

Fact Sheet

Unhealthy Birth Outcomes

Overview

In 2006 there were 102,042 babies born in Arizona.¹ The overwhelming majority of these babies were born healthy, at normal weight and without any complications. However, some babies were born too early, too small, or with a birth defect.

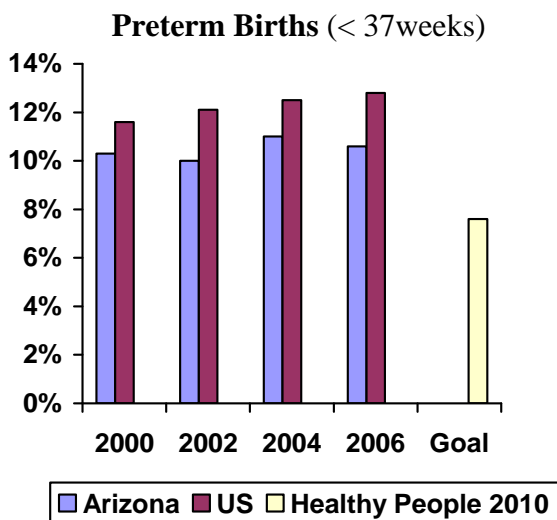
In the United States, about 12.5 percent of all births are preterm (< 37 completed weeks of gestation). According to a recent Institute of Medicine report, infants that are born preterm may have one of several complications, such as respiratory, gastrointestinal, immune system, central nervous system, hearing and vision problems. These infants may also have longer-term problems including cerebral palsy, mental retardation, visual and hearing impairments, behavioral and social-emotional concerns, learning difficulties, and poor health and growth.²

Low birth weight (LBW) (< 2,500 grams, 5 lb 8 oz) is an important indicator of newborn health as it is highly correlated with infant morbidity and mortality. Birth weight is determined by both gestational age at delivery and fetal growth rate. Therefore, babies with low birth weight could be full term babies that are of low weight or babies that are born premature and are low weight due to their prematurity.

Approximately 3% of the babies born in the United States are born with birth defects. The most common birth defects include orofacial clefts with approximately 6,800 babies and Down syndrome with 5,500 born annually.³ Neural tube defects are a type of birth defect where the neural tube fails to properly close. In the US Spina bifida and anencephaly are estimated to affect approximately 2,200 births annually.⁴

Demographics

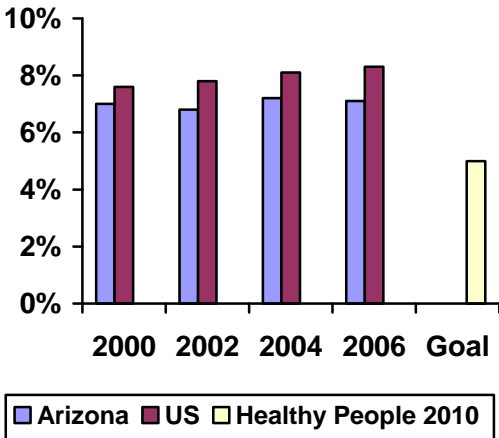
Preterm and Low birth weight



Arizona has a lower percentage of preterm births at 10.6% than the national average of 12.8%. Arizona has not yet attained the Healthy People 2010 goal of 7.6%.

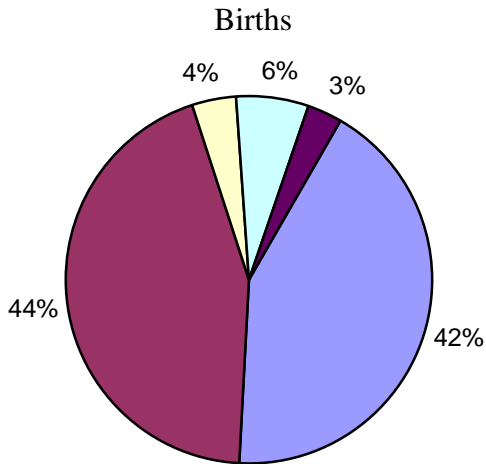
Source: Arizona - Arizona Department of Health Services, Vital Statistics 2006
National - CDC, National Vital Statistics Reports, Births: Preliminary Data for 2006

Low Birth Weight (< 2,500 grams)



Arizona has a lower percentage of low birth weight babies at 7.1% than the national average of 8.3%. Arizona has not yet attained the Healthy People 2010 goal of 5.0%.

Ethnic diversity

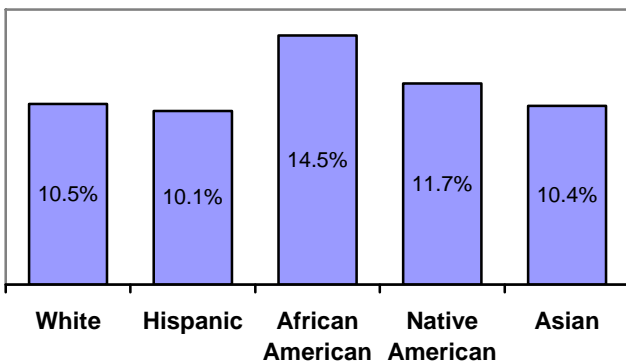


The ethnic diversity of Arizona births is demonstrated in the chart to the left.

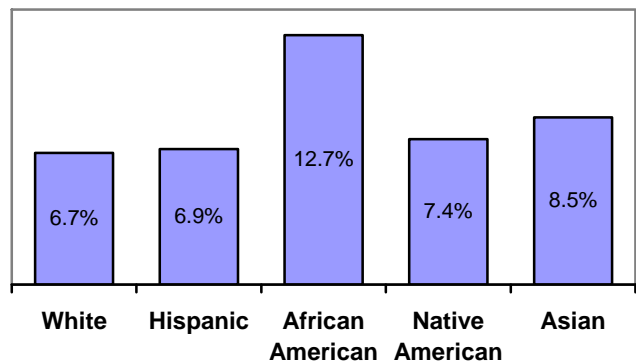
- 42% - White
- 44% - Hispanic
- 4% - African American
- 6% - Native American
- 3% - Asian or Pacific Islander

Ethnic disparity

Preterm Birth Percentage



Low Birth Weight Percentage



The rate of pre-term and low birth weight infants tends to be higher among African Americans in Arizona and nationally.

Source: Arizona - Arizona Department of Health Services, Vital Statistics 2006
National - CDC, National Vital Statistics Reports, Births: Preliminary Data for 2006

Economic Cost of These Conditions

Estimates of the cost of select birth conditions are as follow:

Preterm births

- Per a recent Institute of Medicine report, the annual societal economic cost associated with preterm birth in the United States was at least \$26.2 billion and \$51,600 per infant born preterm.⁵
- The average annual total cost for the first year care of infants born at < 28 weeks gestation was \$190,467 compared to the average annual cost of term infants \$3,325.⁶

Birth defects

- In 2004, Hospital Costs due to birth defects totaled 2.6 billion in the United States.⁷
- Severe birth defects may require special lifelong medical treatment. Many birth defect conditions can not be corrected and are a major cause of childhood and adult disability.⁸

AHCCCS Strategies

AHCCCS covers approximately 52% of the births in Arizona. The AHCCCS Administration in collaboration with their contracted Health Plans work to ensure the best outcome and care for the members and their babies. Interventions and Collaborations contributing to AHCCCS's success in decreasing low birth weight and in ongoing review of new and innovative strategies are as follows.

Identification and Intervention activities include:

- Health risk assessment/identified high risk (e.g. Previous low birth weight, substance abuse) initiates case management intervention
- Outreach
 - Mailings, phone calls
 - Member Handbook
 - Member/provider newsletters
 - Contractor/AHCCCS websites
- Assistance with transportation and appointments
- Member Incentives
 - An example includes a monthly drawing by one health plan of four members for a \$50 Visa Card who have attended specific required doctor visits including first trimester prenatal visits.
- Maternity Packet that include information on:
 - Healthy Lifestyles
 - Nutrition (folic acid)
 - Substance abuse
 - Physical activity
 - Signs of early labor
 - Community resources, including nutrition through Women Infants Children (WIC)
 - Family Planning
 - Mental Wellness, including signs of post partum depression
 - Newborn care and safety
 - Breast feeding
- Monitoring Contractor and member progress toward national standards through:

- AHCCCS Administration review of Contractor processes including tracking mechanism and interventions during Operation and Financial Review (OB/GYN providers are required to follow the American College of Obstetrics and Gynecologist (ACOG) as well as the Medical Insurance Company of Arizona (MICA) standards
- Implementation of performance measures and performance improvement projects

Community /Agency Partners Collaborations include:

- Baby Arizona (Expedited process to determine eligibility for pregnant women with no insurance-if not AHCCCS eligible –sliding fee scale is available)
 - Partners include AHCCCS, Arizona Department of Health Services (ADHS), Department of Economic Security (DES), Acute Contractors, Providers, Arizona Medical Association.
 - Stand alone Baby Arizona and AHCCCS websites list information including participating providers
- Governor’s Task Force for Prevention of Pregnancy and Sexually Transmitted diseases in Youth in Care, state and county agencies with youth in care--Partners include Governor's office, ADHS, AHCCCS, Arizona Department of Education, Arizona Office of Corrections, and Arizona Department of Juvenile Corrections.
- It’s a Baby’s Life—Partners include Maricopa County, community organizations, AHCCCS
- South Phoenix Healthy Start (Federally funded, community based, infant mortality reduction program)—Partners include Maricopa County Department of Health, St Joseph’s Hospital, Maricopa Integrated Health Systems, Maryvale Community Hospital, South West Human development, AHCCCS
- Alliance for Innovations in Health Care—Partners include Maricopa County Department of Health, St. Joseph’s Hospital, Maricopa Integrated Health Systems, Maryvale Community Hospital, South West Human development, AHCCCS
- Substance Exposed Newborn Committee, Fetal Alcohol Spectrum Disorder (FASD)—Partners include Theresa Kellerman, grass roots expert in FASD, March of Dimes, ADHS, AHCCCS
- Arizona Perinatal Trust (APT)—Partners include APT members, ADHS, community providers (neonatologists, perinatologists, Ob/Gyn providers), health care workers (Newborn intensive care unit nurses, neonatal transport providers), AHCCCS
- AHCCCS Native American Health Initiative—collaboration and consultation with Indian Health Services (IHS) and 638 tribally operated programs to address the unique health care needs (including unhealthy birth outcomes) of the Native Americans who comprise the Fee for Service Program both on and off the reservations.

The Arizona Department of Health Services, the Division of Public Health

The Arizona Department of Health Services (ADHS) is the state's lead public health agency. The mission of the Division of Public Health Services is to protect and improve the public's health through prevention and control of disease and disability. One focus area for the Division of Public Health is the tracking and evaluating of the health status of Arizonans. *Healthy Arizona 2010: Collaborating for a Healthier Future* is based upon the national *Healthy People 2010* planning agenda, and uses a unique, community-based approach that is best suited to our large and diverse state. *Healthy People 2010* is designed to achieve two overarching goals:

- Increasing quality and years of life and
- Eliminating health disparities

The goals are supported by specific objectives and each objective was targeted to be achieved by the year 2010. The full Healthy Arizona 2010 plan can be found at: <http://azdhs.gov/phs/healthyaz2010/index.htm>

Reducing Infant Mortality

Infant mortality is an important measure of a nation's health and a worldwide indicator of health status and social well-being. In the past decade, critical measures of increased risk of infant death, such as new cases of low birth weight (LBW) and very low birth weight (VLBW) actually have increased in the United States.

According to the ADHS 2006 Infant Mortality in Arizona Fact sheet, the most common cause of infant mortality (21 percent) in 2006 was congenital malformations, deformations, and chromosomal abnormalities, followed by short gestation and low birth weight (15 percent). Sudden infant death syndrome was the cause in 6 percent of infant deaths.

Research has shown that inadequate prenatal care has been associated with increased risk for low birth weight, prematurity, infant mortality (both neonatal and post neonatal) and maternal mortality.

In 2006 in Arizona, 78% of infants were born to women who received prenatal care beginning in the first trimester, and 2% did not receive any prenatal care. For infants who were born to women receiving early prenatal care, 7% were low birth weight and 11% were premature. For infants who were born to women with no prenatal care, 15% were low birth weight and 25% were premature. (ADHS Prenatal Care Fact Sheet, 2006)

Recent studies suggest that there are many more factors involved in this disparity than adequate prenatal care. The Perinatal Periods of Risk Model is used to explore other variables such as dietary habits, family support systems and degree of acculturation that may impact birth outcomes. One emerging issues has been the discovery of the role of folic acid in reducing neural tube defects.

Neural Tube Defects

According to the Arizona Department of Health Services 1998 – 2000 Birth Defects Monitoring Program Report, national research supports that Spina Bifida and other neural tube defects are preventable birth defects. The occurrence of these disorders could be reduced by more than half if women consumed adequate folic acid before and during pregnancy. In 1992-94, the proportion of women of childbearing age reporting consumption of the recommended level of folic acid (400 micrograms) was 21 percent.

Neural tube defects (NTDs) result from the failure of the neural tube to close properly in fetal development, occurring at approximately four weeks gestation. The three major NTDs are anencephaly, encephalocele, and spina bifida. Research indicates that maternal obesity, socioeconomic status and neighborhood social conditions, prior spontaneous and elective terminations, and short periods of time between pregnancies are associated with an increased risk for an NTD-affected pregnancy.

However, compelling data from randomized clinical trials shows that daily intake of 400 mcg of folic acid starting before conception and continuing through the first trimester can reduce the risk of an NTD-affected pregnancy by at least 50 percent.

Because of the overwhelming evidence that folic acid helps to prevent these birth defects, the Food and Drug Administration mandated fortification of cereal grain products with 140 mcg/100 g starting in January of 1998. Since then, there has been a 26% decrease in NTD-affected pregnancies in the United States.

The pre fortification NTD rate in Arizona (1995 and 1996 data combined) was 8.61 cases per 10,000 live births. The post-fortification NTD rate in Arizona (1999 and 2000 data combined) was 7.24 cases per 10,000 live births. This shows a 16% decline in NTD rates in Arizona post-fortification.

Strategies in Arizona to reduce Neural Tube Defects

ADHS is working in partnership with the March of Dimes and other organizations to increase the Proportion of Pregnancies Begun with an Optimum Folic Acid Level. (Consumption of at least 400 ug of folic acid each day from fortified foods or dietary supplements by non-pregnant women aged 15 to 44 years)

Summary of Actions to Reduce Infant Mortality

ADHS administers several other programs designed to improve birth outcomes and decrease infant mortality and morbidity in Arizona. The programs include but are not limited to Health Start, County Prenatal Block Grant, Newborn Screening Program and the High Risk Peri-natal Program.

Preconception Care Initiative

Research is indicating that a woman's health before she gets pregnant plays a very important role in determining birth outcomes. Based on this research and recommendations from the Centers for Disease Control and Prevention, ADHS is working to increase awareness on the importance of preconception care among health care providers and consumers.

Health Start

Providing case management services in high-risk communities with a focus on improving birth outcomes and the health of children, the program utilizes Lay Health Workers who reflect the cultural, ethnic, and socioeconomic demographics of the women they serve. Clients receive home visits, education on maternal, fetal and child health and development and referrals to community resources. Recently ADHS received a federal Fetal Alcohol Spectrum Disorder (FASD) grant to integrate alcohol screening, and share intervention and referrals for intensive treatment services into the Health Start Program.

High Risk Perinatal Program/Newborn Intensive Care Program

The High Risk Perinatal Program (HRPP) provides a number of services designed to improve outcomes in the event of a high risk pregnancy. The program supports a 1-800 Perinatal Information and Referral Line that provides health care providers throughout the state with immediate access to a perinatologist or a neonatologist. This line is utilized when the local provider unexpectedly encounters a high –risk pregnant mother or a medically fragile newborn. The specialists will offer consultation services and guidance on providing appropriate care in the community and will coordinate transport to a higher level of care in the event the appropriate medical resources are not available in the community.

Research demonstrates that providing developmentally supportive care in the newborn intensive care unit (NICU) reduces morbidity, reduces the amount of time spent in the NICU, shortens the time of intravenous feedings and promotes better weight gain. Based on this knowledge, the HRPP supports funding for Developmental Specialists in the Level IIEQ and Level III NICUs. ADHS has a goal of increasing the proportion of very low birth weight infants who are delivered at a Level III hospital or subspecialty Perinatal Center.

County Prenatal Block Grant

Every county health department in Arizona receives County Prenatal Block Grant funds to improve birth outcomes and reduce infant mortality in their community. While county health departments may use the funds in similar ways, each county designates the funds to activities based on their individualized local needs assessments.

Division of Behavioral Health Services

ADHS supports a regional system of priority access to treatment for pregnant women and women with young children under special requirements of the federal Substance Abuse Block Grant.

Family Planning

The Bureau of Women’s & Children’s Health provides federal Title V MCH Block Grant dollars to 12 county organizations for family planning services. Services include education, counseling, medical, and referral services that enable people to make informed decisions about the quantity and spacing of their children. The program serves approximately 6,000 low-income women per year.

Newborn Screening Program

The Newborn Screening (NBS) Program reduces infant mortality and morbidity through early screening and identification of 29 inherited disorders. Hearing loss is the most common of these disorders. The Newborn Screening Program works with all delivering hospitals in the state to ensure that all babies are screened for selected disorders prior to discharge from the hospital.

Bureau of USDA Nutrition Programs

The Arizona Department of Health Services Bureau of USDA Nutrition Programs administers the:

- Special Supplemental Nutrition Program for Women, Infants and Children (WIC),

- Commodity Supplemental Nutrition Program,
- Farmers Market Nutrition Program (FMNP),
- Breastfeeding Peer Counseling, and Arizona Nutrition Network.

These programs impact the health and nutritional status of large numbers of low-income women and children throughout the state. The Bureau works to improve services provided to program participants, increase the use of common nutrition education strategies, and enhance the evaluation of program efforts for behavioral change.

Additional Resources

Hotlines

The Bureau of Women's and Children's Health has bilingual staff that answer questions from the public and provide referrals for services.

- The Pregnancy and Breastfeeding/Baby Arizona Hotline (1-800-833-4642) provides information about pregnancy, breastfeeding, and serves as an access point for Baby Arizona. Callers are pre-screened for Baby Arizona eligibility and given referrals to Baby Arizona providers or other prenatal care providers if they clearly won't qualify for Baby Arizona.
- Callers to the Children's Information Center 1-800-232-1676 can learn about health services available to infants and children including services for children with special health care needs, where to obtain vaccinations and information on day care services.
- Callers to 1-800-252-5942 learn about WIC and provide referrals to WIC clinics. The Hotline is staffed by certified lactation counselors.

References

- ¹ Arizona Department of Health Services. Arizona Health Status and Vital Statistics 2006 report, Retrieved May 11, 2008 from <http://www.azdhs.gov/plan/report/ahs/ahs2006/toc06.htm>
- ² Institute of Medicine. 2006. *Preterm Birth: Causes Consequences, and Prevention*, National Academy Press, Washington, D.C.
- ³ Centers for Disease Control and Prevention. 2006. "Improved National Prevalence Estimates for 18 Selected Major Birth Defects – United States, 1999 – 2001." *Morbidity and Mortality Weekly Report* 54 (51& 52); 1301-1305.
- ⁴Centers for Disease Control and Prevention. 2004. "Spina Bifida and Anencephaly Before and After Folic Acid Mandate – United States, 1995-1996 and 1999 – 2000." *Morbidity and Mortality Weekly Report*, 53, (17); 362-365.
- ⁵ Institute of Medicine, Preterm Birth: Causes, Consequences, and Prevention.
- ⁶ Institute of Medicine, Preterm Birth: Causes, Consequences, and Prevention.
- ⁷ Russo CA and Elixhauser, A. 2007. "Hospitalizations for Birth Defects, 2004." HCUP Statistical Brief 24." Agency for Healthcare Research and Quality, Rockville, Maryland.
- ⁸ March of Dimes. 2008. *Data Book for Policy Makers, Maternal, Infant, and Child Health in the United States*.