Matthew Cox, MD
Pediatrics
St. Luke’s CARES

ECHO IDAHO:
PERINATAL
SUBSTANCE USE
DISORDER

Parental Substance Use Disorders and Child Abuse & Neglect

July 8, 2020

The speaker has no relevant financial relationship(s) to disclose.

The University of Idaho, WWAMI Medical Education Program is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The University of Idaho, WWAMI Medical Education Program designates this live activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
LEARNING OBJECTIVES

▪ Delineate possible toxicities of a variety of in utero drug exposures

▪ Discuss indications for and type of drug testing for infants possibly exposed to drugs in utero

▪ Review reporting requirements and process when child abuse and neglect is suspected
FETAL SUBSTANCE EXPOSURE EFFECTS

- Difficult to make direct correlation
  - Multiple biological and psychosocial risk factors

- Direct mechanism on brain development
  - Alteration in development of brain

- Indirect mechanism on brain development
  - Variations in maternal placental functioning and physiology
  - Carboxyhemoglobin causes vasoconstriction
# Fetal Substance Exposure Effects

## Table 1: Short- and Long-term Effects of Fetal Substance Exposure

<table>
<thead>
<tr>
<th>Effect</th>
<th>Alcohol</th>
<th>Marijuana</th>
<th>Opiates</th>
<th>Cocaine</th>
<th>Methamphetamine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term effects or birth outcome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fetal growth</td>
<td>+++</td>
<td>+/-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Anomalies</td>
<td>+++</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>-</td>
<td>-</td>
<td>+++</td>
<td>-</td>
<td>Unknown</td>
</tr>
<tr>
<td>Neurobehavior</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Long-term effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td>+++</td>
<td>-</td>
<td>-</td>
<td>+/-</td>
<td>Unknown</td>
</tr>
<tr>
<td>Behavior</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>Unknown</td>
</tr>
<tr>
<td>Cognition</td>
<td>+++</td>
<td>+</td>
<td>+/-</td>
<td>+</td>
<td>Unknown</td>
</tr>
<tr>
<td>Language</td>
<td>+</td>
<td>-</td>
<td>Unknown</td>
<td>+</td>
<td>Unknown</td>
</tr>
<tr>
<td>Achievement</td>
<td>+++</td>
<td>+</td>
<td>Unknown</td>
<td>+/-</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Adapted with permission from Behnke et al (2013).+++ strong effect; +, effect; +/-, no consensus about effect; -, no known effect.

EFFECTS ON NEWBORN

- Drug-relate adverse birth outcomes
  - Preterm birth, LBW, growth restriction
- Neonatal abstinence syndrome
  - Signs indicating dysfunction of respiratory, gastrointestinal, or nervous system regulation
- Neurobehavioral and regulatory impairment
  - Tremors, irritability, hypertonicity, increased startle, feeding problems
- Structural changes
  - Congenital anomalies - FAS
- Environmental or caregiving deficiencies
**Table 1:** Possible effects on newborns due to illicit drug use in pregnancy (not a complete list).

<table>
<thead>
<tr>
<th>Drug</th>
<th>Possible effects on the newborn</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stimulants:</strong></td>
<td></td>
</tr>
<tr>
<td>Methamphetamine, Cocaine</td>
<td>Perinatal:</td>
</tr>
<tr>
<td></td>
<td>Low birth weight [10–12]</td>
</tr>
<tr>
<td></td>
<td>CNS irritability/lability of state [13–15]</td>
</tr>
<tr>
<td></td>
<td>—crying, jittery, sleep/wake alterations may have continued exposure through breastfeeding</td>
</tr>
<tr>
<td></td>
<td>Neurodevelopmental alterations [16]</td>
</tr>
<tr>
<td></td>
<td>Necroizing enterocolitis [17]</td>
</tr>
<tr>
<td></td>
<td>(Teratogenicity suggested by case studies but not confirmed by larger cohort or animal studies) [18]</td>
</tr>
<tr>
<td></td>
<td><strong>Long term:</strong></td>
</tr>
<tr>
<td></td>
<td>Modest but measurable longitudinal differences of cocaine-exposed infants in growth [19, 20], cognition [21], language [22], and impaired behavioral self-regulation [23, 24]. Other risk and protective factors can moderate outcome [23–25]. Longitudinal cohort of amphetamine-exposed infants showed school and behavioral problems (but environment impacts as well) [26]. Longitudinal methamphetamine studies are underway [27].</td>
</tr>
<tr>
<td><strong>Opiates/Opioids:</strong></td>
<td>Perinatal:</td>
</tr>
<tr>
<td>Heroin, morphine, codeine,</td>
<td>Low birth weight [8, 9]</td>
</tr>
<tr>
<td>oxycodone, hydrocodone,</td>
<td>Neonatal Abstinence Syndrome (NAS) [15, 28] scoring system available:</td>
</tr>
<tr>
<td>meperidine, fentanyl, (and</td>
<td>(i) CNS irritability</td>
</tr>
<tr>
<td>others)</td>
<td>(ii) Autonomic dysfunction</td>
</tr>
<tr>
<td></td>
<td>(iii) Respiratory symptoms</td>
</tr>
<tr>
<td></td>
<td>(iv) GI disturbances</td>
</tr>
<tr>
<td></td>
<td><strong>Long term:</strong></td>
</tr>
<tr>
<td></td>
<td>Longitudinal studies limited, problems with behavioral self-regulation reported [27].</td>
</tr>
<tr>
<td><strong>Cannabinoids:</strong></td>
<td>Perinatal:</td>
</tr>
<tr>
<td>Marijuana</td>
<td>Low birth weight with heavy exposure [29]</td>
</tr>
<tr>
<td></td>
<td>Lability of state [15]</td>
</tr>
<tr>
<td></td>
<td><strong>Long term:</strong></td>
</tr>
<tr>
<td></td>
<td>Impulsivity [8] and effects on executive functioning later in life [8, 30]</td>
</tr>
<tr>
<td><strong>Hallucinogens:</strong></td>
<td>Perinatal:</td>
</tr>
<tr>
<td>PCP, MDMA, LSD</td>
<td>Low birth weight [7, 8, 13]</td>
</tr>
<tr>
<td></td>
<td>CNS irritability [13]</td>
</tr>
<tr>
<td></td>
<td>Neurodevelopmental alterations [31]</td>
</tr>
<tr>
<td></td>
<td><strong>Long term:</strong></td>
</tr>
<tr>
<td></td>
<td>Longitudinal studies not available</td>
</tr>
<tr>
<td><strong>Sedatives:</strong></td>
<td>Perinatal:</td>
</tr>
<tr>
<td>Benzodiazepines, barbiturates</td>
<td>Low birth weight [32]</td>
</tr>
<tr>
<td></td>
<td>Respiratory depression, Hypotonia [33]</td>
</tr>
<tr>
<td></td>
<td><strong>Long term:</strong></td>
</tr>
<tr>
<td></td>
<td>Longitudinal studies not available</td>
</tr>
</tbody>
</table>
SUBSTANCE ABUSE AND MALTREATMENT

- Acutely intoxicated or withdrawing parent does not respond to infant cues
- Impaired judgment and priorities
- Multiple other problems in the home – mental illness, poor parenting skills, DV, criminal activity, lack of resources

DRUG TESTING: MOTHER OR INFANT

- Indications for testing
  - Maternal history
    - History of drug abuse
    - Late prenatal care (>16 weeks)
    - History of domestic violence
    - Unexplained placental abruption
    - History of child abuse or neglect
  - Infant History
    - Unexplained intrauterine growth retardation (IUGR)
    - Infant with evidence of drug withdrawal
TIMING OF DETECTION

Window of Detection For Biological Specimens

- Placenta
- Maternal Blood
- Cord Blood
- Maternal Oral Fluid
- Breast Milk
- Maternal Urine
- Neonate Urine
- Neonate Hair
- Amniotic Fluid
- Meconium
- Maternal Hair

Fig. 2. Window of detection for biological specimens: The window of detection varies depending on the sample chosen for drugs of abuse screening. (From Lozano J, García-Algar O, Vall O, et al. Biological matrices for the evaluation of in utero exposure to drugs of abuse. Ther Drug Monit 2007;29:711–34, Figure 2; with permission.)
URINE DRUG TESTING

- Screening vs. confirmatory testing
  - Immunoassay – Urine drug screen
  - Mass spectrometry/gas chromatography – confirmatory testing
- False positives
- Recent use
- Drugs clear rapidly – last few days prior to delivery

Brahm, N, et al. "Commonly prescribed medications and potential false-positive UDS"
URINE FALSE POSITIVES

- Amphetamines: pseudoephedrine, ephedrine, phenylephrine, propranolol, atenolol
- Opioids: poppy seeds
- PCP: OTC medications (dextromethorphan, doxylamine)
- Marijuana: hemp containing food products

MECONIUM

- Formed from the 12\textsuperscript{th} week of gestation
- Reservoir of drugs
- Identifies a history of drug use – not immediate drug use
- Takes several days for results (and collection)
CORD STAT TESTING

- Umbilical cord is the baby (placenta is the mom)
- 6 inches of umbilical cord
  - Turnaround 2-5 days
- Unable to assess timing or amount of use
- Possible drugs from delivery
CHILD PROTECTION PROCESS

- Report to child abuse hotline (child welfare)
- Consider report to law enforcement (particularly when concerned with safety)
  - In Idaho police make determination of imminent danger
- Explain concerns to investigator
- If meets criteria child welfare will meet with child and/or family
IDAHO REPORTING LAW

TITLE 16
JUVENILE PROCEEDINGS

CHAPTER 16
CHILD PROTECTIVE ACT

16-1605. REPORTING OF ABUSE, ABANDONMENT OR NEGLECT. (1) Any physician, resident on a hospital staff, intern, nurse, coroner, school teacher or other person who has reason to believe that a child under the age of 18 years is being subjected to conditions or causes to be reported which the person believes may cause the child to be injured or the child being neglected shall report or cause to be reported within twenty-four (24) hours to the department the attendance of a physician, resident intern, nurse, day care worker, or social worker is pursuant to the performance of services as a member of the staff of a hospital or similar institution, he shall notify the person in

practices, to hear confessions and confidential communications, in accordance with the bona fide doctrines or discipline of that church or religious organization.

(2) The notification requirements of subsection (1) of this section do not apply to a duly ordained minister of religion, with regard to any confession or confidential communication made to him in his ecclesiastical capacity in the course of discipline enjoined by the church to which he belongs if:

(a) The church qualifies as tax-exempt under 26 U.S.C. section 501(c)(3);

(b) The confession or confidential communication was made directly to the duly ordained minister of religion;

(c) The confession or confidential communication was made in the manner and context which places the duly ordained minister of religion specifically and strictly under a level of confidentiality that is considered inviolate by canon law or church doctrine. A confession or confidential communication made under any other circumstances does not fall under this exemption.

(4) Failure to report as required in this section shall be a misdemeanor.

History:

IF YOU SUSPECT ABUSE:

- DON'T try to investigate
- DON'T confront the abuser
- DO report your reasonable suspicions
INFORMING THE FAMILY

- Common ground = Concern for the child
- Ensure safety of child, yourself, and office staff
- Be honest, non-judgmental and direct
- Review medical findings
- Avoid confrontation
- Report based on suspicion but not certainty
KEY POINTS

• Testing with urine and umbilical cord (or meconium) provides broadest evaluation of infant (recent use and prior use)

• Newborn testing positive for any illicit substances must be reported to child abuse hotline
REFERENCES

ECHO IDAHO: PERINATAL SUBSTANCE USE DISORDER

- Social Work/Legal Implication of Perinatal Substance Use Disorder
- July 8, 2020

The speaker has no relevant financial relationship(s) to disclose.
LEARNING OBJECTIVES

- To understand and know how to make a report of suspected child abuse or neglect.
- To understand the priority guidelines
- To understand the Department process in working with a family of a positive tox baby
- To briefly understand what a case disposition (substantiated or unsubstantiated) means and to understand the due process involved
HOW TO REPORT SUSPECTED CHILD ABUSE, NEGLECT OR ABANDONMENT

To report suspected child abuse, neglect or abandonment call:

- **Statewide:** 1-855-552-KIDS (5437)
- **Treasure Valley:** 208-334-KIDS (5437)

- Boise Office (Westgate) 208-334-6800
- Nampa 208-465-8452
- Caldwell 208-455-7000
- Payette 208-642-6411
PRIORITY GUIDELINES FOR ASSESSMENT

PRIORIT Y 1

A Priority 1 report: is identified as a child of concern who is considered to be in immediate danger of life threatening circumstances and/or emergency situation with an immediate initial response by DHW.

There are multiple circumstances that are identified as a Priority 1, but for today’s purposes DHW responds to cases where mothers and/or infants test positive for drugs at the time of birth, or who test positive for alcohol at the time of birth. The immediate initial response of the social worker is to notify law enforcement and coordinate a response to the hospital prior to family discharge.

**We do not necessarily respond out if a mother and baby test positive for a drug that is being prescribed to mom as part of a treatment plan for sobriety; unless there are other safety risks involved.**
PRIORITY GUIDELINES FOR ASSESSMENT

PRIORITY 1

1. Death of a child
2. Safety threat involving physical harm due to Mental Health Issues
3. Life-threatening Physical Abuse
4. Non-life Threatening Physical Abuse of a child 6 years of age and younger
5. Life-threatening Medical Neglect
6. Life-threatening Physical Neglect
7. Withholding Medically Indicated treatment in severely disabled infants with life threatening conditions
8. Mothers/Infants who test positive at birth for alcohol or drugs
9. Sexual Abuse
10. Human Trafficking
11. Rule 16 Expansion
PRIORITY GUIDELINES FOR ASSESSMENT

PRIORITY 2

1. Non-life threatening Physical Abuse of a child 6 years or older
2. Non-life threatening Physical or Medical Neglect
3. Sexual Abuse
4. Human Trafficking
5. Disabilities
PRIORITY GUIDELINES FOR ASSESSMENT

PRIORITY 3

1. Inadequate supervision
2. Health and Safety Hazards in the home
3. Moderate Medical Neglect
4. Court Ordered Investigations
5. Educational Neglect
6. Lewd & Lascivious Conduct/Felony Injury to a Child Conviction
7. Multiple other factors in considering when/how to assign
DISPOSITION OF CASES

SPECIFIC TO SUBSTANCE ABUSE AND POSITIVE TOX BABIES

- There are 3 levels of substantiation specific to positive tox babies. The Department goes through a thorough assessment to determine safety risks, possible supports and working with law enforcement to determine not only how to support and protect the child/ren, but also how to move forward. The ultimate goal of Child Protection is to reunify a child/ren with their family in a safe and supportive environment that can include a myriad of resources for family functioning, parenting, substance abuse as well as other community resources to help a family to be safe.

- There is due process involved with the substantiation process where the family and the Department engage with a Fair Hearing Officer who determines the outcome of the disposition and if it remains
ONGOING RESOURCE LIST

RESOURCES FROM TODAY’S SESSION AND PAST SESSIONS CAN BE FOUND IN OUR ONGOING RESOURCE LIST.

https://iecho.unm.edu/sites/uidaho/download.hns?i=388