

## Diagnosis and Procedure Codes Used to Analyze the Hospital Discharge Data

Diagnostic groupings and code numbers used in Chapter 4 and Chapter 7 are based on the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM).

The tabulations of the hospital inpatient data by first-listed diagnosis and all-listed procedures utilize the diagnostic categories available respectively at <http://www.azdhs.gov/plan/hip/cat/icd9primary.xls> and <http://www.azdhs.gov/plan/hip/cat/icd9procedure.xls>.

The ICD-9-CM diagnostic categories used to identify specific mental disorders are available online at <http://www.azdhs.gov/plan/hip/for/mental/2012/mental12.xls>

## Terms Related to Mortality

The most common, and perhaps the most valuable, measure of the likelihood (or risk) of death in the specified population during a particular time is the **crude death rate**. It is computed as the number of deaths per 1,000 or 100,000 population.

**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	2013 population	2013 deaths	Age-specific rates in 2013	2000 standard	Age-adjusted rate for 2013
A	B	C	D (C/B)*100000	E	F D*E
<1	89,196	447	501.1	.013818	6.9
1-4	351,077	131	37.3	.055317	2.1
5-14	924,150	121	13.1	.145565	1.9
15-24	937,362	663	70.7	.138646	9.8
25-34	868,888	1,081	124.4	.135573	16.9
35-44	834,554	1,585	189.9	.162613	30.9
45-54	834,992	3,418	409.3	.134834	55.2
55-64	759,706	6,480	853.0	.087247	74.4
65-74	566,812	9,091	1603.9	.066037	105.9
75-84	301,956	12,091	4004.2	.044842	179.6
85+	112,360	14,801	13172.8	.015508	204.3
All ages	6,581,054	49,929		TOTAL	<b>Σ = 687.8</b>

The age-adjusted mortality rates should be viewed as relative indexes rather than as actual measures of mortality risk. It is also important to note that age-adjusted rates can only be compared to other age-adjusted rates that use the same population standard.

In this report, all age-adjusted mortality rates are based on the 2000 standard, and they CANNOT BE compared to rates using the 1940 standard population.

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

**Alcohol-induced deaths** - This category was expanded in 2003. Causes of death attributable to alcohol mortality include mental and behavioral disorders due to alcohol use, degeneration of nervous system due to alcohol use, 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 alcohol, poisoning by alcohol, undetermined intent.

**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.

**Comparability ratios** - Comparability ratios are measures of comparison between ICD-9 and ICD-10. Any comparison of causes of mortality in Arizona before and after the implementation of ICD-10 needs to take into account the changes in statistical trends that can be attributed to changes in the classification system alone. Comparability ratio of 1.0 indicates that the same number of deaths would be assigned to a cause-of-death when ICD-9 or ICD-10 was used. Comparability-modified number of deaths and mortality rates are shown for the four causes of death for which the discontinuity in trend is substantial (influenza and pneumonia, Alzheimer's disease, nephritis, or septicemia).

**Drug-induced deaths** - This category was expanded in 2003. Causes of death attributable to drug-related mortality include mental and behavioral disorders due to psychoactive substance use, accidental poisoning by and exposure to drugs, suicide by drugs, homicide by drugs and poisoning by drugs, undetermined intent

**Firearm mortality** - Causes of death attributable to firearm mortality include accidental discharge of firearms, suicide by firearms, homicide by firearms, legal intervention involving discharge of firearms, terrorism involving firearms and discharge of firearms, undetermined intent.