ECONOMIC COSTS OF ALCOHOL AND OTHER DRUG ABUSE IN ALASKA, 2005 UPDATE

PREPARED FOR:

THE ADVISORY BOARD ON ALCOHOLISM AND DRUG ABUSE
DEPARTMENT OF HEALTH & SOCIAL SERVICES

PREPARED BY:

McDowell GROUP

JUNEAU • ANCHORAGE

DECEMBER 2005

Full report is available online:
http://www.hss.state.ak.us/abada/pdf/mcdowell_rept2005_091307.pdf

Fetal Alcohol Spectrum Disorders

Prenatal exposure to alcohol can cause specific birth defects which may include physical, mental, behavioral, and learning disabilities. Many children with fetal alcohol disorders are not identified until they reach school age or later. Individuals with alcohol-related effects may have difficulties with attention, memory, and problem solving. Heart, liver, and kidney defects are also common, as well as vision and hearing problems.[13] Alcohol-related effects that fall within the broad category of fetal alcohol spectrum disorders (FASD) include:

- fetal alcohol syndrome (FAS),
- partial FAS (PFAS),
- fetal alcohol effects (FAE),
- alcohol-related neurodevelopmental disorder (ARND),
- and other alcohol-related birth defects (ARBD).[14]

[13] National Organization on Fetal Alcohol Syndrome, *What is FAS/FASD?*, www.nofas.org/faqs.aspx?id=9
[14] US Department of Health and Human Services, SAMHSA Fetal Alcohol Spectrum Disorders Center for Excellence. *The Language of Fetal Alcohol Spectrum Disorders.*

During the past ten years, a number of FAS prevalence rates have been established. Studies by the Centers for Disease Control and Prevention indicate a national rate from 0.2 to 1.5 cases per 1,000 births across various populations.[15] Other studies, including those focusing on specific high-risk populations such as Native Americans, other minorities and families living in poverty have indicated rates from 0.5 to 5.0 per 1,000 live births. Clearly, the data is varied and limited.

In establishing a clear number of infants born each year in the United States with Fetal Alcohol Syndrome, the CDC estimates between 1,000 and 6,000 children will be born with FAS each year – a preventable birth defect and disability.

Beginning in 1997, Alaska was one of five states comprising the CDC's Fetal Alcohol Syndrome Surveillance Network (FASSNet), a program established to provide consistent and comparable FAS prevalence rates. Participating states included Arizona, Colorado, New York, Wisconsin and Alaska (however, FAS rates for Wisconsin are not available). At 1.5 per 1,000 live births, Alaska has a significantly higher rate of children born with FAS than other states in the FASSNet program. In addition, Alaska data showed an estimated FAS prevalence rate of 4.8 per 1,000 live births among Alaska Natives. CDC data indicates FAS prevalence rates ranging from 0.3 per 1,000 in Arizona and Colorado to 0.4 in New York.

CDC estimates that other prenatal alcohol-related conditions, such as ARND and ARBD, occur approximately three times as often as FAS.[16] Within the wider category of FASD (which would include individuals with FAS), the US is estimated to have about 10 cases per 1,000 live births.[17]

Alaska's estimated rate of all births impacted by prenatal alcohol exposure is 16.3 cases per 1,000 births, based on the 1995 to 1999 birth years. While these alcohol-related effects are closely associated with FASD, these rates are not directly comparable to national FASD rates of 10 per 1,000 live births due to differences in diagnoses and reporting at the state and national levels. Based on 16.3 cases per 1,000 and the number of live births from 1995 to 1999, approximately 160 infants are born each year in Alaska with FAS and other effects from maternal alcohol use during pregnancy. Of those, approximately 15 are born with Fetal Alcohol Syndrome (FAS).

FAS vs. FASD

It is important to remember that the information being used to determine the economic costs of care and service delivery to individuals with Fetal Alcohol Syndrome is only a small portion of the overall impact of prenatal exposure to alcohol and the resulting birth defects and disabilities. Beginning in 2000, the State of Alaska began extensive efforts to improve and expand the ability to appropriately diagnose individuals prenatally exposed to alcohol. In 2005, Alaska has a broad and regionally diverse network of diagnostic teams across the state.[18] Data collected from these teams indicate that from July 2000 through March 2005 teams have conducted

[15] *FAS: Guidelines for Referral and Diagnosis*, CDC, 2004.
[16] CDC, *Tracking Fetal Alcohol Syndrome*, www.cdc.gov/ncbddd/fas/fassurv.htm
[17] National Organization on Fetal Alcohol Syndrome, *What are the Statistics and Facts about FAS and FASD?*, www.nofas.org/faqs.aspx?id=12
[18] For information on available services go to http://health.hss.state.ak.us/fas/teams/default.htm).

755 FASD diagnostic assessments. Of this number, 76 (10.0 percent) were diagnosed with FAS or atypical FAS; 378 (49.9 percent) were diagnosed with Static Encephalopathy; 251 (32.2 percent) were diagnosed with Neurobehavioral Disorder; and 50 (6.6 percent) were found to have no evidence of organic brain damage.

What this data indicates is that the costs associated with all alcohol-related births are much higher than those estimated just for individuals with FAS. And, as noted in the break-through research of Dr. Ann Streissguth in 1996 (Understanding the Occurrence of Secondary Disabilities in Clients with Fetal Alcohol Syndrome [FAS] and Fetal Alcohol Effects [FAE]), individuals with FAE (what is now referred to as FASD) are more likely to develop secondary disabilities and need more services than those with Fetal Alcohol Syndrome and the associated facial dysmorphology. For Alaska and the economic costs associated with all fetal alcohol spectrum disorders, the costs could be as much as 80 percent higher than indicated for FAS alone.

Economic Cost of Fetal Alcohol Syndrome

The cost of caring for and providing appropriate services to a person with FAS can be significant. These costs may include neonatal care for low birth weight to special speech therapy, behavioral management, or residential care for adults with FAS. Lifetime costs for care for children born in 2003 with FAS are estimated below. However, these costs are excluded from the total health care costs for 2003, as the component of that expenditure in 2003 alone cannot be determined.

Methodology

To estimate the economic costs from FAS, the research team first determined the number of live births with FAS in Alaska. The Alaska Department of Health and Social Services has closely monitored incidence of FAS in the state since 1998, as part of a U.S. Centers for Disease Control (CDC) monitoring program called the Fetal Alcohol Syndrome Surveillance Network (FASSNet), the ongoing Alaska FAS Surveillance Project and the Alaska Birth Defects Registry. The development of 13 community-based FASD diagnostic teams across Alaska has also assisted in the collection of data related to both FAS and other alcohol-related disabilities included in the FASD umbrella definition.

The Alaska FAS Surveillance Project data collection system is based on reports to the Alaska Birth Defects Registry, and uses medical chart data points to identify children with FAS or other prenatal alcohol-related conditions. DHSS staff consider the surveillance program to be highly rigorous. Alaska clinicians and case workers use a diagnostic process developed by researchers at the University of Washington Fetal Alcohol Syndrome Diagnostic and Prevention Network. Reporting of birth defects to the state registry is mandated by Alaska law. While Alaska's FAS surveillance system is believed to capture the majority of prenatal alcohol-related cases, it is possible that underreporting could make the incidence rate even higher.

For birth years 1995 to 1999, the incidence rate of FAS in Alaska is 1.5 per 1,000 live births.[19] This was the highest rate of the five states that were involved in developing

[19] *Susan Merrick, FAS Surveillance Project Manager, Alaska Department of Health and Social Services, personal communication, July 2005.*

the CDC FASSNet system. (The lowest rate was 0.3 FAS cases per 1,000 births.) However, the incidence of all prenatal alcohol-related conditions, including such conditions as alcohol-related birth defects (ARBD) and alcohol-related neurodevelopmental disorder (ARND), as well as FAS, is 16.3 per 1,000 live births. This incidence rate is assumed to be consistent in birth year 2003.

To estimate FAS costs in Alaska, the research team relied on data published in Health Professions Education Partnership Act of 1998 (Senate Bill 1754). The cost of treating an individual with FAS over his or her lifetime was estimated to be at least $1.4 million in 1995. These costs could include neonatal intensive care, medical and surgical services (not related to neonatal care), special speech therapy, behavioral management, and residential care. Medical and surgical service might include rectifying or monitoring hearing loss or cleft palate surgery. Residential services include special education, home care, speech therapy or institutional care. The 1995 data was adjusted for inflation using the Bureau of Labor Statistics Consumer Price Index for medical care. Additionally, costs of providing care were adjusted by the Alaska differential for cost of living (65 percent in 2003). The resulting total lifetime costs (in 2003 dollars) for providing services to an individual with FAS are estimated at $3.1 million.

The total cost for providing services to an individual with FAS born in Alaska during 2003 was estimated by multiplying the lifetime costs by the number of FAS births during that period.

Results

Table 18 presents estimated costs for FAS births in Alaska during 2003. During that period, Alaska had about 15 FAS births. Total economic costs resulting from services to all individuals with FAS in Alaska totaled approximately $47.0 million.

Table 18
Lifetime Costs of Medical and Residential Services for Children Born with FAS in 2003

	Incidence and Costs
Alaska births in 2003	10,084
FAS incidence per 1,000 live births	1.5
FAS births	15
Lifetime FAS cost	**$47,037,000**

Source: Birth data from the Alaska Bureau of Vital Statistics. McDowell Group, based on FAS data from Alaska Department of Health and Social Services; and Health Professions Education Partnership Act of 1998, S. 1754, 108d Congress (1998).