# APPENDIX

## RELIABILITY OF THE DATA

In analyzing any data, the fact of potential error in the data must not be overlooked. There are several types of errors possible including: under registration, errors made by the informant, and errors in compiling and processing.

Probably, the most potentially dangerous error is that of improper interpretation. Statistics are neither more true nor false than the interpretation given to them. Particular caution must be made in analyzing trend data, for there have been changes over the years in medical diagnosis, coding definitions, and registration coverage. Most of the rates computed in this report are crude rates. In comparing geographic areas, crude rates are limited because they do not take into account the differences in age, sex, race, and other population characteristics. Care should also be taken in using rates where the number of events or the population is small. Minor variations in the number of events may result in major changes in the rates. Rates based on fewer than 20 events are very unstable.

## VITAL RECORDS

Vital statistics in Missouri are compiled from six basic records, which are filed with the Department of Health and Senior Services by state law. These records are: (1) live birth records, (2) death records, and (3) fetal death records each beginning with 1911; (4) marriage and (5) divorce records, beginning with 1949; and (6) abortion records beginning in 1975.

Missouri cooperates with other states in the exchange of records for live births, fetal deaths, deaths and abortions to include resident data events occurring to Missouri residents in other states. However, Missouri has not received individual abortion records from Illinois since 1983 and Tennessee clinics from 1997 to 2005. But for 1988-2009, an estimate of Missouri resident abortions was received from some Illinois clinics, and for 1997-2005 from Tennessee. These estimates are shown in Graph D.

The data within this report represent the 2009 calendar year of events. Records were accepted through April 16 of 2010 before cut-off, allowing 2009 events to be as complete as possible.

## SOURCES

Except where noted, historical vital statistics data are taken from annual vital statistics reports of the Missouri Department of Health and Senior Services.

## POPULATION

County population estimates for 2009 used in this report represent July 1, 2009 Bureau of the Census estimates. The source of the 1911-1969 state total estimates is the Bureau of the Census' P-25 series. 1971-1979 state estimates were obtained from the Bureau of the Census publication "Preliminary Intercensal Estimates of the Population of Counties." 1981 - 1989 age-sex specific population estimates were developed by the U.S. Bureau of the Census in unpublished tables. City population estimates for 2009 came from Census estimates. 1991-1999 and 2001-2009 state population estimates also came from the Bureau of the Census. The Missouri Department of Health and Senior Services (MDHSS) used these as controls in developing 1991-1999 age-sex specific population estimates for Missouri. 2001-2009 age-sex specific state population estimates were also developed by the Census Bureau.

## RACE

The term "race" refers to the division of population into three groups, white, black, and other. Most tables in this report simply use two divisions, white and black because of the small numbers of persons from other races in Missouri. The race group designated as "other" consists of such races as American Indian, Japanese, Chinese, Filipino, Korean, Asian Indian and Malayan races. Unknown race is not classified as “other”, but is included in the total of all races.

Persons of Latin American birth or ancestry who do not define themselves of Indian or other designated race are classified as white. Hispanic origin births are shown by race in Table 5A. Tables 10A, 13, 19 and 27A were modified in 2002 to include Hispanic vital events as well as totals for “other” races.

Beginning with the 1989 report, birth, fetal and infant death data is presented by race of mother. Before 1989, this data was presented by race of child. This change has been implemented to be consistent with the National Center for Health Statistics (NCHS), which also implemented this change in 1989. Race of child had been computed by an algorithm based on race of mother and race of father. Persons of mixed parentage were classified according to the

race of the nonwhite parent. Because of this rather arbitrary formula and the increasing proportion of out-of-wedlock births in which father's race is missing, it was decided by NCHS to implement this change to race of mother.

Appendix Table A below shows how this change affects infant death rates by race. Three sets of rates and ratios are presented. The first set shows the current method by race of mother and the second set shows the old method by race of child. Both of these use the 1989 death cohort, in which infant deaths occurring in 1989 are divided by births occurring in 1989. In fact, some of these births to 1989 infant deaths occurred in 1988. The third method using the birth cohort takes the births occurring in a given year (e.g., 1989) and matches any deaths that occur to them in the first year of life, even if they occurred in the following year, 1990. This is the preferred method, but takes longer to collect. The rates for the current year are only about 95 percent complete.

The infant death rates for blacks are consistently higher using race of mother than using race of child. The resulting black/white ratios are also consistently higher using race of mother. While the numerator (the number of black infant deaths) stays the same in both calculations, the denominator (the number of black live births) is lower by race of mother than by race of child. Comparing death cohort to birth cohort infant death rates and ratios by race of mother, differences are shown in both directions.

In examining trends in infant death rates by race over time, it is important to use the same method throughout the time period compared. Therefore, it is not appropriate to compare black infant death rates by race of mother in 1989 to black infant death rates by race of child in 1988. The caveats relating to infant death rates by race over time also apply to other birth indicators such as low birth weight rates, out-of-wedlock teen birth rates, etc.

**Appendix Table A**
**Resident Infant Death Rates per 1000 Live Births by**
**Race of Child, Race of Mother, Death Cohort vs. Birth Cohort:**
**Missouri 1988-2007**

| | *DEATH COHORT* | | | | | | *BIRTH COHORT* | | |
|---|---|---|---|---|---|---|---|---|---|
| | *(1989 Annual Method) Race of Mother* | | | *(Pre-1989 Annual Method) Race of Child* | | | *(Matched Birth/Deaths) Race of Mother* | | |
| | *White* | *Black* | *Black/White Ratio* | *White* | *Black* | *Black/White Ratio* | *White* | *Black* | *Black/White Ratio* |
| 1988..... | 8.9 | 16.8 | 1.89 | 9.0 | 16.1 | 1.79 | 8.8 | 16.3 | 1.85 |
| 1989..... | 8.4 | 17.2 | 2.05 | 8.6 | 16.6 | 1.93 | 8.5 | 17.5 | 2.06 |
| 1990..... | 7.7 | 18.2 | 2.36 | 7.9 | 17.5 | 2.22 | 7.6 | 18.0 | 2.37 |
| 1995..... | 6.4 | 13.7 | 2.15 | 6.5 | 12.8 | 1.98 | 6.1 | 13.7 | 2.25 |
| 2000..... | 5.9 | 14.8 | 2.51 | 6.1 | 13.3 | 2.20 | 6.1 | 14.4 | 2.36 |
| 2001..... | 5.8 | 16.8 | 2.88 | 6.0 | 15.1 | 2.51 | 6.0 | 17.0 | 2.85 |
| 2002..... | 7.1 | 17.1 | 2.42 | 7.3 | 15.4 | 2.12 | 6.9 | 16.1 | 2.34 |
| 2003..... | 6.6 | 14.9 | 2.25 | 6.8 | 13.2 | 1.94 | 7.1 | 15.3 | 2.15 |
| 2004…. | 6.4 | 14.9 | 2.34 | 6.6 | 13.2 | 2.00 | 6.1 | 13.9 | 2.29 |
| 2005.... | 6.3 | 14.8 | 2.35 | 6.5 | 13.1 | 2.00 | 6.3 | 13.9 | 2.21 |
| 2006.... | 6.0 | 14.9 | 2.47 | 6.3 | 13.1 | 2.10 | 6.4 | 14.7 | 2.30 |
| 2007..... | 5.9 | 16.3 | 2.78 | 6.1 | 14.5 | 2.37 | 6.1 | 15.2 | 2.51 |
| 2008….. | 5.9 | 15.0 | 2.53 | 6.2 | 14.1 | 2.12 | 6.0 | 14.1 | 2.35 |

## TERMS "RESIDENT" AND "RECORDED"

It is important to understand the significance of the terms "Resident" and "Recorded" when analyzing vital statistics.

"Resident" data are compiled for vital events that relate to persons usually residing in an area independent of where the events occurred. An exception to this involves people dying in hospitals, nursing homes, or other institutions. In such cases, the usual place of residence before admission is reported. In the case of live births, fetal deaths, and infant deaths, the residence of the mother is considered to be the residence of the child.

"Recorded" data are based on the number of vital events that occur in an area. These data are used to analyze events that might be affected by the place in which they occur.

Resident and recorded figures can neither be added to nor subtracted from the other. Thus the number of events occurring or not occurring in the same geographic area where the people reside cannot be calculated from resident and recorded data.

## GEOCODING

Beginning with 2009 data Missouri used a computerized geocoding package (Group 1 Address Broker) to improve coding of resident city, county and Census tract for the entire state. From 2000-2007, Missouri used a geocoding package from Tele Atlas for the following metropolitan counties: Buchanan, Cass, Clay, Greene, Jackson, Jefferson, Platte, Ray, St. Charles, St. Louis County and St. Louis City. The packages use the street address and zip code to assign geocodes and may result in some inconsistencies with past years, particularly with city and town birth and death counts in Tables 17 & 18.

## GESTATIONAL AGE CORRECTION

Beginning in 2003, a correction was made in the calculation of weeks of gestational age. A rounding error had occurred in annual vital statistics reports before 2003 that tended to increase the gestational age and substantially decrease the rate of births less than 37 weeks of gestation shown in Table 10. This also had a relatively slight effect on other indicators that use gestational age, including inadequate prenatal care, and gained LT 15lbs/GT 44 pounds during full-term pregnancy. See the table below on how this correction affected the percents for these indicators in the 1998-2002 annual reports. Corrected data for these indicators for each year from 1990 to present are available at www.dhss.mo.gov/BirthMICA.

**Appendix Table B**
**Resident Percents for Selected Gestational Age Indicators by Original vs. Corrected Report: Missouri 1998-2002**

| | Less than 37 weeks Gestation | | Gained LT 15 lbs During Pregnancy | | Gained GT 44 lbs During Pregnancy | | Inadequate Prenatal Care | |
|---|---|---|---|---|---|---|---|---|
| | Original Report | Corrected Report | Original Report | Corrected Report | Original Report | Corrected Report | Original Report | Corrected Report |
| 1998 | 10.2 | 12.3 | 7.8 | 7.8 | 17.3 | 17.3 | 11.0 | 10.9 |
| 1999 | 10.3 | 12.7 | 7.7 | 7.7 | 17.9 | 18.0 | 10.5 | 10.4 |
| 2000 | 10.6 | 12.3 | 7.7 | 7.7 | 18.8 | 18.8 | 10.4 | 10.3 |
| 2001 | 10.6 | 13.0 | 8.3 | 8.3 | 18.7 | 18.7 | 10.8 | 10.7 |
| 2002 | 10.9 | 13.3 | 8.8 | 8.7 | 18.3 | 18.3 | 10.8 | 10.7 |

## UNKNOWNS

Records classified as Missouri residents with Unknown County of residence are included in the state totals of this publication. In annual vital statistics reports before 1979, these records were excluded from totals. The number of 2006 records with Unknown County of residence by system is as follows:

| | |
|---|---|
| Live Births ..... | 1 |
| Fetal Deaths ..... | 0 |
| Deaths ..... | 0 |
| Abortions..... | 21 |

The following imputations of unknowns were made in this report:

Unknown sex is considered male.
Unknown marital status is considered married.
Unknown live birth order is considered 1st.
Unknown number born is considered singleton.

## RATES

Rates are calculated by dividing the event of concern by the population at risk or a related population and multiplying by a constant. Live birth, death, natural increase, marriage, and dissolution rates are expressed in terms of 1,000-estimated midyear population. Infant, perinatal, fetal, neonatal, and post-neonatal death rates are stated per 1,000 live births.

Rates per 100 live births or percentages are used in Tables 7-10C for such rates as out-of-wedlock or low birth weight. In Table 10, unknowns are excluded in the calculation of percents when the unknowns are greater than 2 percent. These include: (1) crown heel length less than 47 cm; (2) mother greater than 15 percent underweight; (3) mother greater than 20 percent overweight; (4) mother gained less than 15 pounds during pregnancy; (5) mother gained 45+ pounds during pregnancy; (6) inadequate prenatal care; (7) mother Medicaid participant; (8) mother WIC participant; (9) mother Medicaid and WIC; and (10) mother Food Stamp recipient. For less than 18 months since last birth, the denominator excludes first births. For weight gain during pregnancy the denominator is singleton births of 37 or more weeks of gestation.

**Total Fertility Rate** (Graph B) refers to the average number of births a woman would have if a given set of age-specific birth rates applied throughout her reproductive years.

**General Fertility Rate** (Table 3) refers to the total number of live births per 1,000 women aged 15-44 for a given year.

**Age-Specific Fertility Rate** (Table 3) is the number of live births born to mothers of a given age per 1,000 females of that age group for a given year.

The **Abortion Ratio** is a ratio of abortions per 1,000 live births for a given year.

**Crude Death Rate** is defined as the total number of deaths of area residents for the year divided by the midyear population of the area multiplied by some constant. The constants used in this report are 100,000 for cause specific rates and deaths for all causes in Tables 19 and 27A and 1,000 for death rates in all other tables and graphs.

$$\text{Crude Death Rate} = \frac{\text{Number of deaths during year}}{\text{Midyear population}} \times 1{,}000 \text{ or } 100{,}000$$

**Age-Specific Death Rate** (Tables 4 and 21) is calculated in the same manner as the crude death rate except that both the number of deaths and the midyear population are restricted to a given age group.

$$\text{Age-Specific Death Rate} = \text{For given age group: } \frac{\text{Number of deaths during year}}{\text{Midyear population}} \times 1{,}000$$

The **Age-Adjusted Death Rate** (Age-Adj Rate) is a weighted average of age-specific death rates. Comparison of areas or time periods using crude death rates can often be misleading, since these rates are affected by the age composition of the population. For example, a county may display a high crude death rate simply because it has an older population.

To control for these differences in age compositions, age-specific rates can be weighted according to a standard population. Such a calculation produces an age-adjusted rate. The age-adjusted rates shown in this report are calculated by the direct method with the following formula:

$$\text{Age-Adjusted Death Rate} = \sum M_a \times \frac{Pa}{P}$$

Where Ma = age-specific rate for given age group
Pa = standard population in given age group
P = total standard population

This report uses ten-year age groupings with the 2000 United States population as the standard. Each figure thus represents the rate that would have existed if the age-specific rates in question prevailed in a population whose age distribution is like that of United States in 2000. This serves to control for differences in age compositions and makes comparisons between areas or time periods more legitimate. It is important; however, not to compare age-adjusted death rates with other rates adjusted to different standard populations.

From 1991 to 1998, the United States 1940 population had been used as the standard in the Missouri annual vital statistics reports. This makes comparisons of age-adjusted death rates with annuals before 2000 impossible. The standard population was changed to United States 2000 because 1940 was considered too old, and to allow comparability with national age-adjusted death rates published by the National Center for Health Statistics. The 2000 population will also be used as the standard for age-adjusted death rates in the Year 2010 Goals and Objectives for both Missouri and the nation. See Missouri Monthly Vital Statistics Report, February 2000 Vol. 33 No. 12, for a more detailed discussion of this topic.

The **Abridged Life Tables** in this report (Table 29) are generated from a computer software package originally developed by the National Center for Health Statistics, and modified by the Missouri Center for Health Statistics. It uses the technique of "reference to a standard table." These tables are technically defined as "current life tables" since they are cross-sectional in nature. In other words, these tables do not represent the life expectancy of an actual cohort of all Missourians born in a particular year and followed throughout their lifetime. Rather, the current life table considers a hypothetical cohort and assumes it is subject to the age-specific mortality rates existing for a given year. This means that the current life tables contained herein assume hypothetical cohorts subject throughout their lifetimes to the age-specific mortality rates prevailing for the year of this report.

The term "abridged" indicates that the age intervals used in the tables are five-year age groupings rather than single years of age.

## CAUSE OF DEATH CLASSIFICATION

Causes of death data are displayed by the underlying cause. The underlying cause of death is defined as the disease or injury, which initiated the train of morbid events leading directly to death or the circumstances of the accident or violence, which produced the fatal injury.

The causes of death presented here are classified in accordance with the Tenth Revision of the International Classification of Diseases (ICD-10), 1992; World Health Organization. This revision has been used to classify deaths occurring on or after January 1, 1999. Comparisons with data from earlier years must be done with caution, since these were classified under different coding schemes. Consequently, certain diseases may show changes in their trends as a result of changes in definitions. For a general measure of the extent of these changes between the ninth and tenth revisions, consult website www.cdc.gov/nchs/.

Tables 22 and 27 of this report include 40 selected causes of death plus four additional summary groupings. In those tables presenting leading causes of death, the rankings are based on a further consolidation of these 40 causes plus some additional ones from a list of 113 causes developed by the National Center for Health Statistics. These causes are listed below with their ICD-10 codes. Those used for ranking purposes are noted with an asterisk.

| **Causes of Death in Tables 22 & 27** | **ICD-10 Codes** |
|---|---|
| All causes | |
| Causes of Death | |
| *Tuberculosis | A16-A19 |
| *Septicemia | A40-A41 |
| *Syphilis | A50-A53 |
| *AIDS | B20-B24 |
| *Malignant neoplasms | C00-C97 |
| Stomach | C16 |
| Colon, rectum and anus | C18-C21 |
| Pancreas | C25 |
| Trachea, bronchus and lung | C33-C34 |
| Breast | C50 |
| Cervix uteri, corpus uteri and ovary | C53-C56 |
| Prostate | C61 |
| Urinary tract | C64-C68 |
| Non-Hodgkin's lymphoma | C82-C85 |
| Leukemia | C91-C95 |
| Other malignant neoplasms | Residual of C00-C97 |
| *Diabetes mellitus | E10-E14 |
| *Alzheimer's disease | G30 |
| Major cardiovascular diseases | I00-I78 |
| *Diseases of heart | I00-I09,I11,I13,I20-I51 |
| Hypertensive heart disease | I11,I13 |
| Ischemic heart diseases | I20-I25 |
| Other heart disease | I00-I09,I26-I51 |
| *Essential hypertension | I10,I12 |
| *Cerebrovascular diseases | I60-I69 |
| *Atherosclerosis | I70 |
| Other circulatory diseases | I71-I78 |
| *Influenza and pneumonia | J10-J18 |
| *Chronic lower respiratory diseases | J40-J47 |
| *Peptic ulcer | K25-K28 |
| *Chronic liver disease and cirrhosis | K70,K73-K74 |
| *Nephritis and nephrosis | N00-N07,N17-N19,N25-N27 |
| *Pregnancy, childbirth and puerperium | O00-O99 |
| *Conditions originating in perinatal period | P00-P96 |
| *Congenital anomalies | Q00-Q99 |
| Sudden infant death syndrome | R95 |
| Symptoms and ill-defined conditions | R00-R94,R96-R99 |
| All other diseases | Residual of A00-R99 |

*Unintentional injuries

Motor vehicle crashes .....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

Other unintentional injuries .....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, V90-X59, Y85-Y86

*Suicide ..... X60-X84,Y87.0

*Homicide ..... X85-Y09,Y87.1

All other external causes..... Y10-Y36,Y40-Y84,Y87.2,Y88-Y89

**ADDITIONAL CAUSES USED FOR RANKING PURPOSES NOT SHOWN IN TABLE 22 & 27**

**..... ICD-10 Codes**

Salmonella infections ..... A01-A02
Shigellosis and amebiasis ..... A03,A06
Whooping cough ..... A37
Scarlet fever and erysipelas ..... A38,A46
Meningococcal infection ..... A39
Acute poliomyelitis ..... A80
Arthropod-borne viral encephalitis..... A83-A84,A85.2
Measles..... B05
Viral hepatitis ..... B15-B19
Malaria..... B50-B54
Benign/in situ neoplasms and neoplasms of uncertain or unknown behavior ..... D00-D48
Anemias..... D50-D64
Nutritional deficiencies..... E40-E64
Meningitis..... G00,G03
Parkinson's disease ..... G20-G21
Aortic aneurysm and dissection..... I71
Acute bronchitis and bronchiolitis..... J20-J21
Pneumoconiosis and chemical effects ..... J60-J66,J68
Pneumonitis due to solids and liquids ..... J69
Diseases of appendix ..... K35-K38
Infections of kidney..... N10-N12,N13.6,N15.1
Hyperplasia of prostate..... N40
Inflammatory diseases of female pelvic organs..... N70-N76
Legal intervention..... Y35,Y89.0

**TYPE OF ACCIDENT (TABLE 28)**

Beginning with 2004 data, Table 28 (Recorded Deaths by Type of Accident, Age and Sex) was revised to primarily reflect ICD-10 groupings. These groupings are adapted from criteria for the “Injury Mortality Summary” provided by the Research and Statistics Department of the National Safety Council (NSC). This change is intended to better serve the needs of data users, be more comparable with data published by NSC, and more closely follow the information given on death certificates.

Many of the categories were new in 2004, and even when the category name did not change, the numbers were not precisely comparable because of the different methods. Poisonings at home, in particular, were grossly underreported under the old system. The new system gives a more complete count and identifies poisoning deaths due to drugs (both prescribed and illicit).

As before, numbers in Table 28 are not comparable to others in this book because they pertain to recorded, not resident, deaths, i.e., deaths that took place in Missouri, regardless of the residence of the decedent. Death in Missouri does not necessarily mean that the injury took place in Missouri.

# Definitions

The ICD-10 codes for each category are given below.

"Work" is any unintentional injury death for which the "Injury at work?" checkbox on the death certificate is marked "Yes." "Home" means any non-institutional residence, including garage and yard. If the injury took place anywhere else – motel, highway, school, farm, nursing home – then the location is classified as "public."

If a death falls into more than one category, as late effects of a motor vehicle crash while the decedent was at work, the order of precedence is: late effects, work, home/public.

| **Categories in Table 28** | **ICD-10 Codes** |
|---|---|
| Grand total | V01-X59, Y85-Y86 |
| Work total | "Injury at work?" checkbox = "Yes" |
| Heavy Transport vehicle | V60-V69 |
| Other motor vehicle | V02-V04, V09.0, V09.2, V12-V14, V190-V19.2, V19.4-V19.6, V2-V59, V7-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2 |
| Other transport | Residual of V01-V99 |
| Falls | W00-W19 |
| Farm machinery | W30 |
| Other machinery | W31 |
| Struck by/against object | W20-W29, W35-W49 |
| Electric current | W85-W87 |
| Other/unspecified accident | W32-W34, W50-W84, W88-W99, X00-X59 |
| Home total | W00-X59 with 4th-digit place code of 0 |
| Public transport total | W00-X59 with 4th-digit place code not 0 |
| Falls | W00-W19 |
| Machinery | W30-W31 |
| Firearms | W32-W34 |
| Struck by/against object | W20-W29, W35-W49 |
| Drowning | W65-W74 |
| Choke/suffocate | W75-W77, W78-W80, W81-W84 |
| Excess natural heat/cold | X30-X31 |
| Fire/flame/smoke | X00-X09 |
| Poisoning (drug/alcohol) | X40-X45 |
| Poisoning (gas/other) | X46-X49 |
| Other/unspecified accident | Residual of W00-X59 |
| Public transport total | V01-V99 |
| Car or truck | V40-V69 |
| Pedestrian/motor vehicle | V02-V04,V09.0,V09.2 |
| Pedal cyclist | V12-V14, V19.0-V19.2,V19.4-V19.6 |
| Motorcyclist | V20-V29 |
| Railroad (not w/motor vehicle) | V05, V15, V80.6, V81.2-V81.9 |
| Nonroad veh, incl special ATV | V83-V86 |
| Water transport | V90-V94 |
| Air transport | V95-V97 |
| Other/unspecified | Residual of V01-V99 |
| Late effects of accidents | Y85-Y86 |

## MEDICAL CONDITIONS ON BIRTH RECORDS

Table 5B presents selected medical conditions reported on the birth certificate by means of a check-off box system. Before 1989, medical conditions on the birth certificate were reported by open-ended questions. It is believed that the check-off box generally increases reporting. A study done by the Missouri Center for Health Statistics found that medical risk factors increased by 50 percent, labor or delivery complications by 30 percent, and congenital anomaly reporting nearly doubled in the first half of 1989 compared with 1988. See *Missouri Monthly Vital Statistics*, Nov. 1989, Vol. 23, No. 9 for more details.

## ADDITIONAL DEFINITIONS

Apgar Score — An international code ranging from 0 to 10 used to measure the health of an infant at one minute and five minutes after birth. Items used to derive the score are heart rate, respiratory effort, muscle tone, reflex irritability and color. A score below eight implies a moderately or severely depressed condition. The score used in Table 10 is taken at five minutes after birth. Caution should be used in interpreting patterns of low Apgar scores by area because of a possible subjective bias in assigning scores. Different medical personnel may assign different scores to the same child.

Birth Order — Number of previous pregnancies plus one.

Crown Heel — Length of the baby at birth in centimeters.

Fetal Death — Death taking place before birth at 20 weeks gestation or later or birth weight of 350 grams or more if gestational age is unknown.

Gained LT 15lbs/GT 44 lbs during pregnancy – based on mother's weight at delivery minus pre-pregnancy weight for full-term singleton live births. See Gestational Age Correction on page 127 for additional changes in 2003.

GT 15 Percent Underweight/GT 20 Percent Overweight — If the mother's prepregnancy weight is greater than 15 percent below or 20 percent above the desired weight for her height according to the 1959 Metropolitan Life Insurance tables.

Inadequate Prenatal Care — Fewer than five prenatal visits for pregnancies less than 37 weeks, fewer than eight visits for pregnancies 37 weeks or longer or care beginning after the first four months of pregnancy. Before 1994, records with unknown month prenatal care began or unknown prenatal visits were excluded. Beginning in 1994, if adequacy of prenatal care could be determined even if month care began or visits were unknown, then these records were included. See Gestational Age Correction on page 127 for additional changes in 2003.

Infant Death — Baby dying during the first year of life.

Infant Transfer — Infant transferred to another facility after delivery.

Less than 37 Weeks Gestation — Length of pregnancy less than 37 completed weeks based on date of last normal menses unless this calculation is less than 17 weeks, more than 44 weeks, unknown or if the birth weight and length of pregnancy were obviously inconsistent then clinical estimate is used. See Gestational Age Correction on page 127 for additional changes in 2003.

Live Birth Order — Number of previous babies born alive now living plus one.

Low Birth Weight — Less than 2,500 grams or five and one-half pounds.

Maternal Death — Mother dying as a result of complications of pregnancy, childbirth and puerperium (ICD-10 codes O00-O99).

Maternal Transfer — Mother transferred from another facility prior to delivery.

Natural Increase — Resident live births minus resident deaths.

Neonatal Death — Baby dying during first 27 days of life.

Out-of-Wedlock Birth — Birth involving mother whom was unmarried at time of conception, at time of birth, and throughout time between conception and birth.

Perinatal Death — Fetal or neonatal death.

Postneonatal Death — Death occurring after 27th day of life and before one year.

Teen-age Pregnancy — Live birth, fetal death or abortion occurring to a woman under 20 years of age.