

FASD: Why Can't We See It?



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New York had 94,800
women using alcohol
during pregnancy in 2016

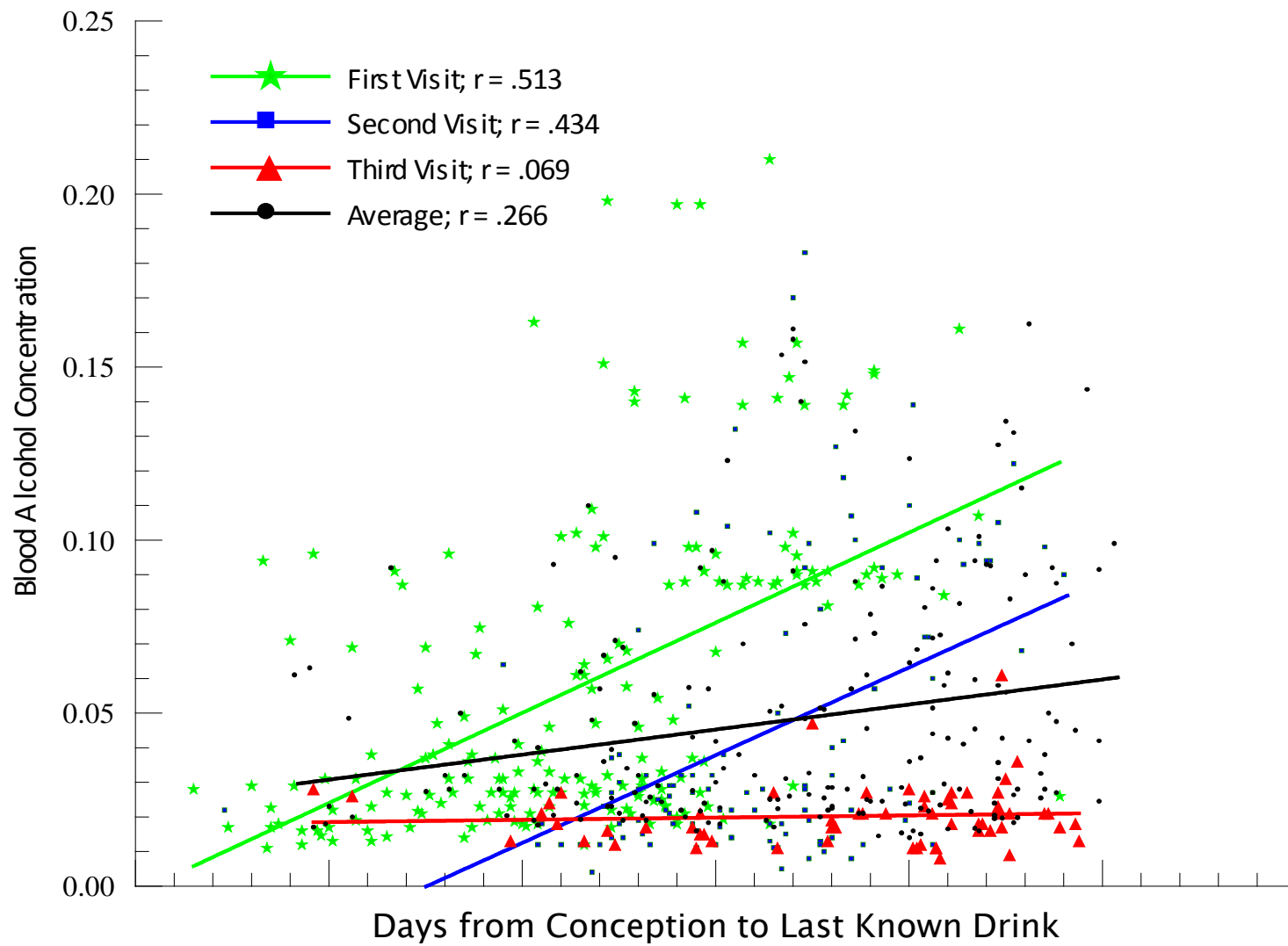
Heavy uses who drink all 40 weeks of
pregnancy = 4,740.

How many are identified?

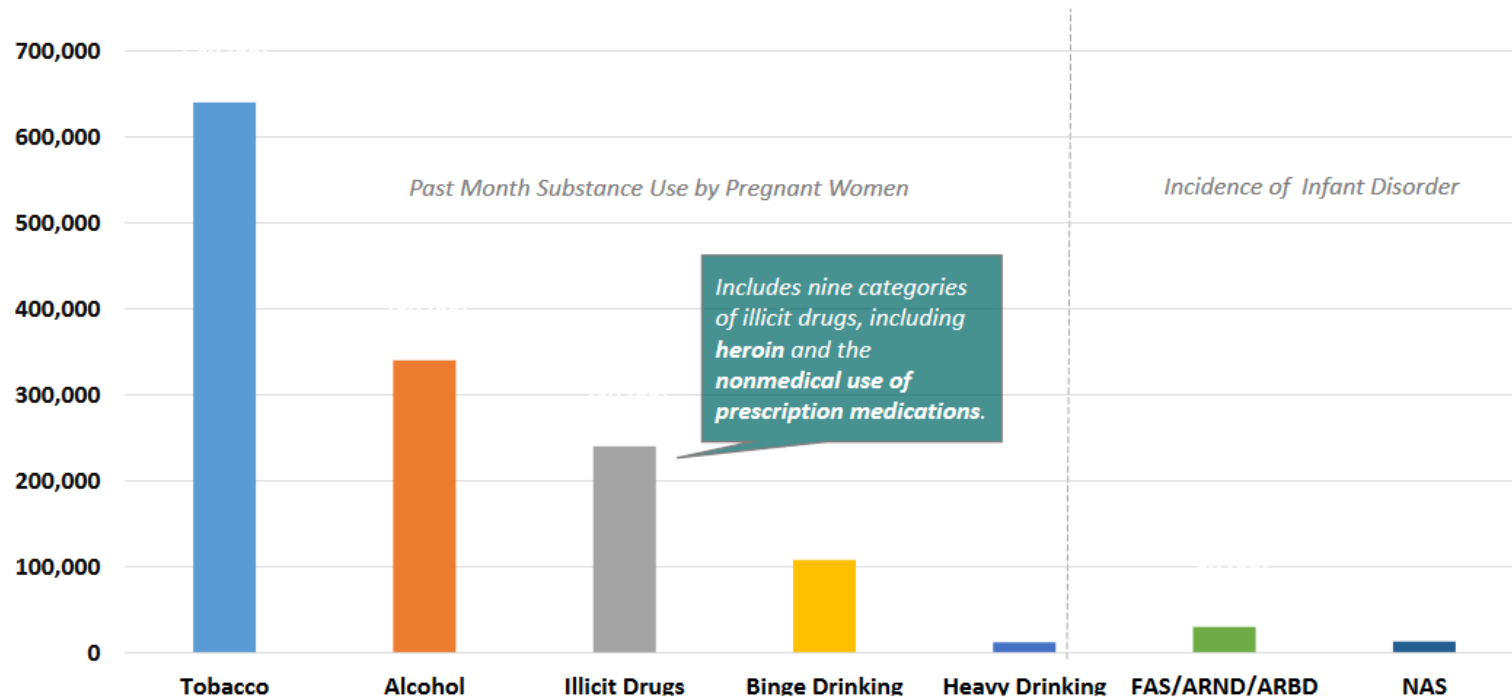
Detection of Prenatal Alcohol Exposure

Prenatal reporting – Use of FAEE identifies 5 women who drank during the last 20 weeks of pregnancy for every 1 who reported drinking

Gareri, J., et al., Ther Drug Monit, 2008, 239–245



Estimated Number of Infants* Affected by Prenatal Exposure, by Type of Substance and Infant Disorder



*Approximately 4 million (3,952,841) live births in 2012

Estimates based on: National Survey on Drug Use and Health, 2012; Martin, Hamilton, Osterman, Curtin & Mathews. Births: Final Data for 2012. National Vital Statistics Report, Volume 62, Number 9; Patrick, Schumacher, Benneyworth, et al. NAS and Associated Health Care Expenditures. Journal of the American Medical Association (JAMA) 2012; 307(18):1934-1940. doi: 10.1001/jama.2012.3951; May, P.A., and Gossage, J.P.(2001).Estimating the prevalence of fetal alcohol syndrome: A summary.Alcohol Research & Health 25(3):159-167. Retrieved October 21, 2012 from <http://pubs.niaaa.nih.gov/publications/arh25-3/159-167.htm>

Fetal Alcohol Spectrum Disorders

- ▶ FASD is a complex disorder with expression over the lifespan. The FASD phenotype is comprised of increased mortality beginning during pregnancy, increased risk for neuropsychiatric disorders and susceptibility to chronic illness. The complexity of the phenotype is increased by delayed diagnosis and accumulating effects from multiple adverse life experiences. The lack of long term anticipatory planning with an emphasis on risk reduction increases the complexity of care across the lifespan.

FASD Prevalence

- ▶ 1% of live births
- ▶ 20 % recurrence risk
- ▶ More severe in younger sibs
- ▶ 5% ever diagnosed
- ▶ Increasing rates of neuropsychiatric disorders

FASD In New York

▶ Every Year	2,370
▶ Birth – 18	42,660
▶ Birth – 50 years	118,500

FASD in New York

▶ New Cases Per Month	198
▶ FASD Population birth – 18	42,660
▶ Diagnosed	2,100
▶ Undiagnosed	40,560



Where are they at?

- ▶ Foster Care ***
- ▶ Birth Defects Clinics
- ▶ Mental Health**
- ▶ Special Education**
- ▶ Juvenile Corrections
- ▶ Residential Care**

New York Diagnostic Capacity

- ▶ FASD Annual Birth Cohort 2,370
- ▶ Per work week (50 weeks) 47
- ▶ Total FASD Pop (0–18) 42,660
- ▶ Per work week ???

Cost of FASD in New York

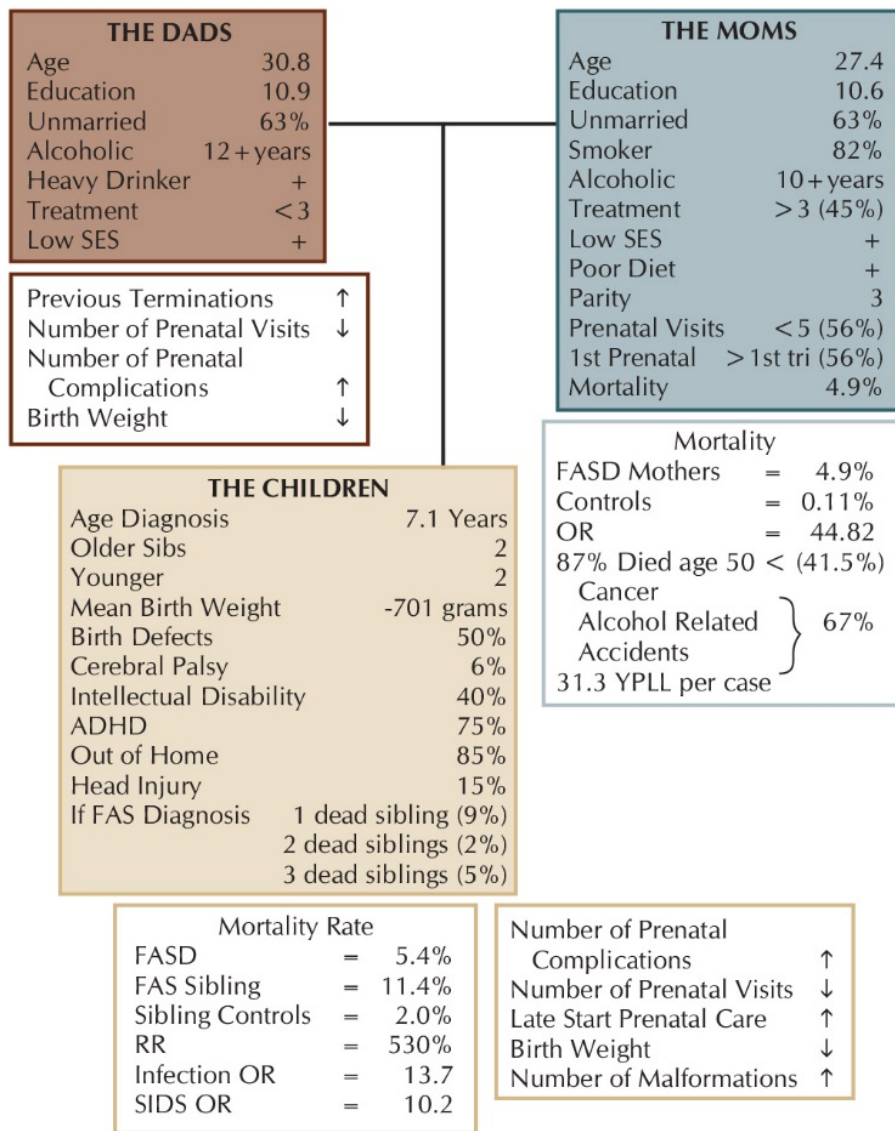
▶ The Daily Cost	\$691,845
▶ Annual Cost of Care	\$324,192,300
▶ Foster Care	34,127 years
▶ Special Education	5,925 years
▶ Juvenile Corrections	1,896 years
▶ Developmental Disabilities	31,995 years

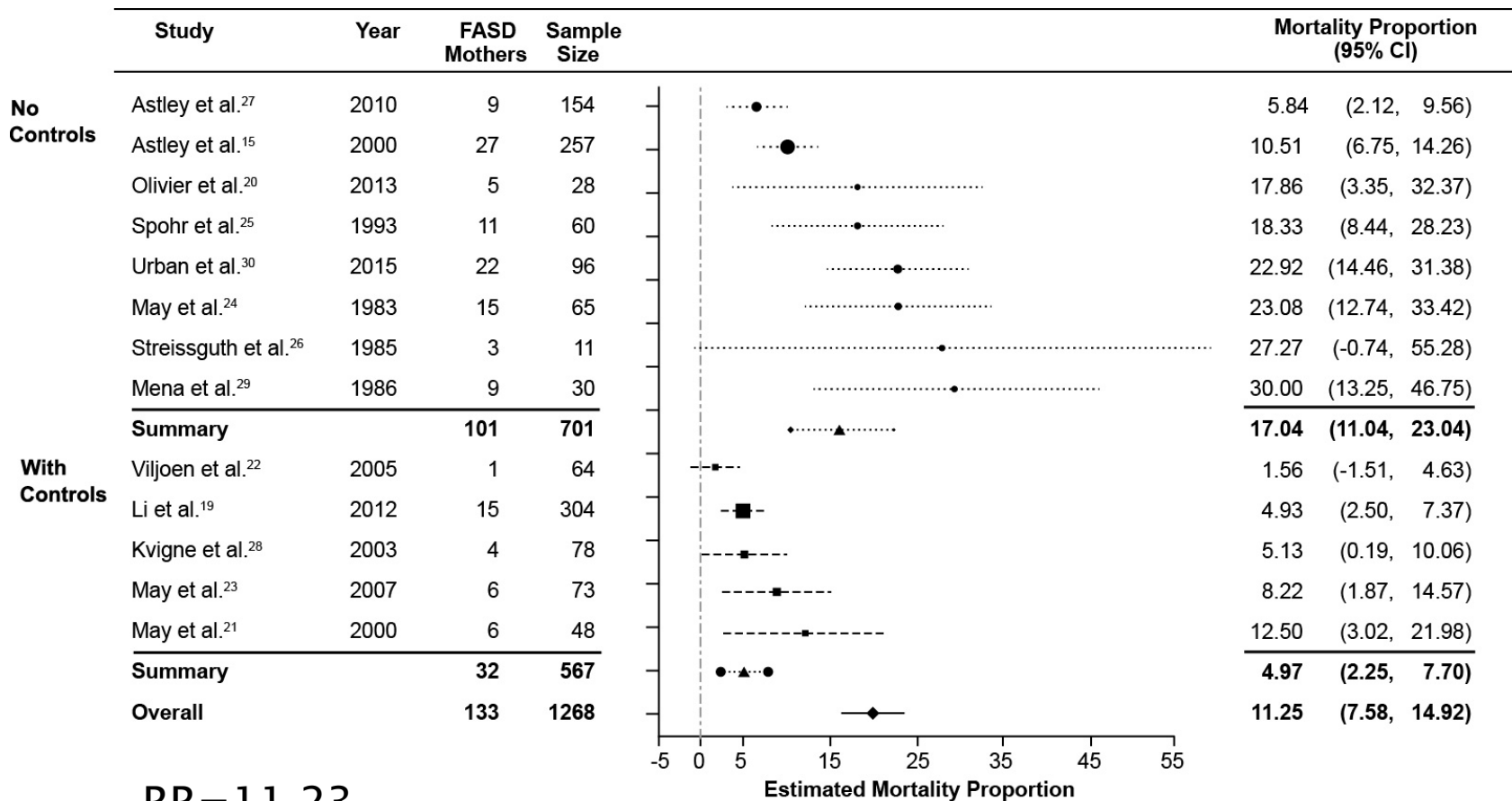
Behind the Face of FASD: We See

- ▶ ADHD
- ▶ Depression
- ▶ Cognitive Impairment
- ▶ Intellectual Disability
- ▶ Learning Disabilities
- ▶ Substance Abuse
- ▶ Judgment Deficits

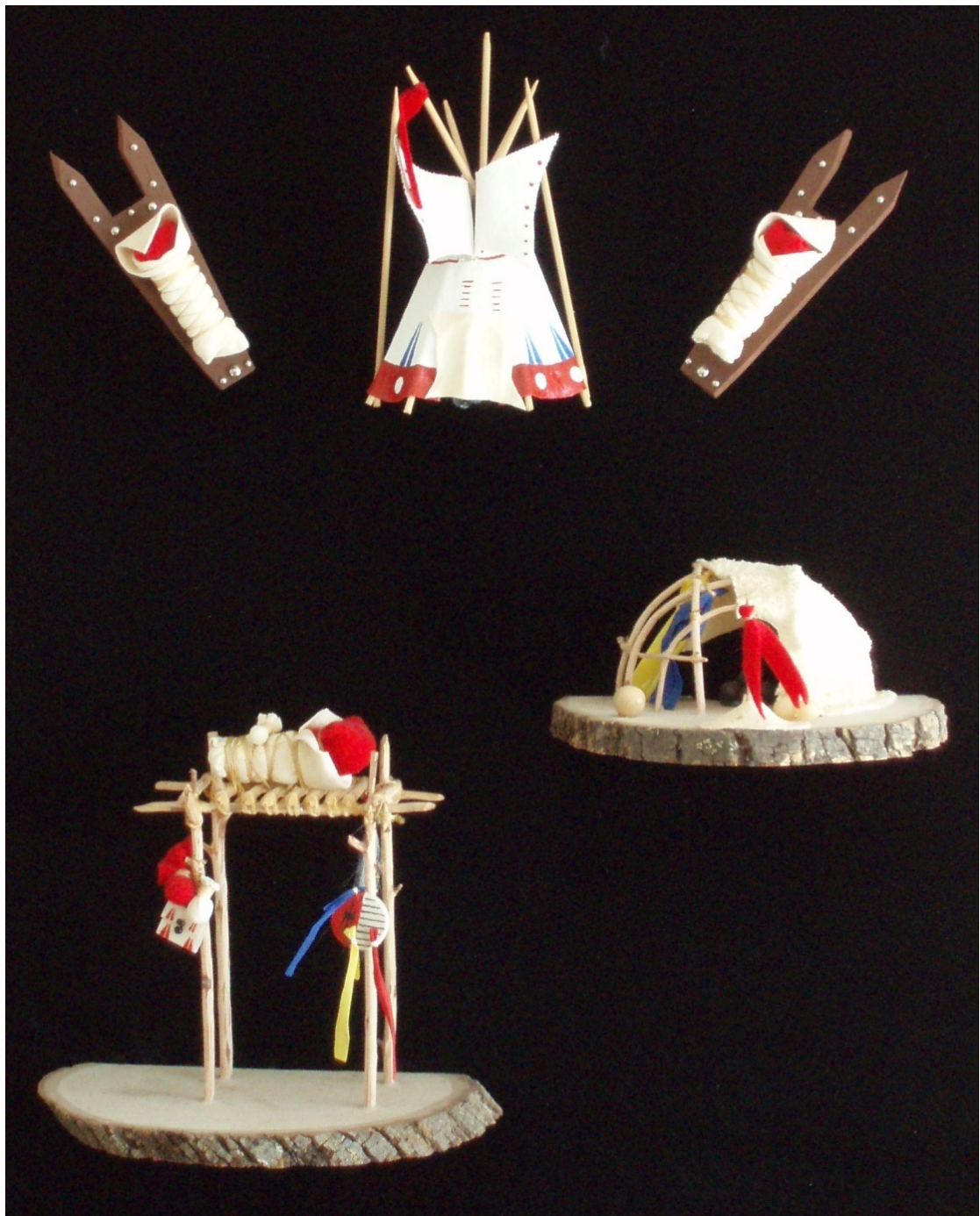


The FASD Family





RR=11.23



THE ARND BEHAVIORAL CHECKLIST

NAME/ID: _____ DOB: ____/____/____ AGE: _____ SEX (circle one): F M

RACE (circle one): Caucasian Native American African American Other DATE OF EXAM: ____/____/____

In order to complete this checklist:

- 1) Behaviors must be impaired for the age of the person being assessed.
- 2) Interviewee needs to have known the person being assessed for at least one month.

CHECK ALL THAT APPLY FOR THE APPROPRIATE AGE RANGE:

BEHAVIOR	3-6 yrs.	7 yrs. +
Hyperactive		
Poor attention		
Impulsive		
Disorganized		
Seems unaware of consequences of actions		
No fear		
Would leave with a stranger		
Poor social skills		
Few friends		
Will talk or interact with anyone		
Easily manipulated and set up by others		
Socially inept (inappropriate speech or touching)		
Difficulty staying on topic during conversation		
Always talking		
Cocktail speech - little content		
Too loud		
Can't remember from one day to the next		
Below average IQ (<85)		
Poor school performance		
Suspended or expelled from school		
Poor sleeper		
Can't follow routine - needs reminders to get dressed, brush teeth, etc.		
Temper tantrums		
Extreme mood swings		
Requires constant supervision		
Been in trouble with the law		
Inpatient treatment for mental health or substance abuse, or in jail for a crime		
Inappropriate sexual behavior		
Poor motor skills		
Has or needs glasses		
Had foster care or was adopted		
Medication for behavior - ever		
Mother used alcohol during any pregnancy (OPTIONAL)		
Mother used alcohol in last five months of this pregnancy (OPTIONAL)		
Mother has been in treatment for alcohol use (OPTIONAL)		

For additional forms or information on ARND, contact:

Larry Burd, Ph.D.
501 N. Columbia Road, Stop 9037
Grand Forks, ND 58202-9037
701-777-3683
www.online-clinic.com

TOTAL CHECKED:

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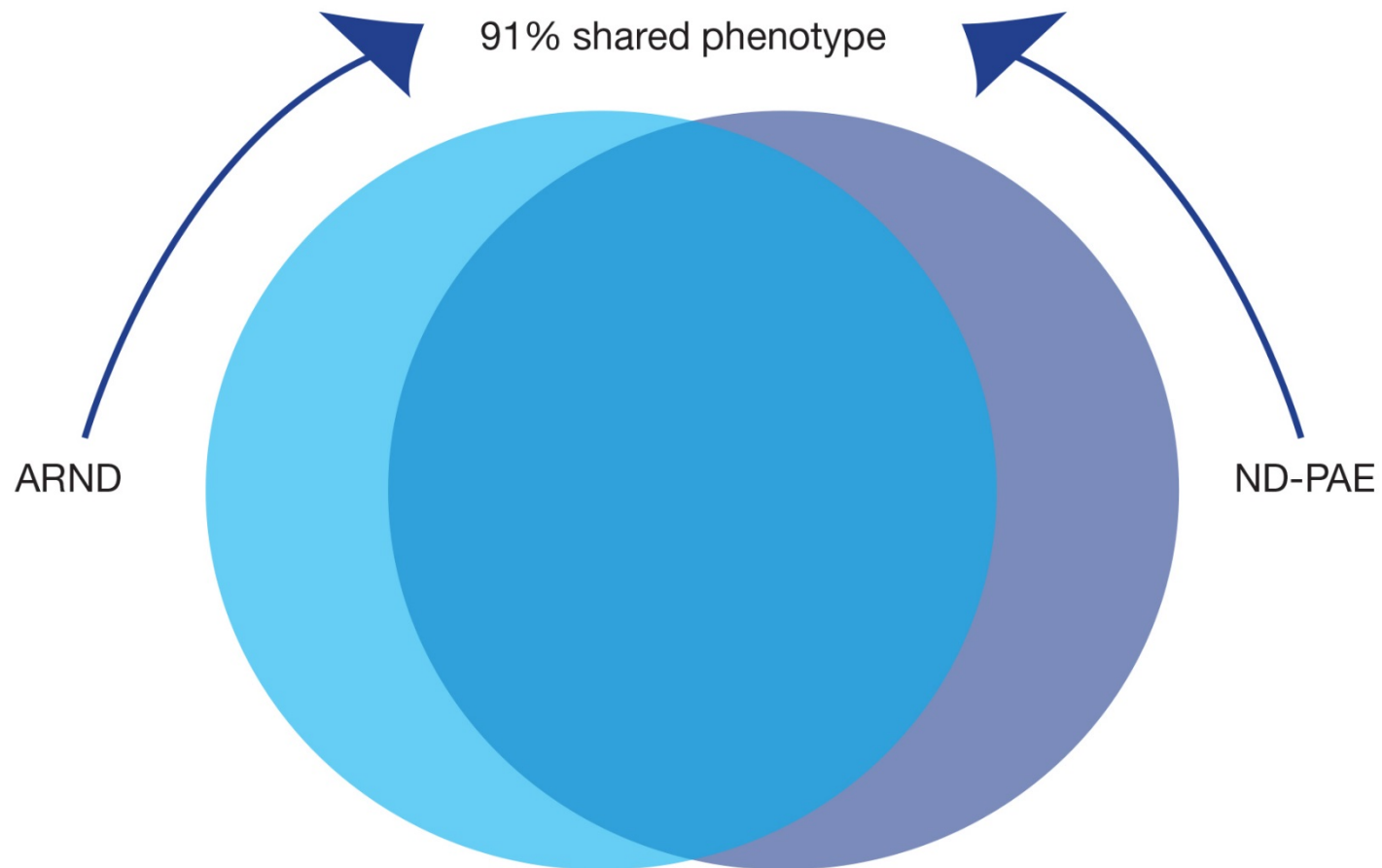
16

20

(Continue assessment if score is greater than or equal to above)

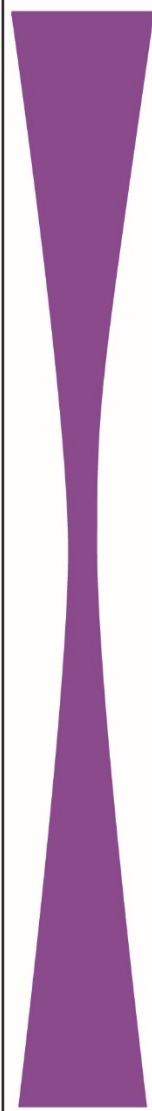
ND-PAE Criteria

- ▶ Prenatal Alcohol Exposure (more than minimal)
- ▶ Neurocognitive Impairment (one)
 - ❑ Impairment in Global Intellectual Functioning
 - ❑ Impairment in Executive Functioning
 - ❑ Impairment in Learning
 - ❑ Impairment in Memory
 - ❑ Impairment in Visual-Spatial Reasoning
- ▶ Self-Regulation Impairment (one)
 - ❑ Impairment in Mood or Behavioral Regulation
 - ❑ Impaired Attention
 - ❑ Impairment in Impulse Control
- ▶ Adaptive Functioning Impairment (two)
 - ❑ Impairment in Communication
 - ❑ Impairment in Social Interactions and Communication
 - ❑ Impairment in Daily Living Skills
 - ❑ Impairment in Motor Skills
- ▶ Childhood Onset



FASD Phenotype

Age



Mortality



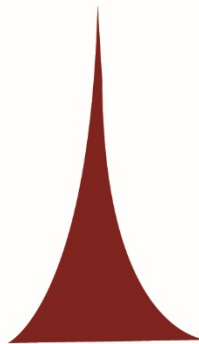
Chronic
Illness



CNS Defects



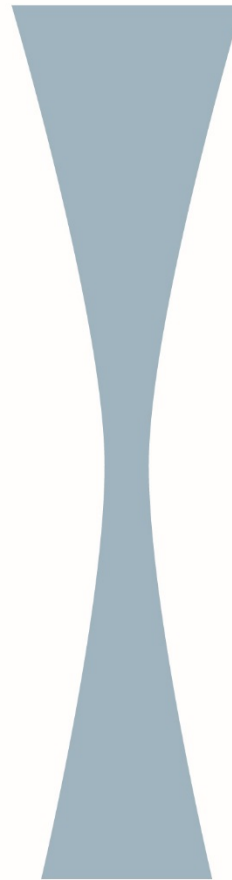
Birth Defects



Growth



Facial
Features



Sensory
Impairments



Neuropsychiatric
Impairments



Independent
Living Skills

ARND +

- Manage as affected
- Think about impairments
 - Short, brief, notes
 - Who will help (name, number, task)
- Does (YOUR) treatment work?
- Brain damage = impairments
 - Accommodate
- Prevent future problems

NO FASD

Knows and recalls rules

- Cautious
- Thoughtful

Thinks about consequence before acting

- Reflective
- Reliable

Relies on experience

- Does well living with rules



FASD

IMPAIRED

Societal rules used inconsistently

IMPAIRED

Poor judgement about

- Peers
- Consequences
- Actions

“OK!”

- Impulsive
- Easily led
- Acts first, thinks later



FASD Forecast

The Future of FASD:
Increasing Severity of
Neurobehavioral Impairments

Severity

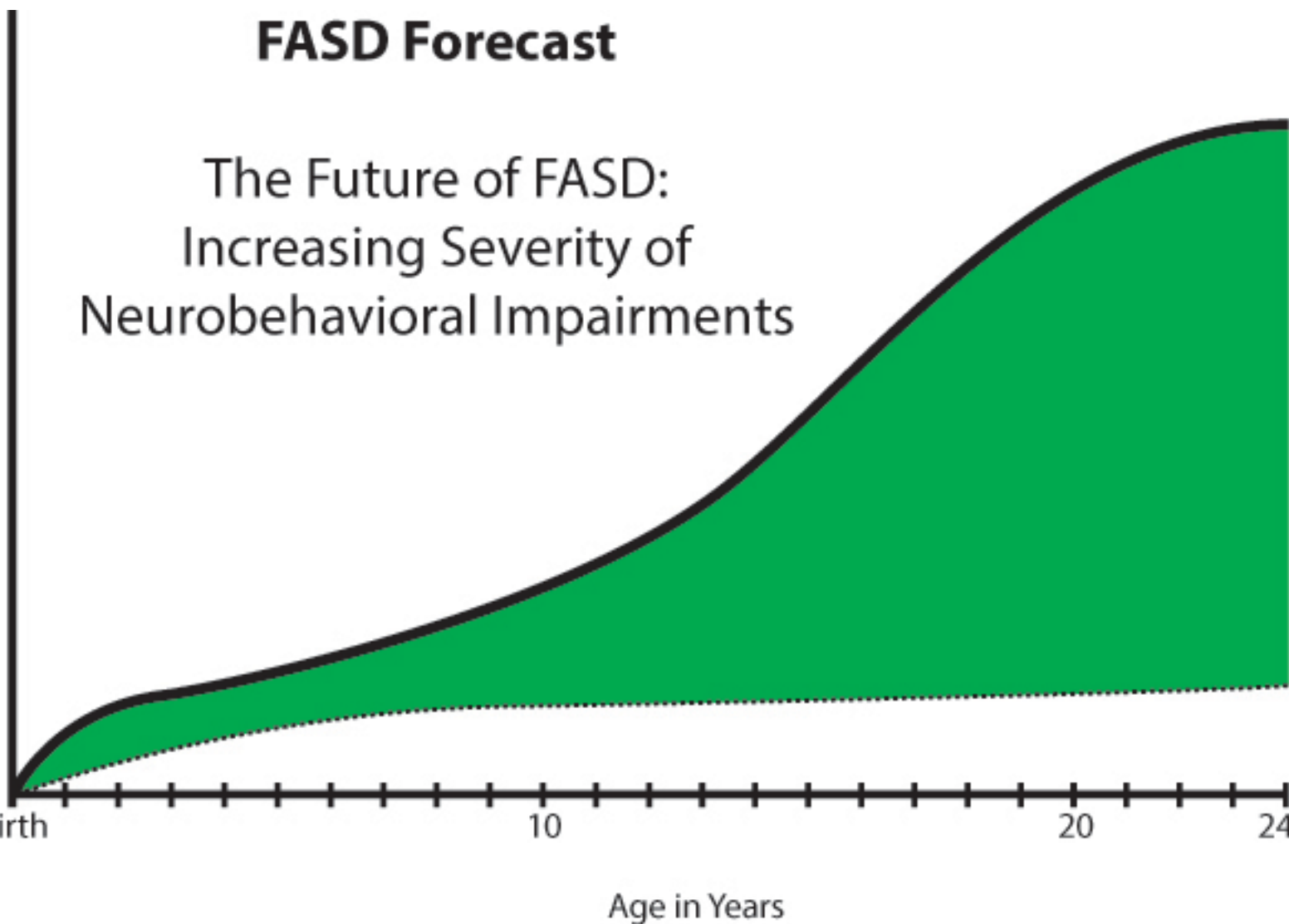
Birth

10

20

24

Age in Years



Adverse Childhood Experiences (ACEs) are Common in FASD

Prevalence of twelve ACE items among children with FASD compared to non-FASD controls.

In FASD: ACEs are born before birth.

ACE	FASD %	Non-FASD %	RR	p
Parents Divorced/Separated	72.45	45.71	1.86	<.001
Drinking/Drugs in Home	84.69	22.86	4.96	<.001
In Foster Care	90.82	16.19	9.05	<.001
Neglect	86.73	14.29	6.73	<.001
Unloving Family	68.37	11.43	3.39	<.001
Depression	32.65	35.24	0.94	.810
Physical Abuse	50.00	9.52	2.44	<.001
Verbal Abuse	46.94	7.62	2.44	<.001
In Prison	35.71	7.62	2.07	<.001
Mother Abused	32.65	8.57	1.92	<.001
Sexual Abuse	23.47	5.71	1.84	<.001
In Residential Care	19.39	2.86	1.98	<.001
None or One	6.12	58.10		
Two to six	39.80	35.24	5.73	<.001
Seven to Twelve	54.08	6.67	9.86	<.001

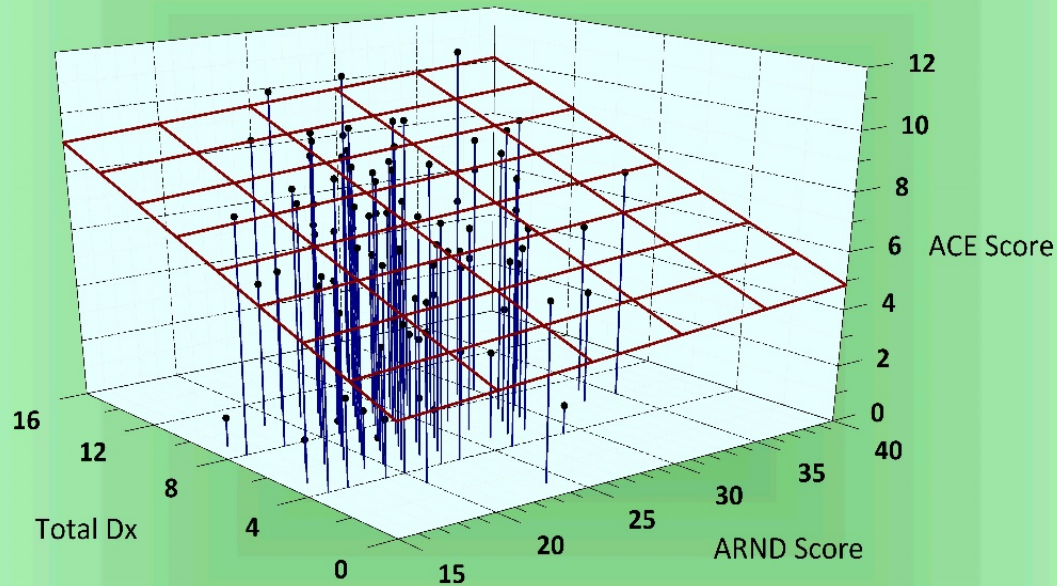
Adverse childhood experiences and prevalence of neurodevelopmental disorders are closely related.

12-items	FASD	NON-FASD	p
	Mean ACE Score	Mean ACE Score	
ADHD	6.46	1.96	<.001
Oral Comprehension	6.64	1.74	<.001
Sleep Disorder	6.69	2.00	<.001
Cognitive Impairment	6.00	2.13	<.001
Vision Problems	6.77	1.66	<.001
Anxiety Disorder	6.93	1.65	<.001
Speech Difficulties	6.52	1.71	<.001
Enuresis	6.27	1.61	<.001
Language Problems	6.55	1.42	<.001
Memory	7.06	2.00	<.001
Depression	7.18	2.07	<.001
0 to 4 Dx	5.67	1.98	<.001
5 to 7 Dx	6.07	1.75	<.001
8 to 14 Dx	7.05	1.89	<.001

Prediction Plane

$$ACD = 2.005 + 0.093 \cdot ARND + 0.327 \cdot Dx$$

Dx Significant Predictor ($p=.007$); ARND not ($p=.227$)



*As the Dx increases (front to back) the plane (ACE) goes up;
As the ARND increases (left to right) the plane (ACE) barely increases*

This is predicting ACE from ARND and Dx. It suggests Dx is the better predictor

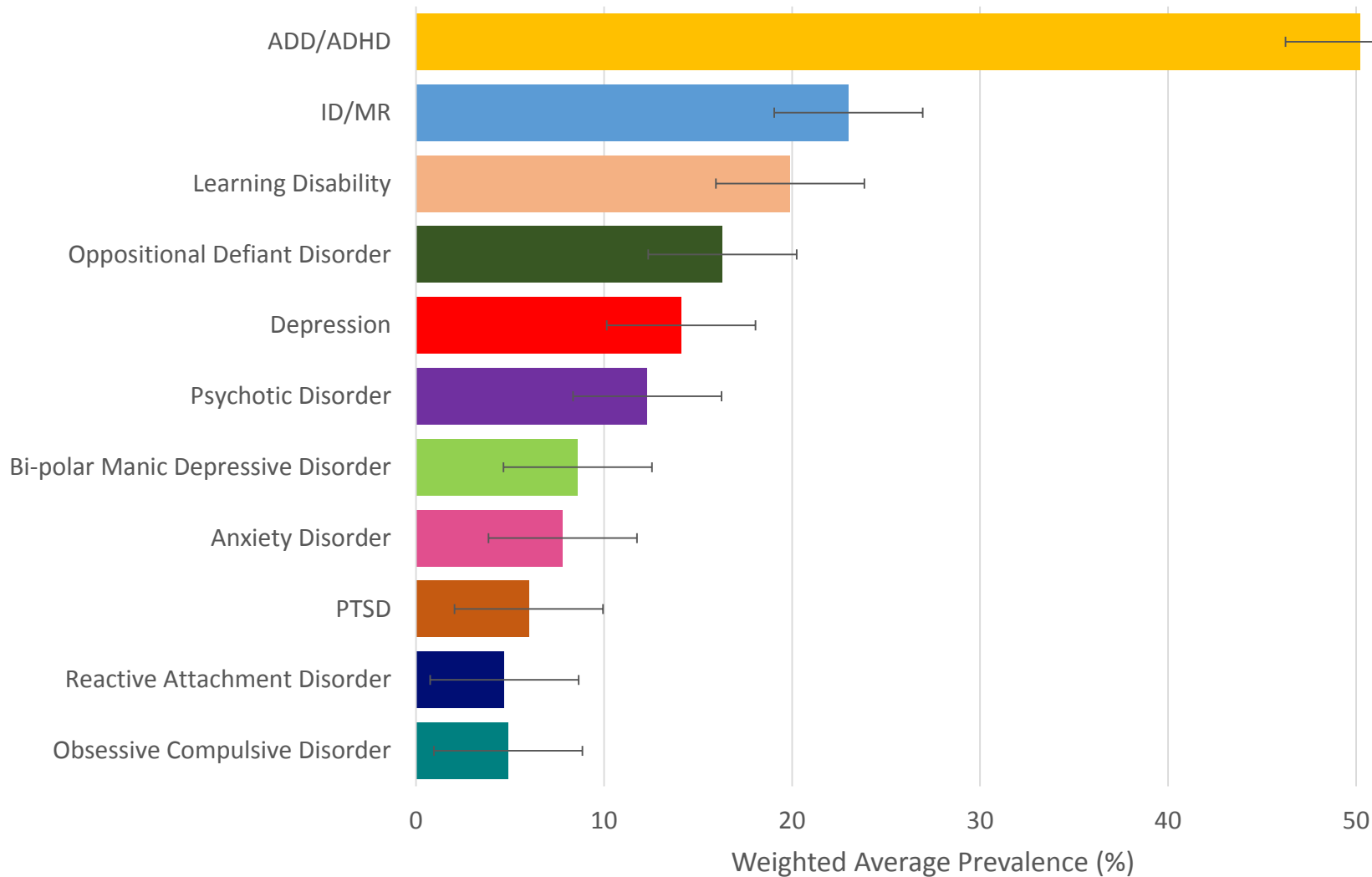


Cut it down
Chop it up
Haul it away

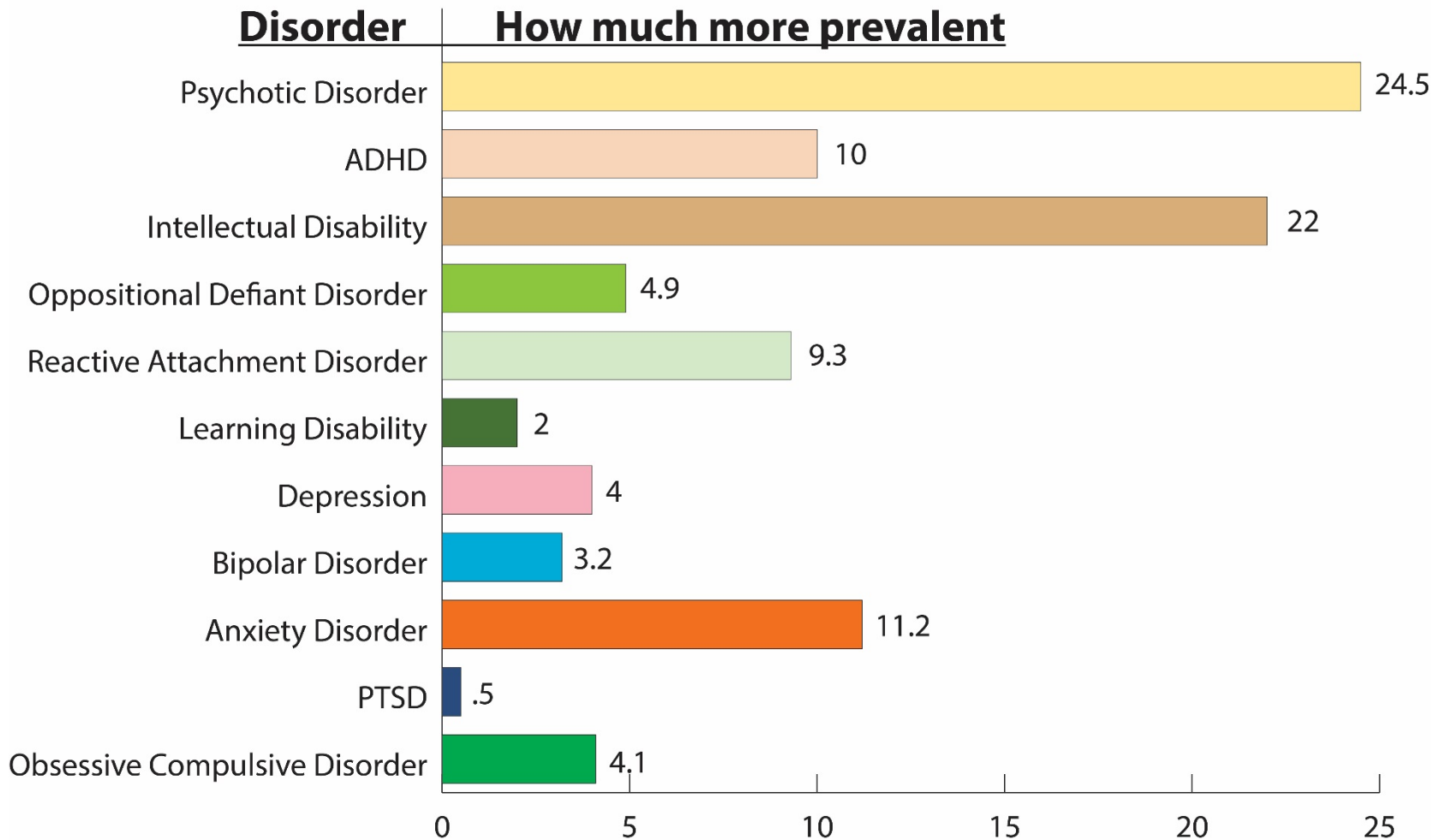


It will let a lot more
light into your life.

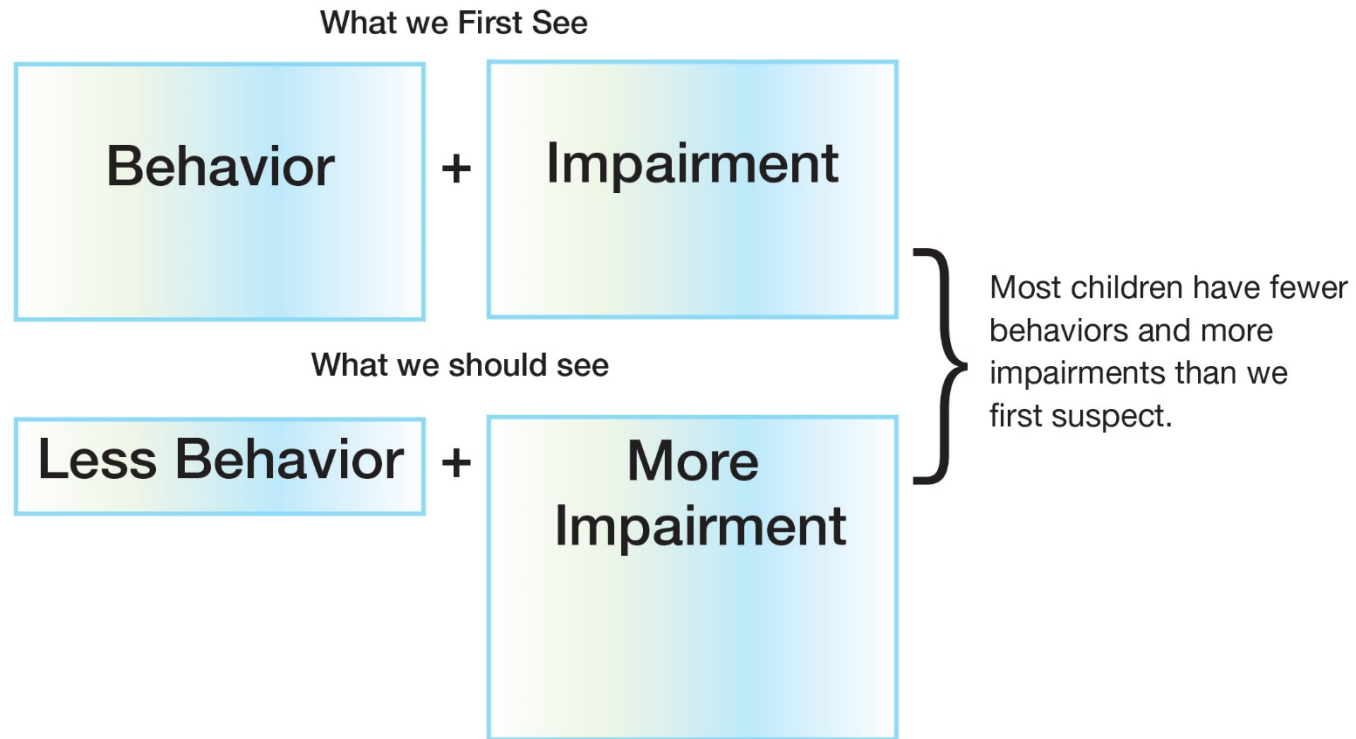
FASD and Comorbid Mental Disorders



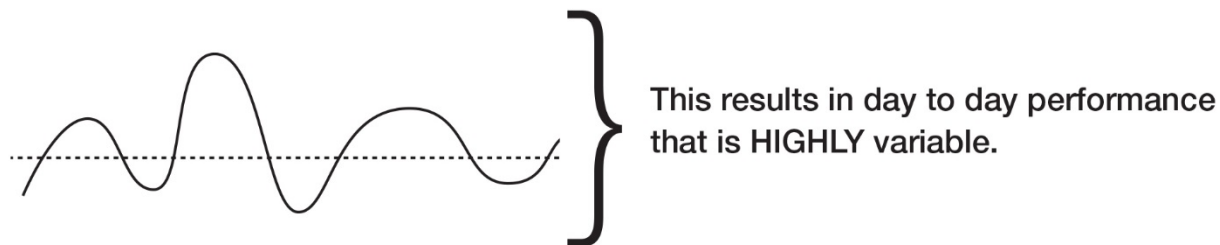
FASD and Mental Disorders



FASD has important neurocognitive features which effect treatment



Inconsistant Performance



Children With FASD

Think about ACEs early and often

Parents Divorced/Separated
Drinking/Drugs in Home
In Foster Care
Neglect
Sexual Abuse
Unloving Family
Parental Depression
Physical Abuse
Verbal Abuse
Parent in Prison
Mother Abused
In Residential Care

Adversity accumulates over time.
This has profound consequences over
the lifespan – prevention reduces the risk

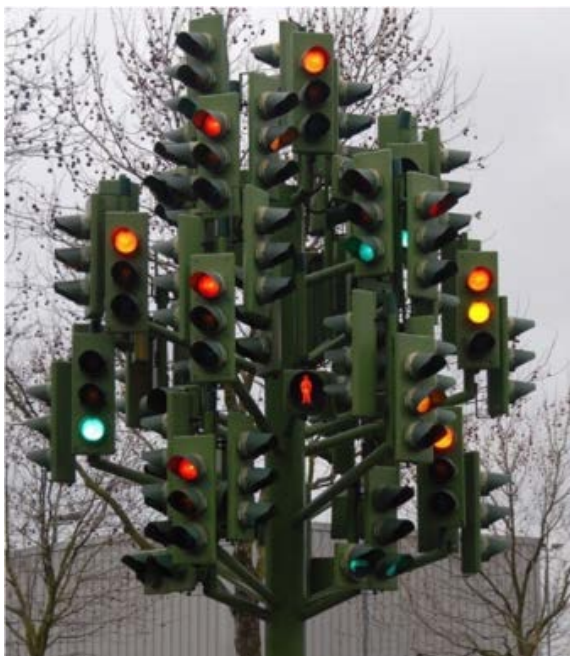
ACEs and neurodevelopmental
disorders are linked

More ACEs lead to more diagnosis

- Delayed diagnosis limits access to diagnosis informed treatment
- Plan ahead to prevent future problems

In Canada youth 12 – 18 years of age with FASD
have a 19 fold increase risk of incarceration.*

Parents With Substance
Disorders Are Not
Stress Tolerant



YOU don't have to get better to do better!



Accommodations



+



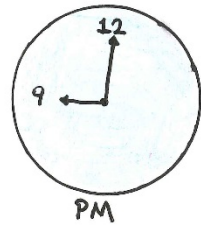
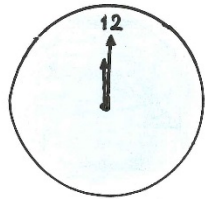
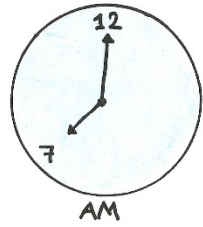
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2) **Basic Cognitive Skills in Adolescents and Adults with FASD**

<u>Characteristics</u>	<u>Grade Level</u>
Reading	5.0
Reading comprehension	4.5
Oral Comprehension	5.0
<u>Percent Affected</u>	
Memory	80%
Attention (ADHD)	75%
Executive Function	
Impairments	80%

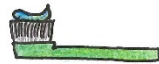
TAKING YOUR MEDICINE



BEDTIME SCHEDULE



PAJAMAS



BRUSH TEETH



GO POTTY



STORY TIME



LIGHTS OUT

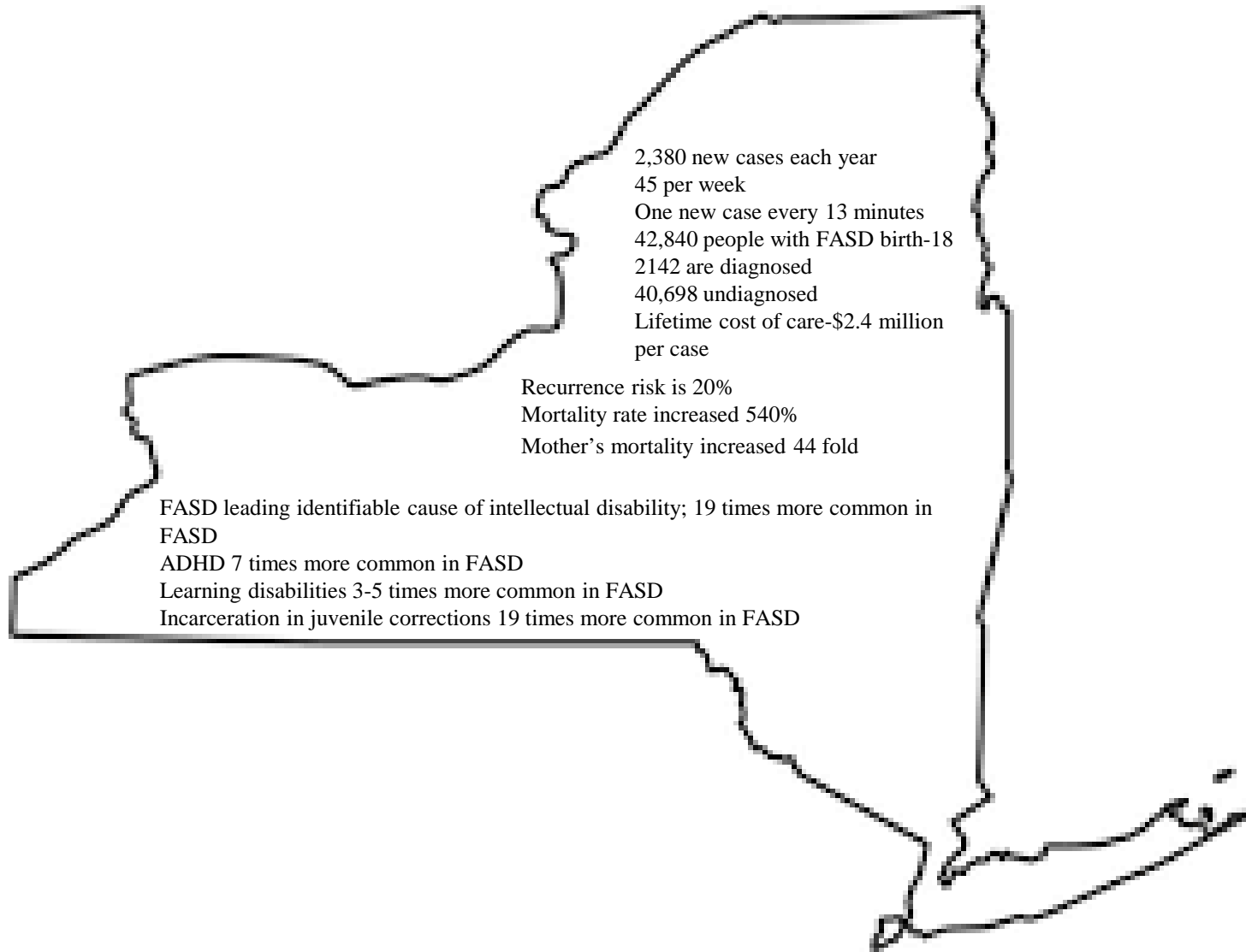
Risk Factors Ahead



Exit 1	Abuse/Neglect
Exit 2	Foster Care
Exit 3	Impairments
Exit 4	Legal Problems
Exit 5	Substance Abuse
Exit 6	Dependent Living

FASD Management

- ▶ Yearly follow-up
- ▶ Few live independently
- ▶ Remember the Familial and Generational Effects of FASD
- ▶ Services MATTER
- ▶ Rely on positive interventions
 - Reduces risk of escalation
 - Less likely to burn out staff or parents



2,380 new cases each year
45 per week

One new case every 13 minutes

42,840 people with FASD birth-18

2142 are diagnosed

40,698 undiagnosed

Lifetime cost of care-\$2.4 million
per case

Recurrence risk is 20%

Mortality rate increased 540%

Mother's mortality increased 44 fold

FASD leading identifiable cause of intellectual disability; 19 times more common in
FASD

ADHD 7 times more common in FASD

Learning disabilities 3-5 times more common in FASD

Incarceration in juvenile corrections 19 times more common in FASD

What to do?

- ▶ Think FASD (Family History)
- ▶ Go slow (Longer Treatment Episodes)
- ▶ What do they recall? (Memory)
- ▶ Pictures (It's Concrete)
- ▶ Wishing and anger won't help
- ▶ Reading and Comprehension (Listening)
- ▶ ANXIETY makes it worse (Group Work)

What About Foster Care?

Substance use in parents is the most frequent reason children go into foster care

Impact on Foster Care

- Prenatal Alcohol Exposed @ 70%
- Alcohol factor in removal @ 50%
- Mortality is increased (mother and children)
- Parents with FASD (42-60%)
- Treatment failure due to FASD @ 50%

Children With FASD Can Be Difficult to Parent Before, During, and After Foster Care

High rates of

- Sleep disorders
- Eating problems
- Toilet training difficulties
- Temper Tantrums
- Developmental disorders-needing therapy
- Comprehension deficits
- School problems
- Difficulty with homework
- Increasing severity of phenotype
- Often requires medications

Caregivers require ongoing supports including respite care.

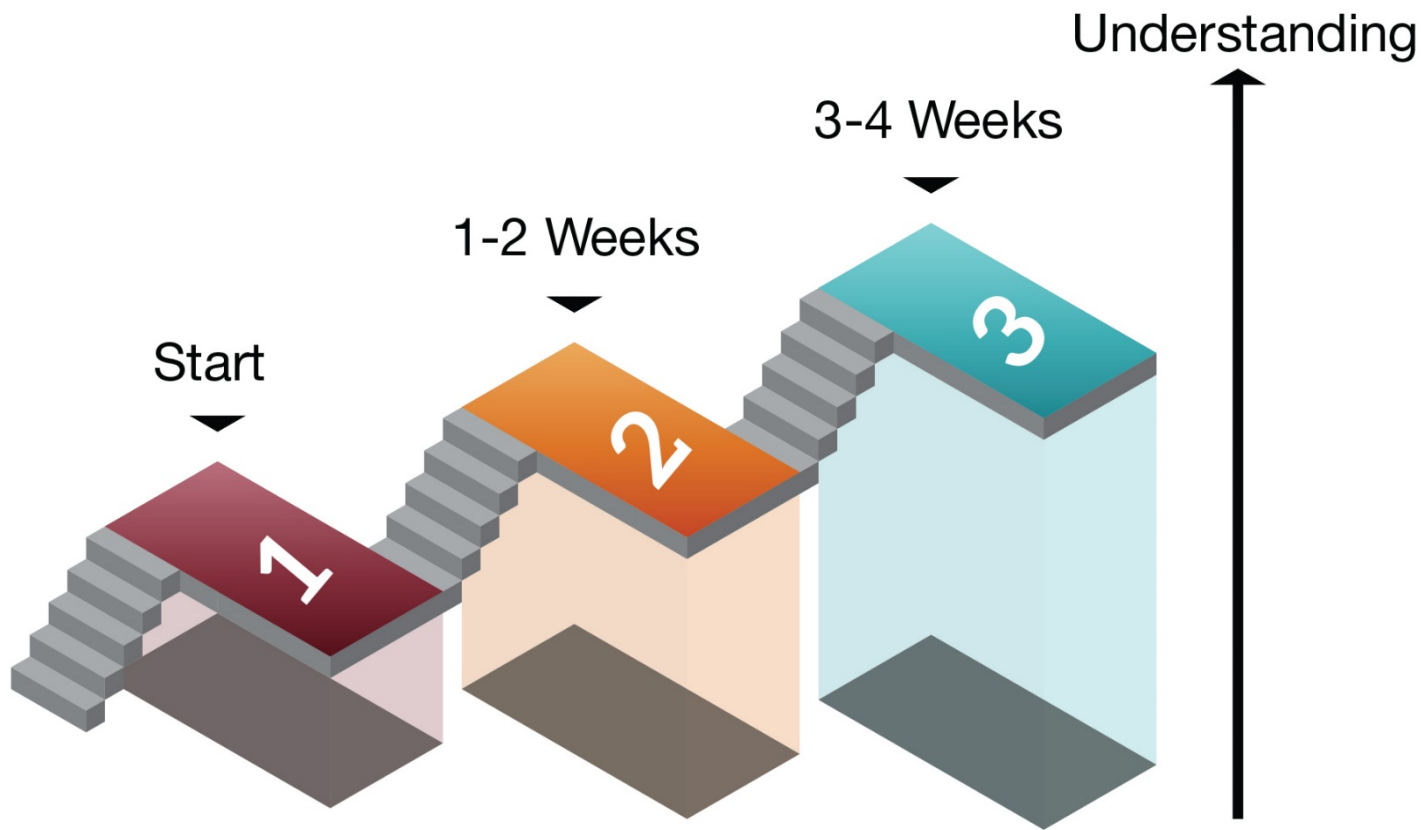
Adapting Substance Abuse Treatment for People with FASD

▶ FASD

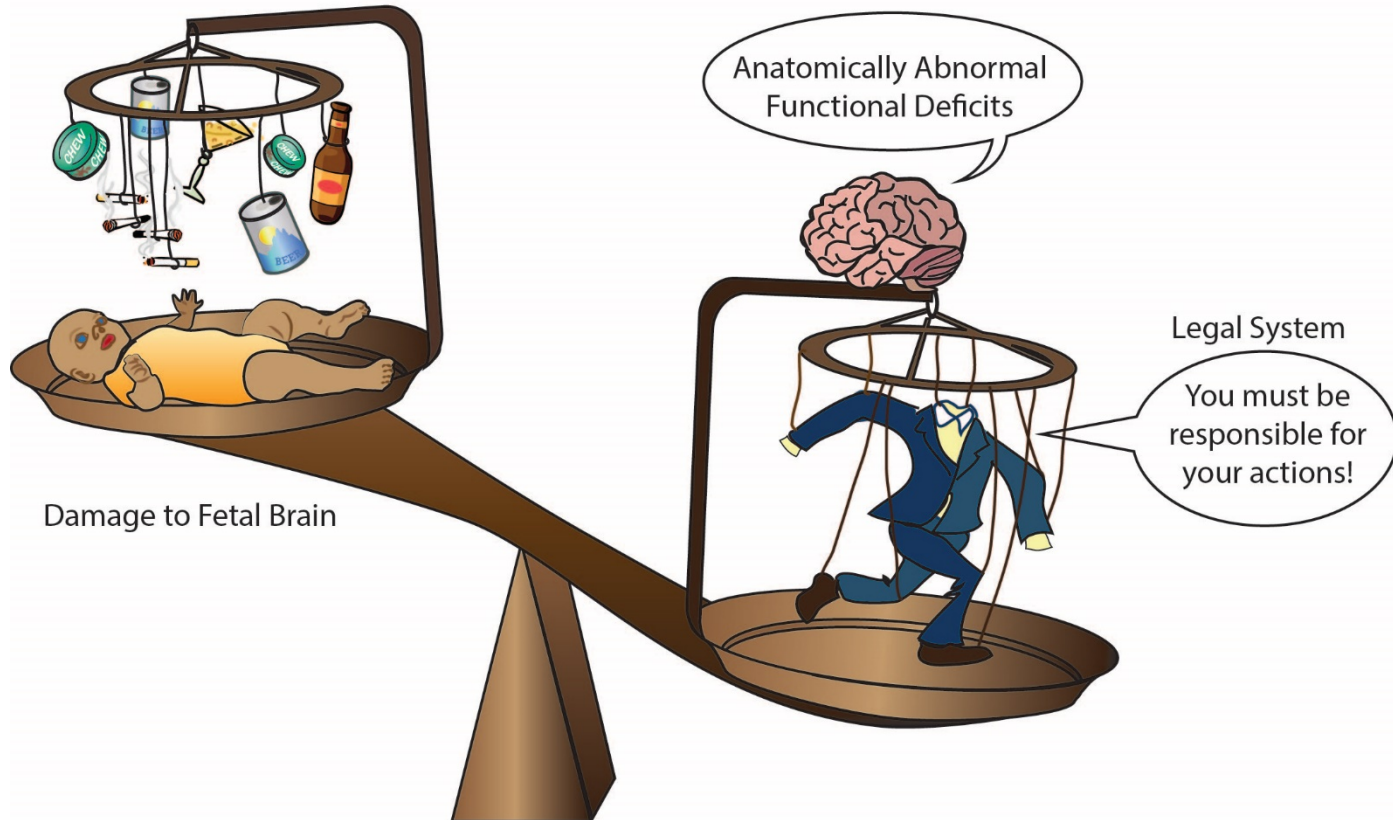
- High rates of ADHD
- Learning disabilities reading listening and spelling
- Anxiety disorders
- Cognitive Impairments

▶ ADAPTATIONS FOR FASD

- Reduce anxiety and stress
- Reduce reading – increase use of pictures
- Increase time in treatment



The Responsibility Scale



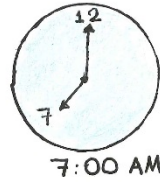
Incarceration Risk For FASD

- ▶ In Canada youth 12–18 years of age with FASD have a 19 fold increase risk of incarceration.

Popova L., Am J Epidemiol ,2012



GETTING UP



GET UP



GO POTTY



GET DRESSED



BREAKFAST



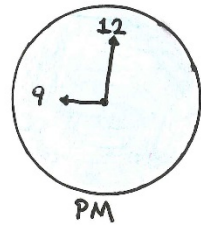
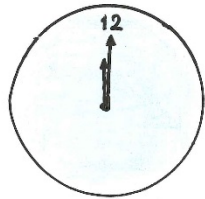
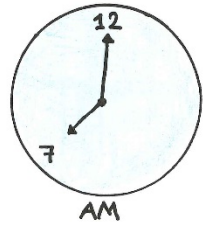
GET READY FOR SCHOOL

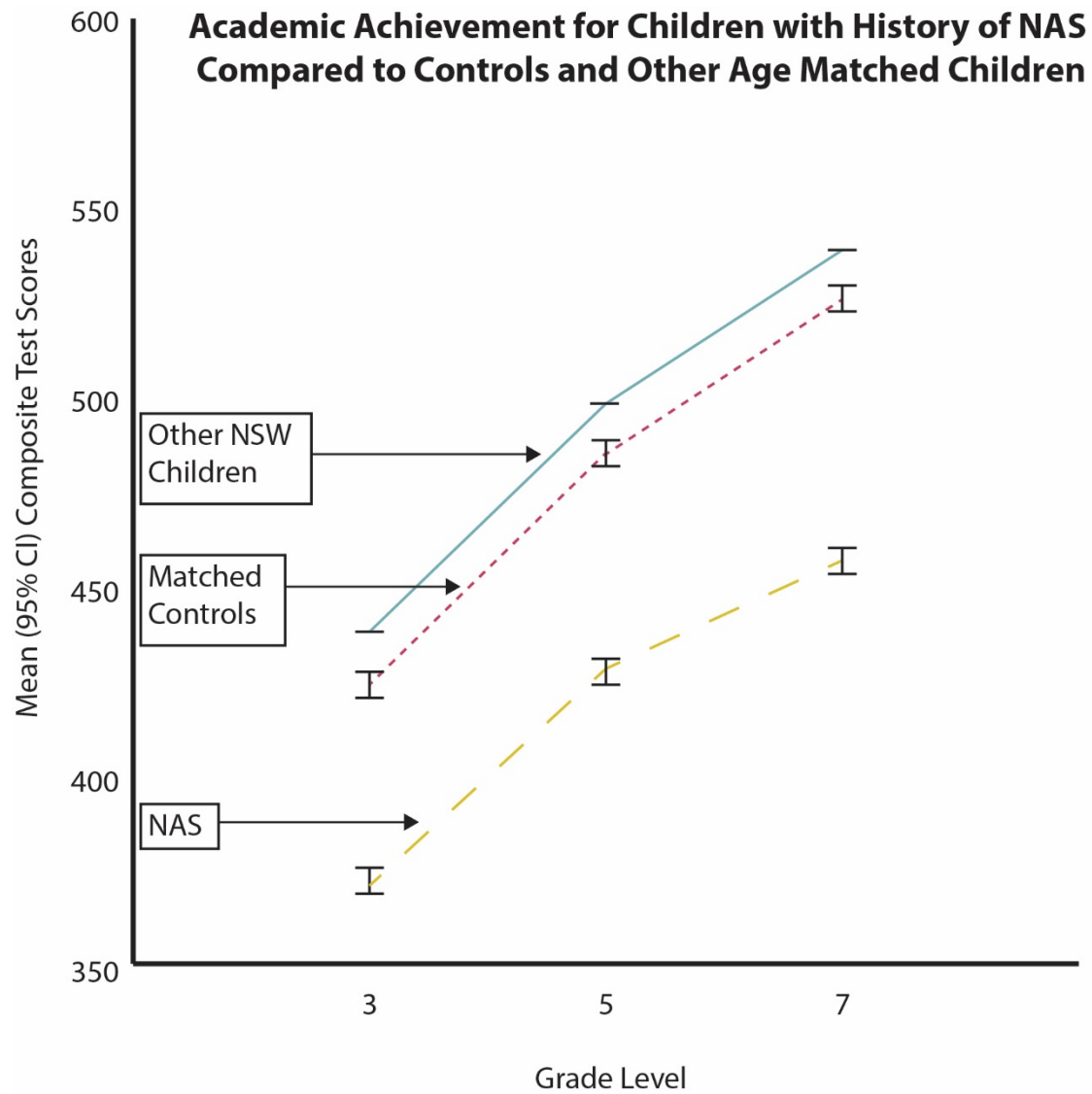
Kenime

Can we send it home?

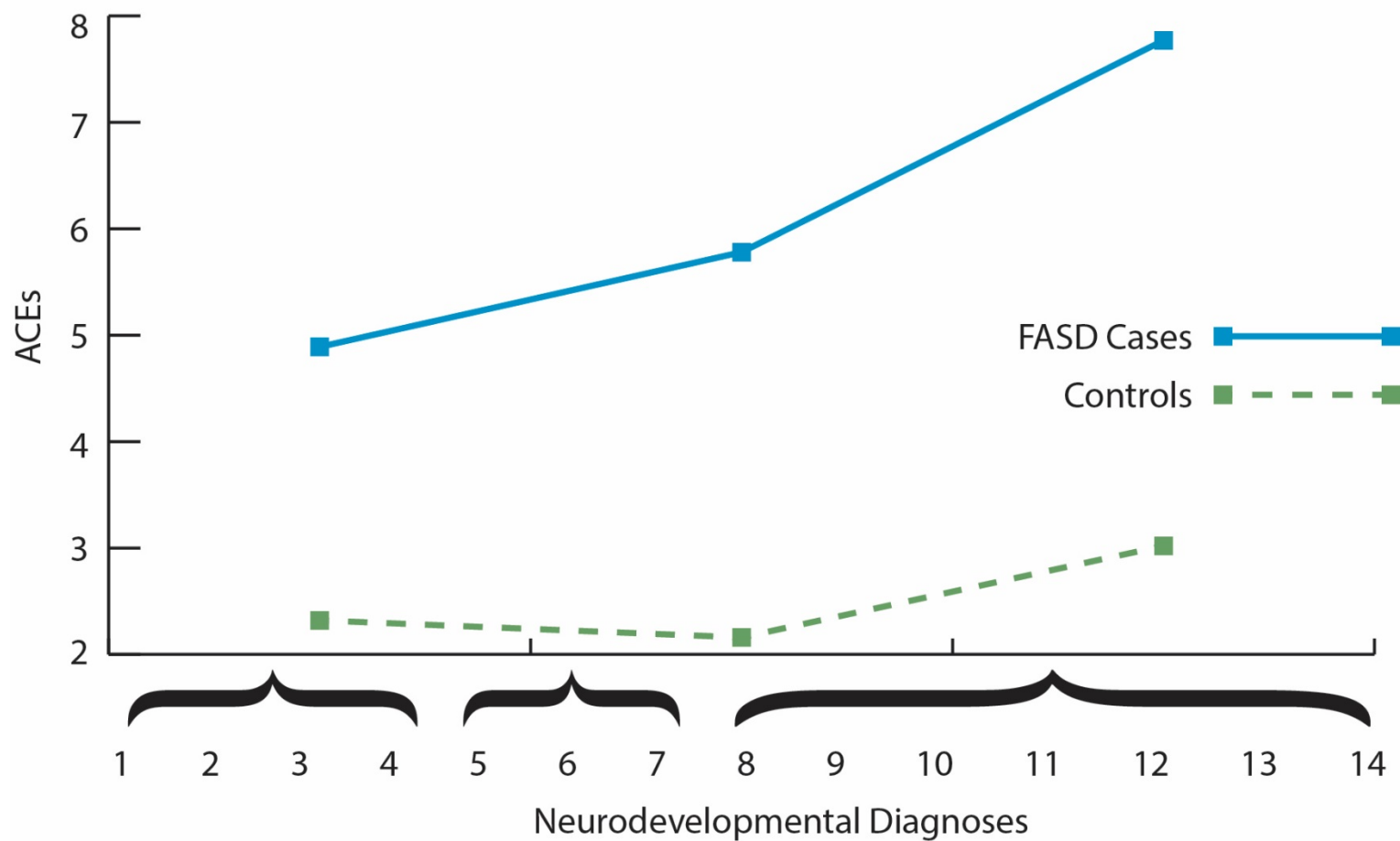
- ▶ Picture schedules
 - Bedtime
 - Morning routine
- ▶ Pictorial behavior plans
- ▶ Parents schedule
- ▶ Medication schedules
- ▶ Behavior Management
 - Transferring our gains
 - Preventing relapse
 - Respite care
 - Avoiding change

TAKING YOUR MEDICINE





Relationship Between ACEs Neurodevelopmental Diseases



Natural History: Fetal Alcohol Syndrome (FAS)

Life expectancy 34 years (95% CI: 31 to 37 years)

External Causes [Adversity] 44%

- *Mortality rate of people with FAS is 7.4 to 73.3 times higher (depending on age group).*
- suicide (15%)
- accidents (14%)
- poisoning by alcohol/illegal drugs (7%)
- other external causes (7%)

Diseases of Organ Systems [FAS/PAE Effects] 43%

- nervous system (8%)
- respiratory systems (8%)
- digestive system (7%)
- congenital malformations (7%)
- mental and behavioral disorders (4%)
- circulatory system (4%)
- cancers (3%)
- endocrine (2%).

*Data from Thanh & Jonsson, March 2016
(Alberta Data 2003–2012)*

from Loock 2017

2016 FASD ADULT HEALTH SURVEY (n=327): NEED FOR TRANSITION, EARLIER DETECTION & CARE

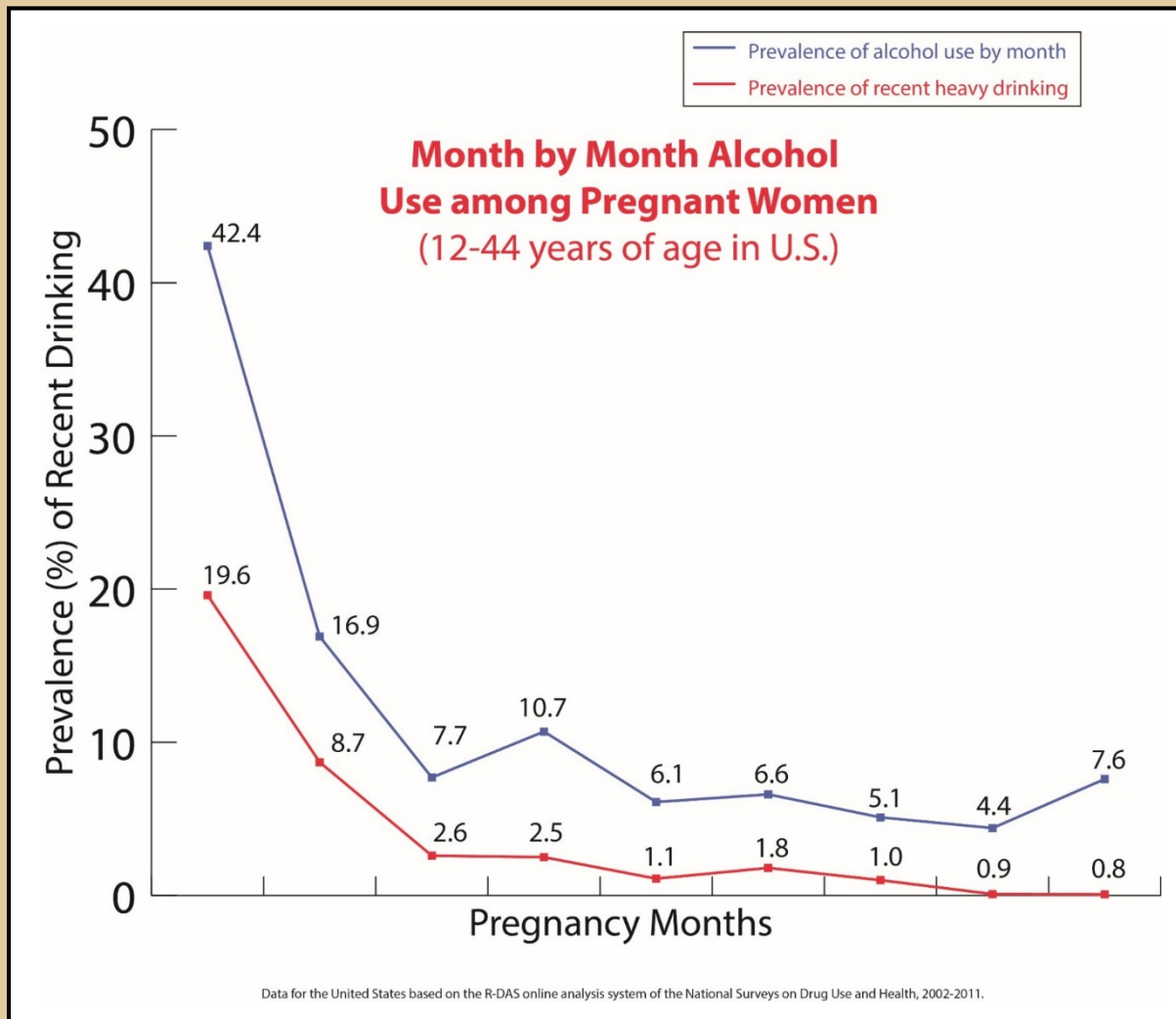
Mixed Causes

- Mood/Anxiety Disorders
- Thought Disorders
- Substance Use Disorders
- PTSD/ADHD
- Other Mental Health
- Sleep
- Sensory
 - Myopia 47%
(30%)
 - Amblyopia 22%
(3%)
 - Hearing 15%
(0.3%)

Top 5 Diseases of Organ Systems

- | | |
|----------------------------|--------|
| 1. All Autoimmune [5–8%] | 30–35% |
| Type 1 Diabetes [0.39%] | 2.5% |
| 2. Respiratory | |
| Chronic sinusitis [13%] | 34% |
| Allergies [40%] | 52% |
| Asthma [9%] | 33% |
| 3. Hypertension [8%] | 15% |
| 4. Congenital heart [0.3%] | 7.4% |
| All Birth Defects [2–4%] | |
| 5. Skeletal All [no data] | 27–44% |
| Scoliosis [3%] | 17% |

p/c Myles, Emily & CJ: 7th Biennial UBC FASD Conference Vancouver 2016
from Loock 2017



STRONG LINK BETWEEN ALCOHOL/NICOTINE USE AND USE OF ILLICIT DRUGS

- Among Women using BOTH Alcohol and Nicotine in the pregnancy
 - 20.4% used Marijuana
 - 9.5% used Cocaine
- Women NOT using Alcohol or Nicotine
 - 0.2% used Marijuana
 - 0.1% used Cocaine
- Alcohol and Nicotine use is also a marker for other drug use.

How We Do It - - - - - ➔ *Exposure Assessment*

Exposure - - - - - ➔ *When was your last drink?*

Risk Stratification - - - - - ➔

	<i>Pregnancy</i>	
	Pre-awareness	Post-awareness
<i>Before</i>		
Unexposed	Exposed	Exposed and High Risk

Dosimetry - - - - - ➔

Charting PAE During Pregnancy

On average, how many days per week
did you drink during pregnancy? _____ (a)

On an average drinking day, during pregnancy,
how many drinks did you have? _____ (b)

How many days per month did you have
4 or more drinks during pregnancy? _____ (c)

What is the most you had to drink
on any one day during pregnancy? _____ (d)

What is a drink? Alcohol % _____ Drink Volume _____

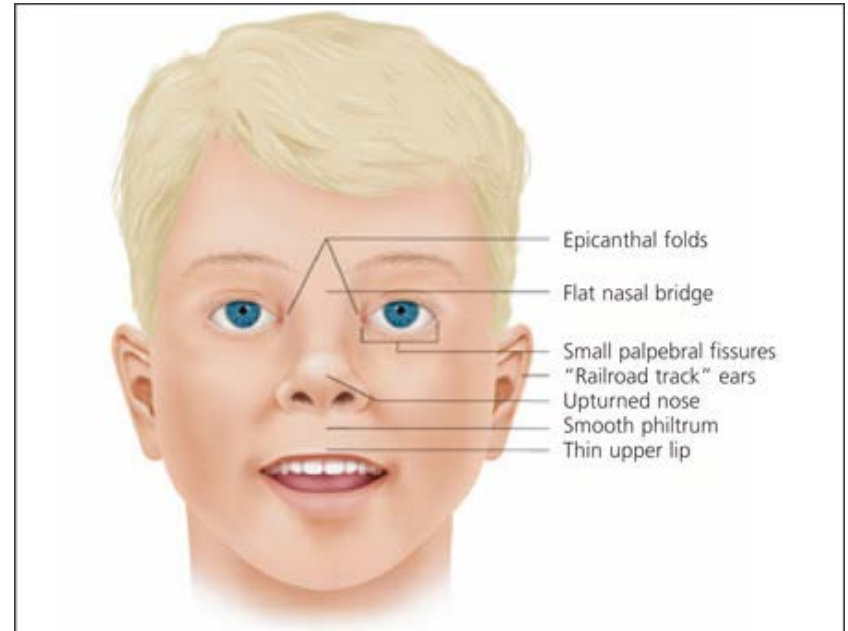
Exposure Assessment

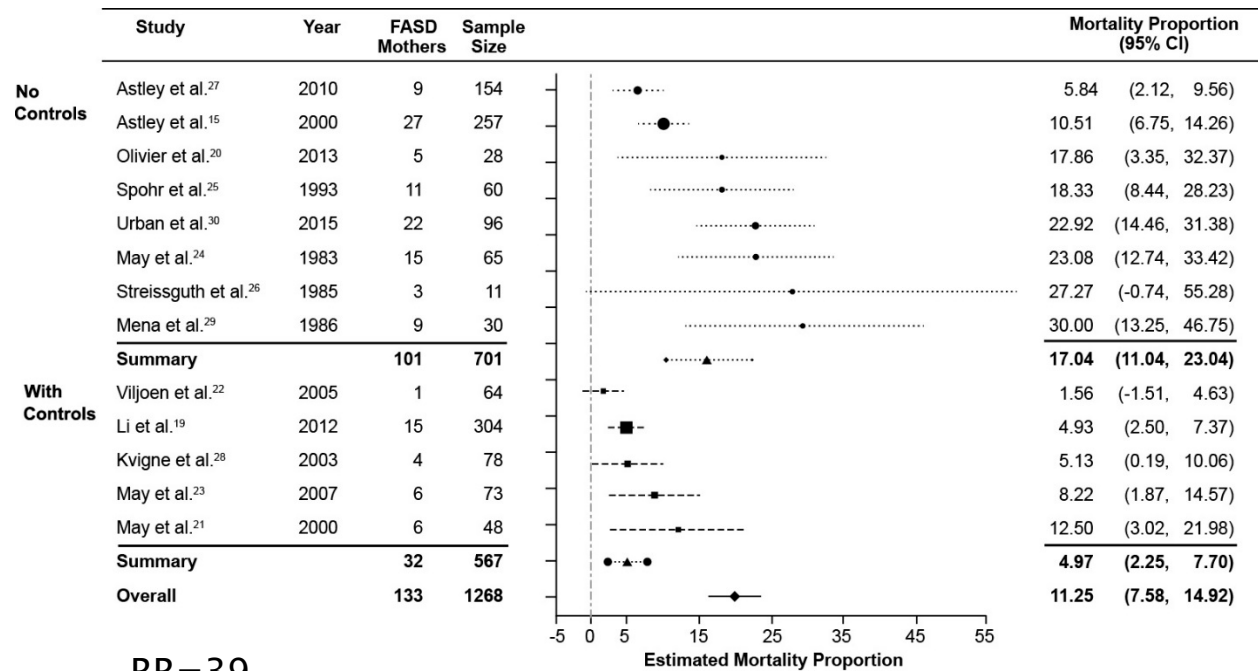
- ▶ 2 Keys
 - Month before pregnancy
 - Last drink



Behind the Face of FASD: We See

- ADHD
- Depression
- Cognitive Impairment
- Intellectual Disability
- Learning Disabilities
- Substance Abuse
- Judgment Deficits





RR=39



Neurobehavioral Expression of FASD

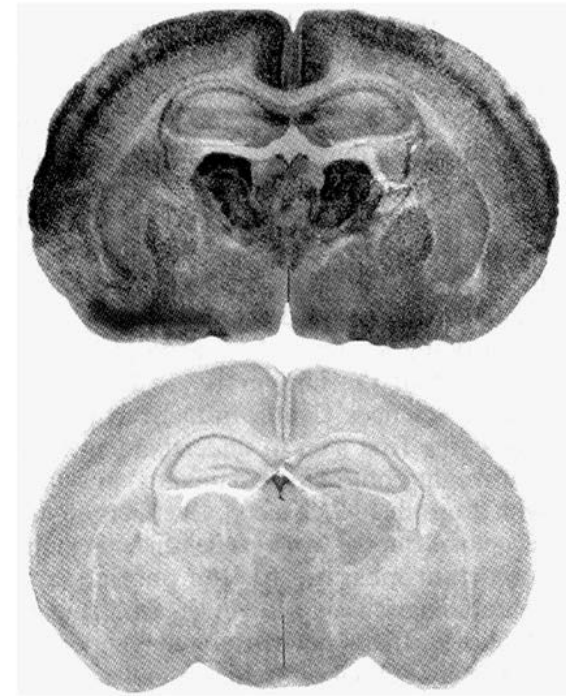


"No, I won't."

**"Let's wait; I want
to talk this over..."**

"OK!"

Fetal Alcohol Spectrum Disorders (FASD)

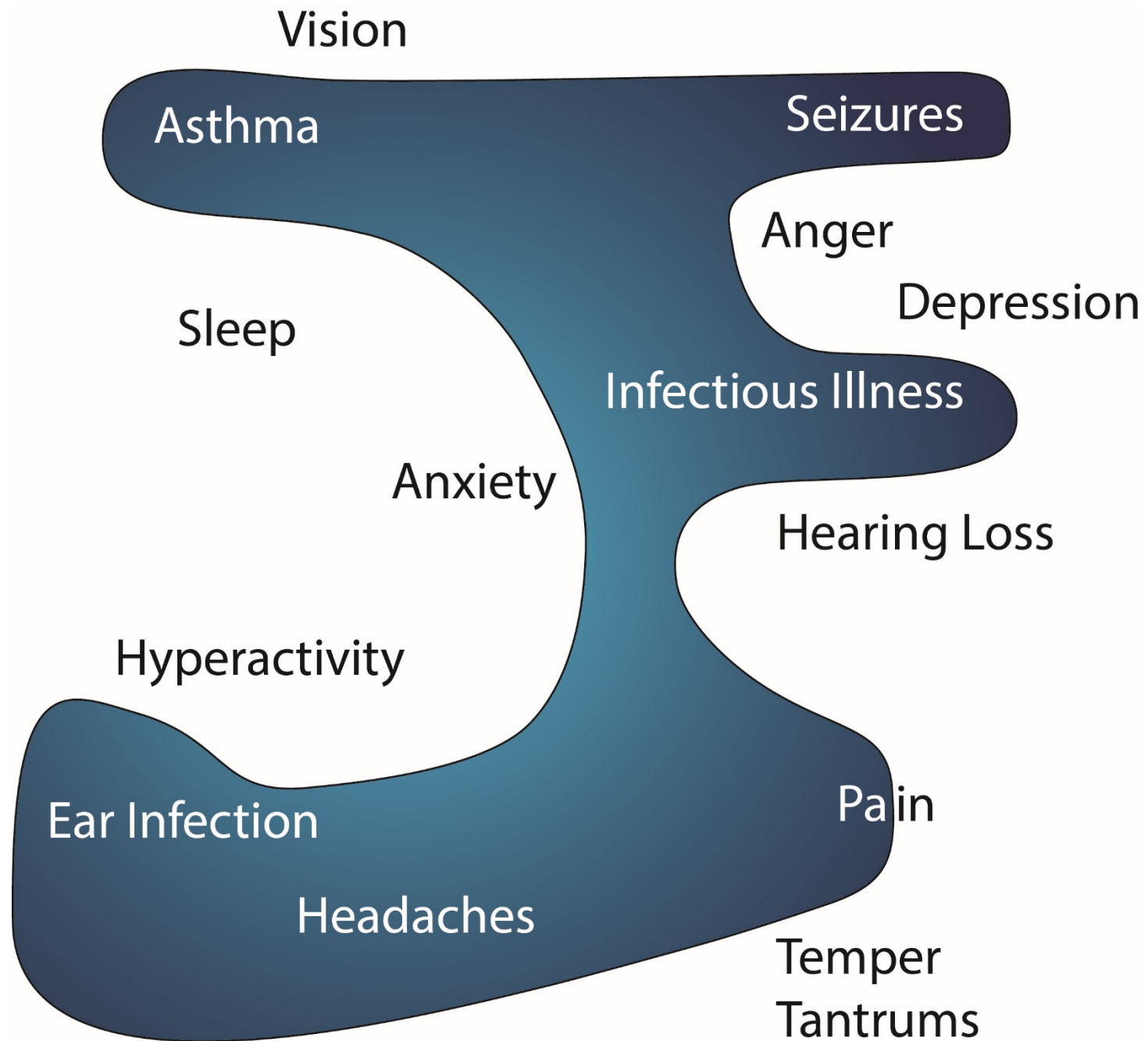


See PAE, Think Impairment



ARND: Risk Factors Ahead

- Exit 1 Abuse/Neglect
- Exit 2 Mental Disorders
- Exit 3 School Problems
- Exit 4 Legal Problems
- Exit 5 Substance Abuse
- Exit 6 Dependent Living



Vision

Asthma

Seizures

Anger

Depression

Sleep

Infectious Illness

Anxiety

Hearing Loss

Hyperactivity

Ear Infection

Pain

Headaches

Temper
Tantrums

Vision

Asthma

Seizures

Anger

Depression

Sleep

Infectious Illness

Anxiety

Hearing Loss

Hyperactivity

Ear Infection

Pain

Headaches

Temper
Tantrums



Drugs we are looking at for:

Prenatal alcohol exposure	}	Metadoxine
Severe intoxication at delivery		
Abnormal brain pathways	}	Naminda

WHY PAE?

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

EFFECT	ALCOHOL	MARIJUANA	COCAINE	HEROIN	TOBACCO
Low Birth Weight	●		●	●	●
Impaired Growth	●				
Facial Malformation	●				
Small Head Size	●				
Intellectual & Developmental Delays	●	●			
Hyperactivity, Inattention	●	●		●	●
Sleeping Problems	●	●	●	●	●
Poor Feeding	●		●		
Excessive Crying	●	●	●	●	
Higher Risk for Sudden Infant Death Syndrome	●			●	●
Organ Damage, Birth Defects	●				
Respiratory Problems	●			●	●

Asking about PAE

- DO NOT ASK all the questions about smoking , alcohol and drug use at the same time.
- Scatter them out in the history.
- Last drink
- When did you find out you were pregnant
- Month before you were pregnant.
- What do you drink
- How often did you drink
- When did you cut down or stop

When Mother is missing, dead and no useful historian is available

- ▶ Maternal Risk Score

Estimating Exposure Risk

Maternal Risk Score

<input type="checkbox"/>	Age over 25 years		
<input type="checkbox"/>	Unmarried, divorced, widow, living with partner		
<input type="checkbox"/>	On TANF, WIC, Social Security or		
<input type="checkbox"/>	income < \$16,000 per year		<u>Score</u>
<input type="checkbox"/>	Did not graduate from high school	Check any one Add 5	
<input type="checkbox"/>	Poor diet		
<input type="checkbox"/>	Smokes more than 1/2 pack per day		
<input type="checkbox"/>	Drinks, but less than 2 days/week & less than 2 drinks /drinking day	Check here Add 20	
<input type="checkbox"/>	Age first drunk less than 15 years		
<input type="checkbox"/>	In treatment over three times	Check any one Add 35	
<input type="checkbox"/>	In treatment in last 12 months		
<input type="checkbox"/>	Previous child died		
<input type="checkbox"/>	Previous child with FASD, or developmental disability		
<input type="checkbox"/>	Children out of home (foster care or adopted)		
<input type="checkbox"/>	Heavy drinker (drinks 3 or more drinks/day for 3 or more days per week, or more than 5 drinks/day on 6 or more occasions)	Check any one Add 45	
<input type="checkbox"/>	Uses inhalants, sniffs or illegal drugs		

<u>Score</u>	<u>Risk Category</u>	<u>Recommendations</u>	Total Score
0	None	Standard prenatal care	<div></div>
5	Low	Standard prenatal care	
20-40	Moderate	Standard prenatal care and FASD education	
45-50	High	High risk pregnancy, alcohol-drug abuse treatment	
55-105	Very High	High risk pregnancy, alcohol-drug abuse treatment	

FASD: What About The Men

Prenatal Alcohol Exposure

Increased risk of impotence 8%¹

Lack of sexual desire increased 31% to 58%²

Double the risk of erectile dysfunction³

Decreased sperm (volume, motility, and abnormal sperm)^{4,5}

Increase in risk of miscarriage 2–5 times⁶

Women drink with partner over 75% of the time⁷

Drinking is initiated by man over 40% of the time⁷

Increased risk of fetal death⁸

Decreased birth weight⁹

Late start of prenatal care¹⁰

Fewer prenatal visits¹⁰

Increased fetal deaths⁶

1. Lemere et al 1973 Am J Psychiat 130: 212–213; 2. Whalley et al 1978: Acta Psychiat Scand 58: 281–298; 3. Jensen SB 1984: Acta Psychiat Scand 69: 543–549; 4. Gumus et al 1998: Int Urol Nephrol: 30 755–759; 5. Muthusami et al 2005: Fertility and Sterility 84: 918–924; 6. Henriksen et al 2004: Am J Epidemiol: 160 661; 7. McBride et al 2012: Global Health Promotion 19: 102–114; 8. Muthusami et al 2005: Fertility and Sterility 84: 918–924; 9. Little et al 1987: Teratology 36: 59–65; 10. Burd et al 2003: Neurotoxicology and Teratology: 25(6) 681–688;

The 5 Trimesters

1

3 Months Prior to Pregnancy:
Early Detection prevents exposure. Smoking increases risks of FASD and increases severity

2

3

4

5

3 Months Post Delivery
Don't Give Up the Quit:
Alcohol
Smoking
Other Drug Use

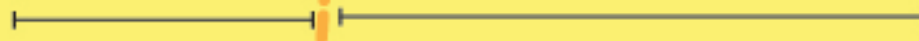
Never Too Late to Quit or Cut Down

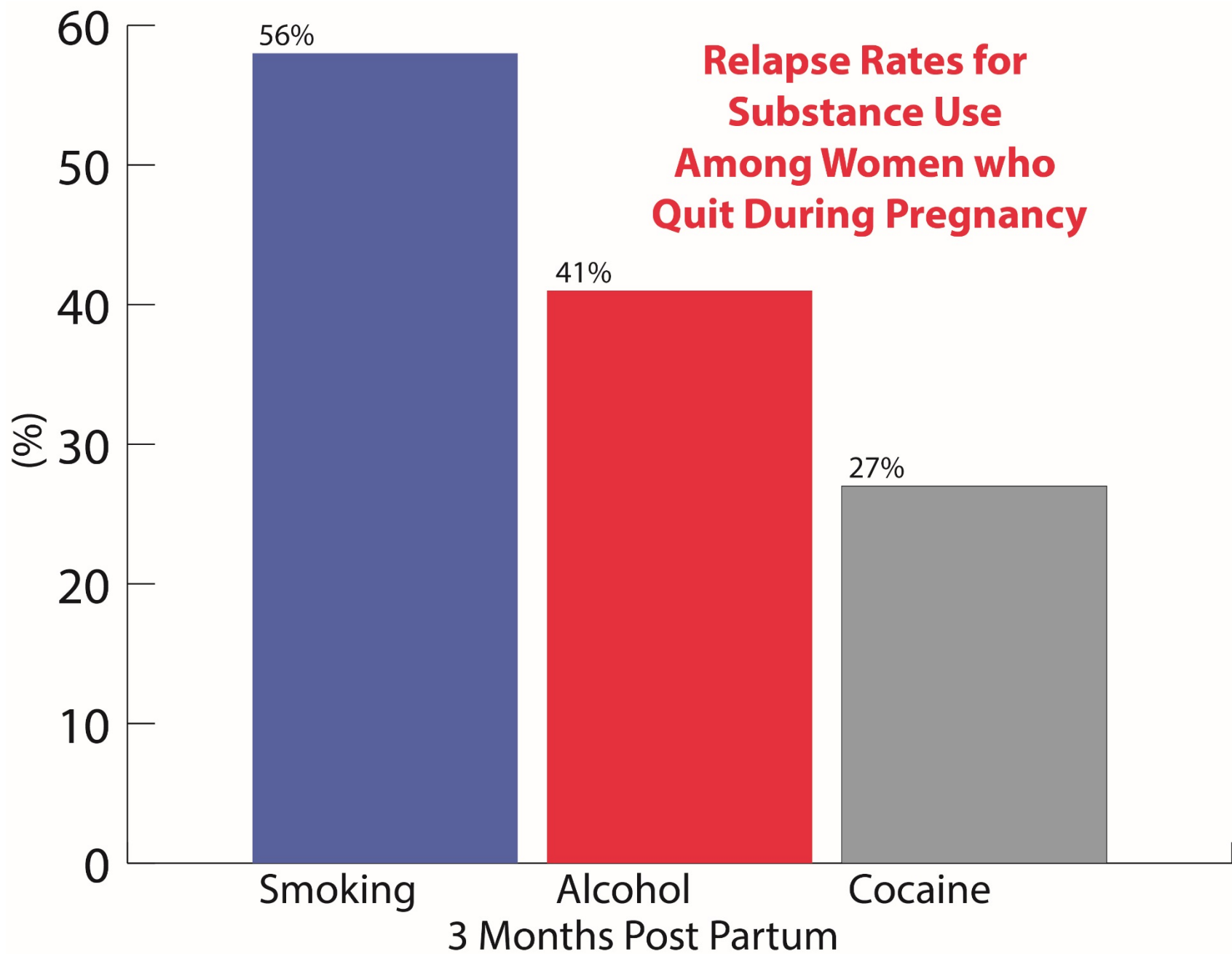
Detection at 10 weeks

(Friday and Saturday Drinking 4 drinks per night and 4 cigarettes every day)

Exposure =
80 drinks
& 240 cigarettes

Exposure Prevented =
320 drinks + 840 cigarettes

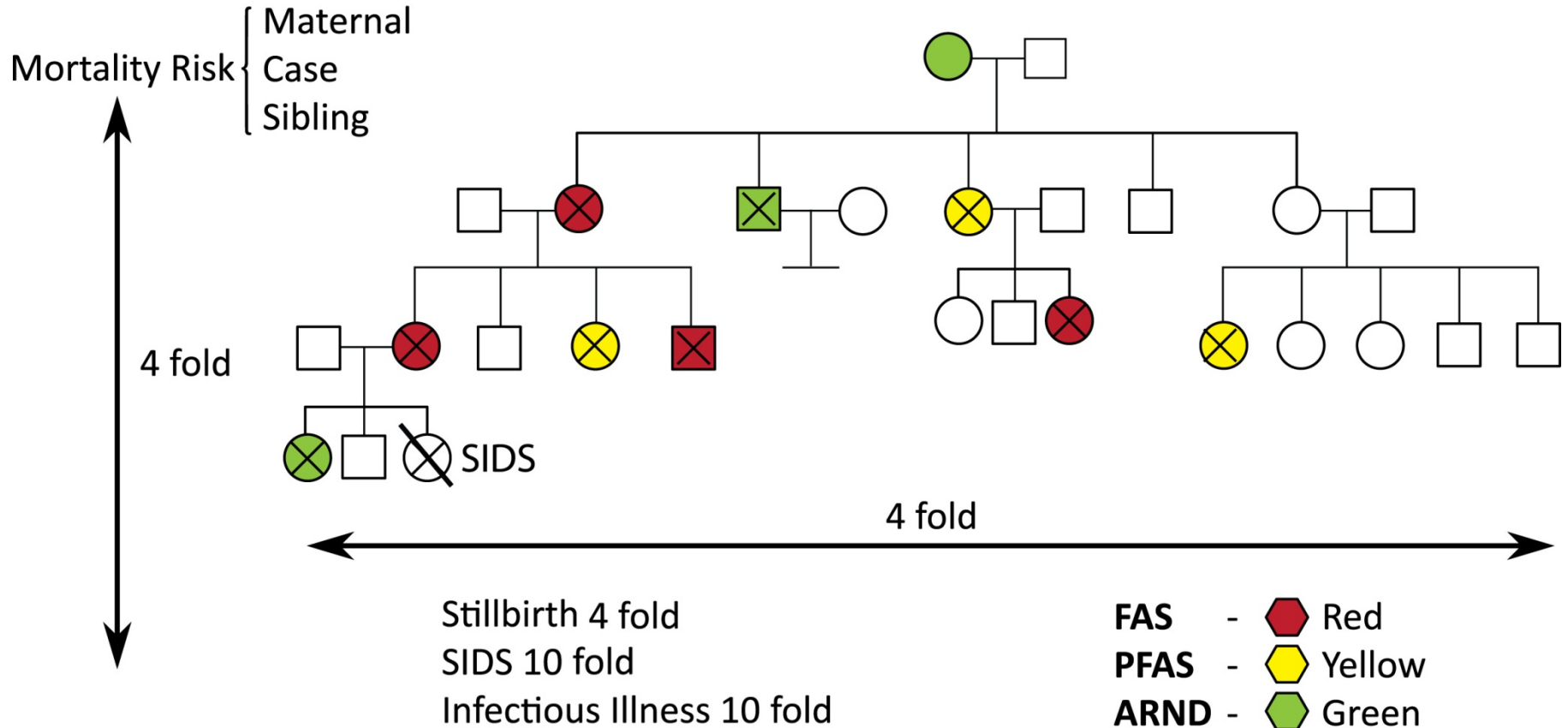




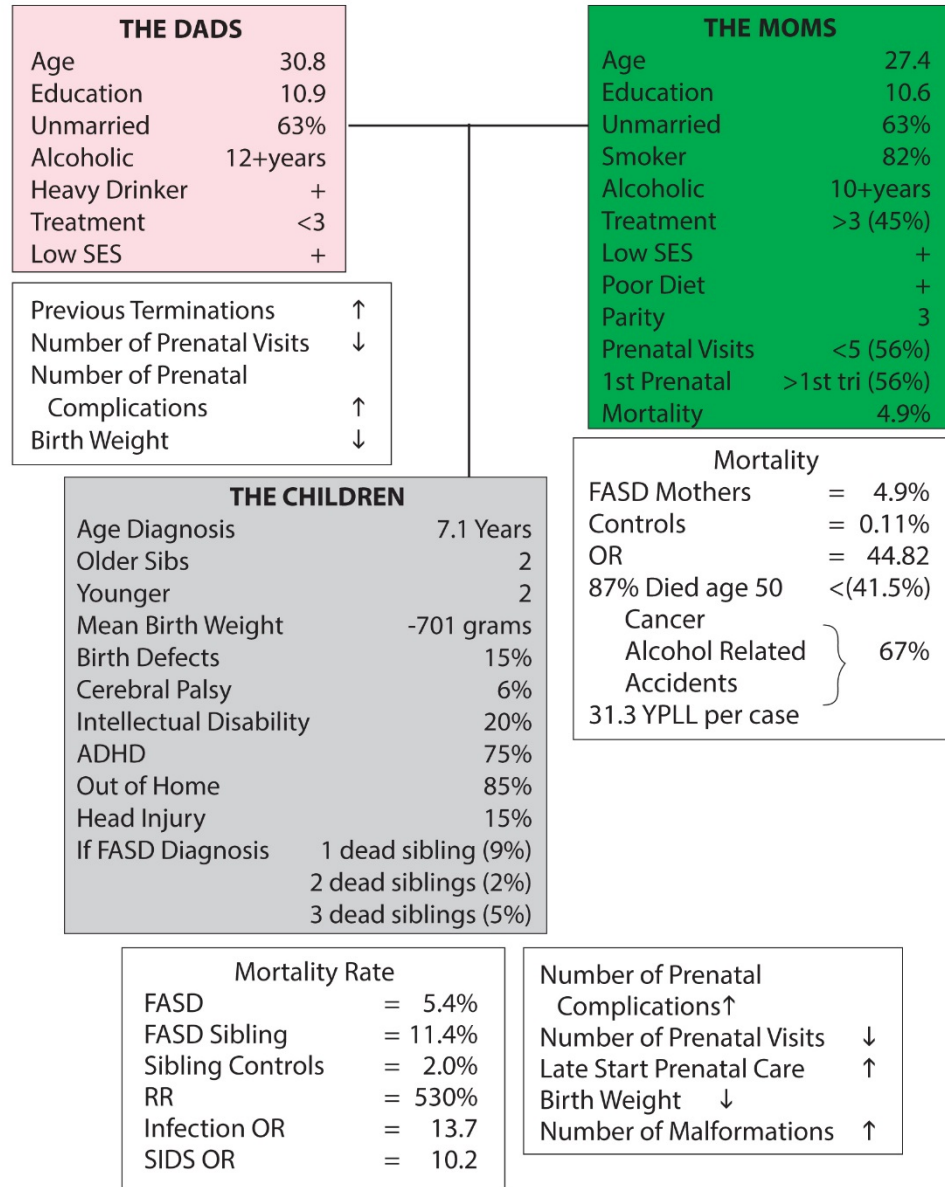
Data for the United States based on the R-DAS online analysis system of the National Surveys on Drug Use and Health, 2002-2011.



FASD - Familial and Generational Effects

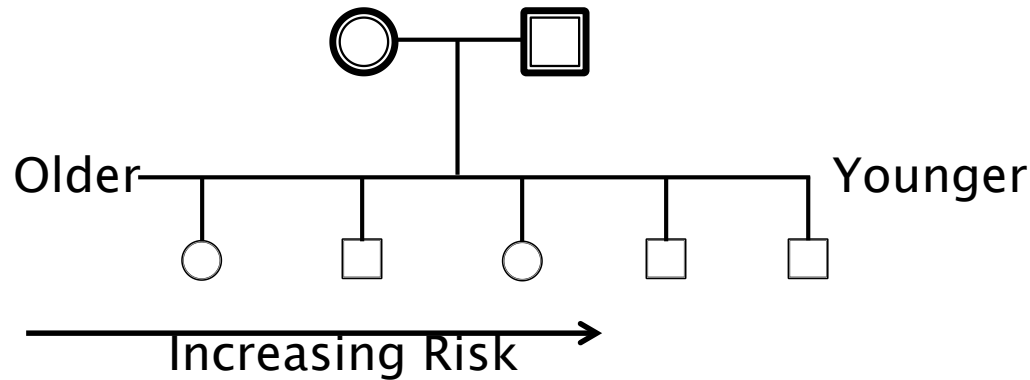


Summary of the North Dakota FASD Family

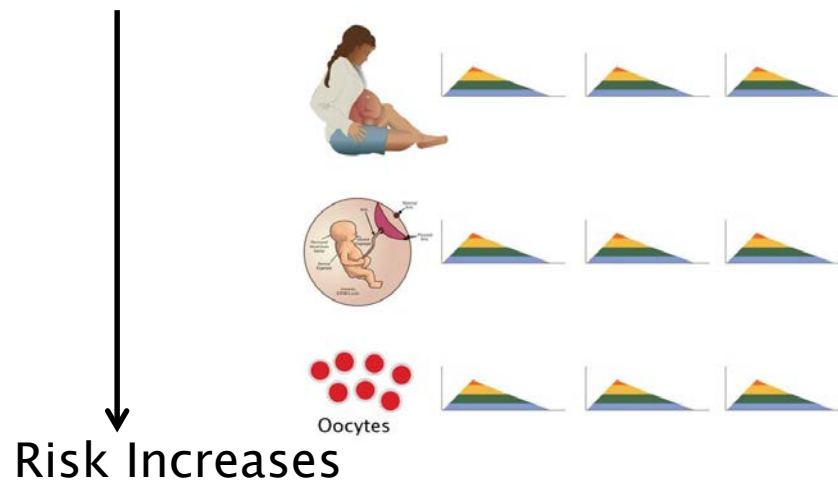


FASD: Epidemiology of Anticipation

Familial



Generational



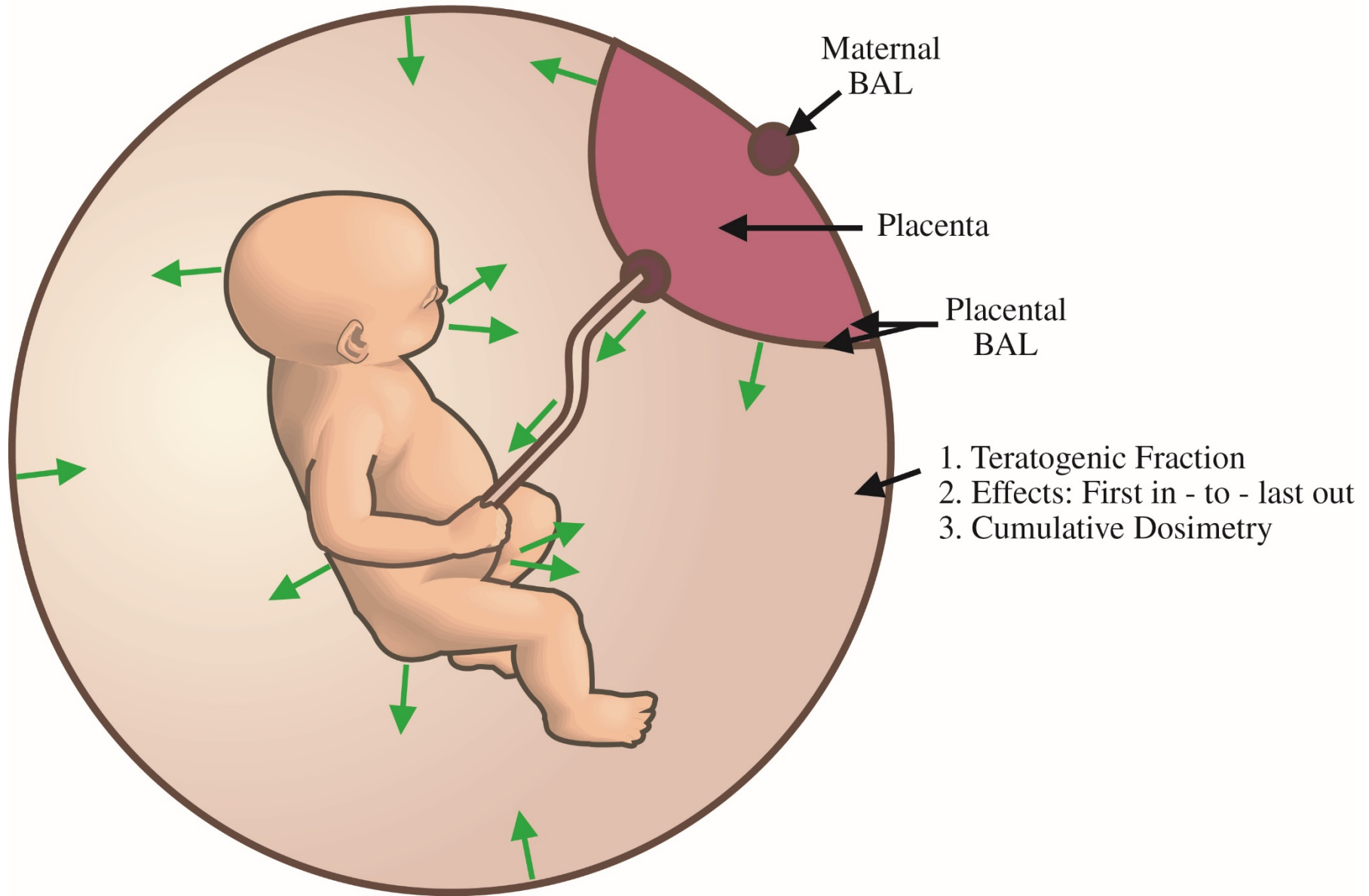
FASD and Maternal Mortality

- ▶ By 1st grade nearly 25% of mothers were dead

Urban et al Alch: Clin Exp Res: 2015

Alcohol: Dispersion and Elimination Kinetics

New Concepts on Fetal Exposure



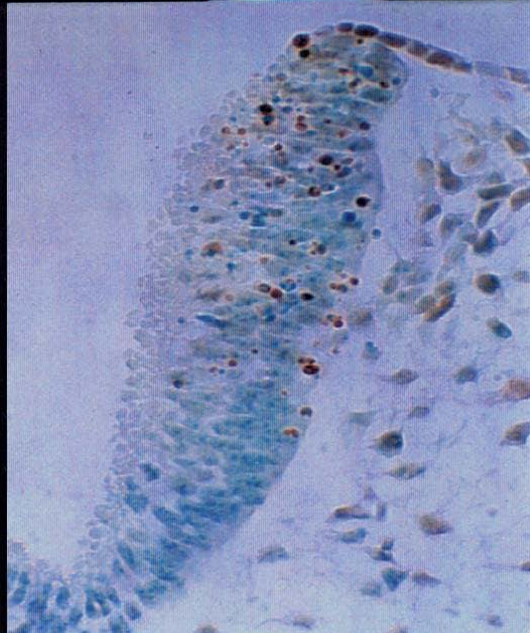
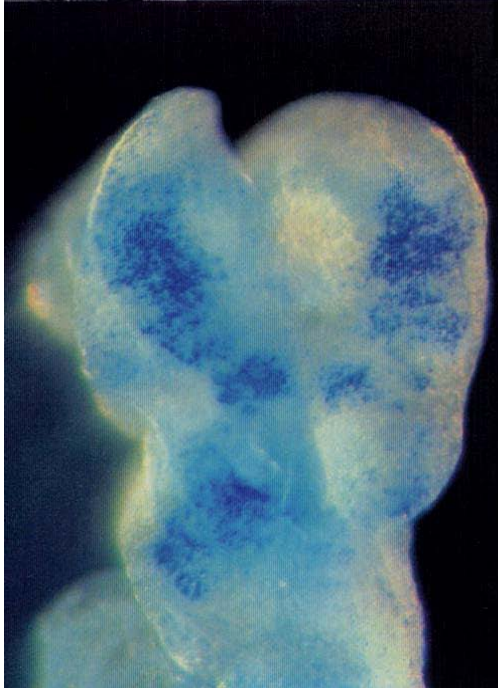
FASD: What does it look like?

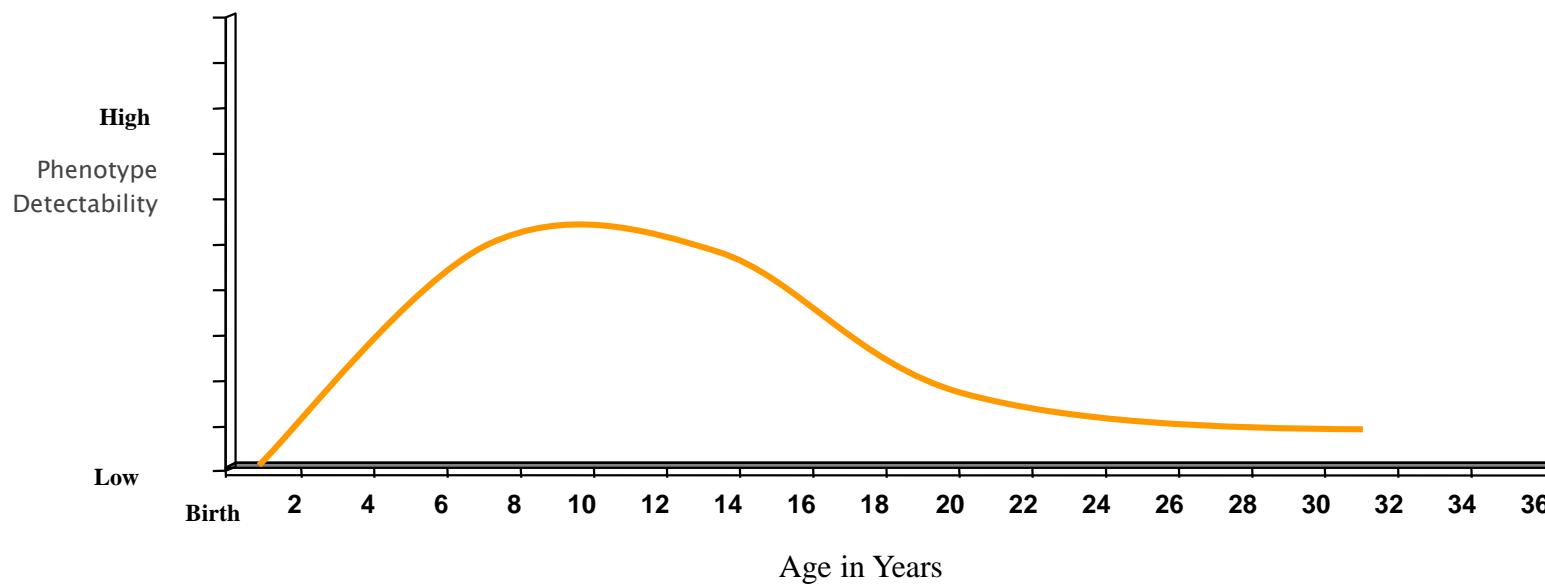
FASD Mortality Rates in North Dakota

Population	Rate	Surveillance
FAS	5.4%	15 years
Maternal	4.5%	15 years
Sibling	11.4% / 2.0% (530%)	14 years
▶ Infectious	OR 13.7	
▶ SIDS	OR 10.2	

Diagnostic Criteria for FASD

	CNS	FACE	GROWTH	HISTORY
FAS	YES (3+ Domain Deficits)	YES (3 of 3)	YES ($\leq 10\%$)	N/A
PFAS	YES (3+ Domains Deficits)	YES (2 of 3)	N/A	YES (Confirmed)
ARND	YES (2+ Domain Deficits)	N/A	N/A	YES (Confirmed)

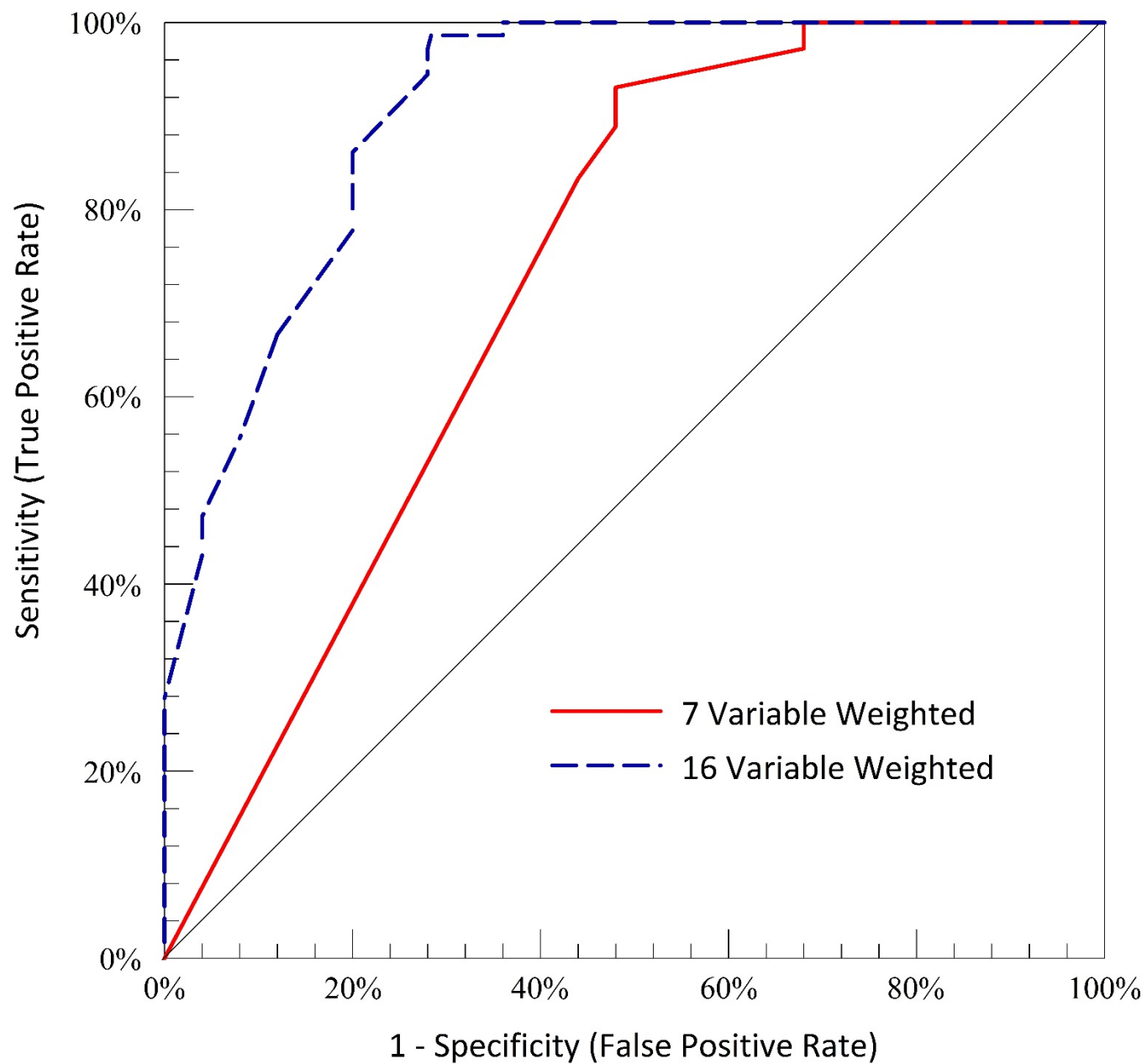


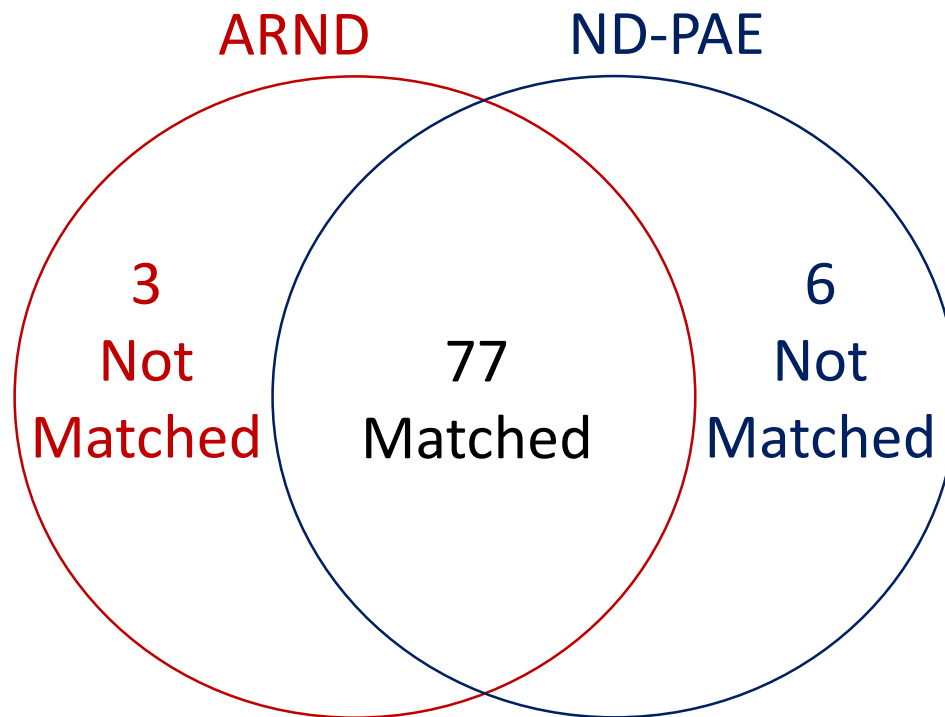


Criteria are Age Dependent







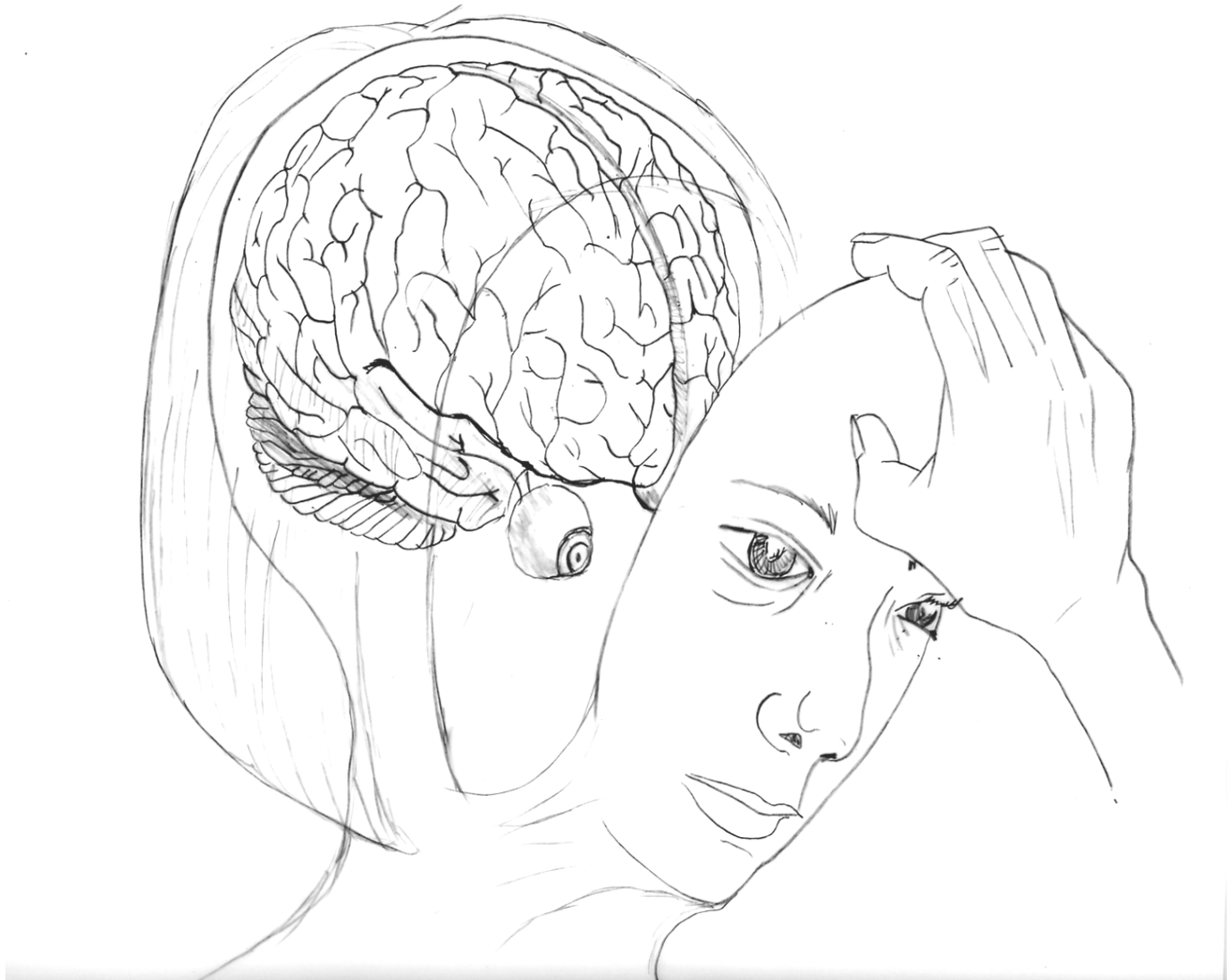


DIAGNOSIS

- ▶ Think ARND (90 – 95%)
- ▶ Not FAS (<5%) – diagnosis very complex
- ▶ Almost everyone is undiagnosed

Management of FASD?

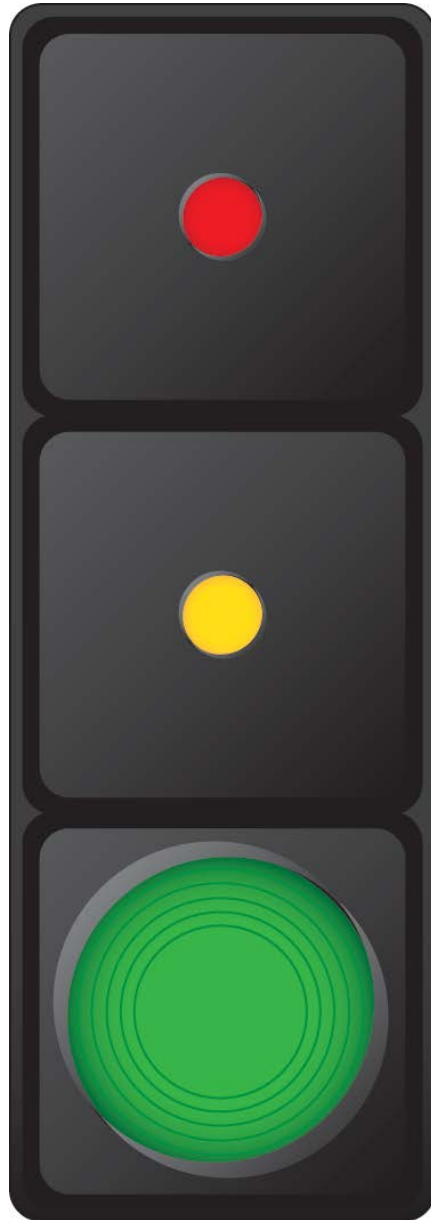
Typical FASD: Look for Impairment



Screen em ALL

- ▶ Foster Care
- ▶ Juvenile Justice
- ▶ Detention
- ▶ Mom was in Treatment
- ▶ Dead Sibling or Mother
- ▶ Sibling FASD

Neurobehavioral Expression of FASD

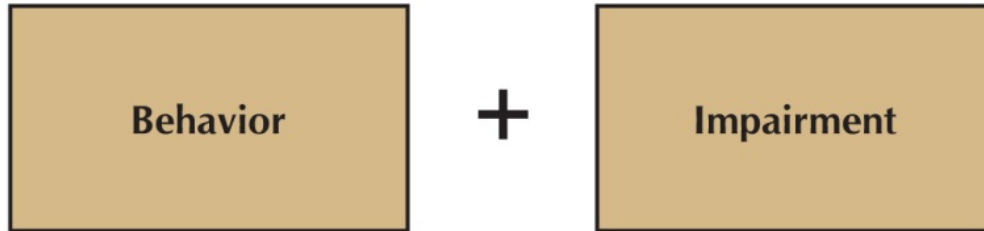


"No, I won't."

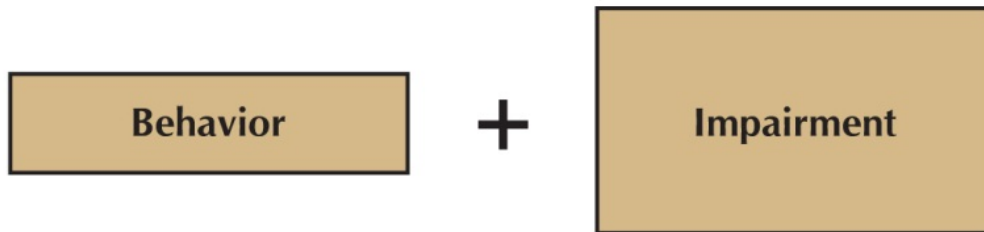
**"Let's wait; I want
to talk this over..."**

"OK!"

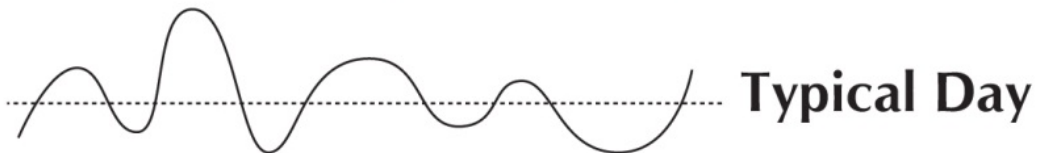
3) FASD: What we First See



A Better View



Inconsistent Performance

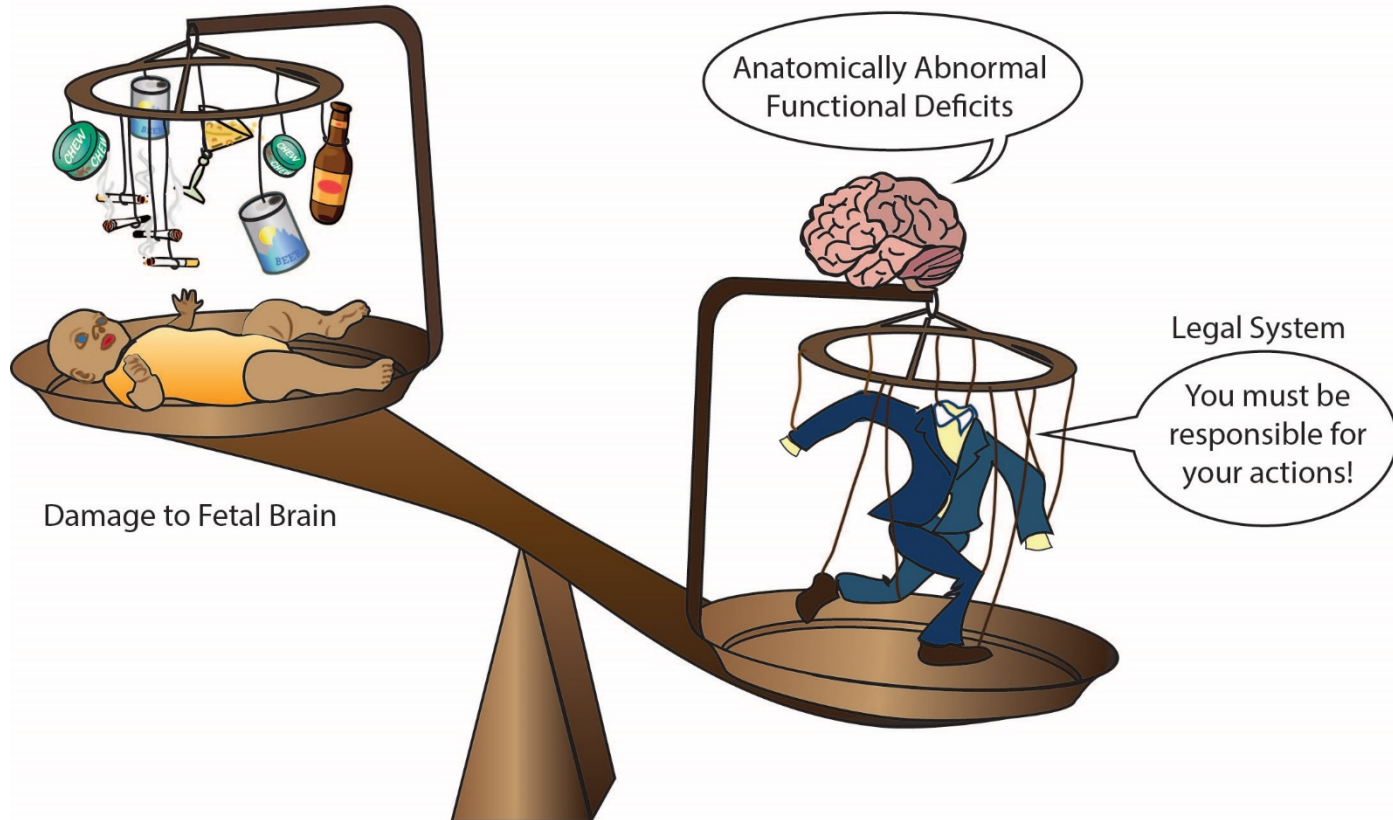


Behavior often persists over the lifespan

Same Behavior Different Age

Age	Behavior
2	Irritable, impulsive, difficult, requires lots of attention
4	Poorly organized, can't finish, easily distracted, forgets
6	Loses and forgets, comprehension deficits, social deficits
8	Can't finish, loses stuff, needs help every day, avoidant/aggressive
12	School problems, doesn't get stuff home or back to school, social deficits, extra help-helps
14	Late, social deficits, school problems, cognitive delays, behavior problems, does best at home, school problems often severe
20	Can't get things finished, avoidant, anxious, easily overwhelmed, memory is poor, why doesn't he/she change, poor choices
24	Late or missing meetings, easily overwhelmed, avoidant, social choices are poor, nods in agreement but doesn't understand, can't finish (treatment, parenting classes after 20+ years who/what needs to change?)

The Responsibility Scale



Behavior

- ▶ It is not the best days that define potential:
- ▶ It's the worst days that determine what your life will be.

FASD Impact on Foster Care

- 0–3 population
 - 0–5 population
 - Total
-
- ▶ Prenatal Alcohol Exposed@70%
 - ▶ Alcohol factor in removal@50%
 - ▶ Parents with FASD (42–60%)
 - ▶ Treatment failure due to FASD @50%
 - ▶ Mortality and FASD
 - ▶ Mothers Mortality@ 11%

Children With FASD Can Be Different to Parent

- ▶ High rates of
 - Sleep disorders
 - Eating problems
 - Toilet training difficulties
 - Temper Tantrums
 - Developmental disorders–needing therapy
 - School problems
 - Homework problems
 - Increasing severity of phenotype

We Should Not Increase Severity

- ▶ Level Systems
- ▶ Positive Reward Deficits
- ▶ Complex Requirements
- ▶ If you ever do it = You can always do it.
- ▶ Lack of Support and Advocacy

DISPILL[®]-USA
U.S. Patent no. 5,788,078 / 6,003,015 / 7,308,984 / 7,792,399 **MADE IN CANADA**

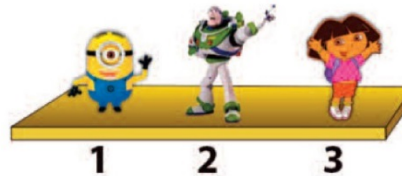
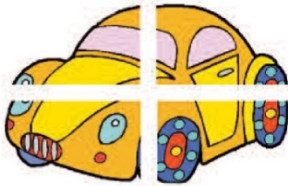
CALL YOUR DOCTOR FOR MEDICAL ADVICE ABOUT SIDE EFFECTS. YOU MAY REPORT SIDE EFFECTS TO FDA AT 1-800-FDA-1088
CAUTION: STATE OR FEDERAL LAW PROHIBITS THE TRANSFER OF THIS DRUG TO ANY PERSON OTHER THAN THE PATIENT FOR WHOM IT WAS PRESCRIBED. THIS PACKAGE IS NOT CHILD RESISTANT.



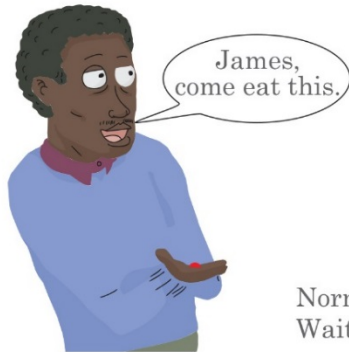
Behavior Management

POSITIVE BEHAVIORS

1. Increasing specific behaviors
2. Pick behavior which competes with negative behaviors



- Schedule rewards at first.
Then go to random chances.
- Big problems require potent rewards.



Normal voice.
Wait 30 seconds. No repeats.

Better Listening
It's in your bed.
It's by the TV
It's on the table

- When Nathaniel has this card, he can earn rewards.
- Remove card for low level of inappropriate behavior
- 3 minutes only
- **NO Card. NO reward.**
Offer frequent rewards.
- This is a signal that behavior is not appropriate. Can be done many times per day.



Reward Card

NEGATIVE BEHAVIORS

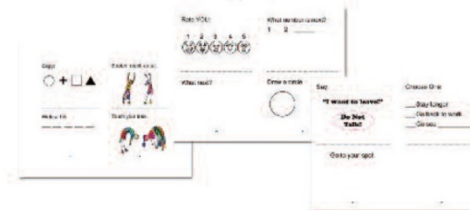
Frequent verbal behaviors - tear off one for each target behavior

Behavior _____

Reward _____

Calm Down Book



Have a plan.

- Practice
- Limit talking
- Reward all steps

Adolescents

▶ Think:

- Impairment
- Substance Abuse
 - **Monitor for this**
 - **Track Peers**
 - **Treat First Time and Every Time – It's a grave threat**
 - **Modify Treatment**
- Where will they live and work
- Environment is key
- Do Not Lose Hope

**In FASD:
YOU don't have to get better to do better!**



Accommodations

Acute Severe Alcohol Exposure During Pregnancy

Option 1. Hemodialysis

Option 2. Metacloxine

- Increase alcohol metabolism

Vonghia, L., et al, Eur J Intern Med, 2008, 561–567

FASD in Florida

- ▶ Annual Births 219,905
- ▶ Annual FASD Births 2,199
- ▶ Recurrent Cases 540
- ▶ 110 will recur in families with multiple affected children.

FASD in Florida

▶ New Cases Per Week	42
▶ FASD Population birth – 18	39,582
▶ Diagnosed	1,000–1,500
▶ Undiagnosed	38,000



Where are they at?

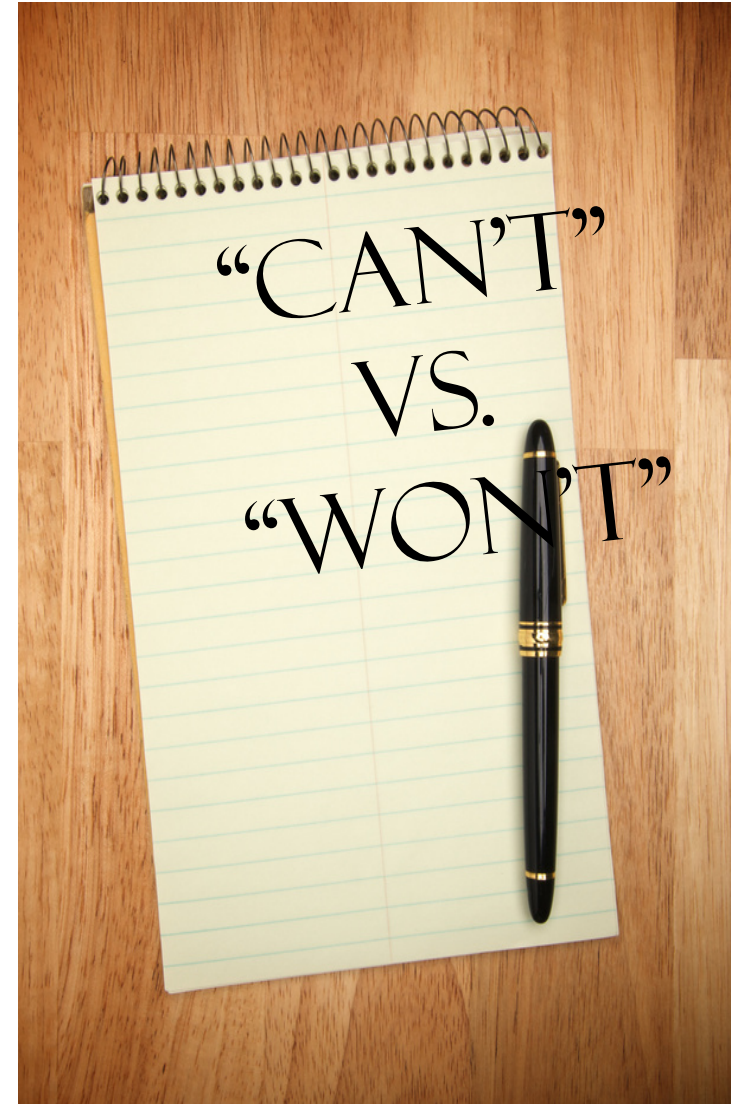
- ▶ Foster Care ***
- ▶ Birth Defects Clinics
- ▶ Mental Health**
- ▶ Special Education**
- ▶ Juvenile Corrections
- ▶ Residential Care**

SUBSTANCE USE DISORDERS

- 90% of all female opioid users are of childbearing age.
- 4.5% of pregnant women use illicit drugs
- Between 6.5 and 11% of women with substance abuse disorders become pregnant every year.

General Strategies

- Plan long-term
- Teach the child/parent to ask for help
- Focus on strengths
- Use praise constantly
- Identify someone (or a team) to serve as the “external brain”



What Behavior to Start With

- ▶ Frequent
- ▶ Easy to Identify and Count
- ▶ Has a Negative and Positive Consequence
- ▶ Try to avoid infrequent behaviors to start with

Calm Down Book
For

Say:

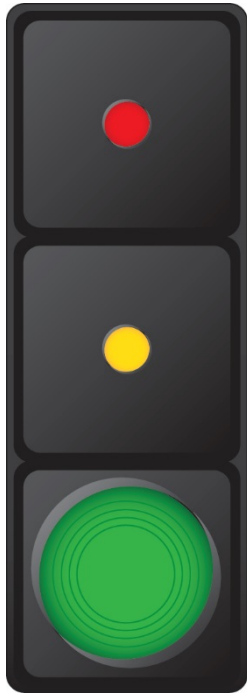
“I want to leave!”

**Do Not
Talk!**

Go to your spot.

Name_____

Date_____



"No, I won't."

**"Let's wait; I want
to talk this over..."**

"OK!"

Green Light problems in the last year

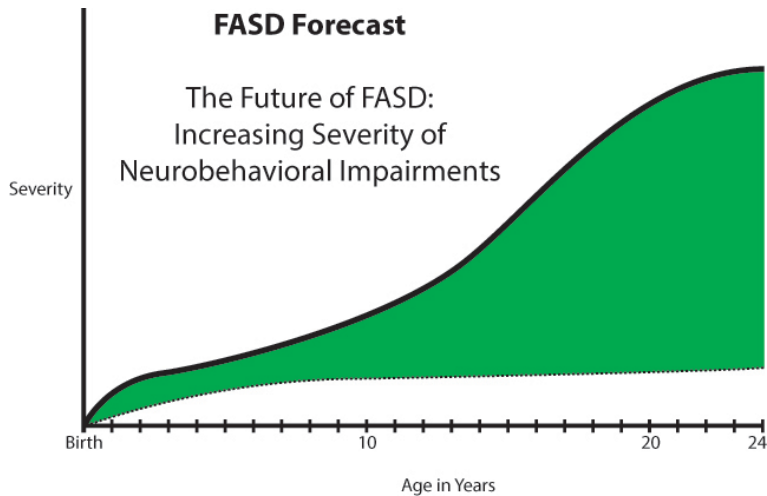
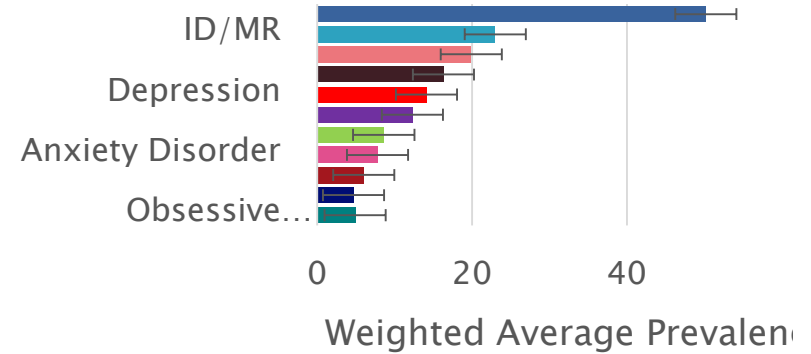
-
-
-
-
-
-

My plan:

- 1)
- 2)
- 3)



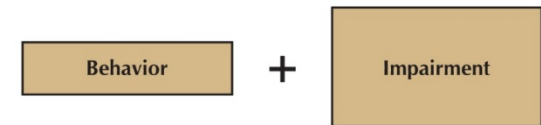
FASD and Comorbid Mental Disorders



3) FASD: What we First See



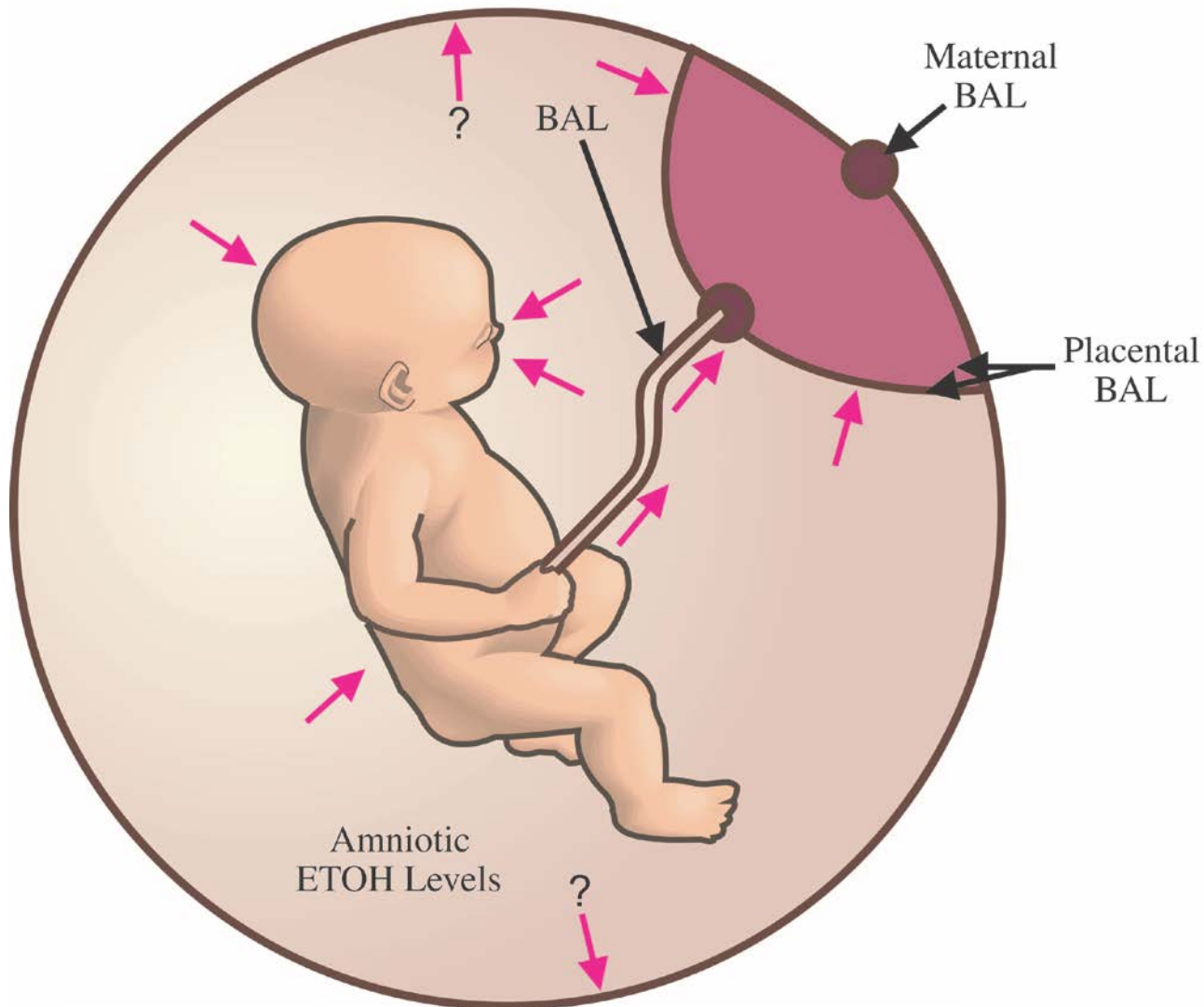
A Better View



Inconsistent Performance



Fetal Exposure



FASD and Maternal Mortality

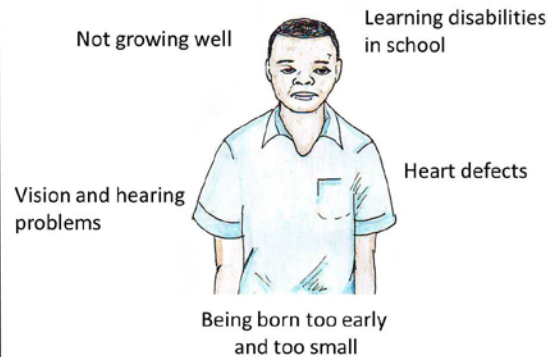
- ▶ By 1st grade nearly 25% of mothers were dead
- ▶ Urban et al: Alch: Clin Exp Res: 2015



I am concerned about the affect of alcohol on your baby.



Drinking in pregnancy can cause lifelong health problems for your baby.



When do you drink? Why do you drink?



With my partner.



When I am unhappy.



With my friends.

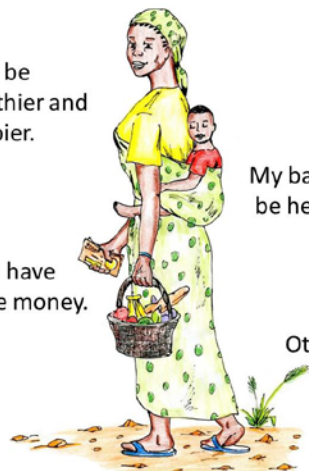
?

Other reasons?

What are advantages for you to stop drinking?

I will be healthier and happier.

I will have more money.



My baby will be healthy.

Other reasons?

How can you avoid alcohol?



Find a friend to help.



Avoid situations with alcohol.



Plan healthy activities with friends.

?

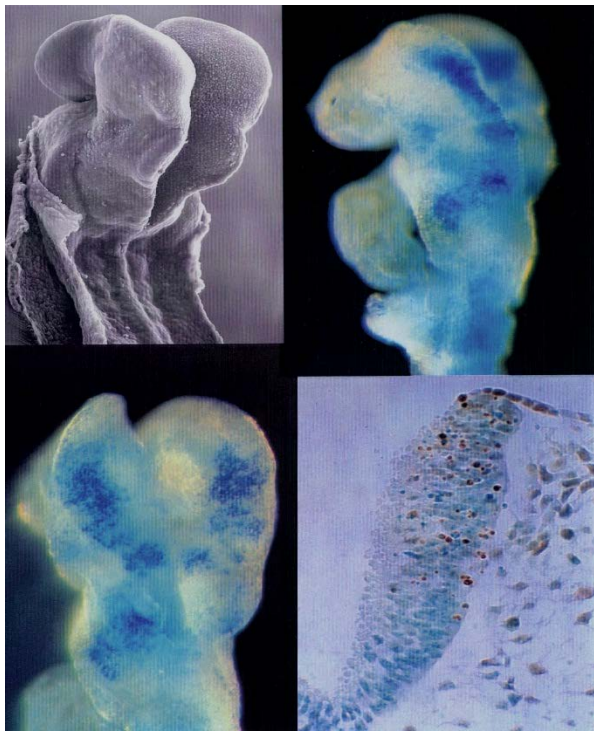
Other examples?

I want to meet with you again. When is your next prenatal visit?

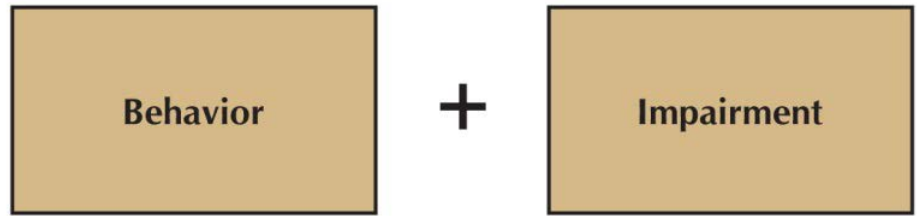


Remember to bring your support friend to your next visit.

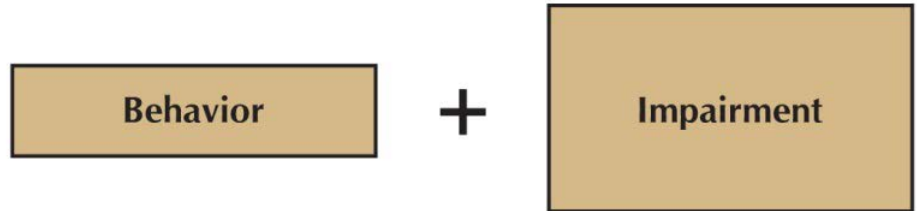




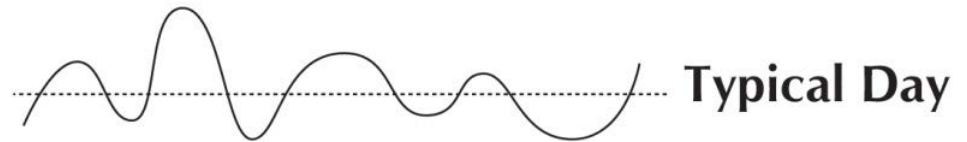
3) FASD: What we First See



A Better View



Inconsistent Performance

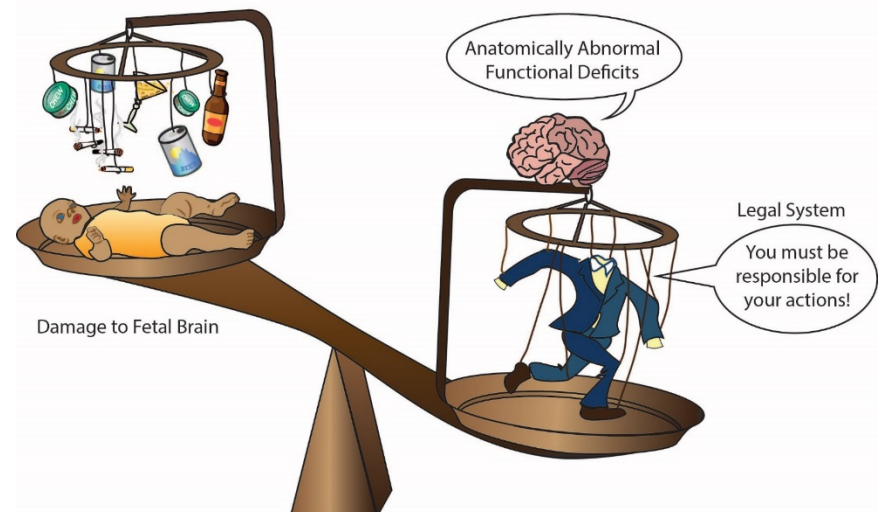


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The Responsibility Scale



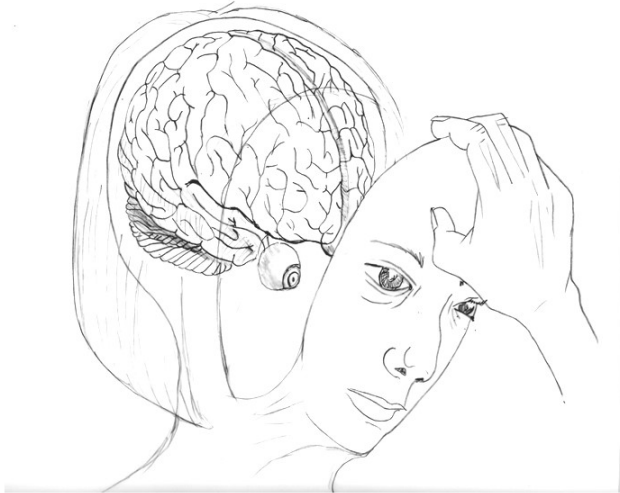
. . . we can envision few things
more certainly beyond one's
control than the drinking habits
of a parent prior to one's birth

Dillbeck v. State (Fla. 1994)





See PAE, Think Impairment



Neurobehavioral Expression of FASD

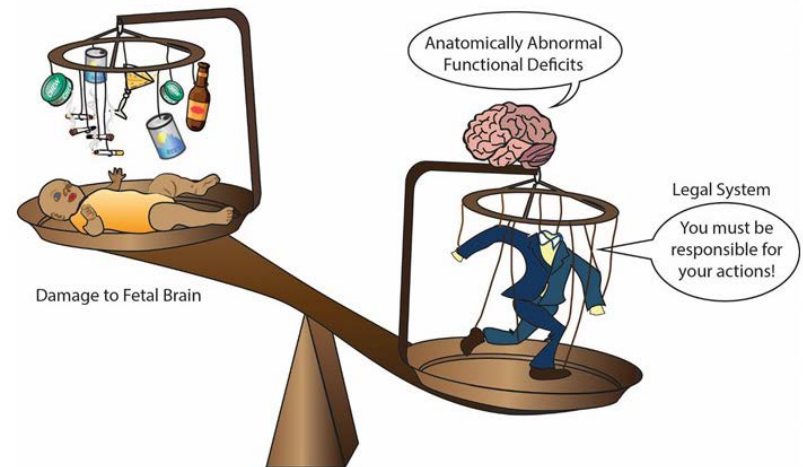


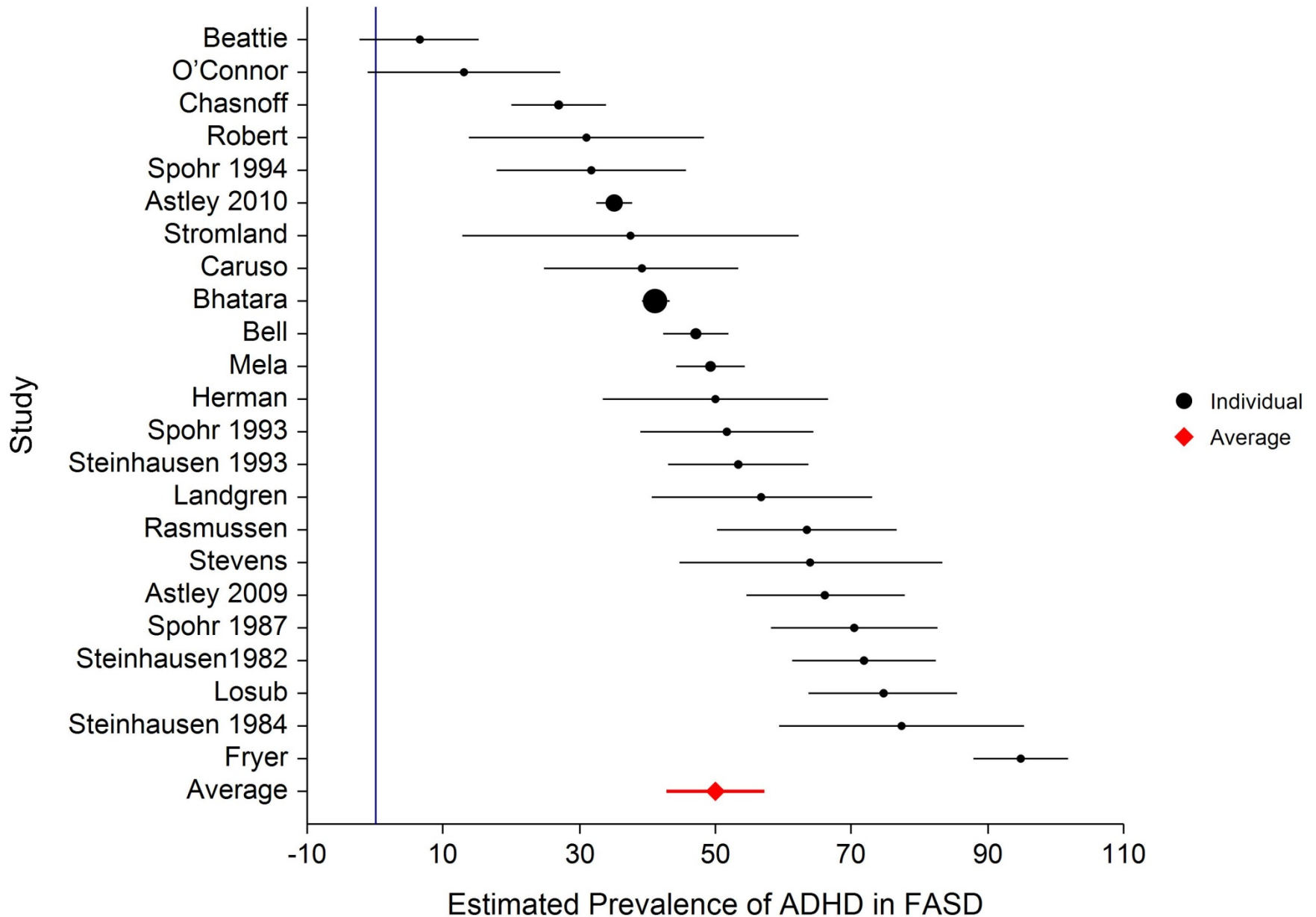
Behind the Face of FASD: We See

- ▶ ADHD
- ▶ Depression
- ▶ Cognitive Impairment
- ▶ Intellectual Disability
- ▶ Learning Disabilities
- ▶ Substance Abuse
- ▶ Judgment Deficits

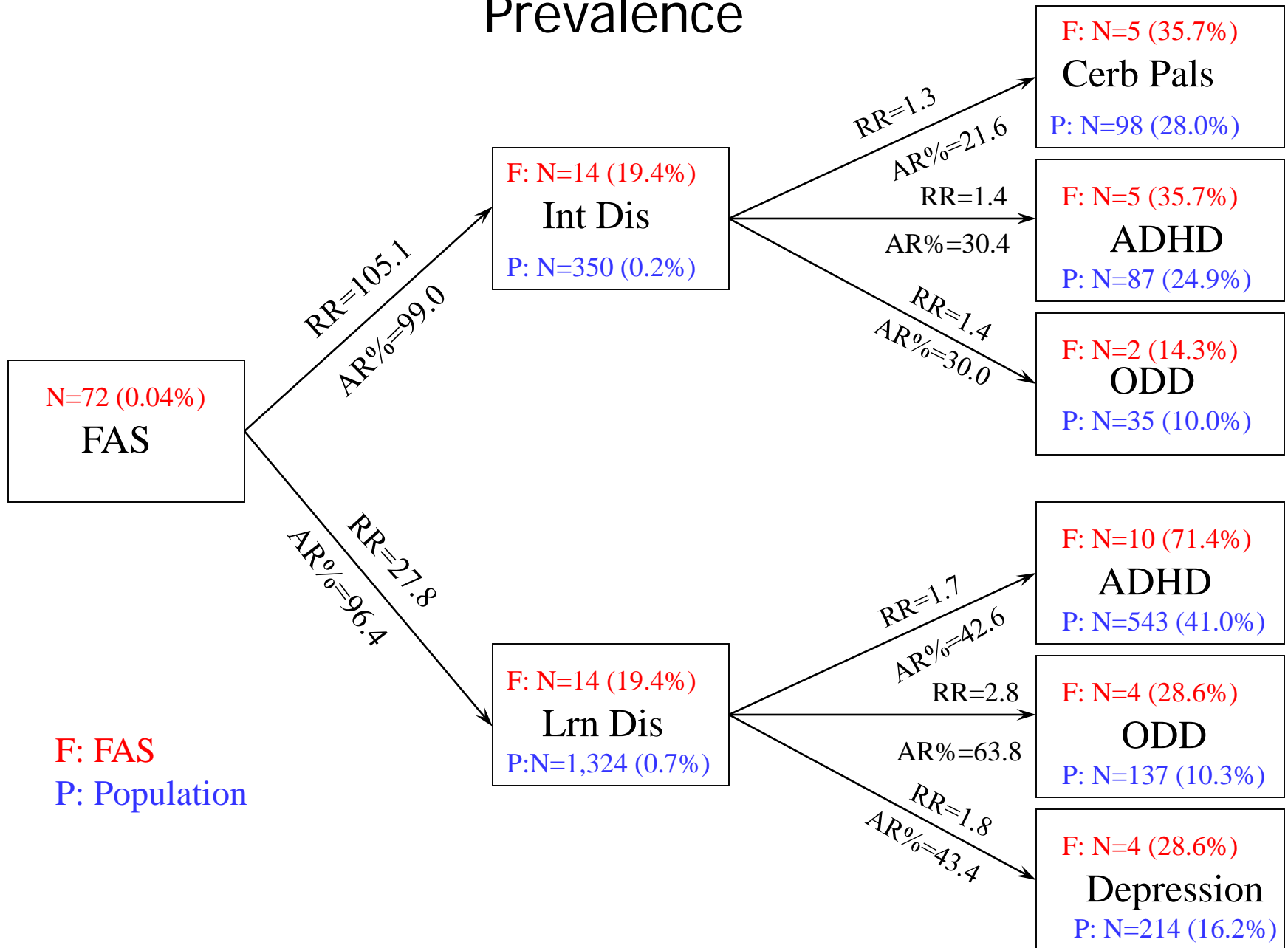


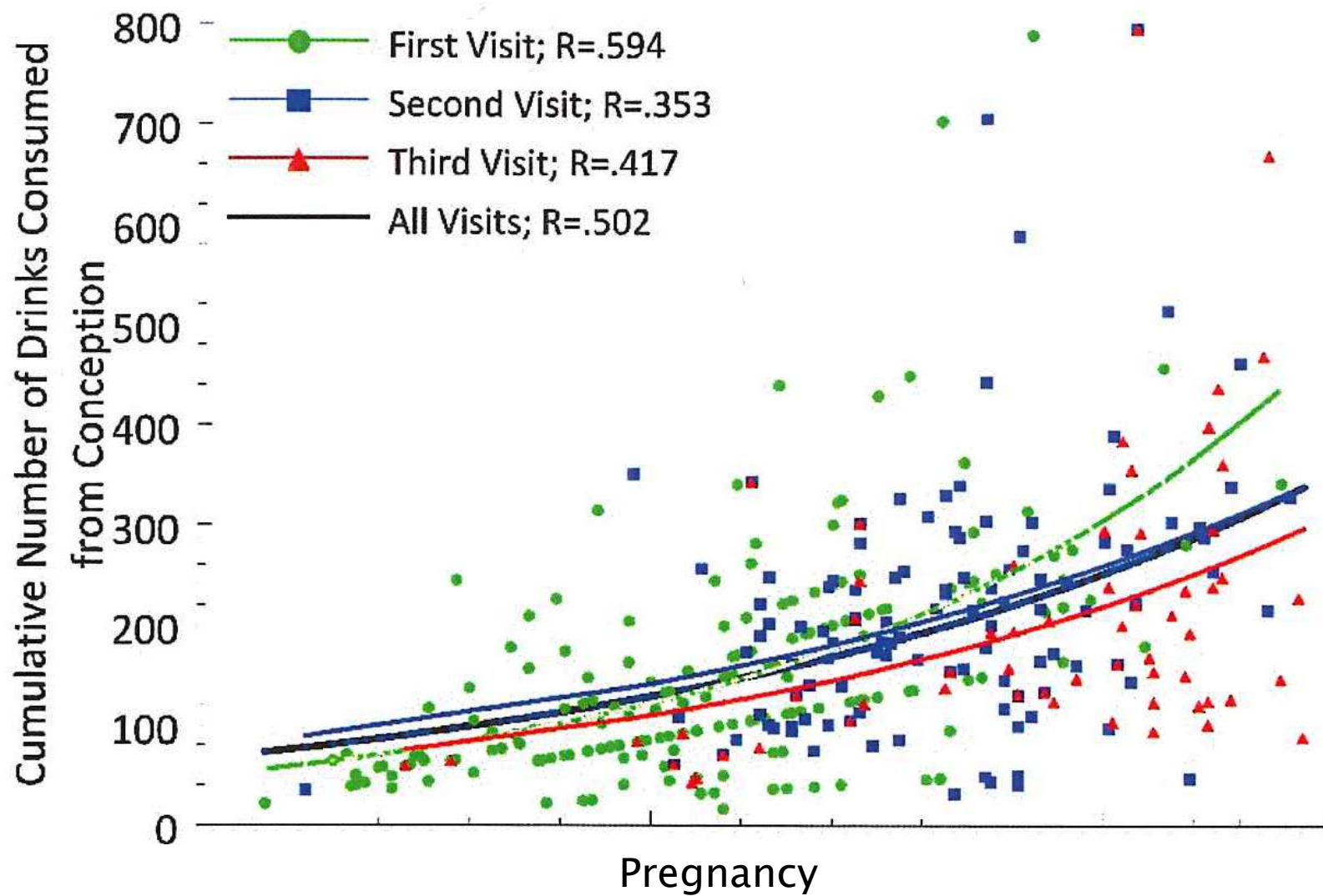
The Responsibility Scale



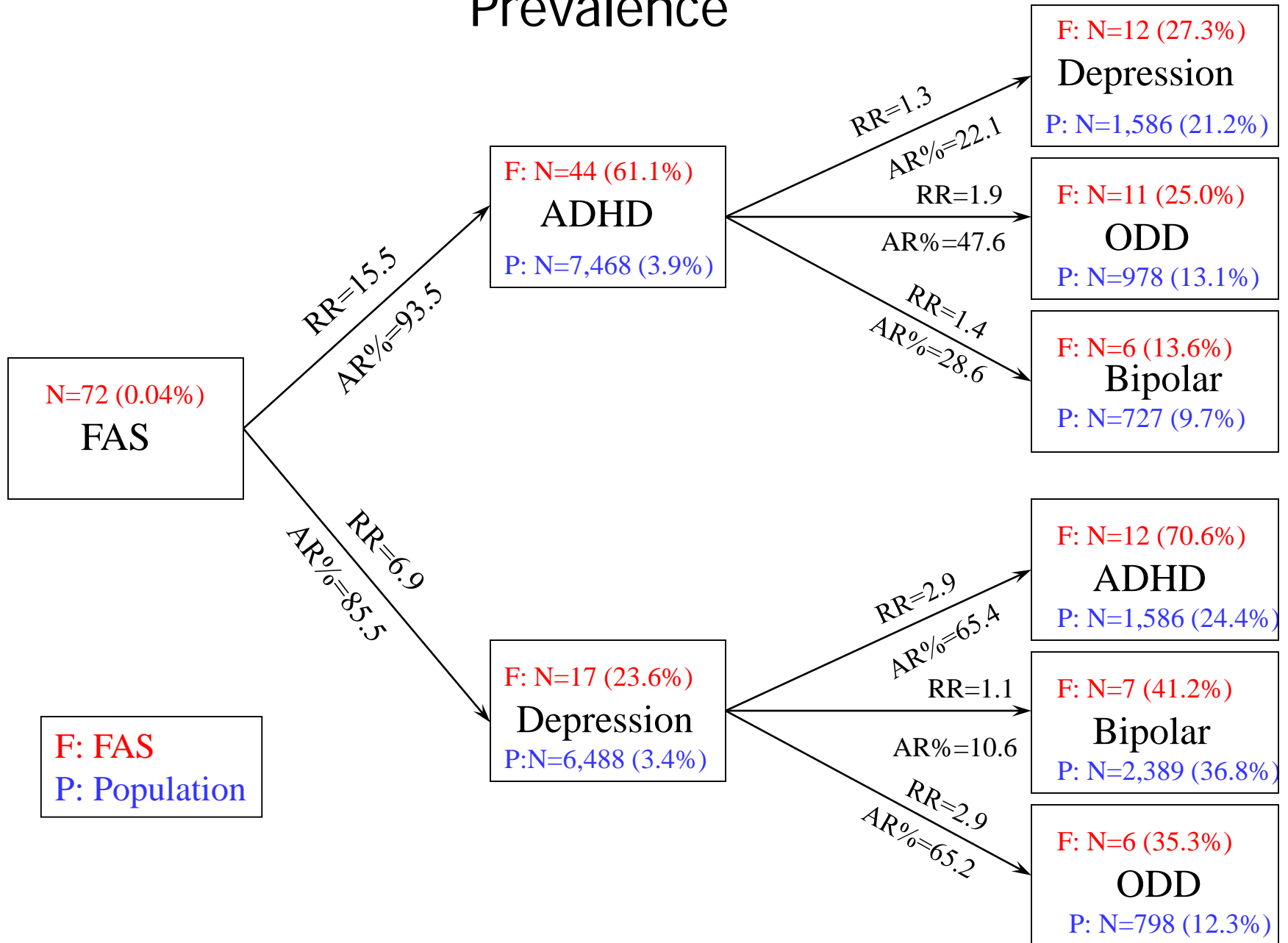


Prevalence





Prevalence



A Philosophy

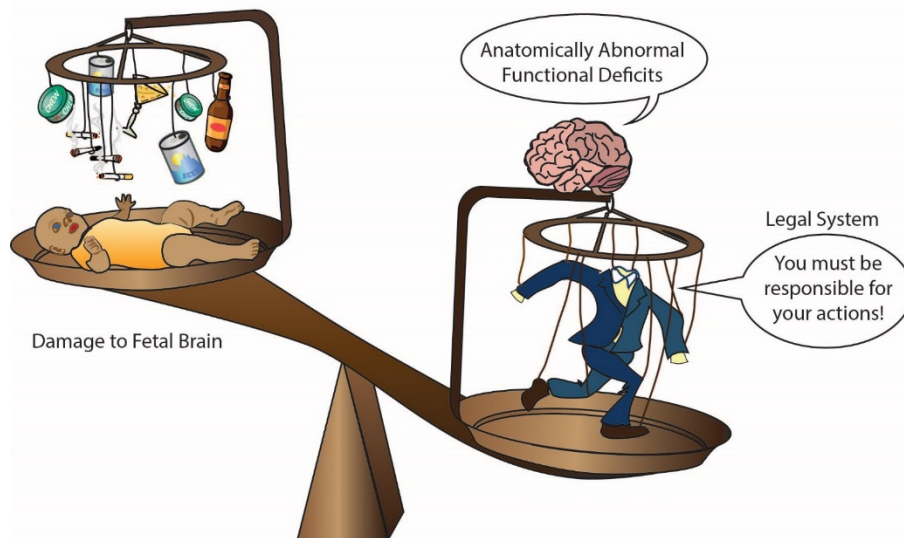
We can envision few things more certainly beyond one's control than the drinking habits of a parent prior to one's birth"

Dilbeck v. State 643 So 2d 1027 Fla 1994 (1994)

The expression of FASD takes a lifetime: The risk is lifelong

- ▶ Age and development dependent risk
- ▶ Mortality
- ▶ Substance abuse
- ▶ Exposure to violence
- ▶ Decreased capacity for independent living

The Responsibility Scale



Incarceration Risk For FASD

- ▶ In Canada youth 12–18 years of age with FASD have a 19 fold increase risk of incarceration.

Neurobehavioral Disorder Associated With Prenatal Alcohol Exposure

Name: _____ Birth Date: _____
dd/mm/year

Gender: _____ Current Age: _____

Proposed Criteria

- _____ A. More than minimal exposure to alcohol during gestation, including prior to pregnancy recognition. Confirmation of gestational exposure to alcohol may be obtained from maternal self-report of alcohol use in pregnancy, medical or other records, or clinical observation.
- _____ B. Impaired neurocognitive functioning as manifested by one or more of the following:
 - _____ 1. Impairment in global intellectual performance (i.e., IQ of 70 or below, or a standard score of 70 or below on a comprehensive developmental assessment).
 - _____ 2. Impairment in executive functioning (e.g., poor planning and organization; inflexibility; difficulty with behavioral inhibition).
 - _____ 3. Impairment in learning (e.g., lower academic achievement than expected for intellectual level; specific learning disability).
 - _____ 4. Memory impairment (e.g., problems remembering information learned recently; repeatedly making the same mistakes; difficulty remembering lengthy verbal instructions).
 - _____ 5. Impairment in visual-spatial reasoning (e.g., disorganized or poorly planned drawings or constructions; problems differentiating left from right).
- _____ C. Impaired self-regulation as manifested by one or more of the following:
 - _____ 1. Impairment in mood or behavioral regulation (e.g., mood lability; negative affect or irritability; frequent behavioral outbursts).
 - _____ 2. Attention deficit (e.g., difficulty shifting attention; difficulty sustaining mental effort).
 - _____ 3. Impairment in impulse control (e.g., difficulty waiting turn; difficulty complying with rules).
- _____ D. Impairment in adaptive functioning as manifested by two or more of the following, one of which must be (1) or (2):
 - _____ 1. Communication deficit (e.g., delayed acquisition of language; difficulty understanding spoken language).
 - _____ 2. Impairment in social communication and interaction (e.g., overly friendly with strangers; difficulty reading social cues; difficulty understanding social consequences).
 - _____ 3. Impairment in daily living skills (e.g., delayed toileting, feeding, or bathing; difficulty managing daily schedule).
 - _____ 4. Impairment in motor skills (e.g., poor fine motor development; delayed attainment of gross motor milestones or ongoing deficits in gross motor function; deficits in co-ordination and balance).
- _____ E. Onset of the disorder (symptoms in Criteria B, C, and D) occurs in childhood.
- _____ F. The disturbance causes clinically significant distress or impairment in social, academic, occupational, or other important areas of functioning.
- _____ G. The disorder is not better explained by the direct physiological effects associated with postnatal use of a substance (e.g., a medication, alcohol or other drugs), a general medical condition (e.g., traumatic brain injury, delirium, dementia), another known teratogen (e.g., fetal hydantoin syndrome), a genetic condition (e.g., Williams syndrome, Down syndrome, Cornelia de Lange syndrome), or environmental neglect.

Talking about Alcohol



Instead, say: "I...
"We...
"Together...
"We can..."

Sit down to talk



© 2014

Where Are We At?

How does drinking help? (try for 2 or 3)

What problems does drinking cause?
(try for 2 or 3)

Could you cut down? Y N Maybe

Could you stop? Y N Maybe

Reducing Risk

What would be most helpful for you?
(try for 2 or 3)

Who can we get to help us?

Close friend
Relative
AA sponsor

Can we make it through today?

Y N Maybe

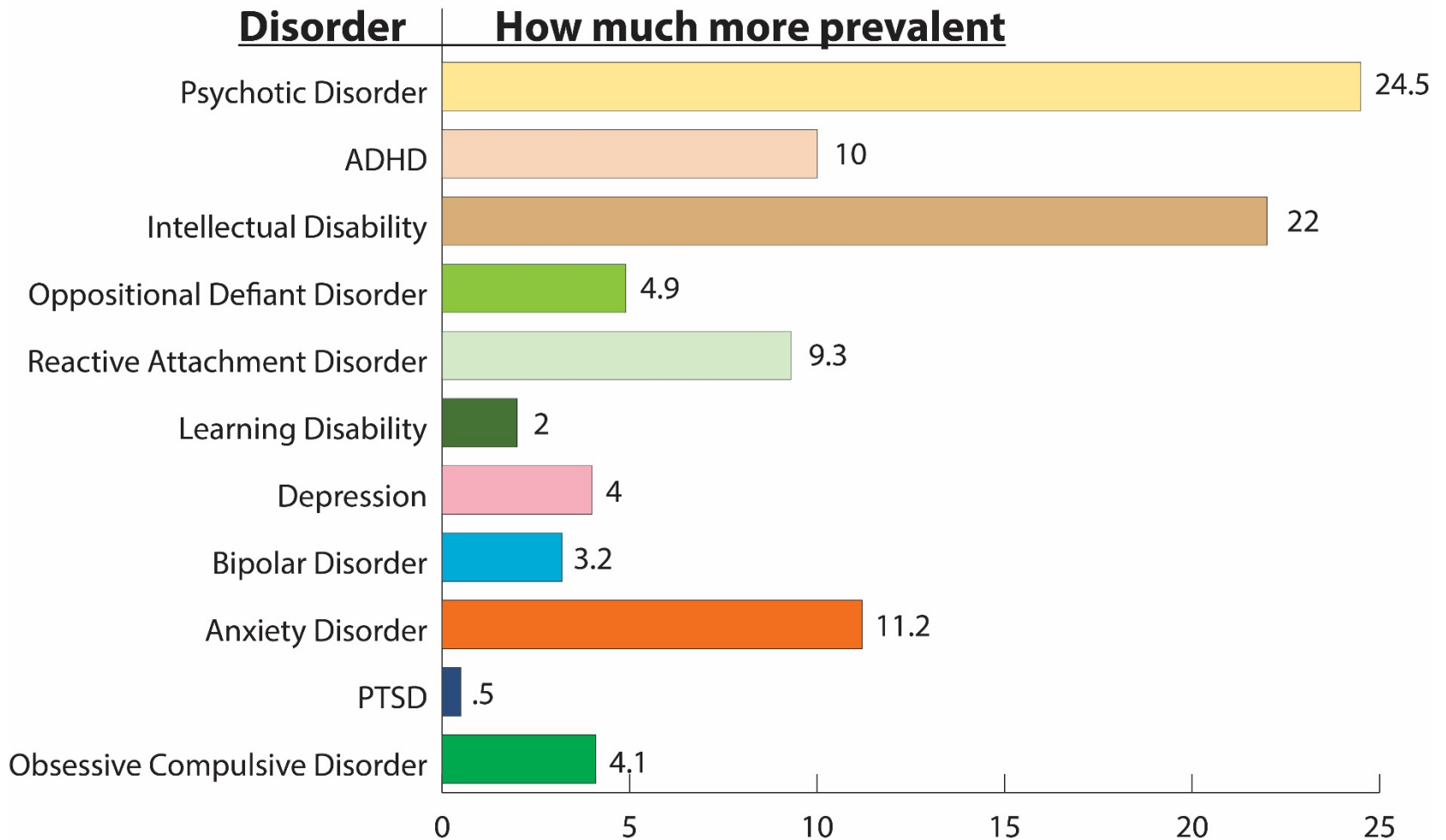
Followup

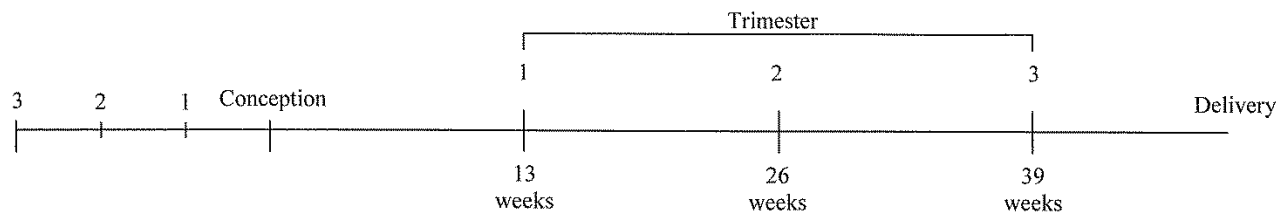
How can we stay in touch?

Let's get together again on

Larry Burd, Ph.D.
North Dakota FAS Center
701.777.3683
larry.burd@med.UND.edu
www.online-clinic.com

FASD and Mental Disorders





When was your last drink?

Date you knew you were pregnant

Your pregnancy was confirmed by
doctor visit

Date _____

Date _____

Date _____

When do you usually drink?

Every day?

Weekends Th F S S

On a drinking day, how many drinks do you have?

How much do you buy?

On a drinking day _____

On a weekend _____

Pregnancy Exposure

Exposed yes _____ no _____

Days exposed _____

% of pregnancy exposed _____

Binge days (4 or more) _____

Cumulative exposure _____ drinks

When did you have your last cigarette? _____

What days do you smoke? _____

Number of cigarettes you usually have? per day _____ or per week _____

How many cigarettes do you buy per week? _____ or per month? _____

Exposed yes _____ no _____

Days exposed n = _____ % of pregnancy _____

Cumulative exposure _____ cigarettes

Table 1. Cost Comparison of Prevention Funding for Zika (\$350 million) and Fetal Alcohol Spectrum Disorder over a comparable time period of 418 days.

Zika	Cost Per Case	FASD	Cost Per Case	Cost Ratio
222 cases acquired in US	\$1.576 million	1% = 43,472	\$345	4,568
4,861 cases diagnosed in travelers	\$72,000	4% = 173,888	\$86	837

Uppgivenhetssyndrom (Resignation syndrome)

Typical FASD: Look for Impairment

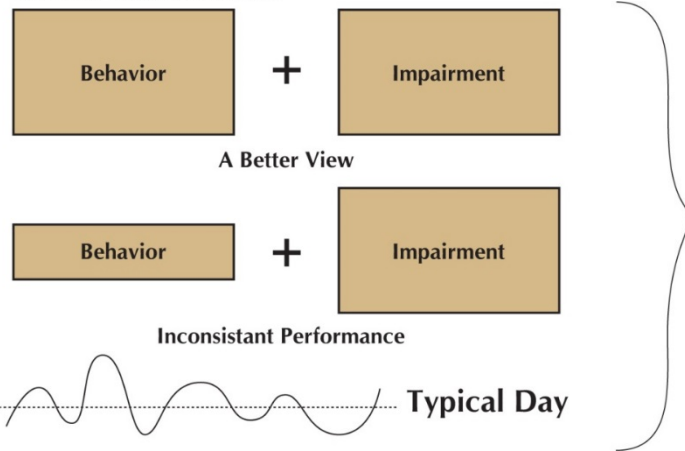


Behind the Face of FASD: We See

- ▶ ADHD
- ▶ Depression
- ▶ Cognitive Impairment
- ▶ Intellectual Disability
- ▶ Learning Disabilities
- ▶ Substance Abuse
- ▶ Judgment Deficits

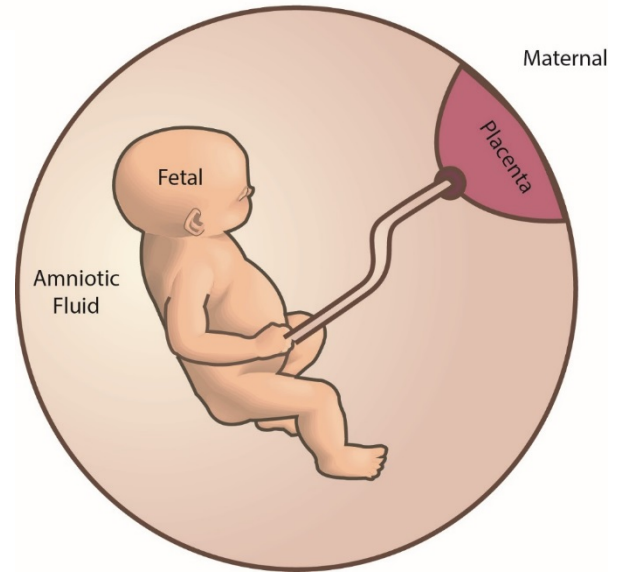
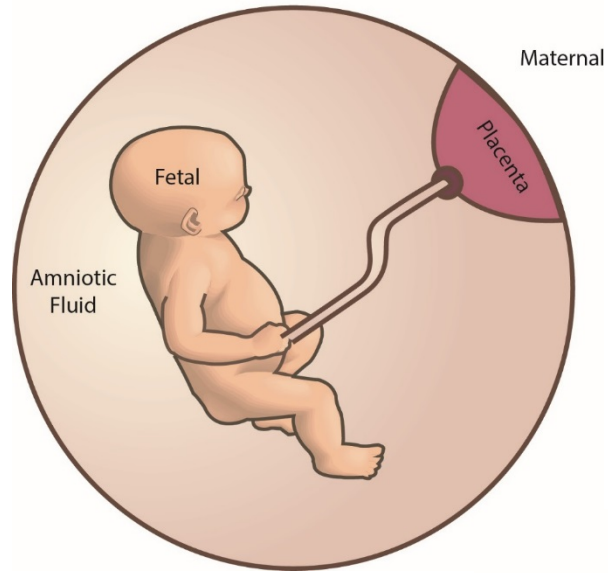
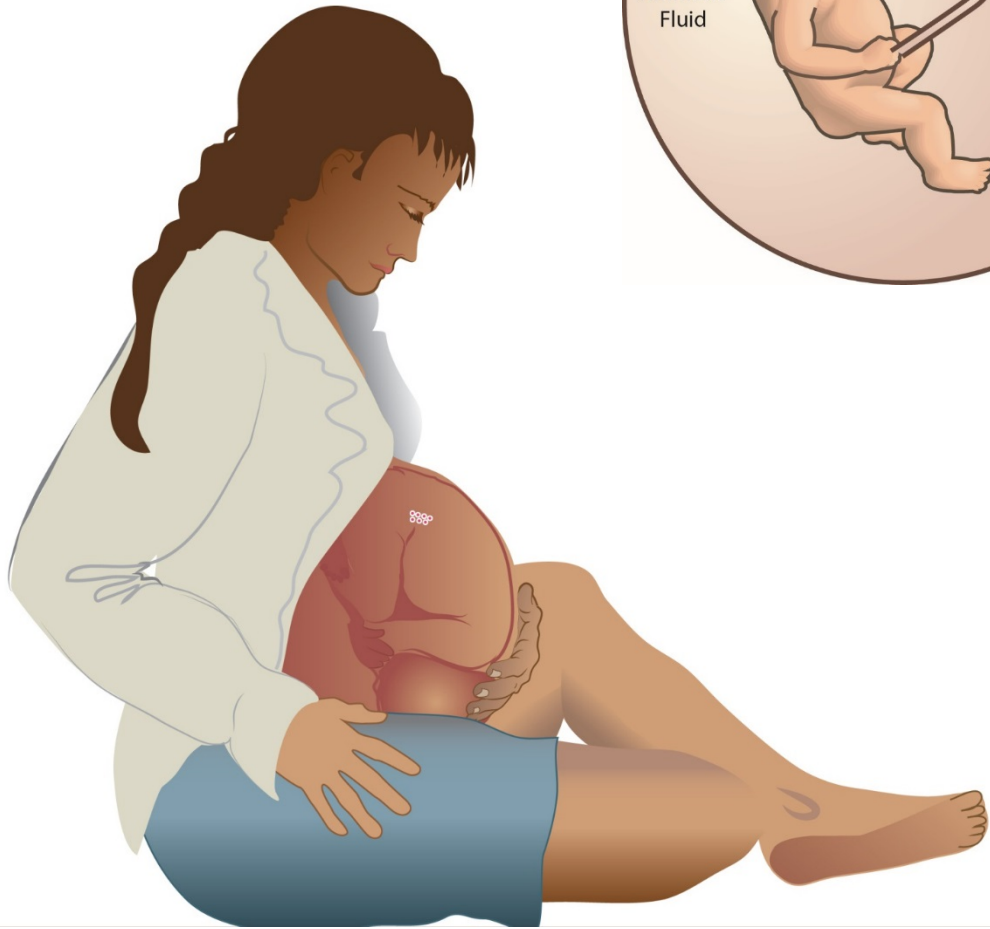


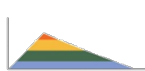
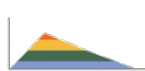
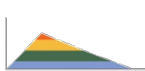
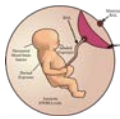
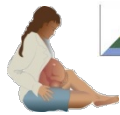
3) FASD: What we First See



Risk Factors Ahead

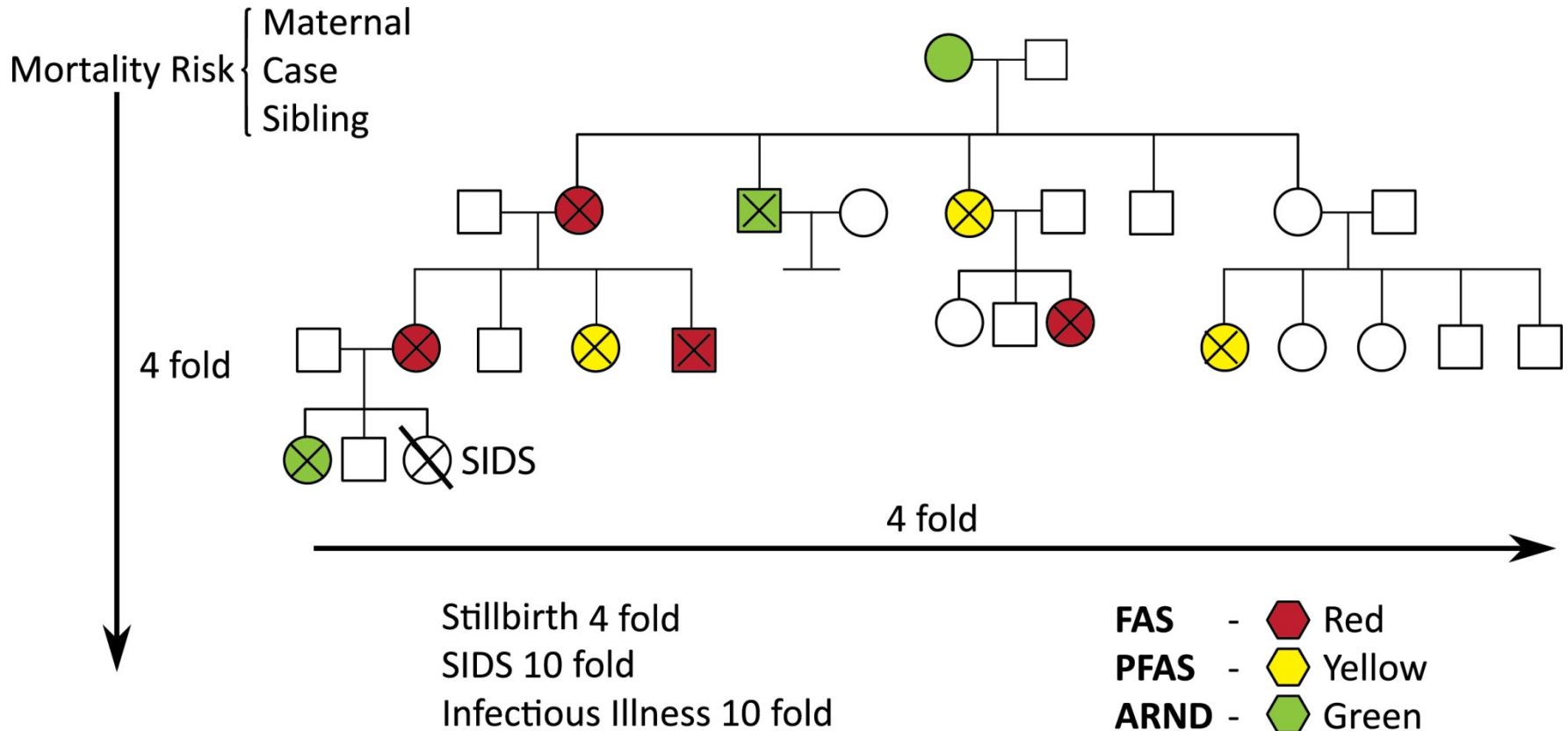
Exit 1	Abuse/Neglect
Exit 2	Foster Care
Exit 3	Impairments
Exit 4	Legal Problems
Exit 5	Substance Abuse
Exit 6	Dependent Living



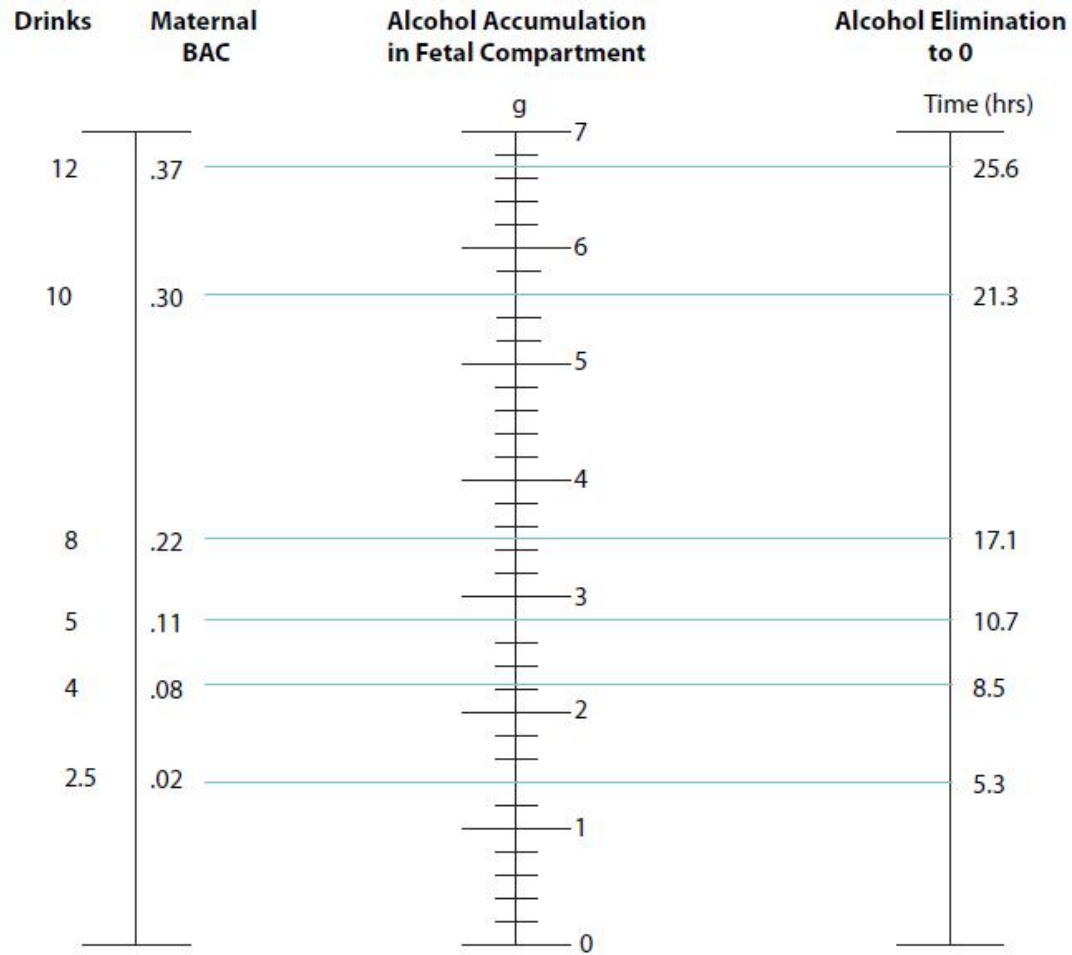


Oocytes

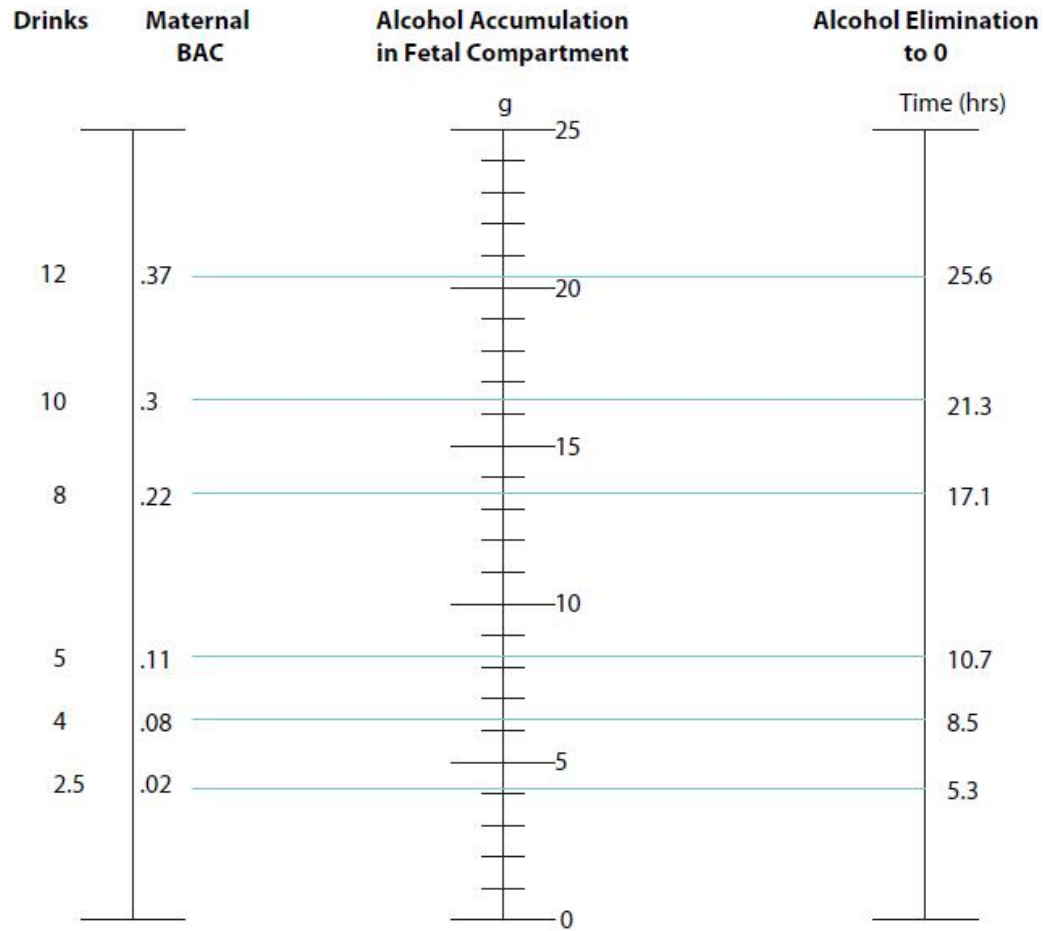
FASD - Familial and Generational Effects



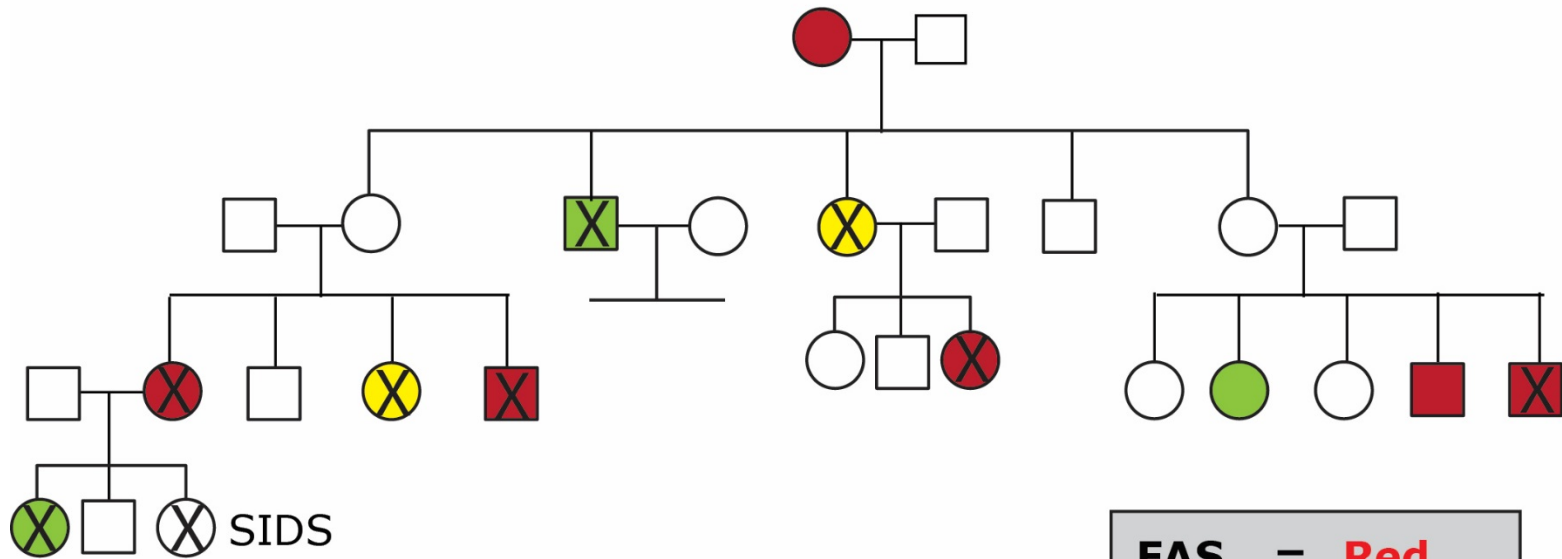
22 weeks/140 lb. female



40 weeks/140 lb. female



Anticipation in FASD: Familial and Generational Effects



FAS	=	Red
PFAS	=	Yellow
ARND	=	Green
X	=	Death

Two Hundred and Fifty-Eight Cases of Suffocation of Infants

By Charles Templeman, M.D.,
B.Sc. (Pub. Health), Surgeon of Police;
Surgeon to the Royal Infirmary, Dundee.

*(Read before the Medico-Chirurgical Society of Edinburgh,
1st June 1892.)*

If drinking over 2 years
prior to pregnancy,
mortality rate 62.7%

◆ 46% deaths occur on Saturday night
and Sunday morning



Neurobehavioral Expression of FASD



"No, I won't."

**"Let's wait; I want
to talk this over..."**

"OK!"

A Note on the Influence of Maternal Inebriety on the Offspring

By W. C. Sullivan, M.D., and Stewart Scholar in Mental
Disease, R.U.I., Deputy Medical Officer, H.M. Convict
Prison, Parkhurst (July, 1899)

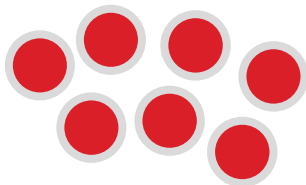
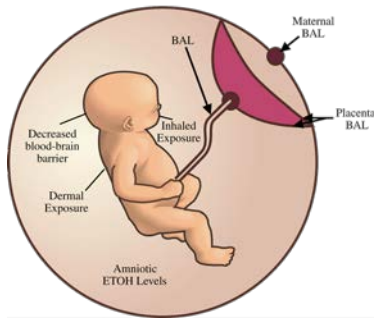
Mortality

- ◆ Women $n = 100$
(plus 20 female relatives)
600 Children
- ◆ 335 (55.8%) died
- ◆ 80 women had 3 or more dead infants

Cost Comparison of Prevention Funding for Zika and Fetal Alcohol Spectrum Disorder Over a Comparable Time Period.

Zika	Cost Per Case	FASD	Cost Per Case	Cost Ratio
222 cases acquired in US	\$1.576 million	1% = 43,472	\$345	4,568
4,861 cases diagnosed in travelers	\$72,000	4% = 173,888	86	837

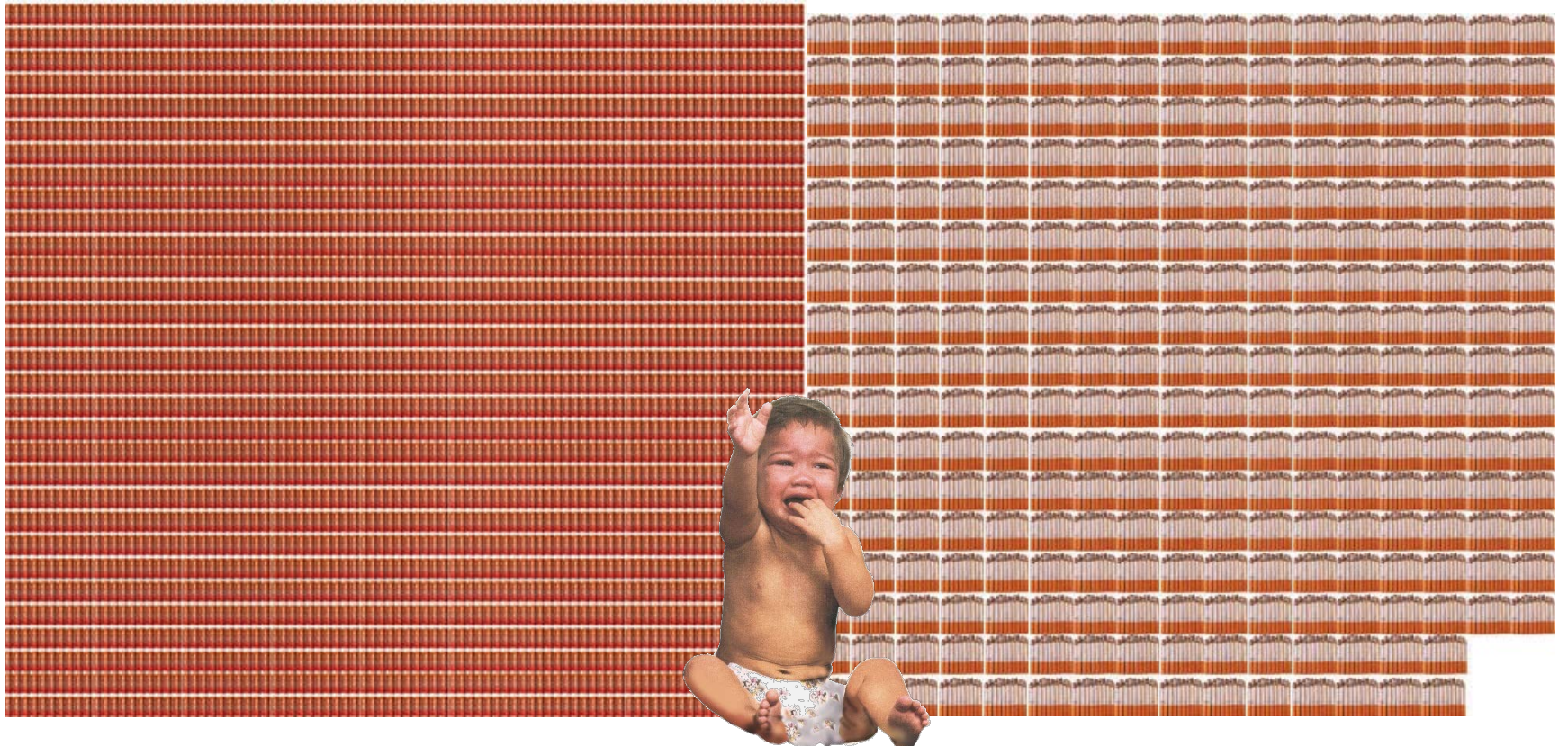
Teratogenic Fraction



Oocytes

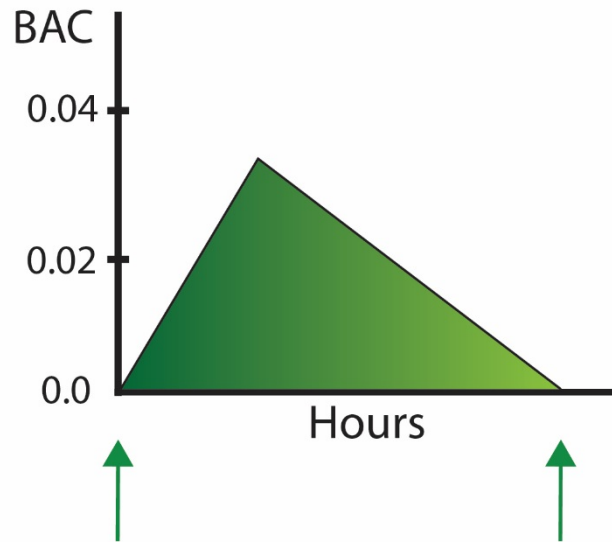


Cumulative Exposure

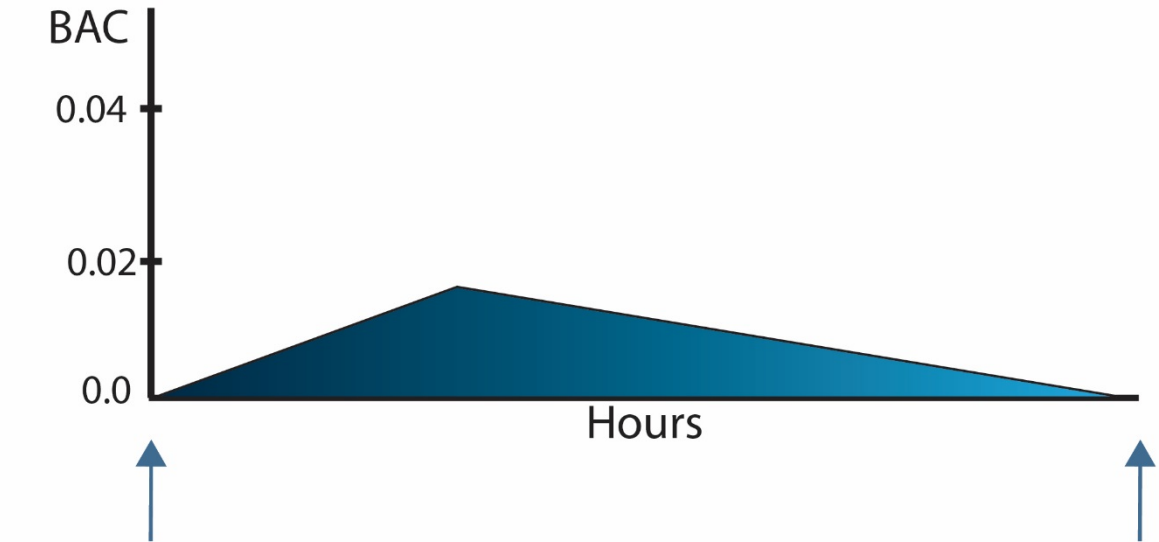


Alcohol: Concentration and Duration of Exposure

< 30 weeks GA

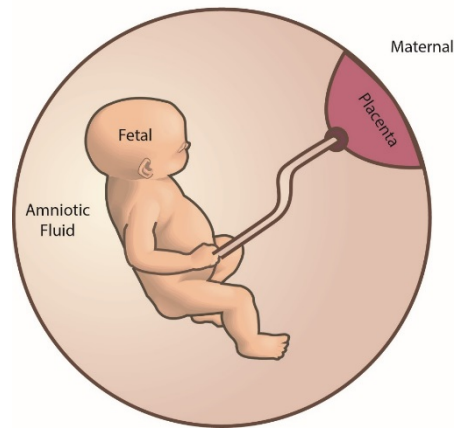


> 30 weeks GA
Barrier function present



First in - to - Last Out

Exposure Enviromics

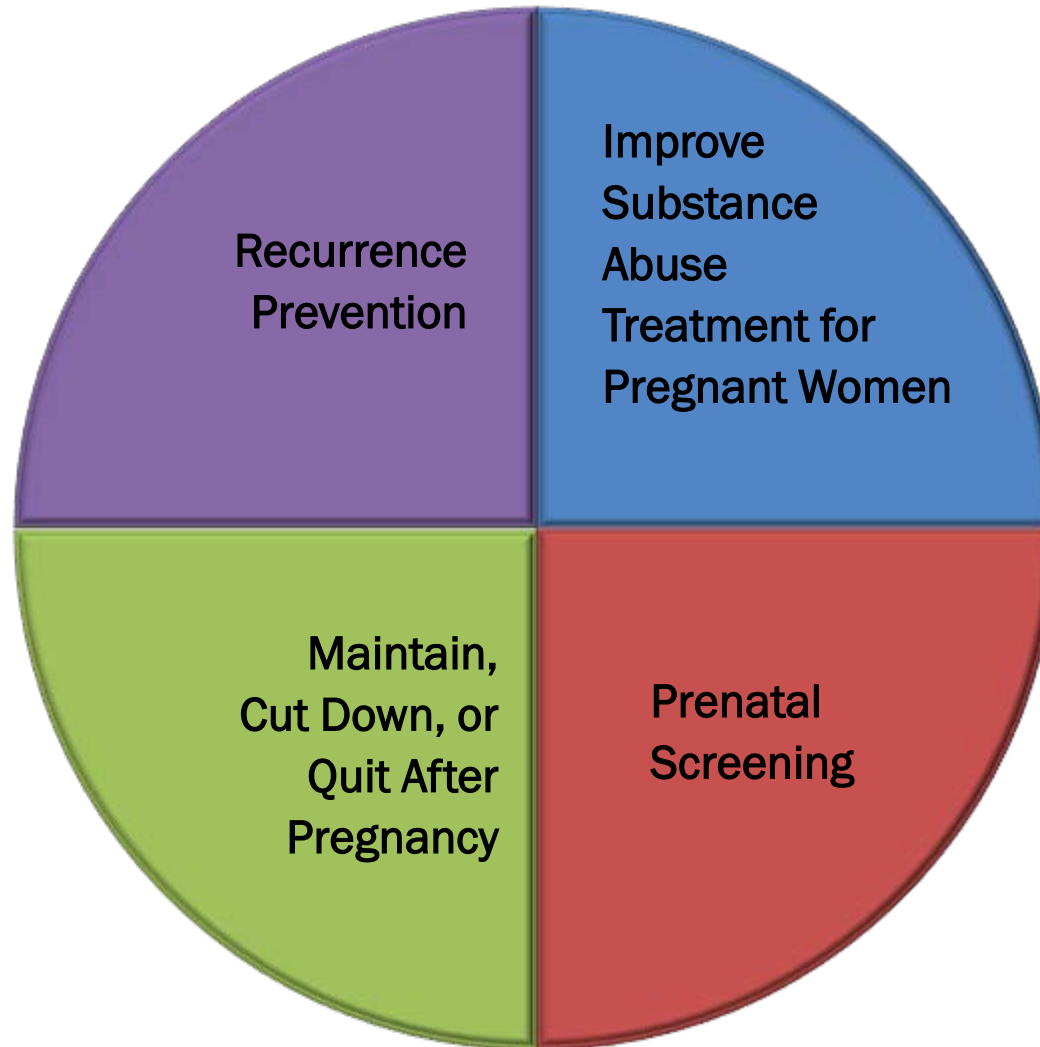




{ Time under
exposure curve

Prevention of FASD

(Always Reduce Smoking)



Recurrence Prevention

Mothers of a child with FASD



61,222 Women

3,862 (6.31%) Pregnant; 57,360 (93.69%) Not Pregnant

2,417 (3.95%) Tested for Alcohol/Drugs; 58,805 (96.05%) Not tested

	Tested	Not Tested
Pregnant	40 (1.04%)	3,822
Not Pregnant	2,377 (4.14%)	54,983

Chi-Square = 91.37, $p < .001$

RR = 0.25 (0.183 to 0.341)

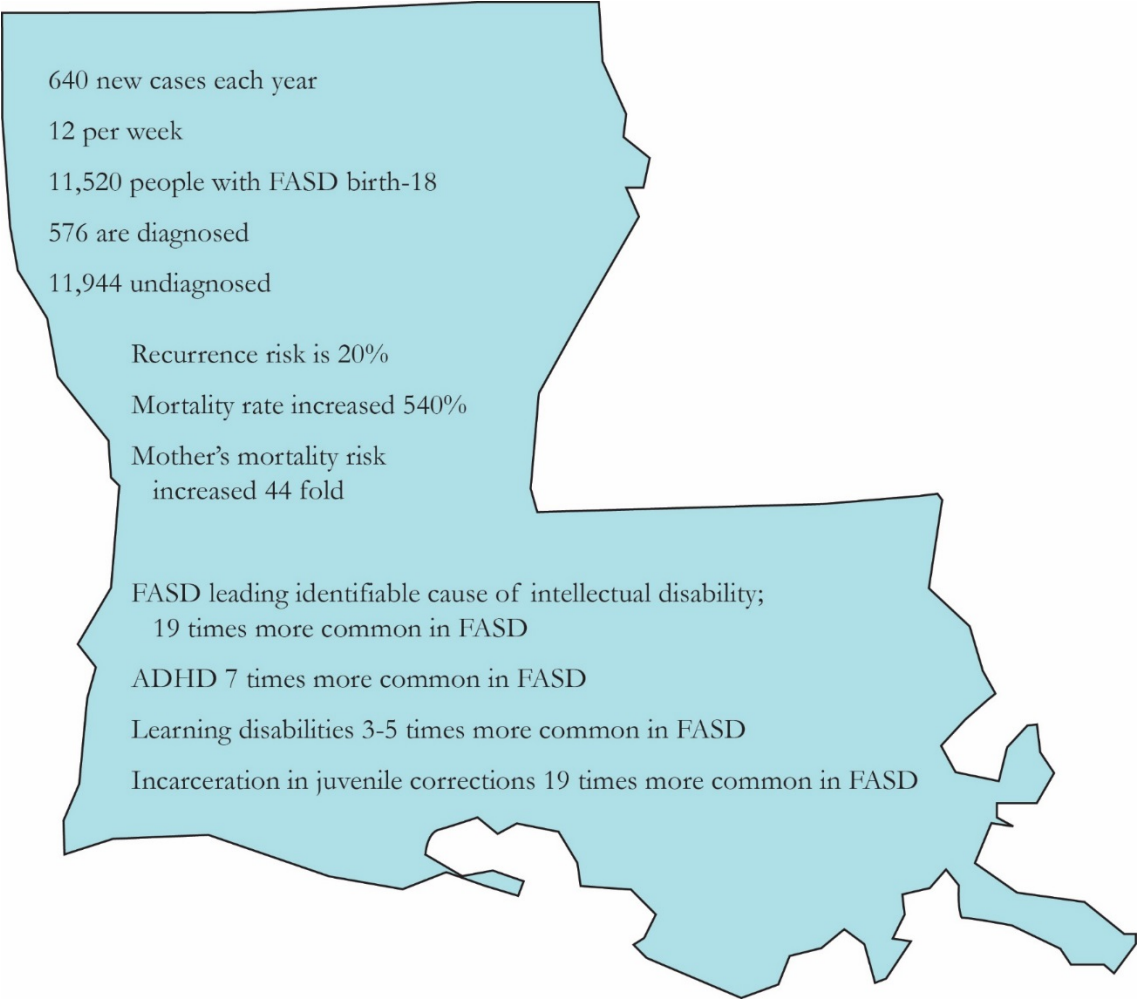
Powered Alcohol Products



- Powered or crystalline form
- 50% by weight, 10% by volume

FASD in Oklahoma

- ▶ Annual Births 53,132
- ▶ Annual FASD Births 531
- ▶ Recurrent Cases 106
- ▶ 25–40 will recur in families with multiple affected children.
- ▶ **Start Prevention With These Mothers or in These Families**



640 new cases each year

12 per week

11,520 people with FASD birth-18

576 are diagnosed

11,944 undiagnosed

Recurrence risk is 20%

Mortality rate increased 540%

Mother's mortality risk
increased 44 fold

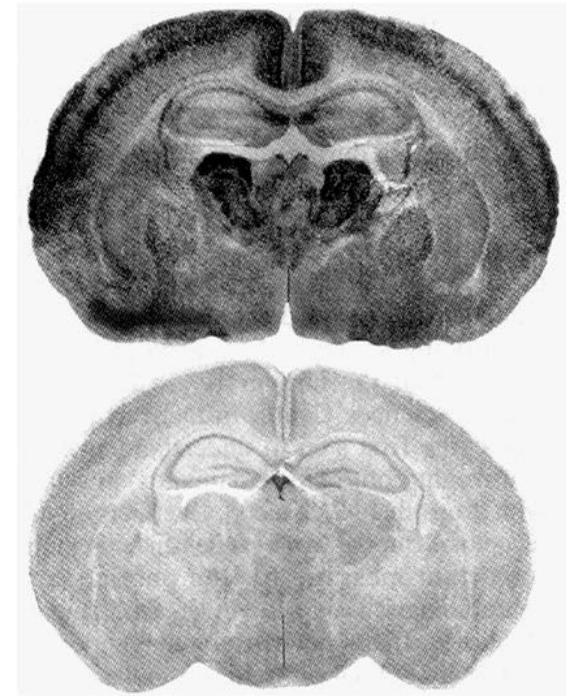
FASD leading identifiable cause of intellectual disability;
19 times more common in FASD

ADHD 7 times more common in FASD

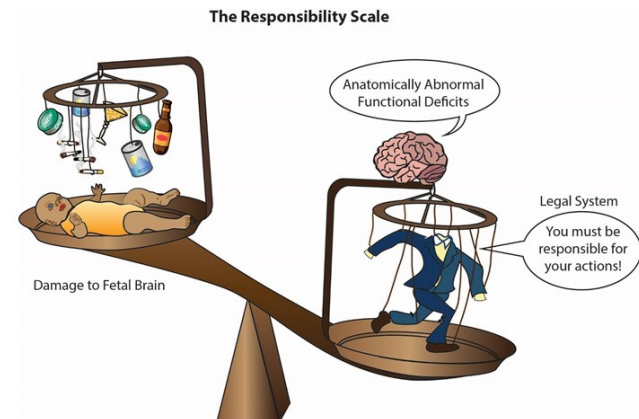
Learning disabilities 3-5 times more common in FASD

Incarceration in juvenile corrections 19 times more common in FASD

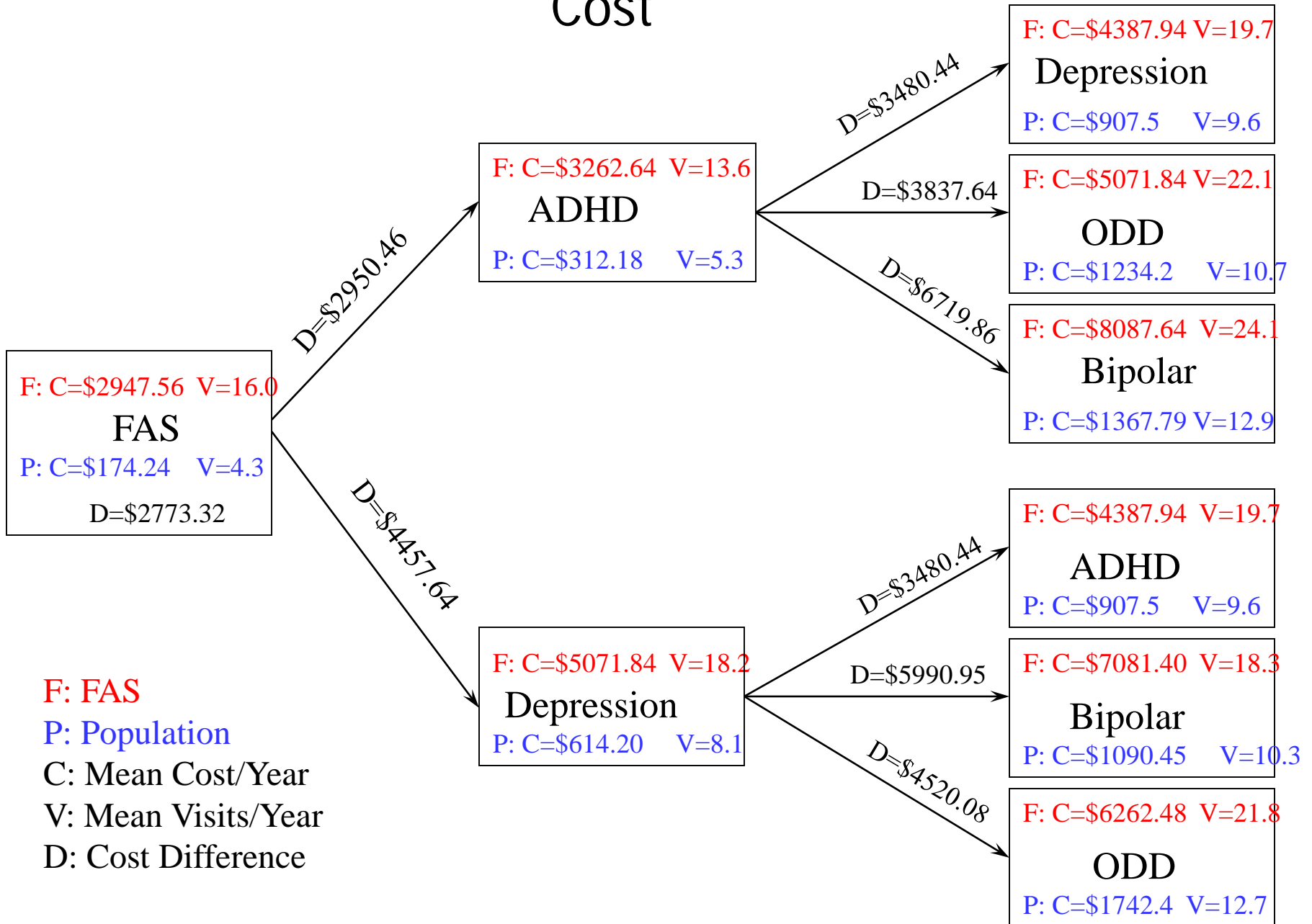
Fetal Alcohol Spectrum Disorders (FASD)

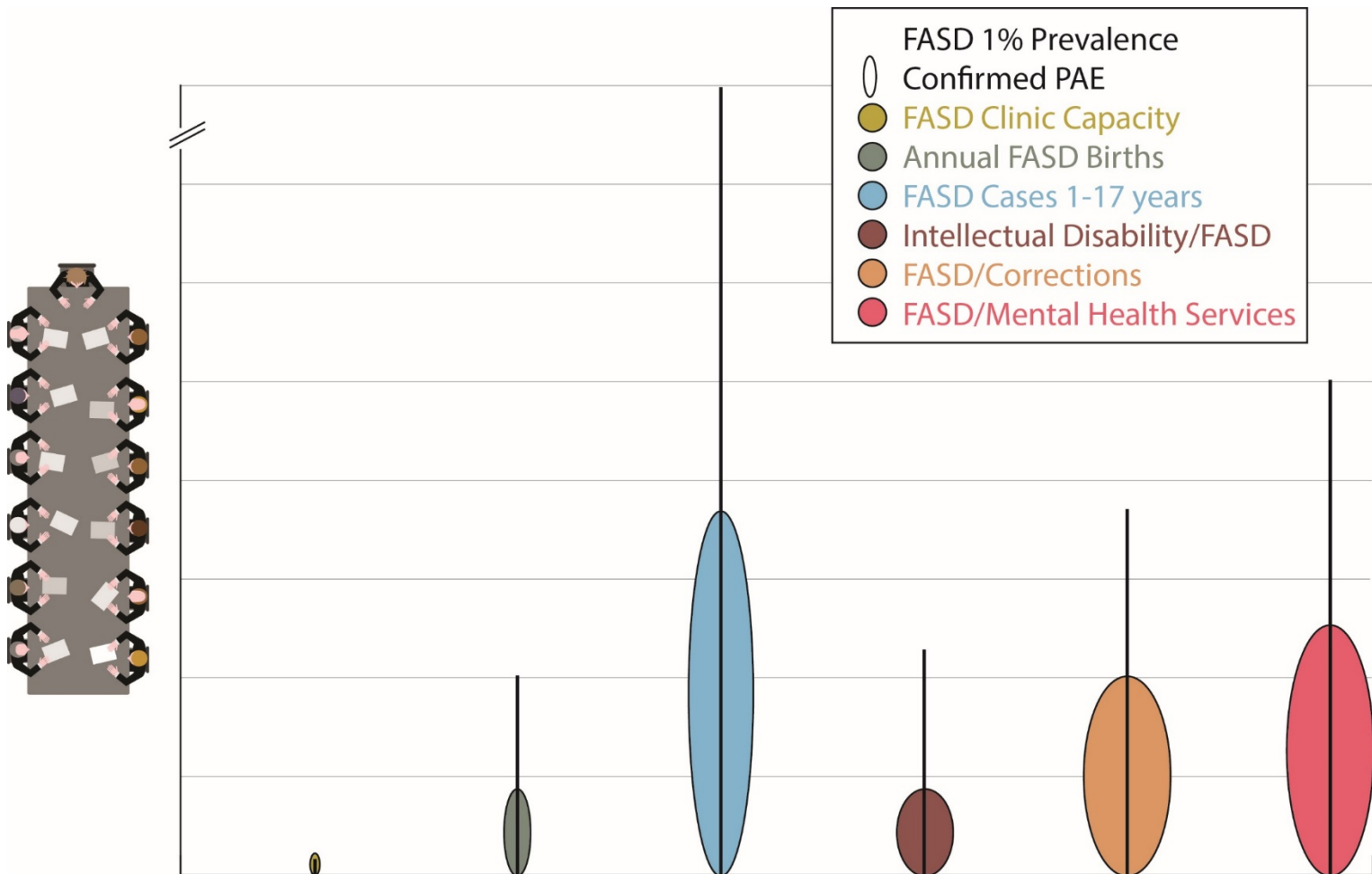


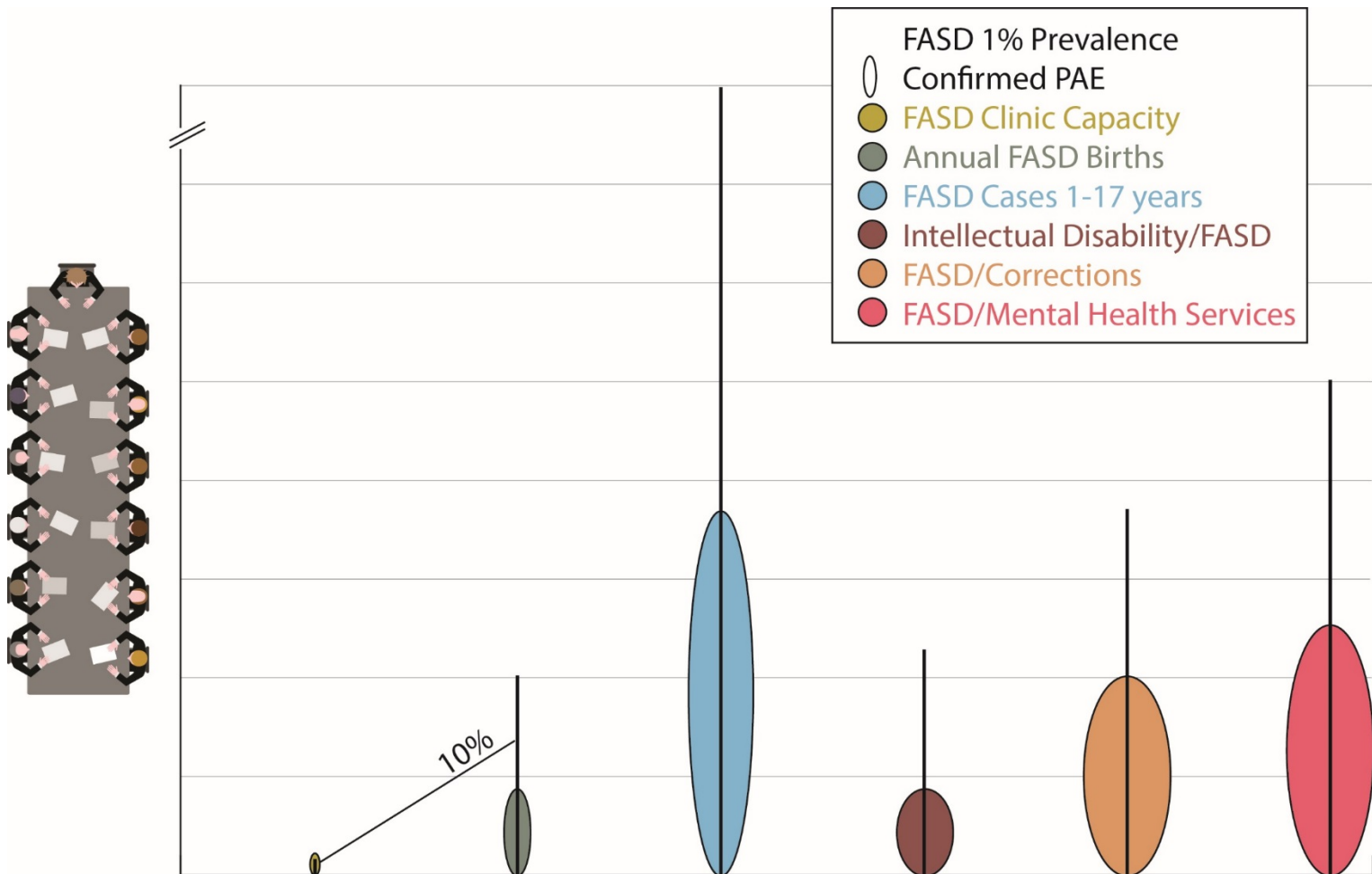
See PAE, Think Impairment

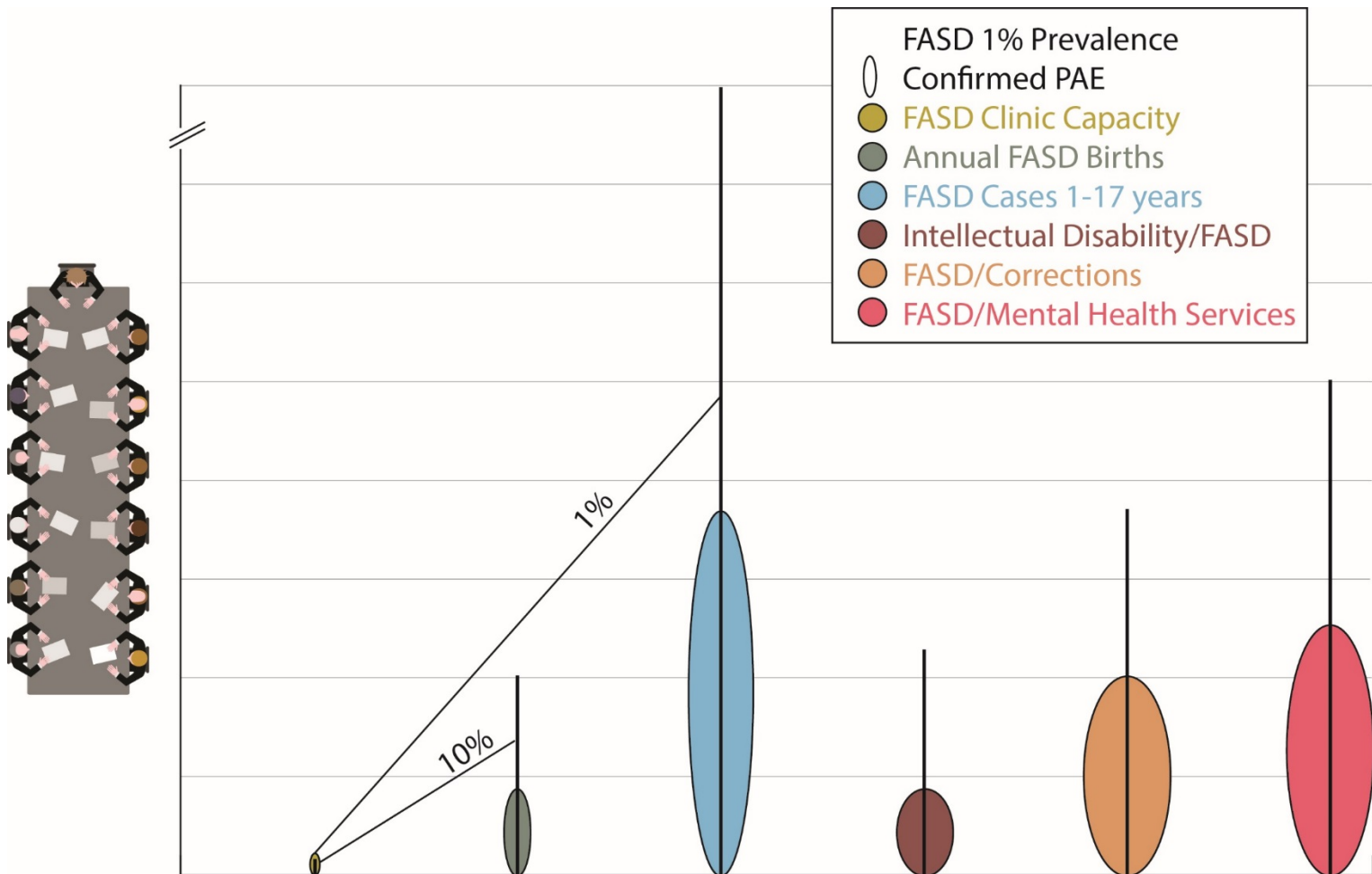


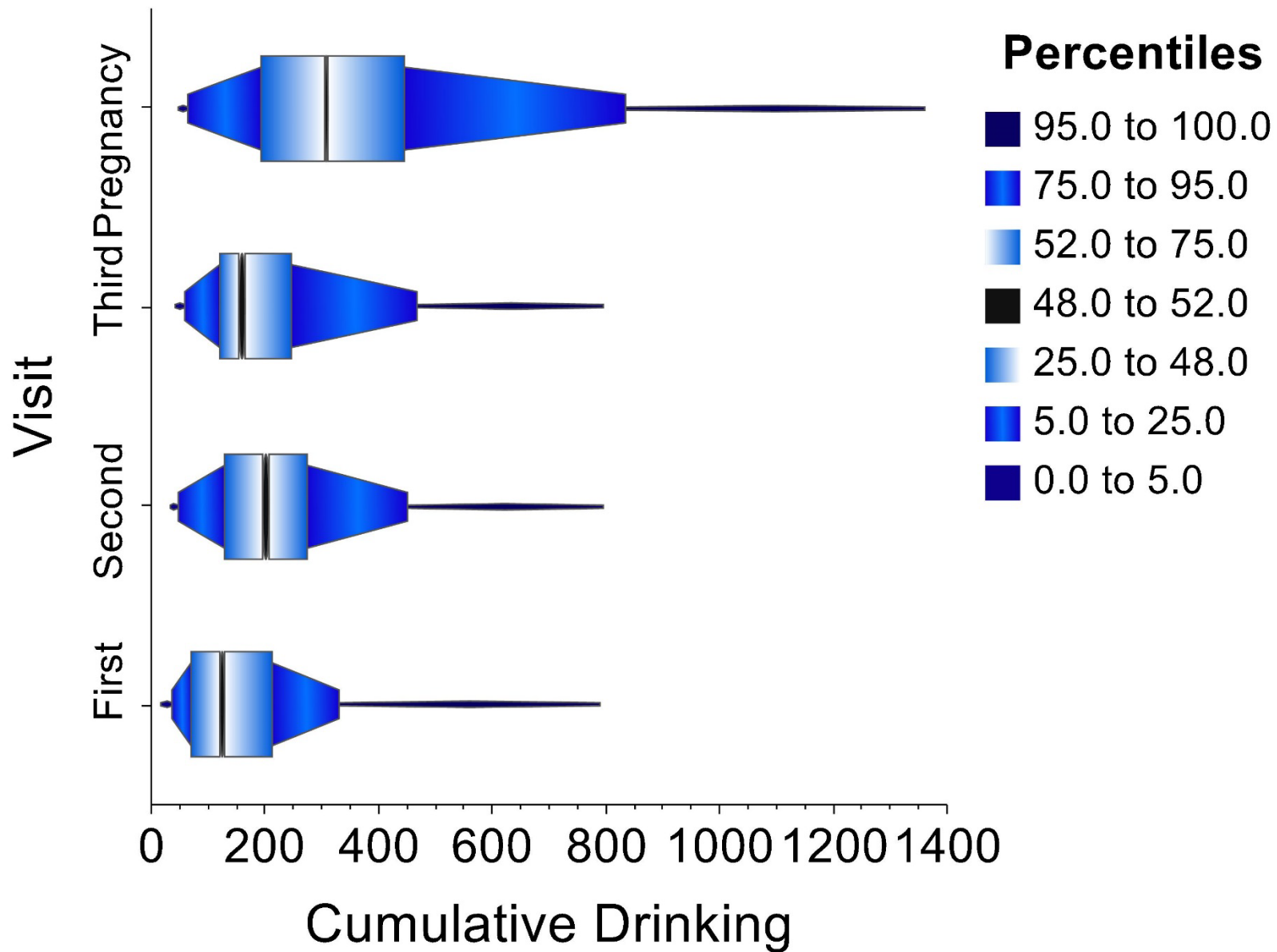
Cost



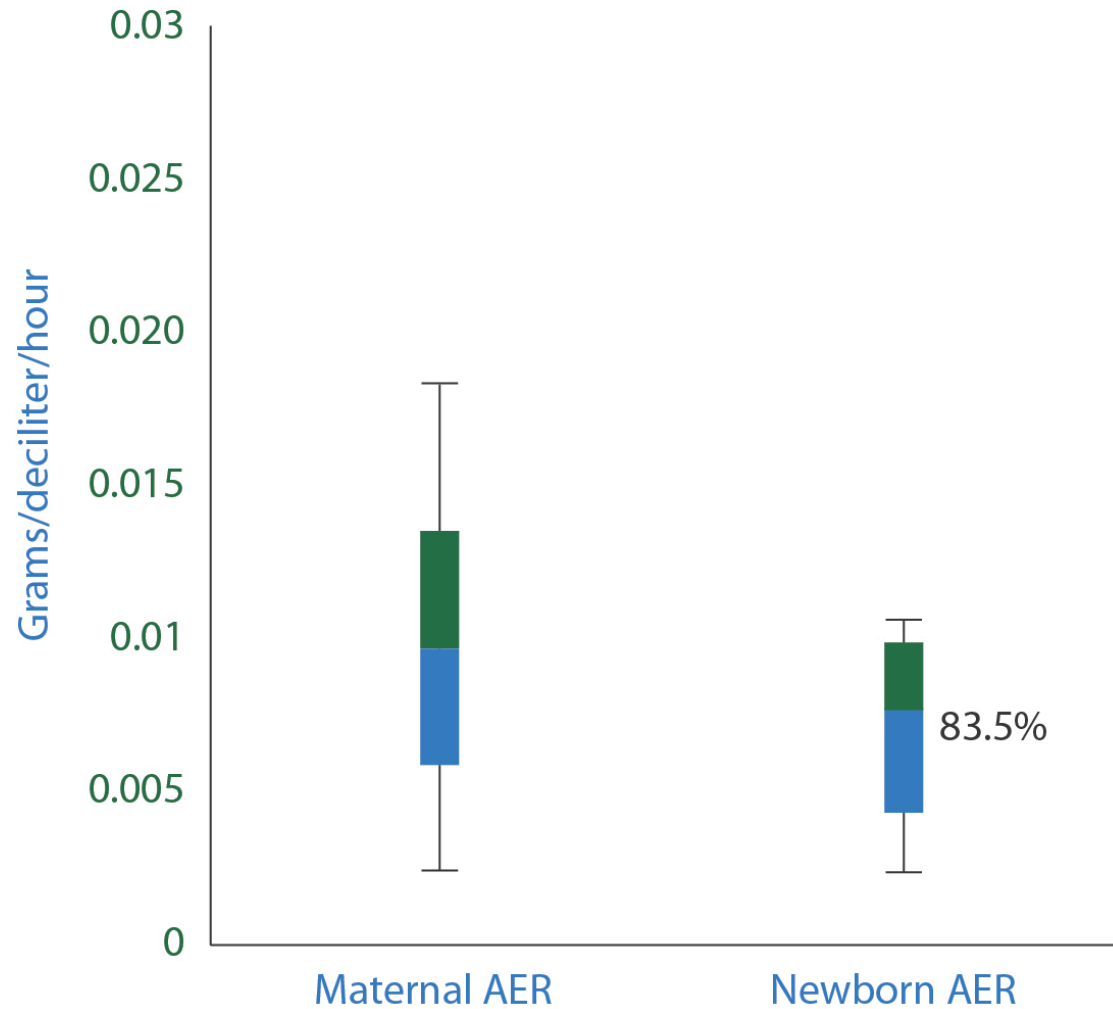






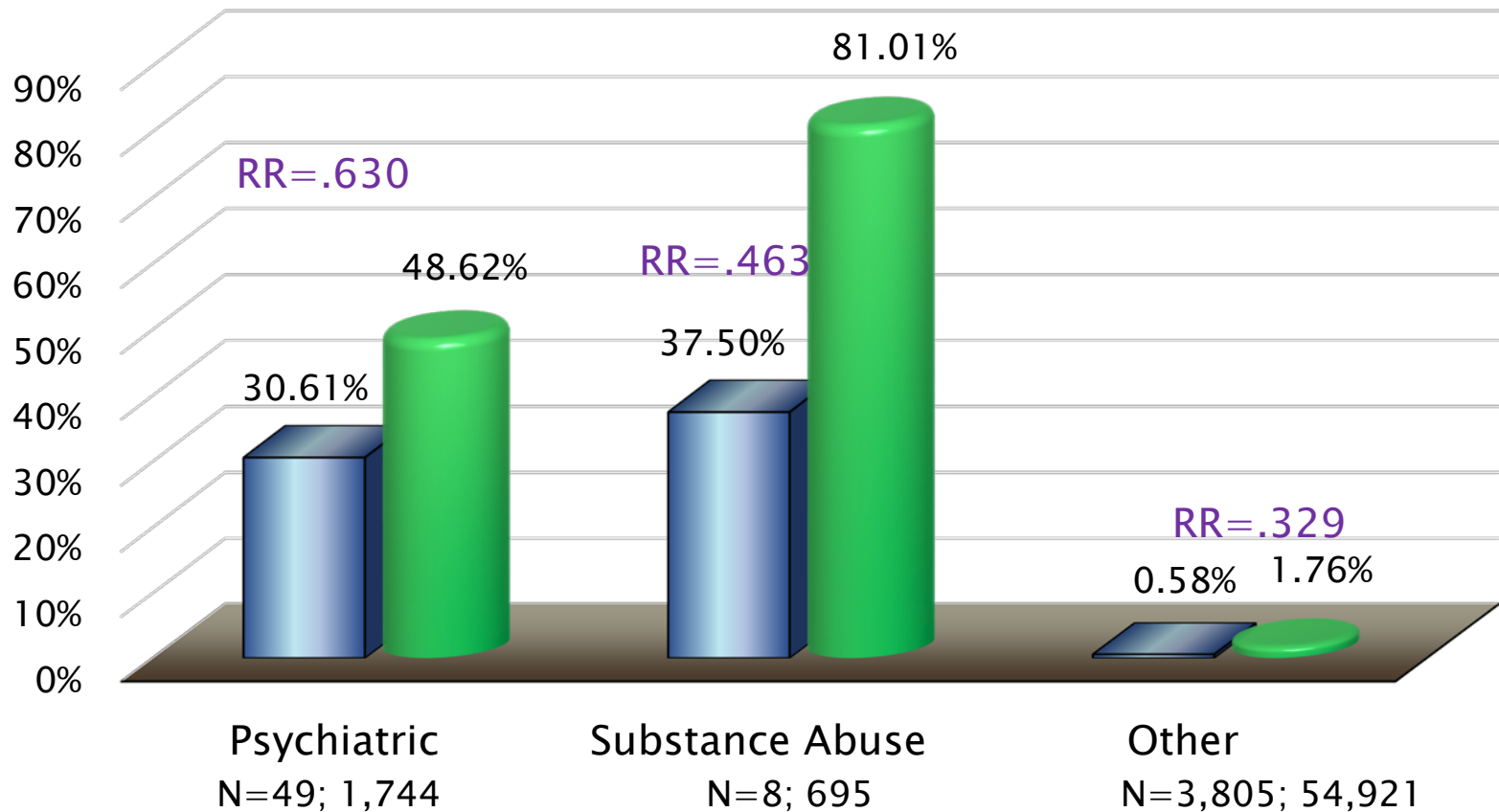


Alcohol Elimination Rates (AER) in Ten Mother - Newborn Pairs



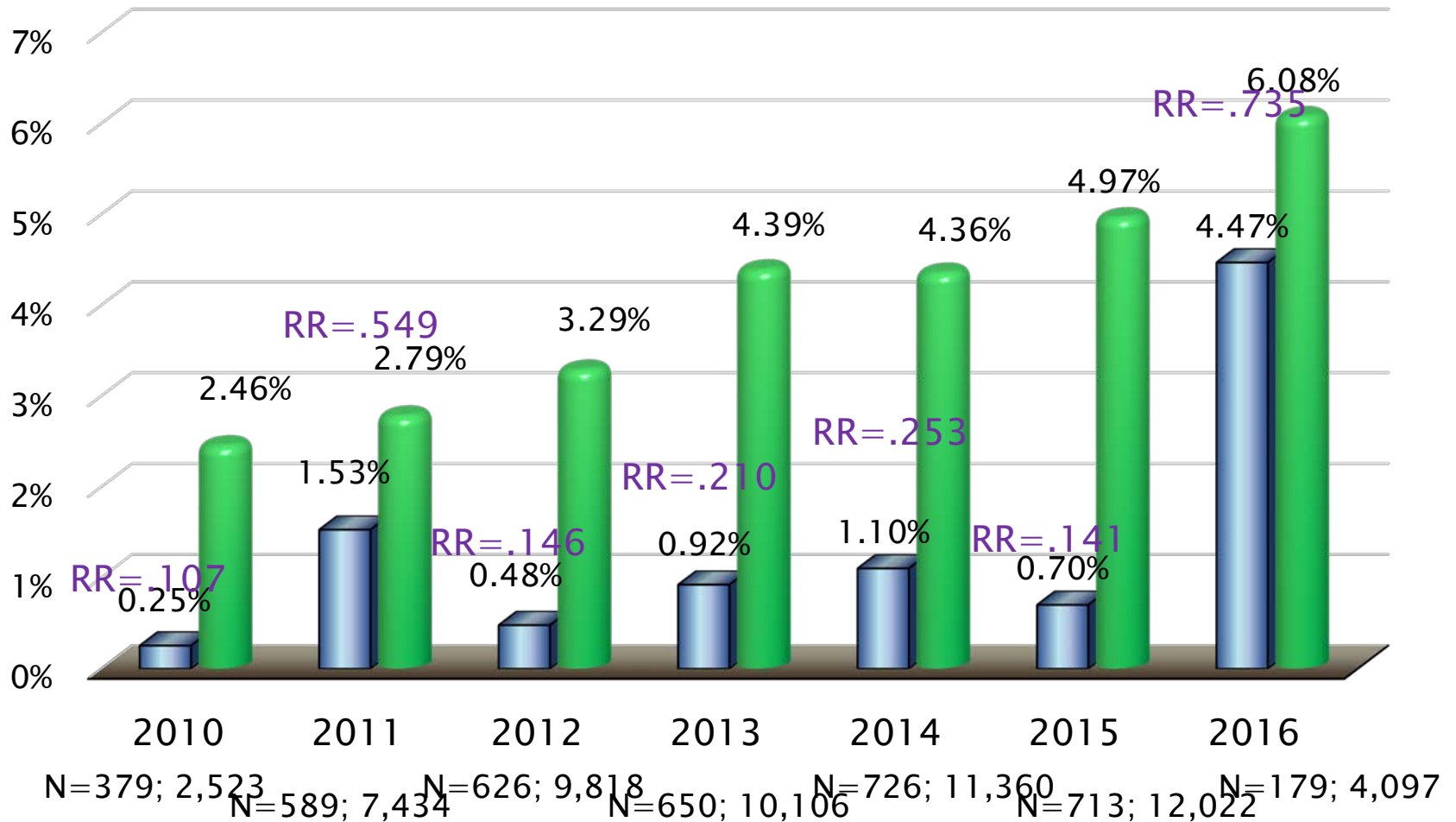
% of Pregnant and Non-Pregnant Women with
Psychiatric, Substance Abuse Disorders, or Other Dx
Who were Tested for Alcohol or Drugs

■ Pregnant (N=3,862) ■ Not Pregnant (N=57,360)



% of Pregnant and Non-Pregnant Women from 2010 to 2016 Who were Tested for Alcohol or Drugs

■ Pregnant (N=3,862) ■ Not Pregnant (N=57,360)



MAKING THE CONNECTION BETWEEN SUBSTANCE USE DISORDERS AND FOSTER CARE



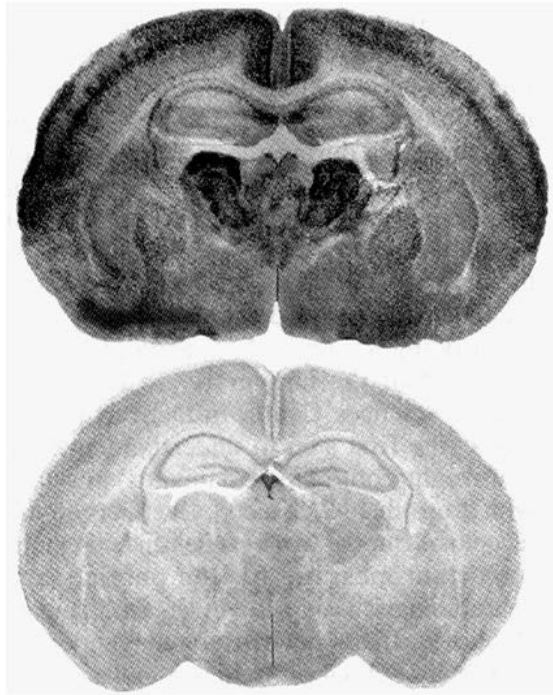
Neurobehavioral Expression of FASD



"No, I won't."

**"Let's wait; I want
to talk this over..."**

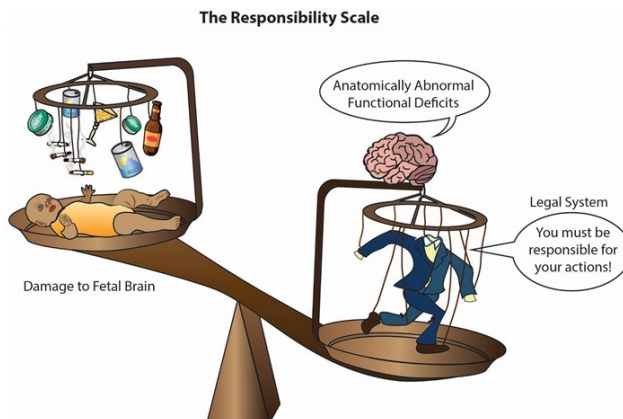
"OK!"



See PAE, Think Impairment



Neurobehavioral Expression of FASD



"No, I won't."

"Let's wait; I want to talk this over..."

"OK!"

Our Case – A Post Evaluation View

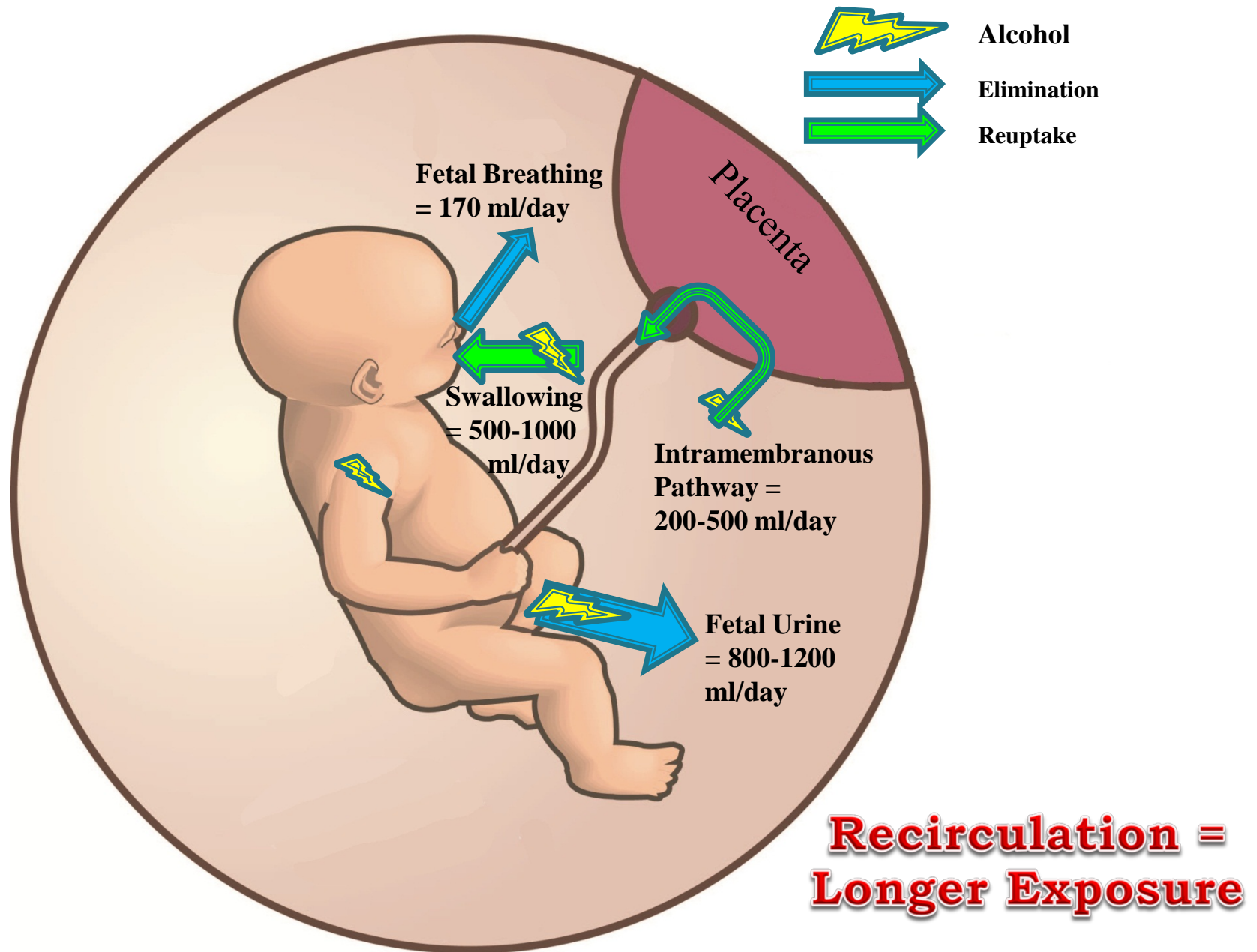
- ▶ Prenatal alcohol exposure
- ▶ Physical –Sexual Abuse –Severe
- ▶ Early Alcohol Dependency (age 6)
- ▶ Intellectual Deficiency (IQ 62)
- ▶ Reading Grade 4
- ▶ Read Comph 3.5
- ▶ Math Grade 4
- ▶ Oral Comp Grade 3
- ▶ Memory Impairments
- ▶ Depression
- ▶ Substance Use – Alcohol, Smoking and other
- ▶ PTSD
- ▶ ADHD
- ▶ Unilateral Visual Impairment
- ▶ Fetal Alcohol syndrome
- ▶ Traumatic Brain Injury ?
- ▶ No History Violence – Absent Alcohol Use
- ▶ Multiple Substance Use Treatment Failures ??

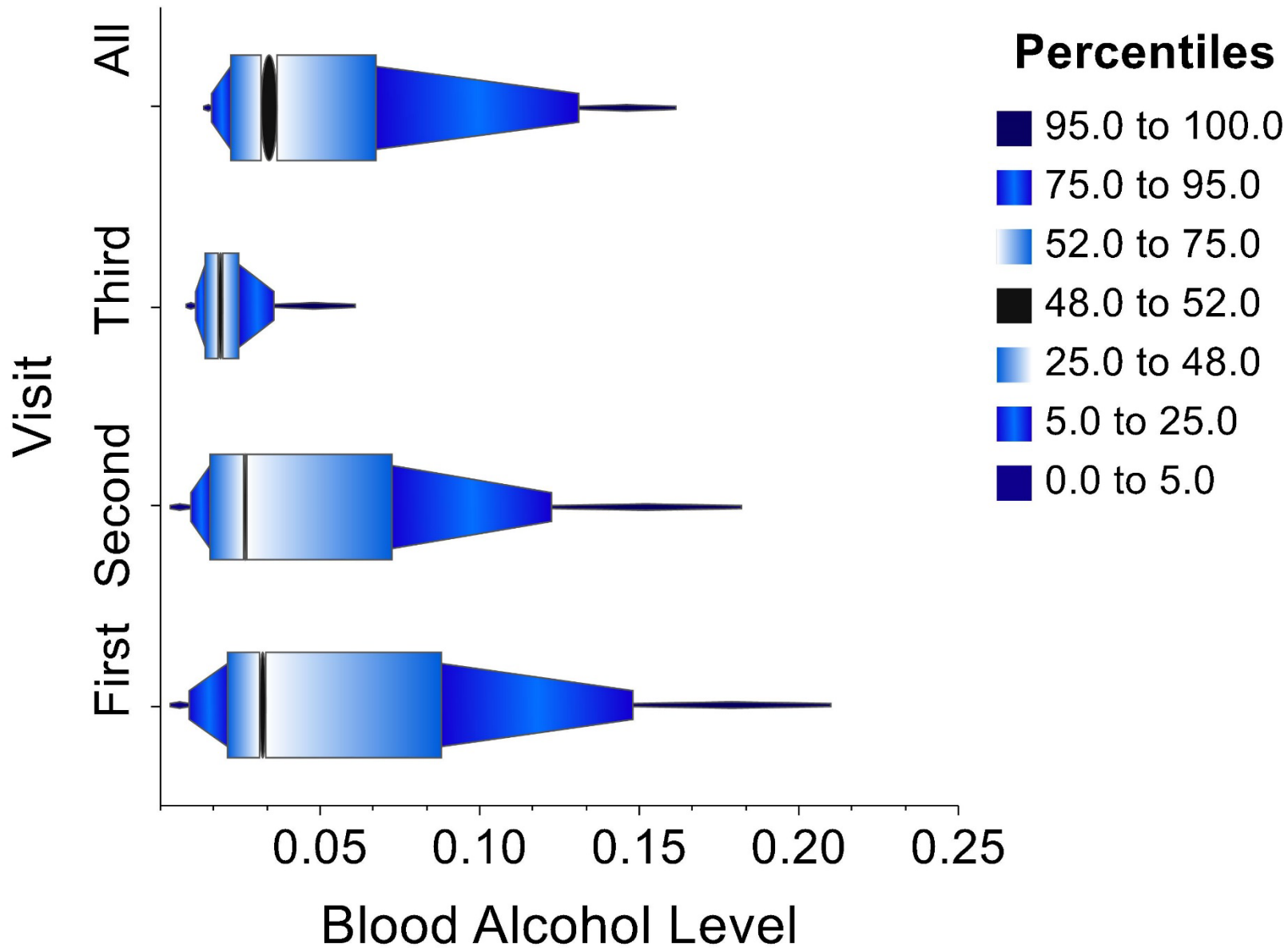


"Unless someone like you cares a whole awful lot,
Nothing is going to get better. It's not!"

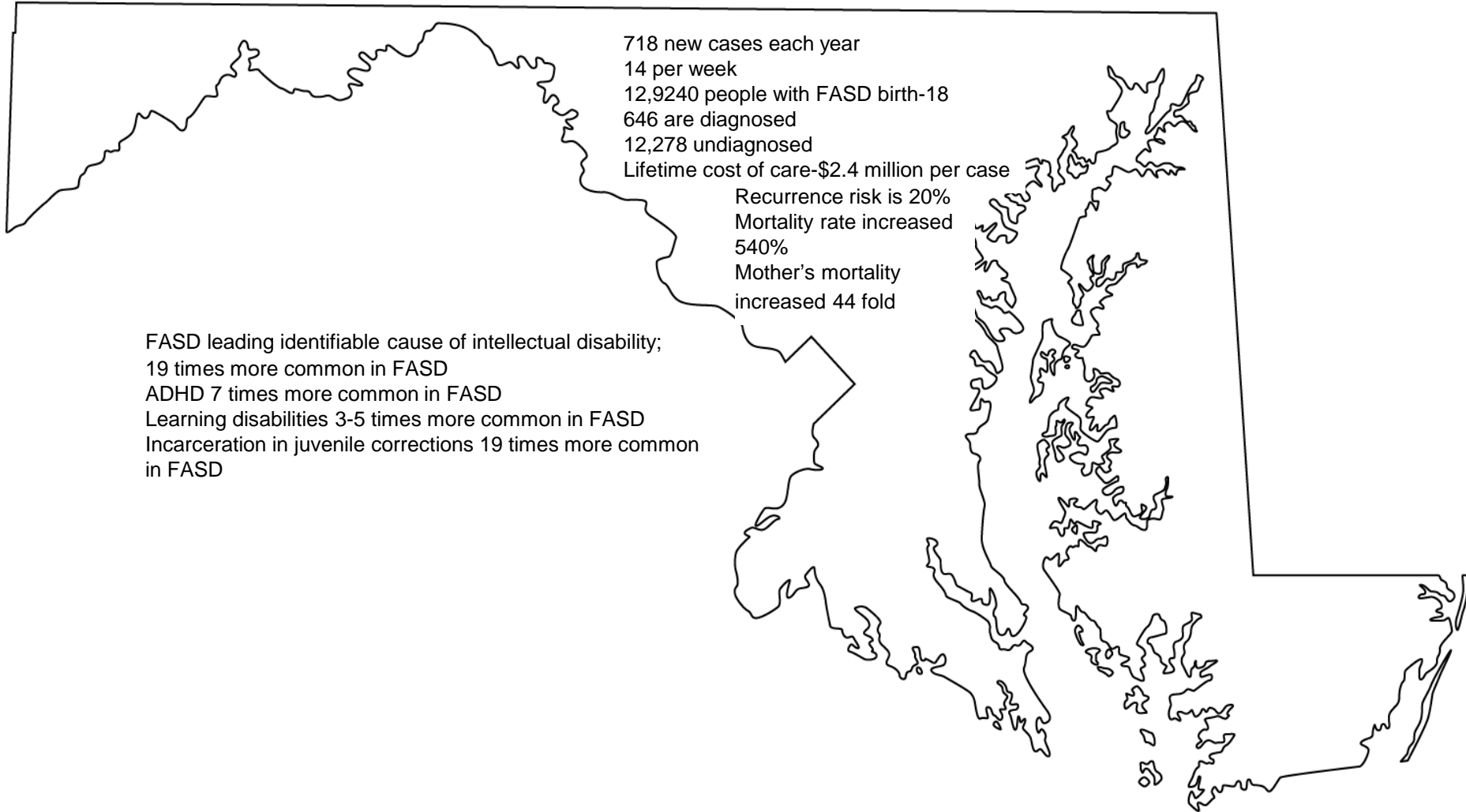
- Dr. Suess

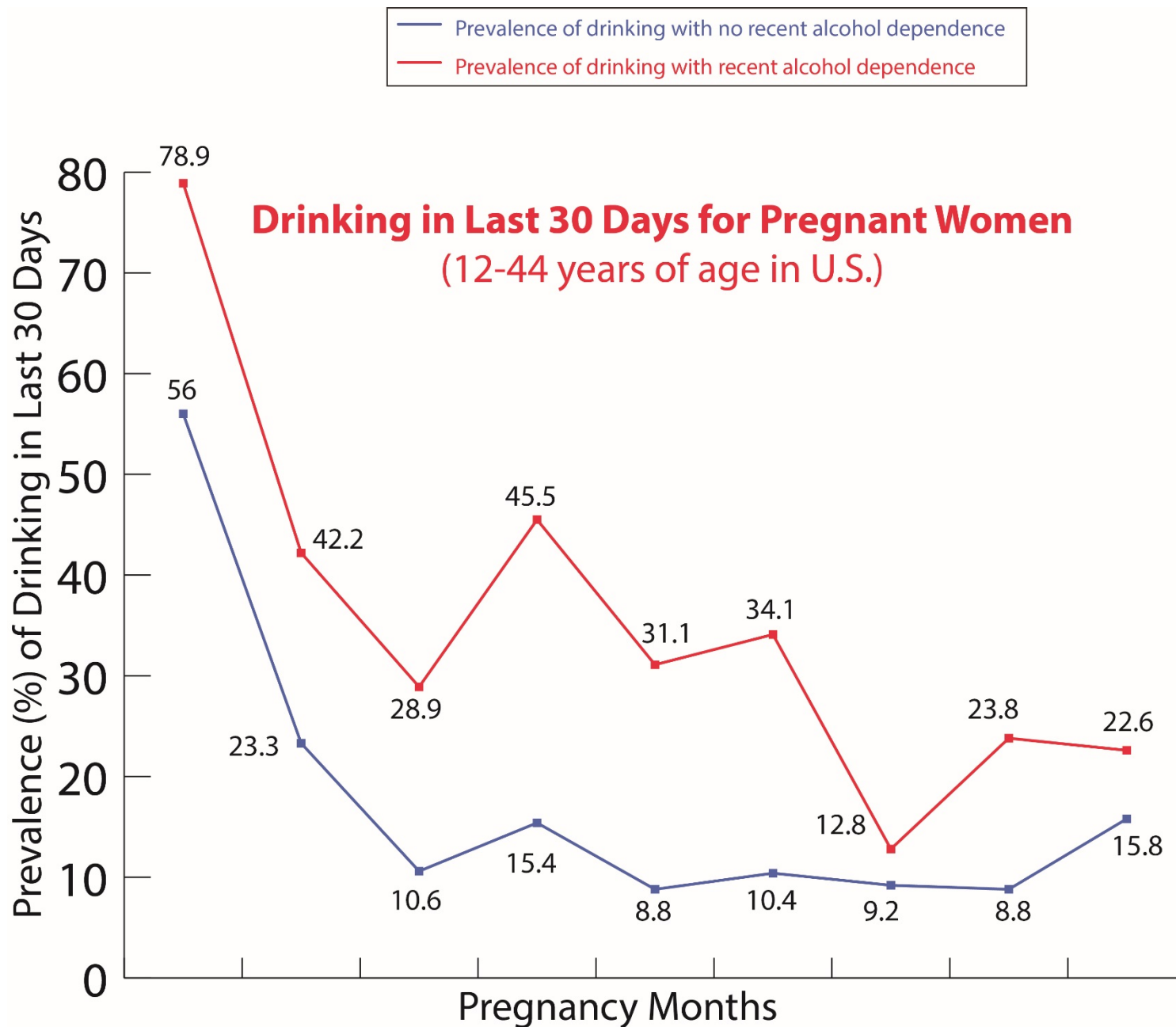
Recirculating Pathways of Ethanol and Amniotic Fluid

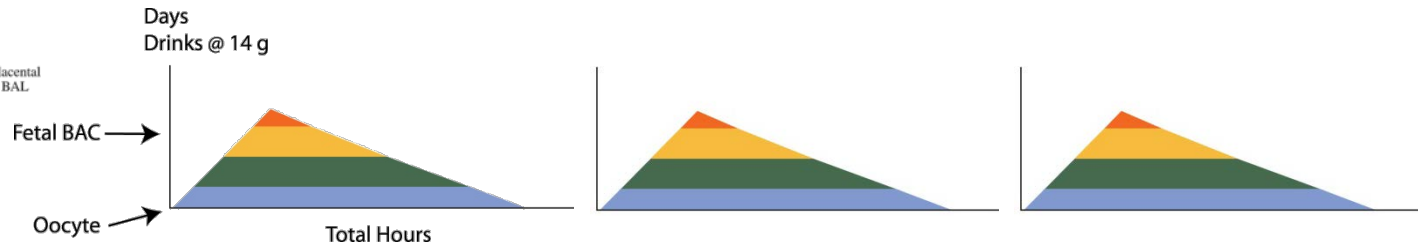
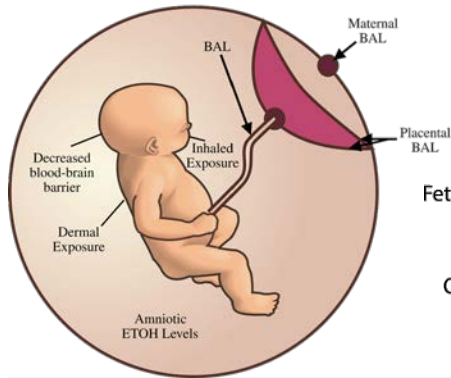




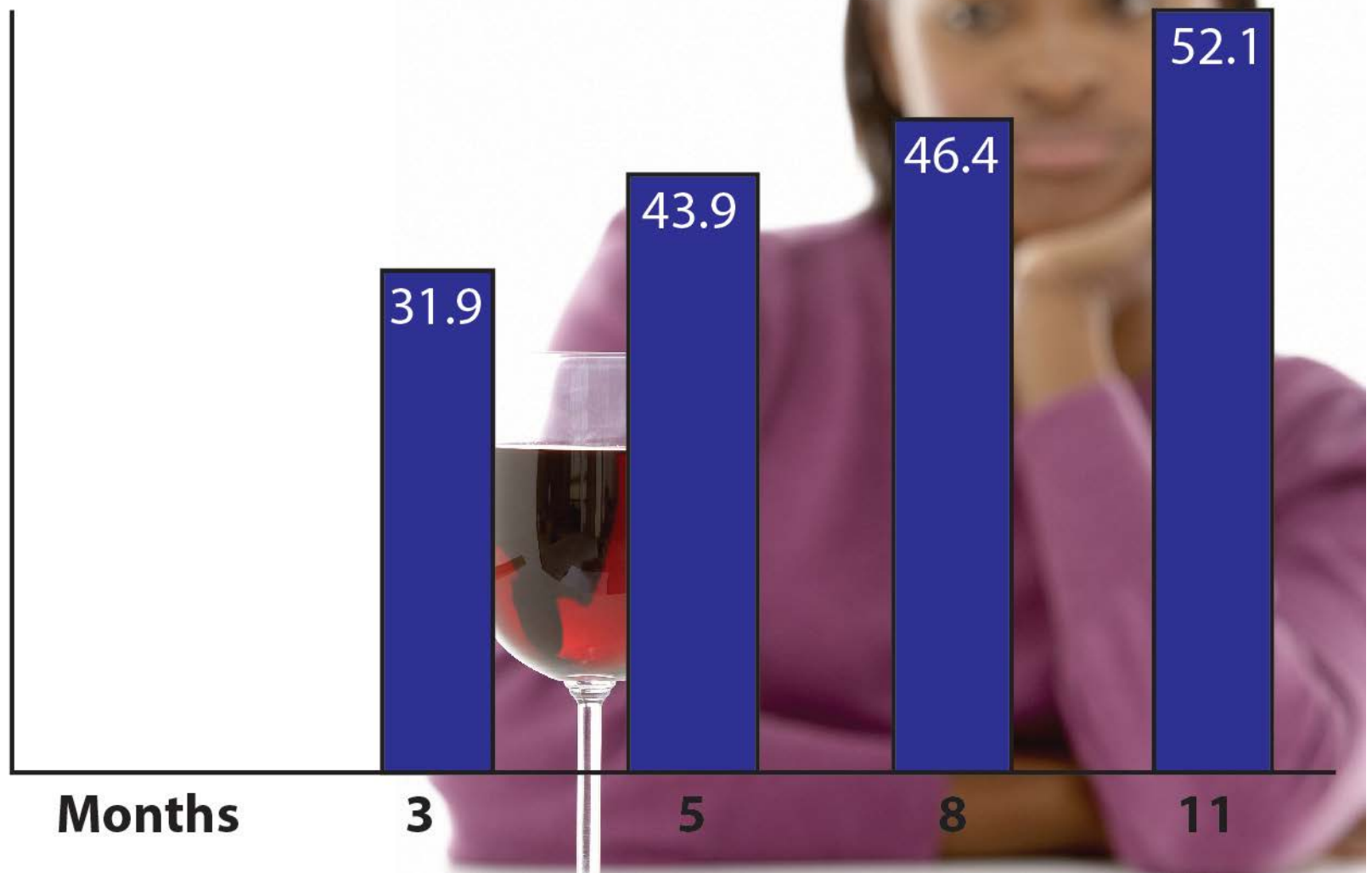
FASD in Maryland



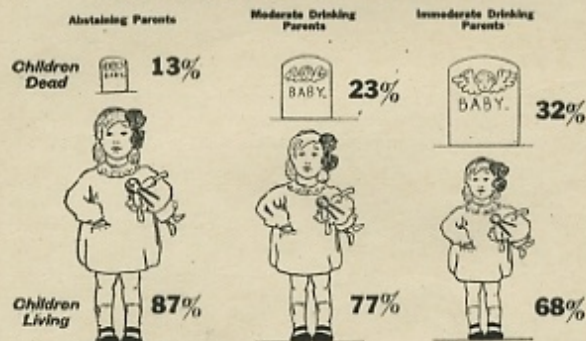




Alcohol Use After the Baby is Born



Child Death Rate Higher IN Drinkers' Families



Abstaining parents had never drunk alcoholic liquors, or at least since marriage.
 "Moderates" drank no more daily than corresponded to one glass of 4% beer.
 "Immoderates" drank daily more than the above-named amount.

Excessive Death-Rate in Drinking Homes Cost 2,407 Children Their Lives

Statistics of 19,519 children in 5,736 families. Laidnes XII, International Congress on Alcoholism, 1909. Abstaining families lost 13 per cent of children by death. At the same rate drinking parents would have lost 2,116 children. They actually lost 4,563, an excess of 2,407.

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 AMERICAN ISSUE PUBLISHING COMPANY
 WESTERVILLE, OHIO.

NO. 2

TEMPER TANTRUMS

10 in a Row Plan = Walk away No talking Wait 2-3 minutes



Tantrums

1 2 3 4 5 6 7 8 9 10

Rewards = Playing Nice

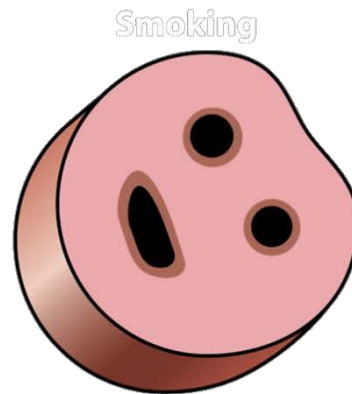
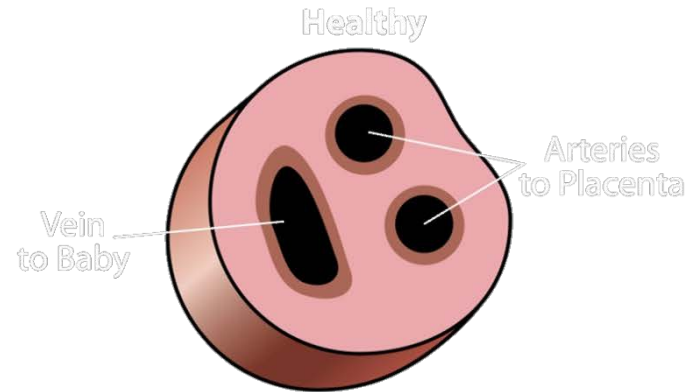
For each time out, find a positive behavior to reward

1 2 3 4 5 6 7 8 9 10

Table 1. Phenotypic Comparisons of the Diagnostic Criteria for Neurodevelopmental Disorders Associated with Prenatal Alcohol Exposure (ND-PAE) and Alcohol Related Neurodevelopmental Disorder (ARND).

Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)		ARND		Sensitivity	Specificity	Accuracy
		Positive	Negative			
1. All 7 Major Criteria Checked	Positive	60	11	.833	.560	76.3%
	Negative	12	14			
2. Weighted 7 item + Score ≥35	Positive	67	12	.931	.520	82.5%
	Negative	5	13			
3. Weighted 16 item + Score ≥31	Positive	71	7	.986	.720	91.7%
	Negative	1	18			

Vasoconstriction from Smoking and Alcohol



FASD In OK

- ▶ Foster Care 9,800
 - ▶ 25% = 2,450
 - ▶ 10% = 980
- ▶ Corrections 27,000 (130 per day)
 - ▶ 25% = 6,750
 - ▶ 10% = 2,700



Birth to Three Screen

FASD Screening Birth to 3 – Brief Screen

Name _____ DOB _____ Sex M__ F__
 or
 ID _____ Age _____ Date _____

 Height _____ Weight _____ Head Circumference _____

Findings That Suggest Increased Risk of FASD

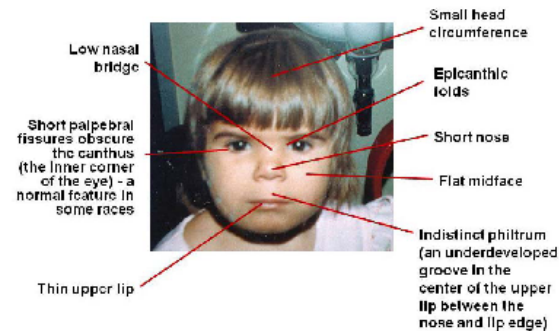
(circle all that apply)
 Score

- | | |
|--|---|
| 1. Child is adopted or in foster care | 1 |
| 2. Child has attention deficit hyperactivity disorder (ADHD) | 1 |
| 3. Child has head circumference < 20th percentile now or at birth (small head) | 1 |
| 4. Child is below 20 th percentile for weight now. | 1 |
| 5. Child has midface hypoplasia (flat midface) | 1 |
| 6. Red raised birthmark now or in the past | 1 |
| 7. Child has altered palmar creases | 1 |
| 8. Child has a smooth philtrum (ridge under nose flat) | 1 |

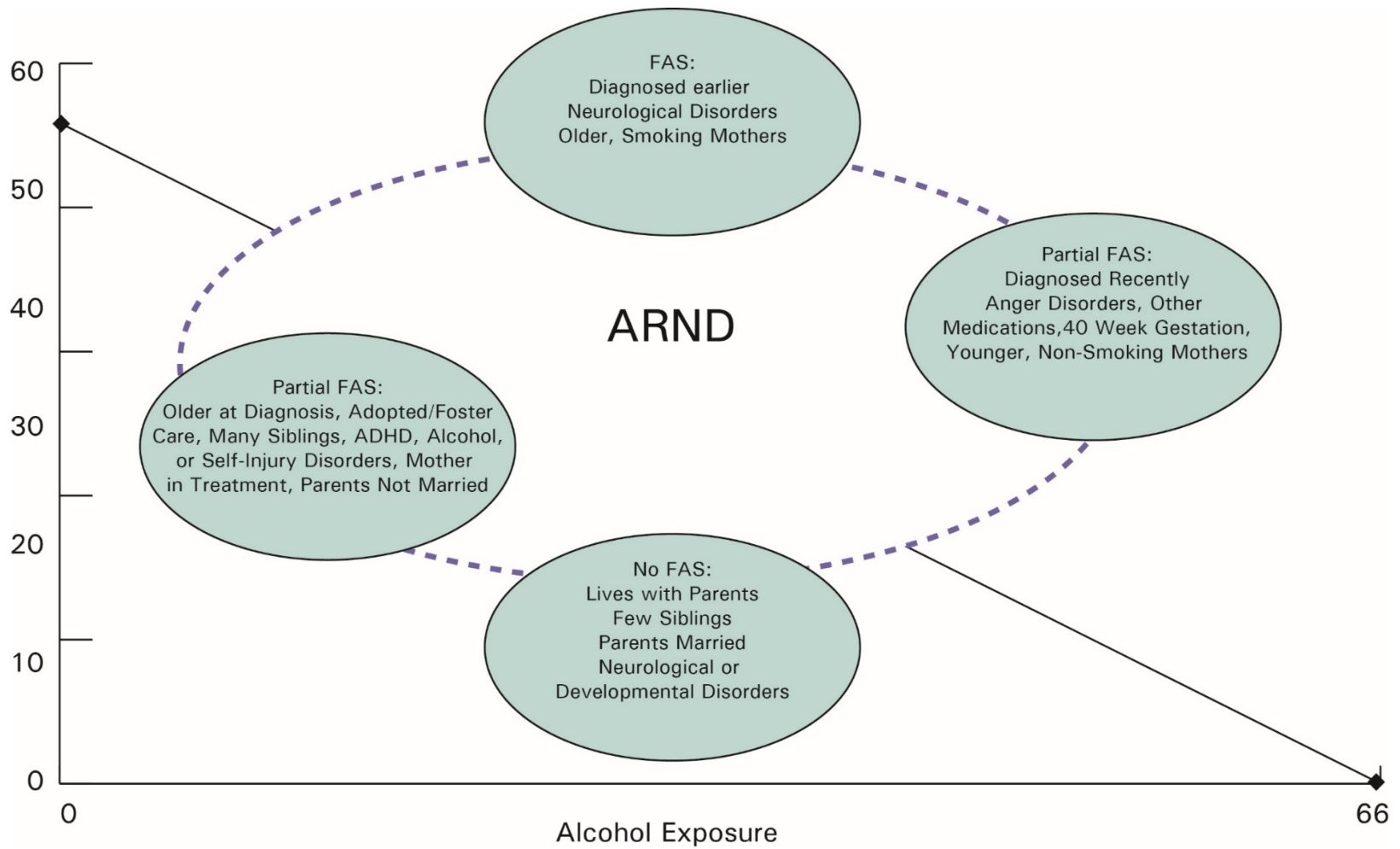
Total Score = _____

Score of 4 or more consider FAS referral
 83.8% accuracy, 93.8% sensitivity, 51% specificity

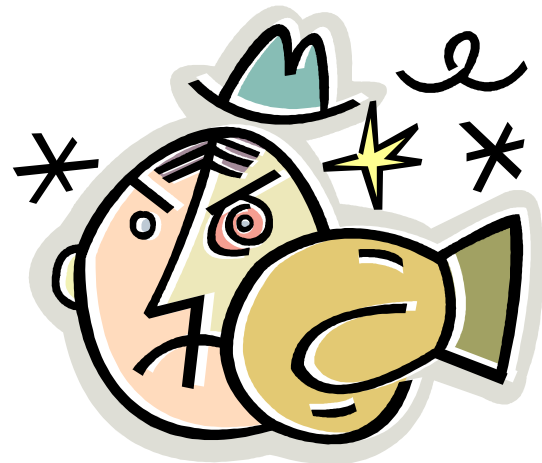
Facial Features



What is ARND?



Hitting



Plan = Hit → Time Out → 1-2 minutes

No Warnings
No Talking
Only 1-2 minutes

10 in a row

1

2

3

4

5

6

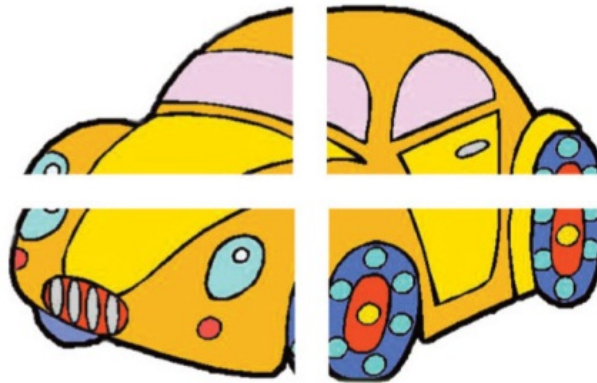
7

8

9

10

Can we divide a reward into pieces?



THE ARND BEHAVIORAL CHECKLIST

Name/ID: _____ DOB: ____/____/____ AGE: ____ SEX (circle one): **F** **M**

RACE (circle one): Caucasian Native American African American Other

In order to complete this checklist:

- 1) Behaviors must be impaired for the age of the person being assessed.
- 2) Interviewee needs to have known the person being assessed for at least one month.

CHECK ALL THAT APPLY FOR THE APPROPRIATE AGE RANGE

BEHAVIOR	3-6 Yrs.	7 Yrs.+
Hyperactive		
Poor attention		
Impulsive		
Disorganized		
Seems unaware of consequences of actions		
No fear		
Would leave with a stranger		
Poor social skills		
Few friends		
Will talk or interact with anyone		
Easily manipulated and set up by others		
Socially inept (Inappropriate speech or touching)		
Difficulty staying on topic during conversation		
Always talking		
Cocktail speech - little content		
Too loud		
Can't remember from one day to the next		
Below average IQ (<85)		
Poor school performance		
Suspended or expelled from school		
Poor sleeper		
Can't follow routine - needs reminders to get dressed, brush teeth, etc.		
Temper tantrums		
Extreme mood swings		
Requires constant supervision		
Been in trouble with the law		
Inpatient treatment for mental health, substance abuse, or in jail		
Inappropriate sexual behavior		
Poor motor skills		
Has or needs glasses		
Had foster care or was adopted		
Medication for behavior - ever		
Mother used alcohol during pregnancy (OPTIONAL)		
Mother used alcohol in last five months of this pregnancy (OPTIONAL)		
Mother has been in treatment for alcohol use (OPTIONAL)		

TOTAL CHECKED:

--	--

16

20

(Continue assessment if score is greater than or equal to above.)

Hitting

Plan = Hit → Time Out → 1-2 Minutes

No Warnings/No Talking/Only 1-2 minutes

1 2 3 4 5 6 7 8 9 10

For each time out reward a positive behavior at least once.

Older children require a different strategy.



Temper Tantrums

Plan = Walk away No talking 2-3 Minutes

Emphasize the need to apply the plan consistently
(10 in a row) Tantrums

1 2 3 4 5 6 7 8 9 10

Reward a positive behavior 2 or 3 times for each time out.

Won't go to bed on time

Plan: Bedtime routine

1. It's time for bed 8:15p.m.
2. PJs
3. Brush teeth
4. Story (must be in bed)
5. Show reward for tomorrow morning

Gets up →

No Talking
No Hugs
No Drinks
No Food

→


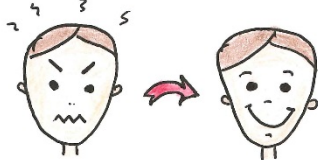
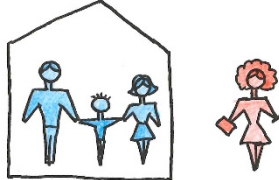

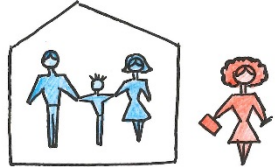

Put in bed
(over & over)

10 in a row

1 2 3 4 5 6 7 8 9 10

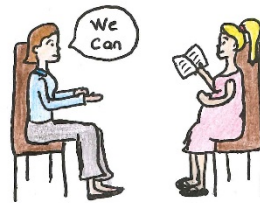


MY SCHEDULE FOR THE WEEK

MONDAY	 DRUG TREATMENT 09:00 AM	 ANGER MANAGEMENT 02:00 PM
TUESDAY		SUPERVISED VISITATION 10:00 AM
WEDNESDAY		PARENTING CLASS 9:30 AM
THURSDAY		SUPERVISED VISITATION 10:00 AM
FRIDAY		COURT 10:30 AM

Kerime

SUBSTANCE ABUSE TREATMENT



Talking About Substance Abuse

DECISIONAL BALANCE

PROBLEMS

"Why do you drink?"



when I am unhappy.



With my friends.



With my partner.

BENEFITS

"What are advantages for you to stop drinking?"



my baby will be healthy.

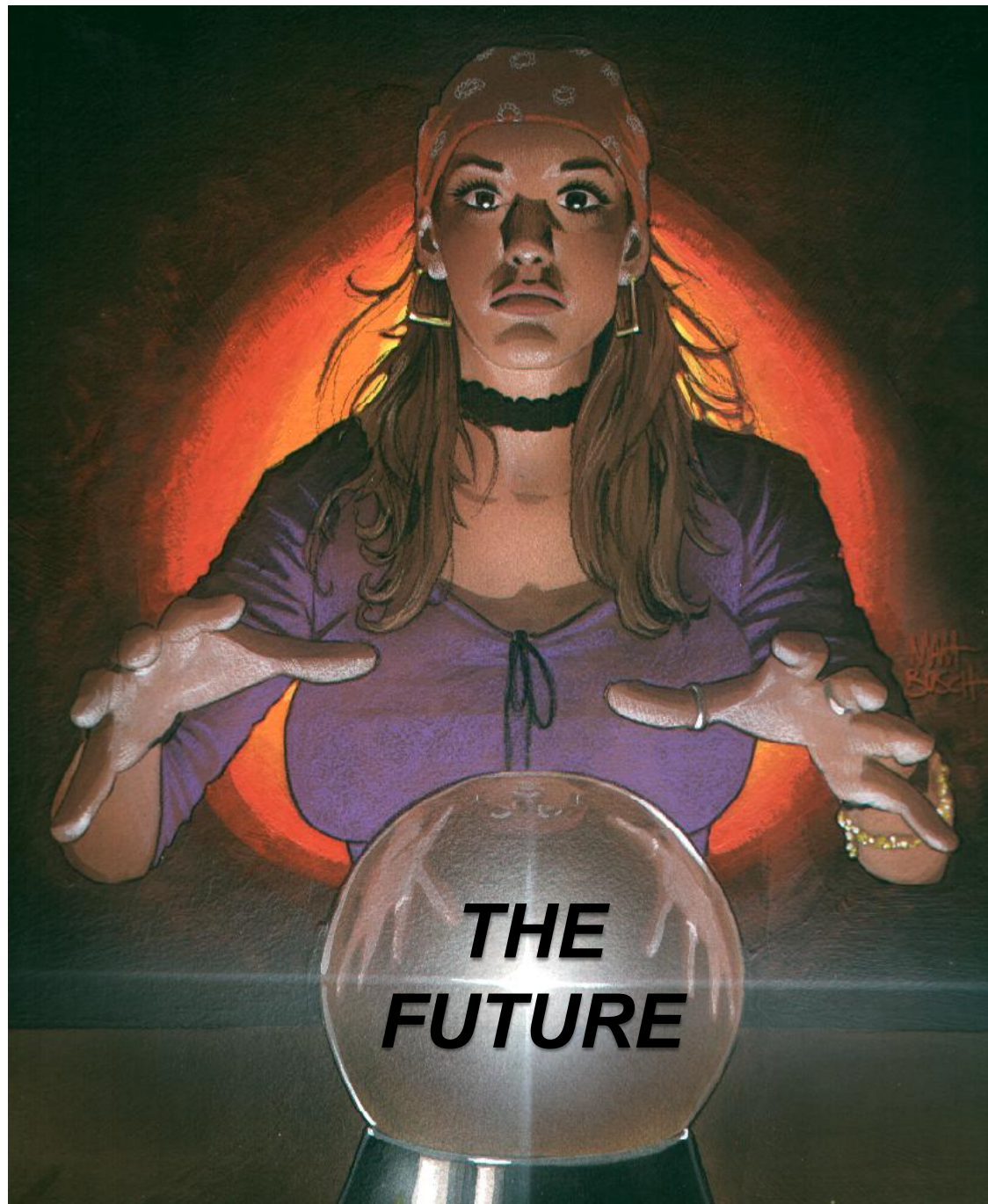


I will have more money.

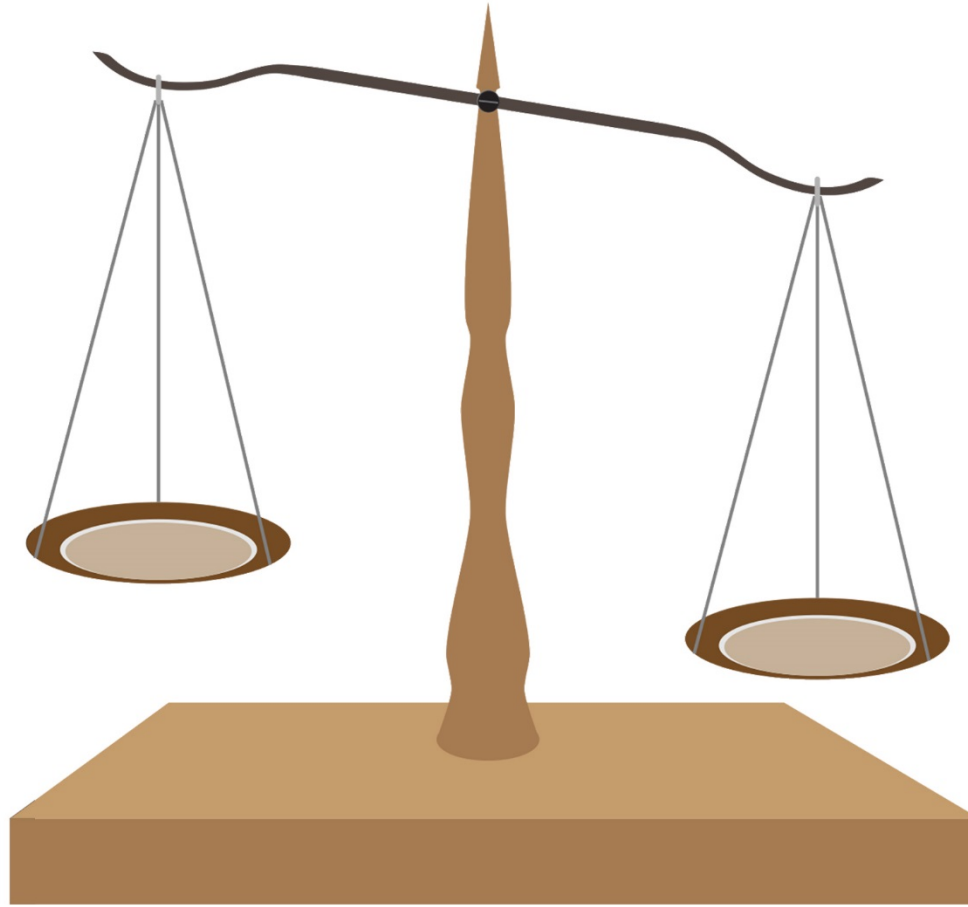


I will be healthier.

Kenime



PAE, FASD AND THE COURTS



We have a choice:

Current Diagnostic Strategies

or

FASD Prevalence Rates

Willful

- ❖ Does not care
- ❖ Won't listen
- ❖ Doesn't want to change
- ❖ Same think over & over

Neuropsychiatric

- ❖ Social Impairments
- ❖ Comprehension
- ❖ Doesn't understand others
- ❖ Does not learn from experience

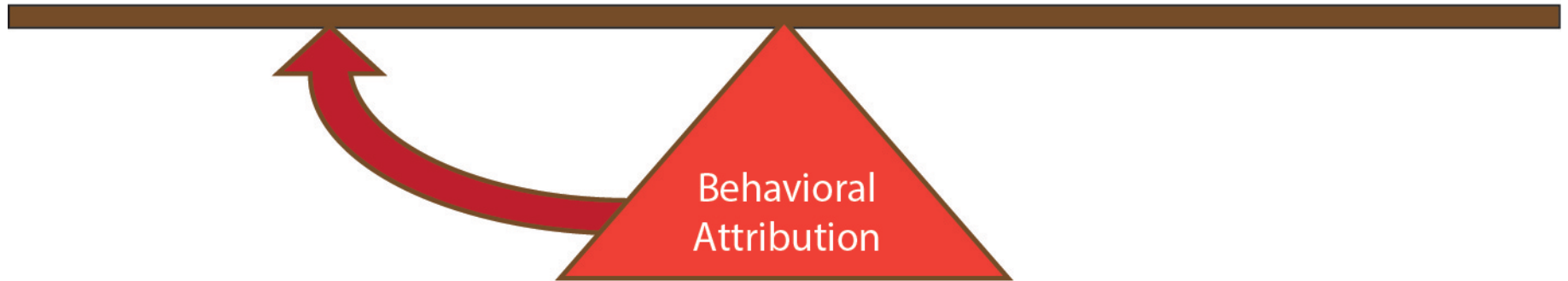


Attributes
of
Behavior

Behavior Problem

- ❖ Willful
- ❖ Increased demands
- ❖ More blame
- ❖ Negative consequences
- ❖ More behavioral escalation

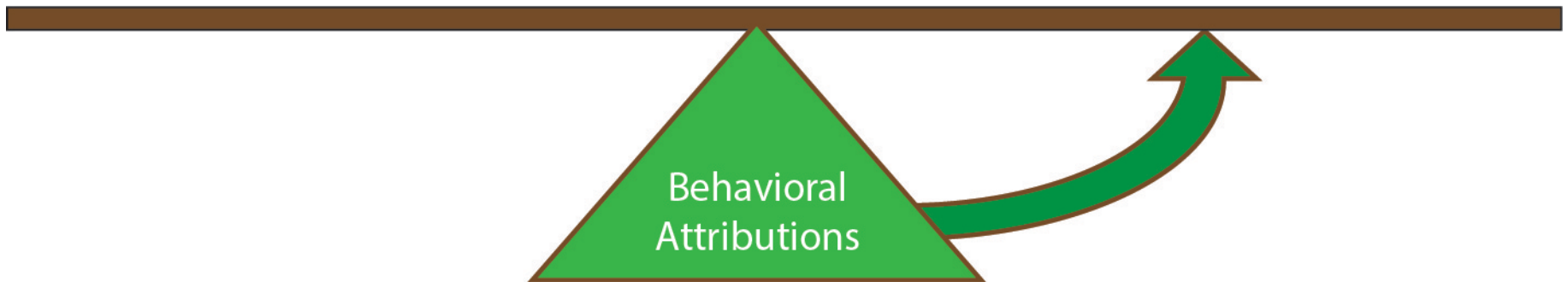
- ❖ Could change, but won't
- ❖ Did task, but now refuses
- ❖ Fewer positive consequences



Decreased Attention to Negative Behaviors

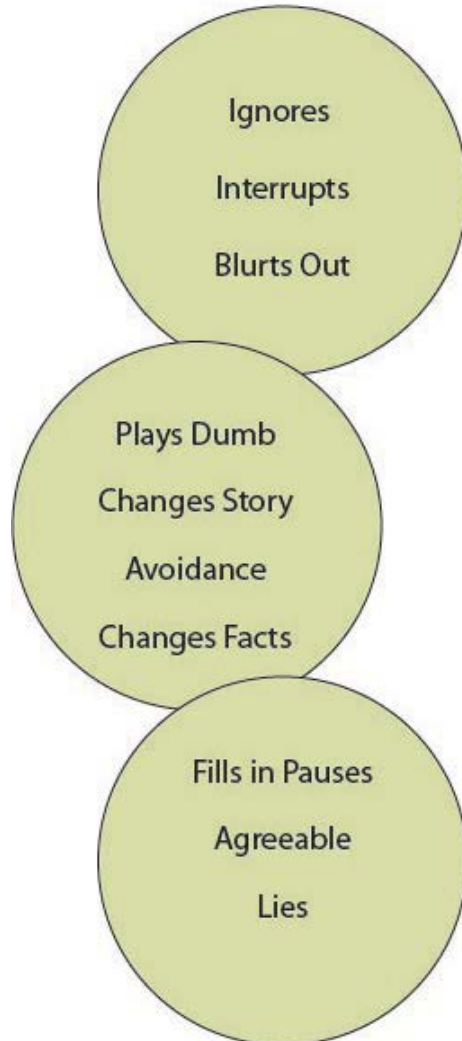
❖ Less behavioral escalation

- ❖ Increased accommodations
- ❖ Long-term plans prevent escalation
- ❖ More positive behavior management

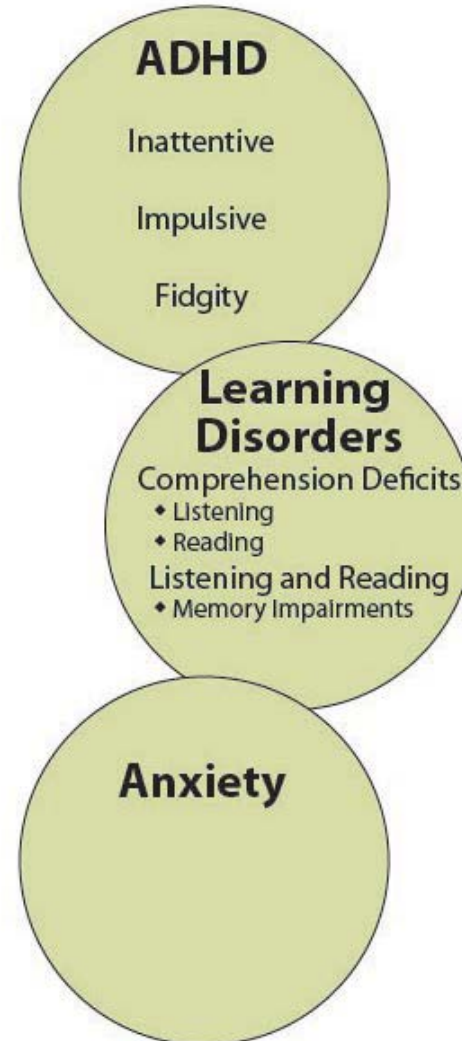


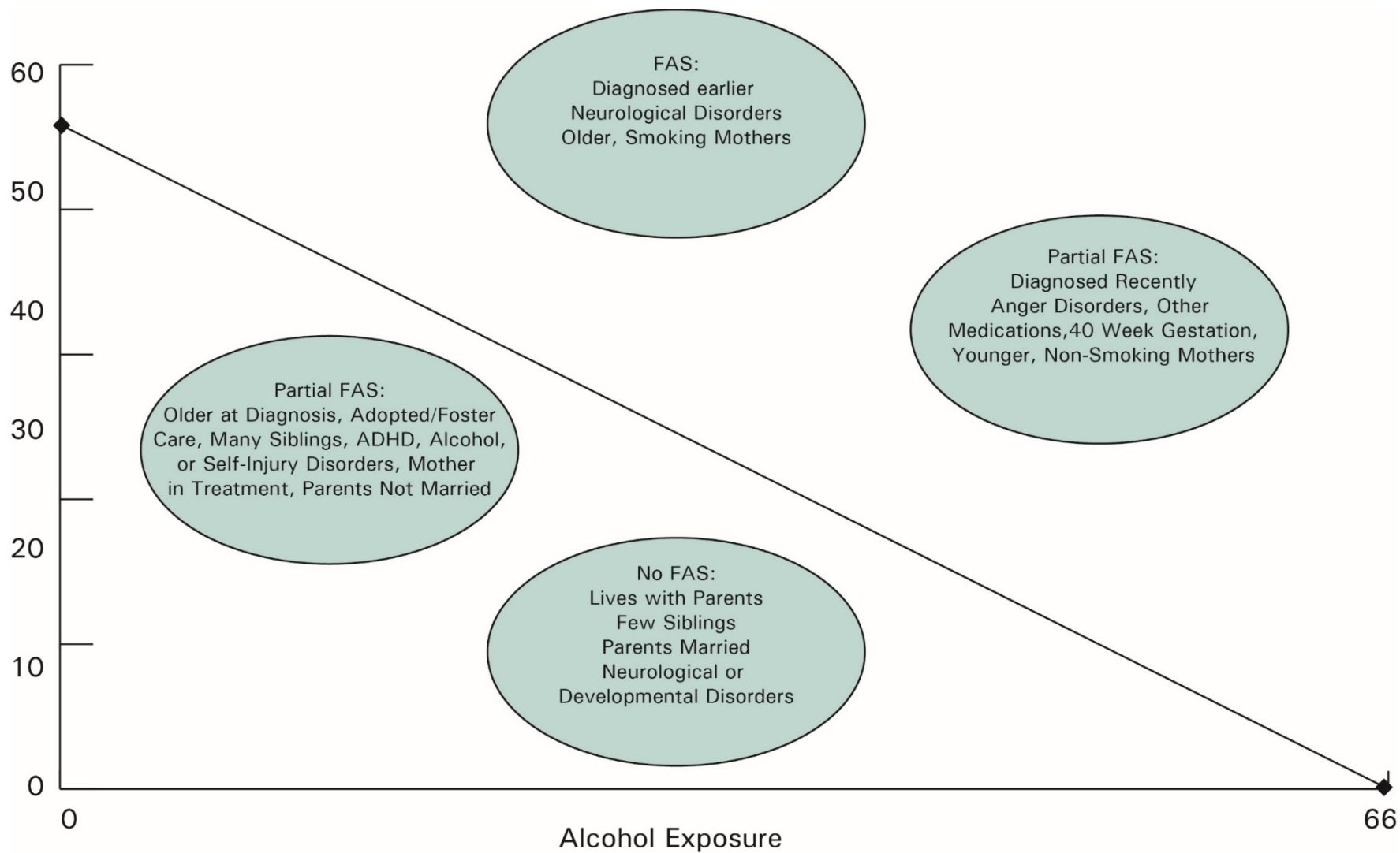
FASD: 2 Views

Behaviors



Impairments





How Mother and Baby "Picked Up"

A case of Blatz Beer in your home means much to the young mother, and obviously baby participates in its benefits.

The malt in the beer supplies nourishing qualities that are essential at this time and the hops act as an appetizing, stimulating tonic.

Main 2400

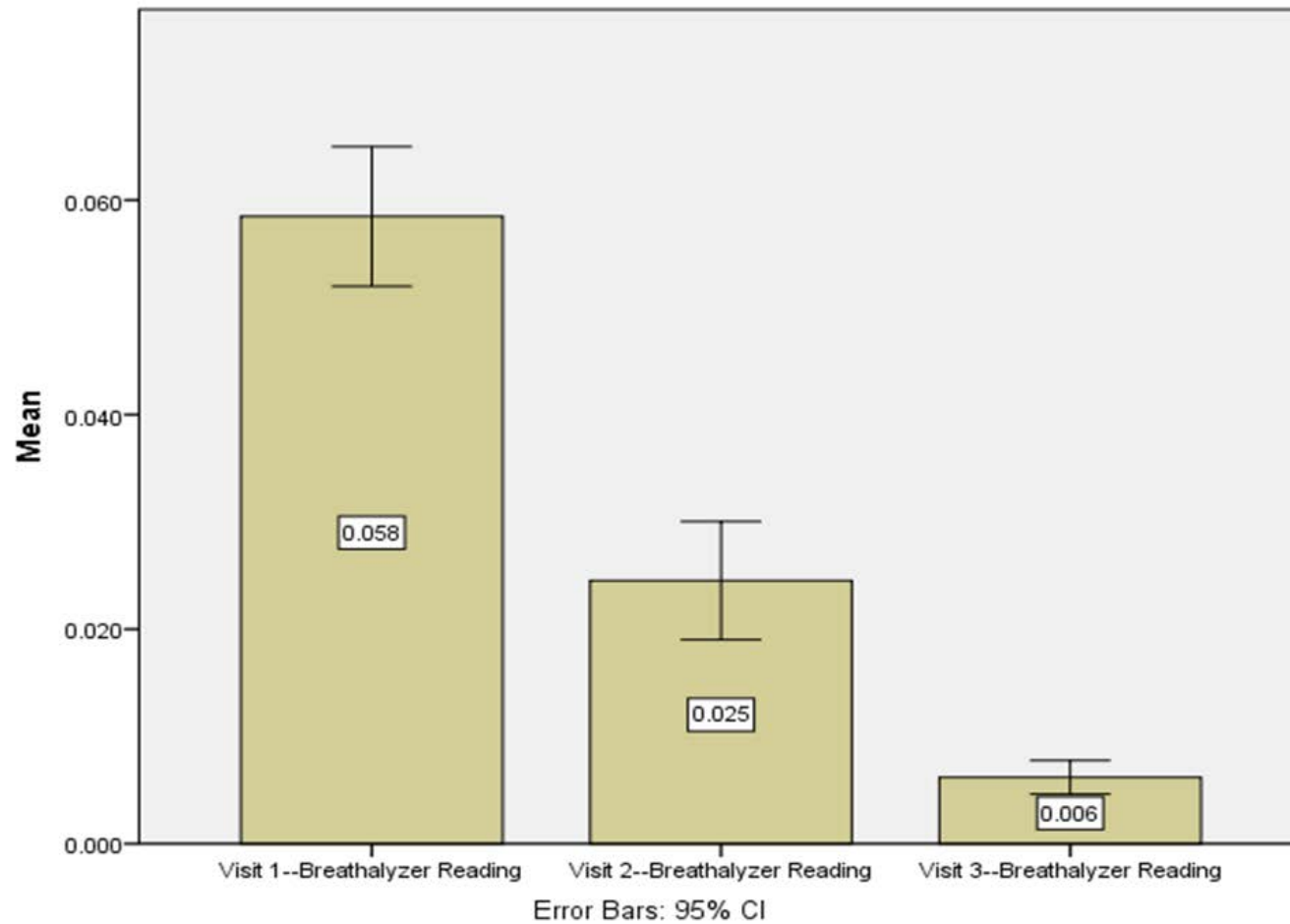


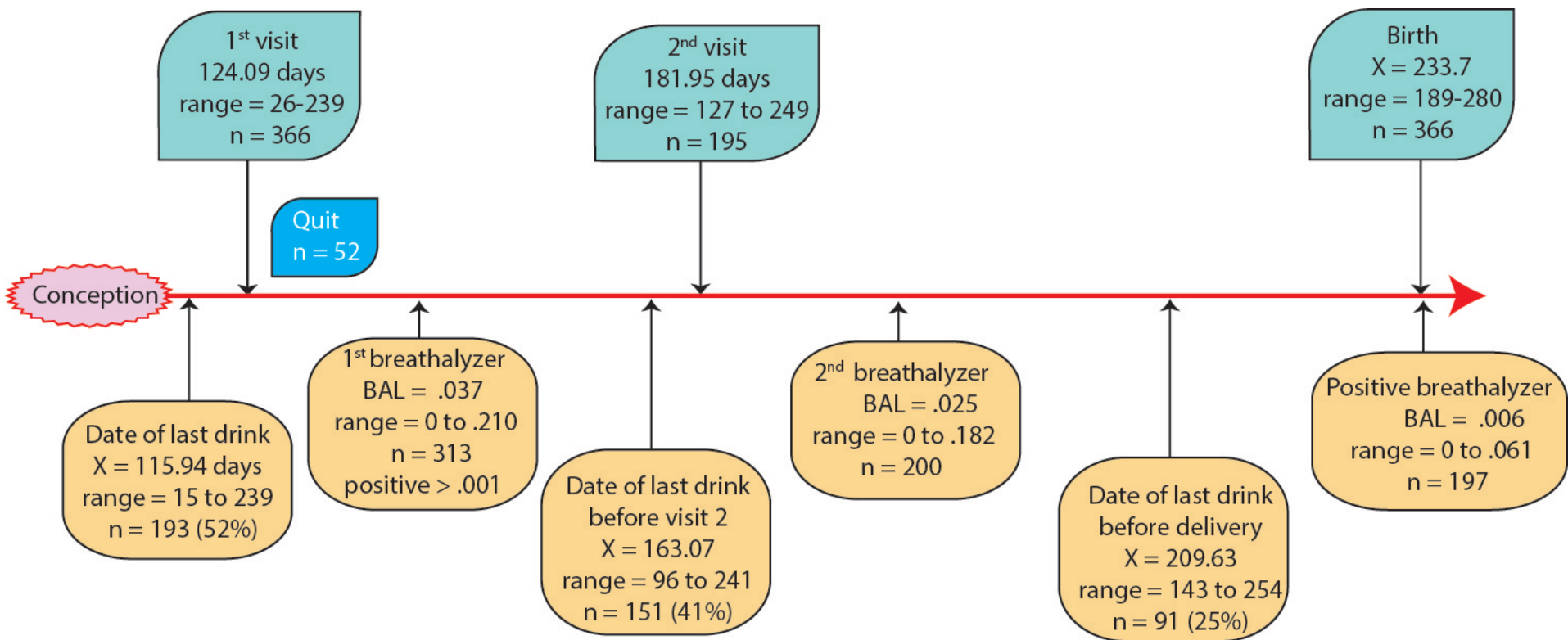
BLATZ

MILWAUKEE

Always the same good old *Blatz*

Breathalyzer reading by visit.





FASD in Maine

- ▶ Annual Births 12,700
- ▶ Annual FASD Births 127
- ▶ Recurrent Cases 31
- ▶ 8 will recur in families with multiple affected children.

FASD In Florida

- ▶ Entering year 269,509 (Screen 1,078 day)
 - ▶ Foster Care 427,910
 - ▶ FASD @ 25% 106,995
 - ▶ FASD @ 10% 42,791
-
- ▶ Corrections 98,010 (392 per day)
 - ▶ FASD @ 25% 24,502
 - ▶ FASD @ 10% 9,801