

# Technical Notes

---

## Sources of Data

## Definitions

- **URBAN AND RURAL AREAS**
- **RACE/ETHNICITY**
- **RATES**
- **TERMS RELATED TO REPRODUCTIVE HEALTH**
- **MEDICAL TERMS USED ON THE BIRTH CERTIFICATE**
  - MEDICAL RISK FACTORS FOR THIS PREGNANCY
  - COMPLICATIONS OF LABOR AND/OR DELIVERY
  - ABNORMAL CONDITIONS OF THE NEWBORN
  - CONGENITAL ANOMALIES OF CHILD
- **TERMS RELATED TO MORTALITY**
  - CAUSE-OF-DEATH CATEGORIES AND COMPARABILITY RATIOS FOR 113 SELECTED CAUSES OF DEATH



# SOURCES OF DATA

Information on births, deaths and fetal deaths is compiled from the original documents filed with the Arizona Department of Health Services', Office of Vital Records and from transcripts of original birth and death certificates filed in other states but affecting Arizona residents. (Copies of certificates for births, deaths and fetal deaths occurring to Arizona residents outside the United States are not sent to Arizona).

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).

Arizona has no central registry for marriage and divorce records. Statistics are limited to counts of marriages and divorces reported monthly by the Clerk of the Superior Court in each county in which the marriage or divorce occurred. These reports contain no demographic data on the people marrying or divorcing.

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 conducts surveillance and monitoring of these notifiable diseases and provided data for the morbidity sections in this report.

Population denominators for Arizona residents, used to calculate rates, are projections from the Population Statistics Unit in the Arizona Department of Economic Security (DES) (1991-1999) and census enumerations (data for 1980, 1990, and 2000 from the U.S. Census Bureau. In order to obtain the 2002 population denominators, the 2000 percentages of population breakdowns (or census shares) by age group and gender were applied to total state and county population estimates released by the DES on 12/6/02.

Requests for additional Arizona statistics on births, deaths, spontaneous and induced terminations of pregnancy, should be directed to the Bureau of Public Health Statistics of the Arizona Department of Health Services, 150 N. 18<sup>th</sup> Avenue, Suite 550, Phoenix, AZ 85007; Phone: (602) 542-1216; FAX: (602) 542-2940). Some additional information on

topics such as morbidity from certain diseases or population composition is available from the following sources:

Birth Defects - Arizona Birth Defects Monitoring Program, Office of Health Registries, ADHS, (602) 542-7310

<http://www.hs.state.az.us/phs/phstats/bdr/index.htm>

Cancer incidence - Arizona Cancer Registry, Office of Health Registries, ADHS, (602) 542-7328

<http://www.hs.state.az.us/phs/phstats/acr/>

Drowning incidence in Maricopa County, Bureau of Public Health Statistics, ADHS, (602) 542-7331

<http://www.hs.state.az.us/phs/phstats/meddir/>

HIV/AIDS morbidity - Office of HIV/STD Services, ADHS, (602) 230-5819

[http://www.hs.state.az.us/phs/hiv/hiv\\_epi.htm](http://www.hs.state.az.us/phs/hiv/hiv_epi.htm)

Hospital inpatient discharge data - Cost Reporting and Discharge Data Review, Bureau of Public Health Statistics, ADHS, (602) 542-2960

<http://www.hs.state.az.us/plan/hosp.htm>

Licensed medical doctors - Board of Medical Examiners, (602) 255-3751

<http://www.bomex.org/>

National health and vital statistics - National Center for Health Statistics

<http://www.cdc.gov/nchs/default.htm>

Sexually Transmitted Diseases morbidity - Office of HIV/STD Services, ADHS, (602) 230-5900

<http://www.hs.state.az.us/phs/oids/std/index.htm>

Smoking, seat belt use, physical inactivity and other behavioral risk factors - Behavioral Risk Factors Surveillance System, Bureau of Public Health Statistics, ADHS, (602) 542-2974

<http://www.hs.state.az.us/plan/brfs/>

Population: census enumerations, estimates and projections - U.S. Bureau of the Census

<http://www.census.gov/>

Population: estimates and projections - Population Statistics Unit, ADES, (602) 542-5984

<http://www.de.state.az.us/links/economic/webpage/page2.html>

Preventable child deaths - Child Fatality Review Team, ADHS, (602) 542-1875

<http://www.hs.state.az.us/cfhs/azcf/index.htm>

# DEFINITIONS

## Urban and Rural Areas

In this report, counties included in a metropolitan area are considered to be urban; counties not included in a metropolitan area are considered to be rural. As defined by the Office of Management and Budget, the following are Arizona's metropolitan statistical areas (MSAs): Phoenix-Mesa MSA (Maricopa and Pinal Counties), Tucson MSA (Pima County), and Yuma MSA (Yuma County). The remaining counties (Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Santa Cruz and Yavapai) comprise Arizona's rural areas. The list of Metropolitan Statistical Areas and their component counties for the United States is available at:

<http://www.cdc.gov/nchs/data/dvs/mcd/geog94msa.txt>

## Race/Ethnicity

Race/ethnic designations used in this report are White non-Hispanic, Hispanic, Black (or African-American), American Indian (or Native American, including Aleut and Eskimo) and Asian (Asians and Pacific Islanders including Hawaiians). In some of the trend tables the designation "Other" includes Asian and Pacific Islanders. White non-Hispanics are included in their appropriate race groups.

The American Indian figures include those living both on and off the reservation.

Ethnicity of mother, father or decedent is as stated on the certificate.

Beginning in 1989, the National Center for Health Statistics changed its method of computing infant mortality rates from race/ethnicity of child to race/ethnicity of mother. Consequently, infant mortality rates under new tabulating procedure tend to be lower for White non-Hispanic infants and higher for minority infants than they are when computed by the previous method. For consistency with the national data sources, all trend tables in this report have been re-calculated by race/ethnicity of mother for all years beginning with the 1991 data year.

## Rates

Rate is a measure of the frequency of some event in relation to a unit of population during a specified time period such as a year; events in the numerator of the year occur to individuals in the denominator. Rates express the likelihood (or risk) of the event in the specified population during a particular time and are generally expressed as

units of population in the denominator (per 1,000, per 100,000 and so forth).

Many rates shown in this report are based on a small population, a small number of events or both. Rates based on small numbers are unreliable and thus should be viewed with caution. Rates for many counties or Arizona's ethnic minorities also vary considerably from year to year due to small populations and few events.

## Terms Related to Reproductive Health\*

**Abortion Rate** - Number of reported abortions to females of all ages during a calendar year per 1,000 females of childbearing age (15-44 years).

**Abortion Ratio** - Number of abortions reported during a period per 1,000 live births occurring during the same period.

**Birth or Live Birth** - The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy which, after such expulsion or extraction, breaths or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

**Birth rate** - Number of live births during a calendar year per 1,000 population.

**Birth weight** - The weight of a neonate determined immediately after delivery or as soon thereafter as possible.

**Fetal death** - Death prior to the complete expulsion or extraction from the mother of a product of human conception, fetus and placenta, irrespective of the duration of pregnancy. The death is indicated by the fact that, after such expulsion or extraction, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles.

**Fetal death ratio (I)** - Number of fetal deaths at 20 or more weeks of gestation per 1,000 live births + fetal deaths.

**Fetal death ratio (II)** - Number of fetal deaths of 500 grams or more per 1,000 live births + fetal deaths.

**Fertility rate (general)** - Total number of live births to women of all ages during a calendar year per 1,000 women of childbearing age (15-44 years old).

**Fertility rate (total)** - The sum of age-specific birth rates of women at each age group 10-14 through 45-49. Since five-year age groups are used, the sum is multiplied by five.

---

\*See "Standard Terminology for Reporting Reproductive Health in the United States". Public Health Reports, Vol.103, No.5. September-October 1988.

# Medical Terms Used on the Birth Certificate

**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).

**Infant mortality rate** - Number of infant deaths per 1,000 live births.

**Low-birthweight** - Any neonate weighing less than 2,500 grams at birth (less than 5 pounds 8 ounces).

**Maternal mortality rate** - Number of deaths attributed to maternal conditions (i.e. related to or aggravated by pregnancy or its management) per 100,000 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).

**Neonatal mortality rate** - Number of neonatal deaths per 1,000 live births.

**Perinatal mortality ratio (I)** - The sum of infant deaths of less than 7 days and fetal deaths with a stated or presumed period of gestation of 28 weeks or more per 1,000 live births+fetal deaths.

**Perinatal mortality ratio (II)** - The sum of infant deaths of less than 28 days and fetal deaths with a stated or presumed period of gestation of 20 weeks or more per 1,000 live births+fetal deaths.

**Perinatal mortality ratio (III)** - The sum of infant deaths of less than 7 days and fetal deaths with a stated or presumed period of gestation of 20 weeks or more per 1,000 live births+fetal deaths.

**Postneonatal death** - Any death of a liveborn infant at least 28 days of age but less than one year of age.

**Postneonatal mortality rate** - Number of postneonatal deaths per 1,000 live births.

**Post term** - Any neonate whose birth occurs from the beginning of the first day (295<sup>th</sup> day) of the 43<sup>rd</sup> week following onset of the last menstrual period.

**Pregnancy rate** - The sum of live births, fetal deaths and induced terminations of pregnancy per 1,000 women of childbearing age (15-44 years old).

**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.

**Term** - Any neonate whose birth occurs from the beginning of the first day (260<sup>th</sup> day) of the 38<sup>th</sup> week, through the end of the last of the 42<sup>nd</sup> week (294<sup>th</sup> day), following onset of the last menstrual period.

**Very Low-Birthweight** - Any neonate whose weight at birth is 1,500 grams or less (less than 3 pounds 5 ounces).

## Medical risk factors for this pregnancy

**Anemia** - Hemoglobin level of less than 10.0 g/dL during pregnancy, or hematocrit of less than 30 percent during pregnancy.

**Cardiac disease** - Disease of the heart.

**Acute or chronic lung disease** - Disease of the lungs during pregnancy.

**Diabetes** - Metabolic disorder characterized by excessive discharge of urine and persistent thirst; includes juvenile onset, adult onset and gestational diabetes during pregnancy.

**Genital herpes** - Infection of the skin of the genital area by herpes simplex virus.

**Hydramnios/Oligohydramnios** - Any noticeable excess (hydramnios) or lack (oligohydramnios) of amniotic fluid.

**Hemoglobinopathy** - A blood disorder caused by alteration in the genetically determined molecular structure of hemoglobin (for example, sickle cell anemia).

**Hypertension, chronic** - Blood pressure persistently greater than 140/90, diagnosed prior to onset of pregnancy or before the 20<sup>th</sup> week of gestation.

**Hypertension, pregnancy-associated** - 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 20<sup>th</sup> week of gestation.

**Eclampsia** - The occurrence of convulsions and/or coma unrelated to other cerebral conditions in women with signs and symptoms of preeclampsia.

**Incompetent cervix** - Characterized by painless dilation of the cervix in the second trimester or early in the third trimester of pregnancy, with premature expulsion of membranes through cervix and ballooning of the membranes into vagina, followed by rupture of the membrane and subsequent expulsion of the fetus.

**Previous infant 4,000+ grams** - The birthweight of a previous live-born child was over 4,000 grams (8lbs.14oz.).

**Previous preterm or small-for-gestational-age-infant** - Previous birth of an infant prior to term (before 37 completed weeks of gestation) or of an infant weighing less than the 10<sup>th</sup> percentile for gestational age using a standard weight for age chart.

**Renal disease** - Kidney disease.

**Rh Sensitization** - The process or state of becoming sensitized to the Rh factor as when an Rh-negative woman is pregnant with an Rh-positive fetus.

**Uterine bleeding** - Any clinically significant bleeding during the pregnancy taking into consideration the stage of pregnancy; any second or third trimester bleeding or third trimester bleeding of the uterus prior to the onset of labor.

## Complications of labor and/or delivery

**Febrile** - A fever greater than 100 degrees F. or 38 degrees C. occurring during labor and/or delivery.

**Meconium, moderate/heavy** - Meconium consists of undigested debris from swallowed amniotic fluid, various products of secretion and shedding by the gastrointestinal tract, moderate to heavy amounts of meconium in the amniotic fluid noted during labor and/or delivery.

**Premature rupture of membranes (more than 12 hours)** - Rupture of membranes at any time during pregnancy and more than 12 hours before the onset of labor.

**Abruptio placenta** - Premature separation of normally implanted placenta from the uterus.

**Placenta previa** - Implantation of the placenta over or near the internal opening of the cervix.

**Other excessive bleeding** - The loss of significant amount of blood from conditions other than abruptio placenta or placenta previa.

**Seizures during labor** - Maternal seizures occurring during labor from any cause.

**Precipitous labor** (less than 3 hours)  
Extremely rapid labor and delivery lasting less than 3 hours.

**Prolonged labor** (more than 20 hours) - Abnormally slow progress of labor lasting more than 20 hours.

**Dysfunctional labor** - Failure to progress in a normal pattern of labor.

**Breech/Malpresentation** - At birth, the presentation of the fetal buttocks, rather than the head or other malpresentation.

**Cephalopelvic disproportion** - The relationship of the size, presentation and position of the fetal head to the maternal pelvis, which prevents dilation of the cervix and/or descent of the fetal head.

**Cord prolapse** - Premature expulsion of the umbilical cord in labor before the fetus is delivered.

**Anesthetic complications** - Any complication during labor and/or delivery brought on by an anesthetic agent or agents.

**Fetal distress** - Signs indicating fetal hypoxia (deficiency in amount of oxygen reaching fetal tissues).

## Abnormal conditions of the newborn

**Anemia** - Hemoglobin level of less than 13.0 g/dL, or a hematocrit of less than 39 percent.

**Birth injury** - Impairment of the infant's body function or structure due to adverse influences that occurred at birth.

**Fetal alcohol syndrome** - A syndrome of altered prenatal growth and development occurring in infants born of women who consumed excessive amounts of alcohol during pregnancy.

**Hyaline membrane disease/RDS** - A disorder primarily of prematurity, manifested clinically by respiratory distress and pathologically by pulmonary hyaline membranes and incomplete expansion of the lungs at birth.

**Meconium aspiration syndrome** - Aspiration of meconium by the fetus or newborn, affecting the lower respiratory system.

**Assisted ventilation (less than 30 minutes)** - A mechanical method of assisting respiration for newborns with respiratory failure.

**Assisted ventilation (30 minutes or more)** - Newborn placed on assisted ventilation for 30 minutes or longer.

**Seizures** - A seizure of any etiology.

## Congenital anomalies of child

**Anencephalus** - Absence of the cerebral hemispheres.

**Spina bifida/meningocele** - Developmental anomaly characterized by defective closure of the bony encasement of the spinal cord, through which the cord and meninges may or may not protrude.

**Hydrocephalus** - Excessive accumulation of cerebrospinal fluid within the ventricles of the brain with consequent enlargement of cranium.

**Microcephalus** - A significantly small head.

**Other central nervous system anomalies** - Other specified anomalies of the brain, spinal cord, and nervous system.

**Heart malformations** - Congenital anomalies of heart.

**Other circulatory/respiratory anomalies** - Other specified anomalies of the circulatory and respiratory systems.

**Rectal atresia/stenosis** - Congenital absence, closure, or narrowing of the rectum.

**Tracheo-esophageal fistula/Esophageal atresia** - An abnormal passage between the trachea and the esophagus; esophageal atresia is the congenital absence or closure of the esophagus.

**Omphalocele/Gastroschisis** - An omphalocele is a protrusion of variable amounts of abdominal viscera from a midline defect at the base of the umbilicus. In gastroschisis, the abdominal viscera protrude through an abdominal wall defect, usually on the right side of the umbilical cord insertion.

**Other gastrointestinal anomalies** – Other specified congenital anomalies of the gastrointestinal system.

**Malformed genitalia** – Congenital anomalies of the reproductive organs.

**Renal agenesis** – One or both kidneys are completely absent.

**Other urogenital anomalies** – Other specified congenital anomalies of the organs concerned in the production and excretion of the urine, together with organs of reproduction.

**Cleft lip/palate** – Cleft lip is a fissure or elongated opening of the lip; cleft palate is a fissure in the roof of the mouth. These are failures of embryonic development.

**Polydactyly/Syndactyly/Adactyly**– Polydactyly is the presence of more than five digits on hands and/or feet; syndactyly is having fused or webbed fingers and/or toes; adactyly is the absence of fingers and/or toes.

**Club foot** – Deformities of the foot, which is twisted out of shape or position.

**Diaphragmatic hernia** – Herniation of the abdominal contents through the diaphragm into the thoracic cavity usually resulting in respiratory distress.

**Other musculoskeletal/integumental anomalies** – Other specified congenital anomalies of the muscles, skeleton, or skin.

**Down's syndrome** – The most common chromosomal defect with most cases resulting from an extra chromosome (trisomy 21).

**Other chromosomal anomalies** – All other chromosomal aberrations.

## 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	2002 population	2002 deaths	Age-specific rates In 2002	2000 standard	Age-adjusted rate for 2002
A	B	C	D (C/B)*100000	E	F D*E
<1	82595	552	668.3	.013818	9.2
1-4	325321	127	39.0	.05317	2.2
5-14	818805	144	17.6	.145565	2.6
15-24	779164	772	99.1	.138646	13.7
25-34	792874	891	112.4	.135573	15.2
35-44	820329	1760	214.5	.162613	34.9
45-54	669740	3111	464.5	.134834	62.6
55-64	471720	4363	924.9	.087247	80.7
65-74	387939	7481	1928.4	.066037	127.3
75-84	251170	12355	4919.0	.044842	220.6
85+	73093	10717	14662.1	.015508	227.4
				TOTAL	<b>796.4</b>

**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.

**Comparability ratios** - Comparability ratios are measures of comparison between ICD-9 and ICD-10. Any comparison of causes of mortality in Arizona between 2000-2001 and previous years 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. The following table provides comparable cause-of-death categories in ICD-9 and ICD-10 and shows comparability ratios for 113 selected causes of death.

## CAUSE-OF-DEATH CATEGORIES AND COMPARABILITY RATIOS FOR SELECTED 113 CAUSES OF DEATH

Cause of death (Based on the <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Category codes according to the Tenth Revision (ICD-10)	Category codes according to the Ninth Revision (ICD-9)	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95-percent confidence limits	
			Tenth Revision	Ninth Revision				Lower	Upper
Salmonella infections . . . . .	A01-A02	002-003	30	37	0.8108	0.0644	7.9	0.6846	0.9370
Shigellosis and amebiasis . . . . .	A03,A06	004,006	*	*	*	*	*	*	*
Certain other intestinal infections . . . . .	A04,A07-A09	007-009	*	*	*	*	*	*	*
Tuberculosis . . . . .	A16-A19	010-018	653	764	0.8547	0.0172	2.0	0.8209	0.8885
Respiratory tuberculosis . . . . .	A16	010-012	518	572	0.9056	0.0201	2.2	0.8662	0.9450
Other tuberculosis . . . . .	A17-A19	013-018	135	192	0.7031	0.0407	5.8	0.6233	0.7830
Whooping cough . . . . .	A37	033	*	*	*	*	*	*	*
Scarlet fever and erysipelas . . . . .	A38,A46	034.1-035	*	*	*	*	*	*	*
Meningococcal infection . . . . .	A39	036	221	222	0.9955	0.0149	1.5	0.9663	1.0247
Septicemia . . . . .	A40-A41	038	21,258	17,791	1.1949	0.0042	0.3	1.1867	1.2030
Syphilis . . . . .	A50-A53	090-097	21	33	0.6364	0.1184	18.6	0.4043	0.8685
Acute poliomyelitis . . . . .	A80	045	*	*	*	*	*	*	*
Arthropod-borne viral encephalitis . . . . .	A83-A84,A85.2	062-064	*	*	*	*	*	*	*
Measles . . . . .	B05	055	*	*	*	*	*	*	*
Viral hepatitis . . . . .	B15-B19	070	1,123	1,346	0.8343	0.0120	1.4	0.8109	0.8578
Human immunodeficiency virus (HIV) disease . . . . .	B20-B24	*042-*044	12,765	11,150	1.1448	0.0045	0.4	1.1360	1.1536
Malaria . . . . .	B50-B54	084	*	*	*	*	*	*	*
Other and unspecified infectious and parasitic diseases and their sequelae . . . . .	A00,A05,A20-A36,A42-A44,A48-A49, A54-A79,A81-A82,A85.0-A85.1,A85.8 A86-B04,B06-B09,B25-B49,B55-B99	001,005,020-032,037,039-041,046-054, 056-061,065-066,071-083,085-088, 098-134,136-139,771.3	2,865	2,607	1.0990	0.0154	1.4	1.0688	1.1291
Malignant neoplasms . . . . .	C00-C97	140-208	464,688	461,544	1.0068	0.0002	0.0	1.0064	1.0072
Malignant neoplasms of lip, oral cavity and pharynx . . . . .	C00-C14	140-149	5,927	6,172	0.9603	0.0040	0.4	0.9525	0.9681
Malignant neoplasm of esophagus . . . . .	C15	150	9,596	9,630	0.9965	0.0020	0.2	0.9926	1.0003
Malignant neoplasm of stomach . . . . .	C16	151	11,480	11,408	1.0063	0.0019	0.2	1.0025	1.0101
Malignant neoplasms of colon, rectum and anus . . . . .	C18-C21	153-154	48,583	48,619	0.9993	0.0009	0.1	0.9975	1.0010
Malignant neoplasms of liver and intrahepatic bile ducts . . . . .	C22	155	9,732	10,102	0.9634	0.0023	0.2	0.9588	0.9679
Malignant neoplasm of pancreas . . . . .	C25	157	24,313	24,361	0.9980	0.0009	0.1	0.9963	0.9997
Malignant neoplasm of larynx . . . . .	C32	161	3,209	3,194	1.0047	0.0053	0.5	0.9943	1.0150
Malignant neoplasms of trachea, bronchus and lung . . . . .	C33-C34	162	131,750	133,936	0.9837	0.0005	0.1	0.9827	0.9846
Malignant melanoma of skin . . . . .	C43	172	5,941	6,139	0.9677	0.0032	0.3	0.9614	0.9741
Malignant neoplasm of breast . . . . .	C50	174-175	38,102	37,891	1.0056	0.0010	0.1	1.0036	1.0075
Malignant neoplasm of cervix uteri . . . . .	C53	180	3,753	3,802	0.9871	0.0034	0.3	0.9805	0.9938
Malignant neoplasms of corpus uteri and uterus, part unspecified . . . . .	C54-C55	179,182	5,318	5,183	1.0260	0.0040	0.4	1.0182	1.0339
Malignant neoplasm of ovary . . . . .	C56	183.0	11,292	11,344	0.9954	0.0016	0.2	0.9923	0.9985
Malignant neoplasm of prostate . . . . .	C61	185	30,672	30,267	1.0134	0.0015	0.1	1.0105	1.0162
Malignant neoplasms of kidney and renal pelvis . . . . .	C64-C65	189.0,189.1	9,521	9,521	1.0000	0.0022	0.2	0.9957	1.0043
Malignant neoplasm of bladder . . . . .	C67	188	9,563	9,594	0.9968	0.0026	0.3	0.9916	1.0019
Malignant neoplasms of meninges, brain and other parts of central nervous system . . . . .	C70-C72	191-192	10,039	10,359	0.9691	0.0025	0.3	0.9642	0.9740
Malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . .	C81-C96	200-208	44,715	44,530	1.0042	0.0012	0.1	1.0019	1.0064
Hodgkin's disease . . . . .	C81	201	1,021	1,036	0.9855	0.0089	0.9	0.9680	1.0030
Non-Hodgkin's lymphoma . . . . .	C82-C85	200,202	17,924	18,326	0.9781	0.0018	0.2	0.9745	0.9817
Leukemia . . . . .	C91-C95	204-208	16,600	16,405	1.0119	0.0019	0.2	1.0083	1.0155

See footnotes at end of table.



## CAUSE-OF-DEATH CATEGORIES AND COMPARABILITY RATIOS FOR SELECTED 113 CAUSES OF DEATH - CON.

Cause of death (Based on the <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Category codes according to the Tenth Revision (ICD-10)	Category codes according to the Ninth Revision (ICD-9)	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95-percent confidence limits	
			Tenth Revision	Ninth Revision				Lower	Upper
Multiple myeloma and immunoproliferative neoplasms. . . . .	C88,C90	203	9,099	8,763	1.0383	0.0030	0.3	1.0324	1.0443
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . .	C96	---	*	*	*	*	*	*	*
All other and unspecified malignant neoplasms. . . . .	C17,C23-C24,C26-C31,C37-C41, C44-C49,C51-C52,C57-C60, C66,C68-C69,C73-C80,C97	152, 156,158-160,163-171,173,181, 183.2-184,186-187,189.2-190,193-199	51,182	45,492	1.1251	0.0021	0.2	1.1210	1.1292
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior . . . . .	D00-D48	210-239	9,263	5,532	1.6744	0.0164	1.0	1.6422	1.7067
Anemias . . . . .	D50-D64	280-285	3,059	3,200	0.9559	0.0077	0.8	0.9409	0.9710
Diabetes mellitus . . . . .	E10-E14	250	48,636	48,242	1.0082	0.0011	0.1	1.0060	1.0103
Nutritional deficiencies . . . . .	E40-E64	260-269	3,215	2,763	1.1636	0.0165	1.4	1.1312	1.1960
Malnutrition . . . . .	E40-E46	260-263	2,607	2,665	0.9782	0.0151	1.5	0.9487	1.0078
Other nutritional deficiencies . . . . .	E50-E64	264-269	608	98	6.2041	0.5961	9.6	5.0358	7.3724
Meningitis . . . . .	G00,G03	320-322	592	584	1.0137	0.0136	1.3	0.9871	1.0403
Parkinson's disease . . . . .	G20-G21	332	10,404	10,392	1.0012	0.0028	0.3	0.9956	1.0067
Alzheimer's disease . . . . .	G30	331.0	29,707	19,121	1.5536	0.0071	0.5	1.5398	1.5675
Major cardiovascular diseases . . . . .	I00-I78	390-434,436-448	796,919	798,435	0.9981	0.0002	0.0	0.9977	0.9985
Diseases of heart . . . . .	I00-I09,I11,I13,I20-I51	390-398,402,404,410-429	615,564	624,405	0.9858	0.0002	0.0	0.9854	0.9863
Acute rheumatic fever and chronic rheumatic heart diseases . . . . .	I00-I09	390-398	2,446	2,980	0.8208	0.0089	1.1	0.8034	0.8382
Hypertensive heart disease . . . . .	I11	402	17,322	21,577	0.8028	0.0028	0.3	0.7973	0.8083
Hypertensive heart and renal disease . . . . .	I13	404	2,170	2,027	1.0705	0.0160	1.5	1.0392	1.1019
Ischemic heart diseases . . . . .	I20-I25	410-414,429.2	466,459	466,935	0.9990	0.0002	0.0	0.9985	0.9994
Acute myocardial infarction . . . . .	I21-I22	410	178,125	180,169	0.9887	0.0003	0.0	0.9880	0.9893
Other acute ischemic heart diseases . . . . .	I24	411	2,667	2,638	1.0110	0.0117	1.2	0.9880	1.0340
Other forms of chronic ischemic heart disease. . . . .	I20,I25	412-414,429.2	285,667	284,128	1.0054	0.0004	0.0	1.0046	1.0062
Atherosclerotic cardiovascular disease, so described. . . . .	I25.0	429.2	64,354	61,362	1.0488	0.0016	0.2	1.0456	1.0519
All other forms of chronic ischemic heart disease. . . . .	I20,I25.1-I25.9	412-414	221,313	222,766	0.9935	0.0004	0.0	0.9927	0.9942
Other heart diseases . . . . .	I26-I51	415-429.1,429.3-429.9	127,167	130,886	0.9716	0.0010	0.1	0.9696	0.9736
Acute and subacute endocarditis. . . . .	I33	421	552	554	0.9964	0.0137	1.4	0.9695	1.0233
Diseases of pericardium and acute myocarditis . . . . .	I30-I31,I40	420,422-423	489	475	1.0295	0.0160	1.6	0.9981	1.0608
Heart failure . . . . .	I50	428	44,297	42,554	1.0410	0.0013	0.1	1.0384	1.0435
All other forms of heart disease . . . . .	I26-I28,I34-I38,I42-I49,151	415-417,424-427,429.0-429.1,429.3-429.9	81,829	87,303	0.9373	0.0014	0.2	0.9345	0.9401
Essential (primary) hypertension and hypertensive renal disease . . . . .	I10,I12	401,403	11,958	10,684	1.1192	0.0050	0.4	1.1094	1.1291
Cerebrovascular diseases . . . . .	I60-I69	430-434,436-438	137,264	129,640	1.0588	0.0008	0.1	1.0572	1.0604
Atherosclerosis . . . . .	I70	440	13,894	14,417	0.9637	0.0025	0.3	0.9588	0.9686
Other diseases of circulatory system . . . . .	I71-I78	441-448	18,239	19,289	0.9456	0.0021	0.2	0.9414	0.9498
Aortic aneurysm and dissection. . . . .	I71	441	12,216	12,201	1.0012	0.0010	0.1	0.9992	1.0032
Other diseases of arteries, arterioles and capillaries. . . . .	I72-I78	442-448	6,023	7,088	0.8497	0.0053	0.6	0.8394	0.8601
Other disorders of circulatory system . . . . .	I80-I99	451-459	2,984	2,899	1.0293	0.0172	1.7	0.9956	1.0631
Influenza and pneumonia . . . . .	J10-J18	480-487	50,526	72,371	0.6982	0.0018	0.3	0.6947	0.7016
Influenza . . . . .	J10-J11	487	572	567	1.0088	0.0073	0.7	0.9945	1.0231
Pneumonia . . . . .	J12-J18	480-486	49,954	71,804	0.6957	0.0018	0.3	0.6922	0.6992
Other acute lower respiratory infections. . . . .	J20-J22	466	346	355	0.9746	0.0392	4.0	0.8978	1.0515
Acute bronchitis and bronchiolitis . . . . .	J20-J21	466	265	355	0.7465	0.0264	3.5	0.6947	0.7983

See footnotes at end of table.

## CAUSE-OF-DEATH CATEGORIES AND COMPARABILITY RATIOS FOR SELECTED 113 CAUSES OF DEATH - CON.

Cause of death (Based on the <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Category codes according to the Tenth Revision (ICD-10)	Category codes according to the Ninth Revision (ICD-9)	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95-percent confidence limits	
			Tenth Revision	Ninth Revision				Lower	Upper
Unspecified acute lower respiratory infection . . . . .	J22	---	*	*	*	*	*	*	*
Chronic lower respiratory diseases. . . . .	J40-J47	490-494,496	94,326	90,022	1.0478	0.0009	0.1	1.0460	1.0496
Bronchitis, chronic and unspecified . . . . .	J40-J42	490-491	913	2,320	0.3935	0.0107	2.7	0.3726	0.4145
Emphysema. . . . .	J43	492	14,369	14,774	0.9726	0.0031	0.3	0.9666	0.9786
Asthma . . . . .	J45-J46	493	4,217	4,718	0.8938	0.0061	0.7	0.8819	0.9057
Other chronic lower respiratory diseases. . . . .	J44,J47	494,496	74,827	68,210	1.0970	0.0014	0.1	1.0943	1.0998
Pneumoconioses and chemical effects . . . . .	J60-J66,J68	500-506	860	845	1.0178	0.0099	1.0	0.9983	1.0372
Pneumonitis due to solids and liquids. . . . .	J69	507	10,183	9,104	1.1185	0.0048	0.4	1.1092	1.1279
Other diseases of respiratory system . . . . .	J00-J06,J30-J39,J67,J70-J98	034.0,460-465,470-478,495,508-519	16,656	14,269	1.1673	0.0052	0.4	1.1572	1.1774
Peptic ulcer . . . . .	K25-K28	531-534	3,574	3,686	0.9696	0.0045	0.5	0.9608	0.9784
Diseases of appendix . . . . .	K35-K38	540-543	209	202	1.0347	0.0242	2.3	0.9873	1.0820
Hernia . . . . .	K40-K46	550-553	658	633	1.0395	0.0154	1.5	1.0094	1.0696
Chronic liver disease and cirrhosis . . . . .	K70,K73-K74	571	21,688	20,920	1.0367	0.0027	0.3	1.0314	1.0420
Alcoholic liver disease. . . . .	K70	571.0-571.3	10,147	9,965	1.0183	0.0050	0.5	1.0085	1.0281
Other chronic liver disease and cirrhosis. . . . .	K73-K74	571.4-571.9	11,541	10,955	1.0535	0.0041	0.4	1.0454	1.0615
Cholelithiasis and other disorders of gallbladder. . . . .	K80-K82	574-575	1,725	1,803	0.9567	0.0060	0.6	0.9450	0.9685
Nephritis, nephrotic syndrome and nephrosis . . . . .	N00-N07,N17-N19,N25-N27	580-589	24,939	20,242	1.2320	0.0044	0.4	1.2234	1.2407
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . .	N00-N01,N04	580-581	161	249	0.6466	0.0342	5.3	0.5796	0.7136
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified. . . . .	N02-N03,N05-N07,N26	582-583,587	468	1,213	0.3858	0.0144	3.7	0.3575	0.4141
Renal failure . . . . .	N17-N19	584-586	24,290	18,758	1.2949	0.0050	0.4	1.2852	1.3047
Other disorders of kidney. . . . .	N25,N27	588-589	20	22	0.9091	0.0867	9.5	0.7392	1.0790
Infections of kidney. . . . .	N10-N12,N13.6,N15.1	590	731	726	1.0069	0.0144	1.4	0.9786	1.0352
Hyperplasia of prostate . . . . .	N40	600	326	327	0.9969	0.0159	1.6	0.9658	1.0280
Inflammatory diseases of female pelvic organs . . . . .	N70-N76	614-616	63	64	0.9844	0.0410	4.2	0.9040	1.0648
Pregnancy, childbirth and the puerperium. . . . .	O00-O99	630-676	*	*	*	*	*	*	*
Pregnancy with abortive outcome . . . . .	O00-O07	630-639	*	*	*	*	*	*	*
Other complications of pregnancy, childbirth and the puerperium . . . . .	O10-O99	640-676	*	*	*	*	*	*	*
Certain conditions originating in the perinatal period . . . . .	P00-P96	760-771.2,771.4-779	10,184	9,555	1.0658	0.0033	0.3	1.0593	1.0724
Congenital malformations, deformations and chromosomal abnormalities . . . . .	Q00-Q99	740-759	5,950	7,025	0.8470	0.0055	0.6	0.8362	0.8577
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . .	R00-R99	780-799	16,940	17,732	0.9553	0.0034	0.4	0.9487	0.9620
All other diseases (Residual) . . . . .	Residual	Residual	109,853	122,107	0.8996	0.0015	0.2	0.8968	0.9025
Accidents (unintentional injuries) . . . . .	V01-X59,Y85-Y86	E800-E869,E880-E929	31,084	30,163	1.0305	0.0014	0.1	1.0278	1.0333
Transport accidents . . . . .	V01-V99,Y85	E800-E848,E929.0,E929.1	17,547	17,586	0.9978	0.0006	0.1	0.9966	0.9990
Motor vehicle accidents. . . . .	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	E810-E825	16,632	17,051	0.9754	0.0006	0.1	0.9742	0.9766

See footnotes at end of table.

## CAUSE-OF-DEATH CATEGORIES AND COMPARABILITY RATIOS FOR SELECTED 113 CAUSES OF DEATH - CON.

Cause of death (Based on the <i>Tenth Revision, International Classification of Diseases, 1992</i> )	Category codes according to the Tenth Revision (ICD-10)	Category codes according to the Ninth Revision (ICD-9)	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95-percent confidence limits	
			Tenth Revision	Ninth Revision				Lower	Upper
Other land transport accidents . . . . .	V01,V05-V06,V09.1,V09.3-V09.9, V10-V11,V15-V18,V19.3,V19.8-V19.9, V80.0-V80.2,V80.6-V80.9,V81.2-V81.9, V82.2-V82.9,V87.8,V88.9,V89.1,V89.3, V89.9	E800-E807,E826-E829	*	*	*	*	*	*	*
Water, air and space, and other and unspecified transport accidents and their sequelae . . . . .	V90-V99,Y85	E830-E848,E929.0,E929.1	351	347	1.0115	0.0209	2.1	0.9706	1.0525
Nontransport accidents . . . . .	W00-X59,Y86	E850-E869,E880-E928,E929.2-E929.9	13,537	12,577	1.0763	0.0035	0.3	1.0696	1.0831
Falls . . . . .	W00-W19	E880-E888	5,173	6,152	0.8409	0.0049	0.6	0.8313	0.8505
Accidental discharge of firearms . . . . .	W32-W34	E922	493	466	1.0579	0.0127	1.2	1.0331	1.0828
Accidental drowning and submersion . . . . .	W65-W74	E910	283	284	0.9965	0.0127	1.3	0.9716	1.0213
Accidental exposure to smoke, fire and flames . . . . .	X00-X09	E890-E899	493	506	0.9743	0.0089	0.9	0.9568	0.9918
Accidental poisoning and exposure to noxious substance . . . . .	X40-X49	E850-E869,E924.1	*	*	*	*	*	*	*
Other and unspecified nontransport accidents and their sequelae . . . . .	W20-W31,W35-W64,W75-W99, X10-X39,X50-X59,Y86	E900-E909,E911-E921,E923-E924.0, E924.8-E928,E929.2-E929.9	6,698	4,721	1.4188	0.0123	0.9	1.3947	1.4428
Intentional self-harm (suicide) . . . . .	X60-X84,Y87.0	E950-E959	18,352	18,422	0.9962	0.0005	0.0	0.9952	0.9972
Intentional self-harm (suicide) by discharge of firearms . . . . .	X72-X74	E955.0-E955.4	14,157	14,183	0.9982	0.0007	0.1	0.9968	0.9996
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . .	X60-X71,X75-X84,Y87.0	E950-E954,E955.5-E959	4,195	4,239	0.9896	0.0023	0.2	0.9850	0.9942
Assault (homicide) . . . . .	X85-Y09,Y87.1	E960-E969	12,287	12,308	0.9983	0.0006	0.1	0.9972	0.9994
Assault (homicide) by discharge of firearms . . . . .	X93-X95	E965.0-E965.4	8,718	8,745	0.9969	0.0008	0.1	0.9953	0.9985
Assault (homicide) by other and unspecified means and their sequelae . . . . .	X85-X92,X96-Y09,Y87.1	E960-E964,E965.5-E969	3,569	3,563	1.0017	0.0024	0.2	0.9969	1.0064
Legal intervention . . . . .	Y35,Y89.0	E970-E978	*	*	*	*	*	*	*
Events of undetermined intent . . . . .	Y10-Y34,Y87.2,Y89.9	E980-E989	*	*	*	*	*	*	*
Discharge of firearms, undetermined intent . . . . .	Y22-Y24	E985.0-E985.4	*	*	*	*	*	*	*
Other and unspecified events of undetermined intent and their sequelae . . . . .	Y10-Y21,Y25-Y34,Y87.2,Y89.9	E980-E984,E985.5-E989	*	*	*	*	*	*	*
Operations of war and their sequelae . . . . .	Y36,Y89.1	E990-E999	*	*	*	*	*	*	*
Complications of medical and surgical care . . . . .	Y40-Y84,Y88	E870-E879,E930-E949	*	*	*	*	*	*	*
Injury by firearms <sup>1</sup> . . . . .	W32-W34,X72-X74,X93-X95, Y22-Y24,Y35.0	E922,E955.0-E955.4,E965.0-E965.4, E970,E985.0-E985.4	23,355	23,418	0.9973	0.0006	0.1	0.9961	0.9985
Drug-induced deaths <sup>1</sup> . . . . .	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	292,304,305.2-305.9,E850-E858, E950.0-E950.5,E962.0,E980.0-E980.5	1,158	969	1.1950	0.0225	1.9	1.1509	1.2391
Alcohol-induced deaths <sup>1</sup> . . . . .	F10,G31.2,G62.1,I42.6,K29.2,K70, R78.0,X45,X65,Y15	291,303,305.0,357.5,425.5,535.3, 571.0-571.3,790.3,E860	14,783	15,269	0.9682	0.0025	0.3	0.9633	0.9731

\* Figure does not meet standards of reliability or precision; see Technical notes.

--- Category not applicable.

0.0 Quantity more than zero but less than 0.05.

<sup>1</sup>Included in selected categories.