

Welcome!

We are so glad you are here!

We will get started shortly.
In the meantime, we invite you to intentionally enter this space.



Silence your cell phone



Stretch



Close the door



Take a few deep breaths



Close browser windows



Emotionally release your to-do list



Check your audio and video



Take a bio break

Prenatal Alcohol Exposure and Preventing FASD Series

Webinar #1

Thursday, September 16, 2021 || 2 pm to 3:30 pm ET





Prenatal Alcohol Exposure & Preventing FASD Series Webinar #1

September 16, 2021



Agenda

| | |
|---|------------------------|
| Housekeeping | Tess Pritchard, NICHQ |
| Introduction to Prenatal Alcohol Exposure and Preventing FASD Series | Olivia Giordano, NICHQ |
| Fetal Alcohol Spectrum Disorders (FASD): The Leading Known Cause of Prenatal Brain Damage | Kathy Mitchell, NOFAS |
| Q&A | All |
| Closing & Evaluation | Olivia Giordano, NICHQ |

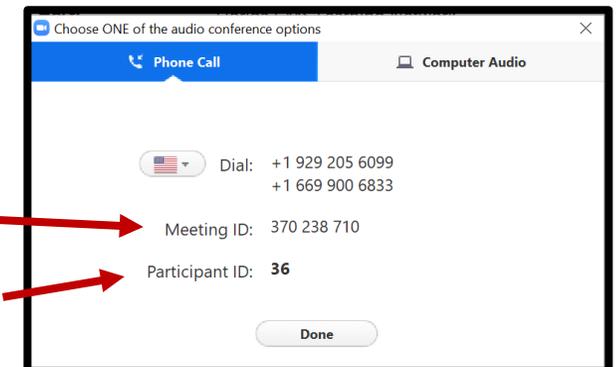
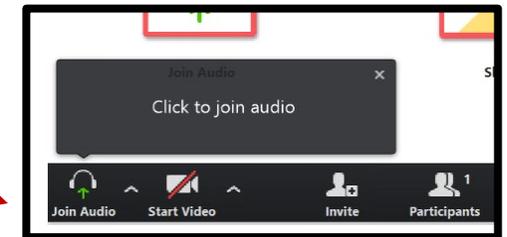
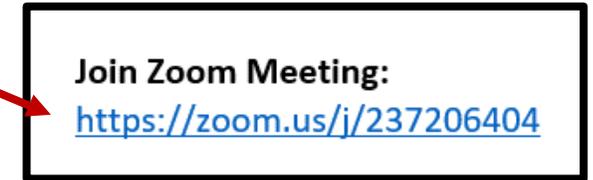
Meeting Logistics



- This session is being recorded.
- All participants are muted upon entry. We ask that you remain muted to limit background noise.
- Members are encouraged to participate in the discussion by typing your comments or asking questions using the chat box.

Connecting to the Audio Conference

- Join the Zoom Meeting by **clicking the Zoom Meeting link** & launching the Zoom application
- An audio conference box will appear
 - If you do not see the box, click **'Join Audio'**
- From the audio conference box, select **'Phone Call'** or **'Computer Audio'**
 - If using the phone:
 - Dial one of the given numbers next to **"Dial"**
 - You will be prompted to enter the **Meeting ID**
 - Then you will be prompted to enter the **Participant ID**



How to Chat

The image shows a Zoom Meeting window with a dark background. At the bottom, there is a toolbar with icons for Unmute, Start Video, Participants, Chat, Share Screen, Record, and Reactions. A red box highlights the Chat icon. To the right, a sidebar is open, showing a 'Chat' header and a 'Type message here...' input field. A dropdown menu is set to 'Everyone'. A red box highlights the input field. Three numbered callouts in red circles with white text boxes provide instructions: 1. 'Click the Chat button at the bottom of the Zoom window.' with an arrow pointing to the Chat icon. 2. 'A sidebar will appear where you can chat to all participants.' with an arrow pointing to the Chat sidebar. 3. 'Chat here to everyone!' with an arrow pointing to the message input field.

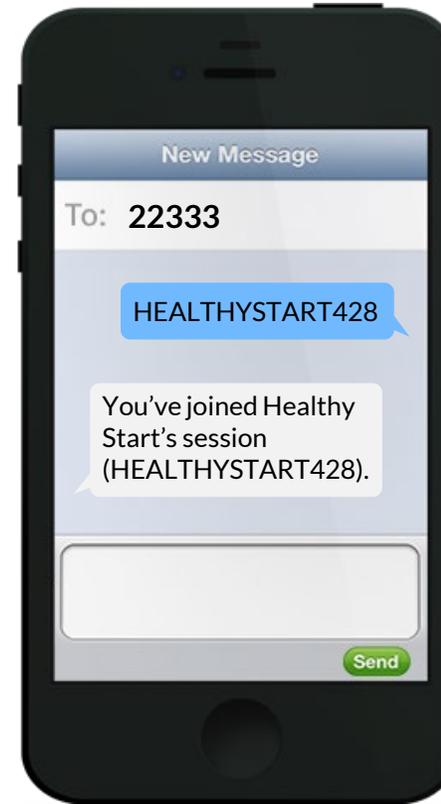
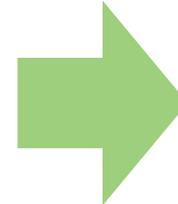
- 1 Click the **Chat** button at the bottom of the Zoom window.
- 2 A sidebar will appear where you can chat to all participants.
- 3 Chat here to everyone!

Participating with Poll Everywhere via text messaging

Send all messages to
the five-digit number
22333

To join, include in body
of text the word
HEALTHYSTART428

*You only need to do this
once*



After you have
successfully joined, you
will receive a
confirmation message.

Additional Tips for Poll Everywhere

- Capitalization does not matter; spelling and spaces do.
- You only have to text '**HEALTHYSTART428**' the first time. After that, send normal text messages to respond to polls.
- If texting **22333** does not work, visit pollev.com/HEALTHYSTART428 to respond to the current poll.
- There will be **NO** charges to your cellphone beyond what your phone carrier typically charges for a text message.



Welcome

Olivia Giordano
Healthy Start TA & Support Center



Prenatal Alcohol Exposure and Preventing FASD Series Schedule

| | |
|-----------|---|
| Webinar 1 | September 16, 2021 2 pm to 3:30pm ET |
| Webinar 2 | January 2022 Date and Time TBD |
| Webinar 3 | May 2022 Date and Time TBD |

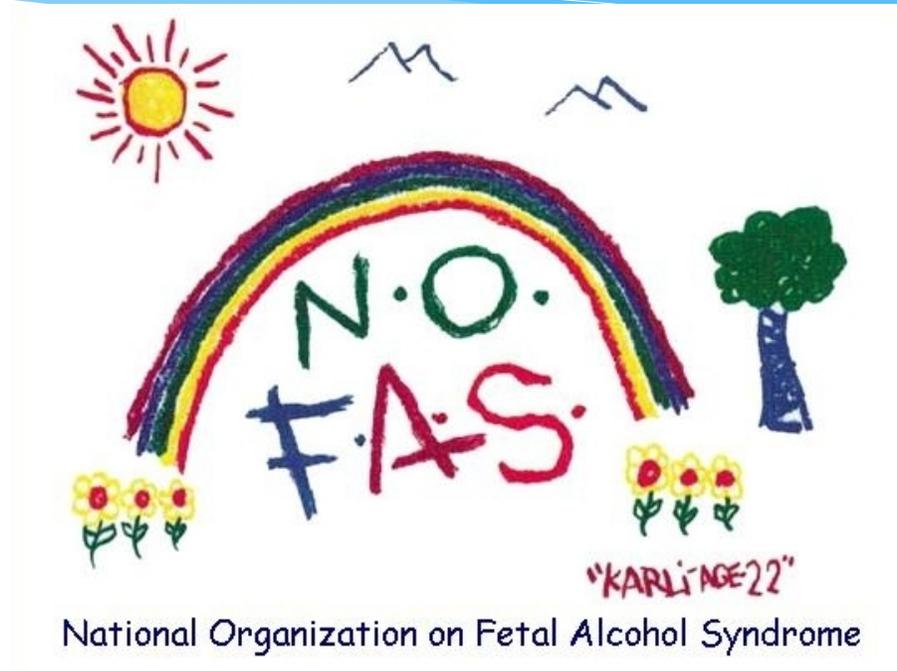
Today's Speaker



Kathleen Tavenner Mitchell, MHS, LCADC
Vice President and National Spokesperson
National Organization on Fetal Alcohol
Syndrome



Fetal Alcohol Spectrum Disorders (FASD): The Leading Known Cause of Prenatal Brain Damage

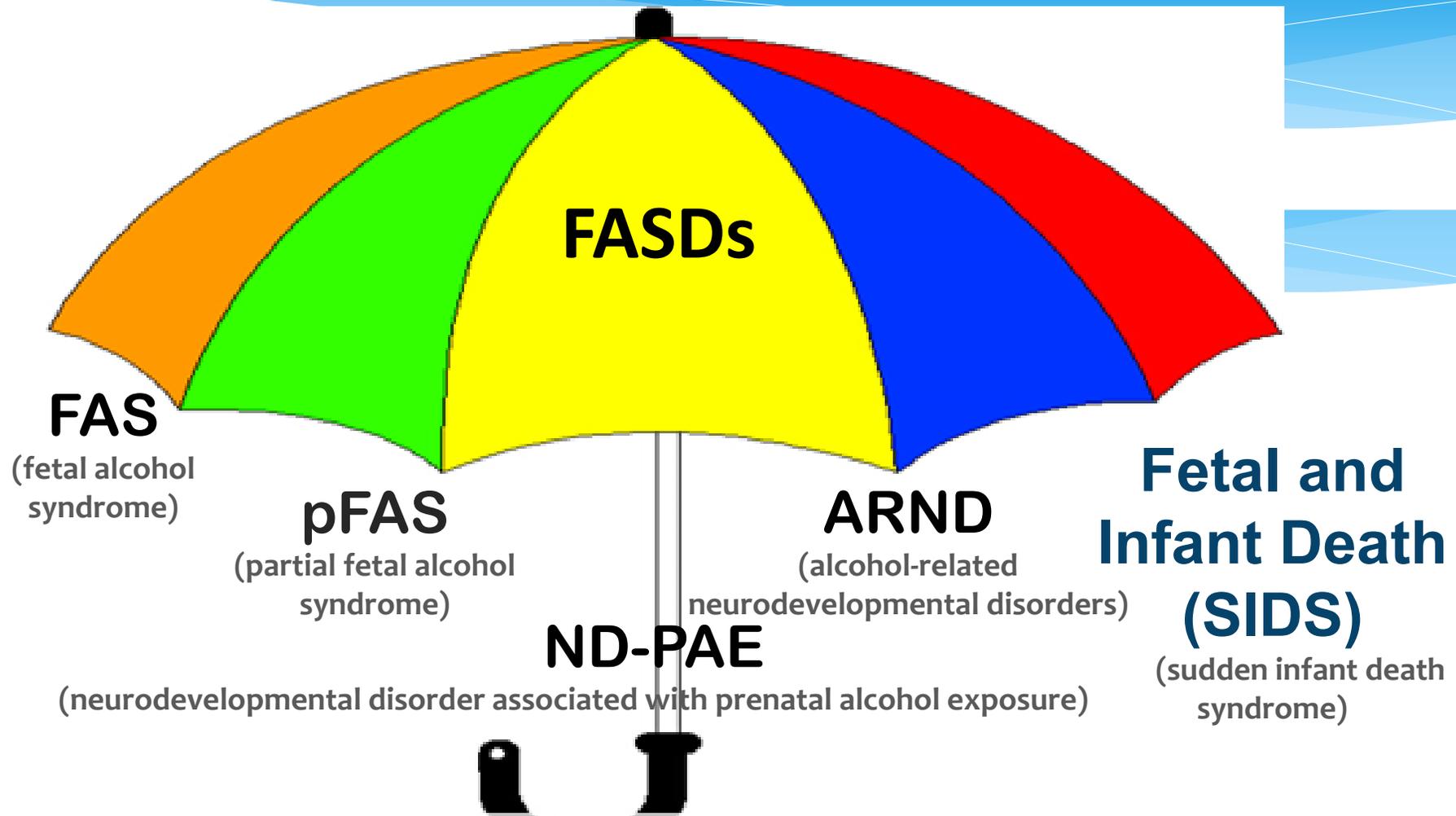


Kathleen Tavenner Mitchell, MHS, LCADC
Vice President and National Spokesperson
National Organization on Fetal Alcohol Syndrome

Objectives

By the end of this webinar participants should be able to:

- * 1. List the three criteria for a diagnosis of fetal alcohol syndrome.
- * 2. Describe 3 common behaviors of an individual living with an FASD.
- * 3. Discuss current FASD research.



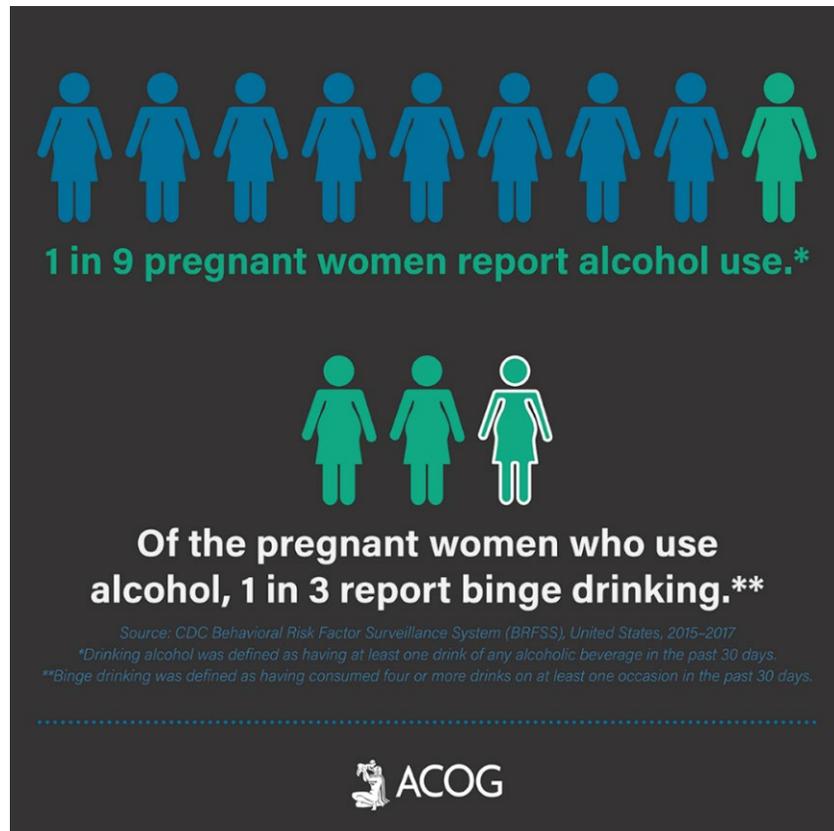
Not all prenatal alcohol-related conditions show the *identifying physical characteristics*

(NOFAS, 2005)



The recent U.S. prevalence study estimates that 1 in 20 U.S. school students may have FASDs.

PREVALENCE OF ALCOHOL USE AMONG WOMEN AGED 18-44 YEARS³



- According to the CDC about half of non-pregnant women report any alcohol use* and about 1 in 5 report binge drinking** in the past 30 days.
- Among pregnant women, approximately 1 in 9 report any alcohol use, and of these, 1 in 3 report binge drinking in the past 30 days.

History of FAS

Judges; Old Testament, "Behold, thou shalt conceive and bear a son and now drink no wine or strong drink!"

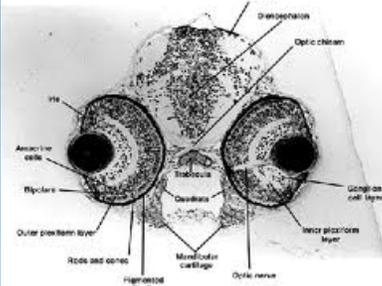
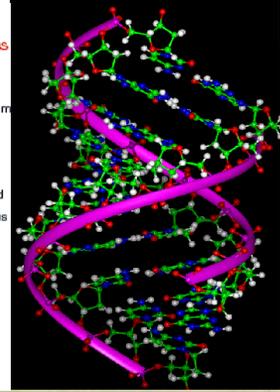
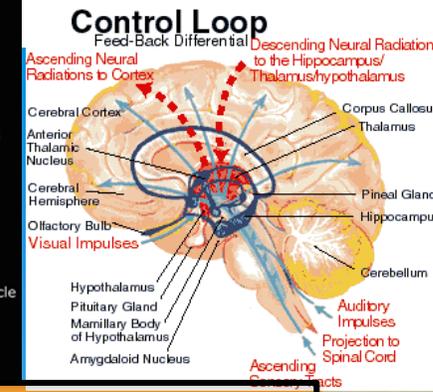
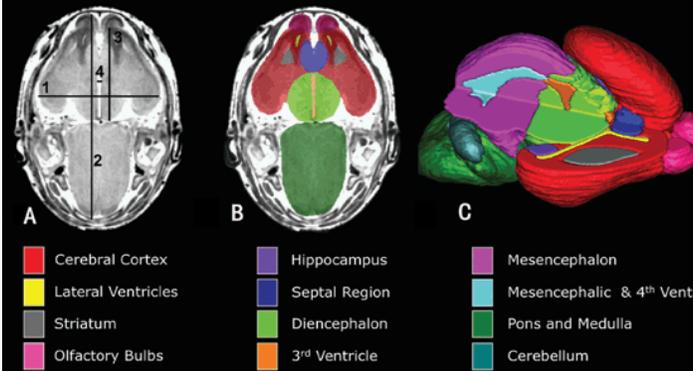
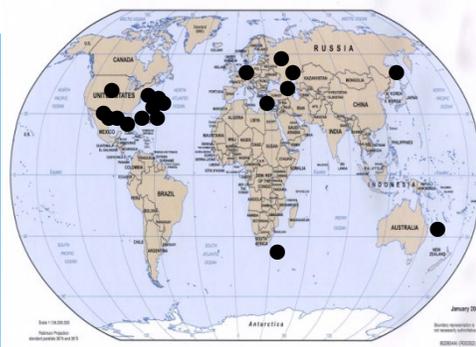
- * In ancient Carthage and Sparta there were laws prohibiting the use of alcohol by newly married couples in order to prevent conception during intoxication.
- * 1720's, "gin epidemic" the Royal College of Physicians reported to the Parliament that parental drinking was a cause of "weak, feeble and distempered children."
- * 1860's, House of Commons came out with a paper entitled "Effects of Drunkenness on the Nation", which also contained a report on the effects of maternal alcohol consumption on the newborn: "They tend to be born starved, shriveled and imperfect in form"
- * 1973, U.S., Dr Kenneth Lyon Jones and Dr David Smith coined the term Fetal Alcohol Syndrome (FAS), which has since become a clearly established clinical entity.
- * 2006, NOFAS FASD Terminology Summit

Use of Ethanol in Threatened Premature Labor

- * View on the absolute safety of alcohol in pregnancy continued into the 1960's when the alcohol drip was introduced in obstetrics.
- * One of few medical uses of ethanol.
- * Involved I.V. ethanol infusion for 6–10 hours, reaching BAC as high as 160 mg/dl
 - * First report — Fuchs, F., et al., *Am. J. Obstet. Gynecol.*, 99:627 (1967)

- * Soon after the identification of FAS (1973) researchers confirmed that alcohol was a teratogen in animal models ranging from mice and rats to dogs, miniature swine, and primates.
- * These models were important because case reports were confounded by numerous variables that could not be well controlled.
 - * smoking, SES, poor prenatal care





Utilize a state-of-the-art, multidisciplinary, multisite, international approach to:

- Develop better ways to recognize and detect the full range of effects from prenatal exposure to large or moderate amounts of alcohol
- Provide assessment of FASD across diverse populations as this may provide important information on the effects of prenatal alcohol and identification of treatments and interventions.



Alcohol can cause severe and permanent brain damage when the human embryo is still small enough to fit inside of the zero on a penny's date.



Alcohol is a teratogen

- **Alcohol crosses the placenta and enters fetal circulation. Ethanol and its metabolite acetaldehyde can alter fetal development by disrupting cellular formation and growth, disrupting DNA and protein synthesis and inhibits cell migration.**



an unborn
baby's blood
alcohol
concentration
will be the
same as
mom's

but for a longer period of time

FASD: The Facts

- * Most common *preventable* cause of intellectual disability and behavior problems.
- * Effects can be *lifelong*.
- * Effect development and function more so than other drugs or teratogens.

“Of all the substances of abuse, including cocaine, heroin, and marijuana, alcohol produces by far the most serious neurobehavioral effects in the fetus.”

Institute of Medicine, 1996

- * Can an contribute to a range of growth deficits and structural anomalies (FASD)

When poll is active, respond at pollev.com/healthystart428

Text **HEALTHYSTART428** to **22333** once to join

What type of alcohol can result in severe fetal damage?

Beer

Wine

Hard liquor or mixed drinks
(e.g., whiskey, vodka, gin)

All of the above

None of the above

WHAT COUNTS AS A STANDARD DRINK?¹⁰

Although the drinks below are different sizes, each contains approximately the same amount of alcohol and counts as a single drink:



12 oz beer
~5% alcohol



8-9 oz malt liquor
~7% alcohol



5 oz wine
~12% alcohol



1.5 oz spirit
~40% alcohol

When poll is active, respond at pollev.com/healthystart428

Text **HEALTHYSTART428** to **22333** once to join

What recreational drug causes the most long-term damage to the developing fetus?

Heroin

Cocaine

Alcohol

Prescription Opioids

None of the above

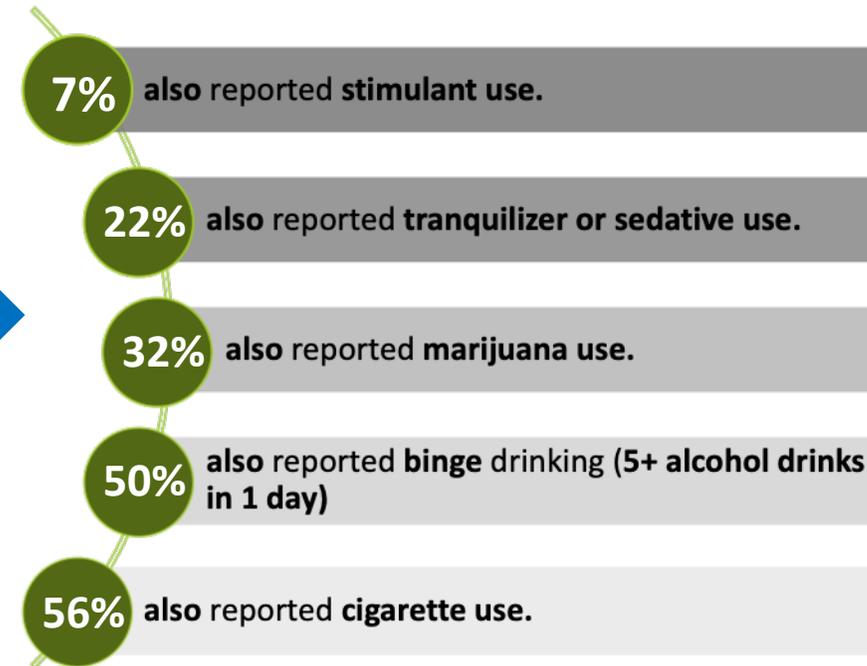
The Doctors Bag: Prescription Pad

- 90% of women use some form of prescription medication throughout their pregnancy
- Over the last 30 years, first trimester use of prescription medications has increased more than 60% (CDC).
 - About 3.4 of every 1,000 infants born suffer from withdrawal symptoms related to misuse of narcotic prescription medications; that is one newborn every hour.
 - According to the Journal of the American Medical Association, infants suffering from Neonatal Withdrawal Syndrome has more than tripled within the past decade.

Polysubstance Use is Common During Pregnancy



From 2005-2014, **2%** of reproductive-aged women (18-44) reported nonmedical opioid use in the past 30 days. Of them:



Research has shown that a fetus that is exposed to both alcohol and cannabis may have more severe outcomes.

True

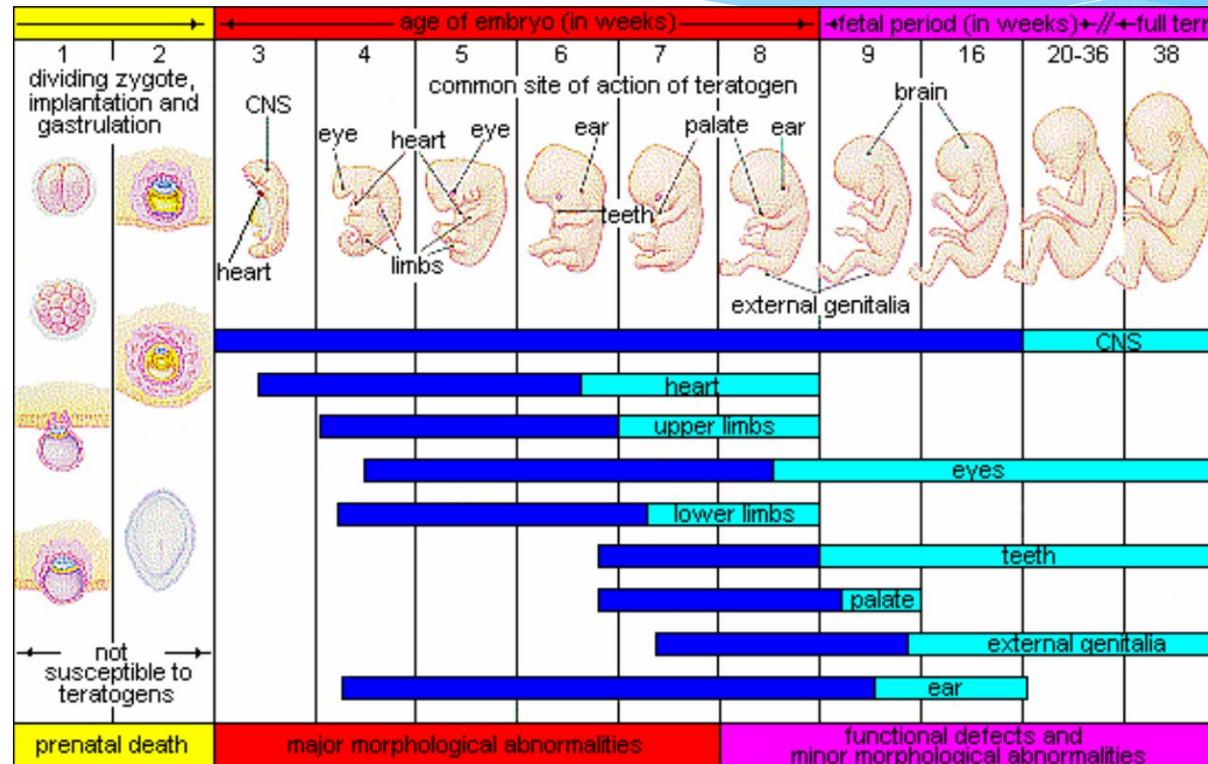
False

UNC study: Even one-time marijuana use can cause birth defects – especially if used with alcohol

- * New preclinical research reported in animal models shows that exposure to compounds found in marijuana called cannabinoids (CBs), which includes cannabidiol (CBD) and tetrahydrocannabinol (THC), during early pregnancy can cause malformations in the developing embryo. Parnell and colleagues also found that when CBs and alcohol were used together, the likelihood of these birth defects more than doubled. They went on to show that these drugs may be causing defects by interacting on a basic cellular level and disrupting signaling between molecules and cells that control growth and development.

EW Fish, LB Murdaugh, C Zhang, KE Boschen, O Boa-Amponsem, HN Mendoza-Romero, M Tarpley, L Chdid, S Mukhopadhyay, GJ Cole, KP Williams, and SE Parnell. [Cannabinoids Exacerbate Alcohol Teratogenesis by a CB1-Hedgehog Interaction.\(link is external\)](#) Sci Rep 9, 16057 (2019) doi:10.1038/s41598-019-52336-w.

Impact of Alcohol Use on the Developing Fetus



Adapted from Moore and Persaud, 1993.

Research has shown that alcohol is a leading causal factor in both fetal and infant death.

True

False

Alcohol: Infant Mortality & SIDS

“Alcohol use while pregnant is a leading causal factor in both fetal and infant death.”

Ken Warren, PhD, Acting Director, NIAAA
NOFAS interview, www.nofas.org

The Three Diagnostic Attributes of Fetal Alcohol Syndrome

GROWTH



FACE



BRAIN



Comparison: Child with FAS and mouse fetus with fetal alcohol exposure

Child with FAS



Small head

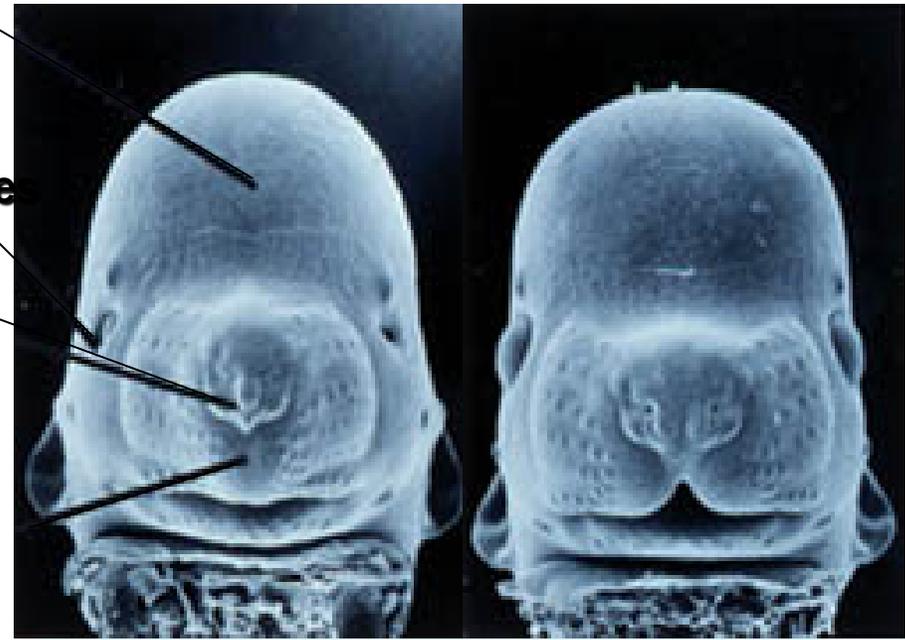
Short palpebral fissure

Small nose

Small midface

**Long philtrum;
Thin upper lip**

Mouse fetuses



alcohol-exposed

normal

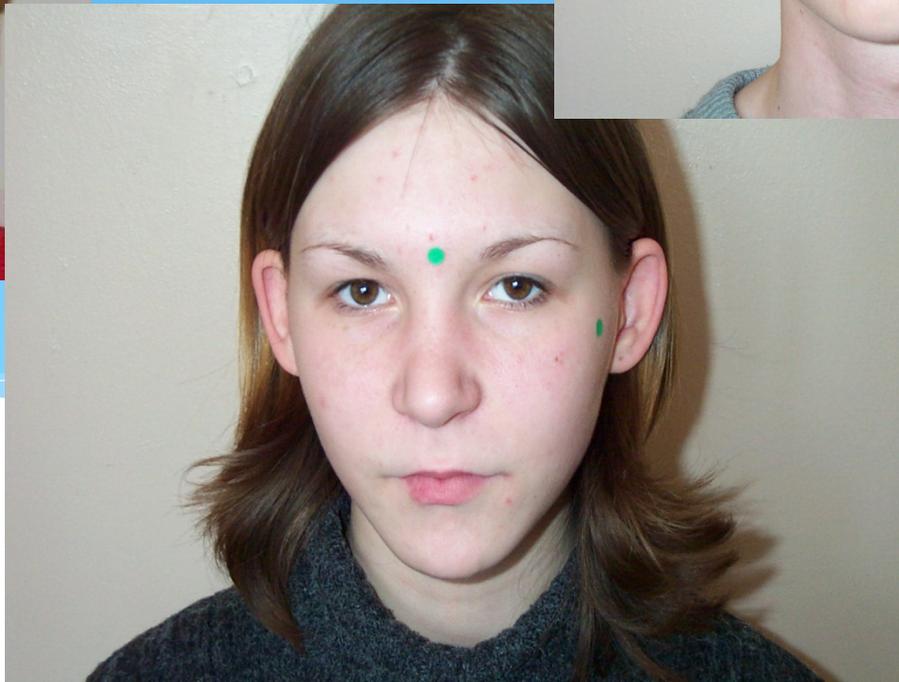
Photos courtesy of K. Sulik

*

Easier to diagnose patients with a measurable bio-marker



The facial features of FAS are not always obvious.

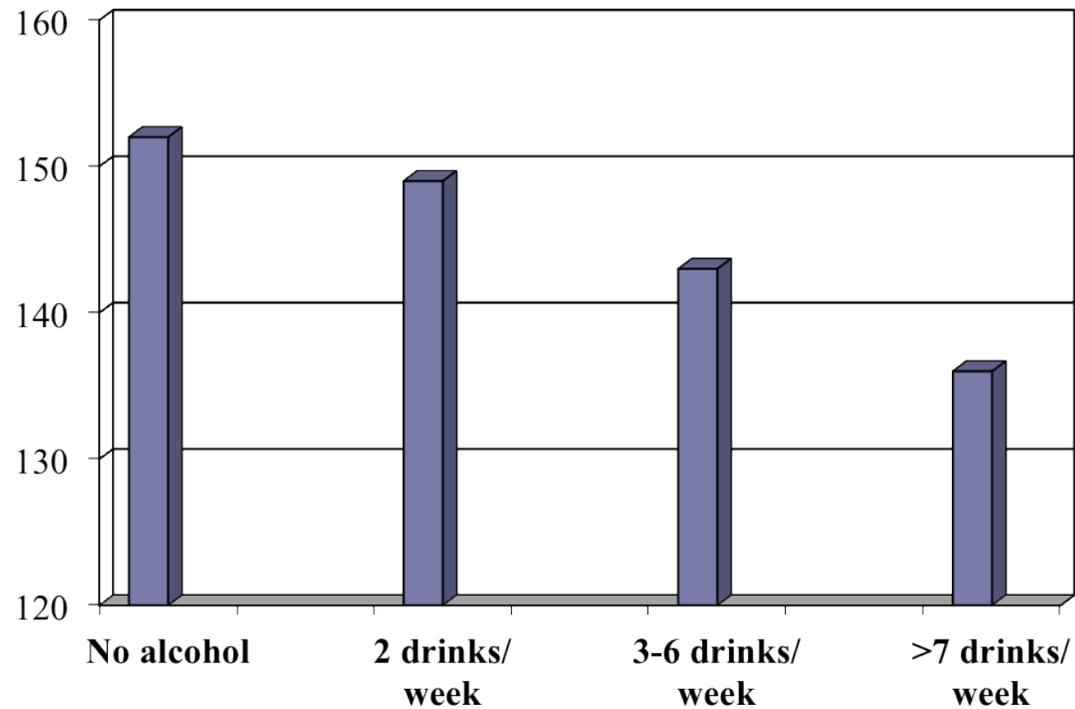


Growth (CDC Diagnostic Guidelines):

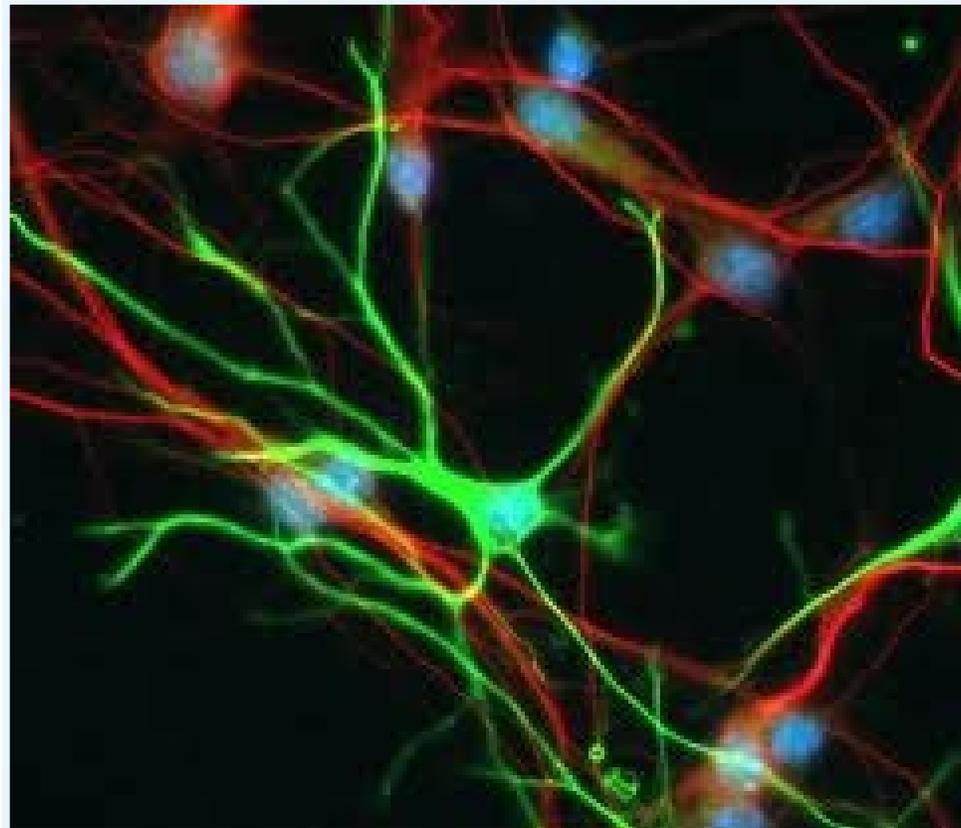
- Confirmed prenatal or postnatal height or weight, or both, at or below the 10th percentile, documented at any one point in time

(adjusted for age, sex, and race or ethnicity)

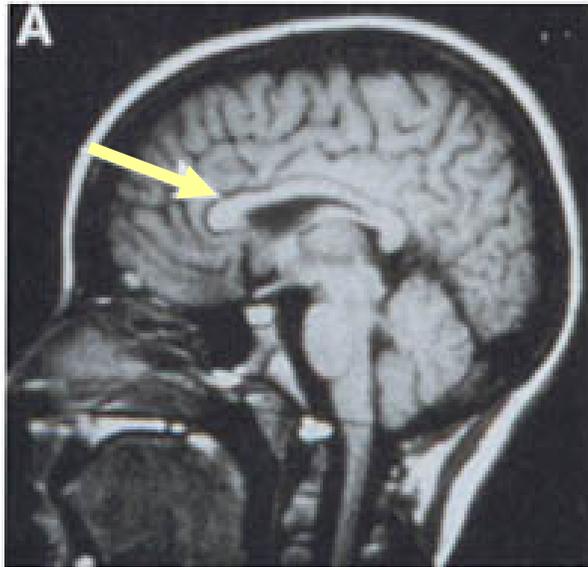
Weight at 14 Years (lb.)



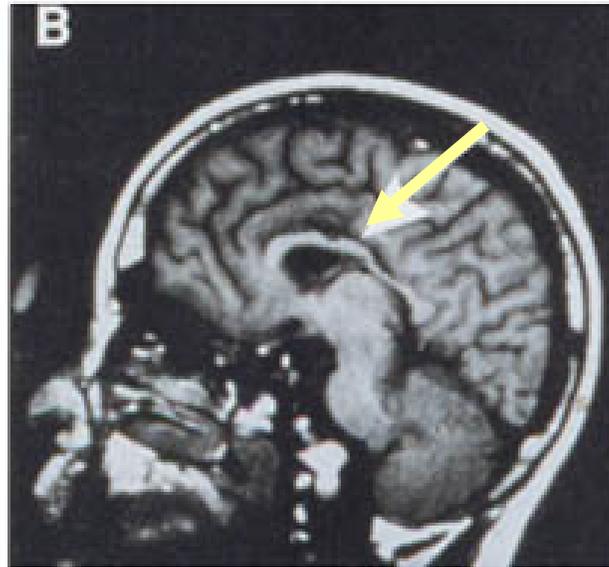
*Prenatal exposure to alcohol
causes the brain to actually
be “built” differently ...*



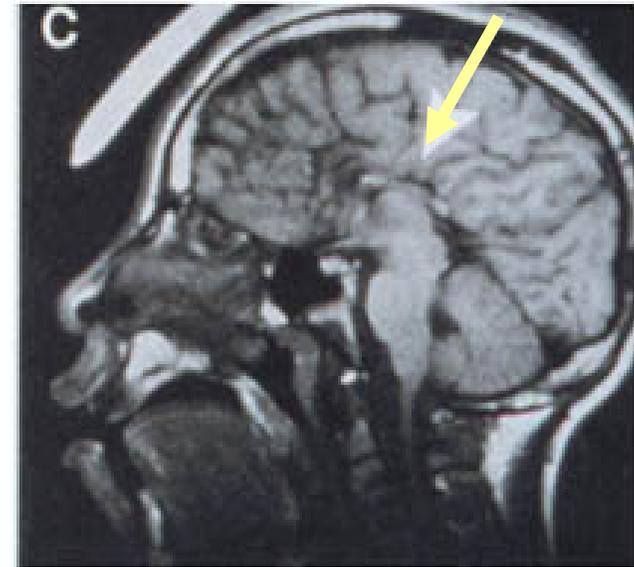
Visualization of the brain of a typical (A) and two children exposed to alcohol (B,C) shows permanent loss of the tissue indicated by the arrows (portions of the corpus callosum).



Normal



FAS/PEA



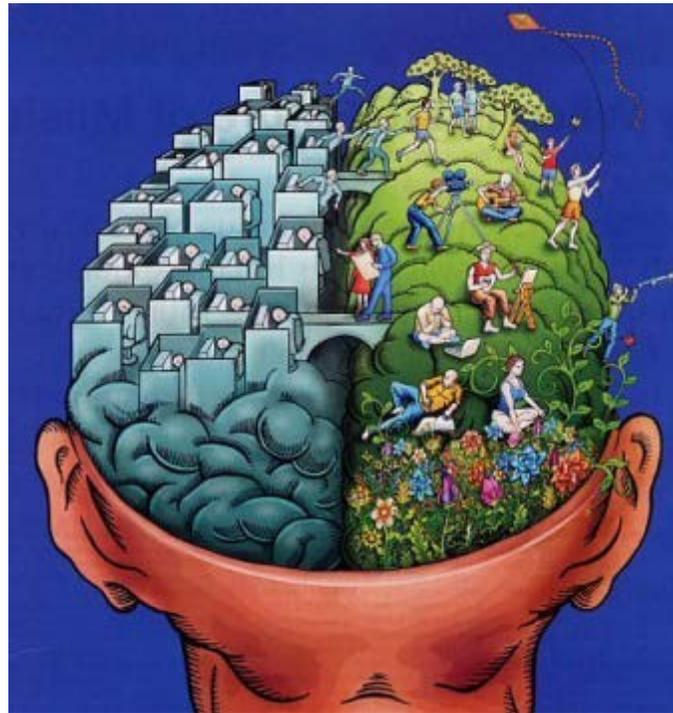
FAS

LEFT BRAIN/RIGHT BRAIN

THE CORPUS CALLOSUM

Left Brain

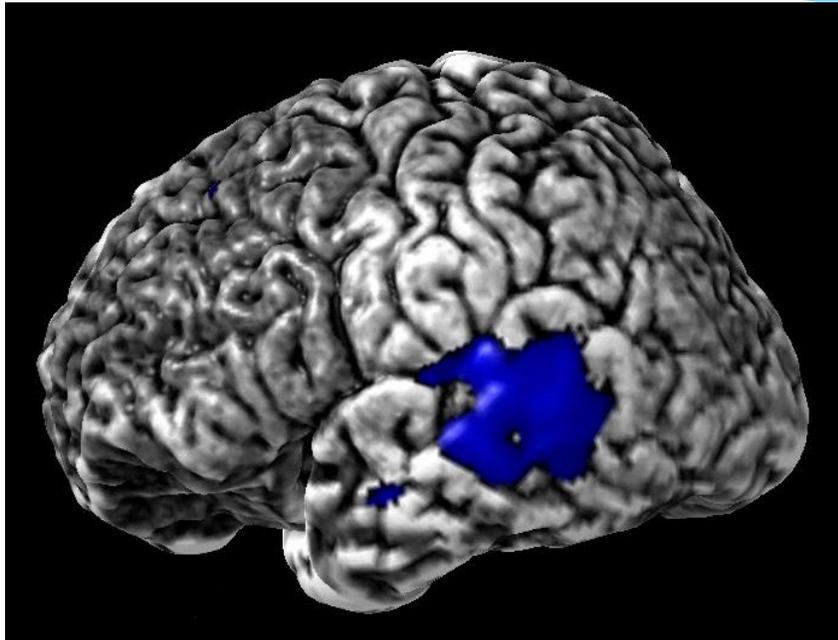
- Language
- Math
- Logic



Right Brain

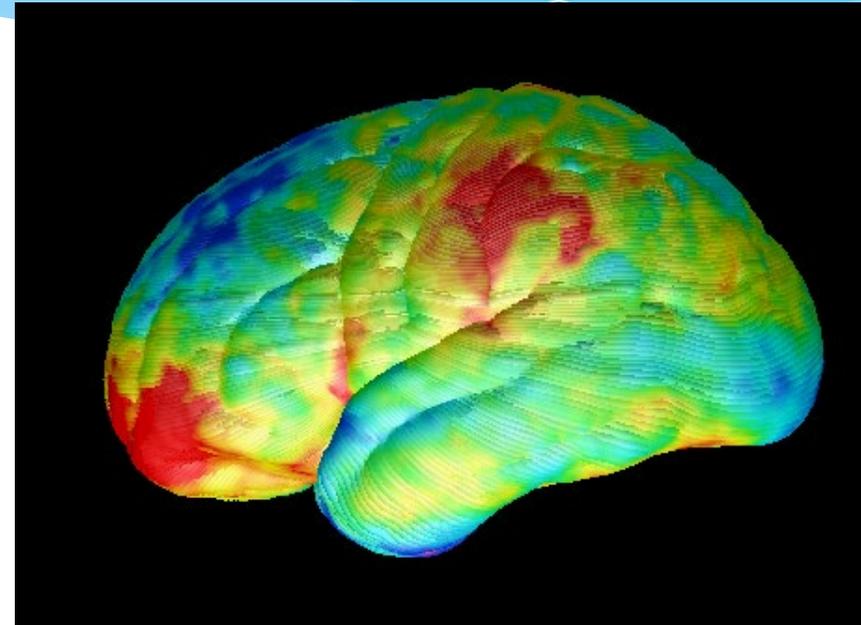
- Spatial abilities
- Face recognition
- Visual imagery
- Music

Significant Brain Size and Shape Abnormalities: Long After Prenatal Exposure



Gray Matter Density Increase

- Sowell et al., 2001a



*White Matter Decrease and Shape
Distortion in Frontal
Lobes*

- Sowell et al., 2001b

Role of frontal lobes

- * Judgment
- * Difficulty in interpreting feedback from the environment
- * Risk taking
- * Understanding and complying with rules
- * Impaired associated learning
- * Working memory
- * Spontaneity
- * Memory
- * Social and sexual behavior
- * Some aspects of language
- * Organize and prioritize information
- * Filters information
- * Category learning
- * Emotional gating

Executive Functioning

Cognitive functions involved in planning and guiding behavior in order to achieve a goal in an efficient manner.

- * The ability to organize and plan
- * Focus and maintain attention
- * Be able to store memories and retrieve them
- * Issues related to affect and inhibition, e.g. preventing anger from getting out of control
- * Self-awareness
- * Initiating and ending activities

A person with an FASD (a client/client's child) may have a brain that:

...can't read the emotions or body language of other people

responds slowly

...can't link cause and effect

...thinks in a disorganized way

...thinks like the brain of someone much younger



...has trouble moving information from one situation to another

...forgets information

...has difficulty with time and money

...uses poor judgment

Common disorders identified with FASD

- * Autism Spectrum Disorder/Asperger's
- * Attention Deficit Hyperactivity Disorder (ADHD)
- * Borderline Personality Disorder
- * Attachment-Bonding Disorder
- * Depression
- * Learning disability
- * Oppositional-Defiant Disorder
- * Post Traumatic Stress Disorder (PTSD)
- * Receptive-Expressive Language Disorder
- * Conduct Disorder

LONG-TERM EFFECTS

Up to **1 in 20** US school children may have FASDs.



People with FASDs can experience a mix of the following problems:

Physical issues

- low birth weight and growth 
- problems with heart, kidneys, and other organs 
- damage to parts of the brain 

Which leads to...

Behavioral and intellectual disabilities

- learning disabilities and low IQ 
- hyperactivity 
- difficulty with attention
- poor ability to communicate in social situations
- poor reasoning and judgment skills 

These can lead to...

Lifelong issues with

- school and social skills 
- living independently
- mental health
- substance use
- keeping a job 
- trouble with the law

Drinking while pregnant costs the US **\$5.5 billion** (2010).



SOURCES: CDC Vital Signs, February 2016. American Journal of Preventive Medicine, November 2015.

FASD is a Systemic Disability

Animal Studies (Joanne Weinberg, 2008)

- Study examines how alcohol exposure affect neurological systems in an animal model and implications for intervention.
 - Altered hormonal, immune, and behavioral function
 - Special emphasis on stress

What happens in the womb can effect our health through the lifespan

- * Increased insulin/diabetes (Chen)
- * Greater risk of cancers (Sakar)

But, we still know little about long term health effects.....

VARIABILITY OF OUTCOMES

- **Not every woman who drinks heavily during pregnancy will give birth to a child with an FASD**
- **Not all children with an FASD have exactly the same defects or deficits**
 - A twin study found that nearly identical alcohol exposure in utero, such as between fraternal twins, can result in immensely different child outcomes (genetic influences).
- **Many biological and environmental factors influence the effects of alcohol on the developing fetus**
 - There is currently no way to predict which fetuses are more or less vulnerable.
 - In order to protect all fetuses, there is no known safe amount of alcohol during pregnancy.

Not all babies born to mothers who drink alcohol are affected by the alcohol to the same degree – other factors, such as mother's nutrition may be important in modifying alcohol's effect on the child's learning ability and growth

Pregnant women who drink alcohol tend to have LOWER levels of nutrients that are essential for the development of the baby:

- ↓ zinc
- ↓ copper
- ↓ iron
- ↓ folate
- ↓ B12
- ↓ Vitamin D



5

types of concerns that may lead to an assessment for an FASD

1. **Developmental or behavioral concerns**
2. **Dysmorphic facial features associated with prenatal alcohol exposure (PAE)**
3. **Growth deficiency at or below 10th percentile for head circumference, height, weight at any time, including prenatally**
4. **History of confirmed or suspected PAE**
5. **Self-reported or family concern about possible FASD**

Families with an individual with an FASD face many challenges

- Most cases of FASD are never diagnosed. Symptoms of FASD are identified and addressed. But rarely is alcohol identified as the causal factor.
- Few physicians, healthcare professionals, disability professionals, psychologists, therapists, etc. are trained in how to identify FASD.
- Family members must become content experts.
- Birth families are blamed and discriminated against for causing FASD.
- Adoptive families are told they are poor parents and may be blamed for causing the child's "behaviors."
- Families can experience isolation, depression and grief.



*Girls/women with SUD/AUD come in all ages, shapes, colors,
and backgrounds ~*

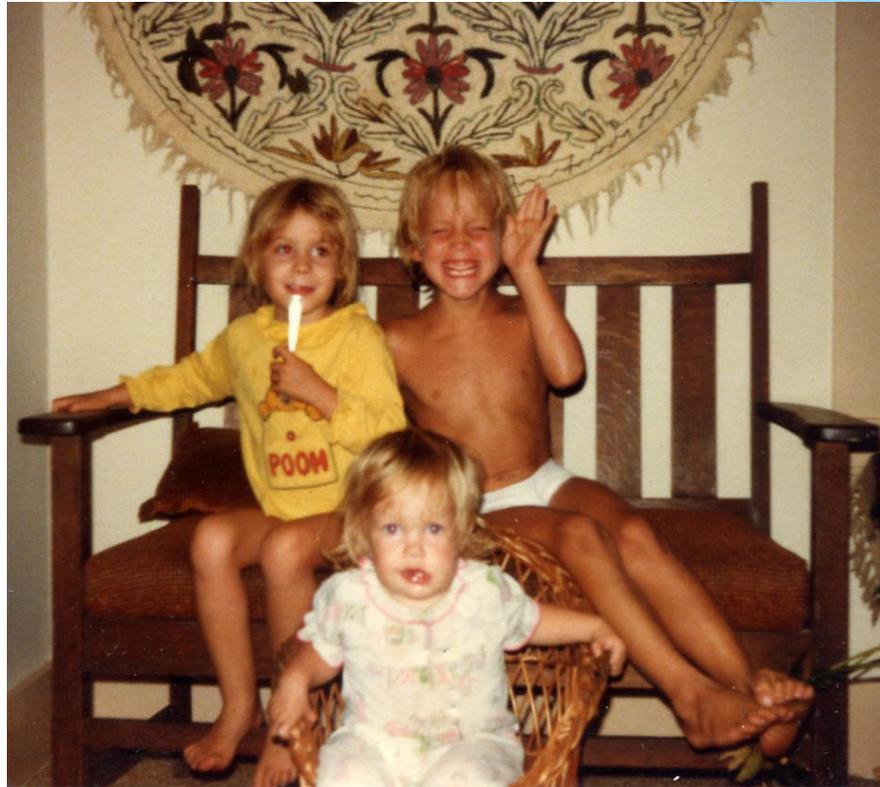
**No woman or girl wants to
hurt her own baby.**

But when no one asks a pregnant girl or woman about their alcohol or other substance use or helps them to find treatment or support- their babies
MAY BE HURT.



1977

A Little Hippie Family



Karli age 10 (diagnosed with cerebral palsy)



PAE: a lifetime of Illness

Age 35

- Systemic lupus
- Idiopathic thrombocytopenia purpura
- Chronic migraines
- Antiphospholipid syndrome
- Fibromyalgia
- Hiatal hernia
- Pituitary microadenoma
- Hysterectomy
- Prolapsed bladder



- Depression
- Anxiety
- Learning disabilities
- Executive functioning difficulties

Information Matters, Here is the proof:

100% Alcohol Free!!



*Provide HOPE for
women and their
families....*

Woman and their families are resilient

“Capacity to rebound from adversity strengthened and more resourceful”

(Walsh,1998)



Supporting Women and Their Families is FASD Prevention!

Never underestimate the power of listening and connecting with your patient for just 2 minutes!

Stigma and blaming has prevented many women from seeking help and likely increases exposures, increases the severity of outcomes and reduces the likelihood of children receiving the correct diagnosis

Treatment works!

Love, acceptance, forgiveness and support: They Matter



Knowledge is power~ Karli is a powerful teacher





Practice Compassion

Empathy not Judgement

They are doing the best that they can, with the tools they have been given.

Be Gentle * Listen to their story

Go the extra mile

Help them to find safe haven ~ treatment

NOFAS Circle of Hope
Birth Mothers Network

www.nofas.org/coh

Recovering Mothers Anonymous
(RMA)

YOU ARE NOT ALONE!



RMA supports women that have the shared lived experience of exposing their unborn to substances that may have impacted their child's development. RMA uses *recovery* as a broad term to include recovery from alcoholism or drug addiction, recovery from childhood trauma and/or an abusive relationship or environment and recovery from having the experience of using alcohol or other harmful substance while pregnant.

www.recoveringmothers.org **12 Step Program for moms**

Take Away Message: FASD's are mostly preventable

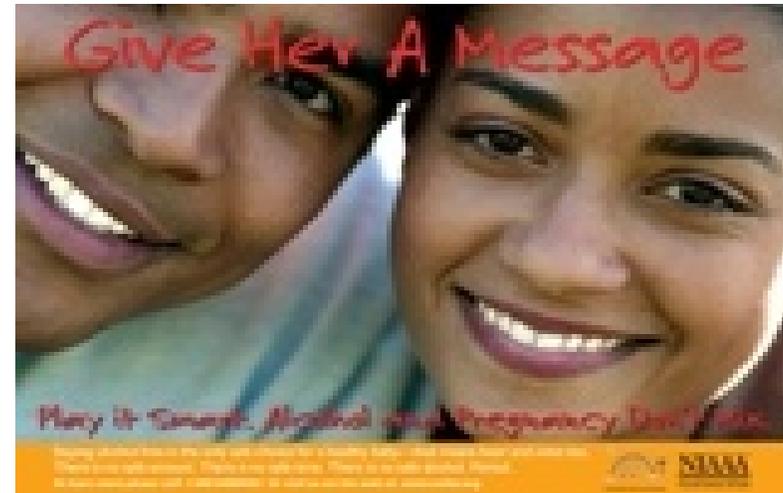
☞ Identify women with SUD and get them the support they need

- Inform your clients about the risks of alcohol and pregnancy
- Inform your clients about FASD
- Consider the possibility of FASD or other developmental disabilities in clients and their children (modify your approach with them)
- Refer clients/children for assessments when possible

Clearinghouse

- * YouTube Videos
- * Crisis calls & questions
 - * (1-800-866-6666)
- * Media Outreach
- * Training Requests and Curriculum Development & Dissemination
- * Students and professionals
- * International and State Resource Directory
- * Policy and Advocacy
- * *Alcoholfreepregnancy* YouTube Channel
 - * 300 interviews

N.O.
F.A.S. Weekly Roundup



Resources

National Organization on Fetal Alcohol Syndrome (NOFAS):
www.nofas.org

NOFAS Resource Directory: www.nofas.org/resource/directory.aspx

Centers for Disease Control and Prevention (CDC)
Brochures, Posters, Fact Sheets, and Training Guides
<http://www.cdc.gov/ncbddd/fasd/freematerials.html>

American College of Obstetricians & Gynecologists
Patient Education handouts, Videos
<http://www.acog.org/alcohol>
<https://findtreatment.samhsa.gov>

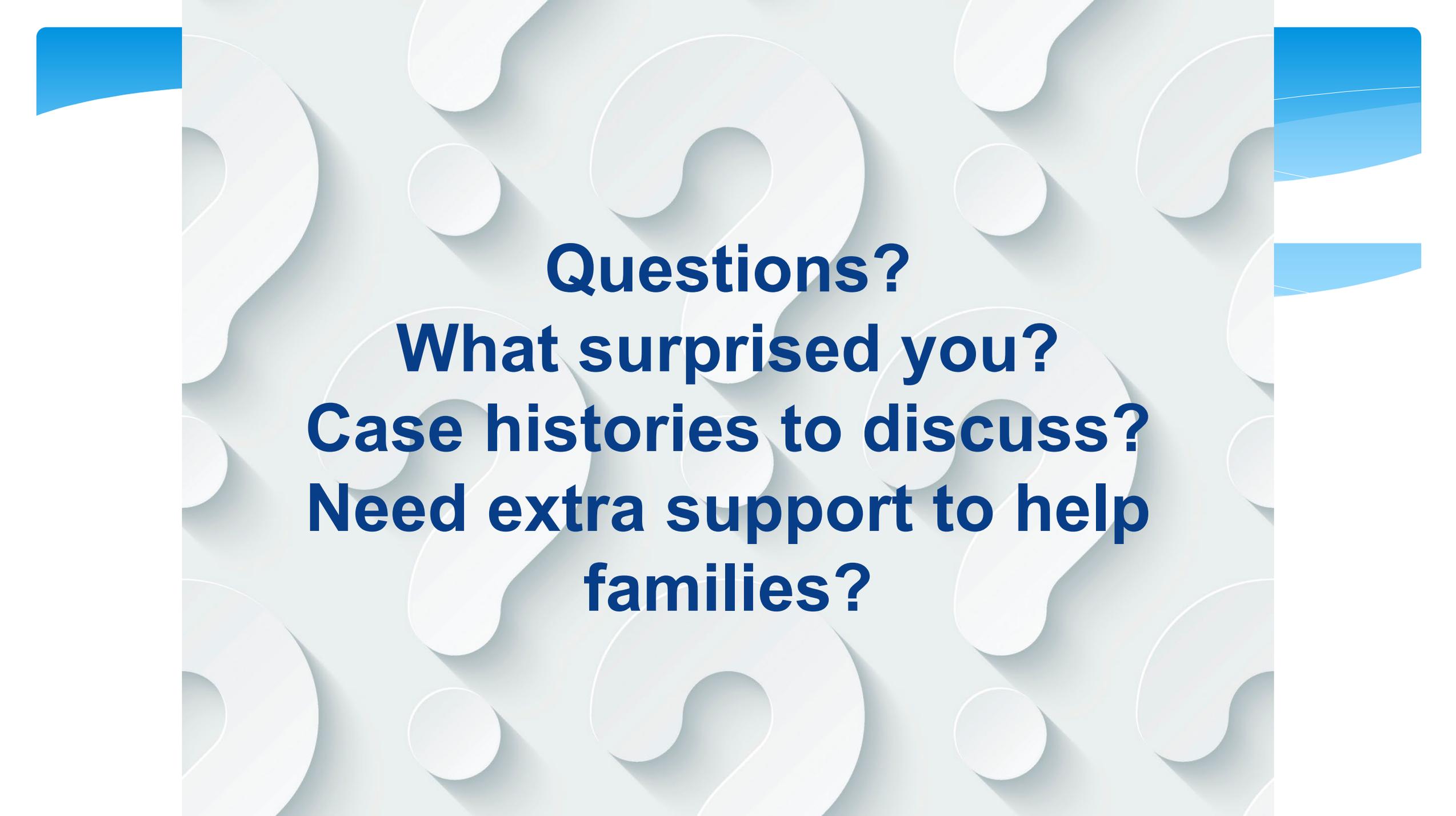
PediaLink online training course
AAP FASD Toolkit – www.aap.org/fasd
School Professionals: www.healthychildren.org/English/health-issues/conditions/chronic/Pages/Fetal-Alcohol-Spectrum-Disorders-FAQs-of-Parents-and-Families.aspx



*We LOVE Healthy Start &
Healthy Start Advocates!*

Kathy Mitchell
mitchell@nofas.org
www.nofas.org

Namaste

The background features a light blue color with several white question marks of varying sizes scattered across it. On the left and right sides, there are vertical blue bars with wavy, decorative shapes. The text is centered and written in a bold, dark blue font.

Questions?
What surprised you?
Case histories to discuss?
Need extra support to help families?



Closing

Olivia Giordano
Healthy Start TA & Support Center



Satisfaction Survey

Can be found on the EPIC website or
bit.ly/hs-deadlines-and-events

September 2021

Deadlines:

Sep 15 HSMED-II Report (CSV or XML) Due

Events:

Sep 15 Healthy Start COIN Meeting #10 – COIN members only

Sep 15 [An Innovative Approach to Preconception Care for Young African American Men: the Gabe Health IT System](#)

Sep 16 [Understanding Prenatal Alcohol Exposure and Preventing Fetal Alcohol Spectrum Disorders \(FASD\) Webinar #1](#)

Sep 20 TIROE CoP Learning Session #5 – COP members only

Sep 21 [Fatherhood Talk Tuesday](#)

Sep 23 [CAN Learning Academy Session #5](#)

Sep 28 [Fatherhood Learning Academy Session #3](#)

Thank
You!

