Improving Our Understanding of Infants with Substance Exposure and Neonatal Abstinence Syndrome (NAS)

October 31, 2017
Housekeeping

- **Webinar is being recorded and will be available with slides in a few days on our website: [www.ncfrp.org](http://www.ncfrp.org)**
  - The NCFRP will notify participants when it’s posted
- All participants will be muted and in listen only mode
- Questions can be typed into the Question Window
  - Due to the large number of participants, we may not be able to get to all questions in the time allotted
  - All questions asked will be answered and posted on the NCFRP website: [https://www.ncfrp.org/](https://www.ncfrp.org/)
About the National Center for Fatality Review and Prevention

The National Center for Fatality Review and Prevention (NCFRP) is a resource and data center that supports child death review (CDR) and fetal and infant mortality review (FIMR) programs around the country.

It is funded in part by Cooperative Agreement Number UG7MC28482 from the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB).
The NCFRP aligns with MCHB priorities and performance and outcome measures such as:

– Healthy pregnancy
– Child and infant mortality
– Injury prevention
– Safe sleep
HRSA’s overall vision for NCFRP

Through delivery of data, training, and technical support, the NCFRP will assist state and community programs in:

– Understanding how CDR and FIMR reviews can be used to address issues related to adverse maternal, infant, child, and adolescent outcomes
– Improving the quality and effectiveness of CDR/FIMR processes
– Increasing the availability and use of data to inform prevention efforts and for national dissemination

Ultimate Goal: improving systems of care and outcomes for mothers, infants, children, and families
Webinar Goals

• Understand opioid disorders and difference between NAS and substance exposure
• Understand factors associated with substance use during pregnancy
• Identify best practices for collaboration and plans of safe care
• Hear suggestions for what fatality review teams can do to address the needs of families affected by substance use disorders
Bringing Systems Together

for

Family Recovery, Safety and Stability

A Program Funded by the

Substance Abuse and Mental Health Services Administration (SAMHSA)

and the

Administration for Children and Families (ACF), Children’s Bureau

www.ncsacw.samhsa.gov
ncsacw@cffutures.org
Agenda

 Infants with Prenatal Substance Exposure
 What Works for Families Affected by Substance Use Disorders
Infants with Prenatal Exposure

- Prevalence & Effects of Substance Exposure
- Neonatal Abstinence Syndrome (NAS)
Estimated Number of Infants* Affected by Prenatal Exposure, by Type of Substance and Infant Disorder

- **Tobacco**: 600,000 (15%)
- **Alcohol**: 360,000 (9%)
- **Illicit Drugs**: 200,000 (5%)
- **Binge Drinking**: 80,000 (2%)
- **Heavy Drinking**: 16,000 (0.4%)
- **Withdrawal Syndrome**: 200,000 (5%)
- **NAS**: 24,000 (6 per 1,000 births)
- **FASD**: 28,000 (.2-.7 per 1,000 births)


Number of Children in Out of Home Care, 2000-2015

Children and Family Futures analyses of the AFCARS Data Set 2000-2015
Prevalence of Parental Alcohol or Other Drug Use as a Contributing Factor for Reason for Removal
2000-2015

Source: AFCARS Data, 2001-2015

Children and Family Futures analyses of the AFCARS Data Set 2000-2015
Parental Alcohol or Drug Use as a Reason for Removal, 2015

National Average: 34.4%

Note: Estimates based on all children who entered out of home care during Fiscal Year

Children and Family Futures analyses of the AFCARS Data Set 2000-2015
1. Identification: Only a handful of states have universal screening or standardized screening tools that are used to detect parental substance use during investigations of child abuse and neglect.

2. Data Collection: Few states have standardized protocols for recording the data in their information system.

Resulting in state by state variation in estimated prevalence of parental substance use as factors in child removals.

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The most recent studies on prevalence were published over a decade ago!

Percent of All Children Under the Age of One Year in Out-of-Home Care with Parental Alcohol or Other Drug Use as a Reason for Removal, 2000-2015

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

Children and Family Futures analyses of the AFCARS Data Set 2000-2015
Age of Children who Entered Out-of-Home Care, 2015
N=268,790

Children and Family Futures analyses of the AFCARS Data Set 2000-2015
Note: Estimates based on all children who entered foster care during Fiscal Year
Extended families are particularly affected by the opioid epidemic.

1/3 of children placed in out of home care with parental alcohol and drug use as a factor are placed with relatives.

This represents an increase from 34% in 2008 to over 40% in 2014.
American Academy of Pediatrics (AAP) 2013 Technical Report

Prenatal substance abuse: Short and long-term effects on the exposed fetus

Authors

• Lead: Marylou Behnke, MD and Vincent C. Smith, MD
• AAP Committee on Substance Abuse
• AAP Committee on Fetus and Newborn

Comprehensive review of approximately 275 peer reviewed articles spanning 40 years (1968-2006)

Key Takeaways:

• While opioids have a strong effect on short-term withdrawal symptoms, other substances such as alcohol, cocaine, marijuana and nicotine show more areas of effect on long-term outcomes.

• Prenatal exposure to alcohol has effects in 9 of 10 domains studied including short-term/birth outcomes and long-term outcomes.

• There are some substances and outcomes for which there is not consensus or not enough data to determine consensus.

## Short Term Effects of Prenatal Exposure

<table>
<thead>
<tr>
<th>Substance</th>
<th>Growth</th>
<th>Anomalies</th>
<th>Withdrawal</th>
<th>Neurobehavioral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td><strong>Strong Effect</strong></td>
<td><strong>Strong Effect</strong></td>
<td>No Effect</td>
<td>Effect</td>
</tr>
<tr>
<td>Nicotine</td>
<td>Effect</td>
<td>No consensus</td>
<td>No Effect</td>
<td>Effect</td>
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<tr>
<td>Marijuana</td>
<td>No Effect</td>
<td>No Effect</td>
<td>No Effect</td>
<td>Effect</td>
</tr>
<tr>
<td>Opiates</td>
<td>Effect</td>
<td>No Effect</td>
<td><strong>Strong Effect</strong></td>
<td>Effect</td>
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<tr>
<td>Cocaine</td>
<td>Effect</td>
<td>No Effect</td>
<td>No Effect</td>
<td>Effect</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>Effect</td>
<td>No Effect</td>
<td>Lack of data</td>
<td>Effect</td>
</tr>
</tbody>
</table>
# Long Term Effects of Prenatal Exposure

<table>
<thead>
<tr>
<th>Substance</th>
<th>Growth</th>
<th>Behavior</th>
<th>Cognition</th>
<th>Language</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Strong Effect</td>
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</table>
Complex Interplay of Factors

Interaction of various prenatal and environmental factors:

- Family characteristics
- Prenatal care
- Exposure to multiple substances (alcohol and tobacco)
- Early childhood experiences in bonding with parent(s) and caregiver(s)
- Other health and psychosocial factors have a significant impact

Infants with Prenatal Exposure

- Neonatal Abstinence Syndrome (NAS)
From Medicaid data, the mean length of stay for infants with NAS was 16.4 days at an average cost of $53,000.

Rates of Neonatal Abstinence Syndrome (NAS) 2000-2013

*2013 Data in 28 States from the Center for Disease Control publicly available data in Health Care and Cost Utilization Project (DCUP) in 28 states


Patrick, S. M. Y., Patrick,
Newborns can’t be “born addicted”

• Addiction is brain disease whose visible symptoms are behaviors – newborn can’t have the behaviors associated with addiction (compulsion, continued use despite adverse consequences, etc.)
• Addiction is chronic disease – this chronic illness isn’t present at birth
• NAS is withdrawal – due to dependence – dependence NOT addiction

NAS is NOT Addiction
An expected and treatable condition that follows prenatal exposure to opioids

Symptoms begin within 1-3 days after birth, or may take 5-10 days to appear and include:

- Blotchy skin; difficulty with sleeping and eating; trembling, irritability and difficult to soothe; diarrhea; slow weight gain; sweating; hyperactive reflexes; increased muscle tone

Timing of onset is related to characteristics of drug used by mother and time of last dose

Most opioid exposed babies are exposed to multiple substances


Three Populations

1. Using legal or illegal drugs, on an opioid medication for chronic pain or on medication (e.g., benzodiazepines) that can result in a withdrawal syndrome and does not have a substance use disorder.

2. Receiving medication assisted treatment for an opioid use disorder (Buprenorphine or Methadone) or is actively engaged in treatment for a substance use disorder.

3. Misusing prescription drugs, or is using legal or illegal drugs, meets criteria for a substance use disorder, not actively engaged in a treatment program.
Polling Question #1

Is medication assisted treatment to treat opioid use disorders in pregnant women safe?

a) Yes, certain medications - methadone and buprenorphine

b) Yes, it is recommended as the clinical standard of care by a National Institute of Health consensus panel, American College of Obstetrics (ACOG), World Health Organization (WHO), and the American Society of Addiction Medicine (ASAM)

c) Yes, abrupt discontinuation of opioids often results in relapse

d) Yes, in conjunction with counseling and other services

e) All of the above
Stability for pregnant woman and fetus; prevent relapse
Counseling targets the cortex

Medication effects the limbic region

http://www.vivitrol.com/opioidrecovery/howvivitrolworks
Medication Assisted Treatment

As part of a comprehensive treatment program, MAT has been shown to:

• Increase retention in treatment
• Decrease illicit opioid use
• Decrease criminal activities, re-arrest and re-incarceration
• Decrease drug-related HIV risk behavior
• Decrease pregnancy related complications
• Reduce maternal craving and fetal exposure to illicit drugs

Medications used to Treat Opioid Use Disorders

- Methadone (50 year research base)
- Buprenorphine (Subutex; 2010 – MOTHER Study)
- Buprenorphine-Naloxone Combination (Suboxone®; Zubsolv)
- Naltrexone Extended-Release (Vivitrol®) – Once per Month injection
- Naloxone (Narcan®) – Reverses overdose

“...opiate dependence is a medical disorder and ... pharmacologic agents are effective in its treatment.”

National Institutes of Health (1997), Effective Medical Treatment of Opiate Addiction, Consensus Statement
A Revised Approach to NAS Treatment
Report on a Multi-Year Improvement Effort

- Yale New Haven Children’s Hospital
- Began in 2010
- Engaged a multidisciplinary team
- Implemented a series of plan-do-study-act cycles at to reduce the average length of stay for infants exposed to methadone in utero
- Average hospital days was 22.4 days before the start of the project
- Aim was to reduce average length of stay for infants with NAS by 50%

### A Revised Approach to NAS Treatment

**Report on a Multi-Year Improvement Effort**

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Outcomes</th>
</tr>
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<tbody>
<tr>
<td><strong>Non-pharmacologic NAS Treatment (morphine as needed)</strong></td>
<td><strong>Decreases in:</strong></td>
</tr>
<tr>
<td>+</td>
<td>• Length of hospital stay for infants: 22.4 to 5.9 days</td>
</tr>
<tr>
<td><strong>Parent Empowerment</strong></td>
<td>• Pharmacological tx: 98% to 14%</td>
</tr>
<tr>
<td><strong>Simplified NAS Assessment</strong></td>
<td>• Costs: $44,824 to $10,289</td>
</tr>
<tr>
<td><strong>Increased Interdisciplinary Communication and Coordination</strong></td>
<td><strong>• No infants were readmitted for treatment of NAS and no adverse events were reported</strong></td>
</tr>
</tbody>
</table>

What Works?

• Family Centered Treatment
• Collaborative Practice
To advance the capacity of state and local jurisdictions to improve the safety, health, permanency, and well-being of infants exposed to maternal alcohol and drug use.

Focuses on opioid use during pregnancy

Recovery of pregnant and parenting women and their families
States Receiving In-Depth TA to Improve Practice and Policies

Connecticut
Delaware
Kentucky
Minnesota
New Jersey
New York
Virginia
West Virginia

Services that Support Families

Prenatal
Universal Prenatal Screening
Substance Use Disorder Treatment

Birth
Birth Protocols
Pain Management
Mother-Infant Bonding
Breastfeeding

Beyond
Continued Support Services and Family Planning

A multi-disciplinary approach to engage Pregnant Women and their Families in Services

New Beginnings

- Motivation to make health related changes is enhanced during pregnancy
- Prenatal care is a touch point to services


Barriers to Screening

**Patient**
- Fear of discrimination, judgment, or CPS
- Previous bad experience with health care provider
- Don’t consider use problematic

**Provider**
- “My patients don’t use drugs”
- “I don’t have time”
- “I won’t get paid”
- “I don’t know what to do if they screen positive”
Early identification can minimize potential harms to the mother and her pregnancy and maximize motivation for change.

Selective screening based on “risk factors” may perpetuate discrimination and miss most women with problematic use.
Treatment that Supports Families

- Encourages retention in treatment
- Increases parenting skills and capacity
- Enhances child well-being

Family Recovery Completion

**PARENTS**
- Parenting skills and competencies
- Family connections and resources
- Parental mental health
- Medication management
- Parental substance use
- Domestic violence

**FAMILY**
- Basic necessities
- Employment
- Housing
- Child care
- Transportation
- Family counseling
- Specialized Parenting

**CHILD**
- Well-being/behavior
- Developmental/health
- School readiness
- Trauma
- Mental health
- Adolescent substance abuse
- At-risk youth prevention
What is recovery?

**SAMHSA’s Working Definition**

Recovery is a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential.

Recovery is not treatment

Access to evidence-based substance use disorder treatment and recovery support services are important building blocks to recovery.
Re-Thinking Family Recovery

Relational Based

• Parents’ recovery must occur in the context of family relationships

• Services that strengthen families and support parent-child relationships helps keep children safe

~85% of children in substantiated abuse and neglect cases either stay home or go home
What Works?

• Collaborative Practice
Polling Question #2

What do the current CAPTA provisions require regarding prenatal substance exposure?

a) A notification by healthcare professionals to child protective services of infants identified to be affected by substance abuse, withdrawal symptoms or FASD

b) Development of a Plan of Safe Care for identified infants and affected caregivers

c) Data collection and reporting on the number of infants and caregivers in which a Plan of Safe Care is developed and referred to services

d) All of the above
A Collaborative Approach

Women with substance use disorders are identified during pregnancy...

engaged into prenatal care, medical care, substance use treatment, and other needed services...

A Plan of Safe Care for an infant and their parents/caregivers is developed reducing the number of crises at birth for women, babies, and systems!
POSC is a unique opportunity for cross-system collaboration

No Single agency can do it alone
To identify infants at risk of child abuse and neglect as a result of prenatal substance exposure, so a range of appropriate services can be delivered to the infant and family/caregiver, ensuring the safety and well-being of infants and their families.
CARA’s Primary Changes to CAPTA 2016

1. Further clarified population to infants “born with and affected by substance abuse or withdrawal symptoms resulting from prenatal drug exposure, or a Fetal Alcohol Spectrum Disorder,” specifically removing “illegal”

2. Required Plan of Safe Care to include needs of both infant and family/caregiver

3. Specified data to be reported by States

4. Specified increased monitoring and oversight by States to ensure that Plans of Safe Care are implemented and that families have access to appropriate services
Key Issues for CAPTA Implementation
Local Considerations

- Coordinated Assessments
  - Prenatal Screening
  - Identification of Prenatal Exposure
  - Child Risk and Safety
  - Family’s Needs and Strengths

- Plan of Safe Care
  - Components
  - Timing: Prenatal, Postnatal
  - Implementation and Monitoring
CAPTA Plan of Safe Care
Preparing for Baby’s Arrival and Beyond

- Ideally, developed prior to birth of infant
- Comprehensive multi-disciplinary assessment
- Multiple intervention points: pregnancy, birth and beyond
- Addresses needs of infant and family/caregiver
- Structure in place to ensure coordination of, access to, and engagement in services
To advance the capacity of State and local jurisdictions to improve the safety, health, permanency and well-being of infants exposed to maternal alcohol and drug use.

Focuses on opioid use during pregnancy

Recovery of pregnant and parenting women and their families
Collaborative Lessons from SEI-IDTA

Leadership
Identifying champions from critical partner systems and a dedicated lead agency

Engaging Critical Partners
Ensuring that partners from multiple agencies and disciplines are meaningfully engaged

Cross-system Collaboration
Building a common foundation for systems change through shared resources, relationships and results

Data Collection, Reporting & Integration
Developing systems, protocols and training to support shared data collection, analysis and reporting
Purpose: Support the efforts of States, Tribes and local communities in addressing the needs of pregnant women with opioid use disorders and their infants and families

Audience
- Child Welfare
- Substance Use Treatment
- Medication Assisted Treatment Providers
- OB/GYN
- Pediatricians
- Neonatologists

National Workgroup
- 40 professionals across disciplines
- Provided promising and best practices; input and feedback over 24 months

Case Study: CHARM Collaborative

What Makes it Work
- Shared Understanding Among Partners
- Regular Meetings
- Information Sharing

Early Identification and Intervention
- MAT and substance use treatment services
- Prenatal Care
- Child Welfare 30-day pre-birth-assessment

Intense Level of Support
- Pregnancy
- Birth
- Post-Partum
5 Next Steps
#1 Download the Cross-Systems Guide

- Use these system specific guides to help establish a baseline understanding of the practices and policies used across systems.

Download @ https://ncsacw.samhsa.gov/files/Collaborative_Approach_508.pdf
#2 Conduct an SEI Systems Walk-Through

## Screening
- Call comes into hotline. Are any concerns noted at this point regarding a child being at risk?
- What determines if an investigation occurs and when?
- Ongoing monitoring is a factor in the case?

## Assessment
- Who decides the LOC needed?
- What does the NCSA do/what recommendations?
- Are there inconsistencies, either the child welfare workers don’t agree with the LOC recommendations?

## Referral
- If a parent completes an assessment, who is this information shared with?
- Are the treatment recommendations shared with CSW workers?

## Monitoring
- What happens if a parent refuses to do it? This is a factor in the case?
- What happens to children who are in the system? Are there the strategies used to improve their engagement?

Contact us @ ncsacw@effutures.org
#3 - View and Discuss SEI-IDTA, Opioid Use and SEI Webinars

**A Collaborative Approach**
Addressing the needs of pregnant women with opioid use disorders, their infants and families.

**Partnering to Treat Pregnant Women**
Lessons Learned from a Six Site Initiative will provide an overview and share lessons from the SAMHSA-funded initiative, Substance Exposed Infants In-Depth Technical Assistance program.

**A Framework for Intervention for Infants with Prenatal Exposure and Their Families**
Identifies points of intervention for comprehensive reform to prevent prenatal exposure and respond to the needs of pregnant women, mothers, their families and infants.

Visit @ www.cffutures.org
#4 Contact the NCSACW TTA Program

- Connect you with programs that are developing tools and implementing practices and protocols to support their powerful collaborative.
- Training and technical assistance to support collaboration and systems change.

ncsacw@cffutures.org
#5 Get Engaged in Current Collaborative Work
Resources
NCSACW Resources

- Publications
- Online Resource Inventory
- Webinars
- Online Tutorials
- Toolkits
- Video

Please visit:

http://www.ncsacw.samhsa.gov/
NCSACW Online Tutorials  Cross-Systems Learning


Understanding Child Welfare and the Dependency Court: A Guide for Substance Abuse Treatment Professionals

Understanding Substance Use Disorders, Treatment and Family Recovery: A Guide for Legal Professionals

FREE CEUs!

www.ncsacw.samhsa.gov/.org
Resources to Help You Address the Opioid Crisis

Substance-Exposed Infants, In-Depth Technical Assistance

- 18 months of technical assistance designed to strengthen collaboration and linkages across systems
- 8 sites: Connecticut, Delaware, Kentucky, Minnesota, New Jersey, New York, Virginia, West Virginia,

[Link](https://ncsacw.samhsa.gov/technical/sei-idta.aspx)

Technical Assistance: Plan of Safe Care Implementation

- Clarifying key decisions for tribes & states
- Defining “affected infants”
- Understanding different populations of pregnant women
- Identifying components in plans of safe care

Resource Directory

- Web-based Includes up to date research, training materials, videos, site examples and other resources
- Webinar Series: 8 recorded webinars

[Link](https://ncsacw.samhsa.gov/resources/opioid-use-disorders-and-medication-assisted-treatment/default.aspx)
Contact Information

Nancy K. Young, Ph.D.

1-(866)-493-2758
ncsacw@cffutures.org
Questions

As a reminder:

– Questions can be typed into the Question Window.
– Due to the large number of participants, we may not be able to get to all questions in the time allotted.
– The NCFRP will answer all questions and post the answers on the NCFRP website: https://www.ncfrp.org/

Recording of webinar and copy of slides will be posted within 2 weeks on the NCFRP website: www.ncfrp.org
NCFRP is on Social Media

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Save the Date!

SAVE THE DATE for our next webinar:

Effective Intervention to Support Mothers and Babies Impacted by Substance Use

November 2017
Date and Registration details to follow.
Thank you!

Additional questions can be directed to info@ncfrp.org