Medication Assisted Treatment (MAT) During Pregnancy: Current research, practice recommendations, and state policy considerations

December 3, 2019
Welcome

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Promoting Innovation in State MCH Policymaking (PRISM)

**Objective:** Build the capacity of Title V programs to advance state-level policy solutions to improve access to MH/SUD services for MCH populations.

- Collaboration between AMCHP and ASTHO
- Multidisciplinary state teams
  - Annual “policy academies”
  - Phone and in-state technical assistance (shaping, implementing projects)
  - Webinar series on MH/SUD program and policy initiatives
- Partners: NASADAD, NACCHO, NAMD, CityMatch, GHPC
Webinar Objectives

At the conclusion of the webinar, participants will be able to:

- Articulate the benefits of Medication Assisted Treatment (MAT) for pregnant women with substance use disorder (SUD).
- Understand the policy and programmatic considerations surrounding MAT use with pregnant women with SUD
- Recognize opportunities for MCH/Title V programs to support MAT efforts in states
Agenda

- Hendree Jones: *Role of Medication to Treat Opioid Use Disorder during Pregnancy and Post-pregnancy Periods*

- Rick Massatti: *MOMS Project – Maternal Opiate Medical Support*

- Questions and Answers

- Webinar evaluation
Housekeeping

- All lines will be in listen-only mode (to unmute your line during the Q&A, press *6)
- If you have a question for the presenters, please type it in the Q&A box
- Please fill out the evaluation survey at the end of the call
- Please download any relevant resources from the files pod
- Today’s call will be recorded
- If you encounter technical difficulties email Atyya Chaudhry at achaudhry@amchp.org
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Role of Medication to Treat Opioid Use Disorder during Pregnancy and Post-pregnancy Periods

Hendrée E Jones, PhD
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University of North Carolina, Chapel Hill
Objectives

- Examine the risks and benefits of medication treatment for opioid use disorders during pregnancy and the post-pregnancy period
- Identify common elements of effective programs that treat women with opioid and other substance use disorders during the perinatal period
Pregnant women with opioid use disorders (OUDs) can be effectively treated with methadone or buprenorphine. Labeling states it should be used only if the potential benefit justifies the potential risk to the fetus.

Pregnant women with opioid use disorders can be effectively treated with methadone or buprenorphine. Both these medications should not be considered “off-label” use in the treatment of pregnant patients with opioid use disorder (Jones et al., *Am J Obstet Gynecol*, 2014).
Why Addiction Matters

Dopamine

nanograms/deciliter

40  Worst Day
50  Average Day
100  Great Day!
500- 1,100  Drugs
Dopamine Matters!

Repeated Drug Use
nanograms/deciliter for drugs
500-1,100

Low Dopamine

Craving

10 nanograms/deciliter every day

Survival Mode

Primal Action
11 Signs of Substance Use Disorders

- Excessive amounts used
  - Excessive time spent using/obtaining

- Craving or urges to use
  - Unsuccessful attempts to cut down

- Hazardous use despite physical danger
  - Health problems
  - Missed obligations
  - Interference with activities
  - Personal problems

- Tolerance
  - Withdrawal
Main Eras of Opioid Use in the USA

1800s: 66–75% of people using opioids were women

1940-50s: New York saw large increase in teenage opioid use

1969-70’s: Opioid use by Vietnam veterans

1996-now: Pain as the 5th vital sign and pain medication access

Courtwright D. J. Southern History 1983; Kandall S. Substance and shadow, 1996.
Earle, Medical Standards, 1888
The Triple Wave of Overdose Deaths

Note: 2016 figures are provisional and cover the 12-month period ending in January 2017.
Source: Centers for Disease Control and Prevention
Methamphetamine is Concerning

Substance Use during Pregnancy

Past Month Substance Use among Pregnant Women

**PAST MONTH, 2015-2018 NSDUH, 15-44**

- **Illicit Drugs**
  - 2015: 109K, 4.7%
  - 2016: 143K, 6.3%
  - 2017: 128K, 5.4%
  - 2018: 194K, 8.5%

- **Tobacco Products**
  - 2015: 319K, 13.9%
  - 2016: 239K, 10.6%
  - 2017: 11.6%
  - 2018: 271K, 14.7%

- **Alcohol**
  - 2015: 334K, 214K, 11.6%
  - 2016: 214K, 9.3%
  - 2017: 187K, 8.3%
  - 2018: 261K, 11.5%

- **Marijuana**
  - 2015: 78K, 3.4%
  - 2016: 111K, 4.9%
  - 2017: 161K, 7.1%
  - 2018: 111K, 4.7%

- **Opioids**
  - 2015: 19K, 0.8%
  - 2016: 26K, 1.2%
  - 2017: 32K, 1.4%
  - 2018: 22K, 0.9%

- **Cocaine**
  - 2015: 1K, 0.05%
  - 2016: 2K, 0.1%
  - 2017: 8K, 0.4%

* Estimate not shown due to low precision.

+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.
Women with substance use often FEAR healthcare

Prenatal care improves birth outcomes even if substance use continues

Untreated substance use disorders among either parent may lead to a dysfunctional home environment and may create detrimental effects on children's psychological growth and development

Maternal well-being has been recognized as a key determinant of the health of the next generation

Hser, Kagihara, Huang, Evans, & Messina, 2012; Funai et al., 2003 Staton et al., 2003 and Wagner et al., 1998; El-Mohandes et al., 2003; Roberts and Pies, 2011 and Schenpf and Strobino, 2009; Chatterji and Markowitz, 2001, Clark et al., 2004, Conners et al., 2004 Hanson et al., 2006 and Linares et al., 2006
Possible Punitive Implications

- No evidence supporting punitive responses decrease drug use in pregnancy
- Unnecessary stressful child welfare involvement
- Loss of parental rights
- Disruption of critical parent/infant bonding
- Deters pregnant people from seeking healthcare and social support
- Long-term consequences of being convicted of a drug-related crime
- Fails to recognize the inadequacies in the healthcare system/other supportive services for pregnant people who use drugs

Patrick, S. W., & Schiff, D. M. 2017 Pediatrics, 139(3)
Role of Medication in Recovery

- Developed and first used as an analgesic in Germany prior to World War II
- First utilized in the United States in the 1940s for medication-assisted withdrawal for heroin addicted individuals, using decreasing doses over a 7-10 day period
- Follow-up research found relapse rates exceeding 90%
- In the 1960s, Dole and Nyswander found that heroin-dependent patients could be safely maintained on methadone
- Effective dosing leads to tolerance and a reduction or elimination of craving for heroin

A Medical Treatment for Diacetylmorphine (Heroin) Addiction
A Clinical Trial With Methadone Hydrochloride
Vincent P. Dole, MD, and Marie Nyswander, MD

A group of 22 patients, previously addicted to diacetylmorphine (heroin), have been stabilized with oral methadone hydrochloride. This medication appears to have two useful effects: (1) relief of narcotic hunger, and (2) induction of sufficient tolerance to block the euphoric effect of an average illegal dose of diacetylmorphine. With this medication, and a comprehensive program of rehabilitation, patients have shown marked improvement; they have returned to school, obtained jobs, and have become reconciled with their families. Medical and psychometric tests have disclosed no signs of toxicity, apart from constipation. This treatment requires careful medical supervision and many social services. In our opinion, both the medication and the supporting program are essential.
Role of Medication in Recovery
Role of Medication in Recovery

With opioid medications we are not replacing one addiction for another. Opioid medications are long-acting medication that help with:

✓ CRAVING
  An individual’s cravings are controlled

✓ COMPULSION
  Individual is no longer compulsively using opioids

✓ CONTROL
  Medication-assisted treatment gives back control to the individual

✓ CONSEQUENCES
  Medication assisted treatment helps the individual focus on rebuilding her life

An individual receiving opioid pharmacotherapy must be monitored by a medical team that evaluates adequacy of medication dosage and general health and well-being of the individual.
Medication Reduces Risk Behaviors

A review of 38 studies, involving some 12,400 participants, found that treatment with either methadone or buprenorphine is associated with reductions in:

- illicit opioid use
- injecting use
- sharing of injecting equipment
- number of multiple sex partners
- exchanges of sex for drugs or money

Review also suggests that the reductions in risk behaviors related to substance use do translate into reductions in cases of HIV infection

Gowing et al., 2011
Medication Prevents Deaths

$n=20$ Patients in each Group. All Patients received group CBT relapse prevention, weekly individual counseling, thrice-weekly urine drug screenings.

Kakko J, Lancet 2003
Medication Improves Pregnancy

- Prevents erratic maternal opioid levels that occurs with use of illicit opioids, and so lessens fetal exposure to repeated withdrawal episodes
- Reduces craving and fetal exposure to illicit drugs
- Produces drug abstinence, that in turn allows other behavior changes which decrease health risks to both mother and fetus (for example: HIV, hepatitis, and sexually transmitted infections)
- Reduces the likelihood of complications with fetal development, labor, and delivery
• Medication assisted withdrawal is not recommended during pregnancy

• Buprenorphine and methadone are the safest medications for managing OUD during pregnancy

• Transitioning from methadone to buprenorphine or from buprenorphine to methadone during pregnancy is not recommended

• Breastfeeding is recommended for women on buprenorphine and methadone

• Neonatal abstinence syndrome (NAS) should not be treated with diluted tincture of opium

The Clinical Guide consists of 16 factsheets that are organized into 3 sections: Prenatal Care (Factsheets #1–8); Infant Care (Factsheets #9–13); and Maternal Postnatal Care (Factsheets #14–16).
## Methadone and Buprenorphine: Advantages

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Methadone</th>
<th>Buprenorphine</th>
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<tr>
<td>Reduces/eliminates cravings for opioid drugs</td>
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<td>Prevents onset of withdrawal for 24 hours</td>
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<td>Blocks the effects of other opioids</td>
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<td>Promotes increased physical and emotional health</td>
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<td>Higher treatment retention than other treatments</td>
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<tr>
<td>Lower risk of overdose</td>
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<tr>
<td>Fewer drug interactions</td>
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<tr>
<td>Office-based treatment delivery</td>
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<td>Shorter NAS course</td>
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Approximately 6/1,000 women presenting for delivery are treated with one of these medications. Split dosing works well for patients receiving either medication during pregnancy.
Methadone and Buprenorphine: Disadvantages

• Methadone Disadvantages
  - Achieving stable dose could take days to weeks
  - Increased risk of overdose
  - Usually requires daily visits to federally certified opioid treatment programs
  - Longer neonatal abstinence syndrome (NAS) duration than other treatments

• Buprenorphine Disadvantages
  - Demonstrated clinical withdrawal symptoms
  - Increased risk of diversion
Defining Neonatal Abstinence Syndrome (NAS)

Results when a pregnant woman regularly uses opioids (e.g., heroin, oxycodone) during pregnancy

NAS defined by alterations in the:

- **Central nervous system**
  - high-pitched crying, irritability
  - exaggerated reflexes, tremors and tight muscles
  - sleep disturbances

- **Autonomic nervous system**
  - sweating, fever, yawning, and sneezing

- **Gastrointestinal distress**
  - poor feeding, vomiting and loose stools

- **Signs of respiratory distress**
  - nasal congestion and rapid breathing

➢ NAS is **not** Fetal Alcohol Syndrome (FAS) only FAS has confirmed long term physical, cognitive and behavioral effects

➢ NAS is treatable

➢ NAS and its treatment are not known to have long-term effects; interactions between the caregiver and child can impact resiliency/risk with potential long-term effects in some cases.

Source: Finnegan et al., Addict Dis, 1975; Desmond & Wilson, Addict Dis, 1975; Jones & Fielder, Preventive Medicine, 2015.
NAS is Not Addiction

- Newborns can’t be “born addicted”
- NAS is withdrawal – due to physical dependence
- Physical dependence is not addiction
- Addiction is a brain illness whose visible signs are behaviors
- Newborns do not have the life duration or experience to meet the addiction definition

Source: Jones & Fielder, Preventive Medicine, 2015.
Other factors that contribute to NAS, need for medication, and length of stay in neonates exposed to opioid agonists in utero:

Factors Providers Can’t Control
- Genetics
- Other Substances
  - Tobacco use
  - Benzodiazepines
  - SSRIs
- Birth weight

Methadone or buprenorphine dose is not consistently related to NAS severity

NAS Factors: Continued

Other factors that contribute to NAS, need for medication, and length of stay in neonates exposed to opioid agonists in utero:

- Presence of a protocol
- NICU setting
- The NAS assessment choice
- NAS medication choice (methadone and buprenorphine gaining attention)
- Initiation and weaning protocols
- Breastfeeding
- Mother and baby together

The 4th Trimester - Postpartum

• Challenges the dyad faces
  – Newborn care, breastfeeding, maternal/infant bonding
  – Mood changes, sleep disturbances, physiologic changes
  – Cultural norms, “the ideal mother”

• System issues
  – Medical care contact shifts from mother focus to pediatric focus
  – Maternal contact often is with social services
  – Insurance changes
  – Treatment for substance use disorders may change

“The year after delivery is a vulnerable period for women with OUD. Additional longitudinal supports and interventions tailored to women in the first year postpartum are needed to prevent and reduce overdose events.”
Schiff DM et al., Obstet Gynecol. 2018
Maternal Mortality Worse for Women Who Use Opioids


Women who used opioids during pregnancy experienced higher rates of:
  depression         anxiety         chronic medical conditions

After adjusting for confounders, opioid use was associated with increased odds of:
  threatened preterm labor
  early onset delivery
  poor fetal growth
  stillbirth

Women using opioids were four times as likely to have a prolonged hospital stay and **were almost four times more likely to die before discharge.**

Model Programs TIP 2: Pregnant Women Using Substances

The goal of the program - provide comprehensive services that are appropriate and sensitive to the needs of the target population - enable women to secure prenatal care and other support throughout pregnancy, to achieve a successful delivery, and to receive months of postpartum care.

Services will be provided by a multidisciplinary team of health professionals

All health care services in one setting following a comprehensive assessment

The model program will provide:
- outreach services
- laboratory workups
- obstetrical and gynecological physicals
- social work intervention
- appropriate follow-up services
- diagnosis, evaluation, clinical interventions, along with medical management

A case management model is used

Source: DHHS Publication No. (SMA) 95-3056, 1993
UNC Horizons: Model of Care for Women and Children

Unified Philosophy Informed by Social Learning, Relationship and Empowerment Theories

- Trauma and SUD Treatment
- Childcare and Transportation
- Vocational Rehabilitation Housing Legal aid
- Parenting Education and Early Intervention
- Residential and/or Outpatient Care
- Medical Care OB/GYN Psychiatry

2018-2019 Served 235 women
- 70% Primary OUD; 13% alcohol
- Mean age first substance use 15 years old (as early as 5 yrs)
- 25% reported prior TBI
- Babies born at term and normal birth weight
- 73% employed at completion
- 95% CPS outcomes were positive at completion
Take-home Messages

► Opioid use disorder is a treatable illness
► Medications given in the context of comprehensive services to treat pregnant and post-pregnancy women will optimize care
► Programs need to provide person-centered and trauma-informed comprehensive care
Rick Massatti, PhD, MSW, MPH
State Treatment Opioid Authority (SOTA), Ohio Department of Mental Health and Addiction Services (OhioMHAS)
MOMS: Nurturing the Mother is Nurturing the Baby
MOMS: An Example from Ohio

**Strategy:** Provide treatment to pregnant mothers with opiate issues during and after pregnancy through a Maternal Care Home (MCH) model of care. This team based healthcare delivery model emphasizes care coordination and wrap-around services.

A quality improvement initiative for pregnant women with OUD

MOMS seeks to:
- **Improve** maternal and infant outcomes
- **Promote** family stability
- **Reduce** costs of Neonatal Abstinence Syndrome (NAS)
Maternal Care Home Model

**Basic Tenets of a Maternal Care Home Model (MCH):**

**Continuity of Care**
Continuity of care from a primary clinician who accepts responsibility for providing and/or coordinating all health care and related social services during a woman’s pregnancy, childbirth, and postpartum period.

**Commitment**
Commitment to utilize highest standards of care for newborns and provide appropriate pediatric/specialist referrals to ensure achievement of all developmental milestones.

**Timely Access**
Timely access to appropriate care and information.

**Continuous Quality Improvement**
Commitment to continuous quality improvement, patient/child safety, evidence-based practice, patient-centeredness and a positive experience of care.
Formalized Partnerships

Formalizing existing partnerships with service providers is important to cover all areas of care.

Lead Care Coordinator

Establish one, centralized care coordinator.

Health Service Integration

Full integration of prenatal, MAT, and behavioral health care services.

MAT Utilization

Consistently utilizing MAT during and after pregnancy.

Child Welfare Involvement

Development of a plan of safe care in anticipation of delivery.

Social Services

Social services and recovery supports from prenatal through post-partum.

Critical Components of Model
Partnerships with Public Health

Partnerships among providers can help women obtain...

- Assistance with programs like *Help Me Grow* and *Women, Infants and Children*
- Early intervention supports
- Items that families need for a new baby (e.g., cribs and developmental milestone resources)
- Vaccines for women and infants
- Food assistance
- Connection with a larger health network!
Funding for every component of the MOMS program can be expensive, so you need to strategically target the least likely components to be funded.
Obtaining Short-term Funding

How are you going to fund MOMS programming?

- **Business Line**: Can organizations expand their business into a distinct profitable line item for pregnant mothers with substance use disorders?

- **Grant Funding**: Can your state leverage grant funding to promote the MOMS program?

- **Levy Funding**: Can you obtain community buy-in to support levies for this population?

- **Other Funding**: Is other funding available from groups like the Women’s Treatment Network, regional planning entities, county commissioners, or other community organizations?
Lessons Learned

MOMS Programs should...

• Implement strategies to increase access during all trimesters and improve treatment retention during third trimester and post partum
• Incorporate pediatrics into the maternal care home model
• Promote tobacco cessation for better infant outcomes (e.g., low birth weight)
• Collaborate with child protective services to reduce out-of-home placement
• Provide more parenting skills education and early home intervention services
• Collaborate with MCPs to support treatment integration and retention
Current Challenges

• What can we do for ...
  • Patient Retention
  • MAT Acceptance
  • Family Treatment Entry
  • Family Housing
  • Patient Debt
Questions? Contact Us

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Visit Us on the Web: momsohio.org
Q & A
Thank You!

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