotherapy is accepted as complementary to traditional 12-step treatment programs and is supportive of using pharmacotherapy. Peer counselors or recovery coaches can help those who are new to recovery avoid triggers that can lead to return to substance use. Coaches can provide practical support such as transportation to and from meetings and show new parents how to securely store all medications, including pharmacotherapeutics for OUD, so that children cannot get into them.

WEB RESOURCES ON THIS TOPIC

Breastfeeding

Academy of Breastfeeding Medicine Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, 2009, Revised 2015
This protocol provides evidence-based guidelines for the evaluation and management of women with SUDs who are considering breastfeeding. It includes information on methadone and buprenorphine.

Baby Friendly Hospital Initiative-USA
This global initiative was launched by the World Health Organization and the United Nations Children's Fund in 1991 to encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding and mother–infant bonding.

Breastfeeding Initiatives: Family Resources
This American Academy of Pediatrics (AAP) webpage lists breastfeeding resources for families; some resources are in Spanish.

Childbirth, Breastfeeding, and Infant Care: Methadone and Buprenorphine
This brochure urges pregnant women who use heroin or abuse opioid prescriptions to seek medication-assisted treatment with methadone or buprenorphine. It discusses how methadone therapy works and women's issues such as breastfeeding, opioid withdrawal, birth control, and child protection services.

Drug Entry Into Human Milk
This InfantRisk Center webpage describes in detail the mechanisms of drug entry into human milk and provides general rules on breastfeeding.

Drugs and Lactation Database (LactMed)
This National Library of Medicine searchable database provides information on medications and other chemicals to which breastfeeding mothers may be exposed.

Medications and Breastfeeding: Tips for Giving Accurate Information to Mothers
This two-page AAP document discusses clinical points to consider when prescribing medications to breastfeeding mothers.

Policy Statement: Breastfeeding and the Use of Human Milk
This AAP-updated policy statement reviews the benefits of breastfeeding for the mother and child.

When Should a Mother Avoid Breastfeeding?
This Centers for Disease Control and Prevention webpage provides links to information about illnesses and conditions that contraindicate breastfeeding.

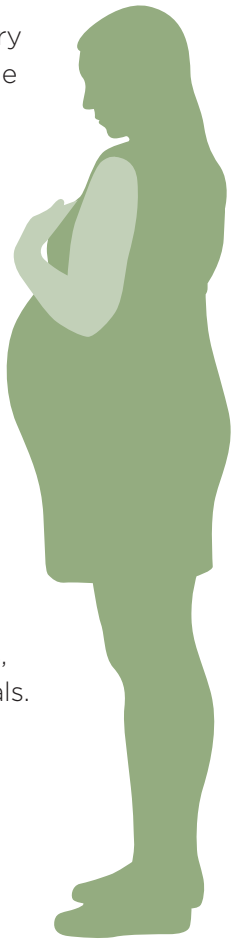
Home Visiting and Peer Support Services

Alcoholics Anonymous (AA)
AA has traditionally emphasized recovery without medication. A person receiving recovery support from AA may need to attend a variety of meetings to find one that recognizes the role of pharmacotherapy in recovery.

Core Competencies for Peer Workers in Behavioral Health Services
On this webpage, SAMHSA defines peer workers and recovery and lists several categories of core competencies for peer workers.

Early Head Start Programs
Early Head Start EHS programs administered by HHS's Administration for Children and Families serve infants and toddlers younger than under the age of 3, and pregnant women. TheseEHS programs provide intensive comprehensive child development and family support services to low-income infants and toddlers and their families, and to pregnant women and their families.

Federal Home Visiting Program
This webpage provides background about the HRSA and ACF program, its structure, and its mission and services, which involve evidence-based, voluntary home visiting programs, where families receive help from health, social service, and child development professionals.



Healthy Beginnings

This program meets the U.S. Department of Health and Human Services criterion for an effective childhood home visiting service delivery model. In this model, nurse home visitors provide education on infant nutrition, family nutrition, and physical activity and address family members' concerns. Nurse visitors typically made 8 visits from a prenatal visit through age 24 months.

Healthy Start

This webpage describes the HRSA Healthy Start program and links to a technical assistance center with more information on program approaches and grantees. The program provides depression screening, healthcare services, care coordination, public health services such as immunization and health education, and training for community health workers and care coordinators.

Narcotics Anonymous (NA)

NA has traditionally emphasized recovery without medication. A person receiving recovery support from NA may need to attend a variety of meetings to find one that recognizes the role of pharmacotherapy in recovery.

National Alliance for Medication Assisted Recovery

This organization is led by people in recovery and supports all pathways to recovery, including medication. Recovery Community Centers offer peer support and opportunities to socialize with others in recovery.

General Resources

Opioid Treatment Program Directory

The dropdown menu on this SAMHSA website links users to information on the availability of OTPs in the United States and its territories.

Strong Start for Mothers and Newborns Initiative

This joint effort by the Centers for Medicare & Medicaid Services, HRSA, and ACF aims to reduce preterm births and improve outcomes for newborns and pregnant women.

SECTION 1
FACTSHEET #
8

PERIPARTUM PAIN RELIEF

CLINICAL SCENARIO

A pregnant woman with opioid use disorder (OUD), in treatment or not, needs pain relief during her labor, delivery, and postpartum period.

CLINICAL ACTION STEPS

Pain Management Options
A pregnant woman will naturally be nervous about how her pain will be controlled during labor and delivery. When a woman is already using pharmacotherapy for OUD or has not started therapy and is misusing opioids, her options for pain control should include epidural/spinal anesthesia and short-acting opioid analgesics.

Differentiating OUD Pharmacotherapy and Pain Management During Delivery or Postpartum
A woman's existing opioid agonist dose should not be expected to provide adequate pain relief either intrapartum or postpartum. Do not attempt to increase the woman's prescribed dose of buprenorphine or methadone for short-term intrapartum or postpartum pain control.

Contraindicated Medications
Do NOT administer butorphanol, nalbuphine, or pentazocine to a pregnant woman with OUD, whether she is on pharmacotherapy for OUD or not. These medications have partial antagonist properties and will precipitate acute opioid withdrawal.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Pain Management Options

- **Pregnant women with OUD need to be assured that they will receive adequate pain relief during labor and the postpartum period.** Healthcare professionals will need to inform the pregnant woman of her labor and delivery pain treatment options, talk with her healthcare professional, and consider arranging for her to meet with the anesthesiologist before she goes into labor.

  Patients with long-term opioid use are at risk for hyperalgesia and may derive insufficient pain relief from standard therapeutic doses of a nonsteroidal analgesic (NSAID), acetaminophen, or short-acting opioid analgesic (Savage, 1996). During labor and delivery, they are likely to require higher doses of opioid agonist medication than women who have not experienced long-term opioid use (Alford, Compton, & Samet, 2006; Meyer, Paranya, Norris, & Howard, 2010; Meyer, Wagner, Benvenuto, Plante, & Howard, 2007). If a woman needs higher doses of NSAIDs, acetaminophen, or short-acting opioid analgesics for adequate intrapartum pain relief, this need may continue into the initial postpartum period regardless of the method of delivery.

Providing pain relief to women receiving methadone or buprenorphine, whether via epidural and/or short-acting opioids, is essential (Jones, Johnson, & Milio, 2006; Jones et al., 2008, 2009). Morphine sulfate, fentanyl, or hydromorphone (Dilaudid®) are reasonable options for acute pain management during labor and delivery for patients with OUD. These medications need to be responsibly prescribed following Centers for Disease Control and Prevention guidelines that, if opioids must be prescribed for acute pain, the effective dose should be used for 3 or fewer days and rarely more than 7 days (Dowell et al., 2016).

Any antepartum discussion or guidance regarding pain relief during labor, delivery, and postpartum should be documented in the antepartum or intrapartum record and accessible to all members of the treating team. Documenting recommendations for pain relief in the patient's record so that they are available to the treatment team during labor and delivery, as well as postpartum, is a simple way to improve communication among the team members. For example, the healthcare professional responsible for prescribing opioid agonist therapy can provide instruction to the team regarding the management of the pharmacotherapy for OUD and guidance for acute pain management to support the treating team in achieving adequate pain control.

Opioid Agonist Therapy for OUD Cannot Provide Pain Management During Delivery or Postpartum

- **During labor and delivery, the mother should be maintained on her current dose of opioid agonist therapy for OUD.** The daily pharmacotherapy dose should be considered the new mother's baseline. The daily dose of methadone or buprenorphine should not be expected to provide analgesia, and neither the dose nor the schedule should be altered to relieve pain (Committee on Healthcare for Underserved Women, American Society of Addiction Medicine, & American College of Obstetricians and Gynecologists, 2012, 2017; Meyer et al., 2007).

  Pregnant women on pharmacotherapy do NOT need to be transitioned from their maintenance medication before a planned cesarean section (Jones et al., 2006). Labor and operative pain can be managed while pharmacotherapy is still being administered (Jones, et al., 2009).

Contraindicated Medications

- **Certain analgesics should NEVER be given to women with OUD.** Practitioners must not prescribe opioid analgesics with antagonist properties (e.g., nalbuphine, butorphanol) to women receiving opioid agonists (e.g., methadone, buprenorphine) or with an OUD, because of the likelihood of precipitating acute withdrawal (Cassidy & Cyna, 2004; Jones et al., 2014; Savage, 1996).

WEB RESOURCES ON THIS TOPIC

FDA Drug Safety Communication: FDA Has Reviewed Possible Risks of Pain Medicine Use During Pregnancy
This Food and Drug Administration 2015 communication discusses its review of published research studies on the use of pain medicines during pregnancy. It does not make any recommendations, because of limitations FDA found in the studies. The communication urges pregnant women to discuss their medications with their healthcare professionals before taking them.

Section I References

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Section II: Infant Care

Section II consists of five factsheets:

Factsheet #9: Screening and Assessment for Neonatal Abstinence Syndrome

Factsheet #10: Management of Neonatal Abstinence Syndrome

Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome

Factsheet #12: Infant Discharge Planning

Factsheet #13: Early Intervention Strategies and Developmental Assessments

Each factsheet contains four components.

I. **Clinical Scenario**
Presents a brief statement to orient the reader to the situation under consideration.

II. **Clinical Action Steps**
Present recommendations that are derived directly from the rated clinical decisions in the RAND/UCLA Appropriateness Method report and describe what can, might, or should not be done when caring for women and their infants.

III. **Supporting Evidence and Clinical Considerations**
Present strengths and weaknesses of the evidence supporting the clinical action steps. This section describes how to address or tailor recommended actions to unique patient variables and preferences, the clinical experience of the provider, and available community resources. Guidance is based on expert panel and Federal Steering Committee discussions and additional information from published articles. *This section includes supporting information for the Clinical Action Steps as well as information in where there was insufficient evidence to recommend a clear course of action. Instead, information in this section will provide elements that must be taken into consideration when making a decision with the pregnant women or new mother about the best course of action for herself or her infant.*

IV. **Web Resources**
Provide links to additional online information.

FACTSHEET #9: Screening and Assessment for Neonatal Abstinence Syndrome

CLINICAL SCENARIO: An opioid-exposed infant at risk for neonatal abstinence syndrome (NAS) is delivered.

- Screening for NAS
- Maternal and infant toxicology
- Informed consent for screening
- NAS onset time varies
- Opportunities for positive change
- Standardized NAS assessment and treatment can improve outcomes

FACTSHEET #10: Management of Neonatal Abstinence Syndrome

CLINICAL SCENARIO: An infant begins to exhibit signs of neonatal abstinence syndrome (NAS) shortly after birth.

- Managing mild NAS
- Managing moderate to severe NAS
- Adjuvant pharmacotherapy for severe NAS
- Additional medical considerations
- Minimizing hospital stays using standardized protocols
- Nonpharmacological interventions for all substance-exposed mother—infant dyads
- Nonpharmacological interventions to reduce NAS severity
- Recommended medications and medications under study
- Not recommended medications for NAS
- Infant observation period variation and type of opioid

FACTSHEET #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome

CLINICAL SCENARIO: A mother with an infant at risk for NAS seeks advice on whether to breastfeed.

- Stable mother and breastfeeding
- Low levels of opioid use disorder medications found in breastmilk
- Pharmacotherapy and breastfeeding decision-making
- Discussing benefits of breastfeeding
- Situations where mother should not breastfeed

FACTSHEET #12: Infant Discharge Planning

CLINICAL SCENARIO: An opioid-exposed infant is ready for discharge home.

- In-home and follow-up services
- Caregiver education and home environment
- Need for acute follow-up
- Discharge planning before birth
- Ongoing support for mothers/caregivers and infants who cannot be quickly weaned from opioid agonists
- Healthy home environments contribute to healthy long-term development
- Ongoing research on genetic components of substance use disorders

FACTSHEET #13: Early Intervention Strategies and Developmental Assessments

CLINICAL SCENARIO: An opioid-exposed infant is ready for discharge home.

- Effects of NAS on development
- Effects of extended-release injectable naltrexone
- Investigating maternal and infant eligibility for early intervention services
- Discussing developmental screens and assessments

SECTION 2
FACTSHEET #
9

SCREENING AND ASSESSMENT FOR NEONATAL ABSTINENCE SYNDROME

CLINICAL SCENARIO

An opioid-exposed infant at risk for neonatal abstinence syndrome (NAS) is delivered.

CLINICAL ACTION STEPS

Screening for NAS

An infant born to a mother who used opioids (licit or illicit) or had pharmacotherapy for opioid use disorder (OUD) during her pregnancy should be monitored for 4–7 days and managed according to a formal protocol for NAS.

Maternal and Infant Toxicology Screening

The monitoring and management of infants at risk of NAS should be informed by an interview with the mother about all substance and pharmacotherapy use during her pregnancy, by the clinical status of the infant, and by toxicology screening of the mother and the infant.

Informed Consent

Any toxicology screening of the mother must be done with her informed consent; toxicology screening in infants does not require informed consent.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Screening for NAS

- **The onset of NAS varies among infants and depends on the opioids to which they were exposed.** The timing of the onset of NAS varies among opioid-exposed infants. Those exposed to heroin or other short-acting opioids will typically present symptoms within 2—3 days of delivery (Beauman, 2005; Chan, Klein, & Koren, 2003), whereas those exposed to methadone or buprenorphine usually will exhibit NAS symptoms within the first 4 days of birth (Jansson, Velez, & Harrow, 2009). Median time to treatment initiation has been shown to be one day later in buprenorphine-exposed neonates compared with methadone-exposed neonates (mean of 3 vs. 2 days, respectively; Gaalema, Heil, Badger, Metayer, & Johnston, 2013). Consequently, an opioid-exposed newborn requires a minimum of 4 days (96 hours) in the hospital for NAS scoring. If the infant requires medication to manage NAS, the exact observation time will depend on the infant's expression of NAS and response to treatment (Hudak et al., 2012).

FACTSHEET TO REVIEW

For more information on factors that influence NAS expression, severity, and pharmacological and nonpharmacological treatment options, see **Factsheet #10: Management of Neonatal Abstinence Syndrome**.

- **Use of standardized NAS assessment and treatment protocols improves outcomes.** The 2012 AAP **Neonatal Drug Withdrawal** report (Hudak et al., 2012) recommends that every labor and delivery unit have a standardized protocol for assessing and treating infants at risk and/or showing signs and symptoms of withdrawal from opioids, alcohol, and other substances. Nursing staff members must be trained to administer a standardized NAS assessment tool reliably to ensure the consistency of these assessments. Standardizing care has been shown to reduce the duration of pharmacological treatment and the number of infants discharged on medication (Patrick et al., 2016). Exhibit FS #9.1 outlines the benefits and challenges of the most common NAS scoring scales. Little research has been done on the comparative cost-effectiveness of these tests or their efficiency in identifying opioid-exposed infants at birth.

RESOURCES TO REVIEW

Each hospital should adopt a protocol for infants exposed to opioids and other substances in utero. The following materials provide examples of established NAS treatment protocols for hospitals to institute:

- **Cohort Analysis of a Pharmacokinetic-Modeled Methadone Weaning Optimization for Neonatal Abstinence Syndrome** (Hall et al., 2015)
- *Maternal Drug Use, Infant Exposure and Neonatal Abstinence Syndrome* (Patrick, 2016)
- **Neonatal Abstinence Syndrome After Methadone or Buprenorphine Exposure** (Jones et al., 2010)
- **Neonatal Drug Withdrawal** (Hudak et al., 2012)
- **The Opioid Exposed Newborn: Assessment and Pharmacologic Management** (Jansson, Valez, & Harrow, 2009)

Exhibit FS #9.1: NAS Scoring Scales

Scale Name	Description	References
Finnegan Neonatal Abstinence Scoring System (Finnegan Scale)	• Dates from the 1970s • Was first scale for NAS	Original: Finnegan, Kron, Connaughton, & Emich, 1975 Most recent: Finnegan & Kaltenbach, 1992
MOTHER NAS Scale (a modified Finnegan Scale)	• Contains 28 items, of which 19 are used for scoring and medication decisions • Eliminates many symptoms listed in Finnegan Scale (e.g., myoclonic jerks, mottling, nasal flaring, watery stools) • Adds 2 items: irritability and failure to thrive	Jones et al., 2010b
Lipsitz Tool (Neonatal Drug Withdrawal Scoring System)	• Is recommended in the 1998 AAP statement Neonatal Drug Withdrawal and again in 2012 updated statement (Hudak et al., 2012) • Offers relatively simple metrics with good sensitivity for identifying clinically important withdrawal	Lipsitz, 1975
Neonatal Narcotic Withdrawal Index	• Evaluates NAS on a 7-item scale • Assigns weights of 0 to 2 points per item • Provides some validity data	Green & Suffet, 1981
Neonatal Withdrawal Inventory	• Provides a sequence of care procedures • Uses an 8-point scale to make withdrawal evaluation	Zahorodny et al., 1998
Withdrawal Assessment Tool (WAT-1)	• Assesses signs of opioid and benzodiazepine withdrawal	Franck, Harris, Soetenga, Amling, & Curley, 2008; Kaltenbach & Jones, 2016

Maternal and Infant Toxicology Screening

- **When creating a long-term plan for the mother's recovery and infant's safety, the healthcare professional needs to take into account the toxicology results, but should not make decisions solely based on these results.** Relying exclusively on maternal drug screens at the time of delivery to identify drug exposure is not necessarily the best approach for creating a long-term plan for the mother's recovery because they generally reflect only recent substance use (except for tetrahydrocannabinol in chronic cannabis users). Safe care of the infant and effective support of the mother and other caregivers are best achieved through a trusting and respectful therapeutic relationship between the mother and the care team. Toxicology screening of the mother and/or the infant can be a useful component of a NAS risk assessment and the development of a care plan. In addition to collecting specimens for toxicology testing, healthcare professionals can use screening instruments and interview the mother about recent drug use and pharmacotherapies she required during her pregnancy (Hudak, Tan, American Academy of Pediatrics (AAP) Committee on Drugs, & AAP Committee on Fetus and Newborn, 2012). Hospitals should use a standardized protocol for screening for substance exposure, as well as for monitoring and treating NAS in an opioid-exposed infant.

  All clinicians and staff members must understand their legal responsibility for reporting substance exposure or withdrawal of an infant and should be sensitive to the social and legal consequences for the mother and infant of reporting such concerns to state and local authorities. Healthcare professionals need confirm any positive test results given the life-changing ramifications for the mother and infant if there is a false positive (Wright, 2015). Reporting requirements vary by state. **A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers** provides more information on developing and coordinating a long-term plan for caring for mothers and their infants (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016).

  Additional testing is often done for benzodiazepines, barbiturates, methamphetamines, and methadone as well as other drugs used in the local community. Testing for synthetic opioids (e.g., oxycodone, hydrocodone, fentanyl, buprenorphine) must be ordered as an extended opioid panel. Extended panels are recommended for women with known substance use disorders (SUDs), with the understanding that urine testing cannot detect ALL drugs of abuse.

  Exhibit FS #9.2 summarizes the most common toxicology screens for infants and mothers at delivery. Little research has been done on the cost-effectiveness of such testing. To be useful in identifying infants at risk of NAS, test results must be available quickly. This means some of the more definitive tests are not useful for the early identification of and intervention in NAS risk.

FACTSHEET TO REVIEW

Factsheet #1: Prenatal Screenings and Assessments for more information on appropriate maternal screens including interview instruments and maternal toxicology.

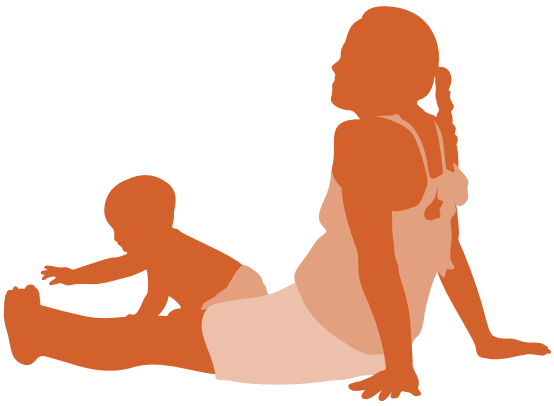
The easiest testing method is to collect urine from the infant. The most commonly ordered panel is the National Institute on Drug Abuse—5 (NIDA-5) to test for cannabis, opioids, cocaine, amphetamine, and phencyclidine. Tests results need to be available quickly to inform care.

Informed Consent

- All testing on the mother requires informed consent; testing on the neonate does not require consent. Healthcare professionals should review with the woman the risks and limitations of each type of test (e.g., false-positive results for amphetamines that can be due to cross-reactions of cold medicines) and the possible need for confirmatory testing for all positive results (e.g., using gas chromatography/mass spectrometry confirmation). They should also ensure that she understands the specimen collection process. See Exhibit FS #9.2 for a review of the most common toxicology screens in use.

Exhibit FS #9.2: The Most Common Toxicology Screens for Infants and Mothers at Delivery—Neonatal Toxicology Tests

Matrix	Benefits	Drawbacks
Amniotic Fluid and Placental Tissues	Placental tissue is noninvasively collected. Collection is exempt from maternal consent procedures.	Placental tissue is not commonly used clinically. Amniotic fluid collection is difficult and invasive; the sample may not be clinically useful.
Cord Blood	Cord blood is relatively easy to collect and does not pose a hazard to mother or child. Provides rapid results. Collection is exempt from maternal consent procedures.	The window of detection in cord blood is very narrow, limiting the findings of the test.
Hair	Specimen has a wide window of detection for drug use. Collection is relatively noninvasive. Collection is exempt from maternal consent procedures.	Extraction from specimen is difficult, and testing requires an experienced laboratory. Accuracy of results are limited by the chemical composition of the drug, the color of the hair (dark hair has greater concentration of drug metabolites than light hair), and timing of maternal consumption (Wright, 2015). Fetal hair reflects only exposure during the third trimester. Collection of hair from the infant may be unacceptable in some cultures.
Meconium	Sample is easily collected and readily available. Method has a relatively wide window for collection and detection because meconium continues to pass for up to 48 hours postnatally. Collection is exempt from maternal consent procedures	Test is complex and must be done by an experienced laboratory. Sample appears to form at 12 weeks. The volume of meconium increases throughout gestation, with most meconium being produced in the last 2 months of gestation (Bakdash et al., 2010); thus, drug detection is biased to the last 8 weeks in utero. Sample is commonly contaminated by fetal urine, which increases the concentration of substances to which the fetus was exposed near term. Testing for drugs is limited by the chemical composition of the drug, timing of maternal consumption (Wright, 2015), maternal and fetal metabolism, and placental transport. A major drawback for meconium testing is that is does not reflect periods of abstinence close to term so may be harmful for women in SUD treatment.



Matrix	Benefits	Drawbacks
Urine	Sample collection is relatively noninvasive and easy to collect. Test is inexpensive and readily available. Results are rapidly available. Collection is exempt from maternal consent procedures	Results reflect only recent exposure and depend on the half-life of the drug. Use of workplace standards for drug detection rather than lowest detectable limits may lead to false-negative results (Farst, Valentine, & Hall 2011). False-positive results are also possible. Many medications can cross-react with the immunoassays used for preliminary screening causing false-positive results; thus, all positive results must be confirmed (Markway & Baker, 2011). Testing for benzodiazepines often looks only for oxazepam or nordiazepam, not the parent compound; thus differentiating between legitimate maternal prescription medication use and illicit street use can be a challenge. **Not completing confirmatory urine testing can be disastrous because it can result in false-positive results that may mean the loss of custody of children and, in some states, legal prosecution** (Wright, 2015).
Umbilical Cord	Sample is easily and noninvasively collected. Sample appears to accurately reflect fetal drug exposure. Collection is exempt from maternal consent procedures.	Sample does not have ideal reservoirs for the more lipophilic drugs, so the results are limited by the chemical composition of the drug.

Exhibit FS #9.2: The Most Common Toxicology Screens for Infants and Mothers at Delivery—Peripartum Maternal Toxicology Tests

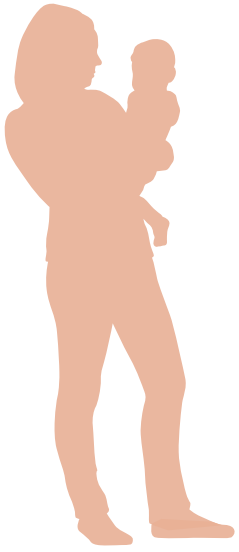
Matrix	Benefits	Drawbacks
Cord Blood	Provides rapid results. Cord blood is relatively easy to collect and does not pose a hazard to mother or infant.	The window for detection for maternal cord blood is very narrow and severely limits testing for drugs.
Hair	Specimen has a wide window for detection for drug use. Collection is noninvasive.	Extraction from specimen is difficult, requires a specialized laboratory, and can be degraded by environmental exposures such as hair dyes or sun exposure. Accuracy of results are limited by the chemical composition of the drug, the color of the hair (dark hair has greater concentration of drug metabolites than light or gray hair), and timing of maternal consumption (Wright, 2015).

Matrix	Benefits	Drawbacks
Urine	Collection is relatively noninvasive. Samples are easy to collect. Test is inexpensive and readily available. Results are rapidly available.	Results reflect only recent exposure and depend on the half-life of the drug. Both false-positive and false-negative results are possible. Many medications can cross-react with the immunoassays used for preliminary screening; thus, all positive results must be confirmed (Markway & Baker, 2011). Testing for benzodiazepines often looks only for oxazepam or nordiazepam, not the parent compound; thus, differentiating between legitimate prescription medication use and illicit street use can be a challenge. Method of ingestion and chronicity of use may affect results. Urine can be adulterated or diluted; thus, collection should be observed, which precludes privacy. **Not completing confirmatory urine testing can be disastrous because it can result in false-positive results that may mean the loss of custody of children and, in some states, legal prosecution** (Wright, 2015).
Saliva	Collection is noninvasive and easily obtained. Collection method is more dignified than observed urine sample collection.	Sample often has a shorter detection window than that of urine. The majority of substances in saliva are the parent drug rather than metabolites. Salivary pH influences drug concentrations in that acid pH decreases concentrations (Drummer, 2005); this makes test adulteration possible.
Sweat	Specialized patch makes collection noninvasive and well tolerated. Collection method offers a cumulative measure of exposure of the drug over an extended period.	Less is known about this type of biological matrix for detecting drugs than other methods, because it is a relatively new methodology. Collection is limited by the chemical composition of the drug.

WEB RESOURCES ON THIS TOPIC

2017 ICD-10-CM Diagnosis Code 96.1
This website provides detailed information on the codes for neonatal withdrawal symptoms used for reimbursement purposes.

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This SAMHSA document provides information on treating pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.



SECTION 2
FACTSHEET #
10

MANAGEMENT OF NEONATAL ABSTINENCE SYNDROME

CLINICAL SCENARIO

An infant begins to exhibit signs of neonatal abstinence syndrome (NAS) shortly after birth.

CLINICAL ACTION STEPS

Management of NAS

An infant born to a mother who misused opioids (licit or illicit) or required pharmacotherapy to treat opioid use disorder (OUD) during her pregnancy should be monitored and managed according to a formal protocol for NAS.

- **Managing Mild Signs**
  An infant exhibiting mild signs of NAS should be managed with nonpharmacological interventions such as rooming-in and monitored for progression to more severe symptoms according to a formal NAS protocol.

- **Managing Moderate to Severe Signs**
  Infants with moderate to severe signs of NAS should be managed with nonpharmacological interventions as for infants with mild NAS, with the addition of pharmacotherapy such as liquid oral morphine or liquid oral methadone. Neither tincture of opium nor phenobarbital should be used as first-line agents in the treatment of NAS. Not enough evidence exists to recommend for or against the use of sublingual buprenorphine for the management of moderate to severe NAS.

- **Using Adjuvant Pharmacotherapy for Severe NAS**
  Clonidine or phenobarbital may be used as adjuvants for infants with severe NAS not adequately relieved by morphine or methadone.

Medical Considerations

An infant with NAS who cannot maintain adequate hydration or who loses weight despite optimal management should be evaluated to rule out other medical conditions, and consideration should be given to transferring the infant to a neonatal intensive care unit.

Management of NAS

- **Hospital stays for infants with NAS are shortened when standardized protocols are used.** Several recent publications have emphasized the value of using a standard assessment and treatment protocol. The act of implementing a standard NAS treatment and weaning protocol shortened the length of infant stays (Asti, Magers, & Keels, 2015; Patrick et al., 2016). Furthermore, a multicenter study comparing infants managed with a standard NAS treatment and weaning protocol with infants managed without such a protocol found that, regardless of medication type (methadone or morphine), infants managed with the standard protocol required a shorter duration of NAS medication treatment and a shorter hospital stay (Hall, Wexelblatt, & Crowley, 2015; Holmes et al., 2016).

  Although a traditional medication regimen uses a weight-based approach, some institutions and research protocols now use a symptom-based approach in which the dose is based on the severity of the infant's symptoms (Jansson et al., 2009; Kraft & van den Anker, 2012). **Exhibit FS #10.1** provides NAS scores to define the terms mild, moderate, and severe used in this Guide. **Exhibit FS #10.2** lists the factors that influence NAS expresssion and severity.

RESOURCES TO REVIEW

Each hospital should adopt a protocol for infants exposed to opioids and other substances in utero. The following materials provide examples of established NAS treatment protocols for hospitals to institute:

- **Cohort Analysis of a Pharmacokinetic-Modeled Methadone Weaning Optimization for Neonatal Abstinence Syndrome** (Hall et al., 2015)
- *Maternal Drug Use, Infant Exposure and Neonatal Abstinence Syndrome* (Patrick, 2016)
- **Neonatal Abstinence Syndrome After Methadone or Buprenorphine Exposure** (Jones et al., 2010)
- **Neonatal Drug Withdrawal** (Hudak et al., 0212)
- **The Opioid Exposed Newborn: Assessment and Pharmacologic Management** (Jansson, Valez, & Harrow, 2009)

See **Exhibit FS #9.1: NAS Scoring Scales** for a list of the most commonly used scoring scales.

Exhibit FS #10.1: NAS Severity Based on Scores Collected Using the MOTHER NAS Scale (a Modified Finnegan Scale)*

Term	Score (based on peak NAS score, 24-hour observation with scoring every 3–4 hours)
Mild	0–8
Moderate	9–16
Severe	17+

*Source: Jones et al., 2010.

Exhibit FS #10.2: Factors that Influence NAS Expression and Severity

Factors	References
Gestational Age at Delivery	Doberczak, Kandall, & Wilets, 1991; Seligman et al., 2008
Prenatal Exposure to Tobacco Smoking	Jones et al., 2013
Prenatal Exposure to Other Substances (e.g., Benzodiazepines, Selective Serotonin Reuptake Inhibitors)	Jansson, Dipietro, Elko, & Velez, 2010; Kaltenbach et al., 2012; Pritham, Paul, & Hayes, 2012; Seligman et al., 2008; Wachman et al., 2011
Genetic and Epigenetic Variation	Wachman et al., 2013, 2015

- **Beginning at birth all infants, whether they manifest signs of NAS or not, should receive nonpharmacologic care, and the pregnant woman and family caregivers should be educated on this approach before the infant's birth.** Nonpharmacologic care of the substance-exposed mother–infant dyad consists of:

  - A thorough understanding of the newborn's functioning with the goals of implementing comforting techniques and environmental modifications and promoting the infant's self-regulation and interactive capabilities.

  - A thorough understanding of the mother's strengths and challenges to promote her self-regulation, confidence as a parent, and ability to respond contingently to and communicate with her infant.

  - Attention to the dyadic communication patterns and behaviors and the environment that may need modifications to support the infant's physiologic organization and regulation and to encourage the mother to respond sensitively to the infant's needs (Velez & Jansson, 2008).

  Infants with NAS can be described as having "dysfunctional regulation" (Velez & Jansson, 2008). The nervous system of each infant will mature at a different rate, and infants exposed to opioids in utero may have specific problems related to neuromaturation. As the timing of the developmental milestones related to self-organization and self-regulation may vary, it is particularly important to create individualized NAS management plans for caregivers that take into consideration each infant's developmental milestones. This plan and training should be sensitive to the individual strengths and vulnerabilities of the infant and the mother.

  Interventions that target both the mother's understanding of and responses to the infant and the infant's regulatory capacity and ability to relay interpretable cues to the mother will facilitate mother–infant interactions. The goal of the individualized infant NAS management plan is to help:

  - The infant self-regulate by increasing the length of sleep, increasing time spent in the quiet alert state, and promoting motor and autonomic control.
  - The mother to understand and respond to her infant's communication sensitively and contingently.

- **Research supports using nonpharmacological interventions to reduce the severity of NAS before or in conjunction with medical treatment.** Predicting the risk of NAS for infants of mothers with opioid use disorder (OUD) is difficult, because the mother may be using several different substances that can influence the presentation of NAS (Jones et al., 2013a; Patrick et al., 2015). Infant-related variables can affect the infant's NAS course, such as genetics, gender, and gestational age (Wachman, et al., 2013; Wachman, et al., 2015).

  NAS is an expected and treatable outcome of opioid agonist or partial agonist pharmacotherapy to treat OUD during pregnancy. Recent studies have shown NAS associated with pharmacotherapy is not worse than that experienced after untreated heroin use (Buckley, Razaghi, & Haber, 2013).

Any amount of breastfeeding when appropriate and however brief, can decrease the infant's need for pharmacological treatment, lead to a decrease in NAS scores, and decrease the duration of pharmacological therapy and hospitalization (Abdel-Latif et al., 2006; Bagley, Wachman, Holland, & Brogly, 2014; Jansson et al., 2008a, 2008b).

Promising nonpharmacological treatments include rooming in, extended skin-to-skin contact with the mother, gentle handling, swaddling, pacifiers, quiet environments, supine positioning and waterbeds (American Academy of Pediatrics [AAP], 2012; Bagley et al., 2014; d'Apolito, 1999; MacMullen, Dulski, & Blobaum, 2014; Oro & Dixon, 1988; d'Apolito, 1999; Velez and& Jansson, 2008; American Academy of Pediatrics [AAP], 2012; Bagley et al., 2014; MacMullen, Dulski, & Blobaum, 2014; World Health Organization, 2014).

Rooming-in has been consistently associated with a reduced need for medication to treat NAS and a shortened neonatal hospital stay (Abrahams et al., 2007; Hünseler, Brückle, Roth, & Kribs, 2013; McKnight et al., 2016; Saiki, Lee, Hannam, & Greenough, 2010). Breastfeeding and rooming-in may go hand in hand, although it is not clear to what extent extensive breastfeeding while rooming-in drives the reductions in NAS severity (Bagley et al., 2014). Rooming-in is now the standard of care and as such should be offered to all mother-infant dyads. Healthcare professionals need to work to minimize barriers to breastfeeding and seek opportunities to support mother–infant bonding and secure attachment during the immediate postpartum period; these efforts will maximize the well-being of the mother and the infant. Exhibit FS #10.3 lists resources on nonpharmacological approaches currently available.

FACTSHEET TO REVIEW

For more information on when it is appropriate to recommend breastfeeding and for additional web resources, see **Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome.**

Exhibit FS #10.3: Nonpharmacological Approaches Currently in Use

Factors	References
Breastfeeding and skin-to-skin contact	Abdel-Latif et al., 2006; Ballard, 2002; McQueen, Murphy-Oikonen, Gerlach, & Montelpare, 2011; O'Connor, Collett, Alto, & O'Brien, 2013; Welle-Strand et al., 2013
Rooming-in	Abrahams et al., 2007; Bagley et al., 2014; Holmes et al., 2016; Hünseler et al., 2013; McKnight et al., 2016; Saiki et al., 2010,
Acupuncture/Acupressure	Filippelli et al., 2012; Schwartz, Xiao, Brown, & Sommers, 2011
Waterbeds	d'Apolito, 1999; Oro & Dixon, 1988

The caregiver will most likely need education in how to respond to the infant's behaviors, intensive social supports during the postpartum period, and continued therapy for any maternal psychiatric problems.

- **Several medications are available to treat NAS.** AAP recommends either oral morphine solution or methadone to treat withdrawal that infants experience following cessation of prenatal opioid exposure (Hudak, Tan, AAP Committee on Drugs, & AAP Committee on Fetus and Newborn, 2012). Because of the short half-life of morphine, dosing is needed at least every 4 hours. Healthcare professionals should be aware that these medications are usually dissolved in alcohol for compounding. Where possible, compounding with alcohol should be avoided and preservative-free preparations should be used.

  Other medications for the treatment of NAS, such as buprenorphine, are under study (Kraft et al., 2008, 2011). Although there is preliminary evidence that sublingual buprenorphine may be more effective than

morphine for treatment of moderate to severe NAS (Kraft, Stover, & Davis, 2016, Kraft Adeniyi-Jones, Chernvoneva, Greenspan, Abatemarco, Kaltenbach & Ehrlich, 2017), further study is needed. Phenobarbital and clonidine are effective **adjuvant** therapies to morphine and methadone when maximum dose of the first-line medication has been reached or when weaning is unsuccessful (Agthe et al., 2009; Kocherlakota, 2014; Kraft, Stover, & Davis, 2016).

- **For several reasons, including avoiding medication errors, diluted tincture of opium is no longer widely used for treating NAS.** Diluted tincture of opium is easily confused with deodorized tincture of opium (both commonly abbreviated DTO) and has a high alcohol content (Langenfeld et al., 2005). Oral morphine sulfate is now preferred over diluted tincture of opium and is as effective as diluted tincture of opium.

- **Women with OUD who are not receiving treatment with an opioid agonist are likely to misuse a combination of short- and long-acting opioids, which complicates the infant observation period.** Opioids with a short half-life include codeine, fentanyl, heroin, hydrocodone, hydromorphone, meperidine, morphine, and oxycodone. Examples of opioids with a long half-life are buprenorphine, levorphanol, and methadone. If the infant was exposed only to short half-life opioids in utero, observe the infant closely for 96 hours and then discharge if NAS medication is no longer needed for the infant. If the infant was exposed to any long half-life opioids in utero, it may be necessary to extend the observation period to 4–7 days from birth before discharge (Hudak, et al., 2012).

WEB RESOURCES ON THIS TOPIC

2017 ICD-10-CM Diagnosis Code 96.1
This website provides detailed information on the codes for neonatal withdrawal symptoms used for reimbursement purposes.

Advisory: Tobacco Use Cessation During Substance Abuse Treatment Counseling
This 2011 Substance Abuse and Mental Health Services Administration document offers substance use disorder (SUD) counselors an introduction to tobacco use cessation during SUD treatment. It discusses screening and effective treatment approaches to quitting, including cessation medications and practical and supportive counseling.

Childbirth, Breastfeeding, and Infant Care: Methadone and Buprenorphine
This brochure urges pregnant women who use heroin or abuse opioid prescriptions to seek medication-assisted treatment with methadone or buprenorphine. It discusses how methadone therapy works and women's issues such as breastfeeding, opioid withdrawal, birth control, and child protection services.

Neonatal Abstinence Syndrome: A Guide for Families
This 2014 guide was produced by the **Ohio Prenatal Quality Collaborative** in conjunction with Dartmouth-Hitchcock Medical Center. It was written to help family members care for infants with NAS, both while in the hospital and after discharge.

SIDS and Other Sleep-Related Infant Deaths
This 2016 AAP policy statement on sudden infant death syndrome (SIDS) and other sleep-related infant deaths provides recommendations for a safe infant sleeping environment.

SECTION 2
FACTSHEET #
11

BREASTFEEDING CONSIDERATIONS FOR INFANTS AT RISK FOR NEONATAL ABSTINENCE SYNDROME

CLINICAL SCENARIO

A mother with an infant at risk for neonatal abstinence syndrome (NAS) seeks advice on whether to breastfeed.

CLINICAL ACTION STEPS

Stable Mother and Breastfeeding

Upon delivery, women who are stable on buprenorphine, buprenorphine/naloxone combination, or methadone should be advised to breastfeed, if appropriate.

Although naltrexone in breastmilk has not been studied extensively in the United States, the benefits of breastfeeding are generally thought to outweigh any risk from naltrexone exposure. The decision to breastfeed while on naltrexone should be made collaboratively with the new mother after a full discussion of the lack of research and individual considerations.

Medical Considerations

An infant with NAS who cannot maintain adequate hydration or who loses weight despite optimal management should be evaluated to rule out other medical conditions, and consideration should be given to transferring the infant to a neonatal intensive care unit.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Stable Mother and Breastfeeding

- **Levels of buprenorphine and methadone are very low in breast milk.** Few studies have focused on breastfeeding as an outcome of opioid agonist pharmacotherapy for pregnant women with opioid use disorder (OUD) (Abrahams et al., 2007; Debelak, Morrone, O'Grady, & Jones, 2013; Johnson et al., 2001). Buprenorphine and methadone levels in breast milk are very low when the mother is on pharmacotherapy and pose little risk to infants (Ilett et al., 2012; Jansson et al., 2008a, 2008b, 2016).

- **The decision to use the combination buprenorphine/naloxone product while breastfeeding is a shared decision, but one that ultimately must be made by the patient once she understands the risks and benefits to herself and her newborn.** Available data suggest that naloxone does not affect lactation hormone levels in breastfeeding mothers. The mother's use of buprenorphine with naloxone is not a reason for discontinuing breastfeeding (Cholst, Wardlaw, Newman, & Frantz, 1984; Johnson, Andrews, Seckl, & Lightman, 1990). Naloxone's poor bioavailability when taken either sublingually or transmucosally in the buprenorphine/naloxone combination product (Ilett et al., 2012) makes it even less likely to transfer to the neonate via breast milk.

Recent studies suggest that maternal and infant outcomes on the combination buprenorphine/naloxone product do not differ from those of buprenorphine only (Debelak et al., 2013; Dooley et al., 2016; Gawronski et al., 2014; Jumah et al., 2016; Lund et al., 2013; Wiegand et al., 2015). Small nonclinically meaningful amounts of naloxone are present in cord blood (Wiegand et al., 2016). No increased birth defect risks have been reported after naloxone was used in pregnant women as an antidote to opioid overdose (Bailey, 2003). However, no long-term follow-up studies that investigate neurodevelopment in infants exposed to buprenorphine/naloxone in utero have been published.

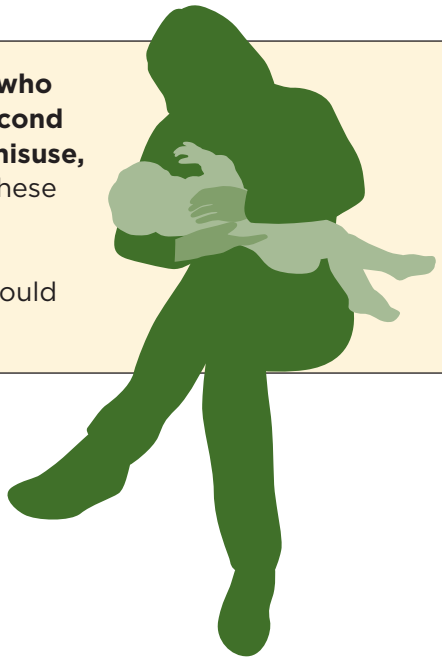
Breastfeeding has many positive physical and behavioral health effects for mother and infant.

- **The effects, if any, of naltrexone on child development are not known.** There are at least 25 published prenatal naltrexone implant exposure cases, and all show normal birth outcomes (Hulse, Arnold-Reed, O'Neil, & Hansson, 2003; Hulse, O'Neil, & Arnold-Reed, 2004; Jones, Chisolm, Jansson, & Terplan, 2012). A mother's preference for beginning antagonist therapy may be considered if she resumes pharmacotherapy in the postpartum period. However, only one case study has reported examining how much naltrexone is secreted into breast milk (Chan, Page-Sharp, Kristensen, O'Neil, & Ilett, 2004). In this case, only very low levels of the naltrexone metabolite were detected in the infant plasma (1.1 micro g/L), and the infant appeared to be healthy, was meeting developmental milestones on time, and showed no adverse effects.

- **Healthcare professionals should take time to talk about the benefits of breastfeeding.** Any breastfeeding, however brief, can decrease the infant's need for pharmacological treatment for NAS and the length of pharmacological therapy and hospitalization (Abdel-Latif et al., 2006; Bagley, Wachman, Holland, & Brogly, 2014; Jansson et al., 2008a, 2008b; Reece-Stremtan, et al., 2015; Ruwanpathirana et al., 2015). The benefit that the infants with NAS derive from breastfeeding is attributed to the act of breastfeeding (e.g., making skin-to-skin contact, holding infant closely) rather than to the amount of maternal opioid agonist secreted into the breast milk (Kaltenbach & Jones, 2016).

- **Mothers need to know when they *should or should not* breastfeed.** Although a stable mother being treated for OUD with pharmacotherapy is encouraged to breastfeed her infant, there are some situations where breastfeeding is not recommended (e.g., the mother is HIV-positive, has tuberculosis, has cracked or bleeding nipples, is hepatitis C-positive, has returned to illicit drug use including cannabis). Mothers who are hepatitis B surface antigen-positive or who are infected with the hepatitis C virus may breastfeed (American Academy of Pediatrics [AAP], Section on Breastfeeding, 2012; Centers for Disease Control and Prevention [CDC], 2015). CDC (2016) describes other **situations in which a mother should avoid breastfeeding**.

Careful consideration regarding breastfeeding is needed for women who present to prenatal care and/or SUD treatment during or after the second trimester, women who return to illicit substance use/licit substance misuse, and women who attained abstinence only in an inpatient setting. In these cases, a recommendation for lactation should be determined with the collaborative care team and the new mother. **Factsheet #16: Maternal Return to Substance Use** provides more guidance on breastfeeding should the mother return to substance use.



The American College of Obstetricians and Gynecologists (ACOG) recommends against maternal cannabis use (Committee on Obstetric Practice, ACOG, 2017) as does a recent National Academies of Science report (National Academies of Sciences, Engineering, & Medicine, 2017). New research is expected on both maternal cannabis smoking and ingestion of tetrahydrocannabinol, the principal psychoactive component of cannabis, due to the legalization of cannabis use in several states. Until research on this issue is provided, pregnant women and new mothers should be counseled to avoid cannabis, as well as alcohol and nicotine, for either recreational or medicinal purposes (Committee on Obstetric Practice, ACOG, 2017; Jansson, Bunik, & Bogen, 2015; Reece-Stremtan et al., 2015; Volkow, Compton & Wargo, 2017; World Health Organization [WHO], 2014). **Exhibit FS #11.1** provides examples of when a mother with OUD might be advised to breastfeed and when breastfeeding is not recommended.

Exhibit FS #11.1: Breastfeeding Recommendations

Factors	Breastfeeding May Not Be Recommended*
The mother is enrolled in a medication-assisted treatment program (with either buprenorphine or methadone) with significant social support and plans to continue treatment. She has demonstrated that she is stable in treatment.	The mother has a medical condition or takes medications that are contraindicated for lactation.
The mother has given written informed consent for healthcare professionals to discuss her SUD treatment.	The mother did not receive prenatal care
The mother's pain management medications after delivery are not contraindicated for newborns.	Close to delivery, the mother has a pattern of regular illicit drug use or licit substance use meeting criteria for an active SUD.
The mother's urine toxicology results were negative except for prescribed medications at delivery.	The mother is not willing to engage in SUD treatment or is engaged in treatment but is not willing to provide consent for contact with anyone in the program.
The mother has received consistent prenatal care.	The mother's urine toxicology results were positive for substances or their metabolites indicating recent use of alcohol or other substances that are not prescribed to her for the treatment of a medical condition.
The mother plans to consider SUD treatment in the postpartum period.	The mother does not have confirmed plans for postpartum SUD treatment and pediatric care.
The mother has been advised of the risk and benefits of taking antidepressants, anxiolytics, and mood stabilizers during the breastfeeding period.	The mother demonstrates behaviors or other indicators of an active SUD
If the infant has significant NAS, lactation support is available.	

* If the mother meets one or more of these criteria, further evaluation should be conducted to determine whether she can support safe infant breastfeeding. Evidence is accumulating to recommend eliminating cannabis use during pregnancy, while breastfeeding, or through secondhand smoke exposure (Jansson, Bunik, & Bogen, 2015).

Sources: AAP, Section on Breastfeeding, 2012; CDC, 2016; Committee on Obstetric Practice, ACOG, 2017; Hudak et al., 2012; Jansson et al., 2008a, 2008b, 2016; Jansson & Velez, 2015; Reece-Stremtan et al., 2015; WHO, 2014.

WEB RESOURCES ON THIS TOPIC

ABM Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, Revised 2015
This ABM protocol provides evidence-based guidelines for the evaluation and management of women with SUDs who are considering breastfeeding. It includes information on methadone and buprenorphine.

Baby Friendly Hospital Initiative-USA
This global initiative was launched by WHO and the United Nations Children's Fund in 1991 to encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding and mother–infant bonding.

Breastfeeding Initiatives: Family Resources
This AAP webpage lists breastfeeding resources for families; some resources are in Spanish.

Childbirth, Breastfeeding, and Infant Care: Methadone and Buprenorphine
This brochure urges pregnant women who use heroin or abuse opioid prescriptions to seek medication-assisted treatment with methadone or buprenorphine. It discusses how methadone therapy works and women's issues such as breastfeeding, opioid withdrawal, birth control, and child protection services.

Clinician Consultation Center Substance Use Warmline
The University of California, San Francisco's, Clinician Consultation Center provides Substance Use Warmline consultation to health center providers. This is a free, real-time clinician-to-clinician telephone consultation, addressing the care and treatment of substance abuse, chronic pain, and behavioral health. Access the Warmline toll-free at: 1-855-300-3595 (Monday-Friday, 10 a.m.-6 p.m. EDT).

Drug Entry Into Human Milk
This InfantRisk Center webpage describes in detail the mechanisms of drug entry into human milk and provides some general rules on breastfeeding.

Drugs and Lactation Database (LactMed)
This National Library of Medicine searchable database provides information on medications and other chemicals to which breastfeeding mothers may be exposed.

LactMed
This website provides the most current and comprehensive information on transference of substances to breast milk.

Medications and Breastfeeding: Tips for Giving Accurate Information to Mothers
This two-page AAP document discusses clinical points to consider when prescribing medications to breastfeeding mothers.

Policy Statement: Breastfeeding and the Use of Human Milk
This AAP-updated policy statement discusses the benefits of breastfeeding for mother and child.

SIDS and Other Sleep-Related Infant Deaths
This 2016 AAP policy statement on sudden infant death syndrome (SIDS) and other sleep-related infant deaths provides recommendations for a safe infant sleeping environment.

When Should a Mother Avoid Breastfeeding?
This CDC webpage provides links to information about illnesses and conditions that contraindicate breastfeeding.

SECTION 2
FACTSHEET #
12

INFANT DISCHARGE PLANNING

CLINICAL SCENARIO

An opioid-exposed infant is ready for discharge home.

CLINICAL ACTION STEPS

In-home and Follow-up Services

The discharge plan for infants treated for neonatal abstinence syndrome (NAS) should include home visitation and early intervention services, such as including attachment-based parenting support, a home nursing consult, a social work consult, and referrals to healthcare professionals who are knowledgeable about NAS and are accessible to the family immediately after discharge.

Caregiver Education and Home Environment

Caregivers should receive home visitations and early intervention services that help them to recognize NAS signs in the infant.

Healthcare professionals can present the benefits of a stable and enriched home environment for the family and provide support to achieve such a positive environment.

A mother who is worried that her substance use disorder (SUD) history increases the likelihood that her child will have an SUD in the future should be counseled that genetic and social factors increase the risk of SUD in children of parents with SUDs but that a stable, healthy home environment can reduce that risk.

Need for Acute Follow-up

An infant treated for NAS who has trouble eating or sleeping, is crying more than expected, or has loose stools after discharge should be promptly evaluated by a healthcare professional.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

In-home and Follow-up Services

- **When completing the discharge checklist, the assumption is that the infant has remained in the hospital for a minimum of 4 days or until NAS medical treatment, if warranted, has been completed.** It is assumed that the mother is ready for discharge at the same time as the infant and the proper protocols for maternal discharge have been followed. In addition to following standard infant discharge procedures (Benitz & American Academy of Pediatrics [AAP] Committee on Fetus and New Born, 2015), it is recommended that the checklists in **Exhibit FS # 12.1** be completed at discharge and at follow-up visits.

Exhibit FS #12.1: Sample Protocol for Discharge and Follow-up Visits*

Infant Discharge Checklist	
Healthcare Professionals Considerations When Determining Infant Discharge Eligibility	**Is Infant Ready for Discharge?†**
Infant weaned off medication (if applied) and observed for at least 24 hours after weaning, following a hospital protocol.	❑
Infant is successfully feeding.	❑
Caregivers received education about recognition of infant signs of NAS and have the contact information of responsive medical personnel to call with concerns.	❑
Caregivers have received education about techniques to soothe the infant (e.g., dim lights, softly playing white noise, skin-to-skin contact, pacifier, swaddling) and ways to recognize and respond to infant dysregulation.	❑
Caregivers are responding to the infant's needs in a safe and responsive way.	❑
Caregivers have been educated on the **Safe to Sleep campaign** and the infant has its own place to sleep to reduce the risk of sudden infant death syndrome (SIDS), especially as infants with NAS are at an increased risk for sleep-related deaths.	❑
Caregivers have received education about follow-up plans that include home visits and early pediatric follow-up appointments (within 5 days of discharge).	❑

†If all boxes are checked, the infant is ready to be considered for discharge.

Best Practices for Infant Follow-up

Actions for the Social Worker or Case Manager at or Shortly After Discharge

- Schedule a pediatric medical follow-up appointment within 2–5 days of discharge.
- Help the family get to the appointment (e.g., arrange transportation).
- Call or text family members to remind them of the appointment.

Medical Follow-up

- Contact the family if the infant misses an appointment and attempt to reschedule it.
- Ensure adequate follow-up if the infant has been exposed to hepatitis B and C.
- Notify other healthcare professionals involved in the postnatal mother-infant dyad care if the family cannot be reached.
- Ensure the infant visit schedule follows the AAP **Bright Futures Periodicity Schedule** or schedule more frequent visits if there are concerns about the dyad.

Infants should only be swaddled at home if the caregivers have been given training in swaddling. The following recommendations on swaddling were released in the **2016 AAP policy statement on safe sleep practices** (AAP Task Force on Sudden Infant Death Syndrome, 2016):

- When an infant is swaddled, he or she should always be placed on the back.
- Because there is a high risk of death if a swaddled infant rolls into the face-down position, when an infant attempts to roll over, swaddling should be discontinued.

- **Although the majority of infants can be weaned from methadone or morphine relatively quickly, some cannot. These infants will require ongoing help and support, as will their mothers or caregivers.** Eighty percent of infants can be successfully weaned from methadone completely within 5 to 10 days (Hudak, Tan, AAP Committee on Drugs, & AAP Committee on Fetus and Newborn, 2012). When infants remain in the hospital for pharmacotherapy, the mothers should be invited to stay with the infant so as to promote rooming-in and other nonpharmacological practices until the infant is weaned from medication.

Caregiver Education and Home Environment

- **Infant discharge planning should begin before birth, with discussions on ways to reduce NAS expression and severity and promote healthy attachment.** Maternal support in the hospital that promotes rooming-in, breastfeeding when appropriate, and skin-to-skin contact increases the opportunities for mothers to nurture their infant and develop parenting skills. With education, support, and mentoring resources, mothers may develop healthy attachment, bonding, and other caregiving behaviors (Abrahams et al., 2007). A small study following prenatally opioid-exposed children for 5 years concluded that a parent–healthcare professional relationship established in pregnancy and continued during the postpartum period facilitated a long-lasting relationship with childhood professionals and reduced court-ordered placements and reports of developmental disorders (Roy et al., 2011).

The infant discharge plan should be compatible with and support the plan of safe care for mother and infant; this includes addressing potential maternal comorbid medical or mental disorders. See **Factsheet #15: Maternal Discharge Planning,** for a more extensive discussion about implementing a plan of safe care for both the mother and infant.

- **Healthcare professionals should remind parents that a healthy home environment is critical to healthy development—from infancy to adolescence—and work to ensure the necessary in-home services and resources are available to make this possible regardless of the family's circumstances.** The home must be secured from safety hazards, and prescription drugs must be out of reach, preferably stored under lock and key. Routine pediatric health maintenance is critical, especially in the first 2 years (Smith & Wilson, 2016). This includes pediatric well-child visits for growth and development assessment, preventive care, and immunizations. Healthcare professionals have a unique opportunity to recognize and assess a child's risk, to intervene to protect the child, and to help parents improve both parenting skills and the home environment.

  The most promising prevention interventions provide reduction of risks and boosts of protective factors across multiple domains (individual and peer, family, school and community; Jackson, Geddes, Haw & Frank, 2012).

- **Research to understand the genetics of SUDs is still emerging.** Researchers believe that some of the same genes that increase a person's risk for problems with alcohol might also put him or her at greater risk for other SUDs. Moreover, those same genes might increase the risk for other psychiatric problems, such as conduct disorder and adult antisocial behavior (i.e., externalizing behaviors) (Dick & Agrawal, 2008). Recent studies suggest that the genetic variability of μ-, δ-, and κ-opioid receptor genes OPRM1, OPRD1, and OPRK1 can modulate the efficacy of opioid treatments (Bauer, Soares, & Nielsen, 2015; Wachman et al., 2013, 2015). Currently, it is difficult to translate these findings into meaningful guidance for families. Healthcare professionals should emphasize modifiable risk factors such as maintaining parental recovery and supporting a stable home environment.

The mother's ongoing engagement in treatment and recovery support for OUD is an essential element of a healthy home environment.

WEB RESOURCES ON THIS TOPIC

Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 4th Edition
This multimodal library of materials for stakeholders involved in improving health care for infants, children, and adolescents was first published in 2000 by AAP. It includes evidence-based toolkits that cover all aspects of pediatric health care.

Bright Futures/AAP Periodicity Schedule
This chart presents the screenings, assessments, physical examinations, procedures, and timing of anticipatory guidance recommended for each age-related well-child visit in Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents (Hagan, Shaw, & Duncan, 2017).

Federal Home Visiting Program
This webpage provides background about the Health Resources and Services Administration (HRSA) and Administration for Children & Families program, its structure, and its mission and services, which involve evidence-based, voluntary home visiting programs, where families receive help from health, social service, and child development professionals.

Healthy Start
This webpage describes the HRSA Healthy Start program and links to a technical assistance center with more information on program approaches and grantees. The program provides depression screening, healthcare services, care coordination, public health services such as immunization and health education, and training for community health workers and care coordinators.

Maternal & Child Health Topics: Perinatal and Infant Health
This webpage describes HRSA goals related to perinatal and infant health and lists programs and initiatives that help HRSA achieve its goals.

Neonatal Abstinence Syndrome: A Guide for Families
This 2014 guide was produced by the **Ohio Prenatal Quality Collaborative** in conjunction with Dartmouth-Hitchcock Medical Center. It was written to help family members care for infants with NAS, both while in the hospital and after discharge.

SECTION 2
FACTSHEET #
13

EARLY INTERVENTION STRATEGIES AND DEVELOPMENTAL ASSESSMENTS

CLINICAL SCENARIO

At a routine pediatric visit, a mother is concerned that her child has developmental delays from opioid exposure or from experiencing neonatal abstinence syndrome (NAS).

CLINICAL ACTION STEPS

Effects of NAS on Development

Caregivers of prenatally opioid-exposed infants should be told that although genetic and social risk and protective factors contribute to the child's eventual risk for developing substance use disorders (SUDs), future SUDs or developmental problems are not known to be long-term consequences of NAS. However, caregivers who express concerns about the development of a child who was exposed to opioids in utero or who experienced NAS should be carefully interviewed about their concerns by a knowledgeable pediatric professional. The child should have developmental screenings and ongoing assessments and should receive early intervention services if requested by the caregiver.

Effects of Extended-Release Injectable Naltrexone on Development

There is no information on the safety of extended-release injectable naltrexone during pregnancy or the long-term effects on the infant of in utero exposure to this medication.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Effects of NAS on Development

- **When a mother expresses concern about her child's development, a healthcare professional should discuss assessments and screenings to address these concerns.** As with all infants, experts recommend that opioid-exposed infants be screened while in the hospital and on subsequent pediatric visits for developmental milestones and whenever concerns arise about neurodevelopment. There are many unknowns; the recommendation is to follow the infant closely and order specialized assessments if the healthcare professional or caregiver have concerns.

  Healthcare professionals should review normal developmental milestones with caregivers of opioid-exposed infants (e.g., infant smiles, sits alone, makes eyes contact), so they can better understand the importance of achieving these milestones within a certain timeframe.

  Infants born to mothers who received methadone or buprenorphine during pregnancy were found as toddlers to have no more problems with certain developmental tasks than those from a normative sample of

children of mothers without SUD, after controlling for confounding factors, such as maternal psychological distress and instability in the home environment. (Sarfi, Sundet, & Waal, 2013). The American College of Obstetricians and Gynecologists (ACOG) reports that current data on in utero opioid-exposed infants are limited (Committee on Healthcare for Underserved Women, American Society of Addiction Medicine, & ACOG, 2012, 2017); however, earlier studies did not find significant differences in cognitive development between children up to age 5 who had been exposed to methadone in utero and those who had not.

Effects of Extended-Release Injectable Naltrexone

- The effects, if any, of naltrexone on child development are not known. There are at least 25 published prenatal naltrexone implant exposure cases, and all show normal birth outcomes (Hulse, Arnold-Reed, O'Neil, & Hansson, 2003; Hulse, O'Neil, & Arnold-Reed, 2004; Jones, Chisolm, Jansson, & Terplan, 2012). A mother's preference for beginning antagonist therapy may be considered if she resumes pharmacotherapy in the postpartum period. However, only one case study has reported examining how much naltrexone is secreted into breast milk (Chan, Page-Sharp, Kristensen, O'Neil, & Ilett, 2004). In this case, only very low levels of the naltrexone metabolite were detected in the infant plasma (1.1 micro g/L), and the infant appeared to be healthy, was meeting developmental milestones on time, and showed no adverse effects.

The process used in developing this Guide determined that there was insufficient evidence to attribute subsequent neurodevelopmental problems to a history of NAS but did conclude that developmental assessments should be conducted whenever there is concern. Appendix A: Suitable Developmental Assessments for Opioid-Exposed Infants and Children provides information on age-appropriate developmental screens. Chapter 3 in the National Institute on Drug Abuse's (NIDA's) **Principles of Substance Abuse Prevention for Early Childhood** describes evidence-based early childhood interventions (NIDA, 2016).

Medicaid may support postpartum care, which would include home visits after the birth of the child through the Health Resources and Services Administration (HRSA) Federal Home Visiting Program and the Administration for Children & Families' (ACF's) Early Head Start (EHS) programs. Caregivers who are concerned about their child's development after exposure to opioids in utero may request a developmental assessment through this program. Infants exposed to opioids in utero and their mothers may be eligible for early intervention services (e.g., screenings, case management, family support, counseling, parent/caregiver skills training).

FACTSHEET TO REVIEW

Factsheet #15: Maternal Discharge Planning for more information on managing postnatal mental disorders including depression and anxiety.

WEB RESOURCES ON THIS TOPIC

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This Substance Abuse and Mental Health Services Administration document provides information on the treatment of pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Ages and Stages Questionnaire, 3rd Edition (ASQ-3)

This screening tool measures developmental progress in children between ages 1 month and 5 years.

Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 4th Edition

This multimodal library of materials for stakeholders involved in improving health care for infants, children, and adolescents was first published in 2000 by the American Academy of Pediatrics. It includes evidence-based toolkits that cover all aspects of pediatric health care.

Early Head Start Programs

EHS programs administered by ACF serve infants and toddlers younger than age 3 and pregnant women. These programs provide intensive comprehensive child development and family support services to low-income infants and toddlers and their families and to pregnant women and their families.

Federal Home Visiting Program

This webpage provides background information about the HRSA and ACF program, its structure, and its mission and services, which involve evidence-based, voluntary home visiting programs, where families receive help from health, social service, and child development professionals.

Healthy Beginnings

This program meets the HHS criterion for an effective childhood home visiting service delivery model. In this model, nurse home visitors provide education on infant nutrition, family nutrition, and physical activity and address family members' concerns. Nurse visitors typically make 8 visits from a prenatal visit through age 24 months.

Principles of Substance Abuse Prevention for Early Childhood: A Research Based Guide

This 2016 comprehensive NIDA guide provides research on risk factors and interventions in the early childhood period. Chapters 1–4 cover three decades of research-based early intervention and prevention for children ages 0–3. Chapter 3 includes a table of risks addressed through specific age-appropriate strategies, and Chapter 4 highlights research-based substance abuse prevention program, with contact details.

Section II References

Factsheet #9

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Section III: Maternal Postnatal Care

Section III consists of three factsheets:

Factsheet #14: Adjusting Pharmacotherapy Dose Postpartum

Factsheet #15: Maternal Discharge Planning

Factsheet #16: Maternal Return to Substance Use.

I. **Clinical Scenario**
Presents a brief statement to orient the reader to the situation under consideration.

II. **Clinical Action Steps**
Present recommendations that are derived directly from the rated clinical decisions in the RAND/UCLA Appropriateness Method report and describe what can, might, or should not be done when caring for women and their infants.

III. **Supporting Evidence and Clinical Considerations**
Present strengths and weaknesses of the evidence supporting the clinical action steps. This section describes how to address or tailor recommended actions to unique patient variables and preferences, the clinical experience of the provider, and available community resources. Guidance is based on expert panel and Federal Steering Committee discussions and additional information from published articles. *This section includes supporting information for the Clinical Action Steps as well as information in where there was insufficient evidence to recommend a clear course of action. Instead, information in this section will provide elements that must be taken into consideration when making a decision with the pregnant women or new mother about the best course of action for herself or her infant.*

IV. **Web Resources**
Provide links to additional online information.

FACTSHEET #14: Adjusting Pharmacotherapy Dose Postpartum

CLINICAL SCENARIO: A new mother with opioid use disorder (OUD) is interested in changing her pharmacotherapy.

- Dose adjustments due to oversedation
- Dangers of mixing opioid agonists and benzodiazepines
- Closely observing postpartum dosing
- Discussing risks and benefits of changing or tapering pharmacotherapy
- Cost, availability, preauthorization requirements, and complications with transitioning

FACTSHEET #15: Maternal Discharge Planning

CLINICAL SCENARIO: A new mother with OUD is ready for discharge after delivery.

- Comorbid mental disorder care planning
- Mental health and/or substance use disorders and consumer-/patient-led organizations
- Avoiding abrupt discontinuation of pharmacotherapy
- Referring families to federal programs providing perinatal and infant health services

FACTSHEET #16: Maternal Return to Substance Use

CLINICAL SCENARIO: A new mother returns to substance use, whether alcohol, benzodiazepines, cocaine, marijuana, methamphetamine, opioids, or tobacco.

- Adjusting pharmacotherapy dose
- Changing or resuming pharmacotherapy
- Breastfeeding in the context of return to substance use
- Working across disciplines and specialties and providing additional services via a collaborative care model
- Assessing marijuana, alcohol, and tobacco use in the context of many unknowns
- Considerations for discontinuation of breastfeeding

SECTION III
FACTSHEET #
14

ADJUSTING PHARMACOTHERAPY DOSE POSTPARTUM

CLINICAL SCENARIO

A new mother with opioid use disorder (OUD) is interested in changing her pharmacotherapy.

CLINICAL ACTION STEPS

Dose Adjustment Due to Oversedation

In the immediate postpartum period, complaints of drowsiness and somnolence (a strong desire for sleep, or sleeping for unusually long periods) should prompt evaluation of the new mother's dose of agonist therapy. A dose effective in pregnancy may be too high during the postpartum period. The patient may present with these complaints while still in the hospital or shortly after discharge.

Pharmacotherapy Changes

Struggling with cravings even without a return to substance use may prompt a new mother to ask about changing her medication. Cravings alone do not justify changing to a different pharmacotherapy for OUD. The effectiveness of the patient's pharmacotherapy dose should be evaluated, and the dose possibly adjusted. Cravings can occur even when OUD is well managed. Patients who report cravings during the postpartum period should receive additional behavioral interventions to address new or aggravated stressors.

Consideration may be given to a new mother's request to change the form of pharmacotherapy for OUD based on her preference and on health or social considerations after delivery. The reasons for and risks and benefits of such a change should be thoroughly discussed with other treating healthcare professionals, with the patient's permission, before the decision is made.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Dose Adjustment Due to Oversedation

- **If a new mother is exhibiting signs of oversedation and is breastfeeding, the healthcare professional should assess both the mother and the infant.** Because of the variability in dosing amounts before delivery, healthcare professionals are advised to use signs of somnolence to guide their recommendations on tapering the postpartum dose for new mothers using either methadone or buprenorphine (Jones et al., 2008a, 2008b). The mother could be drowsy because she has a demanding newborn who does not sleep or eat well. Thus, dose changes need to be individualized, and uniform dose changes postpartum cannot be made. Evidence supporting the need to lower methadone or buprenorphine doses after delivery is mixed (Bastian et al., 2016; Bogen et al., 2013; Jones et al., 2008a; Pace, Kaminetzky, Winter, & Walley, 2014).

After delivery, a new mother's body will go through multiple physiological changes; her previously effective dose pharmacotherapy for OUD may, therefore, need to be adjusted. When oversedation is reported or observed, pharmacotherapy dosages can be titrated as indicated (Bogen et al., 2013; Committee on Healthcare for Underserved Women, American Society of Addiction Medicine, & American College of Obstetricians and Gynecologists, 2012, 2017; Jones et al., 2008a; Pace et al., 2014).

Mothers being treated with opioid agonists need to be especially careful to avoid alcohol or any sedating medications, especially benzodiazepines. Between 2000 and 2010, the number of substance use treatment admissions involving a benzodiazepine and narcotic pain reliever combination increased from 5,032 to 33,701 (Wyatt, 2015). Many more people have begun using these medications without prescriptions, and this combination is especially dangerous to breastfed infants.

Pharmacotherapy Changes

- **A mother who wants to change pharmacotherapy for OUD should first consider the risks and benefits with her clinician.** When a new mother who is currently stable on methadone or buprenorphine requests a switch to naltrexone, begin a conversation about the risks of changing a medication, including the potential for destabilization and return to substance use. The risk of return to substance use is high in this case, and the woman should be advised that the change should not be made without a compelling reason. A new mother who is not stable on her current medication may need to have behavioral health and support services added to her care plan, and healthcare professionals can consider making dose adjustments to her postpartum care plan to address cravings or withdrawal signs (Bogen et al., 2013; Jones, 2008a; Pace et al., 2014).

  Naltrexone may be the best pharmacotherapy for some women. Because no systematic research exists on the safety of naltrexone exposure via breast milk, the healthcare professional and the mother should carefully discuss the risks and benefits of continued breastfeeding. Every effort should be made to avoid premature discontinuation of agonist therapy given the overall benefits of breastfeeding to both mother and child in appropriate dyads. Nevertheless, the result of the discussion may be a decision to begin formula-feeding the infant. In general, unless safety is a concern, discontinuing one pharmacotherapy to start another should be avoided until breastfeeding is naturally concluded.

- **Some mothers will want to taper off their pharmacotherapy during the period they are breastfeeding.** Some women will attempt to taper off pharmacotherapy while breastfeeding and

Watch for signs of oversedation. The mother and family members should be informed of what to watch for and instructed to contact the healthcare professionals if signs or symptoms of oversedation appear. The healthcare professional should schedule a follow-up visit with the mother as early as possible after discharge.

Healthcare professionals must be keenly aware of the dangers of mixing opioid agonists and benzodiazepines for both the mother and infant.

Given the lack of research on the safety of naltrexone for breastfeeding infants, the decision to use naltrexone during breastfeeding should be undertaken only after an individual risk–benefit analysis.

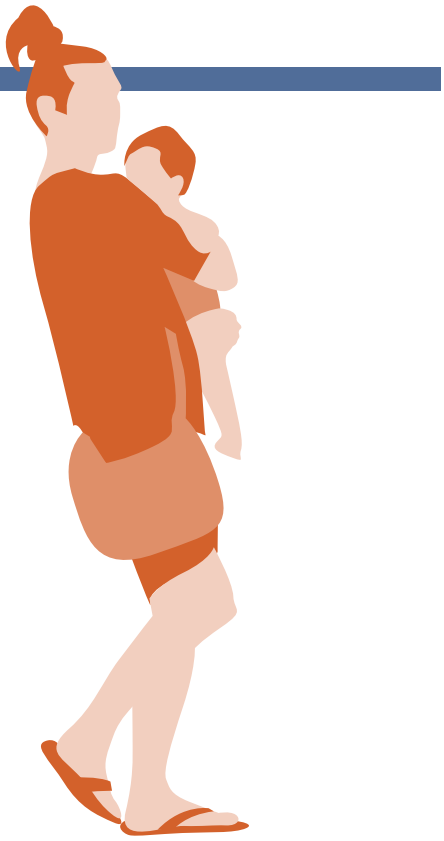
FACTSHEET TO REVIEW

Factsheet #3: Changing Pharmacotherapy During Pregnancy includes more information about the risks associated with changing pharmacotherapy.

be faced with deciding whether to resume pharmacotherapy because of a return to substance use or a risk of returning to use. The mother can be reassured that the amount of prescribed pharmacotherapy to which the baby is exposed via breast milk is extremely small, while the risk of harm to the infant from her return to substance use is much greater.

Healthcare professionals should make every effort to avoid premature discontinuation of pharmacotherapy for OUD in light of the overall benefits of breastfeeding to both mother and child. Discontinuation of pharmacotherapy should, at the very least, be delayed until after the infant is consistently sleeping through the night and has completed breastfeeding. The longer the patient continues on OUD pharmacotherapy, the lower her risk of return to substance use when she eventually chooses to taper.

- **Transitioning medications can be challenging because of cost, availability, and preauthorization requirements.** Sometimes the logistics, reimbursement, or regulatory issues accompanying a change in pharmacotherapy for OUD can be daunting. The costs of medications may become an issue, regardless of the patient's insurance payer; securing the required insurance prior authorization can be challenging and time consuming. If the patient opts to switch medications, all documentation needs to be completed and the preauthorization received before the change is made to avoid gaps in treatment (Krans & Patrick, 2016).



WEB RESOURCES ON THIS TOPIC

National Center on Substance Abuse and Child Welfare (NCSACW) Webinar Series on Opioid Use Disorders and Treatment
Several NCSACW-sponsored webinars are specific to treatment of pregnant women with OUD or are focused on infants and children prenatally exposed to opioids.

SECTION III
FACTSHEET #
15

MATERNAL DISCHARGE PLANNING

CLINICAL SCENARIO

A new mother with opioid use disorder (OUD) is ready for discharge after delivery.

CLINICAL ACTION STEPS

Comorbid Mental Disorders
Any new mother with OUD should be screened for comorbid mental disorders before discharge from the hospital and again at the postpartum outpatient appointment.

Discontinuation of Pharmacotherapy
Discontinuation of pharmacotherapy for OUD should generally be avoided in the immediate postpartum period but may be considered later if the mother is stable and the mother and child are well bonded and have a safe, stable social environment and home.

Every effort should be made to avoid discontinuing pharmacotherapy for OUD at the request of the patient's family, social service provider, parole or probation officer, or judge. Pharmacotherapy for OUD should be discontinued only when in the best interest of the mother and infant.

Contraception
A woman with OUD, whether she is receiving pharmacotherapy or not, should be counseled regarding contraception and have immediate, easy access to her contraceptive of choice before her discharge.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Comorbid Mental Disorders

- **The discharge plan should be compatible with and support the plan of safe care for mother and infant; this includes addressing potential maternal comorbid medical or mental disorders.** The plan of safe care should be made for the mother and the infant that includes addressing potential maternal comorbid medical or mental disorders. The plan of safe care should address any existing maternal comorbid medical or psychiatric condition and recognize that the physiologic change after delivery, stress and sleep deprivation the new mother experiences may exacerbate these conditions or trigger a return to some form of substance use. The discharge plan should include strategies for the new mother to get immediate and nonjudgmental assistance if she feels she is or may become unstable.

- **People who are in recovery from a substance use disorder (SUD) or who live with behavioral health disorders often find support, encouragement, and community in consumer-/patient-led organizations.** Peer counselors or recovery coaches assist people seeking recovery from SUDs by supporting them and helping them avoid triggers that can lead to return to substance use (Substance Abuse and Mental Health Services Administration [SAMHSA], 2015). Coaches can provide transportation to and from meetings and show parents how to securely store all medications, including pharmacotherapy for OUD, so that young children cannot get into them. SAMHSA has compiled a list of core competencies that healthcare professionals should expect from peer support staff (SAMHSA, 2015). The effectiveness of peer support has not been extensively evaluated, and such evaluations are even rarer for programs involving pregnant women with SUDs (Barlow et al., 2015; Sanders, Trinh, Sherman, & Banks, 1998).

The relapse rate for women with SUD increases for women after delivery (Helmbrecht & Thiagarajah, 2008) and can be impacted by issues such as postpartum/maternal depression and the stress of parenting. Healthcare professionals should consider providing the mother with support services for longer than the traditional 6-week postpartum period.

FACTSHEET TO REVIEW

See also **Factsheet #14: Adjusting Pharmacotherapy Dose Postpartum and FS #16 Maternal Return to Substance Use** for additional information on adjusting medications and support postpartum.

Discontinuation of Pharmacotherapy

- **Explain the importance of not abruptly discontinuing pharmacotherapy.** Sometimes people feel that they no longer need pharmacotherapy for OUD and would like to stop taking these medications. Plans to stop taking a medication should be made by the mother in conjunction with her treatment team. Pharmacotherapy with methadone or buprenorphine must be tapered gradually to prevent withdrawal. A safety plan for the mother and family needs to be in place before the tapering starts in order to know what to do if she relapses to opioid use. Discontinuation of pharmacotherapy should, at the very least, be delayed until after the infant is consistently sleeping through the night and has completed breastfeeding. The longer the patient continues on OUD pharmacotherapy, the lower her risk of return to substance use when she eventually chooses to taper.

  Reducing the pharmacotherapy dosage can be considered if the mother chooses when she is living in a safe and stable environment (Jones et al., 2014). The best time to begin initiating discontinuation of medication-assisted treatment is *after* the infant is consistently sleeping through the night, has completed breastfeeding, and the dyad has multiple indicators of life stability (Jones et al., 2014).

People can safely continue pharmacotherapy for OUD for as long as they need it. For some, this may be months or a year; for others, it may be a lifetime.

Contraception

- **Preventing unintended pregnancies and planning for future pregnancies are critical.** Healthcare professionals should offer all women, including those with OUD, non-coercive contraceptive counseling and discuss different forms of birth control and the effectiveness of each method before they are discharged from the hospital. Whether a woman is on pharmacotherapy for OUD or continues to misuse opioids, a conversation about the importance of contraception is critical. Women of reproductive age who have OUD experience a high rate of unintended pregnancy (Heil et al., 2011). One study found that only approximately half of women with a history of current opioid use were using contraception; the majority were not using long-acting reversible contraception (LARC), such as implants or intrauterine devices (IUDs) (Terplan, Hand, Hutchinson, Salisbury-Afshar, & Heil, 2015).

The American College of Obstetricians and Gynecologists (Committee on Healthcare for Underserved Women, American Society of Addiction Medicine, & American College of Obstetricians and Gynecologists [ACOG], 2012, 2017) and the American College of Nurse-Midwives and other nurse professional societies recommend offering immediate postpartum LARC to reduce unintended or short-interval pregnancy. Although there is a higher chance of expulsion with the immediate placement of an IUD after delivery, a risk–benefit analysis concluded that, because many women do not attend their 6-week postpartum visit (at which time a LARC is often provided), insertion while still at the hospital after delivery is an excellent time to implant the device. Concerns with Medicaid reimbursement are an issue, but many states are now providing policy statements on reimbursement at time of insertion.

Ideally, each new mother should have the option to receive a long-acting reversible contraceptive prior to leaving the hospital. At a minimum, women should receive non-coercive contraceptive counseling and the option to leave the hospital with a prescription for contraception, contraceptive supplies, or a contraception plan (SAMHSA, 2014).

Healthcare professionals can encourage women already in treatment to consider planning their next pregnancy with the healthcare team to make sure they are on safe medications, their treatment status is stable, and they are ready for the stresses of motherhood on top of treatment or recovery.

Other Evidence/Considerations

- **Give referrals to services that provide perinatal and infant healthcare to increase access to quality care, promote healthy development, and reduce the risk of infant or maternal morbidity and mortality.** Support for the new mother is important to facilitate her bonding with the infant. The Health Resources and Services Administration (HRSA) **Federal Home Visiting Program** provides an array of services to vulnerable families through home visits, which may include assisting mothers with guidance on how best to breastfeed and care for their babies; helping parents understand child development milestones and behaviors; promoting parents' use of praise and other positive parenting techniques; and working with mothers to set goals for the future, continue their education, and find employment and childcare solutions.

FACTSHEETS TO REVIEW

- **Factsheet #7: Planning Prior to Labor and Delivery** for topics to discuss with women during their pregnancy, including postpartum contraception plans
- **Factsheet #12: Infant Discharge Planning** for discussions of home visitation services and peer support services available to new mothers and caregivers
- **Factsheet #16: Maternal Return to Substance Use** for guidance on preventing return to substance use and supporting recovery

WEB RESOURCES ON THIS TOPIC

ACOG Immediate Postpartum Contraception Options
This ACOG website provides numerous policy documents and practice bulletins on the use of LARC immediately postpartum as well as material on access to contraception.

Current Understanding of the Interaction of Benzodiazepines and Buprenorphine
This Providers' Clinical Support System continuing medical education course reviews the dangers of combining benzodiazepines and buprenorphine.

Federal Home Visiting Program
This webpage provides background about the HRSA and Administration for Children & Families program, its structure, and its mission and services, which involve evidence-based, voluntary home visiting programs, where families receive help from health, social service, and child development professionals.

Healthy Start
This webpage describes the HRSA Healthy Start program and links to a technical assistance center with more information on program approaches and grantees. The program provides depression screening, healthcare services, care coordination, public health services such as immunization and health education, and training for community health workers and care coordinators.

Resources for Consumers and Families
This joint SAMHSA–HRSA Center for Integrated Health Solutions webpage provides links to information to help families understand medication-assisted treatment and how it helps, as well as a guide for patients developed by the American Society of Addiction Medicine and essays collected by Faces and Voices of Recovery and the National Association of Medication Assisted Recovery.

SECTION III
FACTSHEET #
16

MATERNAL RETURN TO SUBSTANCE USE

CLINICAL SCENARIO

A new mother returns to substance use, whether alcohol, benzodiazepines, cocaine, marijuana, methamphetamine, opioids, or tobacco

CLINICAL ACTION STEPS

Adjusting Pharmacotherapy Dose

A new mother who returns to substance use should be assessed for possible adjustment of the dose or schedule of her pharmacotherapy for opioid use disorder (OUD) and should receive more intensive behavioral interventions.

Changing or Resumption of Pharmacotherapy

If changing from one pharmacotherapy to another is necessary, healthcare professionals should carefully discuss with the new mother the risks of further destabilization in the context of active substance use. No change should be undertaken without her fully informed consent.

Breastfeeding in the Context of Return to Substance Use

A new mother who was previously stable on buprenorphine or methadone but has returned to opioid use should be assessed for dose adjustment, should receive additional behavioral interventions, and should be counseled on her lactation options.

SUPPORTING EVIDENCE AND CLINICAL CONSIDERATIONS

Adjusting Pharmacotherapy Dose

- **Return to substance use is a common occurrence among people with a substance use disorder (SUD).** Some people in recovery may never return to substance use; others may do so many times before establishing stable and lasting recovery. Given that returning to substance use is predictable and common, doing so should not be viewed as a setback or failure, but as an indication of the need to reassess the patient and adjust the treatment plan. Such adjustments may include engaging community and behavioral supports. Many people find that, for lasting recovery, they need to control stress, avoid places and situations where they once used drugs (triggers), and even end relationships with people involved with drugs. When making these changes, people in recovery may find that peers—such as other mothers in recovery who experienced a pregnancy affected by OUD—can help them in a way that healthcare professionals cannot. Limited but promising research supports the role of peers who are in recovery from an SUD (Barlow et al., 2015; Sanders, Trinh, Sherman, & Banks, 1998).

- **A collaborative care model enables healthcare professionals to work across disciplines and specialties and to provide services as needed to reduce maternal stress and risk of return to substance use.** Using a collaborative care approach (McLafferty et al., 2016; Substance Abuse and Mental Health Services Administration [SAMHSA], 2016), prenatal healthcare professionals, pediatricians, and behavioral health treatment providers work together to provide behavioral health services to reduce maternal stress. Behavioral health services often focus on preventing a return to substance use, such as through teaching new mothers how to manage triggers and connecting these clients to peer recovery support groups and programs that help new parents. Ideally, these healthcare professionals should be co-located in the same building, if not integrated into a single program, to facilitate postnatal care. If this is not feasible, then providing referrals and regularly communicating with all the healthcare professionals involved in the case is recommended. Healthcare professionals are advised to review the 2016 SAMHSA report **A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers** for a more detailed description of this approach.

FACTSHEETS TO REVIEW

- **Factsheet #6: Addressing Polysubstance Use During Pregnancy** for recommendations on how to treat a return to substance use in the prenatal period
- **Factsheet #14: Adjusting Pharmacotherapy Dose Postpartum** for information on adjusting current pharmacotherapy doses before considering changing pharmacotherapy

Privacy requirements are higher with issues of SUD than with other conditions, so it is especially important to obtain signed informed consent agreements tailored to SUD issues to facilitate sharing of information among healthcare professionals. It could be useful to complete a paper or electronic consent form such as those provided at **https://pcssmat.org/opioid-resources/clinical-tools/** to secure the sort of information releases that will be necessary to coordinate care among healthcare professionals who write pharmacotherapy prescriptions, those who may manage other behavioral health issue, and those providing prenatal care. Electronic systems for managing patient consent to share protected health information are also an option. One example is SAMHSA's **Consent2Share**.

CONTENT TO REVIEW

This link provides treatment agreements and consent forms to promote collaborative care plans in a SUD treatment setting: **https://pcssmat.org/opioid-resources/clinical-tools/.** The two exceptions to the privacy rule affecting behavioral health care are:

- If it appears the woman may harm herself or others.
- If she has been ordered into treatment by the courts.

Resumption of Pharmacotherapy

- **If pharmacotherapy is discontinued postpartum and the behavioral supports are insufficient to prevent or interrupt return to substance use, the option to resume pharmacotherapy should be considered.** A new mother should restart pharmacotherapy for OUD if behavioral supports are insufficient to prevent a return to substance use. Pharmacotherapy selection should be informed by what worked well in the past and whether the mother is breastfeeding.

A mother's preference for beginning antagonist therapy may be considered if she resumes pharmacotherapy in the postpartum period. However, only one case study has reported examining how much naltrexone is secreted into breast milk (Chan, Page-Sharp, Kristensen, O'Neil, & Ilett, 2004). In this case, only very low levels of the naltrexone metabolite were detected in the infant plasma (1.1 micro g/L), and the infant appeared to be healthy, was meeting developmental milestones on time, and showed no adverse effects.

Breastfeeding in the Context of Return to Substance Use

- **If the new mother returns to substance use, healthcare team members will have to consider whether to discontinue breastfeeding based on their knowledge of the patient and her access to behavioral and recovery support services.** If there is a return to substance use, healthcare professionals are advised to review the American Academy of Pediatrics (AAP) **policy statement on breastfeeding** (Hudak, Tan, & AAP, 2012) and the Academy of Breastfeeding Medicine (ABM) **Clinical Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, Revised 2015** (Reece-Stremtan, Marinelli, & ABM, 2009, revised 2015).

  It may not be necessary to stop breastfeeding after an isolated incident of substance use that is quickly under control. The World Health Organization's (WHO's) **Guidelines for the Identification and Management of Substance Use and Substance Use Disorders in Pregnancy** suggest carefully reviewing the mother's situation before recommending discontinuation of breastfeeding (WHO, 2014).

FACTSHEET TO REVIEW

Factsheet #11: Breastfeeding Considerations for Infants at Risk for Neonatal Abstinence Syndrome for information on the benefits of breastfeeding if the mother is stable on medication-assisted treatment and when to bottle feed

Other Evidence/Considerations

- **There are many unknowns when assessing cannabis, alcohol, and tobacco use by pregnant women and new mothers.** Not enough data exist to determine the long-term consequences of cannabis exposure in infancy. The prevalence of past-month cannabis use increased from 2.37 percent in 2002 to 3.85 percent in 2015 (Brown et al., 2017). Although fetal exposure to cannabis, the illicit drug most commonly used by pregnant women, is not known to cause clinically important neonatal withdrawal signs, such exposure may have effects on long-term neurobehavioral outcomes (Campolongo, Trezza, Palmery, Trabace, & Cuomo, 2009). Maternal cannabis smoking has been found to be related to lower birth weight in offspring (Fegusson, Horwood, & Northstone, 2002; Gray et al., 2010; Gunn et al., 2016; National Academies of Sciences, Engineering, & Medicine, 2017).

  Return to use of these substances by a mother while caring for her infant should prompt review of her treatment plan and consideration of adjusting medical, behavioral, and peer services to support discontinuation of these substances.

  Until more is known about the long-term effects of exposure to these substances through breast milk or secondhand smoke, mothers should be counseled to avoid cannabis and tobacco smoke, as well as alcohol (Committee on Obstetric Practice, American College of Obstetricians and Gynecologists, 2017; National Academies of Science, Engineering, & Medicine, 2017; Reece-Stremtan et al., 2015; Volkow, Compton & Wargo, 2017; WHO, 2014).

WEB RESOURCES ON THIS TOPIC

ABM Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, Revised 2015
This protocol provides evidence-based guidelines for the evaluation and management of women with SUDs who are considering breastfeeding. It includes information on methadone and buprenorphine.

Breastfeeding Initiatives: Family Resources
This AAP webpage lists breastfeeding resources for families; some resources are in Spanish.

A Collaborative Approach to the Treatment of Pregnant Women With Opioid Use Disorders: Practice and Policy Considerations for Child Welfare, Collaborating Medical, and Service Providers
This SAMHSA document provides information on the treatment of pregnant women with OUD, summarizes guidelines adopted by a variety of professional organizations, and presents a framework for organizing community efforts. It provides a coordinated, multisystem approach grounded in early identification and intervention to assist child welfare, medical, SUD treatment, and other systems in supporting families.

Drug Entry Into Human Milk
This InfantRisk Center webpage describes in detail the mechanisms of drug entry into human milk and provides some general rules on breastfeeding.

Drugs and Lactation Database (LactMed)
This National Library of Medicine searchable database provides information on medications and other chemicals to which breastfeeding mothers may be exposed.

Medications and Breastfeeding: Tips for Giving Accurate Information to Mothers
This two-page AAP document discusses clinical points to consider when prescribing medications to breastfeeding mothers.

Policy Statement: Breastfeeding and the Use of Human Milk
This AAP-updated policy statement reviews the benefits of breastfeeding for mother and child.

When Should a Mother Avoid Breastfeeding?
This Centers for Disease Control and Prevention webpage provides links to information about illnesses and conditions that contraindicate breastfeeding.

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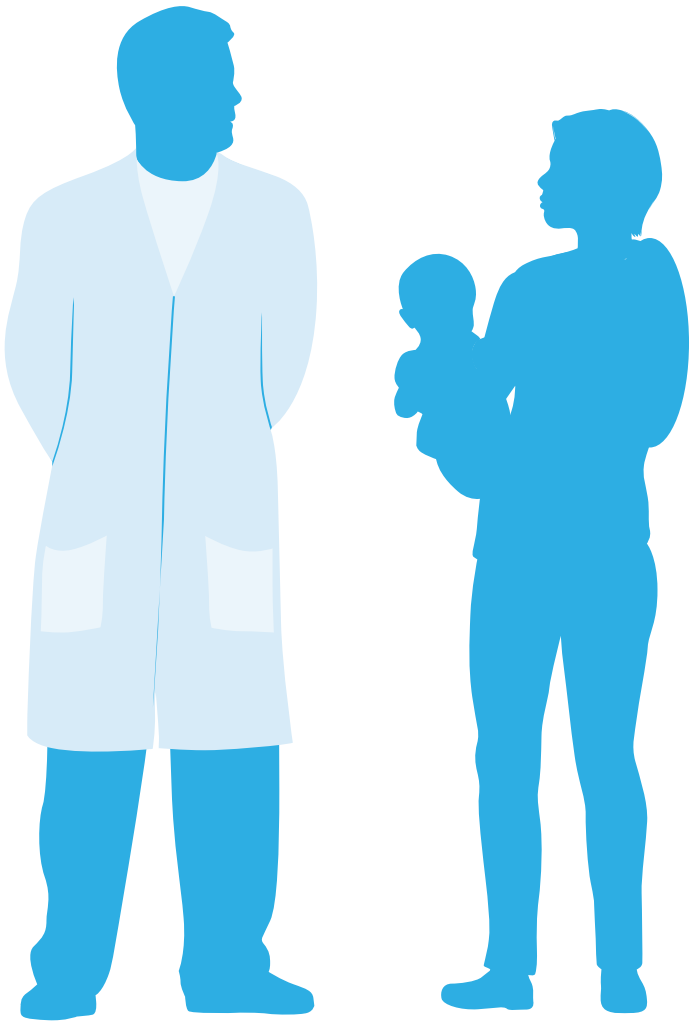

Part C: Conclusion

CONCLUSION

This Guide responds to urgent calls from across the United States for clinical guidance to help healthcare professionals deliver evidence-based individualized care to pregnant and parenting women with opioid use disorder (OUD) and their infants.

The clinical recommendations presented in this Guide are informed by the best available evidence and clinical experience. They are notable for their emphasis on the need for individualized, risk–benefit-based clinical decision-making and the imperative to ensure the health and well-being of mothers to promote optimal outcomes for their infants. Several strategies are critical to success in caring for women with OUD and their infants:

- Identifying and implementing screening for pregnant women for substance use disorders (SUDs), including OUD, and mental health comorbidities using appropriate screening, assessment, and diagnostic procedures.
- Identifying and implementing a community-based team of clinicians (prenatal healthcare professionals, pediatrics, and SUD treatment provider), counselors, and social workers, with an emphasis on rapid referral and engagement into treatment. Methods for multidisciplinary communication and compliance should be developed.
- Making available and offering pharmacotherapy for OUD and mental health comorbidities at the earliest opportunity.
- Including pregnancy monitoring assessment of fetal growth and risk of preterm birth, as well as strategies to reduce tobacco use.
- Focusing on the postpartum period as an especially vulnerable time for return to substance use and managing treatment accordingly. Breastfeeding should be encouraged when appropriate.
- Offering non-coercive contraceptive counseling and the option to leave the hospital with a prescription for contraception, contraceptive supplies, or a contraception plan.
- Developing protocol-driven screening, assessment, monitoring, and treatment of neonatal abstinence syndrome (NAS) for substance-exposed infants. Postnatal care should include careful discharge planning and in-home supports

Where should you begin to address the needs of your patients and community? Numerous online resources and educational materials are provided and hyperlinked in the body of this Guide and its appendices. For example, **https://pcssmat.org/opioid-resources/clinical-tools/** provides templates of consent forms and treatment agreements that can be modified to meet the specific requirements of the healthcare program and the unique needs of each patient. How to implement the guidance provided in the factsheets depends on what types of care you provide and how care is coordinated in your community.

Exhibit C.1 presents to-do lists for engaging in the care of pregnant and parenting women with OUD. If you are new to the treatment of pregnant women with OUD, you should begin with the items in the column labeled "Easy Steps You Can Take." If you are already treating pregnant women with OUD, you should look closely at the column titled "Advanced Steps."

Exhibit C.1: Getting Started and Staying Engaged With Treatment for Pregnant and Parenting Women With OUD

In Your Clinic

Easy Steps You Can Take

1. Have your staff review this Guide.
2. Explore websites of the Substance Abuse and Mental Health Services Administration (SAMHSA) and professional organizations (e.g., American Society of Addiction Medicine [ASAM]) for training opportunities for you and your staff.
3. Attend national meetings of your society to learn about specific clinical practices for pregnant and parenting women.
4. Learn about state regulations for mandatory reporting of positive drug test results for pregnant and parenting women.
5. Complete **buprenorphine waiver training**.
6. Instruct your staff to participate in online or in-person **MAT** training.
7. Get a mentor at **PCSS-MAT.org**.
8. Join listservs to receive alerts, guidance, and information from experts (e.g., **SAMHSA–Health Resources and Services Administration Center for Integrated Solutions, Providers' Clinical System Support**).
9. Identify and implement screening tools for SUDs.
10. Ask public and commercial insurance companies or agencies with whom you have contracts what billing and reimbursement methods are available.

Advanced Steps

1. Develop multidisciplinary protocols for the identifying, referring, and prioritizing pregnant and parenting women for treatment.
2. Develop a mechanism for communication on treatment compliance, sharing of urine testing results, and other procedures.
3. Build a team (e.g., comprising a maternity care provider, an advance nurse practitioner, physician assistants, and peer counselors) with knowledge in treating pregnant and parenting women.
4. Prepare for the transition of care after delivery. Ensure the patient has a primary care provider and pediatrician. Develop a long-term treatment and recovery program.
5. Implement MAT for the treatment of pregnant and parenting women.
6. Educate and encourage staff to commit to a patient-centered, flexible, and accepting practice for pregnant women in treatment.
7. Learn about business strategies to sustain your practice within the healthcare marketplace through SAMHSA's **Business Plus Project for Providers**.

Exhibit C.1: Getting Started and Staying Engaged With Treatment for Pregnant and Parenting Women With OUD

In Your Professional Community

Easy Steps You Can Take

1. Take advantage of existing resources and reach out to partners and local experts (e.g., state chapters of ASAM, American Academy of Pediatrics, American College of Obstetrician and Gynecologists, American Academy of Family Physicians, nurse practitioner/physician assistance [NP/PA] associations, nurse midwife groups, state opioid task force).
2. Check with your **single state agency** (SSA), **state opioid treatment authority** (SOTA), and **state Medicaid authority** about resources and the process for accessing treatment and supports in your community.
3. Visit a nearby opioid treatment program (OTP) or office-based opioid treatment (OBOT) practices to find out how clients are being served and learn best practice for the care of pregnant and parenting women. Assess how your program might participant in a network.
4. Develop relationships with an experienced referral center. Check with your SSA or SOTA to identify potential referral centers.
5. Initiate or participate in regular calls with other care providers in your community to informally discuss cases and share expertise.
6. Initiate or participate in local meetings with your staff and staff at nearby labor and delivery units, nurseries, and local treatment specialists.

Advanced Steps

1. If you are a prenatal healthcare professional, partner with treatment centers and aid in the early and easy entrance of newly pregnant women in recovery to your practice.
2. If you are currently caring for patients with OUD and would like to treat pregnant or parenting women, identify OB/GYNs, family practice physicians, nurses, psychiatrists, and other healthcare professionals who will accept referrals for women with OUD and their infants.
3. Identify pediatricians who can provide best care for newborns at risk for the development of NAS.
4. Identify and reach out to **community health centers**, **OTPs**, **OBOT practices**, **outpatient and residential services, and inpatient detoxification settings** to identify resources for your clients, coordinate services, and aid in the early and smooth care coordination.

In Your Stakeholder Community

Easy Steps You Can Take

1. Identify patient-appropriate resources and use them to educate all of your patients about the needs of women with SUDs and substance-exposed infants (e.g., **Childbirth, Breastfeeding, and Infant Care: Methadone and Buprenorphine**; **Pregnancy: Methadone or Buprenorphine**; **Methadone Treatment for Pregnant Women**).
2. Develop a mentoring group by attending local conferences related to the education of professionals treating pregnant women with OUD.
3. Offer to mentor/educate your peers or trainees in your community.
4. Encourage clients who have been successful in treatment to share their stories with individuals in their community who may need support.

Advanced Steps

1. Reach out to child welfare agencies, courts, social workers, and other stakeholders working with pregnant and parenting women to provide education about the benefits of MAT and start building trust.
2. Work with partners (e.g., law enforcement, hospitals, university medical centers, SSA, SOTA) to develop and host forums or town halls to educate your community.
3. Engage state and local public health leaders in your community and offer to be a resource for pregnant and parenting women with OUD.

If you have questions or need additional information to get started, contact SAMHSAinfo@SAMHSA.gov. Acting now can produce better outcomes for both mothers and opioid-exposed infants.

Appendix A: Suitable Development Assesments for Opioid-Exposed Infants and Children

Measure	Description	Age Range	Format	Time
Screening Measures				
Ages & Stages Questionnaire®, Third Edition (ASQ-3™)	• Screens infants and young children for developmental delays. • 30 questions provide scores on 5 skills: fine motor, gross motor, problem solving, personal—social, and communication.	1—66 months	Parent or caregiver, teacher, or clinician	10—20 minutes
Developmental Activities Screening Inventory, Second Edition (DASI-II)	• Provides early detection of children with developmental disabilities. • 67 questions cover 15 skills including sensory intactness, means-end relationships, and causality to memory, seriation, and reasoning yielding a developmental quotient.	Birth—60 months	Teacher or clinician	25—30 minutes
Targeted Assessment Measures				
Infant Behavior Questionnaire, Revised (IBQ-R)	• Measures infant's temperament. • 191 items yield scores in 14 domains: activity level, distress to limitations, fear, duration of orienting, smiling/laughter, high-intensity pleasure, low-intensity pleasure, ability to be soothed, falling reactivity/rate of recovery from distress, cuddliness, perceptual sensitivity, sadness, approach, and vocal reactivity.	3—12 months	Parent or caregiver	15—30 minutes
Infant Toddler Sensory Profile® (ITSP)	• Evaluates child's sensory processing abilities and the effect of sensory processing on functional performance in daily life. • 36 items assess children 0—6 months and 48 items assess children 7—36 months yielding scores in 4 areas: low registration, sensation seeking, sensory sensitivity, and sensation avoiding. • Low threshold score is a total of the sensory sensitivity and sensation avoiding quadrant scores.	Birth—36 months	Parent or caregiver	15 minutes
Mullen Scales of Early Learning, AG5 Edition (MSEL-AG5)	• Assesses cognitive functioning in young children. • 5 skill areas are scored: gross motor, visual reception, fine motor, expressive language, and receptive language.	Birth—68 months	Trained examiner	Age 1: 15 minutes Age 3: 25—35 minutes Age 5: 40—60 minutes

Measure	Description	Age Range	Format	Time
Screening Measures				
Neonatal Intensive Care Unit Network Neurobehavioral Scale (NNNS)	• Assesses neonatal neurologic and behavioral functioning and stress/abstinence signs in infants. • Neurologic items reflect central nervous system integrity and maturity. • Behavioral assessment items are adapted from the Neonatal Behavioral Assessment Scale, and stress/abstinence items are adapted from the Finnegan Neonatal Abstinence Scoring System. • Additional items capture stress signs exhibited by infants exposed to drugs and other at-risk infants. • NNNS yields 13 summary scales: habituation, attention, handling, quality of movement, regulation, nonoptimal reflexes, asymmetric reflexes, stress/abstinence, arousal, hypertonicity, hypotonicity, excitability, and lethargy.	Gestational age > 30—48 weeks	Trained examiner	30 minutes
Parenting Stress Index™, Fourth Edition (PSI™-4)	• Assesses parental stress from the parent—child relationship. • 120 items measure stress in 2 domains: child domain, with 6 subscales (distractibility/hyperactivity, adaptability, reinforces parent, demandingness, mood, and acceptability) that measure stress from child behavior as reported by the parent; parent domain, with 7 subscales (competence, isolation, attachment, health, role restriction, depression, and spouse/parenting partner relationship) that measure stress from parent functioning. • Life stress scale measures amount of parent stress caused by situational factors other than those from the child or parent.	Birth—144 months	Parent or caregiver	15 minutes
Receptive-Expressive Emergent Language Test, Third Edition (REEL-3)	• Identifies infants and toddlers with language impairments or developmental issues that affect language development. • 66 items measure 2 areas: receptive language and expressive language. • Supplementary subtest provides inventory of vocabulary words.	Birth—36 months	Trained examiner with a parent or caregiver	10—15 minutes
Temperament and Atypical Behavior Scale (TABS) Assessment Tool	• Identifies potential problems with temperament and/or self-regulation. • 55 items cover areas such as temperament, attention, attachment, social behavior, play, vocal and oral behavior, sense and movement, self-stimulation and self-injury, and neurobehavioral state.	11—71 months	Parent or caregiver	15 minutes

Measure	Description	Age Range	Format	Time
Screening Measures				
Battelle Developmental Inventory™, Second Edition Normative Update (BDI-2™ NU)	• Depicts child progress in intervention programs, identifies children with special needs, and provides a comprehensive analysis of functional capabilities. • 341 items use 3 sources to gather information: direct observation, structured task, and interview with parents and teachers. • 96 items identify a child who may need further assessment and provide scores on motor skills (fine, gross, and perceptual), language (expressive and receptive), cognition (conceptual development, reasoning, academic skills, attention, and memory), personal—social expressions (adult interaction, self-concept and social growth, and peer interaction), and adaptive skills (personal responsibility and self-care).	Birth—95 months	Teacher and behavioral health professional	60—90 minutes Screening test: 10—30 minutes
Bayley Scales of Infant and Toddler Development®, Third Edition (Bayley-III®)	• Provides comprehensive assessment of infant development. • 5 core scales consist of 3 based on interaction with the child (cognitive, motor, and language) and 2 based on parent questionnaire (social-emotional and adaptive behavior).	1—42 months	Trained examiner	30—90 minutes
BRIGANCE® Inventory of Early Development, Second Edition (IED II)	• Assesses child's strengths and weaknesses in multiple areas of functioning. • Number of items depends on section. • Developmental section assesses behaviors with regard to pre-ambulatory motor skills, gross motor skill, and fine motor skills; self-help skills; speech and language skills; and social-emotional development. • Early academic skills section assesses general knowledge and comprehension, readiness, basic reading skills, manuscript writing, and math.	Birth—84 months	Teachers, no training required	Developmental section: varies by age Early academic skills section: varies by age
Devereaux Early Childhood Assessment Infant and Toddler Program (DECA-I/T)	• Assesses protective factors that lead to the development of child resilience. • 4 scoring profiles are used in DECA-I for children 1—18 months, and 1 scoring profile is used in DECA-T for children 18—36 months. • 37 items provide scores in 3 areas: initiative, attachment, and self-control. • 10 items screens for possible problem behaviors.	1—36 months	Parent and teacher	20 minutes over 4 weeks
Devereaux Early Childhood Assessment Preschool Program, Second Edition (DECA-P2)	• Extends DECA-I/T up to age 5. • 38 items measure initiative, attachment/relationships, self-regulation, and behavioral concerns.	36—60 months	Parent and teacher	20 minutes over 4 weeks

Appendix B: Glossary and Acronyms

GLOSSARY

12-step program
A group providing mutual support and fellowship for people recovering from addictive behaviors. The first 12-step program was Alcoholics Anonymous (AA), founded in 1935; an array of 12-step groups following a similar model have since emerged and are the most widely used mutual aid groups and steps for maintaining recovery from alcohol and drug use disorders. It is not a form of treatment, and it is not to be confused with the treatment modality called Twelve-Step Facilitation.

Abstinence
Refraining from the use of alcohol, illicit drugs, and the misuse of prescription and over-the-counter medications. Abstinence includes refraining from the inappropriate use of prescription medications including opioid agonists to treat opioid use disorder. See also the entry for *medically supervised withdrawal*.

Addiction
See the entry for *substance use disorder*.

Analgesic
Compound that alleviates pain without causing loss of consciousness. Opioids have pain relieving properties mediated by binding to specific receptors in the central nervous system to block the perception of pain or affect the emotional response to pain. Opioids as an analgesic class include opium and its derivatives, as well as several synthetic compounds.

Assessment
Process of identifying the precise nature and extent of a patient's substance use disorder and other medical, mental health, and social problems as a basis for treatment planning. Assessment usually begins during program admission and continues throughout treatment. It includes a personal substance use history, physical examination, laboratory evaluation, and determination of disease morbidity. Severity of disease often is assessed further in terms of physiological symptoms, organ system damage, and psychosocial morbidity. Assessment may also involve determining the patient's coping skills, motivation, and readiness for change.

Behavioral health
The condition of well-being aligned with the prevention and intervention, treatment, and recovery supports for people with mental and substance use problems or disorders.

Benzodiazepine
One of a group of medications having a common molecular structure and similar pharmacologic activity, including antianxiety, sedative, hypnotic, amnestic, anticonvulsant, and muscle-relaxing effects. Diazepam, chlordiazepoxide, clonazepam, alprazolam, and lorazepam are examples of benzodiazepines.

Buprenorphine
Synthetic mu opioid receptor partial agonist approved by the Food and Drug Administration for use in maintenance treatment for opioid use disorder. Buprenorphine is commercially available as a buprenorphine-only product or a combination buprenorphine/naloxone product. When taken as directed it does not produce the euphoria and sedation associated with heroin or other opioids but can reduce or eliminate withdrawal symptoms, including cravings, in individuals with opioid use disorder.

Cannabis
The dried leaves, flowers, stems, and seeds of the marijuana plant *Cannabis sativa*, which contains psychoactive compounds. Concentrated forms of cannabis include hashish and hash oil.

Cocaine
Powerful central nervous system stimulant made from the leaves of the South American coca plant. Cocaine is used nonmedically to produce euphoria or mental alertness. Chronic use may have serious physiological and psychological effects, such as seizures, paranoia and substance use disorder.

Cognitive behavioral therapy (CBT)
A type of psychotherapy where the client works with a psychotherapist in a structured format, working on specific problem behaviors or negative emotions during a limited number of sessions.

Comorbidity
Coexistence of two or more illnesses.

Contingency management (CM)
A treatment where tangible rewards (e.g., money or reduced appointments) are used to reinforce positive behaviors.

Coordinated Care
Care that integrates the efforts of medical, social service, and behavioral health service professionals to address an individual's health and wellness.

Craving
Urgent, seemingly overpowering desire to use a substance; often associated with tension, anxiety, or other dysphoric, depressive, or negative affective states.

Detoxification
See the entry for *medically supervised withdrawal*.

Evidence-based practice (EBP)
Evidence-based practice "requires the integration of the best research evidence with … clinical expertise and … patient's unique values and circumstances" (Straus, Glasziou, Richardson, & Haynes, 2011, p. 1). An EBP is a continually evolving process, with repeated integration of clinical expertise with current research findings.

Fetal alcohol spectrum disorder (FASD)
Pattern of impaired growth, cognitive and behavioral deficits, and characteristic facial abnormalities found in some children exposed to alcohol during pregnancy.

Healthcare professional
Individuals providing medical care in a variety of settings. The term includes nurse practitioners, midwives, family medicine doctors, obstetricians, pediatricians, neonatologists, and behavioral health care professionals.

Level of care
Intensity and type of treatment needed by an individual based on severity of disease. Different levels of care may be provided in a single setting or across a range of settings.

Maintenance treatment
Providing medications to achieve and sustain clinical remission of signs and symptoms of opioid use disorder and support the individual process of recovery without a specific endpoint.

Medically supervised withdrawal
Using a medication in tapering doses to help a patient discontinue illicit or prescription medications. (This guide does not use the term *detoxification* to mean the process of dose tapering from maintenance medication, because that usage incorrectly suggests that opioid treatment medications are toxic.)

Medication-assisted treatment (MAT) for opioid use disorder (OUD)
Type of comprehensive substance use disorder (SUD) treatment that provides both maintenance pharmacotherapy—using an opioid agonist, a partial agonist, or an antagonist medication, usually provided in a certified, licensed opioid treatment program or a healthcare professional's office-based treatment setting—and other treatment services, including medical and psychosocial support services such as employment assistance or family services. Some healthcare professionals use the term MAT when any medication is used for an SUD regardless of whether specialized behavior therapy or counseling is provided. The use of medications to treat OUD is also referred to as pharmacotherapy.

Methadone
A synthetic, long-acting, full mu opioid receptor agonist that can produce analgesia, sedation, euphoria and respiratory depression by binding to mu opioid receptors. At a therapeutic dose and schedule methadone can eliminate withdrawal symptoms and reduce cravings in individuals with opioid use disorder.

Mutual-aid, mutual-help, mutual-support program
Program offering the benefits of peer support to people with substance use disorders, through attendance at group meetings and other activities. Twelve-step programs are one type of mutual-help program. See also the entry on *12-step program*.

Naloxone
Short-acting opioid antagonist or blocker. Naloxone is used in emergencies to reverse opioid poisoning or overdose. The naloxone molecule has a higher affinity for the mu opioid receptor and displaces opioids from these receptors. In this way it interrupts their action but can also precipitate acute withdrawal. It does not activate the mu receptor, cannot cause euphoria and has no abuse potential. Naloxone is combined with buprenorphine in some products as an abuse deterrent. It may also be used to assess the physiologic readiness of an individual to begin pharmacotherapy with a long-acting antagonist such as naltrexone.

Naltrexone
Synthetic opioid antagonist approved by the FDA for the prevention of relapse to opioid use in persons who have completed medically supervised withdrawal from opioids.

Neonatal abstinence syndrome (NAS)
Group of physiologic and neurobehavioral signs of withdrawal that may occur in a newborn who was exposed to psychotropic substances in utero. The syndrome may be managed with nonpharmacologic interventions, but may require pharmacotherapy.

Neonatal opioid withdrawal syndrome (NOWS)
The constellation of physiologic manifestations of withdrawal specifically attributable to opioids seen in opioid exposed newborns. NOWS can occur as part of multidrug withdrawal syndromes in mothers using multiple substances. The opioid withdrawal symptoms are observed in some newborns of mothers who had opioid use disorder or were using pharmacotherapy for opioid use disorder during pregnancy. The term NOWS captures more accurately than does the term NAS the numbers of infants experiencing withdrawal from opioid exposure in utero. The infant's withdrawal symptoms can be reduced using medications and nonpharmacological treatments. See also the entry for *neonatal abstinence syndrome*.

Office-based opioid treatment (OBOT)
Providing medication for opioid use disorder in settings other than certified opioid treatment programs.

Opiates
Opiates are compounds that are directly derived from opium, including its three natural derivatives: morphine, codeine, and thebaine. Note, opioids are compounds that are broadly related to opium, although not all opioids will be structurally similar or derived from derivatives of opium. These include medications such as methadone, buprenorphine, and oxycodone.

Opioid addiction
See the entry for *opioid use disorder*.

Opioid agonist
Drug that has an affinity for and stimulates physiological activity at cell receptors in the central nervous system that are normally stimulated by opioids.

Opioid antagonist
Drug that binds to cell receptors in the central nervous system that normally are bound by opioid psychoactive substances but that blocks the activity of opioids at these receptors without producing the physiologic effects of opioid agonists. Naltrexone is an opioid antagonist.

Opioid receptor partial agonist
Drug that binds to opioid receptors in the central nervous system without fully activating them. Partial/agonists produce effects similar to those of a full mu opioid receptor agonist, but may not produce additional effects above a certain dose. Buprenorphine is an opioid receptor partial agonist.

Opioid treatment program (OTP)
Refers to specialized programs that are certified by SAMHSA to provide methadone and/or buprenorphine, counseling, and urine testing to treat OUD.

Opioid use disorder (OUD)
Is defined in Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) (American Psychiatric Association [APA], 2013). The diagnosis of OUD can be applied to someone who uses opioid drugs and has at least 2 of the 11 symptoms occurring within a 12-month period. Key aspects of OUD include loss of control, continued use despite adverse consequences, tolerance, and withdrawal. It is important to note that tolerance and withdrawal are not counted toward the diagnosis in individuals experiencing these symptoms when using opioids under appropriate medical supervision (APA, 2013). Medications for OUD should not be used in a person without physical dependence on opioids except in special circumstances (e.g., a person with a history of moderate to severe OUD who is not currently physically dependent, but assessed to be at high risk for relapse).

Opioids
Opioids are compounds that are broadly related to opium, although not all opioids will be structurally similar or derived from derivatives of opium. These include medications such as methadone, buprenorphine, and oxycodone. Note, opiates are compounds that are directly derived from opium, including its three natural derivatives: morphine, codeine, and thebaine.

Pain management
The treatment of acute or chronic pain by various methods that may include administration of opioid medications.

Peer support services, peer support specialist, peer coach, peer worker
Peer support services involve the use of peer support specialists in recovery to provide nonclinical (i.e., not requiring training in diagnosis or treatment) recovery support services to individuals in recovery from SUDs and to their families.

A **peer support specialist** is someone in recovery who has lived experience with mental illness, trauma, and/or substance use disorder, plus skills learned in formal training. Peer support specialists may be paid professionals or volunteers. They are distinguished from members of mutual-help groups because they maintain contact with treatment staff. They offer experiential knowledge that treatment staff often lack (e.g., what to expect at different mutual help meetings, how to talk to people they spent time with when using drugs).

People-first language (PFL)
Language that emphasizes the person rather than the person's disability or disorder. An example is using "a person with a substance use disorder" rather than "an addict."

Person in recovery
An individual who is consciously seeking to improve his or her health and wellness by changing substance use behaviors.

Pharmacotherapy
The use of prescribed medication to treat disease.

Recovery
A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential (SAMHSA, 2012).

Referral
A means of assuring access to needed treatment, recovery or social services when not all services are offered at a single program site. When a person must see a variety of service providers in multiple settings in order to obtain needed services, treatment program staff members should arrange the referrals, coordinate care and monitor patient progress.

Relapse
See the entry for *return to substance use*.

Return to substance use
A single instance or pattern of substance use occurring after a period of abstinence. It is preferred to the term *relapse*.

Screening
Process of determining whether a person is at risk of harm from substance use or has a substance use disorder. Screening usually involves use of one or more standardized techniques, most of which include a questionnaire or a structured interview. Screening may also include observation of known presenting complaints and symptoms that are indicators of substance use disorders.

Screening, brief intervention, and referral to treatment (SBIRT)
Comprehensive, integrated public health approach to the delivery of early intervention and treatment services for people with substance use disorders, as well as those who are at risk of developing such disorders. SBIRT may be conducted at primary care centers, hospital emergency departments, trauma centers, and other community settings provide opportunities for early intervention with people who are at risk for substance abuse before more severe consequences occur.

Stabilization (stability)
Provision of immediate assistance, such as with an opioid agonist, to eliminate withdrawal symptoms and drug craving in order to promote an individual's safety.

Substance use disorder (SUD)
Condition in which repeated or continuous use of alcohol and/or drugs causes an individual clinically and functionally significant impairments, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5; American Psychiatric Association, 2013) determines the level of severity (mild, moderate, or severe) of a substance use disorder by the number of diagnostic criteria met by an individual. According to the DSM-5, a diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological criteria.

Take-home medication
Medication for the treatment of opioid use disorder furnished to patients for unsupervised self-administration.

Tolerance
A state of physiologic adaptation in which repeat or sustained exposure to a drug induces changes that result in a decrease of one or more of the drug's effects. See also *withdrawal*.

Treatment guidelines
A listing of best practices for assessing or managing a health condition; the majority of guidelines are produced by a group of experts after a review of the evidence.

Treatment plan
Describes the patient's short and longer term goals and what strategies, including therapeutic modalities, their schedule and frequency, recovery supports, care coordination and social supports will be employed to achieve them.

Urine drug screen, urine testing
Analysis of urine samples from patients to determine the presence or absence of specific drugs. Widely used in substance use disorder treatment, urine testing is an important tool for assessing individual progress in treatment, effectiveness of the individual treatment plan, and safety. In aggregate, the test results can be used to make programmatic decisions. Methods of urine testing vary widely.

Withdrawal
Expected syndrome of signs and symptoms experienced to varying degrees after abrupt discontinuation or rapid decrease in use of a substance that has been consumed regularly over a period of time. Withdrawal signs and symptoms are usually the opposite of the pharmacological effects of a psychoactive substance.

ACRONYMS

Acronym	Definition
ACF	Administration for Children & Families
ATTC	Addiction Technology Transfer Center
CDC	Centers for Disease Control and Prevention
FDA	Food and Drug Administration
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
MAT	Medication-assisted treatment
MOTHER	Maternal Opioid Treatment: Human Experimental Research
NAS	Neonatal abstinence syndrome
NCSACW	National Center on Substance Abuse and Child Welfare
NICHD	National Institute of Child Health and Human Development
NICU	Neonatal intensive care unit
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NOWS	Neonatal opioid withdrawal syndrome
NSDUH	National Survey on Drug Use and Health
N-SSATS	National Survey of Substance Abuse Treatment Services
OUD	Opioid use disorder
OWH	Office on Women's Health
RAM	RAND/UCLA Appropriateness Method
SAMHSA	Substance Abuse and Mental Health Services Administration
SBIRT	Screening, brief intervention, and referral to treatment
SSRI	Selective serotonin reuptake inhibitor
SUD	Substance use disorder
WHO	World Health Organization

APPENDIX B REFERENCES

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