

# Technical Notes

## Clarifications

### Age-Adjusted Death Rates

Age standardization, often referred to as “age-adjustment,” has been used for over half a century as a way for official United States mortality statistics to eliminate the confounding effects of differences in the age composition among different populations or across time.

The age-adjusted death rate is defined as the death rate that would occur if the observed age-specific death rates were present in a population with an age distribution equal to a standard population. The age-adjusted death rate is calculated by multiplying each age-specific rate by the standard population weight and summing the weighted age-specific death rates. Because each population or time period shares a common age distribution represented by the age-specific standard population weights, the effects of variation in the age distribution are eliminated.

Until 1998, the 1940 U.S. population was the standard population in reporting Colorado vital statistics. A new population standard, the projected year 2000 U.S. population, has been approved for use by the U.S. Department of Health and Human Services (DHHS) and has been implemented by the National Center for Health Statistics (NCHS) for deaths occurring in 1999.

Because the U.S. population aged substantially between 1940 and 2000, changing from the 1940 standard population to the year 2000 standard will affect the magnitude of age-adjusted death rates, and for some causes, trends in mortality.

For more information about age adjustment, please contact the Health Statistics Section at the Colorado Department of Public Health and Environment (303-692-2160) or see “*Brief#40, Age-adjusted Death Rates in Colorado Vital Statistics: Implementation of the Year 200 Standard, March 2001*” in the publications section on our website at [www.cdphe.state.co.us/hs](http://www.cdphe.state.co.us/hs).

### Cause of Death Classification

The *International Classification of Diseases* (ICD) is a system developed collaboratively between the World Health Organization (WHO) and 10 international centers so that the medical terms reported by physicians, medical examiners, and coroners on death certificates can be grouped together for statistical purposes. Revisions of the ICD are implemented periodically so that the classification reflects advances in medical science. Effective with deaths occurring in 1999, the United States replaced ICD-9, in use for deaths from 1979 to 1998, with ICD-10. Publications showing mortality data coded under ICD-10 will differ substantially from those under ICD-9 because of changes in coding rules, changes in category names and ICD numbers, and changes in the tabulation lists used to group mortality data.

Mortality data users should be aware of those changes and are encouraged to contact NCHS or the Health Statistics Section at the Colorado Department of Public Health and Environment (303-692-2160) for assistance or see “*Brief#41, New International Classification of Diseases (ICD-10): The History and Impact, March 2001*” in the publications section on our Website at [www.cdphe.state.co.us/hs](http://www.cdphe.state.co.us/hs). The National Center for Health Statistics has also posted information about the new coding at [www.cdc.gov/nchs/about/major/dvs/icd10des.htm](http://www.cdc.gov/nchs/about/major/dvs/icd10des.htm).

### Underlying Cause of Death Classification

As described above in “Cause of Death Classification,” all causes of death listed on a death certificate must be coded. The underlying cause of death is defined by WHO as the disease or injury that initiated the sequence of events leading directly to the death, or the circumstance of the accident or violence that caused the injury.

When more than one death cause is listed on the death certificate, the underlying cause is determined by rules that take into account the sequence of conditions on the certificate and provisions of the ICD-10. To select the underlying cause of death, the Automated Classification of Medical Entities (ACME) system is used. All cause-of-death codes (ACME codes) serve as inputs to the computer software that employs WHO rules to select the underlying cause of death.

## **Manner of Death**

Manner of death is a checkbox item appearing on the death certificate. Reporting regulations require that this item be completed on all death certificates. There are six possible manner of death categories: “natural,” “accident,” “suicide,” “homicide,” “pending investigation,” and “could not be determined.”

Deaths not due to external causes, such as deaths due to disease, should be identified as “natural.” Usually these are the only types of death a physician will certify. “Pending investigation” and “could not be determined” refer to medical examiner and coroner cases only. “Could not be determined” is checked after a postmortem examination has been completed and the manner of death is still unknown.

## **Life Expectancy Tables**

Two types of life tables exist: the generation (or cohort) life table and the current life table. The generation life table follows the mortality experience of an actual cohort of people (i.e., people born in 1920).

The current life table considers a hypothetical cohort and assumes it to be subject to the age-specific death rates occurring at a given time, such as Colorado death rates in 1996. The current life tables in this report, therefore, do not tell users how long they are expected to live based on their present age. The current life tables express how long a group of people would live if the age-specific death rates existing in 1996 were to apply throughout their lives.

Complete life tables contain information for single years of life. Another type is the abridged life table, which contains values for five-year age groups. Caution must be used in comparing life expectancy statistics from different sources because of the variety of methods that can be used in calculating them.

## **Race/Ethnicity Data**

Information on race is determined by responses to race checkboxes on the various certificates and reporting forms. Ethnic backgrounds are determined by responses to Hispanic origin checkboxes. The following race/ethnicity categories are used in this report to approximate the groups found among the Colorado population: white non-Hispanic, white Hispanic, black, American Indian, and Asian. The black, American Indian, and Asian categories are not divided by origin and thus may or may not be of Hispanic origin.

Race/ethnicity statistics for live birth and spontaneous fetal death are based on race of mother unless otherwise noted. Race/ethnicity of mother has been adopted throughout the United States as the category for natality and pregnancy issues since 1989.

Infant mortality rates (number of infant deaths per 1,000 live births) by race/ethnicity are calculated using the race/ethnicity of the infant in the numerator (number of infant deaths) and the race/ethnicity of mother in the denominator (number of live births). This method was adopted by the National Center for Health Statistics in 1989, and in order to be comparable to national statistics, Colorado has also adopted this method of calculating infant mortality rates.

On death certificates, race/ethnicity must often be determined by funeral directors by observation rather than by interviewing the next of kin. This may result in misreporting or underreporting of deaths to members of racial or ethnic minority groups. See the Death Section for further explanation.

## **Small Frequencies**

Many Colorado counties have small populations and few vital events. Interpretation of vital statistics in such areas may be difficult. Analysis of year-to-year changes or comparison with other places are hampered by a tendency for rates and percentages to fluctuate widely.

Combining multiple years of data and/or using average annual data provides a more reliable indicator of what is “true” for an area. Combining data for places with small numbers of events and small populations into regions is another way of improving the general usefulness of data. Both average annual statistics and multi-county data are included in this report for selected events.

Testing for statistical significance is another way to address the problem of small frequencies. Although statistical significance is not used in this report, a brief explanation is presented.

Numbers of vital events reported for an area represent complete counts and are not subject to sampling error, yet they may be affected by the random variation in the number of events involved. When the numbers are used for analytical purposes, such as the comparison of rates for different areas, the number of events that actually occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances. The probable range of values may be estimated from the actual figures according to certain statistical assumptions.

In general, distribution of vital events may be assumed to follow the binomial distribution. Estimates of standard errors and tests of significance under this assumption are described in most standard statistic text books. When the number of events is large, the standard error, expressed as a percent of the number or rate, is usually small. However, when the number of events is small (i.e., less than 100) and the probability of such an event is small, considerable caution must be used in interpreting the data. Readers who may wish to calculate confidence intervals for rare events should be aware that such events may be assumed to follow a Poisson probability distribution.

For the Poisson distribution, a simple approximation may be used to estimate the error as follows: If N is the number of births and R is the corresponding rate, the chances are 19 in 20 (approximate 95 percent confidence interval) that,

1. The “true” number of events lies between

$$N - 2\sqrt{N} \text{ and } N + 2\sqrt{N}$$

2. The “true” rate lies between

$$R - 2\sqrt{\frac{R}{N}} \text{ and } R + 2\sqrt{\frac{R}{N}}$$

If the rate R corresponding to N events is compared with the rate S corresponding to M events, the difference between the two rates may be regarded as statistically significant if it exceeds

$$2\sqrt{\frac{R^2}{N} + \frac{S^2}{M}}$$

For example, suppose that the observed birth rate for area A was 15.0 births per 1,000 population and that this rate was based on 50 recorded births. Given the prevailing conditions, the chances are 19 in 20 that the “true” or underlying birth rate for the area lies between 10.8 and 19.2. Further suppose that the birth rate for area A of 15.0 is being compared with a rate of 20.0 for area B, which is based on 40 recorded births. Although the difference between the rates for the two areas is 5.0 births per 1,000 population, this difference is less than twice the standard error of the difference of the two rates that is computed to be 7.6:

$$2\sqrt{\frac{(15.0)^2}{50} + \frac{(20.0)^2}{40}}$$

From this, it is concluded that the difference between the rates for the two areas is not statistically significant. The method for testing for statistical significance described here differs from that used to calculate confidence intervals in Table D49, which assumes a normal rather than a Poisson distribution. For a further description, please contact the Health Statistics Section.

## Definitions

**Age-Adjusted Rate:** A rate that has been standardized to the age distribution of a particular population so that it is, in effect, independent of the age distribution of the population it represents. Age-adjusted rates are used to compare rates over time or among different geographical areas.

**Alcohol-Induced Death:** Any death with one or more of the following ICD-10 codes noted on the death certificate as the underlying cause of death is considered an alcohol-induced death: F10 mental/behavioral disorders due to use of alcohol; G31.2 degeneration of nervous system due to alcohol; G62.1 alcoholic polyneuropathy; I42.6 alcoholic cardiomyopathy; K29.2 alcoholic gastritis; K70 alcoholic liver disease; R78.0 finding of alcohol in blood; X45 accidental poisoning by alcohol; X65 intentional self-poisoning by alcohol; and Y15 poisoning by alcohol of undetermined intent.

**Annulment:** A judicial announcement invalidating or voiding a marriage that confers on the parties the status of never having been married to each other.

**Apgar Score:** Summary measure of an infant's condition based on heart rate, respiratory effort, muscle tone, irritability, and color. Each factor is given a score of 0, 1, or 2. The sum of these five values is the Apgar score, which ranges from a low of 0 to an optimum of 10. Apgar scores typically are measured at 1 minute and 5 minutes after birth. Data for 5-minute scores are used in this report. The measure is named after its developer, Dr. Virginia Apgar.

**Birth Rate:** The number of births that occur within a certain population or geographical area, over a specified time period, in relation to the total population of the group or area. Specifically, the number of births per 1,000 total population.

**Birth to Unmarried Woman:** A mother is considered to be unmarried if she was not married at the time of conception and did not marry at any time between conception and delivery. Common-law marriages are recognized as legal marriages in Colorado.

**Birth Weight:** The first weight of the fetus or newborn obtained after birth. This weight preferably is measured within the 1st hour of life, before a significant postnatal weight loss has occurred.

**Calculated Gestational Age:** Number of completed weeks from the 1st day of the mother's last normal menstrual period until the date of delivery or termination of pregnancy.

**Cause of Death:** All the diseases, conditions, or injuries that either resulted in or contributed to death, and/or the circumstances of the accident or violence that produced such injuries. Most standard mortality data are compiled by underlying cause of death (see definition).

**Chronic Disease:** A disease that comprises all impairments or deviations from normal and is characterized by one or more of the following: permanence, residual disability, nonreversible pathological alteration, requirement of special training of the patient for rehabilitation, or expectation of need for a long period of supervision, observation, or care.

**Communicable Disease:** A disease capable of being transmitted from one person to another.

**Congenital Anomaly:** Certain mental or physical traits or peculiarities, malformations, diseases, etc. present at birth whose etiology may be hereditary or due to some influence occurring during gestation. Also called congenital malformations or birth defects.

**Crude Death Rate:** The number of deaths per a specified number of population (i.e., per 1,000 or 100,000). Crude rates are not adjusted for differences in demographic distributions among populations, such as age distributions.

**Death:** The permanent disappearance of any evidence of life at any time after live birth.

**Divorce:** The final legal dissolution of a marriage.

**Drug-Induced Death:** Any death with one or more of the following ICD-10 codes noted on the death certificate as the underlying cause of death is considered a drug-induced death: 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 mental and behavioral disorders due to use of opioids, cannabinoids, sedatives or hypnotics, cocaine, other stimulants, hallucinogens, tobacco, volatile solvents, or multiple drug use and use of other psychoactive substances (excluding amnesic syndrome and excluding harmful use of or dependence on tobacco); X40-X44 accidental poisoning by drugs; X60-X64 intentional self-poisoning by drugs; X85 assault by drugs, medicaments and biological substances; Y10-Y14 poisoning by drugs of undetermined intent. Drug-induced causes exclude accidents, homicides, and other causes indirectly related to drug use.

**Epidemiology:** The study of the distribution of a disease or physiological condition in human populations and of the factors that influence this distribution.

**Fertility Rate (age-specific):** The number of births for a specified age group of females within a certain population or area per 1,000 total females in the age group.

**Firearm Death:** Causes of death attributable to firearm mortality include the following underlying causes by ICD-10 code: W32-W34 accidental injury due to firearm discharge; X72-X74 intentional self-harm by firearm discharge; X93-X95 assault by firearm discharge; Y22-Y24 firearm discharge of undetermined intent; Y35.0 legal intervention involving firearm discharge. Injury by firearm excludes explosives and other causes indirectly related to firearms.

**General Fertility Rate:** A measure of the fertility among women of childbearing age, defined as ages 15-44. Specifically, the number of births to all females over a certain time period per 1,000 females aged 15-44 in the population.

**ICD-10:** International Classification of Diseases, 10th Revision.

**Incidence:** The number of new cases of disease onset in a population over a prescribed period of time.

**Infancy:** The period between live birth and 1 year of age. A child ceases to be an infant on its first birthday.

**Infant Death:** Death in the 1st year of life.

**Induced Termination of Pregnancy:** The purposeful interruption of pregnancy with the intention other than to produce a live-born infant or to remove a dead fetus and does not result in a live birth.

**Life Expectancy:** The average number of years a person will live on the basis of a given set of assumptions (i.e., age-specific rates of dying).

**Live Birth:** The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes, 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; each product of such a birth is considered live born. Birth data in this report are for live births only.

**Low Weight Birth:** Birth weight of less than 2,500 grams (less than or equal to 5 lb 8 oz).

**Manner of Death:** A death classification that specifies whether the death was due to natural causes (i.e., a disease), an accident, suicide, or homicide, or whether the cause of death is pending investigation or cannot be determined.

**Marriage:** The legal union of two persons, limited in Colorado to members of opposite sexes.

**Marriage Dissolution:** The legal termination of a marriage. Includes annulments and divorces.

**Maternal Death:** Those deaths assigned to complications of pregnancy, childbirth, and the puerperium, ICD-10 codes O00-O99.

**Mean:** Measure of central tendency defined as the sum of scores divided by the total number of cases involved.

**Mode:** The most frequent value contained in a set of data.

**Morbidity:** The state of being diseased.

**Mortality:** The state of being deceased.

**Multiple Birth:** More than one child born resulting from a single pregnancy. Also called plural birth.

**Multiple (mentioned) Causes of Death:** The various diseases, conditions, injuries, or circumstances that resulted in or contributed to a death, as listed on the death certificate.

**Natural Increase:** The difference between the number of resident births and deaths.

**Neonatal Death:** Death prior to the 28th day of life.

**Net Migration:** The difference between the number of people moving in and out of a recognized geographical boundary.

**Notifiable Disease:** A disease that health providers are required, usually by law, to report to federal, state, or local public health officials when diagnosed. Reportable diseases are those of public interest by reason of their contagiousness, severity, or frequency.

**Parity:** Number of times a woman has been pregnant and delivered, whether alive or dead, a fetus or child weighing at least 500 grams or having an estimated gestational age of at least 20 weeks. A multiple birth is considered as a single parous experience. Before delivery, a mother having her first baby has a parity of zero.

**Perinatal:** Pertaining to or occurring in the period shortly before and after birth. There are several commonly used definitions for the perinatal period, extending from 20 weeks of gestation to 4 weeks after birth. In this report, perinatal refers to the period of 20 weeks gestation to 27 days of life.

**Perinatal Death:** As defined in this report, death of a fetus of at least 20 weeks gestational age or of a child under 28 days of life.

**Postneonatal Death:** Death of a child occurring from the ages of 28 days through 1 year.

**Postterm:** Births occurring at a gestational age greater than or equal to 42 weeks (>293 days).

**Premature Birth:** Birth occurring prior to 37 completed weeks of gestation, but after that stage of viability at about 20 weeks gestation.

**Prenatal:** Existing or occurring before birth.

**Prenatal Care:** Medical care during pregnancy before birth.

**Prenatal Visits:** The number of visits made to a physician or other health care provider during the prenatal period for medical supervision of a pregnancy.

**Preterm:** Births occurring prior to 37 completed weeks of gestation (<259 days).

**Prevalence:** The number of existing cases of a disease at a given point in time in a community. Depends upon incidence and duration of disease.

**Reported Cause of Death:** Any cause of death reported on the death certificate. Also called mentioned cause of death.

**Singleton:** Single birth.

**Spontaneous Fetal Death:** The expulsion or extraction of a product of human conception resulting in other than a live birth and which is not an induced termination of pregnancy.

**Term:** Births occurring between 37 and 41 completed weeks of gestation (259-293 days).

**Trimester:** As used in this report, a 3-month period of time. First trimester care, for example, refers to care initiated in the 1st three months of pregnancy.

**Underlying Cause of Death:** The disease or injury that initiated the chain of events leading directly to the death or the circumstances of the accident or violence that produced the fatal injury.

**Weeks Gestation:** Completed weeks of pregnancy from the first day of the mother's last normal menstrual period.

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### Vital Statistics Formulas

The most frequently used rates are included here. Unless noted otherwise, all rates and ratios are for annual resident events. Populations used in calculating rates generally are midyear figures.

**Age-Adjusted Death Rate: Direct Method** (U.S. standard population for 2000 is used as standard for rates in this report.) = 
$$\frac{\text{Sum of (age-specific death rate per 1,000 or 100,000 population of area x standard population in corresponding age group)}}{\text{Sum of the standard population}}$$

**Age-, Sex-, Race-Specific Rate:** (Can be applied to any vital event) = 
$$\frac{\text{Number of events in specified age/sex/race group}}{\text{Population in specified age/sex/race group}} \times 1,000 \text{ or } 100,000$$

**Age-Specific Fertility Rate** (Also called age-specific birth rate, but note that, unlike general birth rate, only female population is used for denominator) = 
$$\frac{\text{Number of live births to women in specified age group}}{\text{Female population in specified age group}} \times 1,000$$

**Age-Specific Pregnancy Rate** (Relies on underreported pregnancy outcomes and therefore underestimates actual pregnancy rate. This rate is not used in this report because of a lack of reported spontaneous fetal death data for events <20 weeks gestation.) = 
$$\frac{\text{Total live births, reported induced terminations of pregnancy, and spontaneous fetal deaths to women of a specified age-group}}{\text{Female population in specified age group}} \times 1,000$$

**Birth Rate** = 
$$\frac{\text{Total number of live births}}{\text{Total population}} \times 1,000$$

**Birth Rate by Live-Birth Order** = 
$$\frac{\text{Number of live births of a given birth order}}{\text{Female population ages 15-44}} \times 1,000$$

## Vital Statistics Formulas, continued

**Cause-Specific Crude Death Rate** (Used with underlying causes of death) =  $\frac{\text{Number of deaths from specified cause}}{\text{Total population}} \times 1,000 \text{ or } 100,000$

**Crude Death Rate** (When the term of “death rate” alone is used, it should be assumed the rate is a crude death rate.) =  $\frac{\text{Total number of deaths}}{\text{Total population}} \times 1,000 \text{ or } 100,000$

**General Fertility Rate** =  $\frac{\text{Total number of live births}}{\text{Female population aged 15-44 years}} \times 1,000$

**Infant Mortality Rate** (As opposed to an infant death rate, which is simply an age-specific death rate for persons <1 year old) =  $\frac{\text{Number of infant deaths}}{\text{Number of live births}} \times 1,000 \text{ or } 100,000$

**Marriage Rate** =  $\frac{\text{Number of marriages occurring in a place}}{\text{Total resident population of that place}} \times 1,000$

**Marriage Dissolution Rate** (Often called divorce rate, which more properly is based only on divorces) =  $\frac{\text{Number of divorces and annulments occurring in a place}}{\text{Total resident population of that place}} \times 1,000$

**Maternal Mortality Rate** (See definition of maternal death.) =  $\frac{\text{Number of maternal deaths}}{\text{Number of live births}} \times 10,000$

**Neonatal Mortality Rate** (See definition of neonatal death.) =  $\frac{\text{Number of neonatal deaths}}{\text{Number of live births}} \times 1,000 \text{ or } 100,000$

**Perinatal Mortality Rate** (Definitions of perinatal mortality vary. Care should be used when comparing perinatal statistics from different sources.) =  $\frac{\text{Number of reported spontaneous fetal deaths of 20+ weeks gestation and neonatal deaths}}{\text{Number of reported spontaneous fetal deaths of 20+ weeks gestation and number of live births}} \times 1,000$

## Conversion of Metric Weights to U.S. Equivalents

<500 grams	= 1 lb 1 oz or less
500 - 999 g	= 1 lb 2 oz - 2 lb 3 oz
1,000 - 1,499 g	= 2 lb 4 oz - 3 lb 4 oz
1,500 - 1,999 g	= 3 lb 5 oz - 4 lb 6 oz
2,000 - 2,499 g	= 4 lb 7 oz - 5 lb 8 oz
2,500 - 2,999 g	= 5 lb 9 oz - 6 lb 9 oz
3,000 - 3,499 g	= 6 lb 10 oz - 7 lb 11 oz
3,500 - 3,999 g	= 7 lb 12 oz - 8 lb 13 oz
4,000 - 4,499 g	= 8 lb 14 oz - 9 lb 14 oz
4,500 - 4,999 g	= 9 lb 15 oz - 11 lb 0 oz
5,000+ grams	= 11 lb 1 oz or greater

# Estimated comparability ratios for 113 selected causes of death, injury by firearms, drug-induced deaths and alcohol-induced deaths: ICD-10 and ICD-9 codes

Cause of death	ICD-10 codes	ICD-9 Codes	Ratio	Comparability Standard Error
Salmonella infections	A01-A02	081	0.0644	*
Shigellosis and amebiasis	A03-A06	004-006	*	*
Certain other intestinal infections	A04-A07-A09	007-009	*	*
Tuberculosis	A16-A19	085	0.0172	
Respiratory tuberculosis	A16	091	0.0201	
Other tuberculosis	A17-A19	070	0.0407	
Whooping cough	A37	*		
Scarlet fever and erysipelas	A38,A46	034,1-035	*	*
Meningococcal infection	A39	1.00	0.0149	
Septicemia	A40-A44	00042		
Syphilis	A50-A53	064	0.1184	
Acute poliomyelitis	A80	*	*	*
Arthropod-borne viral encephalitis	A83-A84,A85.2	062-064	*	*
Measles	B05	070	0.0120	
B15-B19	083			
Viral hepatitis	B15-B19	042-044	1.14	0.0045
Human immunodeficiency virus (HIV) disease	B20-B24	*	*	
Malaria	B50-B54			
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	1.10	0.0154
Malignant neoplasms	C00-C97	140-208	0.0002	
Malignant neoplasms of lip, oral cavity and pharynx	C00-C14	140-149	0.96	0.0040
Malignant neoplasm of esophagus	C15	150	1.00	0.0020
Malignant neoplasm of stomach	C16	151	1.01	0.0019
Malignant neoplasms of colon, rectum and anus	C18-C21	153-154	1.00	0.0009
Malignant neoplasms of liver and intrahepatic bile ducts	C22	155	0.96	0.0023
Malignant neoplasm of pancreas	C25	157	1.00	0.0009
Malignant neoplasm of larynx	C32	161	1.00	0.0053
Malignant neoplasms of trachea, bronchus and lung	C33-C34	162	0.98	0.0005
Malignant melanoma of skin	C43	172	0.97	0.0032
Malignant neoplasm of breast	C50	174-175	1.01	0.0010
Malignant neoplasm of cervix uteri	C33	180	0.99	0.0034
Malignant neoplasms of corpus uteri and uterus, part unspecified	C54-C55	179,182	1.03	0.0040
Malignant neoplasm of ovary	C36	183.0	1.00	0.0016
Malignant neoplasm of prostate	C61	185	1.01	0.0015
Malignant neoplasms of kidney and renal pelvis	C64-C65	189.0,189.1	1.00	0.0022
Malignant neoplasm of bladder	C67	188	1.00	0.0026
Malignant neoplasms of meninges, brain and other parts of central nervous system	C70-C72	191-192	0.97	0.0025
Malignant neoplasms of lymphoid, hematopoietic and related tissue	C81-C96	200-208	1.00	0.0012
Hodgkin's disease	C81	201	0.99	0.0089
Non-Hodgkin's lymphoma	C82-C85	200,202	0.98	0.0018
Leukemia	C91-C95	1.01	0.0019	
Multiple myeloma and immunoproliferative neoplasms	C88,C90	203	1.04	0.0030
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue	C86	—	*	*
All other and unspecified malignant neoplasms	C17, C23-C24, C26-C31, C37-C41, C44-C49, C51-C52, C57-C60, C62-C63, C66, C68-C69, C73-C80, C97	152,156,158-160,163-171,173,181,183,2-184,186-187,189.2-190,193-199	1.13	0.0021
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	D00-D48	210-239	1.67	0.0164
Anemias	D50-D64	096	0.0077	
Diabetes mellitus	E10-E14	1.01	0.0011	
Nutritional deficiencies	E40-E64	1.16	0.0165	
Malnutrition	E40-E46	098	0.0151	
Other nutritional deficiencies	E50-E64	264-269	6.20	0.5961

(continued next page)

**Estimated comparability ratios for 113 selected causes of death, injury by firearms, drug-induced deaths and alcohol-induced deaths: ICD-10 and ICD-9 codes, continued**

Cause of death	ICD-10 codes		ICD-9 Codes		Comparability Ratio	Standard Error
Meningitis G00, G03	320-322	1.01	0.0136			
Parkinson's disease G20-G21		332	1.00		0.0028	
Alzheimer's disease G30		331.0	1.55		0.0071	
Major cardiovascular diseases		100-178	390-434,436-448		1.00	0.0002
Diseases of heart	100-109,111,113,120-151		0.99		0.0002	
Acute rheumatic fever and chronic rheumatic heart diseases		100-109	390-398		0.82	0.0089
Hypertensive heart disease		111	402		0.80	0.0028
Hypertensive heart and renal disease		113	404		1.07	0.0160
Ischemic heart diseases		120-125	410-414,429.2		1.00	0.0002
Acute myocardial infarction		121-122	410		0.99	0.0003
Other acute ischemic heart diseases		124	411		1.01	0.0117
Other forms of chronic ischemic heart disease		120,125	412-414,429.2		1.01	0.0004
Atherosclerotic cardiovascular disease, so described		125.0	429.2		1.05	0.0016
All other forms of chronic ischemic heart disease		120,125.1-125.9	412-414		0.99	0.0004
Other heart diseases		126-151	415-429.1,429.3-429.9		0.97	0.0010
Acute and subacute endocarditis		163	421		1.00	0.0137
Diseases of pericardium and acute myocarditis		130-131,140	420,422-423		1.03	0.0160
Heart failure		160	428		1.04	0.0013
All other forms of heart disease		126-128,134-138,142-149,151	415-417,424-427,429.0-429.1,429.3-429.9		0.94	0.0014
Essential (primary) hypertension and hypertensive renal disease		110,112	401,403		1.12	0.0050
Cerebrovascular diseases		160-169	430-434,436-438		1.06	0.0008
Atherosclerosis I70		440	0.96		0.0025	
Other diseases of circulatory system		I71-I78	441-448		0.95	0.0021
Aortic aneurysm and dissection		I71	441		1.00	0.0010
Other diseases of arteries, arterioles and capillaries		I72-I78	442-448		0.85	0.0053
Other disorders of circulatory system		180-189	451-459		1.03	0.0172
Influenza and pneumonia J10-J18		480-487	0.70		0.0018	
Influenza J10-J11		487	1.01		0.0073	
Pneumonia J12-J18		480-486	0.70		0.0018	
Other acute lower respiratory infections		J20-J22	466		0.97	0.0392
Acute bronchitis and bronchiolitis		J20-J21	466		0.75	0.0264
Unspecified acute lower respiratory infection		J22	—		*	*
Chronic lower respiratory diseases		J40-J47	490-494,496		1.05	0.0009
Bronchitis, chronic and unspecified		J40-J42	490-491		0.39	0.0107
Emphysema J43 492		0.97	0.0031			
Asthma J45-J46		493	0.89		0.0061	
Other chronic lower respiratory diseases		J44, J47	494,496		1.10	0.0014
Pneumoconiosis and chemical effects		J60-J66, J68	500-506		1.02	0.0099
Pneumonitis due to solids and liquids		J69	507		1.12	0.0048
Other diseases of respiratory system		J00-J06, J30-J39, J67, J70-J98	034, 0,460-465,470-478,495,508-519		1.17	0.0052
Peptic ulcer K25-K28		531-534	0.97		0.0045	
Diseases of appendix K35-K38		540-543	1.03		0.0242	
Hernia K40-K46		550-553	1.04		0.0154	
Chronic liver disease and cirrhosis		K70, K73-K74	571		1.04	0.0027
Alcoholic liver disease		K70	571.0-571.3		1.02	0.0050
Other chronic liver disease and cirrhosis		K73-K74	571.4-571.9		1.05	0.0041
Cholelithiasis and other disorders of gallbladder		K80-K82	574-575		0.96	0.0060
Nephritis, nephrotic syndrome and nephrosis		N00-N07, N17-N19, N25-N27	580-589		1.23	0.0044
Acute and rapidly progressive nephritic and nephrotic syndrome		N00-N01, N04	580-581		0.65	0.0342
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified		N02-N03, N05-N07, N26	582-583,587		0.39	0.0144
Renal failure N17-N19		584-586	1.29		0.0050	
Other disorders of kidney		N25, N27	588-589		0.91	0.0867
Infections of kidney N10-N12, N13.6, N15.1		590	1.01		0.0144	
Hyperplasia of prostate N40		600	1.00		0.0159	
Inflammatory diseases of female pelvic organs		N70-N76	614-616		0.98	0.0410

(continued next page)

Estimated comparability ratios for 113 selected causes of death, injury by firearms, drug-induced deaths and alcohol-induced deaths: ICD-10 and ICD-9 codes, continued

Cause of death	ICD-10 codes	ICD-9 Codes	Comparability Standard Ratio	Error
Pregnancy, childbirth and the puerperium Pregnancy with abortive outcome Other complications of pregnancy, childbirth and the puerperium Certain conditions originating in the perinatal period Congenital malformations, deformations, chromosomal abnormalities Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	000-099	630-676	*	*
	P00-007	630-639	*	*
	O10-099	640-676	*	*
	P00-P96	760-771.2, 771.4-779	1.07	0.0033
	Q00-Q99	740-759	0.85	0.0055
	R00-R99	780-799	0.96	0.0034
	Residual			
	V01-X59, Y85-Y86	E800-E869, E880-E929	0.90	0.0015
	E800-E848, E929.0, E929.1	1.00	1.03	0.0014
	Transport accidents	V01-V99, Y85	0.0006	
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	0.98	0.0006
	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, V87.9, V88.9, V89.1, V89.3, V89.9	E800-E807, E826-E829		
			*	*
Other land transport accidents	V90-V99, Y85	E830-E848, E929.0, E929.1	1.01	0.0209
	W00-X59, Y86	E850-E869, E880-E928, E929.2-E929.9	1.08	0.0035
	E880-E888	0.84	0.0049	
	W32-W34	E922	1.06	0.0127
	W65-W74	E910	1.00	0.0127
	X00-X09	E890-E899	0.97	0.0089
	X40-X49	E850-E869, E924.1	*	*
	W20-W31, W35-W64, W75-W89, X10-X39, X50-X59, Y86	E900-E909, E911-E921, E923-E924.0, E924.8-E928, E929.2-E929.9	1.42	0.0123
	X60-X84, Y87.0	E950-E959	1.00	0.0005
	X72-X74	E955.0-E955.4	1.00	0.0007
Water, air and space, and other and unspecified transport accidents and their sequelae	X60-X71, X75-X84, Y87.0	E960-E954, E955.5-E959	0.99	0.0023
	E960-E969	1.00	0.0006	
	X93-X95	E965.0-E965.4	1.00	0.0008
	X85-X92, X96-Y09, Y87.1	E960-E964, E965.5-E969	1.00	0.0024
	E970-E978	*	*	*
	Y10-Y34, Y87.2, Y89.9	E980-E989	*	*
	Y22-Y24	E985.0-E985.4	*	*
	Y10-Y21, Y25-Y34, Y87.2, Y89.9	E980-E984, E985.5-E989	*	*
	Y36, Y89.1	E990-E999	*	*
	Y40-Y84, Y88	E870-E879, E930-E949	*	*
Assault (homicide) by discharge of firearms Assault (homicide) by other and unspecified means and their sequelae Legal intervention Y35, Y89.0 Events of undetermined intent Discharge of firearms, undetermined intent Other and unspecified events of undetermined intent and their sequelae	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4	1.00	0.0006	
	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, 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	0.0006	
	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, 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	0.0225	
	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, 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	0.0025	
	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, 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	0.0025	
	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, 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	0.0025	
	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, 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	0.0025	
	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, 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	0.0025	
	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, 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	0.0025	
	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, 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	0.0025	
Alcohol-induced deaths	F10, G31.2, G62.1, I42.6, K29.2, K70, R78.0, X45, X65, Y15	0.97		

— Category not applicable.  
 \* Figure does not meet standards of reliability or precision  
 Source: Kochanek KD, Smith BL, Anderson RN. Deaths: Preliminary data for 1999. National vital statistics reports; vol 49 no 3. Hyattsville, Maryland: National Center for Health Statistics. 2001.

# Vital Statistics Available from the Health Statistics Section

In addition to *Colorado Health Watch*, data are released in short topical reports, special reports, standard tabulations, special data preparations, and on the World Wide Web ([www.cdphe.state.co.us/hs/](http://www.cdphe.state.co.us/hs/)).

Hard-copy information already compiled is provided to users free of charge. The Section is obliged to charge for special data preparations tailored to specific needs. Costs are determined by such factors as the amount of staff and computer time required and the complexity of the request. Staff are available during business hours to respond to data requests. Users should contact:

**Health Statistics Section, HSVRD-HS-A1**  
**Health Statistics and Vital Records**  
**Colorado Department of Public Health and Environment**  
**4300 Cherry Creek Drive South**  
**Denver, CO 80246-1530**  
**Phone: 303-692-2160**  
**Fax: 303-691-7821**  
**[health.statistics@state.co.us](mailto:health.statistics@state.co.us)**

All Colorado vital records are confidential in accordance with Colorado statutes (Section 25-2-117). The Health Statistics Section reserves the right to release information in a manner it judges to be responsible, appropriate, and in accordance with statutes and regulations. The Section specifically disclaims responsibility for any analyses, interpretations, or conclusions it has not provided.

The variety of data maintained by the Section is too great to detail here. However, the following abridged file descriptions will assist users in determining what types of statistical information may be obtained from the state's vital statistics system.

## Births

All variables are available for the years 1975 forward, except as noted. Years in parentheses represent the first year of availability or the first year of a change in compilation for noted variables.

Abnormal conditions of newborn (1989)  
Age of father (calculated from date of birth, 1989)  
Age of mother (calculated from date of birth, 1989)  
Alcoholic drinks (average number) consumed by mother per week (1989)  
Apgar scores, 1 and 5 minutes  
Attendant type  
Birth order  
Calculated weeks gestation  
Certifier title (1989)  
Cigarettes (average number) smoked by mother per day (1989)  
Clinical estimate of gestation (1989)  
Complications of labor and/or delivery (1989)  
Congenital anomalies of newborn (1989)  
County of birth  
Date of birth  
Date of last pregnancy outcomes  
Education of father  
Education of mother  
Ethnic origin of child (limited to Hispanic origin, 1989)  
Ethnic origin of father (limited to Hispanic origin, 1989)  
Ethnic origin of mother (limited to Hispanic origin, 1989)  
Father's date of birth (1989)  
Father's state of birth  
Hour of birth  
Infant transferred after delivery (1989)  
Marital status of mother (married or unmarried)  
Medical risk factors for this pregnancy (1989)  
Method of delivery (1989)  
Month prenatal care began  
Mother transferred prior to delivery (1989)  
Mother's city of residence  
Mother's county of residence  
Mother's date of birth (1989)  
Mother's mailing address ZIP code  
Mother's state of birth  
Mother's state of residence  
Number of prenatal visits  
Obstetric procedures (1989)  
Place of birth  
Place of birth (facility type) (1989)  
Plurality  
Prenatal blood tests for syphilis, HIV, hepatitis (1989)  
Previous pregnancies by outcome type (Incomplete for some years)  
Race of child (calculated from parents' races)  
Race of father  
Race of mother  
Residence census tract (1978, Denver metro only; 1990 forward, statewide)  
Sex of child  
Spanish surname of child  
State of birth  
Weight gained during pregnancy (1989)

## Deaths

All variables are available for the years 1970 forward, unless otherwise noted.

- Age
- Autopsy performed
- Certifier type
- City of injury (1989)
- City of residence
- Coroner case
- County of death
- County of injury (1989)
- County of residence
- Date of birth (1989)
- Date of death
- Date of injury (1989)
- Description of injury (1989)
- Disposition type (i.e., burial, cremation, etc.)(1975)
- Education (1989)
- Ethnic origin (limited to Hispanic origin, 1989)
- Injury at work (1980)
- Manner of death, such as natural or homicide (1989)
- Marital status
- Multiple cause of death
- Place of death
- Place of death (facility type) (1978)
- Place of injury (1980)
- Race
- Residence census tract (Denver metro only, 1978; 1990 forward, state wide)
- Residence ZIP code (1975)
- Sex
- Hispanic surname (1975)
- State of birth
- State of death
- State of injury (1989)
- State of residence
- Time of death
- Time of injury (1989)
- Underlying cause of death
- Usual occupation and industry (1980-1999)

## Matched Births/Infant Deaths

This file combines death and birth certificate information for infant deaths. All variables are available for the years 1975 forward, unless otherwise noted.

Abnormal conditions of newborn (1989)  
Age at death  
Age of father at birth  
Age of mother at birth  
Alcoholic drinks (average number) consumed by mother per week (1989)  
Apgar scores, 1 and 5 minutes  
Attendant type at birth  
Autopsy performed  
Birth certifier's title (1989)  
Birth order  
Birth weight  
Calculated weeks of gestation  
Cigarettes (average number) smoked by mother per day (1989)  
City of residence  
Clinical estimate of gestation (1989)  
Complications of labor and/or delivery (1989)  
Congenital anomalies of newborn (1989)  
County of birth  
County of death  
County of residence  
County of residence at birth  
Date of birth  
Date of death  
Education of father  
Ethnic origin of child (limited to Hispanic origin, 1989)  
Father's date of birth (1989)  
Hour of birth  
Infant transferred after delivery (1989)  
Marital status of mother  
Medical risk factors (1989)  
Method of delivery (1989)  
Month prenatal care began  
Mother transferred prior to delivery (1989)  
Mother's date of birth (1989)  
Multiple cause of death  
Obstetric procedures (1989)  
Place of birth  
Place of birth (facility type) (1989)  
Place of death  
Plurality  
Prenatal blood tests for syphilis, HIV, hepatitis (1989)  
Prenatal visits  
Previous pregnancies by outcome type (incomplete for some years)  
Race of child (calculated from parents' races)  
Residence census tract at death (Denver metro only)  
Sex  
Spanish surname of child  
State of birth  
State of death  
State of residence at death  
State of residence at birth  
Total previous deliveries to mother  
Underlying cause of death

## Spontaneous Fetal Deaths

Beginning in 1989, data for fetal deaths were compiled only for events estimated at 20 weeks or greater gestation. Variables shown here are available for the years 1980 forward, unless otherwise noted. However, comparable data for early fetal deaths (<20 weeks) are available only for the years 1980-1988. Reporting of individual items on these records may be incomplete.

- Age of father
- Attendant type
- Autopsy performed
- Birth order
- Birth weight of fetus
- Certifier's title
- City of event
- City of mother's residence
- County of event
- County of mother's residence
- Date last normal menses began
- Date of event
- Disposition type (i.e., burial, cremation, etc.)
- Education of father
- Education of mother
- Ethnic origin of father (limited to Hispanic origin, 1989)
- Ethnic origin of fetus (limited to Hispanic origin, 1989)
- Ethnic origin of mother (limited to Hispanic origin, 1989)
- Father's date of birth (1989)
- Hour of event
- Marital status of mother
- Month prenatal care began
- Mother employed during pregnancy
- Mother's age
- Mother's date of birth (1989)
- Mother's residence inside city limits
- Physician's estimate of gestation
- Place of delivery
- Plurality
- Prenatal visits
- Previous pregnancies by outcome type
- Race of father
- Race of fetus (calculated from parents' races)
- Race of mother
- Residence ZIP code
- Sex of fetus
- Spanish surname of fetus
- State event occurred
- State of mother's residence

## **Induced Terminations of Pregnancy**

All variables are available for the years 1978 forward, unless otherwise noted. Information is for patient. Reporting of individual items on these records may be incomplete.

- Additional procedures
- Age of woman
- Clinical estimate of gestation
- County of pregnancy termination
- County of residence
- Date last normal menses began
- Date of pregnancy termination
- Education
- Ethnic origin (limited to Hispanic origin, 1989)
- Facility type (clinic, hospital, doctor's office)
- Marital status
- Previous pregnancies by outcome type
- Race
- State of residence
- Type of procedure

## **Marriages**

All variables are available for the years 1975 forward.

- Bride's date of birth
- Bride's prior marital status (single, widowed, divorced)
- Bride's state of birth
- Bride's state of residence
- Ceremony type
- County of marriage
- Date of bride's last termination of marriage
- Date of groom's last termination of marriage
- Date of marriage
- Groom's date of birth
- Groom's prior marital status (single, widowed, divorced)
- Groom's state of birth
- Groom's state of residence

## **Marriage Dissolutions**

All variables are available for the years 1975 forward. (data for 1995, 1996, and 1997 are not available.)

- County of decree
- Decree date
- Dissolution type (divorce, annulment, legal separation)

# Regional Health Profiles

These 21 regions are aggregations of counties developed by the Health Statistics Section of the Colorado Department of Public Health and Environment (CDPHE) in partnership with state and local public health professionals. The regions were developed using statistical and demographic criteria. More information on the 21 regions is available by contacting Alyson Shupe, Health Statistics Section, CDPHE at [health.statistics@state.co.us](mailto:health.statistics@state.co.us).

