

Technical Notes

Definitions of Measures

Injury and Violence

Motor Vehicle Traffic Crash Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of motor vehicle traffic crash deaths per 100,000 population.

Numerator: Number of Utah resident deaths due to motor vehicle crashes (ICD-9 codes E810-E819; ICD-10 codes V02-V04 [.1-.9], V09.2, V12-14 [.3-.9], V19 [.4-.6], V20-V28 [.3-.9], V29-V79 [.4-.9], V80 [.3-.5], V81-V82 [.1], V83-V86 [.0-.3], V87 [.0-.8], V89.2).

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Homicide

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of homicide deaths per 100,000 population.

Numerator: Number of Utah resident deaths due to homicides (ICD-9 codes E960-E969; ICD-10 codes X85-Y09, Y87.1).

Denominator: Total number of Utah residents.

Notes: Does NOT include legal intervention. ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Unintentional Injury Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of unintentional injury deaths per 100,000 population.

Numerator: Number of Utah resident deaths due to unintentional injuries (ICD-9 codes E800-E869, E880-E929; ICD-10 codes V01-X59, Y85-Y86).

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Mental Health

Suicide

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of suicide deaths per 100,000 population.

Numerator: Number of Utah resident deaths due to intentional self-inflicted injury (ICD-9 codes E950-E959; ICD-10 codes X60-X84, Y87.0).

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Poor Mental Health Days

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of adults aged 18 years and older who reported poor mental health days.

Numerator: Number of Utah resident survey respondents who reported seven or more days when their mental health was not good in the past 30 days.

Denominator: Total number of Utah resident survey respondents excluding those with missing, “Don’t know/ Not sure,” and “Refused” responses.

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Question Text: “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good?”

Note: Age adjusted to U.S. 2000 standard population.

Lifestyle Risk

Cigarette Smoking

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of adults aged 18 years and older who reported cigarette smoking.

Numerator: Number of Utah resident survey respondents who have smoked at least 100 cigarettes in their lifetime and who now report smoking cigarettes every day or some days.

Denominator: Total number of Utah resident survey respondents excluding those with missing, “Don’t know/ Not sure,” and “Refused” responses.

Question Text: “Have you smoked at least 100 cigarettes in your entire life? Do you now smoke cigarettes every day, some days, or not at all?”

Note: Age adjusted to U.S. 2000 standard population.

Overweight or Obese

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of adults aged 18 years and older who were overweight or obese.

Numerator: Number of Utah resident survey respondents who had a body mass index (BMI) greater than or equal to 25.

Denominator: Total number of Utah resident survey respondents for whom BMI can be calculated from their self-reported weight and height (excludes unknowns or refusals for weight and height).

Question Text: “About how much do you weigh without shoes? About how tall are you without shoes?”

Notes: BMI is calculated by dividing weight in kilograms by the square of height in meters. Age adjusted to U.S. 2000 standard population.

Regular Physical Activity

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of adults aged 18 and older who reported regular physical activity.

Numerator: Number of Utah resident survey respondents who reported participating in moderate or vigorous physical activity.

Denominator: Total number of Utah resident survey respondents excluding those with missing, “Don’t know/ Not sure,” and “Refused” responses.

Note: Regular physical activity is defined by BRFSS definition of moderate physical activity for at least 30 minutes per day and five days a week OR vigorous physical activity for at least 20 minutes per day and three days a week.

Binge Drinking

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of adults aged 18 years and older who reported binge drinking during the 30 days prior to the survey.

Numerator: Number of Utah resident survey respondents who reported having 5 or more drinks on one occasion during the 30 days prior to the survey.

Denominator: Total number of Utah resident survey respondents excluding those with missing, “Don’t know/Not sure,” or “Refused” responses.

Question Text: “Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?”

Binge Drinking Among Adolescents

Source: Utah Youth Risk Behavior Surveillance System, Utah State Office of Education.

Definition: Percentage of high school students who reported binge drinking during the past 30 days.

Numerator: Number of Utah resident high school survey respondents who reported using having 5 or more drinks of alcohol in a row during the past 30 days.

Denominator: Total number of Utah resident high school survey respondents excluding those with missing, “Don’t know/Not sure,” or “Refused” responses.

Question Text: “During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?”

Responsible Sexual Behavior

HIV/AIDS

Source: HIV/AIDS Surveillance Program, Utah Department of Health.

Definition: Number of people believed to be living with HIV or AIDS per 100,000 population.

Numerator: Number of Utah residents believed to be living with HIV or AIDS.

Denominator: Total number of Utah residents.

Unintended Pregnancies

Source: Utah Pregnancy Risk Assessment Monitoring System (PRAMS), Utah Department of Health.

Definition: Percentage of women with live births who reported their most recent pregnancy was unintended.

Numerator: Number of Utah survey respondents who reported unintended births.

Denominator: Total number of Utah survey respondents.

Question Text: “Thinking back to just before you got pregnant, how did you feel about becoming pregnant?”

Adolescent Births

Source: Utah Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of live births per 1,000 adolescent females.

Numerator: Number of live births to Utah resident adolescent females aged 15-17.

Denominator: Total number of Utah resident adolescent females aged 15-17.

Note: The adolescent birth rate does not include abortions or miscarriages, and is an underestimate of the adolescent pregnancy rate.

Syphilis

Source: Bureau of Communicable Disease Control, Utah Department of Health.

Definition: Number of newly reported cases of primary and secondary syphilis per 100,000 population.

Numerator: Number of newly reported Utah cases of primary and secondary syphilis.

Denominator: Total number of Utah residents.

Chlamydia

Source: Bureau of Communicable Disease Control, Utah Department of Health.

Definition: Number of newly reported cases of chlamydia per 100,000 population.

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Numerator: Number of newly reported Utah cases of chlamydia.

Denominator: Total number of Utah residents.

Gonorrhea

Source: Bureau of Communicable Disease Control, Utah Department of Health.

Definition: Number of newly reported cases of gonorrhea per 100,000 population.

Numerator: Number of newly reported Utah cases of gonorrhea.

Denominator: Total number of persons in Utah.

Environmental Quality

Air Quality

Source: U.S. Environmental Protection Agency (EPA), Office of Air and Radiation, AIRS data.

Definition: Number of exceedences of the EPA health-based standards for Ozone, Particulate Matter, Carbon Monoxide, Sulfur Dioxide, Nitrogen Dioxide, and Lead.

Notes: An “exceedence” is a day on which the air content exceeded the criterion for that pollutant at any of Utah’s air monitoring stations. The health-based standards for the six criteria pollutants are:

Ozone - ozone level was >0.12 parts per million (ppm) on any hour of the day.

Carbon Monoxide - CO level was >35 parts per million (ppm) on any hour of the day.

Nitrogen Dioxide - NO₂ level was >0.053 parts per million (ppm) annual arithmetic mean.

Sulfur Dioxide - SO₂ level was >.14 parts per million (ppm) in 24 hour period.

Particulate Matter - PM₁₀ was >150 micrograms per cubic meter in 24 hour period.

Lead - Lead was =>1.5 micrograms per cubic meter as a quarterly average.

The number and location of monitoring stations across Utah changes over time in response to both scientific and political influences. Currently in 2002, there are 25 monitoring stations. Some stations measure several criteria pollutants and others are dedicated to a single pollutant. The monitor locations may be found at:

www.deq.state.ut.us/EQAMC/utahmap.htm.

Childhood Exposure to Secondhand Smoke

Source: Utah Health Status Survey, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of children aged 17 and under who were exposed to tobacco smoke inside the home during the month prior to the survey.

Numerator: Number of Utah resident children aged 17 and under in survey sample who lived in households in which one or more household members smoked tobacco inside the home during the month prior to the survey.

Denominator: Total number of Utah resident children aged 17 and under in survey sample.

Question Text: “The next few questions ask about cigarette smoking. In the past 30 days has anyone, including yourself, smoked cigarettes, cigars, or pipes **anywhere inside your home**? On how many of the past 30 days has someone, including yourself, smoked cigarettes, cigars, or pipes anywhere inside your home?”

Note: Health Status Survey data were weighted to reflect the Utah population distribution by age, sex, Hispanic status, and geographic area.

Foodborne Illness: *Salmonella*

Source: Communicable Disease Epidemiology Program, Utah Department of Health.

Definition: Number of culture-confirmed cases of illness caused by *Salmonella* species per 100,000 population.

Numerator: Number of culture-confirmed Utah cases of illness caused by *Salmonella* species.

Denominator: Total number of Utah residents.

Foodborne Illness: *E. Coli* O157:H7

Source: Communicable Disease Epidemiology Program, Utah Department of Health.

Definition: Number of infections caused by *Escherichia coli* 0157:H7 per 100,000 population.

Numerator: Number of Utah cases of *Escherichia coli* O157:H7 during the calendar year.

Denominator: Total number of Utah residents.

Immunization

Childhood Immunization 4:3:1:3:3

Source: National Immunization Survey, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Definition: Percentage of children aged 19-35 months who received the recommended vaccines (4 doses of DTaP, 3 polio, 1 MMR, 3 Hib, 3 hepatitis B).

Numerator: Number of Utah children aged 19-35 months in survey sample receiving at least 4 doses of DTaP, at least 3 doses of polio, at least 1 dose of MMR, at least 3 doses of Hib, and at least 3 doses of hepatitis B antigens.

Denominator: Total number of Utah children aged 19-35 months.

Question Text: "Looking at the shot record, please tell me how many times the child has received: 1) a D-T-P, D-T-A-P, pertussis shot, baby shot, or three-in-one shot; 2) a polio vaccine --pink drops, sometimes called O-P-V; 3) a measles shot or an M-M-R shot, that is, a measles, mumps, and rubella shot; 4) an H-I-B shot; 5) a hepatitis B shot."

Adult Influenza Immunization

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Number of adults aged 65+ who report receiving an influenza vaccination in the past 12 months.

Numerator: Number of Utah survey respondents aged 65+ who report receiving an influenza vaccination in the past 12 months.

Denominator: Total number of Utah survey respondents aged 65+.

Question Text: "During the past 12 months, have you had a flu shot?"

Note: Age adjusted to U.S. 2000 standard population.

Access to Health Care

Health Insurance Coverage

Data Source: Utah Health Status Survey, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of Utahns without health insurance coverage at the time of the survey interview.

Numerator: Number of Utah residents in the survey sample who lacked health insurance coverage at the time of the interview.

Denominator: Total number of Utah residents in the survey sample.

2001 Question Text: "Are [any of the members of your household/you] currently covered by health insurance?" (This measure is based on a group of questions asked of respondents.)

Note: Health Status Survey data were weighted to reflect the Utah population distribution by age, sex, Hispanic status, and geographic area. Health insurance was defined as including Medicaid, Medicare, and other government programs.

Prenatal Care

Source: Office of Vital Records and Statistics, Utah Department of Health.

Definition: Percentage of live born infants where prenatal care was reported to have been received in the first trimester.

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Numerator: Number of infants born to Utah women receiving prenatal care in the first trimester.

Denominator: Total number of Utah live births. (Births where prenatal care was unreported were counted in the denominator.)

Asthma Hospitalization Among Children

Source: Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health.

Definition: Number of hospitalizations among persons aged 17 years or younger with asthma as the principal diagnosis per 10,000 population.

Numerator: Number of hospitalizations among Utah children aged 0-17 with asthma (ICD-9 code 493) as the principal diagnosis.

Denominator: Total number of Utah children aged 0-17.

Notes: The primary diagnosis is the first-listed diagnosis on the discharge record. It does not necessarily indicate the primary reason for the hospitalization. Age adjusted to U.S. 2000 standard population.

Diabetes Hospitalization Among Adults

Source: Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health.

Definition: Number of hospital discharges for uncontrolled diabetes as the principal diagnosis per 10,000 population among adults aged 18-64.

Numerator: Number of hospitalizations among Utah residents aged 18 to 64 years with acute diabetes complications (e.g., ketoacidosis, diabetic coma, or hyperosmolarity) as the first-listed (principal) diagnosis (ICD-9 codes 250.02-250.03, 250.10-250.13, 250.20-250.23, 250.30-250.33).

Denominator: Total number of Utah residents aged 18 to 64.

Notes: The primary diagnosis is the first-listed diagnosis on the discharge record. It does not necessarily indicate the primary reason for the hospitalization. Age adjusted to U.S. 2000 standard population.

Pneumonia/Influenza Hospitalization Among Seniors

Source: Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health.

Definition: Number of hospitalizations among persons aged 65 years or older with preventable pneumonia or influenza as the first-listed diagnosis per 10,000 population.

Numerator: Number of hospitalizations among Utah residents aged 65 years or older with preventable pneumonia or influenza as the first-listed (principal) diagnosis (ICD-9 codes 481 or 487).

Denominator: Total number of Utah residents aged 65 years or older.

Notes: The primary diagnosis is the first-listed diagnosis on the discharge record. It does not necessarily indicate the primary reason for the hospitalization.

Regular Source of Care

Source: Utah Health Status Survey, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of persons who reported having a specific source of primary care, where they go if they are sick or need advice about their health.

Numerator: Number of Utah residents interviewed for the survey who reported that they had a specific place where they go for primary health care.

Denominator: Total number of Utah residents interviewed during the same survey period.

2001 Question Text: "Thinking about medical visits, is there a USUAL place that you go when you are sick or need advice about your health?"

Notes: A hospital emergency room is not included as a specific source of primary care. Health Status Survey data were weighted to reflect the Utah population distribution by age, sex, Hispanic status, and geographic area.

Mammography

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of women 40 years or older who reported having a mammogram in the last two years.

Numerator: Number of Utah female survey respondents aged 40 and older who report having a mammogram in the past two years.

Denominator: Total number of Utah female survey respondents aged 40 and older.

Question Text: “A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram? How long has it been since you had your last mammogram?”

Note: Age adjusted to U.S. 2000 standard population.

Chronic Conditions

Coronary Heart Disease Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of coronary heart disease (CHD) related deaths per 100,000 population.

Numerator: Number of Utah resident deaths with CHD (ICD-9 codes 402, 410-414, 429.2; ICD-10 codes I20-I25, I11) as the underlying cause of death.

Denominator: Total number of Utah residents.

Notes: The coding of death from CHD, especially use of 429.2 - “cardiovascular disease, unspecified” - varies geographically. Historically, epidemiologists have used both groups of ICD-9 rubrics to monitor CHD deaths. This has created differences in published mortality measures. To facilitate comparison with historical rates, both groups of codes are recommended as a chronic disease indicator. ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Stroke Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of stroke deaths per 100,000 population.

Numerator: Number of deaths due to stroke (ICD-9 codes 430-438; ICD-10 codes I60-I69) among Utah residents.

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

All Cancer Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of deaths from all cancers per 100,000 population.

Numerator: Number of Utah resident deaths due to cancer (ICD-9 codes 140-208; ICD-10 codes C00-C97).

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 population.

Lung Cancer Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of deaths from lung cancer per 100,000 population.

Numerator: Number of deaths due to lung cancer (ICD-9 code 162; ICD-10 codes C33-C34) among Utah residents.

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Female Breast Cancer Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of deaths from cancer of the breast per 100,000 female population.

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Numerator: Number of deaths due to breast cancer (ICD-9 code 174; ICD-10 code C50) among Utah women.

Denominator: Total number of Utah females.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Colorectal Cancer Deaths

Source: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of deaths from cancer of the colon or rectum per 100,000 population.

Numerator: Number of deaths due to colorectal cancer (ICD-9 codes 153, 154; ICD-10 codes C18-21) among Utah residents.

Denominator: Total number of Utah residents.

Notes: ICD-9 and ICD-10 adjusted for comparability. Age adjusted to U.S. 2000 standard population.

Hepatitis A

Source: Communicable Disease Epidemiology Program, Utah Department of Health.

Definition: Number of reported hepatitis A cases per 100,000 population.

Numerator: Number of reported Utah hepatitis A cases.

Denominator: Total number of Utah residents.

Tuberculosis

Source: Bureau of Communicable Disease Control, Utah Department of Health.

Definition: Number of cases of reported tuberculosis per 100,000 population.

Numerator: Number of reported Utah tuberculosis cases.

Denominator: Total number of Utah residents.

Note: The most common site of infection is the lung, but other organs may be involved.

Healthy Births

Infant Deaths

Source: Office of Vital Records and Statistics, Utah Department of Health.

Definition: Number of infants who died before their first birthday per 1,000 live births.

Numerator: Number of Utah infants who died before their first birthday (under 365 days), after being born alive.

Denominator: Total number of Utah live births.

Low Birth Weight

Source: Office of Vital Records and Statistics, Utah Department of Health.

Definition: Percentage of live-born infants weighing less than 2500 grams (about 5.5 pounds).

Numerator: Number of Utah live-born infants weighing under 2500 grams.

Denominator: Total number of Utah live births.

Children in Poverty

Childhood Poverty

Source: U.S. Current Population Survey.

Definition: Percentage of children (aged 17 or under) living below the poverty level.

Numerator: Number of Utah children (aged 17 or under) living below 100% of the Federal Poverty Level (FPL).

Denominator: Total number of Utah children (aged 17 or under).

Notes: Estimates for persons in poverty come from both the decennial census every ten years, and from the

Census Bureau's Current Population Survey (CPS) every year. CPS data for the U.S. and states for all persons

for every year may be obtained from direct survey estimates, but data on children, and at the county level, must be estimated from a statistical model. The county numbers presented here are numbers from that model, and are not necessarily identical to estimates that come directly from the CPS or the U.S. decennial census. The FPL depends on a family's income and the number of persons in the family, and is established annually by the U.S. Department of Health and Human Services.

Overall Health Status

Life Expectancy at Birth

Source: Office of Vital Records and Statistics, Utah Department of Health.

Definition: Estimate of the expected average number of years of life based on their current age and current age-specific death rates.

Note: The Reed-Merrill method was used to compute life expectancy.

Poor Physical Health Days

Source: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health.

Definition: Percentage of adults aged 18 years and older who reported poor physical health.

Numerator: Number of Utah survey respondents who reported seven or more days when their physical health was not good in the past 30 days.

Denominator: Total number of Utah survey respondents excluding those with missing, "Don't know/Not sure," or "Refused" responses.

Question Text: "Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health good?"

Note: Age adjusted to U.S. 2000 standard population.

Age-Adjusted Rates

A crude rate is a valuable measure, but can be problematic when comparing rates for different populations. The crude mortality rate for a population depends on the rate in each age group as well as on the proportion of people in each age group. Therefore, the crude rate for most causes of death will be higher in populations with a large proportion of elderly individuals, and lower in populations with a large proportion of young individuals (as in Utah). One way to compare two populations is to compare the age-specific rates, but that may be cumbersome.

An adjusted rate is an overall summary measure that helps control for demographic differences between populations. The most commonly used adjusted rate is the age-adjusted rate, which controls for age differences between two or more populations. When comparing across geographic areas, some method of age adjusting is typically used to control for area-to-area differences in health events that can be explained by differing age distributions of the area populations. For example, an area that has an older population will have higher crude (not age adjusted) rates for cancer, even though its exposure levels and cancer rates for specific age groups are the same as those of other areas. One might incorrectly attribute the high cancer rates to some characteristic of the area other than age. Age-adjusted rates control for age effects, allowing better comparability of rates across areas. Age adjustment may also be used to control for age effects when comparing across several years of data, as the age distribution of the population changes over time.

Direct standardization adjusts the age-specific rates observed in the small area to the age distribution of a standard population.⁴⁰ Indirect standardization is based on standard mortality and morbidity ratios (SMR), and adjusts the age-specific rates found in the standard population to the age distribution of the small area or subpopulation.

In 1998, the Centers for Disease Control and Prevention released new standard population weights for age adjustment, replacing the 1940 U.S. standard population weights that had been used for the previous several decades. The table to the right contains the standard population weights published by the CDC. They represent the proportion of the U.S. 2000 population in each age group, and sum to 1.0. Only rates adjusted to the same standard population can be compared. For instance, you may not compare rates age adjusted using the U.S. 1940 standard population with rates that were age adjusted using the U.S. 2000 population.

Master List: 2000 U.S. Projected Population and Age Adjustment Weights

Age	Population in Thousands	Adjustment Weight
All Ages	274,634	1.000000
Under 1 Year	3,795	0.013818
1 Year	3,759	0.013687
2–4 Years	11,433	0.041630
5 Years	3,896	0.014186
6–8 Years	11,800	0.042966
9 Years	4,224	0.015380
10–11 Years	8,258	0.030069
12–14 Years	11,799	0.042963
15–17 Years	11,819	0.043035
18–19 Years	8,001	0.029133
20–24 Years	18,257	0.066478
25–29 Years	17,722	0.064530
30–34 Years	19,511	0.071044
35–39 Years	22,180	0.080762
40–44 Years	22,479	0.081851
45–49 Years	19,806	0.072118
50–54 Years	17,224	0.062716
55–59 Years	13,307	0.048454
60–64 Years	10,654	0.038793
65–69 Years	9,410	0.034264
70–74 Years	8,726	0.031773
75–79 Years	7,415	0.027000
80–84 Years	4,900	0.017842
85 Years and Over	4,259	0.015508

Population Estimates

The population estimates for the state, local health districts, and counties are taken from the Governor’s Office of Planning and Budget (GOPB) for year 2002. The population estimates for the small areas are drawn from the U.S. Census 2000 Zip Code Tabulation Areas (ZCTA) and are adjusted to agree with the GOPB estimates when aggregated into county populations.

The Governor’s Office of Planning and Budget releases updated Utah mid-year (July 1) population estimates and projections by year, county, sex, and single year of age. Those estimates are generated by the Utah Process Economic and Demographic (UPED) model, and are typically released each January with the Economic Report to the Governor. Numbers for the GOPB model and Small Areas model are available on the IBIS query system (from IBIS Homepage, click “Query Databases” and select “General Population Estimates” or “Population Estimates by Small Area”).

Survey Estimates

Surveys exclude certain population segments from the sampling frame, including persons in group living quarters (e.g., military barracks, nursing homes) and households without telephones. As with all surveys, data may be subject to error as resulting from non-coverage (e.g., lower telephone coverage among some low social economic status populations), non-response (e.g., refusal to participate in the survey or answer specific questions), or measurement (e.g. social desirability or recall bias). Interviewer training and monitoring and strict adherence to good survey research protocols reduces error from these sources.

The Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), National Immunization Survey (NIS), Health Status Survey (HSS), and Pregnancy Risk Assessment Monitoring System (PRAMS) are random sample data sets that are gathered from the target population. Each of these surveys has a specific design methodology for collecting and weighting the sample. For more information on this issue consult the reference for the respective survey.

BRFSS: <http://www.cdc.gov/brfss/training.htm>

YRBSS: <http://www.cdc.gov/HealthyYouth/yrbs/data/index.htm>

NIS: <http://www.cdc.gov/nis/pdfs/nisdug02.pdf>

HSS: http://health.utah.gov/opha/publications/2001hss/ovr/01HSSOvr_TechNotes.pdf

PRAMS: <http://www.cdc.gov/reproductivehealth/methodology.htm>

Small Number Variability

For many small areas in Utah the rates for the community health indicators are based on small numbers of events. We have decided to report these rates even for very small numbers, because we believe that the information will be useful. It is important to remember that rates based on small numbers of events are unstable. In common language, that means that they will vary from year to year even if nothing else changes. As such, those variations may not reflect a change in the underlying risk in the population. Therefore, it is important not to overreact to a rate that is higher or lower than expected. You will notice that the confidence interval will be wide for those rates that are based on a low number of events.

ICD-9 and ICD-10 Comparability

About every 10-20 years the International Classification of Diseases (ICD) is revised to stay abreast of advances in medical science and changes in medical terminology. Each of these revisions produces breaks in the continuity of cause-of-death statistics. Discontinuities across revisions are due to changes in classification and rules for assigning underlying cause of death. Classification and rule changes impact cause-of-death trend data by shifting deaths away from some cause-of-death categories and into others. Comparability ratios measure the effect of changes in classification and coding rules.

The comparability ratios are based on a comparability study in which the same deaths were coded according to both the Ninth and Tenth Revisions. The comparability ratio was calculated by dividing the number of deaths classified by ICD-10 by the number of deaths classified by ICD-9. The resulting ratios represent the net effect of the Tenth Revision on cause-of-death statistics and can be used to adjust mortality statistics for causes of death classified by the Ninth Revision to be comparable with cause-specific mortality statistics classified by the Tenth Revision. A comparability ratio of 1.00 can be interpreted as the same number of deaths were found under both revisions of the ICD. A comparability ratio less than 1 means fewer deaths for a particular cause were coded under ICD-10 compared with the comparable cause under ICD-9. Comparability ratios greater than 1 means more deaths for a particular cause were coded under ICD-10 than the comparable cause under ICD-9.

It should be noted that the comparability ratio represents a net difference in the number of deaths classified for a particular cause between the two revisions of the ICD. That is, a cause of death may include additional deaths from a different cause while losing deaths to a third cause. One such example is diseases of heart, which had additional deaths under ICD-10 from pneumonia (compared to ICD-9), but lost deaths due to cardiac arrest, an ill-defined condition in ICD-10 (but part of heart disease under ICD-9). Therefore, a ratio of 1.00 does not necessarily imply perfect comparability. It also is possible there are deviations from a cause-specific comparability ratio by demographic variables, such as age, sex, race, and geographic region.

For more information about the national comparability study, please see the CDC publication: *National Vital Statistics Reports*, Volume 49, Number 2, "Comparability of Cause of Death Between ICD-9 and ICD-10: Preliminary Estimates," by Robert N. Anderson, et al. This publication can be viewed at the following Internet address: www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_02.pdf. To view this PDF formatted file, you will need the Adobe Acrobat Reader software.

Life Expectancy

Life expectancy at birth represents the average number of years an individual may expect to live at the time of birth. Life expectancies are computed through the use of life tables. There are two types of life tables—generational or cohort life tables and current life tables.

Generational life tables are constructed by following the mortality experience of a particular birth cohort until no lives remain in the group. This method requires the collection of data over many years and is therefore impractical in most applications.

Current life tables are constructed using age-specific death rates from an actual population during a specific time period to compute the mortality experience of a hypothetical cohort. The life expectancies presented in this publication are based on current life tables computed using 2002 death data. The life expectancies obtained represent the expected mortality experience of a hypothetical cohort subjected throughout its lifetime to death rates prevailing for the Utah population in 2002. The tables were constructed according to the Reed-Merrill method.

Utah Small Area Information

In order to facilitate reporting data at the community level, Utah has been divided into 61 small areas. Areas were determined based on specific criteria, including population size, political boundaries of cities and towns, and economic similarity. The health measures that are reported by small area are those with events occurring with sufficient frequency to be meaningful. The IBIS query system allows you to query by small area for the Birth Certificate and Infant Mortality databases, the Mortality database, the Hospital Discharge and Emergency Department Visit databases, and the Utah Population Estimates database. See page 146 for small area descriptions.

Ranks and Category Colors

The ranks are based on the age-adjusted rate if it is available; otherwise the crude rate is used.

The color-coded categories in this report are constructed using percentiles. The five categories represent the top 10% (white), next 20% (light blue), middle 40% (blue), next 20% (medium dark blue), and bottom 10% (dark blue) of the ranked areas. Beginning with white, the most desirable outcome, and progressing through to dark blue, the least desirable outcome, the meaning associated with the color remains the same although the category name may change. As an example, for an indicator such as “Heart Disease Deaths” a low rate is desirable and white would be named “lowest”, light blue is “low”, blue is “average”, medium dark blue is “high”, and dark blue is “highest”. For an indicator such as “Prenatal Care” a high rate is desirable and the category names will reverse, white becomes “highest”, light blue is “high”, blue is “average”, medium dark blue is “low”, and dark blue is “lowest”. The names have reversed but the meaning remains the same; white is still the most desirable outcome and dark blue is still the least desirable outcome.

When areas have the same rate and rank they are assigned to the same color category, they do not cross a boundary into another color. Whenever tied scores initially crossed a category boundary, both scores were assigned to the higher category. This may increase (or decrease) the standard percentiles assigned to the color categories. For example, because of tied ranks “lowest” may represent 16% of the areas instead of the standard 10%.