Caring for the Mother with Opioid Use Disorder and her Child: Research and Clinical Perspective on Treating the Dyad

Hendrée E. Jones
Pregnant women with opioid use disorders (OUDs) can be effectively treated with methadone or buprenorphine. However, 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).
Objectives

• At the conclusion of this activity participants should be able to:

  • Identify at least three historical and current factors that help explain the current opioid epidemic for women

  • Identify at least three new SAMHSA recommendations to care for pregnant women and their children touched by opioid use disorder

  • Identify at least three factors that drive Neonatal Abstinence Syndrome outcomes

  • Identify at least three elements that are common themes among model programs that help to facilitate positive mother and child outcomes
Historical Context: Opioid Use and Women

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

Earle, Medical Standards, 1888
The Incidental Economist 2014 https://pointsadhsblog.files.wordpress.com/2012/03/08-0620hair20salon20loc20nywt20226b.jpg
Recent History: Opioid Use in the USA

80’s
- Reports state few receiving narcotic painkillers develop addiction

90’s
- Purdue Pharma Develops Oxycontin
- The Joint Commission “Pain - the 5th Vital Sign”

1996
- Federation of State Medical Boards: Model Guidelines for the Use of Controlled Substances for Pain Treatment

1998
- Tripling of 18-25 year olds abusing opioid pain relievers
- DEA and FDA task forces to reduce internet opioid sales

2003
- George Brothers open first pain clinic in FL. American Pain prescribed almost 20 million pills over two years

2007
- Drug overdose surpass motor vehicles as the leading cause of injury death

2009-now

CDC says Opioids killed more than 42,000 people in 2016

“Our people are dying. More than 175 lives lost every day. If a terrorist organization was killing 175 Americans a day on American soil, what would we do to stop them?” Estimate 63,875

Seating capacity 52,000

Frakt, A. NY Times 12/22/14; CDC Morbidity and Mortality Weekly Report (MMWR) 1/1/16
Recent History: Drug Overdoses in the USA

The number who die each year from...

- Drug overdoses: 52,404
- Car accidents: 37,757
- Guns: 35,763
- H.I.V.: 6,465
In 2017, there were 1,953 overdose deaths involving opioids in North Carolina—a rate of 19.8 deaths per 100,000 persons compared to the average national rate of 14.6 deaths per 100,000 persons.

The greatest rise occurred among deaths involving synthetic opioids other than methadone (mainly fentanyl), from 116 in 2013 to 1,285 deaths in 2017.

In the same four-year period, heroin-involved deaths rose from 189 to 537 cases.

Prescription opioid-involved deaths have not statistically changed in the past several years with 659 reported deaths in 2017.
Drugs Involved in Overdose Deaths, 2000-2016

- Fentanyl and fentanyl analogs
- Heroin
- Painkillers
- Cocaine
- Methamphetamine
- Methadone

Note: 2016 figures are provisional and cover the 12-month period ending in January 2017.
Source: Centers for Disease Control and Prevention
**Current Scope of the Problem: Rowan County**

DEA report on top 25 drugs seized and identified in Rowan County in 2018

<table>
<thead>
<tr>
<th>Type of Drug Seized</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methamphetamine</td>
<td>48</td>
<td>35.3</td>
</tr>
<tr>
<td>Cocaine</td>
<td>34</td>
<td>25.0</td>
</tr>
<tr>
<td>Heroin</td>
<td>26</td>
<td>19.1</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>8</td>
<td>5.9</td>
</tr>
<tr>
<td>Pharmaceutical opioids</td>
<td>8</td>
<td>5.9</td>
</tr>
<tr>
<td>Cannabis</td>
<td>12</td>
<td>8.8</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>136</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Thank you: Jane C. Maxwell, Ph.D., Research Professor, Addiction Research Institute
Current Context of Opioid Misuse in the USA for Women

2015-2016 Annual number and age-adjusted rate of drug overdose deaths

From 1999 to 2017, the death rate from drug overdose among women aged 30–64 years increased by 260%.

Drug overdose deaths involving antidepressants, benzodiazepines, cocaine, heroin, prescription opioids, and synthetic opioids all increased.
People in these various demographic groups have significantly diverging death rates.

White women living in less-urban areas, in particular, have seen a stark increase in death rates — as much as 40 percent in some age groups. **Here’s why.**
Compared to men, women are more likely to:

• report chronic pain
• be prescribed prescription pain relievers
• be given higher doses
• use them for longer time periods than men
• have a shorter duration between opioid use initiation and seeking help for an opioid use disorder
• Less likely to receive naloxone for an overdose

Specific risks for the misuse of prescription opioid medication among women include: experience of violence and trauma, being a native minority, adolescent, young, older, pregnant, a sexual minority, and being a transwoman

http://www.cdc.gov/vitalsigns/prescriptionpainkilleroverdoses/

Sumner SA et al., *Prehosp Emerg Care*. 2016
Randall C et al., *J Stud Alcohol*. 1999
How Do You Define Addiction?
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

DSM-5 released May 2013
“Substance Use Disorder” terminology
11 diagnostic criteria over a 12-month period:
  - Mild: 2-3 symptoms
  - Moderate: 4-5 symptoms
  - Severe: 6 or more symptoms
Among persons with OUD:

- Another substance use disorder 80%
- Alcohol use disorder 41%
- Nicotine dependence 29%
- Major depression 29%

Current Context: Who is at Risk for Opioid Use Disorder (OUD)?

N=4,400 patients entering drug treatment for OUD

- Individuals initially exposed to opioids through a physician’s prescription to treat pain
  - Used a psychoactive substance non-medically prior to or coincident with their opioid prescription 95%
    - Alcohol 93%
    - Nicotine and/or tobacco 90%
    - Marijuana 87%

Similar findings were observed in a study restricted to women

Clinicians must to screen patients for prior substance use histories and judicious monitoring of and intervention with these at-risk patients prior to or during opioid prescribing

Current Context of Substance Use during Pregnancy

Substance Use in Past Month Among Pregnant Women

Special analysis of the 2017 NSDUH Report.

+ Difference between this estimate and the 2017 estimate is statistically significant at the .05 level.
History: 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.

Current Context: Opioids, Pregnancy, and NAS

From 2008 to 2014, the rate of NAS in NC increased from 1.8 cases/1000 hospital births to 8.2/1000 hospital births.
Pathophysiology of NAS

↑ Acetylcholine
Diarrhea, vomiting
Yawning
Sneezing, sweating
Sweating

↓ Serotonin
Sleep deprivation
Sleep fragmentation

↑ Other receptor activity
Hyperalgesia
Allodynia

↓ Dopamine
Hyperirritability
Anxiety

↑ Corticotropin
Increased stress
Hyperphagia

Lack of opioids in chronically stimulated receptors
↓
Super activation of cyclic AMP
↓
Increased protein kinase
↓
Increased transcription factors
↓
Increased release of neurotransmitters

↑ Noradrenaline
Hyperthermia
Hypertension
Tremors
Tachycardia

Adapted from Prabhakar Kocherlakota Pediatrics 2014

Credit: Anne Johnston, MD
NAS is Not Addiction

• Newborns can’t be “born addicted”

• NAS is withdrawal – due to physical dependence

• Physical dependence is not addiction

• Addiction is brain illness whose visible signs are behaviors

• Newborn do not have the life duration or experience to meet the addiction definition
# Nasal Absence Syndrome (NAS): Various Substances

## Neonatal Abstinence Syndrome

<table>
<thead>
<tr>
<th>Drug</th>
<th>Onset, h</th>
<th>Frequency, %</th>
<th>Duration, d</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opioids</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heroin</td>
<td>24–48</td>
<td>40–80(^{27})</td>
<td>8–10</td>
</tr>
<tr>
<td>Methadone</td>
<td>48–72</td>
<td>13–94(^{37})</td>
<td>Up to 30 or more</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>36–60</td>
<td>22–67(^{46,48})</td>
<td>Up to 28 or more</td>
</tr>
<tr>
<td>Prescription opioid medications</td>
<td>36–72</td>
<td>5–20(^{60,60})</td>
<td>10–30</td>
</tr>
<tr>
<td><strong>Nonopioids</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSRIs</td>
<td>24–48</td>
<td>20–30(^{64})</td>
<td>2–6</td>
</tr>
<tr>
<td>TCAs</td>
<td>24–48</td>
<td>20–50(^{64})</td>
<td>2–6</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>24</td>
<td>2–49(^{101})</td>
<td>7–10</td>
</tr>
<tr>
<td>Inhalants</td>
<td>24–48</td>
<td>48(^{70})</td>
<td>2–7</td>
</tr>
</tbody>
</table>

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\(^{27}\) Jourdan et al. 1988; \(^{37}\) Yee et al. 1983; \(^{46,48}\) Deitch et al. 1992; \(^{60,60}\) Oei et al. 1996; \(^{64}\) Fine et al. 1995; \(^{101}\) Schneeweiss et al. 1995; \(^{70}\) Yee et al. 1986.
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

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NAS Factors: Continued

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

Factors Providers Control
- Presence of a protocol
- NICU setting
- The NAS assessment choice
- NAS medication choice
- Initiation and weaning protocols
- Support breastfeeding
- Rooming in of mother and baby
NAS Assessment and Treatment: New Assessment

- N=50 consecutive opioid-exposed infants managed on the inpatient unit

- All infants had FNASS scores recorded every 2 to 6 hours but were managed by using the Eat, Sleep, Console (ESC) assessment approach.

- Breastfed or take >1 ounce from a bottle per feed, to sleep undisturbed for >1 hour, and consoled if crying within 10 minutes

- Actual treatment decisions made by using the ESC approach were compared with predicted treatment decisions based on recorded FNASS scores.

- ESC approach, 6 infants (12%) were treated with morphine compared with 31 infants (62%) predicted to be treated with morphine by using the FNASS approach ($P < .001$).

- There were no readmissions or adverse events reported.

What Happens When Women Who Use Drugs Get Pregnant?

National Survey Drug Use and Health 2013/2014 Past Month Use Data
Those who can’t quit or cut back – likely have a substance use disorder

Continued use in pregnancy is pathognomonic for addiction

Addiction: A Brain-Centered Condition Whose Symptoms are Behaviors

Salient Feature: Continued use in spite of adverse consequences
SAMHSA Clinical Guide Recommendations

• 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 dilute 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).
SAMHSA’s Guidance: Medically Supervised Withdrawal is *Not* Recommended

- Pharmacotherapy is the recommended standard of care

- Pharmacotherapy helps pregnant women with OUD 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.

- A pregnant woman receiving treatment for OUD may decide to move forward with medically supervised withdrawal if
  - It can be conducted in a controlled setting.
  - The benefits to her outweigh the risks.

Pregnant patients should be advised that withdrawal during pregnancy increases the risk of relapse without fetal or maternal benefit.
ACOG Guidance: Treating Women for Opioid Use Disorders during Pregnancy

- Universal screening starting at the first prenatal visit and using a validated verbal screening tool, which is preferable to urine testing
- If a woman screens positive, the guidelines recommend a brief intervention and referral to treatment.
- Medication-assisted treatment remains the preferred treatment
- Relapse is associated with serious risks, such as transmission of infectious agents, accidental overdose as a result of decreased tolerance, lack of prenatal care, and obstetric complications
- Medically supervised withdrawal may be considered in women who do not accept treatment with an opioid agonist or when treatment is unavailable. In that case, a physician experienced in treating perinatal addiction should supervise care, with informed consent of the woman
- Multidisciplinary long-term follow-up should include medical, developmental, and social support
### ACOG Guidance: Screening Differs from Testing

**All screens and tests for the mother require informed consent and neither diagnose a Substance Use Disorder**

<table>
<thead>
<tr>
<th></th>
<th>Screening with an Instrument</th>
<th>Maternal Urine Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To detect possible illness indicators</td>
<td>To establish presence/absence of a recent substance use</td>
</tr>
<tr>
<td><strong>Test method</strong></td>
<td>Simple, quick, acceptable to patients and staff</td>
<td>May take days for results and must be GC/MS or other confirmed test</td>
</tr>
<tr>
<td><strong>Positive result threshold</strong></td>
<td>Generally chosen towards high sensitivity not to miss potential disease</td>
<td>Chosen towards high specificity (true negatives). More weight given to accuracy and precision</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>Cheap, benefits should justify the costs since large numbers of people will need to be screened to identify a small number of potential cases</td>
<td>Higher costs associated with test; cost may be justified to establish specific result</td>
</tr>
</tbody>
</table>

Adapted from: https://www.healthknowledge.org.uk/public-health-textbook/disease-causation-diagnostic/2c-diagnosis-screening/screening-diagnostic-case-finding
When We Ask: What is our Response?

- Urine drug testing is not sufficient for a diagnosis of substance use/use disorder (ACOG 2017)
  - Short detection window
  - Might not capture binge or intermittent use
  - Rarely detects alcohol
  - Doesn’t capture prescription opioids (without confirmation testing)

- Essential component of SUD treatment

- Ethical issues:
  - **Robinson v. California (1962)** - Addiction is an illness, and that criminalizing it is a violation of the 8th Amendment, prohibiting cruel and unusual punishment

- **Ferguson v. City of Charleston (2001)** - Drug-testing pregnant women without their knowledge or consent constituted unlawful search and seizure in violation of the 4th Amendment
Possible Implications of Punitive Measures

- 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 time—used as evidence-based treatment of NAS
- Deters pregnant people from seeking healthcare and social support
- Long-term consequences of being convicted of a drug-related crime
  - Loss of financial aid
  - Housing restrictions
  - Employment challenges
- Fails to recognize the inadequacies in the healthcare system and other supportive services for pregnant people who use drugs

Patrick, S. W., & Schiff, D. M. 2017 *Pediatrics*, 139(3)
Treatment Access and Effectiveness

• Capacity is inadequate
  • Only 15% of treatment centers offer specified services
  • Access is limited
    • For those in poverty, rural areas, uninsured, or insured through Medicaid
• Quality of treatment ranges dramatically
• Barriers in treatment for opioid use disorder
• Engagement in prenatal care is effective regardless of continued drug use

Patrick, S. W., & Schiff, D. M. 2017. Pediatrics, 139(3)
During Pregnancy:
Treatment Principle = Integration

- Behavioral Counseling
- Prenatal Care
- Medication
World Health Organization: 18 Recommendations in their Guidelines

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendation</th>
<th>Strength of recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Pharmacotherapy is not recommended for routine treatment of dependence on amphetamine-type stimulants, cannabis, cocaine, or volatile agents in pregnant patients.</td>
<td>Conditional</td>
</tr>
<tr>
<td>10</td>
<td>Given that the safety and efficacy of medications for the treatment of alcohol dependence has not been established in pregnancy, an individual risk-benefit analysis should be conducted for each woman.</td>
<td>Conditional</td>
</tr>
<tr>
<td>11</td>
<td>Pregnant patients with opioid dependence should be advised to continue or commence opioid maintenance therapy with either methadone or buprenorphine.</td>
<td>Strong</td>
</tr>
</tbody>
</table>

World Health Organization, ACOG and ASAM: Medication Option Guidance

- Methadone
- Buprenorphine alone
- Buprenorphine + naloxone
- Naltrexone
### Methadone and Buprenorphine: Advantages

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Methadone</th>
<th>Buprenorphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduces/eliminates cravings for opioid drugs</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Prevents onset of withdrawal for 24 hours</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Blocks the effects of other opioids</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Promotes increased physical and emotional health</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Higher treatment retention than other treatments</td>
<td>🟢</td>
<td></td>
</tr>
<tr>
<td>Lower risk of overdose</td>
<td></td>
<td>🟢</td>
</tr>
<tr>
<td>Fewer drug interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office-based treatment delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorter NAS course</td>
<td></td>
<td>🟢</td>
</tr>
</tbody>
</table>

Approximately 6 out of every 1,000 women presenting for delivery in the United States are treated with one of these agents.
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
  ❑ Limited efficacy in patients with high opioid debt
  ❑ Demonstrated clinical withdrawal symptoms
  ❑ Increased risk of diversion
Ordinary least squares and Poisson regression analyses were used to test average daily number of cigarettes smoked in the past 30 days at α=0.05, adjusting for both Medication Condition and Site. Below-average cigarette smoking was defined as 6 cigarettes/day (−1 SD), average cigarette smoking as 14 cigarettes/day (Mean), and above-average cigarette smoking as 21 cigarettes/day (+1 SD).

The 4th Trimester - Postpartum

• Critical Period
  • Newborn care, breastfeeding, maternal/infant bonding
  • Mood changes, sleep disturbances, physiologic changes
  • Cultural norms, “the ideal mother” in conflict with what it is actually like to have a newborn

• Neglected Period
  • Care shifts away from frequent contact with prenatal care provider – to pediatrician
  • Care less “medical” (for mom) and shifts to other agencies (WIC)
  • Insurance and welfare realignment
  • SUD treatment provider(s) – care is constant
Maternal Mortality is Increasing

per 100,000 live births

Possible Factors

Drug use with homicide/suicide

Overdose

Medicaid coverage loss at 6 weeks postpartum

“Detox” during pregnancy to prevent NAS

Inadequate Access to drug treatment/MAT

*Excludes California and Texas: California showed a declining trend, whereas Texas had a sudden increase in 2011-2012.

MacDorman MF et al Ob/Gyn 2016
Has Maternal Mortality Really Doubled in the U.S.?

Statistics have suggested a sharp increase in the number of American women dying as a complication of pregnancy since the late 1980s, but a closer look at the data hints that all is not as it seems.

By Dina Fine Maron on June 8, 2015

U.S. Maternal Mortality Ratio by Race in 2011

Maternal deaths per 100,000 live births

- Black: 42.8
- Other Races: 17.3
- White: 12.5

Source: Centers for Disease Control and Prevention

Graphic by Tiffany Farrant-Gonzalez, for Scientific American
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.
What are the Long Term Outcomes of Children Prenatally Exposed to Opioids?

Issues to consider when reading the literature

- Population of Interest definitions
- Comparison group? What kind?
- Prospective data collection in the perinatal period?
- Masked assessment?
- Include a substantial proportion of subjects exposed in utero other substance?
- Matching
- Statistical
- Inferential

“Addiction, illegality, prenatal toxicity and poor outcomes are linked in the public and professional mind. In reality, scientific evidence for prenatal toxicity and teratogenicity is equivocal for some drugs and stronger for others. Inaccurate public expectations of correspondence between illegality and toxicity lead to distortions in interpreting and applying scientific findings.”

MOTHER Child Outcomes 0-36 Months

N=96 children

• No pattern of differences in physical or behavioral development to support medication superiority

• No pattern of differences for infants treated for NAS v. infants who did not receive treatment for NAS

• No pattern of differences when children were compared to norms on tests

Results indicate children born in the MOTHER study are following a path of normal development in terms of growth, cognitive and psychological development.
Are We Learning From Past Mistakes?

"Those who cannot remember the past are condemned to repeat it."
Quote attributed to philosopher George Santayana

“Among children aged 6 years or younger, there is no convincing evidence that prenatal cocaine exposure is associated with developmental toxic effects that are different in severity, scope, or kind from the sequelae of multiple other risk factors. Many findings once thought to be specific effects of in utero cocaine exposure are correlated with other factors, including prenatal exposure to tobacco, marijuana, or alcohol, and the quality of the child's environment. Further replication is required of preliminary neurologic findings.”

Understanding Attachment

- Securely-attached infants would develop a “secure base script” that explains how attachment-related events happen
  - for example: “When I am hurt, I go to my mother and receive comfort”

- Children with an insecure attachment and an Internal Working Model that says that the caregiver will be unavailable and/or rejecting when the child needs him/her may develop a chronic activation of the physiological stress-response system
Having been abused as a child is an important risk factor for abuse of one’s own children. There is a high incidence of abuse during childhood among women in treatment for substance use disorders. Maternal substance use disorder is one of the most common factors associated with child maltreatment. Mothers who have substance use disorders have higher incidences of hostile attributions and inappropriate expectations of child behavior as well as repeated disruptions in their parenting behaviors. These disruptions can create a negative effect on the parent–child relationship, as evidenced in the increased rates of insecure attachment in children who have parents with substance use disorders.
Trauma and The Brain

- The brain has a “bottom-up” organization
- Neurons and connections change in an activity-dependent fashion
- This "use-dependent" development
- The brain is most plastic (receptive to environmental input) in early childhood
- With trauma and neglect, the midbrain is overactive and grows in size while the limbic and cortical structures are stunted in growth

Perry B 2003
Treatment Response Needs to Match the Severity of the Problems

American Society of Addiction Medicine Placement Criteria

LEVEL 0.5 Early Intervention
LEVEL I Outpatient Treatment
LEVEL II Intensive Outpatient/ Partial Hospitalization
LEVEL III Residential/ Inpatient Treatment
LEVEL IV Medically Managed Intensive Hospital/ Inpatient Treatment
The goal of the program - provide comprehensive services that are appropriate and sensitive to the needs of the target population -- services that will 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 will be provided in one setting.

If the patient needs to undergo medical withdrawal or be hospitalized, referrals will be made to the appropriate programs.

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

A case management model is used.

The woman's transition into providing child care and parenting will be facilitated by a complete and thorough assessment of her needs and the development of a comprehensive treatment plan.
UNC Horizons: Care for Women and Children

- Trauma and SUD Treatment
- Childcare and Transportation
- Vocational Rehabilitation
- Medical Care (OB/GYN, Psychiatry)
- Parenting Education and Early Intervention
- Residential and/or Outpatient Care
- Unified Philosophy Informed by Social Learning, Relationship and Empowerment Theories
- Legal Aid

Medication Assisted Treatment
Other Model Programs and Resources

CHARM Collaborative

Dartmouth Hub and Spoke Model

SHIELDs for family Program
Recovery Oriented System of Care for Families
What You Can Do

**Individual Level**
- Mothers, children and families need strength-based support
- Help tell stories of recovery and success
- Consider mother and child not mother vs. child
- Be familiar with toolkits from NC and SAMHSA

**Structural Level**
- Access to whole health care
- Responsible prescribing by providers and training in substance use disorders and their treatments
- Naloxone distribution and connect those to care after naloxone administration
- Create or engage in local networks to foster systems of care that support families
Summary

• Opioid use disorder is a concerning medical illness that has radiating effects on the life of the person and those around the person - including children.

• Those who have this illness deserve the most appropriate medical care – medication in only one part of a complete treatment approach.

• Patients are best served by having choices in medication treatment options.

• Structured, evidence-based behavioral treatment is needed to help support the mother, child and family.

• Women who have opioid use disorders and their prenatally opioid exposed children are best served with a strength-based perspective.

NC Opioid Action Plan Data Dashboard: Metric Summary Table

The Metric Summary Table below provides an at-a-glance look at each of the thirteen metrics being tracked as part of the NC OAP.

Metrics are divided into five strategy areas:
1. Reduce Death/ED Outcomes
2. Reduce oversupply of prescription opioids
3. Reduce diversion/flow of illicit drugs
4. Increase access to naloxone
5. Treatment and recovery

Each metric is updated on a quarterly basis. The most recent quarter and year to date (YTD) provisional data are displayed in the Metric Summary Table. The Metric Summary Table can be viewed for the whole state or for an individual county by changing the State/County Focus dropdown in the upper lefthand corner of the toolbar.

https://injuryfreenc.shinyapps.io/OpioidActionPlan/
To Treat Babies for Drug Withdrawal, Help Their Mothers, Too

Rather than stigmatizing mothers with addiction, research suggests that a holistic approach to improving the lives of both mother and child is most effective.