Pregnancy, Opioid Addiction, and Care Issues in Virginia

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Professor Departments Obstetrics and Gynecology and Psychiatry
Associate Director Addiction Medicine
Virginia Commonwealth University

VA Perinatal Collaborative May 2017
• objectives - at the end of this ... participants will be able to :
  • apply the disease model of addiction to pregnancy
  • detail the fundamentals of pharmacotherapy for the treatment of opioid use disorder
  • and list some of the barriers to evidence-based care in the commonwealth
LAUDANUM.—Poison
Each fluid ounce contains 12.50 grain of opium and 40% alcohol.

Directions:

Two months old, 1 drop
Three months old, 2 drops
One year old, 3 drops
Two years old, 4 drops
Four years old, 5 drops
Ten years old, 6 drops
Twelve years old, 7 drops
Adults, 8 drops.

McCORMICK & CO., BALTIMORE, MD., U.S.A.
The current opioid epidemic: iatrogenic

MMWR 11/4/11
How the Epidemic of Drug Overdose Deaths Ripples Across America

By HAEYOUN PARK and MATTHEW BLOCH JAN. 19, 2016

Overdose deaths per 100,000

2003  2004  2005  2006

2007  2008  2009  2010

2011  2012  2013  2014
How the opioid epidemic became America’s worst drug crisis ever, in 15 maps and charts

Drug overdoses now kill more Americans than HIV/AIDS did at its peak. These maps and charts tell the story.

1) Drug overdoses now kill more people than gun homicides and car crashes combined

Drug overdoses killed more people in 2015 than HIV/AIDS at its 1995 peak

Total deaths in America by cause and year

Source: Centers for Disease Control and Prevention
## Gender and Prescription Drug Use and Misuse

<table>
<thead>
<tr>
<th>Past Year</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription psychotherapeutic drugs</td>
<td>40.9%</td>
<td>47.8%</td>
</tr>
<tr>
<td>“Pain Relievers”</td>
<td>33.9%</td>
<td>38.8%</td>
</tr>
<tr>
<td>Tranquilizers</td>
<td>11.3%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Sedatives</td>
<td>5.6%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Stimulants</td>
<td>6.5%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

- 2.1 million Past Year Initiates Opioid Misuse
  - 0.9 million males (0.7%)
  - 1.2 million females (0.9%)
  - 3300 women per day

NSDUH 2015
Since 2010
Prescription opioid overdose deaths increased
237% for men
400% for women
White women and men in small cities and rural areas are dying at much higher rates than in 1990, while whites in the largest cities and their suburbs have steady or declining death rates.

In Victoria County, Tex., a rural area near the Gulf Coast, deaths among women 45 to 54 have climbed by 169 percent in that time period, the sharpest increase in that age group of any U.S. county. The death rate climbed from 216 per 100,000 people to 583.

### Heroin Use Has INCREASED Among Most Demographic Groups

<table>
<thead>
<tr>
<th>SEX</th>
<th>2002-2004*</th>
<th>2011-2013*</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2.4</td>
<td>3.6</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>0.8</td>
<td>1.6</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGE, YEARS</th>
<th>2002-2004*</th>
<th>2011-2013*</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-17</td>
<td>1.8</td>
<td>1.6</td>
<td>--</td>
</tr>
<tr>
<td>18-25</td>
<td>3.5</td>
<td>7.3</td>
<td>109%</td>
</tr>
<tr>
<td>26 or older</td>
<td>1.2</td>
<td>1.9</td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RACE/ETHNICITY</th>
<th>2002-2004*</th>
<th>2011-2013*</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic white</td>
<td>1.4</td>
<td>3</td>
<td>114%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.7</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANNUAL HOUSEHOLD INCOME</th>
<th>2002-2004*</th>
<th>2011-2013*</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $20,000</td>
<td>3.4</td>
<td>5.5</td>
<td>62%</td>
</tr>
<tr>
<td>$20,000-$49,999</td>
<td>1.3</td>
<td>2.3</td>
<td>77%</td>
</tr>
<tr>
<td>$50,000 or more</td>
<td>1</td>
<td>1.6</td>
<td>60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEALTH INSURANCE COVERAGE</th>
<th>2002-2004*</th>
<th>2011-2013*</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>4.2</td>
<td>6.7</td>
<td>60%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>4.3</td>
<td>4.7</td>
<td>--</td>
</tr>
<tr>
<td>Private or other</td>
<td>0.8</td>
<td>1.3</td>
<td>63%</td>
</tr>
</tbody>
</table>

### Heroin Addiction and Overdose Deaths are Climbing

**Heroin-Related Overdose Deaths (per 100,000 people)**

**Heroin Addiction (per 1,000 people)**

Recent trends in treatment admissions for prescription opioid abuse during pregnancy

Caitlin E. Martin, M.D., M.P.H., 1-3 Nyaradzo Longinaker, M.S., 1-3, Mishka Terplan, M.D., M.P.H. 1-3

1 Department of Obstetrics and Gynecology, Kaiser Permanente Northern California, Oakland, California, USA
2 Department of Family and Community Medicine, Kaiser Permanente Northern California, Oakland, California, USA
3 Department of Pediatrics, Kaiser Permanente Northern California, Oakland, California, USA

*Cochran-Armitage Trend Test p<0.01
• 2002-2009:  
  – Rate of NAS increased

• Cost of care 2009  
  – NAS = $53,400  
  – All other births = $9,500

• Proportion of NAS paid for from Medicaid  
  – 2002 = 69%  
  – 2009 = 78%
Opioids and Child Welfare Epidemic

Parental AOD as Reason for Removal in the United States, 1999-2014

Percent of Children with Terminated Parental Rights by Reason for Removal in the US 2014

Note: Estimates based on all children in out of home care at some point during Fiscal Year

Source: AFCARS Data, 2014
Focus On Infants During Childbirth Leaves U.S. Moms In Danger

May 12, 2017 - 5:00 AM ET
Heard on Morning Edition
Barbary Levy, the vice president of health policy/advocacy at the American Congress of Obstetricians and Gynecologists, said:

“We worry a lot about vulnerable little babies...we don’t pay enough attention to those things that can be catastrophic for women.”
Original Research


Abigail R. Koch, MD, Deborah Rosenberg, MD, and Stacie E. Geller, MD, for the Illinois Department of Public Health Maternal Mortality Review Committee Working Group

Fig. 1. Ten-year pregnancy-associated mortality rates for deaths by violence and injury compared with the leading obstetric causes in Illinois, 2002–2011.

### Health Planning Region of Residence for the 94 Cases in Which Substance Abuse was a Contributor

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
<th>Percent</th>
<th>Rate&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest</td>
<td>8</td>
<td>8.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Northern</td>
<td>16</td>
<td>17.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Southwest</td>
<td>27</td>
<td>28.7</td>
<td>20.8</td>
</tr>
<tr>
<td>Central</td>
<td>28</td>
<td>29.8</td>
<td>19.0</td>
</tr>
<tr>
<td>Eastern</td>
<td>15</td>
<td>16.0</td>
<td>6.6</td>
</tr>
</tbody>
</table>

<sup>1</sup>The rate reflects the number of pregnancy-associated deaths for every 100,000 live births.
What happens when women who use substances get pregnant?

<table>
<thead>
<tr>
<th>Substance use by trimester</th>
<th>Not pregnant</th>
<th>Abstinence during pregnancy</th>
<th>Postpartum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alcohol</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>19.0</td>
<td>54.0</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>5.0</td>
<td>92%</td>
<td>45.4</td>
</tr>
<tr>
<td>Third</td>
<td>4.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cigarettes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>19.9</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>13.4</td>
<td>47%</td>
<td>20.1</td>
</tr>
<tr>
<td>Third</td>
<td>12.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Illicit drugs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>9.0</td>
<td>11.4</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>4.8</td>
<td>79%</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NSDUH 2012/13 Past Month
All pregnant women are motivated to maximize their health and that of their baby-to-be.
Those who can’t quit or cut back – have a substance use disorder

Continued use in pregnancy is pathognomonic for addiction
- A primary, **chronic** disease of **brain reward, motivation, memory** and **related circuitry**. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. (ASAM)

- A chronic, relapsing disease characterized by **compulsive** drug seeking and use despite harmful consequences as well as neurochemical and molecular changes in the brain. (NIDA)
Addiction: Brain-centered disease whose visible symptoms are behaviors

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- A chronic, relapsing disease characterized by **compulsive** drug seeking and use despite harmful consequences as well as neurochemical and molecular changes in the brain. (NIDA)
A primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. (ASAM)

A chronic, relapsing disease characterized by compulsive drug seeking and use despite harmful consequences as well as neurochemical and molecular changes in the brain. (NIDA)

Addiction: Brain-centered disease whose visible symptoms are behaviors

The five Cs:
- Craving
- Compulsive use
- Continued use despite harm (consequences)
- Impaired control over drug use
- Chronicity
Pregnant Women Who Use Drugs
Pregnant Women Who Use Drugs

Reproductive Health Lifecourse
Pregnant Women Who Use Drugs
Pregnant Women Who Use Drugs

Reproductive Health Lifecourse

Addiction Lifecourse

The Pregnancy Box
Women with SUD in pregnancy

- **Mental Health**
  - Two thirds co-occurring mental health disorders (Benningfield 2010)
    - Past 30 days: Mood disorder (50%), Anxiety (40%), PTSD (16%)
  - Childhood trauma: 50-90% physical or sexual abuse (Cormier 2000)
  - 60-80% past year intimate partner violence (Engstrom 2012, Tuten 2004)
    - Chronic pain worse in IPV survivors (Wuest 2008)

- **Reproductive Health**
  - Unplanned pregnancy: 80% (Heil 2012)
  - Low rates of contraception (Terplan 2015)
  - Higher rates of HIV
Women with SUD in Pregnancy

- Other substance use
  - High rates of smoking (>90%)
- Nutritional/other medical needs
- Social functioning
  - Inadequate social supports
  - 67% their parents used drugs (Finnegan 1991)
  - Unpredictable parenting models
  - Children – childcare needs
- Stigma and Shame
- Prior poor experiences with providers
- Fear of CPS
Pregnant women with SUD have unique set of needs across multiple domains – domains that affect both obstetric health and outcomes and addiction treatment. Care needs to address those needs. "Gold Standard" – Integration

- Comprehensive co-located service delivery
- Close collaboration between SUD and PNC provider
Methadone Vs. Comparisons

Strauss et al., showed that methadone treatment during pregnancy + comprehensive prenatal care reduced OB risk to a comparable level of “non-addicted” women of similar socio-medical circumstances.
Comprehensive prenatal care (PNC) ameliorates adverse outcomes associated with drug use.

**Table 2**

<table>
<thead>
<tr>
<th>Groups</th>
<th>No. of Patients</th>
<th>Average no. of Prenatal Visits</th>
<th>Obstetrical Complications %</th>
<th>LBW Incidence %</th>
<th>Pre-eclampsia %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>65</td>
<td>0</td>
<td>36.9</td>
<td>47.7</td>
<td>9.2</td>
</tr>
<tr>
<td>B</td>
<td>109</td>
<td>1.9</td>
<td>32.1</td>
<td>35.5</td>
<td>2.8</td>
</tr>
<tr>
<td>C</td>
<td>193</td>
<td>8.2</td>
<td>33.7</td>
<td>19.7</td>
<td>4.7</td>
</tr>
<tr>
<td>D</td>
<td>93</td>
<td>0</td>
<td>32.3</td>
<td>19.4</td>
<td>8.6</td>
</tr>
<tr>
<td>E</td>
<td>122</td>
<td>9.2</td>
<td>32.0</td>
<td>13.9</td>
<td>8.2</td>
</tr>
</tbody>
</table>

**Management of Pregnant Drug-Dependent Women**

Loretta P. Finnegan
Department of Pediatrics
Thomas Jefferson University
Philadelphia, Pennsylvania 19107

1978

<table>
<thead>
<tr>
<th>LOW BIRTH WEIGHT</th>
<th>PNC</th>
<th>No PNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>No drug use</td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td>Drug Use</td>
<td>19%</td>
<td>48%</td>
</tr>
</tbody>
</table>
Comprehensive Treatment Works

- **Kaiser Early Start** – Behavioral Health embedded in PNC
- Birth outcomes among Early Start moms were same as non-drug-using women (Goler 2008)
- Cost effective – net cost benefit of $6 million (50,000 individuals) (Goler 2012)
- Early Start expanded to all Kaiser NoCal OB clinics
Treatment for Opioid Use Disorder in Pregnancy

• Standard of care: Pharmacotherapy plus behavioral counseling
  – Methadone or Buprenorphine
Benefits of Pharmacotherapy

**Maternal**
- 70% reduction in overdose related deaths
- Decrease in risk of HIV, HBV, HCV acquisition/transmission
- Increased engagement in prenatal care and recovery treatment
- Treatment is platform for delivery of other services

**Fetal**
- Reduces fluctuations in maternal opioid levels; reducing fetal stress
- Decrease in intrauterine fetal demise
- Decrease in intrauterine growth restriction
- Decrease in preterm delivery
Which Medication?

- Methadone standard of care since 1970s
- Buprenorphine studied since 2002
- What about naltrexone?
Mean Neonatal Morphine Dose, Length of Neonatal Hospital Stay, and Duration of Treatment for Neonatal Abstinence Syndrome

• Maternal outcomes similar in the 2 study conditions (N=131)
  – Low rates of illicit drug use during pregnancy and at delivery
• Infants who received buprenorphine spent 58% less time in hospital receiving medication (4.1 vs 9.9 days)
• Clinically meaningful attrition rate in buprenorphine condition (18% in methadone arm vs 33% in buprenorphine arm)
Methadone vs Buprenorphine in Pregnancy

**Methadone**
- May have better treatment retention
- No risk precipitating withdrawal
- Patients with high opioid tolerance

**Buprenorphine**
- Probably less severe NAS
- Reduced risk of overdose during induction
- Reduced risk of overdose if children exposed to medication
Pregnant Women: A Priority Population

• “Because it is crucial that pregnant women engage in treatment for their addictions, OTPs should give priority to admitting pregnant patients at any point during pregnancy and providing them with all necessary care, including adequate dosing strategies as well as referrals for prenatal and follow-up postpartum services.” Federal Guidelines for Opioid Treatment Programs, 2015

• Pregnant women – don’t need to meet DSM criteria for use disorder to receive MAT (TIP 43)
Pregnant Women: A Priority Population?

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- Pregnant women – don’t need to meet DSM criteria for use disorder to receive MAT (TIP 43)

<table>
<thead>
<tr>
<th>Policy</th>
<th>Number of States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance Use Considered Child Abuse</td>
<td>24+DC</td>
</tr>
<tr>
<td>Substance Use Grounds for Civil Commitment</td>
<td>3</td>
</tr>
<tr>
<td>Mandatory Reporting</td>
<td>23+DC</td>
</tr>
<tr>
<td>Targeted Programs for Pregnant Women</td>
<td>19</td>
</tr>
<tr>
<td>Pregnant Women Given Priority Access</td>
<td>17+DC</td>
</tr>
<tr>
<td>Pregnant Women Protected from Discrimination</td>
<td>9</td>
</tr>
</tbody>
</table>
• Overall <20% of women who need treatment received it

• Among women with recent drug use, pregnant women are more likely to need treatment (OR 1.92 [1.46, 2.52])

• But no more likely to receive it (OR 0.90 [0.54, 1.51])

---

**TABLE 4. Odds Ratios and 95% Confidence Intervals (CIs) for the Odds of Treatment Receipt Among Those Meeting Criteria for Treatment**

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th>Treatment Receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude odds ratio (95% CI)</td>
</tr>
<tr>
<td>Pregnant</td>
<td>1.15 (0.70, 1.90)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1.22 (0.86, 1.73)</td>
</tr>
<tr>
<td>Black</td>
<td>1.47 (0.92, 1.75)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.67 (0.39, 1.33)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Age, y</td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>0.60 (0.49, 0.75)</td>
</tr>
<tr>
<td>21–25</td>
<td>0.90 (0.66, 1.23)</td>
</tr>
<tr>
<td>≥35</td>
<td>0.85 (0.61, 1.18)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>High school diploma or equivalent</td>
<td>0.54 (0.44, 0.69)</td>
</tr>
<tr>
<td>Governmental Assistance</td>
<td>1.84 (1.44, 2.35)</td>
</tr>
<tr>
<td>Employed</td>
<td>0.47 (0.36, 0.66)</td>
</tr>
<tr>
<td>Insurance</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>2.17 (1.65, 2.84)</td>
</tr>
<tr>
<td>Public</td>
<td>1.45 (1.32, 1.68)</td>
</tr>
<tr>
<td>Married</td>
<td>0.67 (0.45, 0.99)</td>
</tr>
</tbody>
</table>

*Adjusted model controls for all variables in the table.
• Overall <20% of women who need treatment received it

• Among women with recent drug use, pregnant women are more likely to need treatment (OR 1.92 [1.46, 2.52])

• But no more likely to receive it (OR 0.90 [0.54, 1.51])

There is no evidence that pregnant women receive preferential access to treatment
• GAO (2015): “the program gap most frequently cited was the lack of available treatment programs for pregnant women…”

• Overall provision of women-centered services in drug treatment facilities declined 2002-2009 (43%-40%, p<0.001)

• As did services specific for pregnant or postpartum women (19% in 2002 to 13% in 2009)
MAT receipt among pregnant women in treatment for OUD TEDS 1996-2014

- Pregnant women with OUD
- Pregnant women with OUD receiving MAT

Year
- 1996
- 2002
- 2008
- 2014

% of women receiving MAT
- 16.9
- 17.1
- 24.3
- 41.6
- 50.6
- 55.2
- 50.7

Maternal OUD Treatment Disparities
Pharmacotherapy: Priority

• Pharmacotherapy supported by:
  – CDC
  – WHO
  – SAMHSA
  – BOP
  – NCCHC
  – ACOG
  – ASAM
  – AAP
  – AAFP
  – Federal Guidelines for Opioid Treatment 2015
  – (partial list)

• Pharmacotherapy not supported by:
Comprehensive treatment and pharmacotherapy are rare and unavailable for most pregnant women with OUD.
How do we narrow the treatment gap for pregnant women who use drugs?
How do we narrow the treatment gap for pregnant women who use drugs?

• 1) Assessment: Universal assessment for substance use, misuse and addiction
How do we narrow the treatment gap for pregnant women who use drugs?

• 2) Increase treatment capacity
  – Buprenorphine waivered physicians
  – Under CARA (Comprehensive And Recovery Act, 2016)
    buprenorphine prescribing authority expanded to NPs and PAs – but not to CNMs!
How do we narrow the treatment gap for pregnant women who use drugs?

• 3) Need comprehensive lifecourse approach
  – Public Health Programming beyond the “Pregnancy Box”
Pregnant Women Who Use Drugs

Reproductive Health Lifecourse

Addiction Lifecourse

The Pregnancy Box
Postpartum:
The 4th Trimester

• 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 PNC 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

• Gaps in care – addressed through public health interventions – home visiting etc
FIGURE 1.1

The typical woman spends five years pregnant, postpartum or trying to get pregnant and 30 years trying to avoid pregnancy.

Median age at which event occurs:

Note: *Age by which half of women have experienced event.

Source: Reference 6.

Guttmacher Institute

Next Steps for America's Family Planning Program
Barriers in the Commonwealth

- Pharmacotherapy for OUD treatment
- Prior authorization for medication
- Discontinuities of care – especially into the postpartum period
- No comprehensive care for pregnant women in the state
- Family planning for women with addiction
We must avoid the “Crisis at Delivery”
Only 41% in treatment during pregnancy

Only 10% received counseling or referral from hospital
Putting it all together

- All pregnant women manifest motivation to maximize their health during pregnancy
- Most women stop or decrease use in pregnancy
- Those that can’t likely have a SUD
- Engagement in care improves outcomes
- However pregnant women with SUDs have unique set of needs and experience discrimination
- Therefore care needs to be compassionate and non-judgmental, comprehensive and coordinated with PNC provider
- Preventing substance exposed pregnancies means decreasing unplanned pregnancies, increasing access to reproductive health services, specifically contraception
Thank You

- Mishka.Terplan@vcuhealth.org
- Follow me on twitter: @do_less_harm
Narcotic withdrawal in pregnancy: Stillbirth incidence with a case report

José Luis Rementeria, M.D.
Nemesio N. Nunag, M.D.
Bronx, New York

A stillborn infant was born to a drug-addicted mother who had withdrawal symptoms shortly before delivery. Mechanisms are presented to help explain the possible relationship between the maternal withdrawal and the fetal death. Statistics are also presented to show an increased stillborn and neonatal mortality rate in the overall pregnant drug-addicted population.
• 1973 FDA said all pregnant women on methadone should undergo a 21-day detoxification

• Research shows that methadone:
  - Reduces maternal craving and repetitive episodes of fetal withdrawal
  - When provided in the context of a comprehensive program, allows other behavior changes which decrease health risks to both mother and fetus
  - Reduces the likelihood of complications with fetal development, labor, and delivery
Narcotic withdrawal in pregnancy: Still a problem with a case report

JOSÉ LUIS REMENTERIA, MD
NEMESIO N. NUNAG, M.D.
Bronx, New York

A stillborn infant was born to a drug-addicted mother who had withdrawal symptoms shortly before delivery. Mechanisms are presented to help explain the situation.


Brief article

Is opiate detoxification unsafe in pregnancy?

Jason Luty, Ph.D., MRCPsycha, Vasilis Nikolaou, B.Sc., M.Sc., Jenny Beam, MRCP, MRCPsychb

aMarina House, Addictions Resource Centre, 60-63 Denmark Hill, Camberwell, London SE5 8RS, UK
bDepartment of Statistics, Institute of Psychiatry, De Crespigny Park, Denmark Hill, London SE5 8AF, UK
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Opioid Detoxification in Pregnancy

JODI S. DASHE, MD, GREGORY L. JACKSON, MD, DEBORA A. OLSCHER, RNC, NP, ELIZABETH H. ZANE, MSW, AND GEORGE D. WENDEL, Jr, MD

The obstetrical and neonatal impact of maternal opioid detoxification in pregnancy

Robert D. Stewart, MD; David B. Nelson, MD; Emily H. Adhikari, MD; Donald D. Mcintire, PhD; Scott W. Roberts, MD; Jodi S. Dashe, MD; Jeanne S. Sheffield, MD

OBSTETRICS

Detoxification from opiates during pregnancy

Jennifer Bell, MD;Craig V. Towers, MD; Mark D. Hennessy, MD; Callie Heitzman, RN; Barbara Smith; Katie Chattin

SMFM PAPERS www.AJOG.org

Original Research ajog.org
Detoxification from opiate drugs during pregnancy

Jennifer Bell, MD; Craig V. Towers, MD; Mark D. Hennessy, MD; Callie Heitzman, RN; Barbara Smith; Katie Chattin

Be controlled. Group 1 consisted of incarcerated patients. These pregnant women underwent acute detoxification involuntarily because the jail program in East Tennessee has no ability to provide opiates to prevent or perform an opiate-assisted medical withdrawal. The physi-

**TABLE 1**

Demographics, gestational age at the time of detoxification, neonatal intensive care unit admission, and pregnancy outcome of the opiate detox study population

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>108</td>
<td>23</td>
<td>77</td>
<td>93</td>
<td>301</td>
</tr>
<tr>
<td>Mean maternal age, y</td>
<td>26.9 ± 3.7</td>
<td>26.4 ± 3.5</td>
<td>25.6 ± 3.6</td>
<td>27.2 ± 3.9</td>
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<tr>
<td>Maternal age range, y</td>
<td>18–43</td>
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</tr>
<tr>
<td>Maternal age &lt;30 y</td>
<td>82 (78%)</td>
<td>18 (78%)</td>
<td>55 (71%)</td>
<td>67 (72%)</td>
<td>222 (74%)</td>
</tr>
<tr>
<td>Multiparity</td>
<td>94 (87%)</td>
<td>14 (61%)</td>
<td>54 (70%)</td>
<td>73 (78%)</td>
<td>235 (78%)</td>
</tr>
<tr>
<td>White</td>
<td>85 (79%)</td>
<td>22 (91%)</td>
<td>74 (96%)</td>
<td>84 (90%)</td>
<td>265 (88%)</td>
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<tr>
<td>African-American</td>
<td>22 (20%)</td>
<td>1 (4%)</td>
<td>3 (4%)</td>
<td>8 (9%)</td>
<td>34 (11%)</td>
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Gestational age at detoxification and NICU admission

| Detoxification first trimester, 5–13 wks gestation | 10 (0%) | 4 (17%) | 12 (15%) | 2 (2%) | 28 (9%) |
| Detoxification second trimester, 14–27 wks gestation | 65 (60%) | 10 (43%) | 36 (47%) | 37 (40%) | 148 (49%) |
| Detoxification third trimester, ≥28 wks gestation | 33 (31%) | 9 (36%)  | 29 (38%) | 54 (58%) | 125 (42%) |
| Preterm deliveries prior to 37 wks gestation | 21 (19%) | 3 (13%)  | 13 (17%) | 16 (17%) | 53 (17.6%) |
| Neonatal intensive care unit admission | 32 (30%) | 5 (22%)  | 60 (78%) | 22 (24%) | 119 (40%) |

Pregnancy outcome

| Rate of NAS | 20 (18.5%) | 4 (17.4%) | 54 (70.1%) | 16 (17.2%) | 94 (31%) |
| Rate of relapse | 25 (23.1%) | 4 (17.4%) | 57 (74.0%) | 21 (22.5%) | 107 (36%) |

Group 1 consisted of acute detoxification (incarcerated patients). Group 2 consisted of intended detoxification with intensive behavioral health follow-up. Group 3 consisted of inpatient detoxification without intensive behavioral health follow-up. Group 4 consisted of slow outpatient buprenorphine detoxification.

NAS: neonatal abstinence syndrome; NICU: neonatal intensive care unit.

*One Hispanic in group 1 and one Asian in group 4. Relapse rate is defined as a positive drug screen on admission, an admission by the patient at the time of delivery that she had relapsed, or a positive neonatal inpatient unit (and include all of the patients who had relapsed treated for neonatal abstinence syndrome).

Detoxification from opiate drugs during pregnancy

Jennifer Bell, MD; Craig V. Towers, MD; Mark D. Hennessy, MD; Callie Heitzman, RN; Barbara Smith; Katie Chaitin

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Group 1 consisted of acute detoxification (incarcerated patients). Group 2 consisted of inpatient detoxification with discharge; Group 3 consisted of inpatient detoxification. Group 4 consisted of slow outpatient buprenorphine detoxification. NICU, Neonatal intensive care unit.

NAS: Neonatal abstinence syndrome; NICU, Neonatal intensive care unit.

Medically Assisted Withdrawal (Detoxification): Considering the Mother-Infant Dyad

- Early reports associated withdrawal with maternal relapse and fetal demise
- Recent case series data do not support this association
- Relapse remains a significant clinical concern - rates ranging from 17% to 96% (average 48%)
- Current data do not support a reduction in NAS with medically assisted withdrawal relative to opioid agonist pharmacotherapy
- Medically assisted withdrawal increases the risk of maternal relapse and poor treatment engagement and does not improve newborn health
- Treatment of chronic maternal disease, including opioid agonist disorder, should be directed toward optimal long-term outcome

Jones HE, Terplan M, Meyer M. J Addict Med. 2017
Helping the Helpless: Fighting Hampton Roads' Heroin Epidemic

More women using opioids while pregnant

Pill-Popping Mommas: 'Many' Pregnant Women Take Opioids, CDC Finds

Number of children born addicted to drugs skyrockets in the Tampa Bay area
Case Explores Rights of Fetus Versus Mother

Aida Bellar, 29, was sent to a drug-treatment center despite insisting she was not using drugs.

By ERIK ECHOLM
Published: October 23, 2012 | 570 Comments
No bystander could be more innocent. No damage so helplessly collateral.
Crack Babies: The Worst Threat Is Mom Herself

By Douglas J. Besharov

LAST WEEK in this city, Greater Southeast Community Hospital released a 7-week-old baby to her homeless, drug-addicted mother even though the child was at severe risk of pulmonary arrest. The hospital’s explanation: “Because [the mother] demanded that the baby be released.”

The hospital provided the mother with an apnea monitor to warn her if the baby stopped breathing while asleep, and trained her in CPR. But on the very first night, the mother went out drinking and left the child at a friend’s house—without the monitor. Within seven hours, the baby was dead. Like Dooney Waters, the 6-year-old living in his mother’s drug den, whose shocking story was reported in The Washington Post last week, this child was all but abandoned by the authorities.
Stigma

- Pregnant women who use drugs endure a particular “stigma”
- Pregnant women are treated differently by the CJ system
- Stigma – applies to treatment (medication assisted treatment)
- More appropriate terms:
  - Discrimination or Prejudice
State Policies on Substance Use during Pregnancy

<table>
<thead>
<tr>
<th>Policy</th>
<th>Number of States</th>
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<tr>
<td>Substance Use Considered Child Abuse</td>
<td>23+DC</td>
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<tr>
<td>Substance Use Grounds for Civil Commitment</td>
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<tr>
<td>Mandatory Reporting</td>
<td>23+DC</td>
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<td>Targeted Programs for Pregnant Women</td>
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<td>Pregnant Women Given Priority Access</td>
<td>16+DC</td>
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<td>Pregnant Women Protected from Discrimination</td>
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Guttmacher Institute Feb 1 2017
Punishing Pregnant Women: Not Best Practice

Maternal-Fetal Unit
A structurally and functionally interconnected metabolic unit shared by a mother and fetus through the placenta

Maternal-Infant Dyad
“There is no such thing as a baby ... If you set out to describe a baby, you will find you are describing a baby and someone. A baby can not exist alone, but is essentially part of a relationship” (D.W. Winnicott 1966)
Punishing Pregnant Women: Not Best Practice

• Discriminatory in how applied
  – Although SUDs affect all, white women more likely to use in pregnancy, black women and poor women far more likely to be prosecuted.

• Not grounded in evidence
  – Harms of illicit substances exaggerated; effects of licit substances minimized

• Unintended consequences
  – Policies drive women from PNC, SUD treatment
  – PNC ameliorates adverse effects of substances in using women
Principles of Treatment

• Empathy
  – Treating people with dignity and respect

• Adherence
  – People come back
  – Increase adherence by addressing needs/barriers:
    • Women/child friendly services
    • Transportation
    • Trauma informed care
    • Incentives
Pa. mom, 27, faces charges after her baby ODs on heroin

The young mother of the 10-month-old girl who OD'd was...