

HEALTHY CHICAGO

TRANSFORMING THE HEALTH OF OUR CITY

CHICAGO DEPARTMENT OF PUBLIC HEALTH

PUBLIC HEALTH BRIEF

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FETAL ALCOHOL SPECTRUM DISORDERS

Fetal Alcohol Spectrum Disorders (FASD) are the single largest cause of intellectual disability. It is estimated that more than half of persons with FASD have had legal trouble and 35% of persons with FASD have been incarcerated.

Fetal Alcohol Spectrum Disorders (FASD) is the term used to describe a group of disorders that result from prenatal alcohol exposure. A public health problem with lifelong consequences, FASD are the single largest cause of intellectual disability.¹

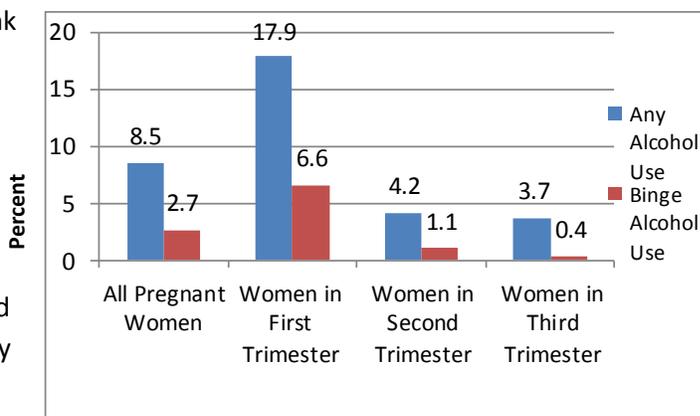
Fetal Alcohol Syndrome (FAS) is the most

serious diagnosis of all FASD. The precise number of persons with FAS is unclear, but according to CDC research, there are 0.2 to 1.5 cases of FAS for every 1,000 live births in the United States.² The physical, cognitive, behavioral, emotional, and adaptive functioning deficits caused by FAS cause suffering for individuals and families, and are costly to the U.S. as whole, estimated at four billion dollars nationally each year. The purpose of this brief is to raise awareness about FASD and opportunities for intervention.

RISK FACTORS FOR FASD

Combined 2011 and 2012 data show that across the U.S., 8.5 percent of pregnant women aged 15 to 44 drank alcohol in the past month, and 18 percent of pregnant women drank alcohol during their first trimester (Figure 1). Alcohol can disrupt the development of the fetus at any time, and binge drinking is especially harmful to the fetus.³ Generally, greater risk is associated with greater frequency of drinking alcohol, larger amounts of alcohol consumption, and continued drinking throughout pregnancy.⁴ The risk women are posing to their unborn child is often unintentional, with many women unaware that they are pregnant when they drink, a likely contributor to the higher percentage of alcohol use in the first trimester. Others are not aware of the harm that alcohol consumption can cause to their unborn child.⁵ Maternal risk factors include maternal age, number of pregnancies and number of births:

Figure 1. Percentage of Past Month Alcohol Use and Binge Alcohol Use among Pregnant Women Ages 15 to 44, 2011 and 2012



Source: SAMHSA. (2013). The NSDUH Report. 18 Percent of Women Drink Alcohol during Early Pregnancy. National Surveys on Drug Use and Health (NSDUH). Accessed at <http://www.samhsa.gov/data/spotlight/spot123-pregnancy-alcohol-2013.pdf>



older women who frequently drink large amounts of alcohol, who have had greater numbers of pregnancies and children, are at higher risk for having a child with FASD. Lower SES is also a key risk factor. Smaller women are overrepresented among mothers of FASD children, as alcohol metabolism is affected by body size.⁶

SIGNS AND SYMPTOMS OF FASD

The effects of FASD present in many different ways. Primary disorders in those with FASD include lower IQ; impaired ability in reading, spelling, and arithmetic; and lower levels of adaptive functioning. There are numerous other and related difficulties that persons with FASD may experience, including sensory overload, problems with balance and coordination, difficulties processing information, impaired executive function and decision making, and poor self-esteem.⁷ Some of the most common signs and symptoms of FASD are shown in Figure 2.

ISSUES RELATED TO DIAGNOSIS AND TREATMENT

An accurate diagnosis of FASD has important implications. Optimal care requires a diagnosis and coordinated services from health care, social service, mental health providers, and schools. However, diagnosing FASD can be difficult. Many other disorders have similar symptoms.⁸ In addition, the facial abnormalities present in children with FAS are usually less obvious in adolescence and adulthood. In contrast, while young children often have few functional abnormalities, adolescents generally have behavior, attention, and cognitive problems.⁹

A diagnosis of FAS is more easily confirmed with maternal report of alcohol use during pregnancy. However, mothers are often reluctant to admit that they consumed alcohol during pregnancy. In other cases, the child may be living with adoptive or foster families, and information about the mother's history of alcohol use during pregnancy is unavailable. Also, if the pregnancy occurred long ago, mothers may not be able to recall details about their history of alcohol use.¹⁰

Persons with FASD who are not identified and treated are at risk for serious consequences, including early death, unemployment, homelessness, substance abuse, and incarceration.¹¹ University of Washington researchers estimate that more than half of the persons with FASD have had legal trouble, and that 35% of persons with FASD have been incarcerated. This is because some types of FASD include brain damage that can lead to a host of issues related to criminal behavior, including a lack of impulse control, difficulties thinking through the consequences of behavior, problems empathizing, delaying gratification, or using good judgment; explosive episodes; and vulnerability to peer pressure. Other times, a person with FASD does not understand that certain behaviors are unwanted, or they are simply taken advantage of. Further, some persons with FASD are not able to provide accurate testimony and are prone to making false confessions. Structured living environments can be very helpful in preventing incarceration in some persons with FASD.¹²

Figure 2. Common Signs and Symptoms of Fetal Alcohol Spectrum Disorders

- Abnormal facial features, such as a smooth ridge between the nose and upper lip (the philtrum)
- Small head size
- Shorter-than-average height
- Low body weight
- Poor coordination
- Hyperactive behavior
- Difficulty paying attention
- Poor memory
- Difficulty in school (especially math)
- Learning disabilities
- Speech and language delays
- Intellectual disability or low IQ
- Poor reasoning and judgment skills
- Sleep and sucking problems as a baby
- Vision or hearing problems
- Problems with the heart, kidneys, or bones

Source: CDC. (2011). Fetal Alcohol Spectrum Disorders. CDC Website. Accessed at <http://www.cdc.gov/NCBDDD/fasd/facts.html>.



TYPES OF TREATMENT

Early intervention to improve child development at a young age has been shown to be most effective. For persons who are older, medical care, medication, behavior and education therapy and parent training are all common treatments for FASD. Medical care varies, depending on the particular needs of the individual. Medication may be used to address symptoms such as depression, anxiety, aggression, hyperactivity, and problems with attention. Therapy, including evidence-based friendship training, math tutoring, executive function training, parent-child interaction therapy, and parent and behavior management training, can be successful in improving relationships, educational deficits, self control, memory, problem solving, behavior problems and family stress. Parent training assists parents in learning about FASD and in teaching their children skills and coping behaviors. Early diagnosis, involvement in special education and social services, and a non-violent, loving, nurturing, and stable home can reduce the risks of FASD.¹³

INTERVENTIONS UNDER STUDY

New preventive interventions and treatments are being researched. One promising intervention is supplementation with vitamins and nutrients. In particular, vitamin A, folate, and choline supplementation appear to mitigate some of the effects of alcohol exposure. Choline is being studied both pre-and postnatally, potentially helpful to not only the developing fetus but to persons with FASD. Choline is an essential nutrient that is lacking in many diets and is not found in many prenatal vitamins. Prenatally, choline has been shown to attenuate the impact of alcohol on birth weight, brain weight and many behavioral measures. Postnatally, choline has reduced the severity of over-activity, learning deficits and memory deficits and has improved attention, fine motor skills and cognitive functioning.^{14, 15, 16}

PREVENTION

Screening and preventive interventions are critical to preventing FASD. In Illinois, the Illinois Department of Human Services (IDHS) is integrating alcohol screening and an empirically validated brief intervention within the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Program. The intervention uses short counseling sessions to increase awareness of the negative consequences of drinking, identify risky situations, reduce alcohol consumption, and develop alcohol reduction goals. IDHS completed statewide training for all WIC providers in 2013, and the program will begin statewide, including in Chicago, in 2014.^{17, 18}

Across the country, there has been increased legislative action related to FASD in recent years, important to the funding and mandating of interventions. Most recently in Illinois, the Illinois school code was amended to include course materials and instruction about the dangers of drug and alcohol use during pregnancy. While a high proportion of FASD bills across the country have been passed, funding bills have had a low success rate.¹⁹ Overall, continued advocacy is needed to effectively address FASD. For more information about FASD legislation and FASD overall, visit <http://www.fascenter.samhsa.gov/>.



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