The Interdisciplinary Diagnosis and Interventions for Fetal Alcohol Spectrum Disorders

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Disclosures

• Honorarium from Formed Families Forward
• Co-Director, Specialty Diagnostic Resource Center
Objectives

- FASD Overview of Diagnostic Criteria
- In-depth review of symptoms
- Evidence-Based Treatments and Strategies
- Available Resources for Families
FASD Overview

Prevalence, the umbrella, diagnostic criteria, and the spectrum.
Prevalence of FASD in the US

- 6600 First Graders
- 222 Met Criteria for FASD
- 2 Had Existing Diagnosis

May et al., 2018

1 in 20 Children Meets Criteria for an FASD

BUT

Less Than 1% Get a Diagnosis!
Fetal Alcohol Spectrum Disorders

a descriptive term used for the broad spectrum of disorders caused by prenatal exposure to alcohol, including:
CRITICAL PERIODS IN HUMAN DEVELOPMENT*

<table>
<thead>
<tr>
<th>period of dividing</th>
<th>age of embryo (in weeks)</th>
<th>fetal period (in weeks)</th>
<th>full term</th>
</tr>
</thead>
<tbody>
<tr>
<td>period of dividing</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>zygote, implantation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>bilaminar embryo</td>
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</table>

C.N.S. (central nervous system)


does not susceptible to teratogens

prenatal death

major congenital anomalies (red)

functional defects & minor congenital anomalies (yellow)

Red indicates highly sensitive periods when teratogens may induce major anomalies.
Central Nervous System Abnormalities

Photo courtesy of Sterling Clarren, M.D.
How much alcohol needs to be exposed for a pregnancy to be at risk for FASD?

The results are shocking....
Standard drink levels (NIAAA)

12 fl oz of regular beer = 8-10 fl oz of malt liquor or flavored malt beverages such as hard seltzer (shown in a 12 oz glass) = 5 fl oz of table wine = 3-4 fl oz of fortified wine (such as sherry or port, 3.5 oz shown) = 2-3 fl oz of cordial, liqueur, or aperitif (2.5 oz shown) = 1.5 fl oz of brandy or cognac (a single jigger) = 1.5 fl oz shot of distilled spirits (gin, rum, tequila, vodka, whiskey, etc.)

Each drink shown above represents one U.S. standard drink and has an equivalent amount (0.6 fluid ounces) of “pure” ethanol.
More than minimal levels of alcohol exposure:

- Greater than 13 drinks per month
- More than TWO drinks on one occasion
Types of glasses


Note no “shaker pint” or “Imperial pint” and the vast majority of glasses under one US pint.
Alcohol is the most harmful teratogen that can be exposed to a pregnancy. But polysubstance exposure makes it worse.
Additional Teratogenic Exposure

• It is rare to see a child who has only been exposed to alcohol.
• Additional teratogenic exposure increases the severity of damage and dysfunction.

Common teratogens:
• Opioids
• Cocaine
• Marijuana
• Nicotine
• Trauma (cortisol)
FASD Facts

• FASDs are *almost* 100% preventable
• The leading cause of developmental disabilities worldwide Can occur anywhere and anytime pregnant women drink
• There is no proven safe amount of alcohol during pregnancy or while breastfeeding
• ~50% of pregnancies are unplanned
• 1 in 5 women binge drink (4 or more drinks at one time)
More FASD Facts

• Percentage of foster/adoptive system:
  • 17%

• Percentage of prison system:
  • 20%

• Age of first police encounter:
  • Just under 13

• Most common cause of death:
  • External Causes (including suicide, accidents, and overdosing)
So, why do pregnant people drink?

- Most people do not know they are pregnant until 6 weeks or later
- About 50% of pregnancies are unplanned
- Healthcare professionals say conflicting things about how much alcohol is allowed during pregnancy
- Friends and families say conflicting things
- Mental illness/coping mechanisms
- Our relationship with alcohol in the US is an incredibly unhealthy one
- This is a systemic problem!!
"The Wine Mommy" Phenomenon

**ON WEDNESDAYS WE WEAR WINE.**

**ONE GLASS OF WINE A DAY KEEPS THE DOCTOR AWAY.**

**HOW DO YOU KNOW IT'S TIME TO DO THE DISHES?**

**WINE AEROBICS**

...and repeat.

Mom fact # 482.

If you combine wine and dinner, the new word is winner.

It's funny how 8 glasses of water a day seems impossible,

but 8 glasses of wine can be done in one meal.
Affects of Pandemic on FASD Risks
NIAAA Surveillance Report, 2022; United Nations population Fund, 2021

Alcohol sales increased 35%
1.4 MILLION Unintended pregnancies in 2021

= !?
Fetal Alcohol Syndrome: FAS

Jones and Smith (1973)
Fetal Alcohol Syndrome

ICD-10 Diagnostic Criteria:

• Facial Dysmorphia:
  • Smooth Philtrum
  • Thin Vermilion Border
  • Small Palpebral Fissures

• Growth Problems

• Central Nervous System Abnormalities

• Notice what is NOT on the list…
Dysmorphic Facial Features

Percentage of FAS in the FASD Spectrum

- FAS: 10%
- Other FASD: 90%
ND-PAE

Other Specified Neurodevelopmental Disorder: Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure 315.8 (F88)
DSM-V Criteria for ND-PAE

A. History of more than minimal levels of prenatal alcohol exposure (PAE)

B. Neurocognitive impairment

C. Impairment in self-regulation

D. Deficits in adaptive functioning skills
A Word About Confirming Prenatal Alcohol Exposure

Avoid the Stigma.
Confirming alcohol exposure without stigmatizing

• Case history forms should have the following questions:
  • What are your current drinking habits (how many drinks per week)?
  • When did you find out you were pregnant?
  • Were your drinking habits different before you found out you were pregnant? Specify.

• If you’re not asking these questions, then you’re leaving out an important diagnostic biomarker.
Other Specified Neurodevelopmental Disorder: Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure (ND-PAE) 315.8 (F88)

Neurocognitive Impairment
- Global intellectual function
- Executive function
- Learning
- Memory
- Visual spatial skills

Impairment in Self-Regulation
- Mood or behavioral regulation
- Attention skills
- Impulse control

Deficits in Adaptive Functioning Skills
- Communication
- Social communication
- Daily living
- Motor skills

Utilization of Outside Info/Existing Testing is key!

Put the puzzle together!
Characteristics and Symptoms of Children with FASD

Strengths and Functional Symptoms/Characteristics
Common Strengths of Kids with FASD

- Very friendly
- Very likeable
- Often very verbal and easy to talk to
- Hard workers
- Very determined
- Great with small children, older adults, and other children with disabilities
- Forgive easily
- Very trusting
- Often very artistic or musical
Common Co-Occurring Diagnoses

- ADD/ADHD
- Reactive Attachment Disorder
- Learning Disabled
- Speech-Language Delay
- Pervasive Developmental Disorder
- Sensory Integration Dysfunction
- Sleep Disorders
- Conduct Disordered, Seriously Emotionally Disturbed
- Borderline Personality Disorder
- Antisocial Personality Disorder
- Autism Spectrum Disorder/Asperger’s
- Oppositional Defiant Disorder
- Depression
- Anxiety

*Trying Differently Rather than Harder, Malbin (1999)*
Common Categories of FASD Symptoms

Externalizers:
- Big emotional swings
- Extreme hyperactivity
- Bullying
- Violence/aggression
- “Oppositional”

Internalizers:
- High anxiety
- Falls through the cracks
- Difficulty with academics-literacy and math
- High risk of suicide
## Common Areas of Impairment

<table>
<thead>
<tr>
<th>Cognition</th>
<th>Oral Motor or Speech</th>
<th>Language</th>
<th>Abstract Concepts</th>
<th>Social Skills</th>
<th>Emotional Regulation</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow Processing</td>
<td>Motor Control</td>
<td>Following multi-step directions</td>
<td>Reading</td>
<td>Executive dysfunction that causes poor social skills</td>
<td>Big emotional swings that happen suddenly</td>
<td>“Oppositional”</td>
</tr>
<tr>
<td>Cause and Effect</td>
<td>Failure to Thrive</td>
<td>Answering “wh” questions</td>
<td>Math</td>
<td>Difficulty keeping friends</td>
<td>Difficulty calming when in a tantrum</td>
<td></td>
</tr>
<tr>
<td>Impulsive</td>
<td>Difficulty Feeding</td>
<td>Lower Receptive than Expressive skills</td>
<td>Money</td>
<td></td>
<td>Becomes upset with transition</td>
<td></td>
</tr>
<tr>
<td>Decision Making</td>
<td>Speech sound delays</td>
<td></td>
<td>Time</td>
<td></td>
<td>Mood Disorders</td>
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<tr>
<td>Attention Deficit</td>
<td>Appetite Control</td>
<td></td>
<td>Consequences</td>
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<tr>
<td>Memory</td>
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<td>Sarcasm</td>
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<td>Difficulty with coordination</td>
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<td></td>
<td>Extreme hyperactivity</td>
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<td>Inattentive</td>
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<td>Sleep Problems</td>
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<td></td>
<td></td>
<td></td>
<td>Sensory Processing Difficulty</td>
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Intervention Supports and Ideas

Neurobehavioral Approach
Medical Model of Disability
Social Model of Disability - Neurobehavioral Approach
Tips for Behavior Management

• Traditional behavior systems DO NOT WORK for kids with FASD

• Avoid:
  • Clip charts
  • Reward systems that require a certain level of performance
  • Neurotypical expectations (phasing out the need for accommodations)

• Neurobehavioral Approach to FASD
If the caregiver doesn’t prevent the trigger, the behavior won’t change.

PREVENT THE BEHAVIOR!

The NB approach to FASD is very caregiver heavy- this is a LOT of work, but the results are amazing!
Educational Supports for Kids with FASD

- Avoid consequence-based behavior systems
- Extra Visual Cues
- Short instructions
- Ask the RIGHT questions (not yes/no questions)
- Repeat, Repeat, Repeat
- Frequent Sensory Breaks
- Think Outside the Box: Don’t practice skills at the therapy table
- Bring Peers Into Sessions
- Advocate for these kids to other teachers and school admin
Take-Home Suggestions

• Patience is key - progress may be very slow
• Diagnosis is important!
• Avoid engaging in arguments or oppositional behaviors
• Clear, concrete directions are best
• Discuss the layout of each session to decrease anxiety about the unknown
Resources for FASD

• Specialty Diagnostic Resource Center (SDRC)
  www.ArkSDRC.org

• FASDCollaborative.com

• FASD United Affiliates (NOFAS-VA)
Questions?

Thank you!
References


References

References


