

# INTRODUCTION

This publication by the Arizona Department of Health Services, *Arizona Health Status and Vital Statistics 2006*, is the annual update of information on vital statistics and the health status of Arizona residents. It provides population-wide data on *pregnancies, births, abortions, stillbirths, reportable diseases, deaths, marriages, divorces, hospital inpatient discharges, emergency department visits* and the *population* of the State.

The year 2006 report consists of 253 tables, 137 graphs and accompanying text. It highlights both the statewide trends and patterns in the general population, as well as inequalities in the health status among ethnic groups and Arizona's counties. When possible, the data for 2006 are placed in a temporal context by comparison with the data for the preceding years.

The updated *Index to Tables* in this report contains more than 600 entries referring to specific health conditions, risk factors, disease categories, diagnostic groupings, procedures performed on hospital inpatients and causes of death.

The information in this volume consists of frequencies and rates of vital events for the State's residents (except as noted). The report contains approximately 4,900 age-adjusted and 6,200 age-specific mortality rates, and more than 15,000 other rates and ratios (fertility rates, pregnancy rates, crude death rates, rates of natural increase, etc.).

Since 1992, the report has been organized into three major parts, reflecting differences in geographic coverage:

*Part I is concerned with statewide statistics, Part II presents county-level information, Part III is focused on community-level data.*

The first two parts are further divided into sections on reproductive and perinatal health, utilization of hospital care, mortality and the status on year 2010 health objectives.

Not all health statistics are available on a sub-county level. Hence, information about pregnancies, stillbirths, induced terminations of pregnancy (abortions), inpatient discharges, emergency room visits, reportable diseases, marriages and marriage dissolutions is given only for the State and by county.

Part I, *THE STATE*, of the report has four chapters. The first chapter deals with *reproductive and perinatal health*, i.e., characteristics of women who became pregnant, factors related to the course of their pregnancies and the status of pregnancy outcomes. Much of these data are given for each year from 1996 to 2006. The natality section of this report is concerned with fertility and birth rates, the general health of newborns as indexed by birthweight and prematurity and selected demographic and prenatal care characteristics of the women giving birth.

The second chapter is focused on *trends and patterns in mortality*. It compares the annual age-adjusted profile of leading causes of death by gender from 1996 to 2006. Urban/rural and ethnic differences in cause-specific mortality are also examined for Arizona residents. The five leading causes of death are discussed for infants (<1 year), children (1-14 years), adolescents (15-19 years), young adults (20-44 years), middle-aged adults (45-64 years) and the elderly (65 or more years). For each age group, cause-specific mortality is compared between urban (i.e. Maricopa, Pima, Pinal and Yuma counties) and rural (all other counties) regions and between genders by year from 1996 to 2006. Urban and rural regions are compared in gender-specific total mortality. The chapter on mortality concludes with an examination of patterns of premature mortality by gender and race/ethnicity.

*Morbidity*, levels of disease in the population, is the topic of the third chapter. The presentation is limited to data on diseases reported for the entire population of the State by statutory mandate.

Chapter 4 is focused on *inpatient hospital care*, as well as *emergency room care* in Arizona in 2006. An inpatient discharge occurs when a person who was admitted to a hospital leaves that hospital. A person who has been hospitalized more than once in a given calendar year will be counted multiple times as a discharge and included more than once in the hospital inpatient discharge data set; thus, the statistics in this report are for discharges, not persons.

The available data are for non-Federal short-stay hospitals. Federal, military and the Department of Veteran Affairs hospitals are not included. All discharges are for the residents of Arizona. Discharges of out-of-state residents are not included in this report. Diagnostic groupings and code numbers are based on the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

Up to nine diagnoses are coded for each discharge. In sections 4A and 7A, discharges are presented by first-listed diagnosis, which is the first one listed on the discharge summary of the medical record. The number of first-listed diagnoses is the same as the number of discharges. For comparability with the national data, the discharge rates are presented per 10,000 population.

The data on the number procedures in sections 4B and 7B are for inpatients only. Procedures include surgical and non-surgical operations, diagnostic procedures, and special treatments reported on the medical record. Up to six procedures were included for each discharge. These all-listed procedures include all occurrences of the procedure regardless of the order on the medical record. Procedure groupings and code numbers also are based on the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

Preceding the tabulated data in the first four chapters is a narrative description of the data. This description is not meant to be exhaustive but rather is a presentation of the major highlights to be gleaned from the data.

Part II and Part III contain information with no accompanying narrative.

Part II, **THE COUNTIES**, presents the tabulated data on 1) Trends and patterns in health status and vital statistics by county of residence in Chapter 5, 2) County profiles and statewide trends on indicators for assessing health status and monitoring progress toward Arizona and national year 2010 objectives (Chapter 6). The health indicators are organized around ten subject areas: *maternal, infant and child health, responsible sexual behavior, vaccine preventable diseases, injury and violence, cancer, diabetes, heart disease and stroke, respiratory diseases, human immunodeficiency virus (HIV) disease, and substance abuse*; Hospital inpatient and emergency room statistics by disease category, diagnosis group and all-listed procedures by patient's county of residence in the State (Chapter 7), and 3) Selected historical vital

events (births, deaths, infant deaths, marriages and dissolutions of marriage) by year and county in the State for 1950-1995 (Chapter 8).

Part III, **THE COMMUNITIES**, provides readers with selected community-level data on live births and deaths in Arizona in 2006 (Chapter 9).

Chapter 10 presents population denominators for Arizona by gender, age groups, county of residence and race/ethnicity.

To use **Arizona Health Status and Vital Statistics 2006** effectively, the reader should become familiar with *Technical Notes* at the end of the report. They provide definitions of terms used in the report, as well as information about the sources of data. *Technical Notes* also include detailed comparability ratios used to make comparisons between cause-of-death data classified by the Ninth and Tenth Revisions of the International Classification of Diseases.

In addition to bound form, the **Arizona Health Status and Vital Statistics 2006** is available online at:

<http://www.azdhs.gov/plan/report/ahs/>

In order to be of maximum usefulness, the public health data must be timely. It is our pleasure to release **Arizona Health Status and Vital Statistics 2006** within nine months after the end of the data calendar year. Below are some highlights from the report.

#### RESIDENT BIRTHS

In 2006, the number of resident live births exceeded 100,000 for the first time in the State's history. The number of resident births doubled from 50,049 in 1980 to 102,042 in 2006.

Among women who gave birth in Arizona in 2006:

- 58,910 had no private insurance to pay for birth,
- 44,750 were unmarried (which may signify absence of emotional, social and financial resources)
- 28,200 experienced complications during labor and/or delivery
- 28,000 had a serious medical condition such as hepatitis, anemia or diabetes
- 22,740 received late or no prenatal care
- 13,000 were teenagers 19 years old or younger
- 5,570 smoked and/or used alcohol during pregnancy (all numbers are rounded to the nearest ten).

### **BIRTHS BY PAYER**

The share of resident births paid for by the Arizona Health Care Cost Containment System (the State's Medicaid program) was essentially unchanged between 2005 and 2006. The share of private health insurance slightly increased from 41.6 percent in 2005 to 42.3 percent in 2006. The payment source was the mothers themselves and/or their families (i.e., self-pay) in 3 percent of the deliveries.

### **TEEN PREGNANCIES**

While the teen pregnancy rate has fallen in Arizona, the drop in the rate has not been enough to offset the growth in the female teenage population.

The declining teenage pregnancy rate has not been accompanied by a similar decrease in the number of pregnancies. In fact, the number of 14,918 pregnancies to females 19 years old or younger in Arizona in 2006 was the highest number ever recorded in the State.

### **TOTAL MORTALITY**

During 2006, 45,415 Arizona residents died, 300 more than in 2005. There were 23,658 deaths of Arizona male residents and 21,757 deaths among females.

The death rate for females in 2006 was 611.8, 7 percent lower than in 2002 when it reached its recent peak of 658.0. For males, the age-adjusted mortality rate decreased by 6.9 percent from 925.7 in 2005 to 861.6 in 2006.

### **INFANT MORTALITY**

In 2006, 642 infants died before reaching their first birthday, the second highest number of annual infant deaths since 1971. However, the infant mortality rate (IMR) decreased by 7.4 percent from 6.8 infant deaths per 1,000 live births in 2005 to 6.3/1,000 in 2006.

Birthweight is one of the most important predictors of an infant's survival chances. Births at 500-999 grams accounted for 0.4 percent of births, but 24.6 percent of infant deaths in Arizona in 2006. Together, births of infants weighing less than 1,000 grams accounted for 0.6 percent of births and 43 percent of all infant deaths. Infants weighing less than 500 grams have very high mortality rate of 86.8 percent.

### **CAUSE-SPECIFIC MORTALITY**

The leading underlying cause of death to Arizona residents in 2006 continued to be *heart disease*, which accounted for 10,362 or 22.8 percent of all deaths. *Cancer* remained the second most frequent cause of death to residents of the state, being responsible for 21.5 percent of all deaths in 2006. Deaths due to *accidents (unintentional injuries)* ranked third in 2006, with 3,156

resident deaths reported. The fourth leading cause of death, *chronic lower respiratory diseases*, accounted for 2,771 or 6.1 percent of total deaths. Deaths due to *cerebrovascular disease* ranked fifth in 2006, with 2,325 resident deaths reported. In 2006, *cerebrovascular disease* accounted for 4.8 percent of all deaths. Together, these five causes accounted for 62.1 percent of total deaths in 2006.

### **MATERNAL MORTALITY**

In 2006, nine women were reported to have died from maternal causes. The number of maternal deaths is highly variable from one year to the next. In the eleven-year period from 1996 to 2006, the causes of maternal deaths in the State have included *complications mainly related to pregnancy* (21.9 percent of all maternal deaths), *complications following childbirth* (i.e. complications of the puerperium, 31.3 percent), and *complications occurring in the course of labor and delivery* (15.6 percent). *Ectopic pregnancy* accounted for 6.3 percent of maternal deaths in 1996-2006.

### **HOSPITAL CARE**

In 2006, there were 644,462 inpatients discharged, excluding newborn infants, from non-Federal short stay hospitals in Arizona. The most frequently reported first-listed diagnoses for inpatient hospitalizations were *heart disease* (68,851), *fractures* (22,141), *pneumonia* (22,041), *malignant neoplasms* (28,608), *cerebrovascular disease* (16,676), and *psychoses* (14,907). Together, these six diagnostic categories accounted for 26.9 percent of all inpatient hospitalizations in Arizona in 2006.

### **INPATIENT PROCEDURES**

During 2006, 1,082,180 procedures were performed on hospital inpatients in Arizona. Among the inpatient discharges which had one or more specific procedures recorded, the most frequent were diagnostic and therapeutic procedures, such as arteriography and angiocardiology or respiratory therapy.

### **EMERGENCY ROOM CARE**

During 2006, almost 1.6 million visits were made by Arizona residents to hospital emergency departments (ED), approximately 26 visits per 100 persons. In 2006, *abdominal pain*, *acute upper respiratory infection*, *contusion with intact skin surface*, *open wound*, *chest pain*, *spinal disorders* and *mental disorders* were the leading diagnostic categories, accounting for more than one-fourth (25.7 percent) of all visits.

A comparison of some of the basic findings for the State for 1996, 2001 and 2006 is presented on the following page.