Substance Use Disorder in Pregnancy

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A. Abstract

Rates of substance use disorder (SUD) nationwide are on the rise including among reproductive-age women. As a result, there is a growing number of both women affected by SUD while pregnant and of infants born with complications and side effects from maternal substance use [1]. This module is designed to be administered to all medical students and is best suited for students in their clinical years, such as within a subspeciality rotation like obstetrics, emergency medicine or family medicine. There is an approximately 2-hour* long guided session to be completed by students in-person. The session covers four units: 1) Addiction 101 & SUD management in pregnancy, 2) Promoting recovery and understanding barriers to care, 3) Postpartum, breastfeeding and neonatal considerations and 4) Legal and ethical issues around OUD in pregnancy. Case scenarios and questions that employ small group learning engage students in meaningful conversations on these topics. Small group learning was specifically selected as a method that continues to gain momentum in medical education and carries a number of positive educational outcomes [2,3].

As a result of this module, students will be able to:
Unit 1:
- Define terms to use and to avoid when talking about addiction
- Describe opioids, opioid use disorder, and rationale for treating opioid use disorder
- Use a framework when approaching opioid use disorder in prenatal setting

Unit 2:
- Develop tools to actively support women with SUD in pregnancy
- Distinguish facilitators and barriers to women engaging in recovery care

Unit 3:
- Describe the risks women with substance use disorder face after delivery
- Examine breastfeeding considerations for infants born to mothers on medical therapy
- Recognize neonatal opioid withdrawal syndrome and investigating its management

Unit 4:
- Critique state laws and policies surrounding substance use disorder in pregnancy

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- Construct an argument for the decriminalization of substance use disorder in pregnancy

B. Introduction/ Rationale

Medical students are likely already exposed to the care of these women and their children across specialty rotations. Similarly, many students will go on to be primary caretakers for these families across a broad range of future specialties whether from obstetrics and pediatrics to family and internal medicine. It is critical that all students receive instruction that allows them to provide high-quality care to these groups. This resource aims to provide evidence-based teaching on substance use disorder and women's health with a strong emphasis on opioid use disorder in pregnancy. Sources were carefully selected from leading addiction medicine organizations and articles of primary literature. These sources cover a range of topics that not only provide important clinical knowledge but also essential psychosocial topics necessary to care for this vulnerable group.

C. Curriculum Design

As described earlier, the module is composed of four units.* Prior to the session, the student will receive materials to review that introduce the topic. They will also be requested to complete two, pre-session questions. These questions are meant to guide student reflection through prior experiences with women affected by substance use disorders in pregnancy, if previously encountered. They will also be asked to either read an article or watch a video on the lived experience of women with SUD through pregnancy to help introduce them to the emotional challenges inherent to the care of these women.

Ahead of the learning session, students will be sent an article (The Mother Society Condemns[1]) and a video (What Happens When a Mother is Addicted to Meth[2]) that provide patient-centered stories on the lived experiences of women with substance use disorders and the impact it has on their families and their wellbeing. Students will be requested to either read the article or watch the video prior to arriving at the session. These resources are included in the Facilitators Guide and in our references below. Finally, students will be asked to complete 2 pre-session questions as found in the "Student Reflection Pre-Training".

All learning objectives will be provided to the students through the "Student Guide," which is made to be either printed or electronically distributed to all students at the start of the session. It contains the learning objectives and corresponding questions for each unit. It also includes all associated citations for future reference.

Within the session, students will be guided through the content via the facilitator. This session is meant to be interactive and collaborative, allowing students to work together through the material to develop and present answers. Specifically, material will be presented using case-based scenarios presented by facilitators that correspond to the subject material of each of the four units. Students will then use the provided articles to look through as a team in order to seek out answers and build their responses.

Finally, the session will end with a post-training set of questions. This will contain both a reflective question to assess how our session has impacted their idea of caring for women with SUD in pregnancy. It will also contain a question that demonstrated advanced understanding of the material and development of a nuanced argument on our topic.

- Full descriptions are in the Appendix

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Additionally, questions for each unit will be distributed to students via presentation from the Facilitator using the “Substance Use Disorder in Pregnancy” PowerPoint. Facilitators will be expected to present the topic and questions of each unit, explain the model of small-group discussion followed by large-group presentation and facilitate these large-group conversations.

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Appendices:

The following materials have been designed and included in the curriculum:

1. Student Reflection Pre-Training
2. Student Reflection Post-Training
3. Facilitator Guide
4. Student Guide
5. “Substance Use Disorder in Pregnancy” PowerPoint
6. References

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Appendix 1
Substance Use Disorder in Pregnancy
Student Reflection Pre-Training

Prior to arrival to the session, please record your thoughts to the following questions:

1. Have you been involved in the care of a woman or child affected by substance use disorder? If so, in what clinical settings or rotations have you encountered these patients? What was the clinical scenario that brought this patient to care?

2. What perceptions did you have about this patient? What perceptions did the team have about this patient? Did stigma play a role, if at all, in their care?

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Appendix 2
Substance Use Disorder in Pregnancy
Student Reflection Post-Training

At the conclusion of the session presentation,
record your thoughts below to the following questions:

1. Describe how this session impacted your perception(s) of pregnant women with opioid use disorder? How might these ideas impact your future career in medicine and the care that you will provide?

2. You have 5 minutes with a federal lawmaker. Make an argument for the decriminalization of SUD in pregnancy. When possible, incorporate some evidence-based information.

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Appendix 3
Introduction to Substance Use Disorder in Pregnancy for Medical Students: Integrated Case Based Learning

Facilitator Guide

Pre-session

- Send the pre-session video and article to students ahead of time, requesting them to select one to read or watch as an introduction to the topic.
    - "The Mother Society Condemns", an article from the New York Times
    - "What Happens When a Mother is Addicted to Meth", a video (and associated article) from The Atlantic
- Additionally, send the "Student Reflection Pre-Training" that students should fill out prior to arrival at the session.

During the session

- Collect the "Student Reflection Pre-Training" from all students or have them electronically submit this at the start of the session
- Provide all students with the "Student Guide"
- Move through each unit using the "Substance Use Disorder in Pregnancy" PowerPoint alongside this guide
- At the conclusion of the session, have all students complete the "Student Reflection Post-Training". You can choose to collect this via paper or have them electronically submit responses.

The Cases

Case 1 (30 minutes)
Introduction to Substance Use In Pregnancy

Learning objectives

- Understand terms to use and avoid when talking about addiction
- Describe opioids, opioid use disorder, and rationale for treating opioid use disorder
- Use a framework when approaching opioid use disorder in prenatal setting

You are seeing a patient for their first prenatal visit in a prenatal intake clinic. Jane Shay is a 29-year-old G2P1001 with a history of active injection drug use and opioid use disorder referred to the substance use in pregnancy clinic by her family medicine physician. She is interested in continuing this pregnancy and wants to ensure her baby's health.

SMALL GROUP BREAK (10 MINUTES) TO DISCUSS QUESTIONS 1-3
LARGE GROUP DISCUSSION (20 MINUTES) TO DISCUSS QUESTIONS 1-3

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1) **The patient calls herself a junkie addict, wants to stop abusing drugs, and insists on getting clean because she's worried about her baby being addicted. What non judgmental language would you use in your response?**
   Patients should feel comfortable to use whatever language they prefer in reference to themselves. Providers on the other hand should use phrases to reduce stigma and negative bias whenever possible.
   - *Instead of junkie or addict, use person with substance use disorder/person with opioid use disorder/patient*
   - *Instead of abusing, use using*
   - *Instead of clean, use in recovery/abstinent from drugs/not currently or actively using drugs*
   - *Instead of addicted baby, use baby born to mother who used drugs while pregnant/baby with signs of withdrawal from prenatal drug exposure/baby with neonatal opioid withdrawal syndrome/newborn exposed to substances*

2) **What substances qualify as opioids? Does this patient have an opioid use disorder? Should this patient start medication treatment?**
   Opioids include naturally occurring compounds (ex: morphine, codeine), semi-synthetic compounds (ex: heroin, oxycodone, buprenorphine), and synthetic compounds (ex: fentanyl, methadone, tapentadol)

   Yes. DSM-5 criteria includes symptoms: opioids often taken in larger amounts or over a longer period of time than intended, persistent desire or unsuccessful efforts to cut down or control use, great deal of time spent in activities necessary to obtain opioids, cravings or strong desires to use opioids, recurrent opioid use resulting in failure to fulfil major role obligations, continued opioid use despite persistent negative consequences, continued use despite knowledge of having a persistent or recurrent physical or psychological problem, tolerance, or withdrawal. Severity (2-3 symptoms), Moderate (4-5 symptoms), Severe (6 or more)

   Yes. Treatment can improve a patient and baby's health and facilitate her participation in a rehabilitation program. This treatment may also help patients better consider abstinence from opioids because they can think more clearly once the acute withdrawal phase has passed. However, by itself, medically supervised withdrawal is usually not sufficient to produce long-term recovery, and it may increase the risk of overdose among patients who have lost their tolerance to opioids and resume the use of these drugs. Repeated use of opioids produces tolerance as well as long-lasting craving that usually requires additional treatment in order to avoid a relapse of drug use.

3) **How should we approach her opioid use disorder at this prenatal intake visit?**
   - *Universal screening, brief intervention, and referral for treatment of pregnant women with opioid use disorder improves maternal and infant outcomes*

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- *Screen for substance use as part of comprehensive obstetric care at first prenatal visit*
- *For pregnant women with an opioid use disorder, opioid agonist pharmacotherapy is the recommended therapy and is preferable to medically supervised withdrawal because withdrawal is associated with high relapse rates, which lead to worse outcomes. Pharmacotherapy options include: methadone, buprenorphine, and buprenorphine/naloxone*
    - *Methadone: partial agonist*
    - *Buprenorphine: partial agonist*
    - *Naloxone: antagonist*
- *Given unique needs of pregnant women with opioid use disorder, healthcare providers will need to consider modifying some elements of prenatal care (expanded STI testing, additional ultrasound exams to assess fetal weight if there is concern for grown abnormalities, and consultations with various types of healthcare providers (ex: psychiatry, social work, peer mentor).*

Case 2 (30 minutes)
Promoting Recovery and Understanding Barriers to Care

Learning Objectives

- Develop tools to actively support women with SUD in pregnancy
- Distinguish facilitators and barriers to women engaging in recovery care

SMALL GROUP BREAK (10 MINUTES) TO DISCUSS QUESTIONS 1-2
LARGE GROUP DISCUSSION (20 MINUTES) TO DISCUSS QUESTIONS 1-2

Jane comes back to the clinic at 26w7d for her regular checkup. She tells you how comfortable she feels having you as her obstetric provider. During her last pregnancy, she had often felt stigmatized by her medical care team. This leaves you thinking about ways in which you can understand her barriers to care and continue to promote recovery for Jane.

1) **What are some principles of effective treatment when approaching substance use in pregnancy?**
    - Understanding addiction is complex but treatable disease
    - No single treatment is appropriate for everyone
    - Treatment needs to be readily available
    - Effective treatment attends to multiple needs of the individual
    - Remaining in treatment for an adequate period of time is critical
    - Behavioral therapies - including individual, family, or group counseling - are the most commonly used forms of treatment

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- Medications are important element of treatment especially when combined with counseling and other behavioral therapies
- Many individuals with substance use disorders also have co-occurring mental health illness
- Treatment does not need to be voluntary to be effective
- Drug use during treatment must be monitored continuously, as lapses during treatment do occur

2) **What are facilitators and barriers to women engaging in recovery care?**
   Disclaimer: This is a nuanced area. Facilitators should feel free to explore comments from students. There are no right or wrong answers. This list is not all inclusive, but is based on a significant qualitative study from postpartum experience.

    - Facilitator
        - Pregnancy is an inflection point at which they experience intense motivation of SUD treatment
        - Initially felt shame, but also developed self-acceptance and a new sense of competence with regard to recovery
        - Desire to care for others and take control of their own life
        - Women formed communities with other women in community homes
    - Barrier
        - Difficult of disclosing substance use, especially fear of stigma and legal consequences and CPS involvement
        - Uncertainty surrounding provider responses
        - Unable to enter treatment due to long waiting lists, lack of insurance, transportation problems

Case 3 (30 minutes)
Postpartum, Breastfeeding, and Neonatal Considerations

Learning Objectives
- Understand the risks women with substance use disorder face after delivery
- Examine breastfeeding considerations for infants born to mothers on medical therapy
- Recognize neonatal opioid withdrawal syndrome and investigating its management

SMALL GROUP BREAK (10 MINUTES) TO DISCUSS QUESTIONS 1-3
LARGE GROUP DISCUSSION (20 MINUTES) TO DISCUSS QUESTIONS 1-3

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Jane, now G2P2001, has just given birth to a full-term, uncomplicated baby girl at 38w5d. She is transferred to the postpartum unit. Roughly 18 hours after delivery, she calls a nurse into her room because her baby is feeding poorly, vomiting, irritable, jittery, and crying uncontrollably. On postpartum rounds early next morning, Jane shares that she feels guilty that her baby is exhibiting signs of withdrawal. She is also wondering if she should bottle-feed instead of breast-feed because of her baby's difficulty latching. How would you respond to her concerns?

1) **What risks do women with SUD face after delivery (think about risks that all postpartum women face and then about risks specific to this population)?**
   Sleep deprivation, dramatic hormonal shifts and the day-to-day realities of caring for an infant create enormous stress for all women, but especially for those who are struggling to stay in recovery from drug use.

   In a study published this month, co-authored by Terplan, researchers tracked more than 4,000 Massachusetts women with an opioid addiction for a year before and a year after delivery. The results confirmed for the first time what many practitioners had observed: Opioid overdose deaths decline during pregnancy and peak in the seven to 12 months postpartum.

   Since the study only included Massachusetts residents, lack of insurance following childbirth was not a contributing factor. Even so, postpartum gaps in opioid treatment, such as the discontinuation of addiction medications, may have contributed to some overdose deaths, according to the study.

2) **Can women with opioid use disorders breastfeed? What are the benefits and contraindications?**
   Upon delivery, women who are stable on buprenorphine, buprenorphine/naloxone combination, or methadone should be advised to breastfeed, if appropriate. However, rates of breastfeeding among women stable on opioid maintenance therapy remain low compared with the general population, likely due to a number of barriers including misinformation from healthcare providers.

   Benefits: However brief, can decrease the infant's need for pharmacological treatment for NAS and the length of pharmacological therapy and hospitalization. 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 the infant closely) rather than to the amount of maternal opioid agonist secreted into the breast milk. Buprenorphine and methadone levels in breast milk are very low when the mother is on pharmacotherapy and pose little risk to infants. 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. Recent studies suggest that maternal and infant

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outcomes on the combination buprenorphine/naloxone product do not differ from those of buprenorphine only.

Contraindications: If the mother is HIV-positive, has tuberculosis, has cracked or bleeding nipples, is hepatitis C-positive, has returned to illicit drug use including cannabis, then breastfeeding is not encouraged. Mothers who are hepatitis B surface antigen-positive or who are infected with the hepatitis C virus may breastfeed.

3) **What is neonatal opioid withdrawal syndrome (NOWS, formerly known as NAS)? How is it assessed and treated?**
   NOWS refers to a constellation of withdrawal symptoms that result from chronic intrauterine exposure to opioids. NOWS reflects a higher prevalence of opioid receptors in the nervous system and gastrointestinal tract exhibiting neurologic excitability (tremors, irritability, increased muscle tone, frequency yawning or sneezing, seizures), gastrointestinal dysfunction (feeding difficulty, uncoordinated sucking, vomiting, diarrhea, poor weight gain), and autonomic signs (diaphoresis, nasal stuffiness, fever, temperature instability)

   It is assessed using validated screening assessments, such as the Finnegan Scale, to diagnose NOWS. Protocols that standardize treatment using methadone or morphine have been associated with approved outcomes.

Case 4 (30 mins)
Legal and ethical issues around opioid use disorder and pregnancy

Learning Objectives:
- Critique state laws and policies surrounding substance use disorder in pregnancy
- Construct an argument for the decriminalization of substance use disorder in pregnancy

SMALL GROUP BREAK (10 MINUTES) TO DISCUSS QUESTIONS 1-2
LARGE GROUP DISCUSSION (20 MINUTES) TO DISCUSS QUESTIONS 1-2

1) **Currently pregnancy remains a crime in many states. Is prenatal substance use grounds for terminating parental rights?**
   It's complicated.
   - 23 states and District of Columbia consider substance use during pregnancy to be child abuse under civil child-welfare statues, and 3 consider it grounds for civil commitment
   - 25 states and District of Columbia requires healthcare professionals to report suspected prenatal drug use, and 8 states require testing for prenatal drug exposure if there is due suspicion

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- 19 states have either created or funded treatment programs for pregnant women, and 17 states and the District of Columbia provide pregnant women with priority access to state-funded drug treatment programs
- 10 states prohibit publicly funded drug treatment programs from discriminating against pregnant women

Women are assigned a CPS reporter who will conduct an investigation to ensure baby and mother's safety.

These laws have a minimal effect on reducing the number of babies born to mothers using opioids, and they may drive pregnant women to avoid prenatal care and addiction treatment due to fear of being arrested during pregnancy.

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Appendix 4
Introduction to Substance Use Disorder in Pregnancy for Medical Students: Integrated Case Based Learning

Student Guide

Unit 1 - Addiction 101 & SUD Management in Pregnancy

Learning Objectives:

- Understand terms to use and avoid when talking about addiction
- Describe opioids, opioid use disorder, and rationale for treating opioid use disorder
- Use a framework when approaching opioid use disorder in prenatal setting

You are seeing a patient for their first prenatal visit in a prenatal intake clinic. Jane Shay is a 29-year-old G2P1001 with a history of active injection drug use and opioid use disorder referred to the substance use in pregnancy clinic by her family medicine physician. She is interested in continuing this pregnancy and wants to ensure her baby's health.

1. The patient calls herself a junkie addict, wants to stop abusing drugs, and insists on getting clean because she's worried about her baby being addicted. What non-judgmental language would you use in your response?

2. What substances qualify as opioids? Does this patient have an opioid use disorder? Should this patient start medication treatment?

3. How should we approach her opioid use disorder at this prenatal intake visit?

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Reference Materials

- What words should I use when talking about addiction?
    - Refer to the "Words Matter" campaign from the National Institute on Drug Abuse (NIDA)

- What is the pharmacology of addiction and specifically opioids? How do we define and treat opioid use disorder?
    - Refer to the article "Drugs, Brains, and Behavior: The Science of Addiction" from NIDA.
    - Refer to the article "Basic Opioid Pharmacology: An Update" by Pathan et al
    - Refer to the article "Treatment of Opioid Use Disorder" by Schuckit

- How should we manage pregnant women with opioid use disorder?
    - Refer to the article "Opioid Use and Opioid Use Disorder in Pregnancy" from the American College of Obstetricians and Gynecologists (ACOG)

- What are other use disorders in pregnancy and how should we manage them?
    - Refer to **one** of the follow special focus articles:
        - "Methamphetamine Abuse in Women Reproductive Age" article from ACOG
        - "Marijuana Use During Pregnancy and Lactation" article from ACOG
        - "At-Risk Drinking and Alcohol Dependence: Obstetrics and Gynecology Implications" article from ACOG
        - "Tobacco and Nicotine Cessation During Pregnancy" article from ACOG

Unit 2 - Promoting Recovery and Understanding Barriers to Care

Learning Objectives:

- Develop tools to actively support women with SUD in pregnancy
- Distinguish facilitators and barriers to women engaging in recovery care

Jane comes back to the clinic at 26w7d for her regular checkup. She tells you how comfortable she feels having you as her obstetric provider. During her last pregnancy, she had often felt stigmatized by her medical care team. This leaves you thinking about ways in which you can understand her barriers to care and continue to promote recovery for Jane.

1. What are some principles of effective treatment when approaching substance use in pregnancy?

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2. What are facilitators and barriers to women engaging in recovery care?

Reference Materials

- What are tools we can use to actively support women with SUD in pregnancy?
    - Refer to **only pages 3-6 (Principles of Effective Treatment section**) from the article "Principles of Drug Addiction Treatment: A Research-Based Guide" from NIDA
    - Refer to the article "Motivational Interviewing: A Tool for Behavior Change" from ACOG
- What are facilitators and barriers to women engaging in recovery care?
    - Refer to the article "Treatment for Substance Use Disorders in Pregnant Women-Motivators and Barriers" by Frazer et al
    - Refer to the article "In Their Own Words - A Qualitative Study of Factors Promoting Resilience and Recovery Among Postpartum Women with Opioid Use Disorders" by Goodman et al.
    - Refer to the article "Women-Centered Drug Treatment Services and Need in the United States, 2002-2009" by Terplan et al.

Unit 3 - Postpartum, Breastfeeding and Neonatal Considerations

Learning Objectives:

- Understand the risks women with substance use disorder face after delivery
- Examine breastfeeding considerations for infants born to mothers on medical therapy
- Recognize neonatal opioid withdrawal syndrome and investigating its management

Jane, now G2P2001, has just given birth to a full-term, uncomplicated baby girl at 38w5d. She is transferred to the postpartum unit. Roughly 18 hours after delivery, she calls a nurse into her room because her baby is feeding poorly, vomiting, irritable, jittery, and crying uncontrollably. On postpartum rounds early next morning, Jane shares that she feels guilty that her baby is exhibiting signs of withdrawal. She is also wondering if she should bottle-feed instead of breast-feed because of her baby's difficulty latching. How would you respond to her concerns?

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1. What risks do women with SUD face after delivery (think about risks that all postpartum women face and then about risks specific to this population)?

2. Can women with opioid use disorders breastfeed? What are the benefits and contraindications?

3. What is neonatal opioid withdrawal syndrome (NOWS, formerly known as NAS)? How is it assessed and treated?

Reference Materials

- What risks do women with SUD face after delivery?
    - Refer to the article "For Addicted Women, the Year After Childbirth is the Deadliest" by Vestal
- Can women with substance use disorders breastfeed?
    - Refer to the article "Breastfeeding Considerations for Infants At Risk for Neonatal Abstinence Syndrome" by SAMHSA
    - Refer to the article "Breastfeeding in Women on Opioid Maintenance Therapy" by Clark
- What is neonatal opioid withdrawal syndrome (NOWS, formerly known as NAS) and how is it managed?
    - Refer to the article "Neonatal Abstinence Syndrome" by McQueen
    - Refer to the article "Screening and Assessment for Neonatal Abstinence Syndrome" by SAMHSA
    - Refer to the article "Management of Neonatal Abstinence Syndrome" by SAMHSA

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Unit 4 - Legal and ethical issues around opioid use disorder and pregnancy

Learning Objectives:

- Critique state laws and policies surrounding substance use disorder in pregnancy
- Construct an argument for the decriminalization of substance use disorder in pregnancy

1. Currently pregnancy remains a crime in many states. Is prenatal substance use grounds for terminating parental rights?

Reference Materials

- What are the ethical issues surrounding drug use and drug testing in pregnancy?
    - Refer to the article "State Responses to Substance Abuse Among Pregnant Women" and the updated article "Substance Use During Pregnancy" by the Guttmacher Foundation.
    - Refer to **only pages 18-21** within the article "Substance Use Disorders in Pregnancy: Clinical, Ethical, and Research Imperatives of the Opioid Epidemic" by Ecker et al.
    -
- How does substance use disorder in pregnancy affect historically excluded and other marginalized groups?
    - Refer to the article "Assessment of Racial and Ethnic Disparities in the Use of Medication to Treat Opioid Use Disorder Among Pregnant Women in Massachusetts" by Schiff et al.
    - Refer to the article "A Qualitative Study of Black Women's Experiences in Drug Abuse and Mental Health Services" by Jones et al.
    - Refer to the article "Effectiveness of Medication Assisted Treatment for Opioid Use in Prison and Jail Settings- A Meta-Analysis and Systematic Review" by Moore et al
    - Refer to the article "Methadone and Buprenorphine Prescribing and Referral Practices in US Prison Systems - Results from a Nationwide Survey" by Nunn et al

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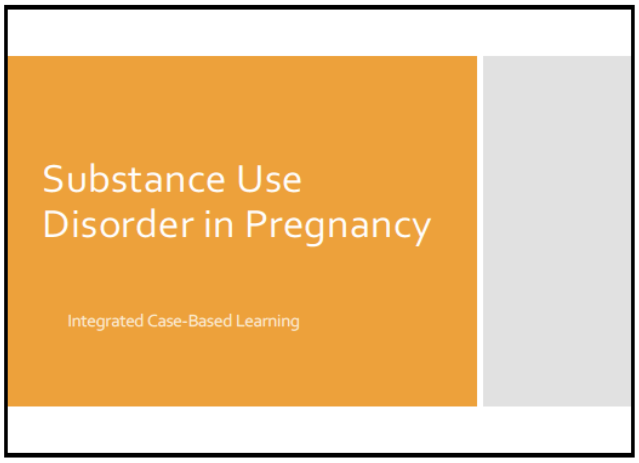
PowerPoint



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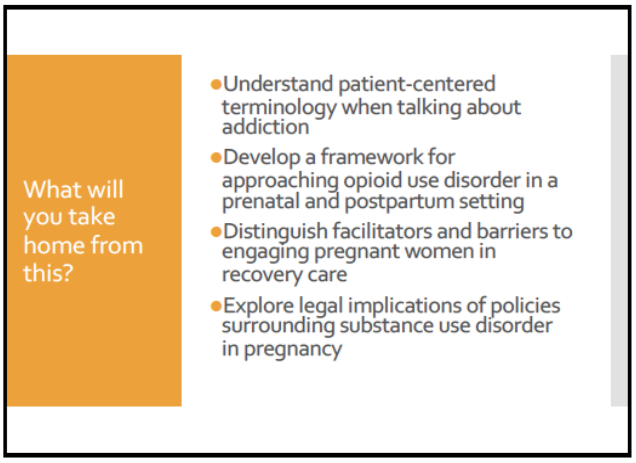

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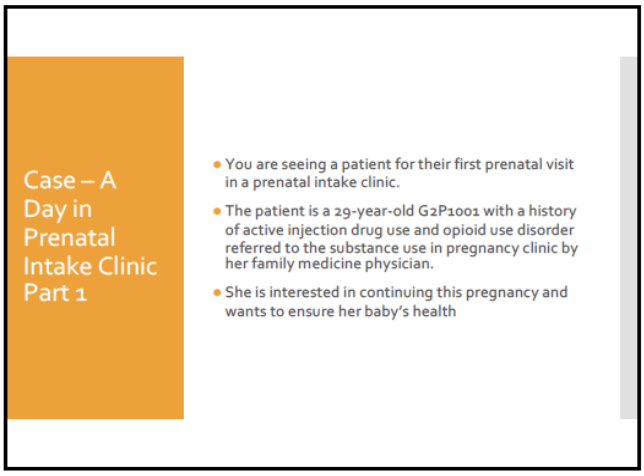

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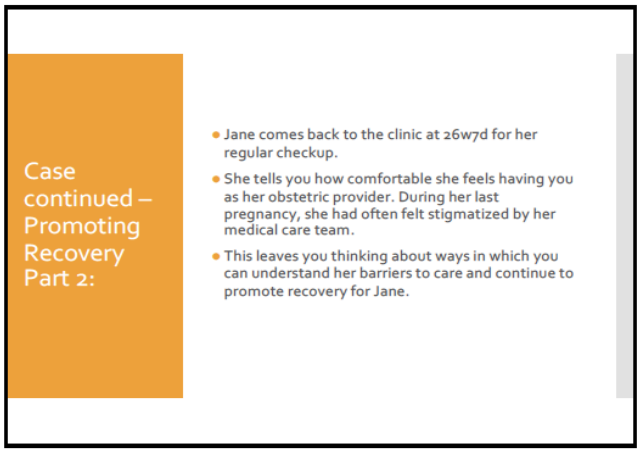

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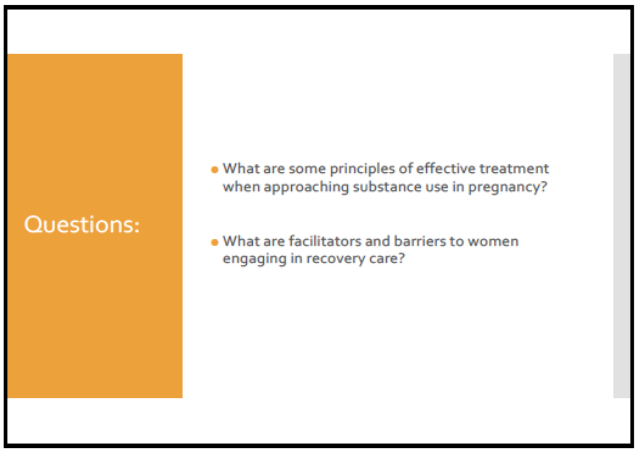

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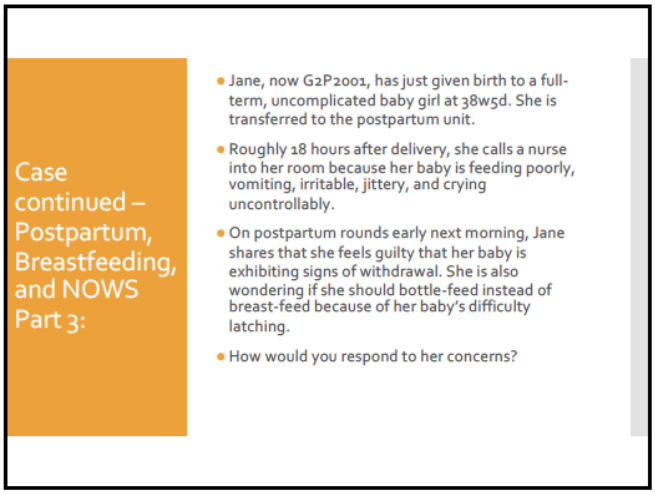

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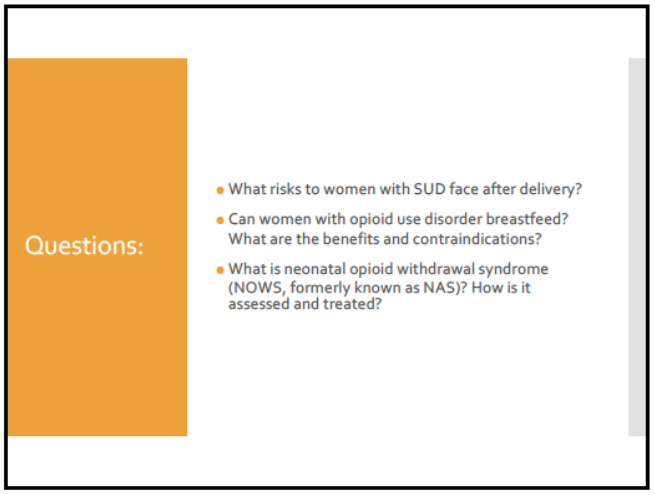

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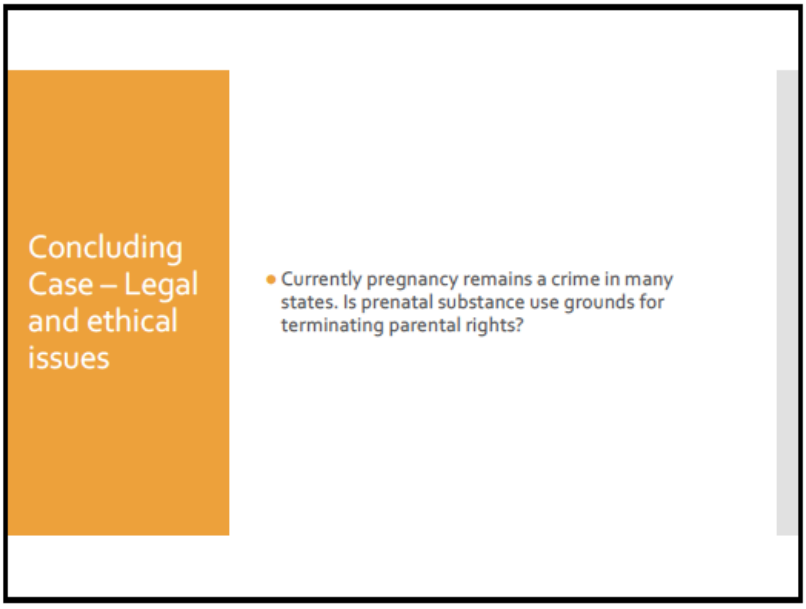

9

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Appendix 5
Substance Use Disorder in Pregnancy
References

Unit 1:

- National Institute on Drug Abuse, National Institutes of Health. (2021, April 8). *Words Matter - Terms to Use and Avoid When Talking About Addiction*. https://www.drugabuse.gov/nidamed-medical-health-professionals/health-professions-education/words-matter-terms-to-use-avoid-when-talking-about-addiction
- National Institute on Drug Abuse, National Institutes of Health. *Drugs, Brains, and Behavior: The Science of Addiction.* https://www.drugabuse.gov/sites/default/files/soa.pdf
- Pathan, H., Williams, J. (2012). Basic opioid pharmacology: an update. *British Journal of Pain.* 6(1) 11-16.
- Schuckit, M. A. (2016). Treatment of Opioid-Use Disorders. *N Engl J Med.* 375(4) 357-68.
- American College of Obstetricians and Gynecologists. (2017). Opioid use and opioid use disorder in pregnancy. Committee Opinion No. 711. *Obstet Gynecol*; 130:e81–94.
- American College of Obstetricians and Gynecologists. (2011). Methamphetamine abuse in women of reproductive age. Committee Opinion No. 479. *Obstet Gynecol*; 117:751–5.
- American College of Obstetricians and Gynecologists. (2017). Marijuana use during pregnancy and lactation. Committee Opinion No. 722. *Obstet Gynecol*; 130:e205–9.
- American College of Obstetricians and Gynecologists. (2011). At-risk drinking and alcohol dependence: obstetric and gynecologic implications. Committee Opinion No. 496. *Obstet Gynecol*; 118:383–8.
- American College of Obstetricians and Gynecologists. (2020). Tobacco and nicotine cessation during pregnancy. ACOG Committee Opinion No. 807. *Obstet Gynecol*; 135:e221–9.

Unit 2:

- National Institute on Drug Abuse, National Institutes of Health. (2018, January). *Principles of Drug Addiction Treatment: A Research-Based Guide*. https://www.drugabuse.gov/download/675/principles-drug-addiction-treatment-research-based-guide-third-edition.pdf?v=74dad603627bab89b93193918330c223
- American College of Obstetricians and Gynecologists. (2009). Motivational interviewing: a tool for behavior change. ACOG Committee Opinion No. 423. *Obstet Gynecol*; 113:243–6.

Funding for this initiative was made possible (in part) by grant no. 1H79TI083343 from SAMHSA. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

- Frazer, Z., McConnell, K., Jansson, L.M., (2019). Treatment for substance use disorders in pregnant women: Motivators and barriers. *Drug Alcohol Depend*. 205:107652. doi: 10.1016/j.drugalcdep.2019.107652.
- Goodman, D.J., Saunders, E.C., Wolff, K.B. (2020). In their own words: a qualitative study of factors promoting resilience and recovery among postpartum women with opioid use disorders. *BMC Pregnancy Childbirth.* 20**,** 178.
- Terplan, M., Longinaker, N., Appel, L.. (2015) Women-Centered Drug Treatment Services and Need in the United States, 2002-2009. *Am J Public Health*. 105(11):e50-4.

Unit 3:

- Vestal, C. (2018, August 4). *For Addicted Women, the Year After Childbirth is the Deadliest.* Pew. https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/08/14/for-addicted-women-the-year-after-childbirth-is-the-deadliest
- Substance Abuse and Mental Health Services Administration. (2018). *Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants*. *Section: Breastfeeding Considerations for Infants At Risk for Neonatal Abstinence Syndrome.* HHS Publication No. (SMA) 18-5054.
- Clark, R.R.S., (2019). Breastfeeding in Women on Opioid Maintenance Therapy: A Review of Policy and Practice. *J Midwifery Womens Health*. 64(5):545-558. doi: 10.1111/jmwh.12982.
- McQueen, K., Murphy-Oikonen, J., (2016). Neonatal Abstinence Syndrome. *N Engl J Med*. 375(25):2468-2479.
- Substance Abuse and Mental Health Services Administration. (2018). *Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants*. *Section: Screening and Assessment for Neonatal Abstinence Syndrome.* HHS Publication No. (SMA) 18-5054.
- Substance Abuse and Mental Health Services Administration. (2018). *Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants*. *Section: Management of Neonatal Abstinence Syndrome.* HHS Publication No. (SMA) 18-5054.

Unit 4:

- Dailard, C., Nash, E., (2000, December 1). *State Responses to Substance Abuse Among Pregnant Women*. Guttmacher Institute. https://www.guttmacher.org/sites/default/files/article_files/gr030603.pdf

Funding for this initiative was made possible (in part) by grant no. 1H79TI083343 from SAMHSA. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

- Guttmacher Institute, (2021, April 1). *Substance Use During Pregnancy*. Guttmacher Institute. https://www.guttmacher.org/print/state-policy/explore/substance-use-during-pregnancy
- Ecker, J., Abuhamad, A., Hill, W., Bailit, J., Bateman, BT., Berghella, V., Blake-Lamb, T., Guille, C., Landau, R., Minkoff, H., Prabhu, M., Rosenthal, E., Terplan, M., Wright, TE., Yonkers, KA.. (2019). Substance use disorders in pregnancy: clinical, ethical, and research imperatives of the opioid epidemic: a report of a joint workshop of the Society for Maternal-Fetal Medicine, American College of Obstetricians and Gynecologists, and American Society of Addiction Medicine. *Am J Obstet Gynecol*. 221(1):B5-B28.
- Schiff, D.M., Nielsen, T., Hoeppner, B.B., Terplan, M., Hansen, H., Bernson, D., Hafsatou, D., Bharel, M., Krans, E.E., Selk, S., Kelly, J.F., Wilens, T.E., Taveras, E.M., (2020). Assessment of Racial and Ethnic Disparities in the Use of Medication to Treat Opioid Use Disorder Among Pregnant Women in Massachusetts. *JAMA Netw Open.* 2020;3(5):e205734.
- Jones, L.V., Hopson, L., Warner, L., Hardinamn, E.R, James, T., (2014). A Qualitative Study of Black Women's Experiences in Drug Abuse and Mental Health Services. *Journal of Women and Social Work.* 30(1): 68-82.
- Moore, K.E., Roberts, W., Reid, H.H., Smith, K.M.Z., Oberleitner, L.M.S., McKee, S.A.. (2019). Effectiveness of medication assisted treatment for opioid use in prison and jail settings: A meta-analysis and systematic review. *J Subst Abuse Treat*. 99:32-43.
- Nunn, A., Zaller, N., Dickman, S., Trimbur, C., Nijhawan, A., Rich, J.D.. (2009). Methadone and buprenorphine prescribing and referral practices in US prison systems: results from a nationwide survey. *Drug Alcohol Depend*. 105(1-2):83-8.

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