

Facts about Cleft Palate (CP) 1994-2004, Arizona

Definition and Types

Cleft Palate (CP) is a type of birth defect that occurs when the roof of the mouth does not fully close within the first six to nine weeks of conception. The palate is divided between the hard (front) and the soft (back) portions. The palate may be completely or partially open. Surgery within 12 months of birth can correct CP.¹

Then in 1997-1998, the Food and Drug Administration required the addition of folate to enriched cereal-grain products.⁶ The U.S. prevalence rate for CP between 1999 and 2000 was 5.3 cases per 10,000 live births. Fortification was associated with a 12% drop in CP rates in the U.S.⁷

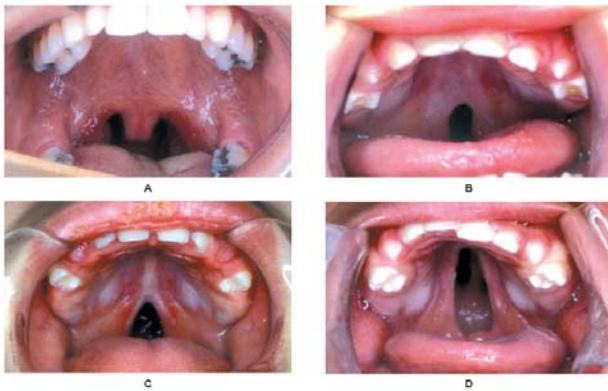


FIGURE 1- Different extents of isolated cleft palate: A) uvula, B) soft palate, C) incomplete hard palate and D) complete hard palate

Clinical presentation of CP²

Children with CP 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 CP. Problems with adjusting to social situations may influence how the child learns and behaves.³

United States Estimates

There are approximately 2,600 babies in the U.S. born with CP each year.⁵ The societal and economic lifetime cost associated with caring for a child that has been diagnosed with CP is at least \$100,000.³ In 1992, the Centers for Disease Control and Prevention (CDC) recommended that women of child-bearing age consume 400 micrograms of synthetic folic acid daily.

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

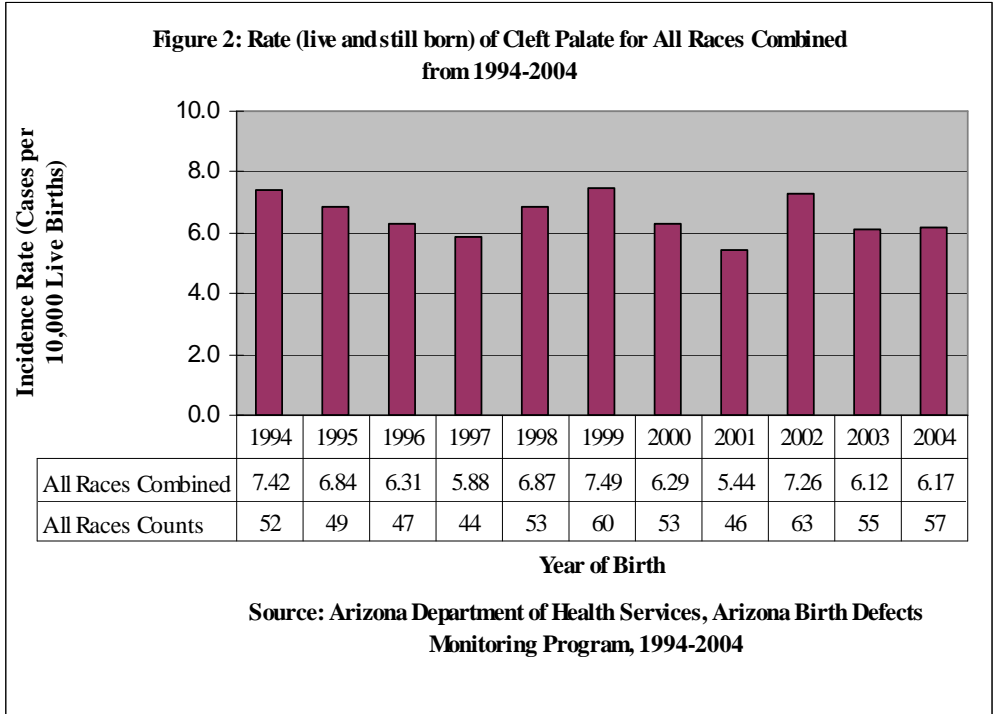
Cleft Palate in Arizona

Approximately 53 babies are born each year in Arizona with isolated CP (namely, not concurrent with cleft lip).⁸ Between October 1998 and December 2003, the average rate of CP in Arizona decreased (following the folic acid fortification of many cereal foods). The rate of CP during the pre-folic acid fortification period was 6.36 per 10,000 live births. The rate post-folic acid fortification was 5.77 per 10,000 live births. The prevalence ratio (post-fortification prevalence/pre-fortification prevalence) was 0.91 (95% CI: 0.72-0.98). This 9% reduction in the occurrence of CP falls somewhat short of the 12% decrease seen nationally.

The rate for Whites (non-Hisp) was 6.33 per 10,000 live births (95% CI: 5.33-7.34). The rate for Native Americans was 5.74 (3.45-8.96) per 10,000 live births. The rate for Hispanics was 6.68 (5.55-7.82) per 10,000 live births, an elevated rate compared to Whites (non-Hisp) (Figure 5).

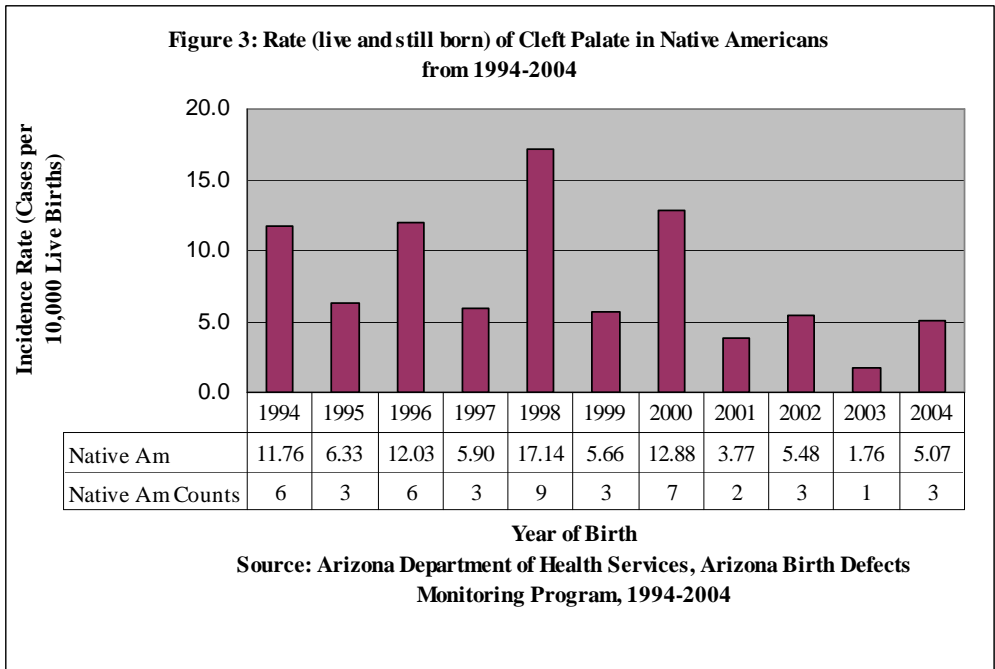
Cleft Palate in Arizona

Figure 2: The average rate of Cleft Palate for all races in Arizona between 1994 and 2004 is 6.55 cases per 10,000 live births.



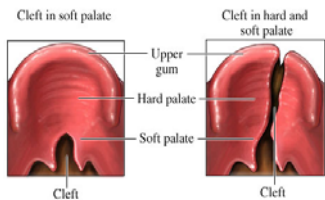
A 3D clinical presentation of CP.⁹

Figure 3: The average rate of Cleft Palate in the Native American population between 1994 and 2004 is 7.98 per 10,000 live births. The small count of cases makes the yearly rates unstable.



Facts about Cleft Palate (CP)

Figure 4: The average rate of Cleft Palate in the Hispanic population between 1994 and 2004 is 6.39 per 10,000 live births with no clear temporal trend.



Types of CP¹⁰

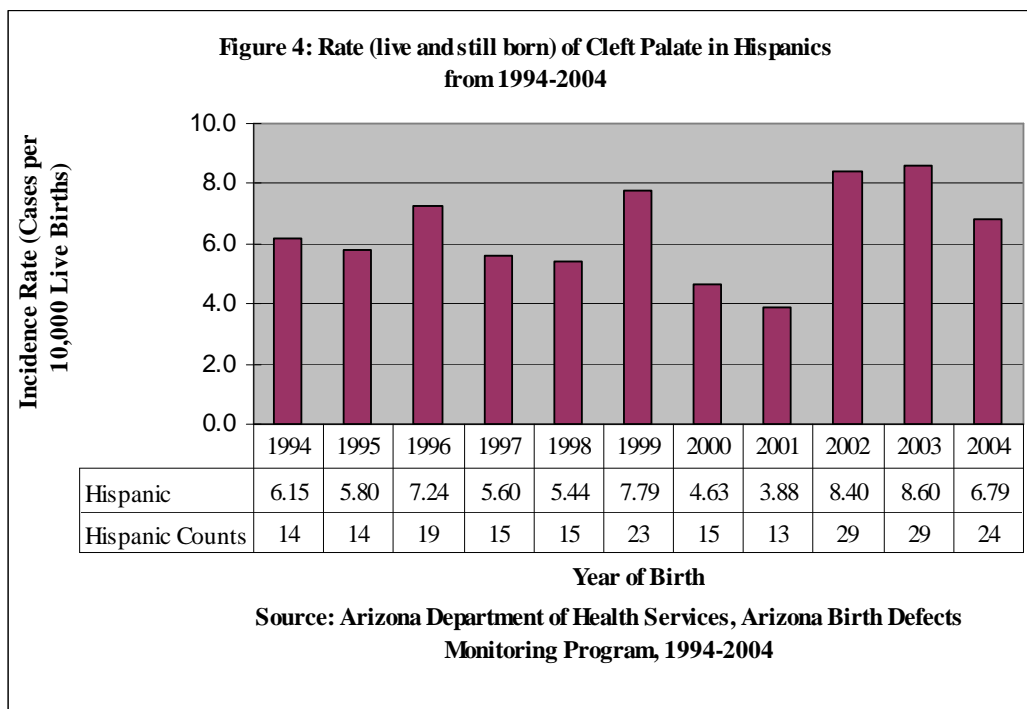
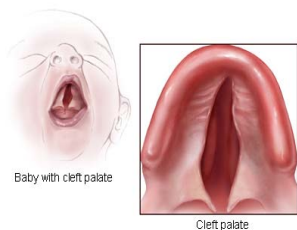
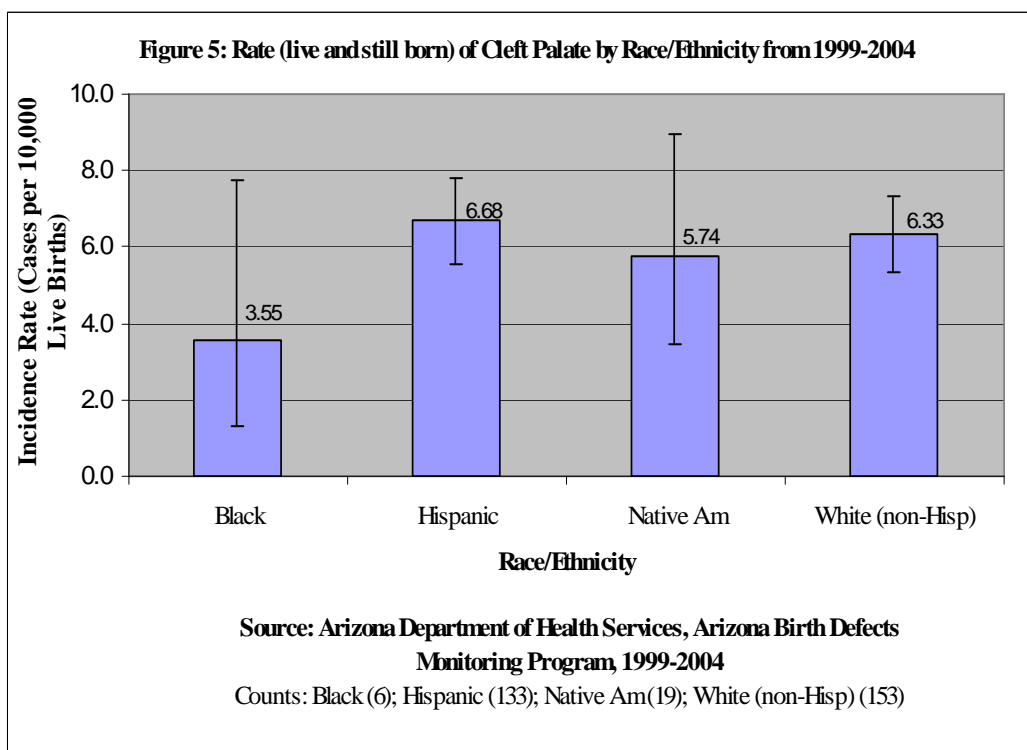


Figure 5: The average rate of Cleft Palate by race/ethnicity for births between 1999 and 2004.



Clinical Presentation of CP¹



Prevention

Research has demonstrated that illicit drug use (cocaine), alcohol and smoking are associated with the development of CP. Therefore, women who plan on conceiving should refrain from all of these substances.^{11,12,13} Also, some studies suggest CP can be reduced by consuming folic acid.¹⁴

Referral Services

The ABDMP is dedicated to identifying 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.¹⁶
- 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.¹⁷
- The March of Dimes (MOD) is a nonprofit agency that promotes the health of babies by preventing birth defects, prematurity, and infant deaths.¹⁸

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.²⁰



Surgery aides in correcting a CP.¹⁵



Dietary folate and folic acid can ensure the health of mother and child.¹⁹

We are on the web!

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

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