Facts and Statistics about Prenatal Alcohol and Drug Exposure
The U.S. Surgeon General’s Warning

• The dangers of consuming alcohol during pregnancy are well-documented and have earned their own U.S. Surgeon General’s Warning:\(^1\)
  - “Alcohol consumed during pregnancy increases the risk of alcohol-related birth defects, including growth deficiencies, facial abnormalities, central nervous system impairment, behavioral disorders, and impaired intellectual development.”
  - “No amount of alcohol consumption can be considered safe during pregnancy.”
The U.S. Surgeon General’s Warning (cont.)

• U.S. Surgeon General’s Warning:
  - “Alcohol can damage a fetus at any stage of pregnancy. Damage can occur in the earliest weeks of pregnancy, even before a woman knows that she is pregnant.”
  - “The cognitive deficits and behavioral problems resulting from prenatal alcohol exposure are lifelong.”
  - “Alcohol-related birth defects are completely preventable.”
Fetal Alcohol Spectrum Disorders

- Abbreviated as “FASD”
- Umbrella term for a spectrum of disorders caused by prenatal alcohol exposure that includes:
  - Physical disabilities
  - Mental disabilities
  - Behavioral disabilities
  - Learning disabilities
- Disabilities may range from mild to severe and may last a lifetime.
- Any form of FASD is 100 percent preventable.
Fetal Alcohol Syndrome

• Abbreviated as “FAS”
• The most severe end of the FASD spectrum
• Three major diagnostic criteria:
  – Distinctive, abnormal facial features
  – Growth deficiencies
  – Central nervous system problems (structural and/or functional)
Physical Signs of FAS

- Flat Midface
- Small Eye Sockets
- Short Nose
- Indistinct Lip Groove
- Thin Upper Lip
- Low Nasal Bridge
- Non-Hereditary Eyelid Fold
- Minor Ear Anomalies
- Small Lower Jaw
Non-Physical Signs of FAS

- Reduced cognitive ability
- Learning disabilities
- Attention deficits
- Hyperactivity
- Poor impulse control
- Poor social skills
- Language difficulties
- Memory deficits
Only Professionals Can Diagnose Prenatal Alcohol Exposure

- FAS can only be diagnosed by a clinical exam.³
- Because damage may be subtle, FAS is often missed or misdiagnosed.³, ⁶
- Genetic and environmental factors can cause similar disabilities and abnormalities.³
Facts About Prenatal Alcohol Exposure

• 1 in 100 babies (40,000 babies annually) is born with some effects of prenatal alcohol exposure.³
• 1 in 1,000 babies is born with full-blown FAS.³
• Annually, FAS costs up to $6 billion in direct and indirect costs.⁴
• Lifetime expenses and costs for an individual with FAS are approximately $2 million.⁴
Who Is At Risk?

- Any woman of childbearing age is at risk of having a child with FASD if she drinks alcohol during pregnancy.\(^8\)
- Women particularly at risk of drinking alcohol during pregnancy and having a child with FAS include:\(^8\)
  - Women with substance abuse problems
  - Women with mental health problems
  - Recent drug users
  - Smokers
  - Women with multiple sex partners
  - Recent victims of abuse and violence
Many Women Stop Drinking

- Many women who drink early in pregnancy will stop when they find out they are pregnant.
- Others cannot stop without help.
- Discontinuing drinking, even late in pregnancy, is better than not stopping at all.
All Types of Alcoholic Beverages Should Be Avoided

• A standard drink = 0.60 ounces of pure alcohol:\textsuperscript{9}
  – One 12-oz beer or wine cooler
  – One 5-oz glass of wine
  – One 1.5-oz serving of hard liquor

• Some alcoholic drinks contain more alcohol and/or come in larger containers (22 to 45 ounces).
How Alcohol Reaches the Fetus

- When a pregnant woman drinks alcohol, it readily moves across the placenta into the fetus’s bloodstream through the umbilical cord.\(^{10}\)
How Alcohol Reaches the Fetus

Alcohol is transferred from the mother to the baby through the placenta and umbilical cord.
Alcohol Can Damage All Organ Systems

- External Genitalia (As early as week 2)
- Heart (As early as week 4)
- Ears (As early as week 4)
- Eyes (As early as week 3)
- Central Nervous System (As early as week 3)
- Upper Limbs (As early as week 4)
- Teeth (As early as week 6)
- Palate (As early as week 6)
Alcohol Can Damage All Organ Systems (cont.)

- A mother’s drinking can affect all parts of a developing fetus.\textsuperscript{10}
- The time during pregnancy at which she drinks alcohol determines the type of injury.\textsuperscript{3, 10}
- The more alcohol she drinks, the greater the injury.\textsuperscript{3}
Babies Are Also Vulnerable While Breastfeeding

- A breastfeeding baby takes in alcohol, too, in the breast milk of a mother who drinks.\(^9\)
- Because a baby’s brain continues to grow and mature after birth, alcohol could still affect a child’s normal development.\(^9\)
- If a breastfeeding mother has four alcoholic drinks in a day, the alcohol her baby takes in may impair motor development – the baby’s ability to roll over, to sit, to crawl, and to walk.\(^9\)
Severe Injury to the Developing Brain

"Of all the substances of abuse (including cocaine, heroin, and marijuana), alcohol produces by far the most serious neurobehavioral effects on the fetus."¹¹

- Institute of Medicine Report to Congress, 1996
FASD = Lifelong Problems and Lower Quality of Life

• People with FASD can have lifelong disabilities and a reduced quality of life:
  – Low self-esteem\textsuperscript{12}
  – Poor impulse control\textsuperscript{12}
  – Disruptive school experiences\textsuperscript{7, 12}
  – Incomplete education\textsuperscript{2}
  – Unemployment\textsuperscript{2}
  – Psychiatric problems\textsuperscript{2, 7}
  – Inappropriate sexual behavior\textsuperscript{7}
  – Criminal behavior\textsuperscript{2, 7}
What Can We Do?

- Stop all drinking, including social drinking, if we are pregnant or could become pregnant.
- Help our pregnant partners and friends to stop all drinking, including social drinking.
- Encourage our pregnant partners and friends to see a doctor.
- Help families of babies born with FASD find medical, county, and community resources.
How to Stop Social Drinking

• To avoid social drinking and continue getting along with your partner and friends:
  – Explain that there is no known safe amount of alcohol, and that any type of alcoholic beverage can hurt your unborn baby.\(^5\)
  – Keep several alternate activities in mind that you, your partner, and your friends enjoy doing.
  – Be assertive!
  – If you cannot stop drinking:\(^2\)
    • Talk with your physician
    • Seek community services and intervention
    • Ask your partner and friends for support
How to Help Pregnant Partners and Friends Stop Social Drinking

• Share information about FASD and the importance of not drinking during pregnancy.\(^8\)
• Model safe behavior by abstaining from drinking alcohol yourself and attend social gatherings that do not involve drinking alcohol.\(^8\)
• Encourage her to discuss the reasons leading her to drink alcohol (e.g. various problems in her life).\(^8\)
• Help her find community services and/or interventions to help her stop drinking alcohol.\(^8\)
How to Help Families of Babies Born With FASD

• Encourage families to contact medical, county, and community resources.

• Encourage families to visit their local school district’s early childhood and family education programs.

• Attend meetings or sessions with families as they learn about available services and interventions.

• Offer to stay and help care for the baby to relieve caregiver stress.
Drug Categories—Part 1

- **Prescription drugs**: Prescribed by a doctor and used under a health professional’s supervision.
- **Nonprescription drugs**: Over-the-counter drugs that can be purchased at a pharmacy or drug store without a prescription.
Drug Categories—Part 2

• **Social drugs**: Used in social settings; examples are tobacco, alcohol, and caffeine.

• **Illicit drugs**: Illegal drugs that can be smoked, snorted, swallowed, injected, or inhaled, such as heroin, cocaine, marijuana, and methamphetamine. Also called “street drugs.”

• **Dietary supplements**: Nonprescription vitamins, minerals, or medicinal herbs used to improve nutritional status and overall health.
What Is a Teratogen?

- Teratogen: An agent that causes physical or developmental defects in an unborn child.

Examples include:
- alcohol
- mercury
- nicotine
- isotretinoin (brand name Accutane®, a treatment for severe acne)
- phenytoin (brand name Dilantin®, a treatment for epilepsy)
Drug Use Affects the Unborn Child At Any Time During Pregnancy

• The larger the amount of a drug a mother uses, and the longer she uses it, the greater the risks to the unborn baby.¹

The physical, emotional, cognitive, social, and behavioral problems from prenatal drug exposure can continue into childhood and beyond!
Combining Drugs Causes the Greatest Danger

• The risks are significantly higher for children whose mothers used a combination of drugs during pregnancy.¹
• Additional risks exist if a pregnant woman also smokes and drinks alcohol.¹
Who Is At Risk?

• Research indicates that “the age groups (18-34) with the highest birth rates are also the age groups most likely to use legal and illegal drugs.”\(^2\)
Babies Are Also Vulnerable While Breastfeeding

- Women who are breastfeeding should check with their doctor or health care professional before taking any drug, even a nonprescription drug or dietary supplement:\(^1\)
  - Most drugs that a mother takes are present in her breast milk in a small amount.
  - Very small amounts of some prescription drugs can harm the baby.
  - Breastfeeding mothers should not take any amounts of amphetamines or illicit drugs.
Many Women Stop Using Drugs During Pregnancy

- Many women who use drugs early in pregnancy will stop when they find out they are pregnant.
- Others cannot stop without help.
- Discontinuing drug use, even if it is late in pregnancy, is better than not stopping at all.
How Do Drugs Reach an Unborn Child?

• When a pregnant woman takes a drug, it readily moves across the placenta into the fetus’s bloodstream through the umbilical cord.¹
How Do Drugs Reach an Unborn Child?
Using Drugs Increases Risk

- A pregnant woman’s use of drugs can increase the risk of the following:
  - Prenatal death\(^6\)
  - Premature birth\(^3, 5, 6\)
  - Miscarriage\(^3, 4\)
  - Birth defects\(^3, 4\)
  - Low birth weight\(^4, 5, 6\)
  - Small size for gestational age\(^5\)
  - Small head size\(^4\)
  - Neurobehavioral symptoms\(^5\)
Withdrawal from drug addiction is physically distressing. A newborn who was exposed to drugs before birth shows several typical signs of withdrawal:

- Tremors
- Sleeplessness
- Muscle spasms
- Feeding difficulties
Short-Term Effects of Prenatal Drug Exposure

A fetus exposed to a mother’s drug use can experience a number of effects from birth to age two:

- Breathing problems
- Cerebral palsy
- Disrupted sleep patterns
- Hearing problems
- Irritability
- Reduced cognitive ability
- Poor fine motor skills
- Vision problems
Long-Term Effects of Prenatal Drug Exposure—Part 1

- A child can experience additional effects from age two through preschool:
  - Abnormal and minimal play skills$^5, 7$
  - Atypical social interactions$^5$
  - Delayed language development $^7$
  - Difficulty organizing behavior $^7$
  - Difficulty transitioning between activities$^5$
  - Hyperactivity$^5$
  - Lack of tolerance for frustration $^7$
  - Mood swings with loss of control$^5$
  - Shorter-than-normal attention span$^5$
Long-Term Effects of Prenatal Drug Exposure—Part 2

• Research suggests that the following risks are greater for children who have the developmental problems described on the previous two slides:5
  – Behavioral problems
  – Learning disabilities
  – Neglect and abuse
Intervention Is Required to Help Drug-Affected Children

• A number of approaches are used to help drug-affected children cope with their surroundings:
  – Emotional self-control by caregivers\textsuperscript{5}
  – Avoidance of abrupt transitions\textsuperscript{7}
  – Avoidance of excessive touching\textsuperscript{7}
  – Fairness, firmness, and consistency\textsuperscript{7}
  – Predictable routines\textsuperscript{5}
  – Calm and secure environments\textsuperscript{5}
  – Special positioning techniques\textsuperscript{7}
  – Protection from bright lights and noise\textsuperscript{7}
Strategies for Support

- County and community programs can provide support in a variety of ways:
  - Help the whole family as a unit
  - Integrate family needs with existing services
  - Provide competent, consistent, sensitive, and respectful care
  - Provide parenting skills training
  - Create partnerships between parents, caregivers, and health and educational providers
  - Promote child’s bonding with at least one responsible person in his or her life (need not be a parent)
  - Refer family to drug treatments and interventions
What Can We Do?

• Stop using all drugs, including social drugs, if we are pregnant or could become pregnant.
• Help our pregnant partners and friends to stop using all drugs, including social drugs.
• Encourage our pregnant partners and friends to see a doctor.
• Help families of babies born with effects of prenatal drug exposure find medical, county, and community resources.
How to Stop Drug Use

• To avoid using illicit and social drugs and continue getting along with your partner and friends:
  – Explain that any amount and any type of drug can hurt your unborn baby.\(^1\)
  – Keep several alternate activities in mind that you, your partner, and your friends enjoy doing.
  – Be assertive!
  – If you cannot stop using illicit or social drugs:
    • Talk with your doctor
    • See community services and intervention
    • Ask your partner and friends for support
Helping Pregnant Partners and Friends Stop Using Drugs

- Share information about prenatal drug exposure and the importance of not using drugs during pregnancy. ⁷
- Model safe behavior by not using drugs yourself and attend social gatherings that do not involve drug use. ⁷
- Encourage her to discuss the reasons leading her to use drugs (e.g., various problems in her life). ⁷
- Help her find community services and/or interventions to help her stop using drugs. ⁷
Helping Families of Drug-Affected Babies

• Encourage families to contact medical, county, and community resources.

• Encourage families to visit their local school district’s early childhood and family education programs.

• Attend meetings or sessions with families as they learn about available services and interventions.

• Offer to stay and help care for the baby to relieve caregiver stress.
National Statistics

- More than 90 percent of pregnant women take or use some type of drug (including prescription drugs and social drugs).\(^1\)
- Each year, 550,000 to 750,000 infants have been prenatally exposed to drugs.\(^4\)
- Two to three percent of all birth defects are attributed to the use of drugs during pregnancy.\(^1\)
- Each year, an estimated 2.6 million infants are prenatally exposed to alcohol.\(^3\)
- Each year, approximately 1.3 million infants are prenatally exposed to nicotine.\(^3\)
- Each year, an estimated 92,400 infants are prenatally exposed to stimulants, 43,500 to hallucinogens, and 38,300 to sedatives.\(^3\)
- Each year, the number of crack- or cocaine-exposed newborns ranges from approximately 30,000 to 100,000.\(^3\)
Conditions Associated with Prenatal Drug Exposure

- Birth defects\textsuperscript{5, 7}
- Difficult to comfort (withdrawn or unresponsive)\textsuperscript{7}
- Failure to thrive (FTT)\textsuperscript{2}
- Fetal Alcohol Spectrum Disorders (FASD)\textsuperscript{4}
- Increased susceptibility to infectious diseases\textsuperscript{2, 4}
- Low birth weight\textsuperscript{4, 6, 7}
- Miscarriage\textsuperscript{5, 7}
- Neurobehavioral symptoms\textsuperscript{4}
- Premature birth\textsuperscript{4, 5, 6}
- Prenatal death\textsuperscript{6}
- Small head size\textsuperscript{7}
- Small size for gestational age\textsuperscript{4}
- Sudden Infant Death Syndrome (SIDS)\textsuperscript{4, 6}
Birth to Two Years

- Problems interacting socially
- Breathing problems
- Cerebral palsy
- Delayed language development
- Disrupted sleep patterns
- Feeding difficulties
- Hearing problems

- Irritability
- Reduced cognitive ability
- Poor fine motor skills
- Poor weight gain
- Seizures
- Tremors
- Vision problems
Toddler and Preschool Years

- Abnormal and minimal play skills$^4, 8$
- Problems interacting socially$^4$
- Delayed language development$^8$
- Difficulty organizing behavior$^8$
- Difficulty processing auditory information and instructions$^4$
- Difficulty processing visual information and instructions$^4$
- Difficulty transitioning between activities$^4$
- Hyperactivity$^4$
- Lack of tolerance for frustration$^8$
- Mood swings with loss of control$^4$
- Shorter-than-normal attention span$^4$
Early School and Teenage Years

• Greater risks with:
  – Behavioral problems
  – Learning disabilities
  – Neglect and abuse
Follow-up and Long-Term Care

- Use of adapted activities to meet the child’s abilities and needs
- Emotional control by caregivers to reduce anger, frustration, and disappointment
- Avoidance of abrupt transitions
- Avoidance of excessive touching
- Fairness, firmness, and consistency in expectations, limits, and discipline
- Encouragement of self-control and the use of calming behaviors
- Predictable routines
Follow-up and Long-Term Care – cont.

- Introduction of new activities and skill-building when child is calm and receptive\(^4\)
- Calm and secure environment\(^4\)
- Physical, gentle touches during care\(^4\)
- Protection from bright lights and noise\(^8\)
- Limited environmental distractions\(^4\)
- Gentle but firm tactile stimulation around the face\(^8\)
- Special positioning techniques to improve posture and movement\(^8\)
- Specific containment measures (e.g., swaddling, holding firmly against caregiver’s skin)\(^8\)
Follow-up and Long-Term Care – cont.

Beneficial intervention strategies

• Helping the whole family as a unit
• Integrating the family’s needs with existing community services
• Obtaining competent, consistent, sensitive, and respectful care
• Obtaining parenting skills training
• Creating partnerships between parents, caregivers, and health and educational providers
• Promoting the child’s bonding with at least one person in his or her life (need not be a parent)
• Referring the family to agencies providing drug treatment and intervention
Financial Costs

- Newborns and infants may experience longer and additional hospital stays as a result of maternal drug use and/or alcohol use
- Subsequent abandonment. This extra care has significant financial costs: $47 million annually
- An additional $360 million each year in hospital costs for newborns
- An additional $47 million each year for housing abandoned babies beyond medical requirements
Financial Costs – cont.

Individual, Family, and Social Costs

- Disruptive school experiences\textsuperscript{10, 11}
- Incomplete education\textsuperscript{12}
- Unemployment\textsuperscript{12}
- Psychiatric problems\textsuperscript{11, 12}
- Inappropriate sexual behavior\textsuperscript{11}
- Criminal behavior\textsuperscript{11, 12}
Extra Nurturing

• A loving, nurturing, and stable home life\textsuperscript{12, 13}
• Avoidance of disruptions, transient lifestyles, or harmful relationships\textsuperscript{12}
• Consistent routines\textsuperscript{10}
• Limited stimulation\textsuperscript{10}
• Concrete language and examples\textsuperscript{10}
• Multi-sensory learning (visual, auditory, and tactile)\textsuperscript{10}
• Realistic expectations\textsuperscript{10}
• Supportive environments\textsuperscript{10}
• Supervision\textsuperscript{10}
Prenatal Drug Use Presentation Endnotes


