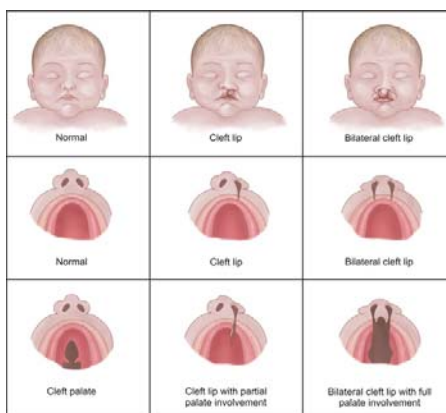


Definition and Types

Cleft Lip (CL) is a type of birth defect that occurs when the lip does not fully close within the first four to seven weeks of conception. The severity of the lip opening can be as minimal as notch in the lip or a large gap from the top of the lip to the bottom of the nose. The split in the lip can be on one or both sides of the lip. Surgery within the first months of birth can correct CL.¹



Clinical presentation of CL/CP²

Children with CL may have a variety of health problems. Some children may need assistance with breathing, eating, and talking. Ear infections, loss of hearing, and teeth problems are common in children with CL. Problems with adjusting to social situations may influence how the child learns and behaves.³

United States Estimates

There are approximately 4,200 babies in the U.S. are born with CL/CP each year.¹ The societal and economic lifetime cost associated with caring for a child that has been diagnosed with CL/CP is at least \$100,000.³ In 1992, the Centers for Disease Control and Prevention (CDC) recommended that women of childbearing age consume 400 micrograms of synthetic folic acid daily.

Then in 1997-1998, the Food and Drug Administration required the addition of folate to enriched cereal-grain products.⁵ The U.S. prevalence rate for CL/CP between 1999 and 2000 was 9.0 cases per 10,000 live births. Fortification was associated with a 5% drop in CL/CP rates in the U.S.⁶

ABDMP Data Collection

The ABDMP staff reviews hospital records, birth and death certificates in order to identify potential cases. If potential cases are identified, the staff review the medical records to confirm that the child has a reportable birth defect. Once confirmed, information from the abstract is entered into the Arizona Birth Defects Monitoring Program.⁴

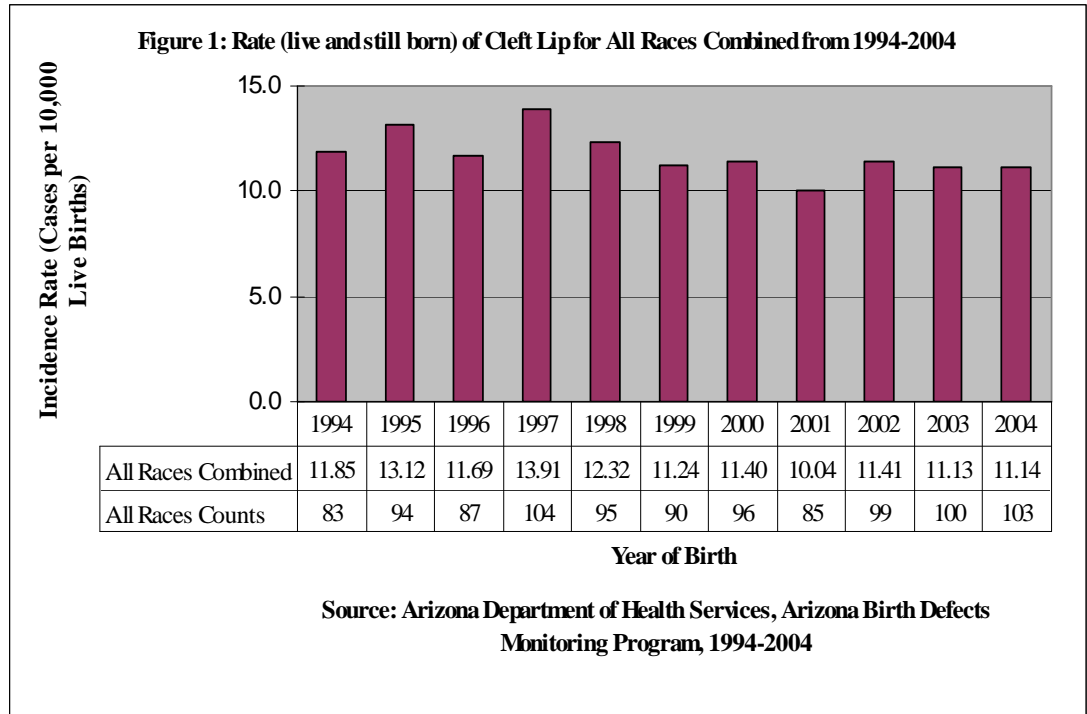
Cleft Lip/Cleft Palate in Arizona

Approximately 94 babies are born each year in Arizona with CL with and without CP.⁷ Between October 1998 and December 2003, the average rate of CL in Arizona decreased (following the folic acid fortification of many cereal foods). The rate of CL during the pre-folic acid fortification period was 12.06 per 10,000 live births. The rate post-folic acid fortification was 9.95 per 10,000 live births. The prevalence ratio (post-fortification prevalence/pre-fortification prevalence) was 0.83 (95% CI: 0.75-0.94). This 17% reduction in the occurrence of CL is greater than the 5% decrease seen nationally.

The rate for Whites (non-Hisp) was 10.18 per 10,000 live births (95% CI: 8.91-11.45). The rate for Native Americans was 21.43 (16.45-26.41) per 10,000 live births, an elevated rate and statistically significant compared to Whites (non-Hisp). The rate for Hispanics was 10.55 (9.12-11.98) per 10,000 live births (Figure 4).

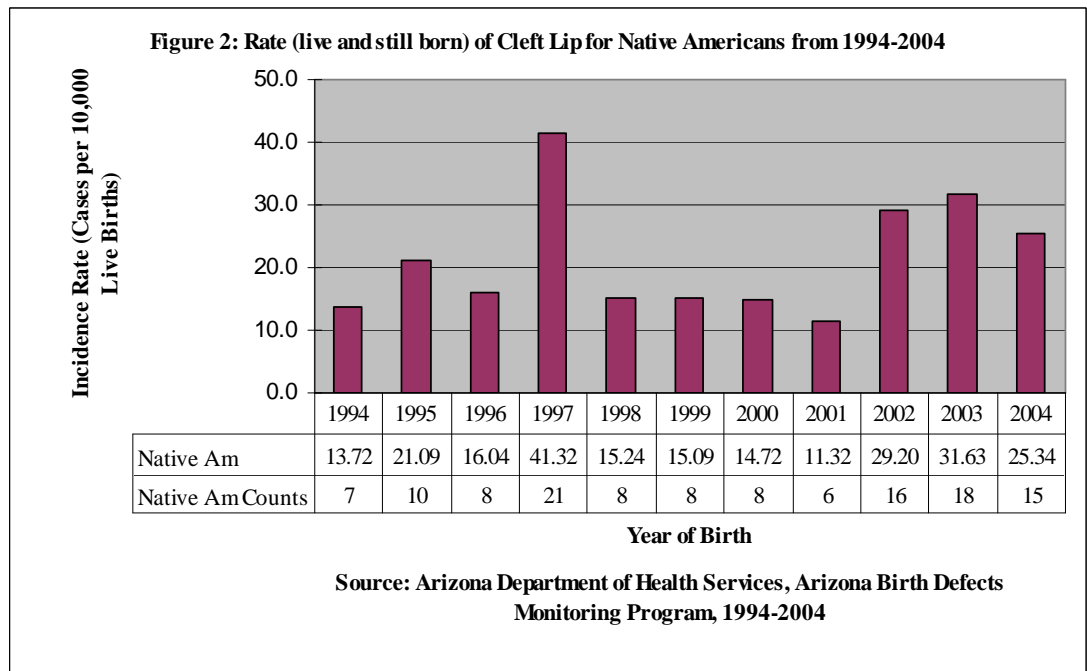
Cleft Lip in Arizona

Figure 1: The average rate of Cleft Lip for all races in Arizona between 1994 and 2004 is 11.75 cases per 10,000 live births.



A 3D clinical presentation of CL.⁸

Figure 2: The average rate of Cleft Lip in the Native American population between 1994 and 2004 is 21.34 per 10,000 live births. The small count of cases makes the yearly rates unstable.

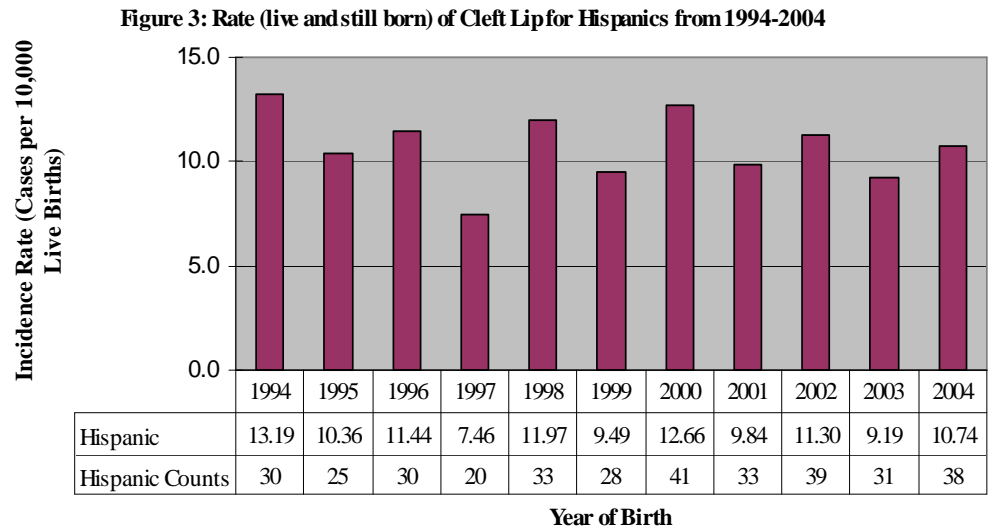


Facts about Cleft Lip (CL) with and without Cleft Palate (CP) 1994-2004, Arizona

Figure 3: The average rate of Cleft Lip in the Hispanic population between 1994 and 2004 is 10.69 per 10,000 live births with no clear temporal trend.



Baby with CL⁹

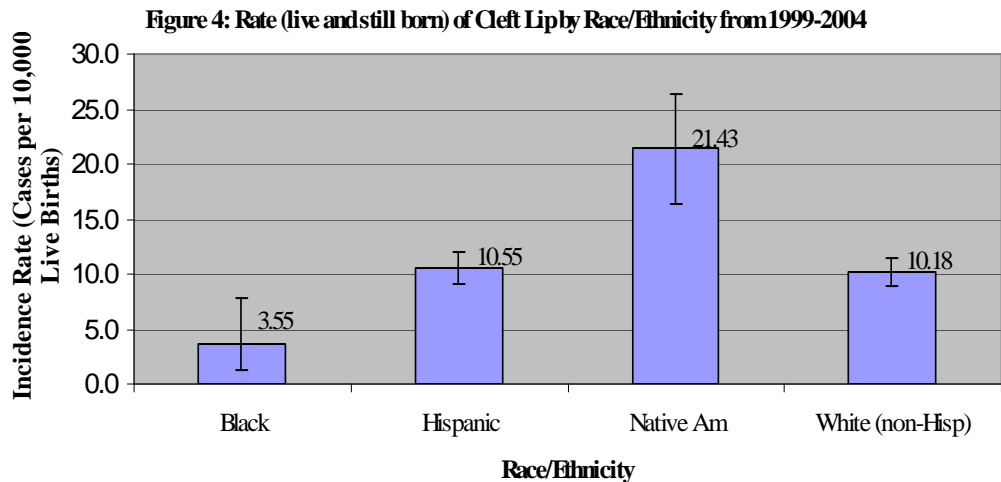


Source: Arizona Department of Health Services, Arizona Birth Defects Monitoring Program, 1999-2004

Figure 4: The average rate of Cleft Lip by race/ethnicity for births between 1999 and 2004.



Types of CL¹⁰



Source: Arizona Department of Health Services, Arizona Birth Defects Monitoring Program, 1999-2004
 Counts: Black (6); Hispanic (210); Native Am(71); White (non-Hisp) (246)

Prevention

Research has demonstrated that alcohol and smoking consumption is associated with the development of CL/CP. Therefore, women who are planning a pregnancy should not drink alcohol or smoke tobacco.^{11,12} Also, some studies suggest folic acid consumption around the time of conception may reduce CL/CP.¹³

Referral Services

The ABDMP identifies children with birth defects so that they can be referred to outreach services.

- The Arizona Early Intervention Program (AzEIP) is a state-mandated outreach program that provides medical services for children up to three years of age. Some benefits of this program include counseling, physical therapy, and developmental screening. Utilizing this service enables children and families to gain the support they need.¹⁵
- A second state mandated resource is Children's Rehabilitative Services (CRS). This program involves specialty physicians that assist in the treatment of chronic conditions associated with birth defects.¹⁶
- The March of Dimes (MOD) is a nonprofit agency that promotes the health of babies by preventing birth defects, prematurity, and infant deaths.¹⁷

ABDMP Goals

The Arizona Birth Defects Monitoring Program (ABDMP) is a statewide, population-based, active surveillance program that collects and analyzes information on children with reportable birth defects diagnosed within the first year of life.

The goals of the ABDMP include :

- To reduce the incidence of birth defects in Arizona from preventable causes.
- To produce accurate statistics regarding the occurrence of birth defects in Arizona.
- To identify, report, and investigate various birth defects trends, high-risk populations, and high-risk locations.
- To provide a resource for information about the incidence and epidemiology of birth defects for researchers, health professionals, hospitals, local health agencies, and others with a valid scientific or public health interest.¹⁹



#ADAM

Surgery is an important component to treating children with CL.¹⁴



Dietary folate and folic acid can reduce CL/CP.¹⁸

We are on the web!

<http://www.azdhs.gov/phs/phstats/bdr/index.htm>

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