

# **I.**

## **RISK PROFILE OF AMERICAN INDIANS IN ARIZONA:**

### **AN OVERVIEW OF SELECTED HEALTH PROBLEMS AND HEALTH RISKS AMONG AMERICAN INDIANS AND ALL RESIDENTS OF THE STATE IN 2011**



The risk profile presented on the following page summarizes how American Indians as a group compared in 2011 to the state average on 70 measures of health status. The 70 indicators used in the profile are individual measures of the various dimensions or facets of health status. The profile uses the percentages a racial/ethnic group is above or below the statewide average on each of the specific measures. In order to represent the level of each indicator for American Indians in comparison to the overall state level, the following formula was used:\*

$$\left[ \frac{\text{THE VALUE OF A RATE OR RATIO IN A SPECIFIED GROUP}}{\text{THE AVERAGE VALUE OF A RATE OR RATIO FOR ALL GROUPS}} - 1.0 \right] \times 100$$

The above formula produces a score of 0.0 for a group with the same value as the statewide average. A negative value indicates better than average standing on an indicator. A positive value indicates worse than average standing on an indicator\*. The profile visually describes the better-than-average and worse-than-average clusters of health status characteristics for American Indian residents of Arizona.

Following the graphic profile is a detailed description of the 70 indicators. These indicators are organized around 9 major subject areas:

(1) Teen Pregnancies, (2) Maternal Lifestyle and Health Characteristics, (3) Utilization of Prenatal Care Services, (4) Newborn's Health, (5) Mortality from Natural Causes (chronic or infectious diseases), (6) Mortality from Injuries, (7) Age-Specific Mortality, (8) Premature Mortality and (9) Reportable Diseases.

**IN 2011, AMERICAN INDIAN RESIDENTS OF ARIZONA:**

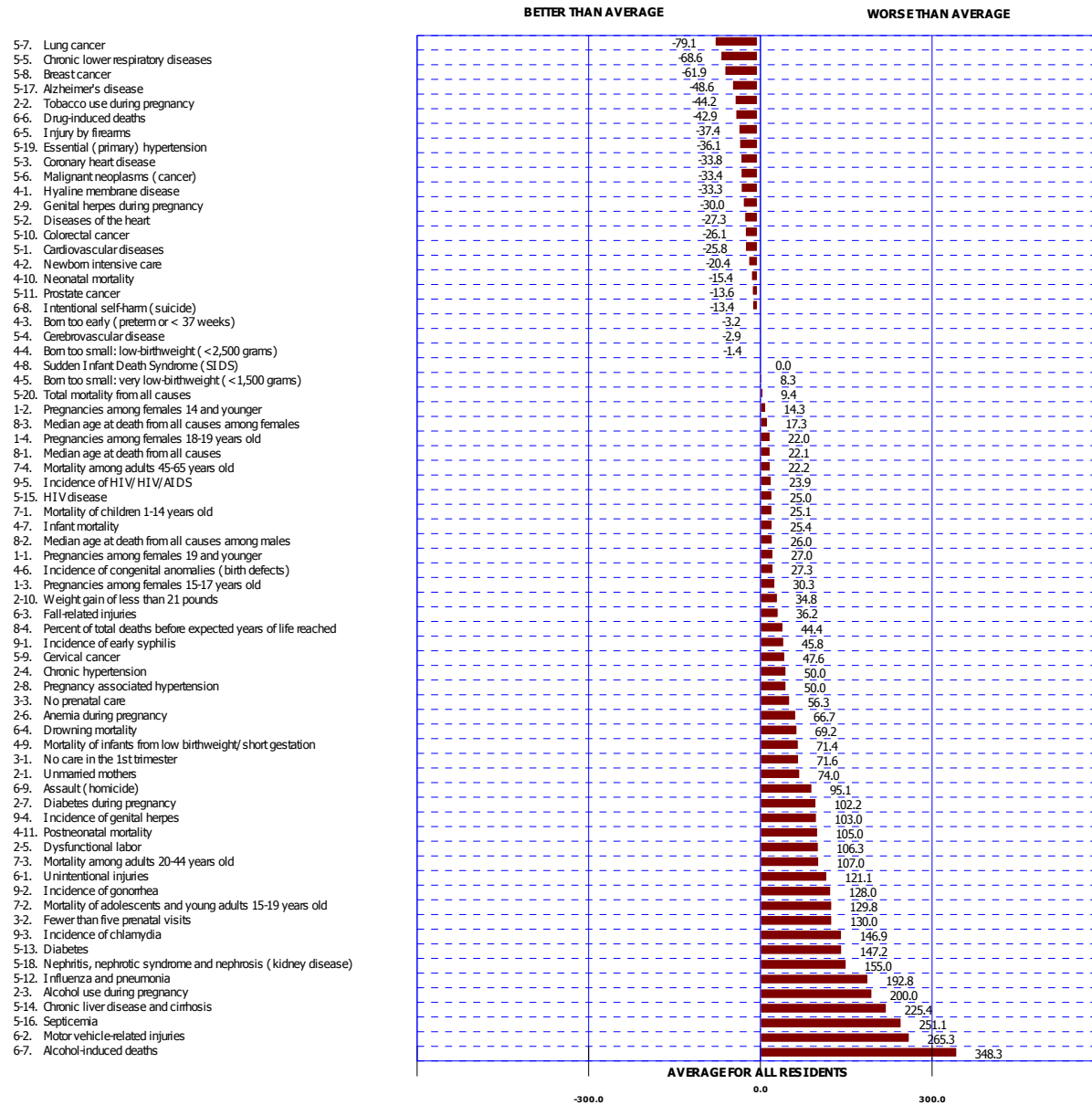
- ranked worse than the statewide average on 47 of 70 health indicators;
- ranked poorly on measures of maternal lifestyle and health, as well as in utilization of prenatal care;
- on average were 19 years younger at time of death compared to all racial/ethnic groups;
- had high mortality from alcohol-induced causes, motor vehicle accidents, septicemia, influenza and pneumonia, and mortality from other unintentional injuries: all contributing to the premature death rate of 77.7 percent;
- ranked better than average on a number of health indicators including (1) mortality rates for several chronic diseases (lung cancer, chronic lower respiratory diseases, breast cancer, Alzheimer’s disease, heart disease, all malignant neoplasms, and colorectal cancer), (2) tobacco use during pregnancy, (3) drug induced deaths, and (4) injury by firearms.

\* The comparative risk profiles for American Indian, White non-Hispanic, Hispanic or Latino, Black or African American, and Asian or Pacific Islander residents of Arizona were developed for a report *"Differences in the Health Status among Ethnic Groups"*. This publication is available online at <http://www.azdhs.gov/plan/report/dhsag/index.htm>. For consistency, the signs + and - for scores indicating the median age at death as higher or lower than the statewide average were reversed (indicators 8-1, 8-2, 8-3). Otherwise, a lower-than-average median age at death would signify a better than average standing on this indicators. A lower-than-average median age at death obviously reflects a worse off life expectancy.



## 2011 RISK PROFILE OF AMERICAN INDIANS

(Percent above or below the average rate or ratio of all Arizona residents in 2011)



**AMERICAN INDIANS' STANDING IN ARIZONA IN 2011  
ON 70 INDICATORS OF HEALTH STATUS**

**1. TEEN PREGNANCIES**

(Number of pregnancies per 1,000 females in specified age group)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
1-1	Pregnancies among females 19 and younger	29.2	<b>27.0</b>	23.0	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	0.8	<b>14.3</b>	0.7	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	28.8	<b>30.3</b>	22.1	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	94.2	<b>22.0</b>	77.2	The sum of live births, fetal deaths, and abortions per 1,000 females aged 18-19 years.

**2. MATERNAL LIFESTYLE AND HEALTH CHARACTERISTICS**

(All rates are per 100 live births)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
2-1	Unmarried mothers	77.1	<b>72.1</b>	44.3	The number of births to unmarried mothers per 100 births.
2-2	Tobacco use during pregnancy	2.4	<b>-44.2</b>	4.3	The number of mothers giving birth who self-reported tobacco use during pregnancy per 100 births.
2-3	Alcohol use during pregnancy	1.5	<b>200.0</b>	0.5	The number of mothers giving birth who self-reported alcohol use during pregnancy per 100 births.
2-4	Chronic hypertension	1.2	<b>50.0</b>	0.8	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	3.3	<b>106.3</b>	1.6	Failure to progress in a normal pattern of labor (the number of cases per 100 births).
2-6	Anemia during pregnancy	6.0	<b>66.7</b>	3.6	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	9.3	<b>102.2</b>	4.6	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	6.3	<b>50.0</b>	4.2	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	0.7	<b>-30.0</b>	1.0	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	35.6	<b>34.8</b>	26.4	The number of women giving birth who gained less than 21 pounds per 100 births.

**AMERICAN INDIANS' STANDING IN ARIZONA IN 2011  
ON 70 INDICATORS OF HEALTH STATUS (continued)**

**3. UTILIZATION OF PRENATAL CARE SERVICES**

(Per 100 live births)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
3-1	No care in the 1 <sup>st</sup> trimester	31.4	<b>71.6</b>	18.3	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	11.5	<b>130.0</b>	5.0	The number of mothers giving birth who had fewer than five prenatal visits during pregnancy per 100 births.
3-3	No prenatal care	2.5	<b>56.3</b>	1.6	The number of mothers giving birth who received no prenatal care during pregnancy per 100 births.

**4. NEWBORN'S HEALTH**

(Infant, neonatal, and postneonatal rates are per 1,000 live births. All other indicators are expressed per 100 live births)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
4-1	Incidence of hyaline membrane disease	0.2	<b>-33.3</b>	0.3	The number of cases of hyaline membrane disease per 100 births. Hyaline membrane disease is 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	4.3	<b>-20.4</b>	5.4	The number of babies admitted to Newborn Intensive Care units per 100 births.
4-3	Born too early (preterm or < 37 weeks)	9.0	<b>-3.2</b>	9.3	The number of births before 37 weeks of gestation per 100 births. Preterm is 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)	6.9	<b>-1.4</b>	7.0	The number of newborns weighing less than 2,500 grams per 100 births. Low-birthweight is 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)	1.3	<b>8.3</b>	1.2	The number of newborns weighing less than 1,500 grams per 100 births. Very low-birthweight is 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)	1.4	<b>27.3</b>	1.1	The numbers of babies born with birth defects per 100 births.
4-7	Infant mortality	7.4	<b>25.4</b>	5.9	The number of infant deaths per 1,000 live births. Infant death is 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)	0.3	<b>0.0</b>	0.3	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	1.2	<b>71.4</b>	0.7	The number of infant deaths from low-birthweight/short gestation (ICD-10 code P07) per 1,000 live births.
4-10	Neonatal mortality	3.3	<b>-15.4</b>	3.9	The number of neonatal deaths per 1,000 live births. Neonatal death is 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	4.1	<b>105.0</b>	2.0	The number of postneonatal deaths per 1,000 live births. Postneonatal death is any death of a liveborn infant at least 28 days of age but less than one year of age.

**AMERICAN INDIANS' STANDING IN ARIZONA IN 2011  
ON 70 INDICATORS OF HEALTH STATUS (continued)**

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

(Number of deaths per 100,000 population age-adjusted to 2000 standard. The causes of death are classified by the Tenth Revision of the International Classification of Diseases or ICD-10)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
5-1	Cardiovascular disease	149.2	<b>-25.8</b>	201.0	The number of deaths from cardiovascular diseases (ICD-10 codes I00-I78) per 100,000 age-adjusted population.
5-2	Diseases of the heart	111.1	<b>-27.2</b>	152.7	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	79.6	<b>-33.8</b>	120.3	The number of deaths from coronary heart disease (ICD-10 codes I200-I259) per 100,000 age-adjusted population.
5-4	Cerebrovascular disease	29.7	<b>-2.9</b>	30.6	The number of deaths from cerebrovascular disease (ICD-10 codes I60-I69) per 100,000 age-adjusted population.
5-5	Chronic lower respiratory diseases	14.4	<b>-68.6</b>	45.9	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)	100.8	<b>-33.4</b>	151.3	The number of deaths from cancer (ICD-10 codes C00-C97) per 100,000 age-adjusted population.
5-7	Lung cancer	7.9	<b>-79.1</b>	37.8	The number of deaths from lung cancer (ICD-10 codes C33-C34) per 100,000 age-adjusted population.
5-8	Breast cancer	7.5	<b>-61.9</b>	19.7	The number of deaths from breast cancer (ICD-10 code C50) per 100,000 age-adjusted female population.
5-9	Cervical cancer	3.1	<b>47.6</b>	2.1	The number of deaths from cervical cancer (ICD-10 code C53) per 100,000 age-adjusted female population.
5-10	Colorectal cancer	9.9	<b>-26.1</b>	13.4	The number of deaths from colorectal cancer (ICD-10 codes C18-C21) per 100,000 age-adjusted population.
5-11	Prostate cancer	17.1	<b>-13.6</b>	19.8	The number of deaths from prostate cancer (ICD-10 code C61) per 100,000 age-adjusted male population.
5-12	Influenza and pneumonia	28.4	<b>192.8</b>	9.7	The number of deaths from influenza and pneumonia (ICD-10 codes J10-J18) per 100,000 age-adjusted population.
5-13	Diabetes	61.3	<b>147.2</b>	24.8	The number of deaths from diabetes (ICD-10 codes E10-E14) per 100,000 age-adjusted population.
5-14	Chronic liver disease and cirrhosis	43.6	<b>225.4</b>	13.4	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	2.0	<b>25.0</b>	1.6	The number of deaths from HIV disease (ICD-10 codes B20-B24) per 100,000 age-adjusted population.
5-16	Septicemia	16.5	<b>251.1</b>	4.7	The number of deaths from septicemia (ICD-10 codes A40-A41) per 100,000 age-adjusted population.
5-17	Alzheimer's disease	18.1	<b>-48.6</b>	35.2	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)	15.3	<b>155.0</b>	6.0	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	6.9	<b>-36.1</b>	10.8	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	765.5	<b>9.4</b>	699.6	Total number of deaths from all causes per 100,000 age-adjusted population.



**AMERICAN INDIANS' STANDING IN ARIZONA IN 2011  
ON 70 INDICATORS OF HEALTH STATUS (continued)**

**6. MORTALITY FROM INJURIES**

(Number of deaths per 100,000 population age-adjusted to 2000 standard. The causes of death are classified by the Tenth Revision of the International Classification of Diseases or ICD-10. Drug-induced deaths include accidental, suicidal, and homicidal poisoning by drugs, but also disorders due to use of psychoactive substances. Alcohol-induced deaths include accidental, suicidal, and homicidal by drugs, but also disorders due to use of alcohol)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
6-1	Unintentional injuries	100.6	<b>121.1</b>	45.5	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	44.2	<b>265.3</b>	12.1	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	15.8	<b>36.2</b>	11.6	The number of deaths from fall-related injuries (ICD-10 codes W00-W19) per 100,000 age-adjusted population.
6-4	Drowning mortality	2.2	<b>69.2</b>	1.3	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	9.2	<b>-37.4</b>	14.7	The number of deaths by firearms (ICD-10 codes W32-W34, X72-X74, X93-X95, Y22-Y24, Y 35.0) 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	9.6	<b>-42.9</b>	16.8	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. <u>Also excluded are newborn deaths associated with mother's drug use.</u>
6-7	Alcohol-induced deaths	64.1	<b>348.3</b>	14.3	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)	14.9	<b>-13.4</b>	17.2	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)	11.9	<b>95.1</b>	6.1	The number of deaths due to assault (homicide; ICD-10 codes X85-X09, Y87.1) per 100,000 age-adjusted population.

**AMERICAN INDIANS' STANDING IN ARIZONA IN 2011  
ON 70 INDICATORS OF HEALTH STATUS (continued)**

**7. PREMATURE MORTALITY**

(Number of deaths per 100,000 persons in specific group)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
7-1	Mortality of children 1-14 years old	21.9	<b>25.1</b>	17.5	The number of deaths per 100,000 children 1-14 years old.
7-2	Mortality of adolescents 15-19 years old	114.2	<b>129.8</b>	49.7	The number of deaths per 100,000 adolescents 15-19 years old.
7-3	Mortality of young adults 20-44 years old	276.5	<b>107.0</b>	133.6	The number of deaths per 100,000 young adults 20-44 years old.
7-4	Mortality of middle-aged adults 45-64 years old	726.8	<b>22.2</b>	595.0	The number of deaths per 100,000 middle-aged adults 45-64 years old.

**8. AGE-SPECIFIC MORTALITY**

(Number of deaths per 100,000 persons in specific group)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average for all groups*	Average rate for all groups in 2011	Definitions
8-1	Median age at death from all causes	60.0	<b>22.1</b>	77.0	The median age (the age in the middle) of Arizonans who died in 2011.
8-2	Median age at death from all causes among males	54.0	<b>26.0</b>	73.0	The median age (the age in the middle) of Arizona males who died in 2011.
8-3	Median age at death from all causes among females	67.0	<b>17.3</b>	81.0	The median age (the age in the middle) of Arizona females who died in 2011.
8-4	Percent of total deaths before expected years of life reached	77.7	<b>44.4</b>	53.8	The number of deaths before reaching 78.7 years (the life expectancy of all U.S. residents in 2011) per 100 deaths.

Notes: For consistency, the signs + and - for scores indicating the median age at death as higher or lower than the statewide average were reversed.

**9. REPORTABLE DISEASES**

(Number of cases per 100,000 persons in specific group)

Figure Number	Indicator	2011 rate for American Indians	Percent above or below the average rate for all groups	Average rate for all groups in 2011	Definitions
9-1	Incidence of early syphilis	10.5	<b>45.8</b>	7.2	Number of reported cases of early syphilis per 100,000 population.
9-2	Incidence of gonorrhea	162.8	<b>128.0</b>	71.4	Number of reported cases of gonorrhea per 100,000 population.
9-3	Incidence of chlamydia	1129.6	<b>146.9</b>	457.6	Number of reported cases of chlamydia per 100,000 population.
9-4	Incidence of genital herpes	68.4	<b>103.0</b>	33.7	Number of reported cases of genital herpes per 100,000 population.
9-5	Incidence of HIV/AIDS	11.4	<b>23.9</b>	9.2	Number of reported cases of HIV/AIDS per 100,000 population.