Registration The reporting of Kansas vital events to the Kansas Department of Health and Environment (KDHE) is mandated by law (K.S.A. 65-102, K.S.A. 65-2422b, K.S.A. 65-445). The filing of birth and death records began in 1911, the registration of marriages was initiated in 1913 and divorce tabulations started in 1951. The reporting of abortions began in 1970. Certificates of birth, death, stillbirth, marriage, marriage dissolution, and reports of abortion are completed by the combined efforts of physicians, hospital personnel, funeral directors, attorneys, and local courts. All certificates and reports are filed with the Office of Vital Statistics by direct reporting. Since the registration of vital events began, over ten million records have been processed, filed and indexed.

2005 Revisions to Certificates Beginning with the reporting of 2005 data, Kansas implemented the 2003 revision of the U.S. standard certificates and reports. The new data collection instruments are referenced on pages 155-167. Not all states use the new certificate format. Therefore, some information routinely collected on Kansas residence events may not be provided on births and deaths that involve Kansas residents who had events in another state.

While most data items on the certificates are comparable to past years, certain items have changed considerably. These changes can affect comparability with previous years data.

Prenatal care visits In previous years, the mother or prenatal care provider reported the month of pregnancy in which the mother began prenatal care. As of 2005, this item was replaced by the exact dates of first and last prenatal visit. Therefore, the month prenatal care began is now calculated from the last normal menses date and the date of first prenatal care visit. Accordingly, prenatal care data in this report (Tables 17 and 18, Figure 17) is not directly comparable to data collected from previous certificates.

Race-Ethnicity The revised certificates contain significant changes in the way self-reported race and Hispanic origin is collected. The race item was revised to allow the reporting of multiple races and can capture up to 15 categories and eight literal entries. In addition, Hispanic origin is now collected as a separate question from ancestry. These changes were implemented to provide a better picture of the nation's variation in race and ethnicity. The expanded racial and ethnic categories are compliant with the provisions to the Statistical Policy Directive No. 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting, issued by the Office of Management and Budget (OMB) in 1997. Under these guidelines when race and Hispanic origin are collected separately, Hispanic origin is collected first on the certificate.

Population-Group Reporting Changes to reporting of Hispanic origin and race, combined with concerns over confidentiality and comparisons among race and origin categories, resulted in the development of a population-group approach to reporting statistics by race/ethnicity. This method uses a unique series of population groups that combine race and Hispanic origin for reporting statistics. At the most detailed level there are nine population-groups: Hispanic any race, White non-Hispanic, Black non-Hispanic, Asian non-Hispanic, Native Hawaiian and other Pacific Islander (NHOPI) non-Hispanic, American Indian/Alaska Native (AIAN) non-Hispanic, Multiple race non-Hispanic, Other race non-Hispanic, and

Unknown race non-Hispanic. The accompanying grid shows how population-groups are aggregated when counts are too small to be displayed or to be used in a rate calculation.

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This report uses partial or full aggregation of population groups for reporting statistics.

Aggregation Grid for Population Groups

Aggre-gation Level	Population Groups								
None	Hispanic any Race	White Non-Hispanic	Black Non-Hispanic	Asian Non-Hispanic	NHOPI Non-Hispanic	AIAN Non-Hispanic	Multi race Non-Hispanic	Other race Non-Hispanic	Unknown Non-Hispanic
Partial	Hispanic any Race	White Non-Hispanic	Black Non-Hispanic	Asian/NHOPI Non-Hispanic		AIAN Non-Hispanic	Multi & other non-specified race(s) Non-Hispanic		N.A.
Full	Hispanic any Race	White Non-Hispanic	Black Non-Hispanic	Multi, other specified & non-specified race(s) Non-Hispanic					N.A.

The U.S. Census Bureau population estimates, revised in accordance with the new standards, produces population estimates that can be collapsed into seven of the nine population-groups. These estimates are used as the denominator in calculating population–based rates by population group for selected 2007 vital events (Figure 4 and Table 40) in this report.

The Census Bureau also prepares a set of bridged race population estimates in collaboration with the National Center for Health Statistics (NCHS). These estimates - in which persons of Hawaiian, or Pacific Islander race or of multiple race were bridged or collapsed into the four categories of White, Black, American Indian/Alaska Native, and Asian – are used as the base for creating population data for specific age groups needed to calculate teen pregnancy rates (Table 25). The unbridged census annual population estimates do not have the specific age groups needed for teen pregnancy rates.

Quality of Data The quality of the analyses in the *Annual Summary of Vital Statistics* depends on the accuracy of the Kansas vital statistics data. The Office of Vital Statistics makes every effort to ensure the completeness and accuracy of the certificates filed. An exchange agreement with all 57 registration states/jurisdictions and Canada ensures that vital events occurring to Kansas residents in other states or Canada are recorded. Tabulation of vital events for 2007 in-state and out-of-state occurrences is maintained through June 1, 2008. Reports filed later consist of less than one percent of the total reports filed, are considered negligible, and are omitted from this report.

The tabulation of divorce statistics is impacted by the completeness of reporting by District Courts in Kansas. Despite efforts to assure 100 percent reporting compliance, it has been determined by the Center for Health and Environmental Statistics (CHES) that not all divorce and annulment certificates have been filed with the Center. The Center is unable to estimate the number of these records not filed. Users of marriage dissolution data should exercise caution before making any conclusions based on these data. The Center is obligated to report the data it collects, but recommends that any marriage dissolution data findings be accompanied by a statement that totals may not represent 100 percent of this vital event due to under-reporting.

Residence vs Occurrence Data Residence data is information compiled according to the usual residence regardless of where the event occurred (including events occurring out-of-state). Occurrence data is information compiled according to the geographical location where the event took place, regardless of the actual residence. Information compiled for births, stillbirths, and deaths in this report are residence data, while marriages and marriage dissolutions are occurrence data and abortions are reported in both data formats (residence and occurrence).

Peer Groups For various demographic studies, it is useful to consider groups of counties with similar characteristics. "Peer Groups" of counties, as used in this summary, are defined as those with similar population density based on their 2000 actual census counts. In order to facilitate a time series comparison, the assignment of counties to their peer group remains unchanged until the next decennial census. They will not necessarily have similar values for any other indicators. Frontier counties are defined as those with less than 6.0 persons per square mile, Rural counties as those with 6.0 - 19.9 persons per square mile, Densely-Settled Rural counties as those with 20.0 - 39.9 persons per square mile, Semi-Urban counties as those with 40.0 - 149.9 persons per square mile, and Urban counties as those with 150.0 or more persons per square mile. These definitions originated with the Kansas Department of Health and Environment, Office of Local and Rural Health, and should *not* be confused with the U.S. Census Bureau's (USCB) definitions of urban and rural areas. Sources for calculation of population densities are population figures from the 2000 U.S. Census and land areas from the 2000 U.S. Census.

Counties are grouped in population density peer groups as follows:

Frontier
Barber
Chase
Cheyenne
Clark
Comanche
Decatur
Edwards
Elk
Gove
Graham
Greeley
Hamilton
Hodgeman
Jewell
Kearny
Kiowa
Lane
Lincoln
Logan
Meade
Morton
Ness
Osborne
Rawlins
Rush
Sheridan
Smith
Stanton
Trego
Wallace
Wichita

Rural
Anderson
Brown
Chautauqua
Clay
Cloud
Coffey
Ellsworth
Grant
Gray
Greenwood
Harper
Haskell
Jackson
Kingman
Linn
Marion
Marshal
Mitchell
Morris
Nemaha
Norton
Ottawa
Pawnee
Phillips
Pratt
Republic
Rice
Rooks
Russell
Scott
Sherman
Stafford
Stevens
Thomas
Wabaunsee
Washington
Wilson
Woodson

Densely-Settled Rural
Allen
Atchison
Barton
Bourbon
Cherokee
Cowley
Dickinson
Doniphan
Ellis
Finney
Ford
Jefferson
Labette
McPherson
Neosho
Osage
Pottawatomie
Seward
Sumner

Semi-Urban
Butler
Crawford
Franklin
Geary
Harvey
Leavenworth
Lyon
Miami
Montgomery
Reno
Riley
Saline

Urban
Douglas
Johnson
Sedgwick
Shawnee
Wyandotte

Population State, county, and city population estimates for 2003-2007 were produced by the USCB and certified by the Kansas Division of the Budget. These estimates are on the Division's website at: http://budget.ks.gov/ecodemo.htm. (Tables 3 and 4, Figure 5)

Population estimates by age-group and sex for 1988-1989, 1991-1999 and 2002-2007 were obtained from the U.S. Census Bureau. Actual population counts were used for

1990 and 2000. Population by age-group and sex was not available from the USCB for 2001 and was estimated by the Kansas Department of Health and Environment based on 2000 USCB numbers. (Table 5) These numbers were used in age-specific and age-adjusted calculations. (Tables 11, 35, 44, 45, 51, 52, Figures 12, 13 and 31) Population by race and race-specific birth and death rates (Tables 6, 7 and Figure 4) for 2007 are based on unbridged U.S. Census estimates that comply with the new race standards and can be obtained on the Internet at: http://www.census.gov/popest/estimates.php.

Due to rounding and variation in estimation methods within the USCB, some discrepancies may be found in population data. (Tables 3 and 5) Usually differences are negligible and rarely result in discrepancies in the totals. We advise you to utilize state totals from the county population totals when a total population estimate is needed.

Female Population 10-19 Estimates of the Kansas female population for 1988-1999 were obtained from the USCB, and actual population counts were used for 1990 and 2000.

The 2001 state and county estimates for teenage females (10-14, 10-17, 15-19, 10-19) were compiled by the KDHE based on 2000 USCB numbers. In order to estimate the 2001 teenage female population for the various age groupings, the 2000 proportion for the age grouping within the total population had to be derived. These estimates were calculated as in the following example for 2001.

$$\frac{\text{Female Population 10-14 Year Age Group (2000)}}{\text{2000 Population All Ages}} \times \text{2001 Population All Ages} = \text{10-14 Year Age-Group (2001)}$$

Female population estimates for 2002-2007 were obtained from the Bridged-race Vintage 2002, 2003, 2004, 2005, 2006, and 2007 postcensal series by year, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement between the National Center for Health Statistics (NCHS) and the USCB. The population data are at: http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm. (Tables 24, 25, 26 and 27, Figure 19)

Deaths Underlying causes of death in the *2007 Annual Summary of Vital Statistics* are established through a system known as the International Classification of Diseases, 10th Revision (ICD-10). This system promotes uniformity and comparability in the collection and presentation of mortality or death data. Prior to 1999, Kansas used ICD-9 to report mortality statistics. Periodically the classification system needs to be updated to address new diseases and reflect a better understanding of causes of death. The World Health Organization maintains ICD-10 and the NCHS, which compiles national statistics, modifies ICD-10 for use by Kansas and other states. Death data from 1999 forward are classified by ICD-10, and trends in mortality will be comparable. Such trends are not comparable if the data bridge 1998-1999.

In accordance with NCHS guidelines, fetal deaths that were coded Symptoms, Signs & Abnormal Findings (R00 - R99) are now coded unspecified cause (P95).

Age-Adjusted Death Rates The mortality rate, the number of deaths per 100,000 population, is a common way to report death statistics so that comparisons can be

made from year to year or among geographic areas. Crude death rates compensate for the differences in population within the areas or time periods studied. Crude death rates, however, do not compensate for the different age make up of compared populations. For example, some Kansas counties may have more older residents than other counties. To address this, statisticians prepare age-adjusted death rates. The direct method for calculating age-adjusted death rates was used in this report. Age-adjusting is a process by which the age composition of a population is defined as constant so that differences in age composition can be eliminated from the analysis. This is needed because older populations have higher death rates, merely because death rates increase with age. Age-adjusted rates allow for more meaningful comparison of the risk of mortality over time and among groups.

For this report, age-adjusted death rates were calculated using the 2000 population standard. Kansas began using the 2000 population standard, as recommended by NCHS, in the *1999 Annual Summary of Vital Statistics*. As part of its implementation of the new age-adjusting population standard, CHES produced the report *Age Standardization of Kansas Death Rates: Implications of the Year 2000 Standard.* Copies can be obtained at the CHES Web site http://www.kdheks.gov/ches/.

Comparing Age-Adjusted Death Rates Mortality rates, derived from vital records, are not subject to sampling error but are subject to what is termed random error. This arises from random variations in the number of deaths over time or between different communities. The potential impact of variation increases as the number of events decreases. This makes resulting rates subject to volatility, and requires caution when comparing them to rates from other populations, geographic areas, and time periods.

Confidence intervals are often used in research when comparing two age-adjusted death rates (for two different or independent populations) to determine whether a significant difference exists between them. Ninety five percent confidence intervals are provided for the age-adjusted rates in this report. The precise statistical definition of the 95% confidence interval is that if the measurement were conducted 100 times, 95 times the true value would be within the calculated confidence interval and five times the true value would be either higher or lower than the range of the confidence interval.

The first step in calculating a confidence interval for an age-adjusted rate is the computation of a standard error (SE), which defines the rate's variability. The SE for an adjusted rate per 100,000 population can be estimated by dividing that rate by the square root of the number of events (n) upon which the rate was based:

$$RATE/\sqrt{N}$$

The estimated SE can then be used to compute a 95% confidence interval (CI) for the rate. The standard formula for determining the 95% CI of a rate is:

$$R \pm (1.96 \times SE)$$

Computing confidence limits for pairs of rates varies depending on the number of events on which each rate was created. The formula below was used for calculating confidence intervals that appear in this report (Table 52).

Confidence limits for rates when the numerator is 100 or more

In this case, use the following formula for the rate R based on the standard error SE:

$$\text{Lower limit} = R - (1.96 \times SE)$$

Upper limit = *R* + (1.96 x SE)

where:

R = the rate (age-adjusted rate)
SE = the rate divided by the square root of the number of events (deaths)

An example of this would be the comparison of cancer age-adjusted death rates for two years. If 2006's rate has a 95% confidence interval of 174.8-184.6 and the 95% confidence interval for 2007 is 174.3-183.9, then they overlap and there is no significant difference between the two years rates, at the 95% confidence level.

There are various statistical formulas for comparing rates, depending on the types of rates or populations being studied and the number of events involved. Please note that the formulas shown above are a conservative approach and, in some cases, may not be the most appropriate.

Significance test when both rates are based on 100 or more events

To compare two rates when both are based on 100 or more events, first calculate the difference between the two rates by subtracting the lower rate from the higher rate. This difference is considered statistically significant if it exceeds the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two rates.

$$1.96 \sqrt{\frac{R_1^2}{N_1} + \frac{R_2^2}{N_2}}$$

where:

R_1 = the first rate
R_2 = the second rate
N_1 = the first number of events
N_2 = the second number of events

If the difference is greater than this statistic, then the difference would occur by chance less than 5 times out of 100. The difference is statistically significant at the 95 percent confidence level.

If the difference is less than this statistic, the difference might occur by chance more than 5 times out of 100. The difference is not statistically significant at the 95 percent confidence level.

The National Center for Health Statistics was used as a source for confidence interval and significance tests based on the *Vital Statistics of the United States: Mortality, 1999*. Technical Appendix.

Years of Potential Life Lost (YPLL) The YPLL, for this report, is a measurement of the number of years of potential life lost by each death occurring before the average life expectancy. This calculation provides more information on the societal impact of mortality. Years of life lost counts deaths at a younger age more heavily than those at older ages (e.g., the younger person has a greater potential for years left than an elderly person). YPLL were calculated by subtracting mid-point years of the 5-year age-groups from life expectancies for all Kansans and male and female Kansans. The subtraction leaves a remainder minus the years of potential life lost, which is then multiplied by the number of deaths in that particular age-group and subsequently all calculations for the

five-year age-groups beginning with 0-4 and through over 85 are summed to provide the total years of life lost. In making the calculations, the age-groups with mid-points larger than the life expectancy were set to zero because they would not contribute years of life lost (e.g., they are over the life expectancy). For this report, the life expectancy for all Kansans is 77.4 years, males 74.9 and females 79.8 years. These 2000 life expectancies were prepared by the KDHE CHES. Since the *1992 Annual Summary of Vital Statistics*, CHES has used 1990 life tables prepared by the Kansas Division of the Budget. In an effort to update this data CHES prepared the report *Abridged Life Tables, Kansas, 2000*. Copies can be obtained on the CHES website at: http://www.kdheks.gov/ches/research.html.

Rate Reliability Vital statistics are easily influenced by random variation and single-year rates can fluctuate from year to year. A multiple-year rate such as a five- or ten-year average of single-year rates would be more accurate in formulating conclusions on vital events. For example, between 2003 and 2007 the infant death rate for Kansas ranged from 6.7 to 7.9, while the 2003-2007 five-year infant death rate for Kansas was 7.3 infant deaths per 1,000 live births. A five or 10-year rate smoothes some of the single-year rate variation and is a more reliable indicator of Kansas infant death rates.

Rates based on a small or large number of events in a sparsely populated area can vary widely. To exemplify the variation that may occur with a small change in the number of events, in 2007 Greeley County was the least populated county in Kansas with 1,297 residents and Johnson County was the largest with 526,319 residents. With 13 deaths occurring in Greeley County in 2007, the crude death rate was 10.0 deaths per 1,000 population; whereas 3,084 deaths occurring in Johnson County resulted in a crude death rate of 5.9 deaths per 1,000 population. If five more deaths occurred in each county (e.g., multiple- death accident), Greeley County's crude death rate would have increased to 13.9, while Johnson County's rate would have increased by only a few hundredths and, with rounding, still remain 5.9 deaths per 1,000 population. Therefore, one must use caution when comparing rates of vital events between counties of extreme population size differences to avoid misleading conclusions.

Limitations of Pregnancy Outcome Data From July, 1970 through June, 1995, only hospitals in Kansas were required by K.S.A. 65-445 to keep and submit to the Secretary of the Department of Health and Environment written records of all pregnancies terminated in the hospital. During this reporting period, non-hospital providers reported terminations only on a voluntary basis. Although most providers reported, there could have been a small number of abortions not reported. This means that the data may have been, to a certain degree, underreported. However, effective July 1, 1995, the Kansas legislature amended K.S.A. 65-445 broadening the reporting requirement to include every medical care facility and every person licensed to practice medicine.

Criteria for the Adequacy of Prenatal Care Utilization (APNCU) INDEX

I. Month prenatal care began (Adequacy of Initiation of Prenatal Care)

Adequate Plus: 1st or 2nd month
Adequate: 3rd or 4th month
Intermediate: 5th or 6th month
Inadequate: 7th month or later, or no prenatal care

II. Proportion of the number of visits recommended by the American College of Obstetricians and Gynecologists (ACOG) received from the time prenatal care began until delivery (Adequacy of Received Services)

Adequate Plus: 110% or more
Adequate: 80% - 109%
Intermediate: 50% - 79%
Inadequate: less than 50%

III. Summary Adequacy of Prenatal Care Utilization Index

Adequate Plus: Prenatal care begun by the 4th month and 110% or more of recommended visits received
Adequate: Prenatal care begun by the 4th month and 80% - 109% of recommended visits received
Intermediate: Prenatal care begun by the 4th month and 50% - 79% of recommended visits received
Inadequate: Prenatal care begun after the 4th month or less than 50% of recommended visits received

The bibliographic reference relating to this index is: Kotelchuck, Milton. "An Evaluation of the Kessner Adequacy of Prenatal Care Index and a Proposed Adequacy of Prenatal Care Utilization Index.", *American Journal of Public Health*, 1994; 84(9): 1414-1420.

Handling of Unknowns Items for which no response was provided are shown as "not stated" (N.S.) in the tables and graphs throughout this publication. To ensure the accuracy of the data, the "not stated" have been removed from totals when calculating percentages.

DEFINITIONS

The following terms, formulas and symbols are defined for more meaningful interpretations of the data contained in this report.

Abortion (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 which does not result in a live birth.
Adequacy of Prenatal Care Utilization (APNCU) Index:	An assessment of the adequacy of prenatal care measured by the APNCU Index (often referred to as the Kotelchuck Index), a composite measure based on gestational age of the newborn, the trimester prenatal care began, and the number of prenatal visits made.
Age-Adjusted Death Rate:	A calculation by which the age composition of a population is defined as constant so that differences in age composition can be eliminated from the analysis.
Annulment:	The invalidation of a marriage contract.
Birth Order:	Live birth order is determined from birth certificates specifying the total number of live births (living and dead) the mother had. It is calculated as the sum of the prior live births plus the current birth.
Birth Weight:	The weight of the fetus or infant at the time of delivery.
Cause of Death:	The underlying cause of death, or that condition giving rise to the chain of events leading to death.
Congenital Anomalies:	Defects existing at and usually before birth regardless of causation.
Divorce:	The dissolution of a legally binding marriage contract.
Hebdomadal Death:	The death of a live-born infant which occurs prior to the seventh day of life.
ICD Code:	The cause-identifying number classified in the Tenth Revision of the *International Classification of Diseases* implemented by NCHS for deaths in 1999.
Infant Death:	The death of a live-born infant which occurs within the first year of life.
Live Birth:	The complete expulsion or extraction of a product of human conception from its mother, irrespective of the duration of pregnancy, that, after such expulsion or extraction, shows any evidence of life such as breathing, heartbeat, pulsation of the umbilical cord, or voluntary muscle movement, whether or not the umbilical cord has been cut or the placenta attached.

Low Birth Weight:	Weight of a fetus or infant at delivery which is under 2,500 grams (less than five pounds, 8 ounces).
Marriage:	The legal union of a male and female.
Marriage Dissolution:	A marriage dissolved by either a divorce or an annulment.
Maternal Death:	The death of a mother caused by complications of pregnancy, childbirth and the puerperium.
Medical Procedure I:	Refers to use of the drug mifepristone as a pregnancy termination procedure.
Medical Procedure II:	Refers to use of the drug methotrexate as a pregnancy termination procedure.
Natural Increase:	Live births minus total deaths of a population within a given year.
Neonatal Death:	The death of a live-born infant which occurs prior to the twenty-eighth day of life.
Occurrence Data:	Vital statistics compiled on the basis of where the vital event happened.
Out-of-Wedlock Birth:	A birth occurring to a mother who is not married at the time of conception or at the time of birth or at any time between conception and birth.
Peer Group:	A group of counties with similar population densities in persons per square mile, as adopted by the Kansas Department of Health and Environment, Office of Local and Rural Health.
Perinatal Period III Death:	The aggregate total of stillbirths (fetus weighs over 350 grams) and hebdomadal deaths (deaths that occur prior to the 7th day of life).
Population Density:	The average number of inhabitants per square mile.
Post-Hebdomadal Death:	The death of a live-born infant occurring seven days to prior to the twenty-eighth day of life.
Post-Neonatal Death:	The death of a live-born infant occurring 28 days to prior to the 365th day of life.
Prenatal Care:	Pregnancy-related health care services provided to a woman between conception and delivery.
Previous Pregnancy:	Includes all previous reported spontaneous terminations, previous induced abortions, children born still living and children born now dead.

Puerperium:	Period of time after delivery, usually six to eight weeks, during which all maternal reproductive organs return to the normal pre-pregnancy condition.
Stillbirth:	Any complete expulsion or extraction from its mother of a product of human conception, the weight of which is in excess of 350 grams, irrespective of the duration of pregnancy, resulting in other than a live birth, and which is not an induced termination of pregnancy.
Residence Data:	Vital statistics compiled on the basis of the usual place of residence of the person(s) to whom the vital event occurred.
Teenage Pregnancy:	A live birth, stillbirth or abortion occurring to a female under 20 years of age.
Trimester:	A three-month period of time. First trimester care, for example, refers to care initiated in the first three months of pregnancy.
Very Low Birth Weight:	Weight of a fetus or infant at delivery which is under 1,500 grams (less than 3 pounds, 5 ounces).
Weeks Gestation:	The number of weeks between the last reported normal menses and the delivery of the fetus or infant.
Years of Potential Life Lost (YPLL):	A measurement of the number of years of potential life lost by each death occurring before the average life expectancy.

RATES AND RATIOS

Abortion Ratio:	$\frac{\text{induced abortions}}{\text{live births}}$	x 1,000
Age-Adjusted Death Rate:	$\frac{\sum Ma \quad Pa}{P}$	x 1,000 or 100,000

Where M_a = age-specific death rate per 1,000 or 100,000 population for a given age-group

P_a = standard population in a given age-group

P = total standard population

Age-Specific Death Rate:	$\frac{\text{deaths in a specific age-group}}{\text{population in a specific age-group}}$	x 1,000
Age-Specific Fertility Rate:	$\frac{\text{live births in a specific age-group}}{\text{female population in a specific age-group}}$	x 1,000
Birth Rate:	$\frac{\text{live births}}{\text{total population}}$	x 1,000
Cause-Specific Death Rate:	$\frac{\text{cause-specific deaths}}{\text{total population}}$	x 100,000
Death Rate:	$\frac{\text{total deaths}}{\text{total population}}$	x 1,000
Divorce Rate:	$\frac{\text{divorces}}{\text{total population}}$	x 1,000
Marriage Dissolution Rate:	$\frac{\text{divorces and annulments}}{\text{total population}}$	x 1,000
Fertility Rate:	$\frac{\text{live births}}{\text{female population 15-44}}$	x 1,000
Stillbirth Rate:	$\frac{\text{stillbirths}}{\text{live births + stillbirths}}$	x 1,000
Hebdomadal Death Rate:	$\frac{\text{hebdomadal deaths}}{\text{live births}}$	x 1,000
Infant Death Rate:	$\frac{\text{infant deaths}}{\text{live births}}$	x 1,000
Marriage Rate:	$\frac{\text{marriages}}{\text{total population}}$	x 1,000
Maternal Death Rate:	$\frac{\text{maternal deaths}}{\text{live births}}$	x 10,000

Natural Increase Rate:	live birth rate minus total death rate	
Neonatal Death Rate:	neonatal deaths / live births	x 1,000
Out-of-Wedlock Birth Ratio:	out-of-wedlock births / live births	x 100
Perinatal Period III Death Rate:	perinatal period III deaths / live births + stillbirths	x 1,000
Post-Neonatal Death Rate:	post-neonatal deaths / live births	x 1,000
Teenage Pregnancy Rate:	live births, stillbirths, abortions for females in a specific age-group / female population in a specific age-group	x 1,000
Years of Potential Life Lost Rate	years of potential life lost / population	x 1,000

SYMBOLS AND ABBREVIATIONS

n.s.	not stated
n.a.	not available
n/a	not applicable
0.0	quantity or percent more than zero but less than 0.05