

Potpourri of Child Neglect: Drug-exposure, Failure to Thrive, Medical Care

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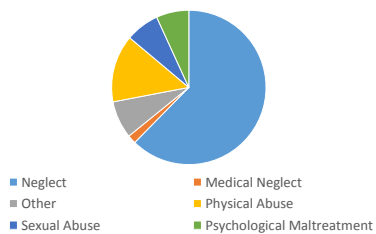
Neglect

- Definition
 - Act of "omission"
 - Action or failure to act which results in harm or risk of harm
 - Each state has its own specific definition

<https://www.childwelfare.gov/pubs/focus/acts/>

Substantiated Cases by Child Welfare: 2013 (NCANDS)

<http://www.acf.hhs.gov/sites/default/files/cb/cm2013.pdf>



Forms of Neglect

- Medical
- Nutritional (Malnutrition, FTT)
- Supervisory
- Substance mis-use/drug exposure
- Educational
- Environmental
- OFTEN co-occur with other forms of maltreatment

“Serve and Return”

- Development of healthy brain architecture relies on responsive “serve and return” encounters
 - Majority of brain growth and neural connections occur in first few years of life
- Resilience can mitigate some of the negative impact of adversities
 - Most common factor associated with resilience is the presence of at least one supportive parent, caregiver or other adult in the child’s life

<http://developingchild.harvard.edu/>

Consequences of Neglect: Ages 0-6 years

- Delays in language
- Increased aggression, anger and conduct problems
- Negativity in play, poor peer relationships
- Negative maternal-child interactions

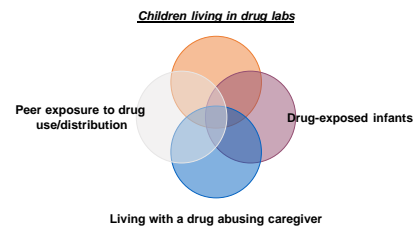
• Naughton et al., *JAMA Peds* 2013; Volume 167(8).

Consequences of Neglect: Ages 5-14 years

- Increases in inattention, impulsivity, hyperactivity
- Difficulty initiating or developing friendships
- Reduced literacy
- Low self-esteem
- Increase in depression and suicidality

• Maguire et al., *Child Care Health Devel* 2015; March 3.


Drug-endangered children



Substance abuse and child maltreatment by Wells, *Peds Clin N Am* April 2009

Drug-exposed Newborns Garrett's Law

- Methamphetamine
- Cocaine
- Marijuana
- PCP (Hallucinogens)
- Opiates (Narcotics)
- Benzodiazepines (Sedatives)



Stimulants

Prescription

Alcohol and Nicotine not included

Who gets tested? Provider dependent...not universal

Maternal indicators

- Known drug abuse by mom or altered state
- Lack of prenatal care
- STD
- Placental abruption
- Unexpected pre-term labor

Newborn indicators

- Agitated/altered mental status in mother
- Unexplained CNS complications
 - Seizures, hemorrhage
- Drug withdrawal symptoms
 - Tachypnea, hypertonicity...
- Changes in behavioral state
 - Jittery, fussy, lethargic...

Wegner et al. OB and Gynecol Clinics of North America, Vol 25(1)

ANGELS Neonatal Guideline: Newborns exposed to illicit drugs in utero

Drug Testing

- Urine
 - Shows drugs that were likely to be used by mom around the time of delivery.
 - Days
 - Negative test in baby doesn't mean drug wasn't in baby because drugs clear quickly from the urine in babies and often void before sample is collected
- Meconium (early baby stool)
 - Longer window of exposure
 - Days to weeks to months (starts to form mid 2nd trimester)
 - If mom used drugs right at delivery, may not have made it into meconium yet after delivery of baby.

Testing

Screening

Benefit	Limitations
Quick results	Indirect identification (risk of false positive)
Easy access	
Low cost	

Confirmatory

Benefit	Limitations
Direct identification (lower risk of false positive)	Turnaround time
	Reference labs
	Cost

Drug Class	Drugs in class	False (+) possibilities <i>(not a complete list)</i>
Amphetamines (AMP)	Methamphetamine, amphetamines (ADD and weight loss)	Decongestants Anti-depressants
Opiates	Heroin, morphine, oxycodone, hydrocodone	Dextromethorphan (DM), poppy seeds
Marijuana (THC)	Cannabinoids	Ibuprofen (NSAIDS)
Cocaine	Cocaine + metabolites	Amoxicillin
Benzodiazepines (Benzo)	Diazepam (Valium) Alprazolam (Xanax) Clonazepam (Klonopin)	Ibuprofen (NSAIDS) famotidine (pepcid)
Phencyclidine (PCP)	PCP	Dextromethorphan (DM), allergy meds (benadryl)
Barbiturates (Barbs)	Amobarbital, secobarbital (sleep aids)	Phenobarbital (seizure medication)

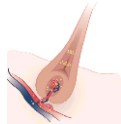
Mass Spectrometry (MS) Gas Chromatography (GC-MS) Liquid Chromatography (LC-MS)

- “Gold standard” for forensic analysis as it identifies the specific substance present (100 % specificity)
- Screening tests are not 100 % specific
 - Indicates that a category of a substance is present
 - Specificity can vary by test
 - Highest predictive values are for cocaine and THC (90-100 %)
 - Lowest predictive values are for amphetamines and opiates (70-80’s %)

Drug Testing

• Hair

- Send out test so longer time for results
- Have to have hair (1 inch of growth)
- ~ 3 month window of exposure depending on technique used by lab performing the test
- Positive could be from drug residue on surface of hair or drug in system that is growing out in hair shaft (if test performed without pre-test washing of sample)



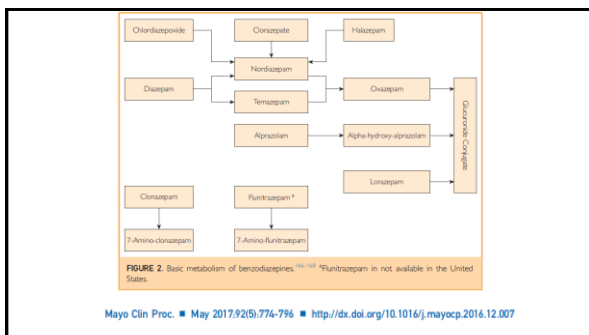
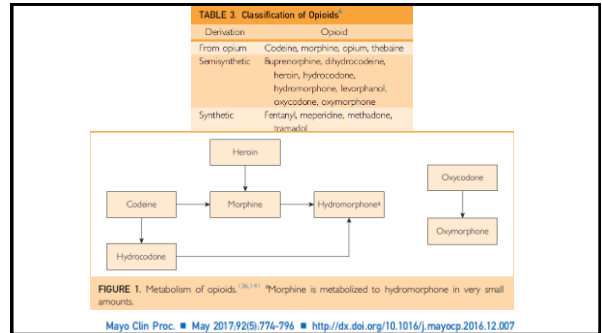
Drug Testing

• Notes

- Methamphetamine breaks down to amphetamine in the body. Amphetamine (ADD meds) does not convert up to methamphetamine
- “Synthetic” opioids such as methadone and fentanyl will not make a routine drug test for opiates turn positive (test must specifically say it looked for these)
- Cocaine breaks down to metabolites with other names:
 - Benzoylcegonine (BE), norcocaine, coca-ethylene
- Synthetic cannabinoids (K-2, Spice, etc.) will not make a routine drug test for marijuana turn positive

TABLE 2. Approximate Drug Detection Time in the Urine ¹⁷		TABLE 2. Approximate Drug Detection Time in the Urine ¹⁷	
Drug	Length of time detected in urine	Drug	Length of time detected in urine
Alcohol	7-12 h	Opioids	
Amphetamine	48 h	Codeine	48 h
Methamphetamine	48 h	Heroin (morphine)	48 h
Barbiturate		Hydromorphone	2-4 d
Short-acting (eg, pentobarbital)	24 h	Methadone	3 d
Long-acting (eg, phenobarbital)	3 wk	Morphine	48-72 h
Benzodiazepine		Oxycodone	2-4 d
Short-acting (eg, lorazepam)	3 d	Phencyclidine	8 d
Long-acting (eg, diazepam)	30 d	Synthetic cannabinoids	
Cocaine metabolites	2-4 d	Single use	72 h
Marijuana		Chronic use	>72 h
Single use	3 d	Synthetic cathinone	Variable
Moderate use (4 times/wk)	5-7 d		
Chronic use (daily)	10-15 d		
Chronic heavy smoker	>30 d		

Mayo Clin Proc. ■ May 2017;92(5):774-796 ■ <http://dx.doi.org/10.1016/j.mayocp.2016.12.007>



Increased Exposure Risk to Children in Drug Endangered Homes

- Developmental:
 - Grabbing/ Hand-to-mouth behaviors
 - Close to ground/floor
 - Attracted to bright colors/ sweet tastes
 - Unknowingly imitate caregivers
 - Playing outside
 - Wrong place/wrong time

Drug Exposure Effects-Direct

- Newborns
 - Most babies born exposed to drugs during pregnancy are born healthy and at term
- Neonatal Abstinence Syndrome (NAS)
 - Opiates such as hydrocodone, methadone, heroin
 - Sometimes attributed to methamphetamine or benzodiazepine/sedatives as well
 - Scoring system and medication for symptoms

What are the possible health effects?

- Immediate
 - Smaller than expected growth in uterus
 - Placental abruption
 - +/- Prematurity
- *These can occur with no drug exposure*
- Long-term
 - Subtle but measurable deficits in learning and attention
- *Multiple factor affect learning outcomes*

Drug exposure effects-direct

- Children exposed after pregnancy:
 - Accidental/intentional ingestion of drugs in home can cause serious illness and even death.
 - Chemicals used in drug manufacturing ("meth labs") can cause chemical burns to body and fire/explosion of surroundings.
 - Passive exposure to cigarette and drug smoke can cause problems with breathing and recurrent respiratory illnesses (sinuses, asthma flare-ups, etc.)
 - Needle stick injuries with used needles can cause hepatitis or HIV.

Drug Exposure Effects-Indirect

- Co-occurring risk factors
 - Neglectful supervision can lead to risk or injury, not getting regular medical/dental care for child, school absences, etc.
 - Prior maltreatment of current child or other child in the home
 - Undiagnosed or under treated mental health issue in the caregiver
 - Drug use often attempt to self-medicate symptoms
 - Does the caregiver realize they have a problem and need help?
 - (Screening tools in reference by Anthony)
 - Domestic Violence in home
 - HITS screening
 - Hurt, Insult, Threaten, Scream
- <http://www.domesticpeace.com/education.html>

Domestic Violence in the home with children

- Direct:
 - Child physically injured during altercation
- Indirect:
 - Child emotionally injured from witnessing violence (direct?)
 - Caregiver less able to respond to patient's needs
 - Child learns negative relationship and regulation skills
 - Increased depression and lower school performance in children

Adverse Childhood Experiences

<https://www.cdc.gov/violenceprevention/acestudy/index.html>

- Abuse
 - Physical, Sexual, Emotional
- Household Challenges
 - Parent treated violently
 - Incarceration of a parent
 - Parent with substance abuse or mental health disorder
 - Parental separation or divorce



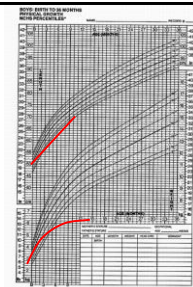
- Graded dose-response relationship between # ACEs and negative outcomes for health and well-being across the lifespan

Failure to Thrive

- Failure to grow at expected rate for children of similar age and gender
 - Weight crossing 2 major percentiles downward
 - Ratio of weight to length is less than 10th %
- At risk populations
 - Preterm/low birth weight infants
 - Issues causing neurologic dysfunction
 - Household food insecurity
 - Stressors in the home
 - Lack of maternal support

Failure to Thrive

- -Birth history, past growth plots, known medical problems, feeding history
- -Typical ranges
 - First month ~ 1 ounce a day (back to birth weight by 2 weeks)
 - Double birth by 6 months
 - Triple birth by a year
 - Quadruple birth by 2 years

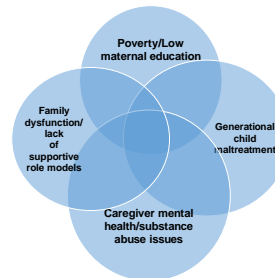


16 ounces in 1 pound and 1 kilogram = 2.2 pounds

Failure to thrive

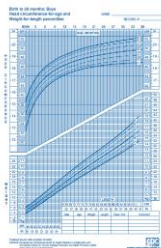
- Can be problems going on with a body system that cause a child to not grow properly = **ORGANIC FTT**
- If the child is not being fed enough calories but gains weight when fed appropriately = **Non-ORGANIC FTT** (Nutritional Neglect)
- Children with medical or feeding issues whose needs are not met by caregivers = **MIXED FTT**

Failing to Thrive



Why is FTT a big deal?

- Brain grows as much in the 1st year as it will during the rest of the life
- 700 new neural connections per second
- If FTT extends beyond 6 months of age, may never reach full brain growth potential



Treatment plan

- Ensure caregiver understands feeding/treatment plan
 - How much, how to mix, how often
- Resources to obtain formula/food
 - WIC, transportation, supply company delivery
- Follow up plan
 - PCP's office, Home health weight checks
- Contact #'s if questions
- Assess for other barriers
 - substance abuse, DV, mental illness, economic barriers

Medical Neglect

"Lack of medical treatment or failure to follow through with prescribed treatment for a condition that if untreated could become severe enough to constitute a serious or long-term harm to the child."

Factors considered:

- Seriousness of the health problem
- Probably outcome (and severity) if not treated
- Generally accepted medical benefits and side effects of the prescribed treatment

Questions.....Discussion??

- Extra Resource Slides follow.....

Domestic Violence Resources

- Arkansas Commission on Child Abuse, Rape and Domestic Violence: Link to the Domestic Violence Resources: <http://accardv.uams.edu/domestic-violence/resources-related-to-domestic-violence/>
- Arkansas Attorney General's Website: <http://arkansasag.gov/programs/domestic-dating-violence/lauras-card/>




National Child Traumatic Stress Network: Info Sheet <http://www.nctsn.org/trauma-types/domestic-violence>

Domestic Violence | National Child Traumatic Stress Network - Child Trauma Home

 A screenshot of the NCTSN website's 'Domestic Violence' info sheet. The page has a blue header with the NCTSN logo and navigation links. The main content area is white with a blue sidebar. The text defines domestic violence as a pattern of behavior that causes fear and includes psychological, emotional, sexual, and physical abuse. It also mentions that domestic violence is now recognized as a significant risk factor for child health issues.

Toxic Stress
<http://developingchild.harvard.edu/science/key-concepts/toxic-stress/>

<http://tedmed.com/talks/show?id=293066>
Nadine Burke Harris, MD

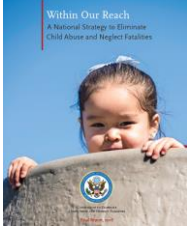


POSITIVE Brief increases in heart rate, mild elevations in stress hormone levels.

TOLERABLE Serious, temporary stress responses, buffered by supportive relationships.

TOXIC Prolonged activation of stress response systems in the absence of protective relationships.

Commission to Eliminate Child Abuse and Neglect Fatalities (CECANF)
--Final Report
--March 17, 2016



- <https://eliminatechildabusefatalities.sites.usa.gov/>