

# **DATA SOURCES AND DEFINITIONS**



## SOURCES OF DATA

Information on births and deaths is compiled from the original documents (i.e., certificates of live births and certificates of death) filed with the Arizona Department of Health Services. Information on induced terminations of pregnancy (abortions) performed on Arizona women is compiled from reports sent to the Arizona Department of Health Services by facilities within but not outside the state.

Pregnancies are the sum of live births, spontaneous terminations of pregnancy (fetal deaths or stillbirths) and induced terminations of pregnancy (abortions).

Data on morbidity, levels of disease and disability in the population, are obtained for certain infectious diseases that must be reported by law. The ADHS Epidemiology and Disease Control Services conduct surveillance and monitoring of these reportable diseases and provided data for section 9 in this report.

Two data sources were utilized in producing the 2007 population estimates. The totals for the State and each of its counties agree with the projections released by the Department of Economic Security (DES) on March 31, 2006 (<http://www.workforce.az.gov/?PAGEID=67&SUBID=138>). The percentages of population breakdowns by single-year of age, gender and race/ethnicity were derived from the "Bridged-Race Vintage 2006 Postcensal Population Estimates for Calculating Vital Rates", available at <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm#vintage2006>. These percentages were then applied to total state and county population projections for 2007 from DES.

Almost all figures are based on rates and ratios published in the *2007 Arizona Health Status and Vital Statistics* report and available online at <http://www.azdhs.gov/plan/report/ahs/ahs2007/toc07.htm>

## DEFINITIONS

### 1. TEEN PREGNANCIES

Figure number	Indicator	Definitions
1-1	Pregnancies among females 19 and younger	The sum of live births, fetal deaths, and abortions per 1,000 females aged 19 or younger.
1-2	Pregnancies among females 14 and younger	The sum of live births, fetal deaths, and abortions per 1,000 females aged 14 or younger.
1-3	Pregnancies among females 15-17 years old	The sum of live births, fetal deaths, and abortions per 1,000 females aged 15-17 years.
1-4	Pregnancies among females 18-19 years old	The sum of live births, fetal deaths, and abortions per 1,000 females aged 18-19 years.

### 2. MATERNAL LIFESTYLE AND HEALTH CHARACTERISTICS

Figure number	Indicator	Definitions
2-1	Unmarried mothers	The number of births to unmarried mothers per 100 births.
2-2	Tobacco use during pregnancy	The number of mothers giving birth who self-reported tobacco use during pregnancy per 100 births.
2-3	Alcohol use during pregnancy	The number of mothers giving birth who self-reported alcohol use during pregnancy per 100 births.
2-4	Chronic hypertension	Blood pressure persistently greater than 140/90, diagnosed prior to onset of pregnancy or before the 20th week of gestation (the number of cases per 100 births).

2-5	Dysfunctional labor	Failure to progress in a normal pattern of labor (the number of cases per 100 births).
2-6	Anemia during pregnancy	Hemoglobin level of less than 10.0 g/dL during pregnancy, or hematocrit of less than 30 percent during pregnancy (the number of cases per 100 births).
2-7	Diabetes during pregnancy	Metabolic disorder characterized by excessive discharge of urine and persistent thirst; includes juvenile onset, adult onset and gestational diabetes during pregnancy (the number of cases per 100 births).
2-8	Pregnancy-associated hypertension	An increase in blood pressure of at least 30 mm hg systolic or 15 mm hg diastolic on two measurements taken 6 hours apart after the 20th week of gestation (the number of cases per 100 births).
2-9	Genital herpes during pregnancy	Infection of the skin of the genital area by herpes simplex virus (the number of cases per 100 births).
2-10	Weight gain of less than 21 pounds	The number of women giving birth who gained less than 21 pounds per 100 births.

### 3. UTILIZATION OF PRENATAL CARE SERVICES

Figure number	Indicator	Definition
3-1	No care in the 1 <sup>st</sup> trimester	The number of mothers giving birth who received no prenatal care in the 1 <sup>st</sup> trimester of pregnancy per 100 births.
3-2	Fewer than five prenatal visits	The number of mothers giving birth who had fewer than five prenatal visits during pregnancy per 100 births.
3-3	No prenatal care	The number of mothers giving birth who received no prenatal care during pregnancy per 100 births.

### 4. NEWBORN'S HEALTH

Figure number	Indicator	Definition
4-1	Incidence of hyaline membrane disease	The number of cases of hyaline membrane disease per 100 births. Hyaline membrane disease = a disorder primarily of prematurity, manifested clinically by respiratory distress and pathologically by pulmonary hyaline membranes and incomplete expansion of the lungs at birth.
4-2	Incidence of newborn intensive care	The number of babies admitted to Newborn Intensive Care units per 100 births.
4-3	Born too early (preterm or < 37 weeks)	The number of births before 37 weeks of gestation per 100 births. Preterm = any neonate whose birth occurs through the end of the last day of the 37 <sup>th</sup> week (259 <sup>th</sup> day), following onset of the last menstrual period.
4-4	Born too small: low-birthweight (<2,500 grams)	The number of newborns weighing less than 2,500 grams per 100 births. Low-birthweight = any neonate weighing less than 2,500 grams at birth (less than 5 pounds 8 ounces).
4-5	Born too small: very low-birthweight (<1,500 grams)	The number of newborns weighing less than 1,500 grams per 100 births. Very low-birthweight = any neonate whose weight at birth is 1,500 grams or less (less than 3 pounds 5 ounces).
4-6	Incidence of congenital anomalies (birth defects)	The numbers of babies born with birth defects per 100 births.
4-7	Infant mortality	The number of infant deaths per 1,000 live births. Infant death = any death at any time from birth up to, but not including, the first year of age (364 days, 23 hours, 59 minutes from the moment of birth).
4-8	Sudden Infant Death Syndrome (SIDS)	The number of infant deaths from Sudden Infant Death Syndrome (ICD-10 code R95) per 1,000 live births.

4-9	Mortality of infants from low birthweight/short gestation	The number of infant deaths from low- birthweight/short gestation (ICD-10 code P07) per 1,000 live births.
4-10	Neonatal mortality	The number of neonatal deaths per 1,000 live births. Neonatal death = death of a liveborn neonate before the neonate becomes 28 days old (up to and including 27 days, 23 hours, 59 minutes from the moment of birth).
4-11	Postneonatal mortality	The number of postneonatal deaths per 1,000 live births. Postneonatal death = any death of a liveborn infant at least 28 days of age but less than one year of age.

### 5. MORTALITY FROM NATURAL CAUSES (chronic or infectious diseases)

Figure number	Indicator	Definition
5-1	Cardiovascular disease	The number of deaths from cardiovascular diseases (ICD-10 codes I00-I78) per 100,000 age-adjusted population.
5-2	Diseases of the heart	The number of deaths from disease of the heart (ICD-10 codes I00–I09, I11, I13, I20–I51) per 100,000 age-adjusted population.
5-3	Coronary heart disease	The number of deaths from coronary heart disease (ICD-10 codes I200-I259 and I110 – I119) per 100,000 age-adjusted population.
5-4	Cerebrovascular disease	The number of deaths from cerebrovascular disease (ICD-10 codes I60–I69) per 100,000 age-adjusted population.
5-5	Chronic lower respiratory diseases	The number of deaths from chronic lower respiratory diseases (ICD-10 codes J40–J47) per 100,000 age-adjusted population.
5-6	Malignant neoplasm (cancer)	The number of deaths from cancer (ICD-10 codes C00–C97) per 100,000 age-adjusted population.
5-7	Lung cancer	The number of deaths from lung cancer (ICD-10 codes C33–C34) per 100,000 age-adjusted population.
5-8	Breast cancer	The number of deaths from breast cancer (ICD-10 code C50) per 100,000 age-adjusted female population.
5-9	Cervical cancer	The number of deaths from cervical cancer (ICD-10 code C53) per 100,000 age-adjusted female population.
5-10	Colorectal cancer	The number of deaths from colorectal cancer (ICD-10 codes C18–C21) per 100,000 age-adjusted population.
5-11	Prostate cancer	The number of deaths from prostate cancer (ICD-10 code C61) per 100,000 age-adjusted male population.
5-12	Influenza and pneumonia	The number of deaths from influenza and pneumonia (ICD-10 codes J10–J18) per 100,000 age-adjusted population.
5-13	Diabetes	The number of deaths from diabetes (ICD-10 codes E10–E14) per 100,000 age-adjusted population.
5-14	Chronic liver disease and cirrhosis	The number of deaths from chronic liver disease and cirrhosis (ICD-10 codes K70, K73–K74) per 100,000 age-adjusted population.
5-15	HIV disease	The number of deaths from HIV disease (ICD-10 codes B20-B24) per 100,000 age-adjusted population.
5-16	Septicemia	The number of deaths from septicemia (ICD-10 codes A40-A41) per 100,000 age-adjusted population.
5-17	Alzheimer's disease	The number of deaths from Alzheimer's disease (ICD-10 code G30) per 100,000 age-adjusted population.
5-18	Nephritis, nephrotic syndrome and nephrosis (kidney disease)	The number of deaths from nephritis, nephritic syndrome and nephrosis (ICD-10 codes N00–N07, N17–N19, N25–N27) per 100,000 age-adjusted population.
5-19	Essential (primary) hypertension	The number of deaths from essential (primary) hypertension (ICD-10 codes I10, I12) per 100,000 age-adjusted population.
5-20	Total mortality from all causes	Total number of deaths from all causes per 100,000 age-adjusted population.

## 6. MORTALITY FROM INJURIES

Figure number	Indicator	Definition
6-1	Unintentional injuries	The number of deaths from unintentional injuries in accidents (ICD-10 codes V01–X59, Y85–Y86) per 100,000 age-adjusted population.
6-2	Motor vehicle-related injuries	The number of deaths from motor vehicle-related injuries (ICD-10 codes V02–V04, V09.0, V09.2, V12–V14, V19.0–V19.2, V19.4–V19.6, V20–V79, V80.3–V80.5, V81.0–V81.1, V82.0–V82.1, V83–V86, V87.0–V87.8, V88.0–V88.8, V89.0, V89.2) per 100,000 age-adjusted population.
6-3	Fall-related injuries	The number of deaths from fall-related injuries (ICD-10 codes W00–W19) per 100,000 age-adjusted population.
6-4	Drowning mortality	The number of deaths due to accidental drowning and submersion (ICD-10 codes W65–W74) per 100,000 age-adjusted population.
6-5	Injury by firearms	The number of deaths by firearms (ICD-10 codes W32–W34, X72–X74, X93–X95, Y22–Y24, Y35.0) per 100,000 age-adjusted population. Causes of death attributable to firearm mortality include accidental discharge of firearms, intentional self-harm (suicide) by discharge of firearms, assault (homicide) by discharge of firearms, discharge of firearms, undetermined intent; and legal intervention involving firearm discharge. Deaths from injury by firearms exclude deaths due to explosives and other causes indirectly related to firearms.
6-6	Drug-induced deaths	The number of drug-induced deaths (ICD-10 codes F11.0–F11.5, F11.7–F11.9, F12.0–F12.5, F12.7–F12.9, F13.0–F13.5, F13.7–F13.9, F14.0–F14.5, F14.7–F14.9, F15.0–F15.5, F15.7–F15.9, F16.0–F16.5, F16.7–F16.9, F17.0, F17.3–F17.5, F17.7–F17.9, F18.0–F18.5, F18.7–F18.9, F19.0–F19.5, F19.7–F19.9, X40–X44, X60–X64, X85, Y10–Y14) per 100,000 age-adjusted population. Causes of death attributable to drug-induced mortality include selected codes from the ICD-10 title Mental and behavioral disorders due to psychoactive substance use, accidental poisoning by and exposure to drugs, medicaments and biological substances; intentional self-poisoning (suicide) by and exposure to drugs; assault (homicide) by drugs, medicaments and biological substances; and poisoning by and exposure to drugs, medicaments and biological substances, undetermined intent. Drug-induced causes exclude accidents, homicides, and other causes indirectly related to drug use. Also excluded are newborn deaths associated with mother's drug use.
6-7	Alcohol-induced deaths	The number of alcohol-induced deaths (ICD-10 codes F10, G31.2, G62.1, I42.6, K29.2, K70, R78.0, X45, X65, Y15) per 100,000 age-adjusted population. Causes of death attributable to alcohol-induced mortality include mental and behavioral disorders due to alcohol use, degeneration of nervous system due to alcohol, alcoholic polyneuropathy, alcoholic cardiomyopathy, alcoholic gastritis, alcoholic liver disease, finding of alcohol in blood, accidental poisoning by and exposure to alcohol, intentional self-poisoning by and exposure to alcohol; and poisoning by and exposure to alcohol, undetermined intent. Alcohol-induced causes exclude accidents, homicides, and other causes indirectly related to alcohol use.
6-8	Intentional self-harm (suicide)	The number of deaths due to intentional self-harm (ICD-10 codes X60–X84, Y87.0) per 100,000 age-adjusted population.
6-9	Assault (homicide)	The number of homicides (ICD-10 codes X85–X09, Y87.1) per 100,000 age-adjusted population.

## 7. AGE-SPECIFIC MORTALITY

Figure number	Indicators	Definition
7-1	Mortality of children 1-14 years old	The number of deaths per 100,000 children 1-14 years old in 2007
7-2	Mortality of adolescents 15-19 years old	The number of deaths per 100,000 adolescents 15-19 years old in 2007
7-3	Mortality of young adults 20-44 years old	The number of deaths per 100,000 young adults 20-44 years old in 2007
7-4	Mortality of middle-aged adults 45-64 years old	The number of deaths per 100,000 middle-aged adults 45-64 years old in 2007

## 8. PREMATURE MORTALITY

Figure number	Indicators	Definition
8-1	Median age at death from all causes	The median age (the age in the middle) of Arizonans who died in 2007.
8-2	Median age at death from all causes among males	The median age (the age in the middle) of Arizona males who died in 2007.
8-3	Median age at death from all causes among females	The median age (the age in the middle) of Arizona females who died in 2007.
8-4	Percent of total deaths before expected years of life reached	The number of deaths before reaching the life expectancy of all U.S. residents per 100 deaths.

## 9. REPORTABLE DISEASES

Figure number	Indicators	Definition
9-1	Incidence of early syphilis	Number of reported cases of early syphilis per 100,000 population.
9-2	Incidence of gonorrhea	Number of reported cases of gonorrhea per 100,000 population.
9-3	Incidence of chlamydia	Number of reported cases of chlamydia per 100,000 population.
9-4	Incidence of genital herpes	Number of reported cases of genital herpes per 100,000 population.
9-5	Incidence of HIV/AIDS	Number of reported new cases of HIV/AIDS per 100,000 population. The estimated incidence of HIV/AIDS includes the sum of new HIV cases and new AIDS cases which were not diagnosed as HIV positive in any prior calendar year. The cases of persons who were diagnosed with both HIV and AIDS in the same calendar year are counted only as AIDS to avoid double counting. Due to reporting delays, all counts for 2000-2007 are provisional (2000-2007 volume as of 5/20/2008).

## Terms Related to Mortality

**Age-adjusted mortality rates** - Because mortality from most causes of death occurs predominately among the elderly, a population group with a larger proportion of older persons would have a higher mortality rate. The "age-adjustment" removes the effect of the age differences among sub-populations (or in the same population over time) by placing them all in a population with a standard age distribution. All age-adjusted mortality rates in this report were computed by the direct method, that is by weighting the age-specific rates for a given year by the age distribution of a standard population. The weighted age-specific rates are then added to produce the summary rate for all ages combined. Beginning with the 2000 data year, a new population standard for the age adjustment of mortality rates has replaced the standard based on the 1940 population and used since 1943. The new standard uses the age composition of the 2000 U.S. projected population. The standard is expressed in terms of a "standard million": the relative distribution of the 2000 population of the United States totaling 1 million in 10-year age groups:

Age group A	2007 population B	2007 deaths C	Age-specific rates in 2007 D (C/B)*100000	2000 standard E	Age-adjusted rate for 2007 F D*E
<1	102587	701	683.3	.013818	9.4
1-4	396458	111	28.0	.055317	1.6
5-14	913680	145	15.9	.145565	2.3
15-24	889177	853	95.9	.138646	13.3
25-34	930335	999	107.4	.135573	14.6
35-44	883484	1610	182.2	.162613	29.6
45-54	831302	3353	403.3	.134834	54.4
55-64	649212	5276	812.7	.087247	70.9
65-74	425190	7340	1726.3	.066037	114.0
75-84	302091	11950	3955.8	.044842	177.4
85+	108491	12292	11330.0	.015508	175.7
All ages	6432007	44640		TOTAL	663.2

**Age-specific mortality** - Number of deaths in a specific age group during a calendar year.

**Cause of death** - For the purpose of national mortality statistics, every death is attributed to one underlying condition, based on information reported on the death certificate and utilizing the international rules for selecting the underlying cause of death from the reported conditions.

**Cause-specific mortality** - Number of deaths from a specified cause during a calendar year.

**Classification of causes of death** - The cause of death used in this report is the underlying cause classified according to the *International Classification of Diseases (ICD)*. Beginning with the 2000 data year in Arizona (1999 nationally), a new revision of the International Classification of Diseases was implemented. The Tenth Revision (ICD-10) has replaced the Ninth Revision (ICD-9), which was in effect since 1979. The measures of comparison between ICD-9 and ICD-10 – the "comparability ratios" – for the causes of death shown in this report are available on the Arizona Vital Statistics web site at <http://www.azdhs.gov/plan/report/ahs/ahs2007/pdf/compratios.pdf>