

2011



UTAH DEPARTMENT OF
HEALTH

2011 Utah State Health Profile

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Description of the Utah State Health Profile

The state of Utah is widely recognized as a healthy place to live, work, do business, and raise a family. The Utah Department of Health is committed to ensuring Utahns are the healthiest people in the nation. Conducting an assessment of the state's health is the foundation for understanding the health of our residents and communities. This Utah State Health Profile was developed to provide a current and robust understanding of the health status concerns that need to be considered as we develop the Department's 2011–2012 Strategic Plans.

As a companion document to the online Indicator Based Information System for Public Health (IBIS-PH) Public Health Outcome Measures Report (<http://ibis.health.utah.gov/phom>), this report is intended to provide easy access to information on Utah's priority health issues. The Strategic Initiatives Steering Committee's State Health Assessment Workgroup chose the priority areas and the Indicators within them in order to provide data and information to track trends and guide policy decisions, set priorities, and establish long-range strategies as we address our Department's four strategic goals: Healthiest People, Health in Health Reform, Transform Medicaid, and UDOH - A Great Organization.

While based on legacy information housed in the IBIS-PH system, this report begins a new journey for UDOH to enhance performance-orientation and overall accountability. The report will inform our strategic planning activities and our planned process to engage partners and stakeholders in developing a statewide community health assessment and committing to a statewide community health improvement plan.

The report provides descriptions of [underlying population demographics](#) and information on ten priority health areas: [healthy births](#), [obesity](#), [access to health care](#), [air quality](#), [diabetes](#), [cancer](#), [tobacco use](#), [heart disease](#), [injury prevention](#), and [mental health](#). The report also includes measures and descriptions for each priority area in the Indicator Reports. Where possible, we have included the U.S. Department of Health and Human Services Healthy People 2020 objectives for each Indicator. All are highlighted in the [Summary of Findings](#) at the beginning of the report. We encourage you to read this report, and as you have questions and comments, please share them with members of the State Health Assessment Workgroup and/or [Kathryn Marti](#), Director of the Office of Public Health Assessment.

Acknowledgements:

Special thanks are extended to the State Health Assessment Workgroup members and the program staff that helped collect the data and write the descriptions for each of the Indicators defining the ten priority areas. Workgroup members are: Kathryn Marti, Chair and lead report editor; Kim Neerings, technical lead and editor; Marc Babitz; Michael Friedrichs; Sam LeFevre; Karyn Leniek; Laverne Snow; and Tong Zheng. We are indebted to the more than 100 Indicator "owners" and editors who provided information for this report and keep IBIS updated. And we are grateful to Barry Nangle, Director of the Center for Health Data and Robert Rolfs, UDOH Deputy Director, Chair of the Strategic Initiatives Steering Committee and Chair of the Strategic Planning Workgroup, who provide important feedback and ongoing support for IBIS in general and this report in particular. Finally, we want to acknowledge the CDC National Public Health Improvement Initiative and the Affordable Care Act of 2010 for contributing partial financial support of these activities.

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Summary of Findings

Underlying Demographic Context of the Population

The characteristics of Utah's population, such as age distribution, cultures, racial and ethnic composition, educational achievement, income levels, and living and working conditions, affect population health in important ways. For example, children and the elderly have an increased susceptibility to certain kinds of diseases. We refer to these measures collectively as the demographic context of the Utah population or social determinants of health. Utah's population was 2,763,885 in the 2010 Census, a 23.8% increase from 2000. We summarize a number of these population characteristics here.

Age Distribution of the Population

- The Utah population is the youngest in the nation (median age 29.2 years versus 37.2 nationally in 2010). Because many diseases, such as cancer and heart disease, are less common among younger persons, Utah's population is healthier than the U.S. population. In order to remove the "age effect" so that Utah can be compared to the entire U.S. population or to other states, health data are often age adjusted for presentation in reports such as this one.
- Childhood is the age group during which health interventions, such as immunizations, result in the best long term health benefit. Because Utah's population has a higher proportion of young people, Utah will need to expend more resources per capita for these critical interventions for children, compared to older population states.

Racial and Ethnic Composition of the Population

- The White, non-Hispanic population continues to be the largest in Utah. However, the minority Black, Asian, Pacific Islander, and Hispanic/Latino populations in Utah are growing at faster rates than the state population as a whole.
- The proportion of non-White race groups is still relatively small, though, making comparisons across racial and ethnic groups problematic at times. But we do know that health disparities exist and they affect the overall health status of the state.
- According to the 2010 American Community Survey, when Utah is compared to the entire U.S. population:
 - A larger percentage of the Utah population is White and non-Hispanic (80.3% versus 63.7%).
 - A smaller percentage is Hispanic/Latino (13% versus 16.3%).
 - A smaller percentage is Black (1.0% versus 4.8%).
 - A larger percentage is American Indian/Alaska Native (1.2% versus 0.8%).
 - A larger percentage is Native Hawaiian/Pacific Islander (0.9% versus 0.2%).
- Some racial groups have a genetic predisposition for certain kinds of diseases. As our racial distribution changes, we can expect to see changing trends in those diseases.

Education Level in the Population

- Over the last decade, education levels have improved in Utah and the U.S. Among Utah adults aged 25 and over in 2010, 90.6% were high school graduates or higher and 29.3% had a bachelor's or advanced degree. This finding compares with 87.7% and 26.1% in 2000. A larger percentage of Utahns had at least a high school education when compared to the U.S. (90.6% versus 85.6% respectively in 2010).
- Education level is strongly related to health status. Persons with a better education are more likely to understand the consequences of life choices, are more capable to make good life choices, and are more able to deal with stress and other environmental factors that influence health. In addition, education strongly correlates with income and work benefits.

Household Income

- Utah's median household income increased steadily from 1984 to 2008 and has been higher than the U.S. since 1992. Reflecting the recent economic downturn, this figure decreased in Utah between 2008 and 2009 (from \$56,633 to \$55,117) and remained lower in 2010 (\$54,744), though still higher than the U.S. figure (\$50,046). However, due to Utah's larger families, per capita income was lower in the state (\$22,059) compared with the U.S. (\$26,059).

- Households with higher incomes have better health care coverage and access to health care services. Persons with higher incomes are more likely to be able to have healthier diets, participate in recreational and personal fitness activities, and deal with stress.

Persons Living in Poverty

- From 2008 to 2010, the overall percentage of Utahns living in poverty increased from 9.7% to 13.2%, an increase of 36%.
- In 2010, approximately 360,400 Utahns were living in poverty.
- Persons living in poverty often have worse health measures than persons in more affluent households.

Childhood Poverty

- From 2008 to 2010, there was a 50% increase in the percentage of Utah children aged birth-17 living in poverty, from 10.5% to 15.7%. The percentage in Utah remains lower than the U.S. (21.6% in 2010). Before the country's recent economic woes, the Utah childhood poverty rate had been relatively stable for many years, hovering between 10% and 12% from 2000-2008.
- In 2010, approximately 135,400 children age 17 and under were living in poverty.
- Poverty in the early years of a child's life can have especially harmful effects on health and development.

Deaths From All Causes

- Utah's age-adjusted death rate has decreased over time, from 801/100,000 population in 1990 to 686/100,000 in 2010. In 2009, the latest comparable year, Utah's age-adjusted death rate was 655/100,000 compared to a U.S. rate of 790/100,000.
- The overall death rate of a population reflects the average life expectancy of individuals in that population. The lower the death rate, the higher the life expectancy.

Birth Rates

- In 2010, there were 52,164 live births to Utah residents, a rate of 18.3 per 1,000 Utahns. Utah continues to report the highest birth rate in the U.S., with 19.2 live births per 1,000 total population in 2009 (the latest year for which U.S. preliminary data are available for comparison). The preliminary U.S. birth rate in 2009 of 13.5 per 1,000 population was considerably lower. And according to the 2010 American Community Survey, Utah women aged 15-50 have the most children (78/1,000 versus the national average of 55/1,000).

Life Expectancy at Birth

- In Utah, life expectancy at birth for males increased from 72.4 years in 1980 to 78.1 years in 2010, and for females from 78.6 to 82.2 years. In comparison, life expectancy at birth in the U.S. rose from 70.0 to 75.7 years for males, and 77.4 to 80.8 years for females.
- As life expectancy increases, the proportion of older individuals living in society increases, too. It is important to look at ways that those added years can be lived in good health.

Healthy Births

A healthy pregnancy and birth is vital to the well-being of women and infants particularly, but also families and communities. Preconception and prenatal care can reduce birth defects, low birth weight, and other preventable problems. Adolescents have a higher risk of a number of adverse pregnancy outcomes.

Infant Mortality

- In 2010, 251 Utah infants died during their first year of life reflecting an infant mortality rate of 4.8 infant deaths per 1,000 live births. Utah's infant mortality rate has declined since 1980 when it was 10.5.
- While Utah's overall rate is lower than in the U.S. as a whole, there are disparities by racial groups. For Utah's Asian and Pacific Islander populations, the rate of infant mortality is nearly twice that of Whites. Among Black women, the rate is more than double that of Whites.
- Three causes account for more than half of all infant deaths in Utah: conditions in the perinatal period, birth defects, and other medical conditions.

Prenatal Care

- In 2010, 73.1% of pregnant women in Utah received prenatal care in the first trimester; an increase from 71.6% in 2009.

- There are wide disparities among Utah's racial and ethnic groups in the percentages of women who receive early prenatal care. Lack of early prenatal care is strongly linked with poverty and a lack of insurance coverage.
- Women who receive early and consistent prenatal care enhance their likelihood of giving birth to a healthy child. Health care providers recommend that women begin prenatal care in the first trimester of their pregnancy.

Low Birth Weight

- Utah's rate of low birth weight was 7.0% in 2010. Low birth weight is defined as less than 2,500 grams or about 5 pounds, 8 ounces.
- Rates of low birth weight continue to rise in Utah and in the U.S. The percentage of Utah babies born at a low birth weight increased from 6.0% in 1991 to 7.0% in 2010.
- Low birth weight increases an infant's risk for mortality and morbidity.
- Utah's hospital discharge data show that hospital costs for a low birth weight infant are 20 times higher than those of a normal weight newborn.

Adolescent Births

- Utah's adolescent birth rate was 27.6 births per 1,000 females aged 15-19 in 2010.
- Utah's adolescent birth rate has declined steadily since 2007 and continues to be below the U.S. rate.
- Birth rates for women aged 15-19 vary substantially by race and ethnicity.
- Bearing a child during adolescence is associated with long-term difficulties for the mother, her child, and society.

Maternal Mortality

- Pregnancy-related mortality in Utah increased in 2009 to 16.7 maternal deaths per 100,000 live births after two years of declines from a high of 20.6 in 2006. Some of the fluctuation in this rate in Utah may be attributable to the small numbers involved.
- The maternal mortality rate has also increased in the U.S. recently. In 2007, the most recent year with comparable data, Utah's rate was 16.3 versus the U.S. rate of 12.7 deaths per 100,000 live births.
- The health of mothers prior to conception is a significant contributor to a healthy pregnancy. For many of Utah's healthy birth indicators, improving maternal preconception health is a way to improve outcomes.

Obesity and Related Factors

People who are overweight or obese are at increased risk for weight-related chronic diseases such as hypertension, high low-density lipoprotein (LDL) cholesterol, type 2 diabetes, coronary heart disease, stroke, and osteoarthritis. Physical activity has been shown to reduce the risk of many of these same diseases, and improve general physical and mental health. While breastfeeding imparts health benefits to both babies and mothers, it has been shown that mothers who breastfeed, lose the weight gained during pregnancy more quickly than mothers who do not breastfeed; and that breastfeeding also lowers the risk of a number of health problems for babies, including obesity.

Obesity Among Adults

- Over the past 20 years, obesity rates have increased dramatically in Utah, the nation and the world. This obesity epidemic affects all age groups.
- In 2010, nearly one in four Utah adults were obese (24.0%) and about two-thirds (59.7%) were at an unhealthy weight. These rates increased from 10.5% and 39.3%, respectively, in 1989.
- Hawaiian/Pacific Islanders, Blacks, and American Indians/Alaska Natives have higher obesity rates compared with other races. As Utahns' household incomes decrease their rates of obesity increase. Utahns with less education tend to have higher rates of obesity.

Obesity Among Children and Adolescents

- The percentage of obese elementary school students in Utah has increased dramatically over the past 16 years. The percentage of obese third grade boys increased by 97%, from 6.0% in 1994 to 11.8% in 2010. The percentage of obese third grade girls increased by 40% over the same time period, from 6.0% to 8.4%. Overall, 9.7% of elementary school students were obese and 20.4% were at an unhealthy weight in 2010.

- Data from a 2011 high school survey show that approximately 8.6% of Utah high school students are obese and 20.1% are at an unhealthy weight. The high school obesity rate rose from 5.4% in 1999.
- In all age groups, males have a higher obesity rate compared to females. In elementary school, the overall obesity rate increases with grade, primarily due to increases in the male obesity rate.
- With this increase in child and adolescent obesity, diseases previously thought to be diseases of adults, such as type 2 diabetes, high blood pressure, and high cholesterol, are now being diagnosed in children and adolescents.

Physical Activity: Recommended Levels Among Adults

- The types of physical activities that can help to moderate weight have become less a part of modern life in recent years with the increase in sedentary work environments and the lure of computers and television.
- In 2009, only 58.7% of Utah males and 56.6% of Utah females reported getting the recommended amount of physical activity.

Physical Activity Among Adolescents

- In 2011, 40.7% of girls and 55.7% of boys in Utah high schools reported getting at least 60 minutes of physical activity at least 5 days per week, which is one measure of an adequate amount of physical activity for this age group.

Breastfeeding

- For nearly all infants, breastfeeding is the best source of nutrition and immunologic protection.
- Provisional data of 2008 births from the Centers for Disease Control and Prevention National Immunization Survey show that most Utah mothers breastfed their infants, at least initially. In 2008, 84.5% of Utah mothers initiated breastfeeding, 61.5% breastfed at least 6 months, and 29.3% breastfed at least 12 months. Those who exclusively breastfeed are in the minority, with 44.1% exclusively breastfeeding at 3 months and only 17.0% exclusively breastfeeding for 6 months. Breastfeeding rates in Utah have remained relatively unchanged from 2005-2008 births.
- Utah data from the 2000 Pregnancy Risk Assessment Monitoring System (PRAMS) indicate that the following characteristics are significantly related to discontinuation of breastfeeding by 4 months of age: young maternal age (≤ 17 years, 18-19 years), less than high school education, other than White race, Hispanic ethnicity, unmarried, unintended pregnancy, Medicaid coverage before conception, WIC enrollment during pregnancy, postpartum depression, smoking, and traumatic stress during pregnancy.

Access to Health Care

Access to health care is an issue for many Utah residents, whether it is due to financial barriers (poverty and/or lack of insurance), geographic barriers (distance to needed services), cultural barriers (including language/translation issues), or when needed services are not available. Delaying needed health care for whatever reason can lead to worsening health problems that are more difficult and expensive to treat than those avoided completely or treated earlier.

Health Insurance Coverage

- An estimated 10.6% of all Utah residents did not have health insurance coverage in 2010. This means that roughly 301,700 people were uninsured. The estimate is based on a Utah land-line only telephone survey that does not reach households without phones or those with cell phones only. Research shows that people with cell phones only are more likely to be uninsured.
- The estimate may actually be as high as 15.3%, or 421,900 Utah residents, according to a Census Bureau survey that is mailed and includes follow-up phone calls and face-to-face interviews when needed. This survey does reach people with cell phones only and people without phones at all. By either measure, the uninsured rate in Utah has increased in recent years.

Physicians per 10,000 Civilian Population

- The physician supply in Utah has kept up with population growth but is lower than in the U.S as a whole, with the gap widening over time. From 1997 to 2008, there have been between 19.6 and 21.2 active physicians per 10,000 civilian population, with 20.8 in 2008 compared to 27.7 per 10,000 civilian population in the U.S. The ratio of physicians to persons in a population is an indication of the capacity of the health system and the access to care for persons in that population.

Primary Care Services for Medically Underserved Populations

- The supply of physicians is not equitable across the state. There are few providers in many rural and frontier parts of the state, and in lower-income neighborhoods within Utah's urban areas. Utah has 29 Health Professional Shortage Areas (HPSAs) that are either full-county or partial county in size. A primary care HPSA indicates an area with a shortage of primary care providers serving the designated population. Some HPSAs are based solely on the population-to-provider ratio, while others use both population-to-provider ratio and percent low income population. For example, Salt Lake County has 6 HPSAs designated due to the shortage of primary care physicians serving the low-income population.

Immunizations 4:3:1:3:3:1

- In 2010, an estimated 70.6% of 2-year-old children in Utah had received all recommended immunizations. This percentage decreased from 76.6% in 2008 and slightly increased from 70.3% in 2009. This means that in 2010, 29.4% of 2-year-old children in Utah were not being protected against at least some preventable serious childhood illnesses.
- Immunizations are the most cost-effective health prevention measures and are seen as one of public health's great success stories in the 20th century.
- By two years of age, it is recommended that all children should have received 4 doses of diphtheria-tetanus-pertussis (DTP), 3 doses of polio, 1 dose of measles-mumps-rubella (MMR), 3 doses of Hepatitis B, 3 doses of Haemophilus Influenzae type B (Hib), and 1 dose of Varicella vaccine. This recommendation is referred to in shorthand as "4:3:1:3:3:1."

Cost as a Barrier to Health Care

- In 2010, the crude percentage of Utah adults who reported being unable to see a doctor in the past 12 months due to cost was 14.2%. This is the highest the measure has been since being tracked starting in 2003.
- This percentage was the highest for adults aged 18-24 (20.5%) and lowest for Utah adults aged 65 and older (3.8%).
- Utah adults with low incomes had a higher rate of reporting cost as a barrier to health care than those with higher incomes as did those without health insurance versus the insured.

Medicaid and CHIP Penetration

- In 2010, approximately 7.0% of Utah children aged 0-18 years had no health insurance coverage. This represents a slight increase from the previous year (6.7%), though this change was not statistically significant.
- The 2010 Behavioral Risk Factor Surveillance System (BRFSS) estimated that approximately 70% of uninsured children in Utah were income eligible for health care services through Children's Health Insurance Program (CHIP) or Medicaid programs. It must be kept in mind, though, that eligibility determination requires a review of circumstances in addition to income.

Air Quality

Air pollution contributes to a number of health problems for many Utahns. How air pollution affects an individual's health depends on the particular pollutants that individual is exposed to, the length of time and concentration of the exposure, and that individual's tolerance level and other health risks. Air pollution can indirectly affect health through deposition into drinking water sources or by entering the food chain. Poor air quality is thought to exacerbate asthma and heart disease and increase the risk of developing respiratory infections. Poor air quality may also impact fetal development. The rate of adverse birth outcomes in newborns has increased in Utah over the last 10 years. Approximately 7.0% of births will be low birth weight and 9.8% will be pre-term.

Air Quality: Ozone and PM2.5

- Because it is not possible to monitor for all possible air pollutants, certain pollutants such as fine particulate matter (PM2.5) and ozone are used to understand public health risk due to air pollution.
- During the last 10 years, Utah experienced an average of 27 days annually where the levels of PM2.5 exceeded the National Ambient Air Quality Standards (NAAQS), and 25 days where levels of ozone exceeded the NAAQS.
- These days of poor air quality are geographically confined to the more urbanized counties in the state. Not all residents will experience all days of poor air quality.

Asthma-related Emergency Department Visits

- In Utah, there are approximately 25 emergency department visits per 10,000 persons each year due to asthma. This rate has remained relatively constant since the year 2000.
- Asthma emergency department visits are higher among male children and adolescents. Among adults, females have higher rates.
- An average of 1,400 Utahns annually will be admitted to a hospital as a result of their asthma.

Heart Attack: Hospitalizations

- While the rate of hospitalizations for heart attack has dropped significantly over the past 10 years in Utah, an average of 24 persons per 10,000 are admitted to the hospital for heart attacks every year.
- Recent studies have shown significant relationships between air pollutants and increased risk of heart attack or other forms of coronary heart disease. This increased risk is synergistic with lifestyle risks for heart attack such as obesity and smoking.

Diabetes

Diabetes is a serious chronic illness that affects an increasing number of people. It is the leading cause of blindness among individuals under age 75, non-traumatic lower-extremity amputations, and renal failure. Diabetes is costly and burdens the health care system, with at least \$116 billion in direct medical costs every year. Children born in the year 2000 have a one in three chance of developing diabetes during their lifetime.

Diabetes Prevalence

- The prevalence of diabetes continues to increase, both nationally and in Utah. Several factors contribute to this increase, including rising rates of obesity and sedentary lifestyles, aging population, increasing numbers of racial and ethnic minorities, and improvements in clinical diagnoses of diabetes.
- In 2010, approximately 6.5% of Utah adults aged 18 years and older had been diagnosed with diabetes, more than double the 1989 prevalence of 3.1%. This means that roughly 128,000 Utah adults had been diagnosed at some time in their lives, while studies show that an additional 47,000 Utah adults may have diabetes but don't yet know it.
- The age-adjusted percentage of adults with diabetes in Utah is lower than that for the U.S. (7.2% versus 8.5% in 2010).
- Diabetes prevalence varies by ethnicity and race. American Indian/Alaskan Native Utah adults have a significantly higher prevalence than the Utah population as a whole, as do adult Latino/Hispanic residents.

HEDIS (Healthcare Effectiveness Data and Information Set) Measures: Diabetes Care - Hemoglobin A1c (A1C)

- For people with diabetes, the A1C test is an important measure of blood sugar control. The A1C test measures the average level of blood glucose over a three-month period for persons with diabetes and provides a much more accurate picture of a patient's blood glucose level than just a point-in-time test.
- Most people with diabetes should have an A1C test at least twice a year, but more frequent exams are recommended when clinical goals are not being met or if there is a change in medication.
- In 2011, a measure from Utah's HEDIS showed that 87.1% of people with diabetes who are enrolled in one of the state's Medicaid Health Maintenance Organizations (HMOs) and 90.4% of those enrolled in commercial HMOs had their A1C tested within the last year.
- HEDIS provides measures of performance for Utah's HMOs. The HMOs include about 35% of Utahns who have health insurance coverage.

Cancer

Cancer is the second leading cause of death in the U.S. and in Utah. Cancer generally develops over several years and has many causes. Several factors both inside and outside the body contribute to the development of cancer. Some of these factors include genetics, tobacco use, diet, weight, physical inactivity, and excessive sunlight exposure. Other factors include exposure to ionizing radiation and environmental chemicals that may be present in the workplace, food, air, or water such as asbestos, benzene, and arsenic.

Breast Cancer Deaths

- Breast cancer is the most commonly occurring cancer in U.S. women (after basal and squamous cell skin cancers) and the leading cause of female cancer death in Utah. Deaths from breast cancer can be substantially reduced if the tumor is discovered at an early stage.
- In 2010, 255 Utah women died from breast cancer, for a crude death rate of 17.8 per 100,000 Utah women.
- On average, Utah has consistently had a lower age-adjusted breast cancer mortality rate than the U.S. (19.9 per 100,000 versus 22.8 per 100,000 in 2007).

Colorectal Cancer Deaths

- Colorectal cancer is the second leading cancer killer in the United States, but it doesn't have to be. If men and women aged 50 or older had regular screening tests, as many as 60% of deaths from colorectal cancer could be prevented.
- In 2010, 250 Utahns died from colon cancer (a crude death rate of 8.8 deaths per 100,000 population).
- Since 1980, Utah's age-adjusted colorectal cancer mortality rate has been consistently lower than the U.S. rate (12.1 per 100,000 versus 16.7 per 100,000 in 2007).

Prostate Cancer Deaths

- Prostate cancer is the second most commonly diagnosed cancer in men, and second only to lung cancer in the number of cancer deaths. Although screening can detect prostate cancer early and, when found early, treatment may be more effective, there is no agreement among medical experts that prostate cancer screening saves lives.
- In 2010, 222 Utah men died from prostate cancer (a crude death rate of 15.5 per 100,000 Utah males).
- The age-adjusted prostate cancer mortality rate has been decreasing, at 24.9 per 100,000 males in Utah and 23.5 per 100,000 males in the U.S. in 2007.

Melanoma of the Skin Incidence and Deaths

- Melanoma is the most serious of three types of skin cancer (basal cell carcinoma, squamous cell carcinoma, and melanoma). It is estimated that 90 percent of non-melanoma skin cancers and 65 percent of melanoma skin cancers are associated with overexposure to ultraviolet (UV) radiation from the sun.
- From 2003-2007, Utah had faster growing incidence and mortality rates for melanoma when compared to the U.S.
- In 2010, 84 Utah residents died from melanoma, for a crude death rate of 2.4 per 100,000.
- In 2008, the age-adjusted incidence for melanoma was 28.8 per 100,000 in Utah versus 18.8 per 100,000 in the U.S., and the age-adjusted death rate in 2007 was 3.0 per 100,000 in Utah vs. 2.7 per 100,000 in the U.S.

Breast Cancer - Mammography

- With routine screening exams, breast cancer may be found at an early stage when it is easiest to treat and before the tumor is big enough to feel or cause symptoms. Mammograms are the best method to detect breast cancer.
- In 2010, the crude percentage of Utah women aged 40 or older who had a mammogram in the last two years was 67%.
- In 2010, Utah had one of the lowest age-adjusted mammogram screening rates in the nation, with only 66.4% of women aged 40 or older who reported having had a mammogram in the last two years, compared to 74.9% in the U.S.
- In Utah, the two most frequently reported reasons for not having a mammogram were a lack of time and the belief that it was not needed.

Colorectal Cancer Screening

- With routine screening exams, colorectal cancer may be found at a precancerous or early stage when it is easier to treat and before it causes symptoms.
- In 2010, the crude percentage of Utah adults aged 50 or older who had ever had a sigmoidoscopy or colonoscopy in the past 10 years or a fecal occult blood test (FOBT) in the past year was 68%.

- In 2010, 68.7% (age-adjusted rate) of Utahns aged 50 and older reported they had ever had a sigmoidoscopy or colonoscopy in the past 10 years or FOBT in the past year compared to 66.5% nationally. This percentage increased significantly in Utah from 48.0% in 2001.
- In Utah, the two most frequently reported reasons for not having a colonoscopy/sigmoidoscopy were cost and the belief that it was not needed.

Tobacco Use

Tobacco use continues to be the single most preventable cause of death and disease in the United States. Many Americans die from tobacco-related illnesses each year, and many more tobacco users have a serious tobacco-related illness. Tobacco costs the U.S. nearly \$2 billion annually in medical expenses and lost productivity.

Smoking Among Adults

- In 2010, an estimated 8.8% of Utah adults smoked cigarettes every day or some days.
- The age-adjusted rate of cigarette smoking among Utah adults has declined by 35% since 1999 when it was 13.5%.
- These percentages are based on a telephone survey of households with land-line telephones only and may underestimate adult smoking prevalence for recent years. People who use only cell phones tend to have higher smoking rates than the general population.
- When the 2010 estimate was re-calculated using a preliminary dataset that includes cell phone interviews and an analysis methodology that better represents populations of low socioeconomic status, the adult smoking rate in Utah was found to be substantially higher than the estimate of 8.8% listed above.
- The risk for smoking is higher among people with lower levels of formal education and lower household income.

Smoking Among Adolescents

- The rate of cigarette smoking among Utah high school students was 5.9% in 2011. Adolescent cigarette smoking has declined by 50% since 1999 when 11.9% of high school students reported that they had smoked cigarettes in the past 30 days.
- For students who reported having tried cigarette smoking in their lifetime, the average age of cigarette smoking initiation for Utah students in grades 6, 8, 10, and 12 was 12.9 years in 2011.
- The youth smoking rates and other health risk behaviors are assessed through paper and pencil surveys administered in public schools in Utah.

Smoking Cessation Attempt

- In the past 10 years, the percentage of current Utah smokers who indicated that they stopped smoking for one day or longer during the past 12 months because they were trying to quit ranged from 52% to 66%.
- Nicotine is highly addictive, therefore, many smokers make several quit attempts before they are successful.

Heart Disease

Heart disease is a generic term that describes many different problems affecting the heart. It can affect your coronary arteries, heart valves, and heart muscle and can also affect your heart rate and rhythm. Heart disease is the number one killer of Americans. Modifiable risk factors for heart disease include high blood pressure, high blood cholesterol, smoking, and obesity. Coronary artery disease occurs when the arteries that supply blood to the heart muscle become hardened and narrowed.

Blood Cholesterol: Doctor-diagnosed High Cholesterol

- The crude percentage of Utah adults who were ever told they had high cholesterol was 23.5% in 2009. The age-adjusted percentage was lower in Utah at 25.9% compared to 28.9% nationally. Both the U.S. and Utah have seen an increase in the age-adjusted percentage since 1991 when it was 19.6% in the U.S. and 16.4% in Utah.
- The 2009 data also show that doctor-diagnosed high cholesterol was more prevalent among males than females in the two youngest age categories and similar among genders in the two oldest age categories.

- Generally, high cholesterol prevalence increases with age. Among Utahns aged 65 and over, 48.7% of men and 46.4% of women reported high cholesterol in 2009.

Blood Pressure: Doctor-diagnosed Hypertension

- The crude percentage of Utah adults who reported ever being told they had high blood pressure was 23.1% in 2009. The age-adjusted percentage was lower in Utah at 25.4% compared to 28.1% nationally. Utah's age-adjusted percentage has remained relatively constant over the past decade.
- The 2009 data also show that the percentage of adults who reported being told they had high blood pressure was similar for males and females across age groups.
- The prevalence of high blood pressure increases with age. Among Utahns aged 65 and over, 54.6% of men and 60.4% of women reported ever being told they had high blood pressure in 2009.

Coronary Heart Disease Deaths

- Utah's crude death rate due to coronary heart disease was 49.4 deaths per 100,000 people in 2010.
- Utah's age-adjusted death rate from coronary heart disease of 83.8/100,000 was lower than the U.S. rate of 126.0/100,000 in 2007, the most recent year with comparable data.
- The U.S. age-adjusted death rate from coronary heart disease has declined significantly over the past 30 years. Utah has experienced a similar decline from 290.1/100,000 in 1980 to 67.5/100,000 in 2010.

Injury Prevention

In 2009, more than 1,500 Utahns - or 30 people every week - died from injuries. Each year, treating injuries costs Utahns an average of \$486 million in hospitalization and emergency department charges. Injuries are the leading cause of death for Utahns ages 1-44, with poisonings, firearms, and motor vehicle crashes the leading methods.

Drug Overdose and Poisoning Incidents

- Utah has seen a 97.4% increase in age-adjusted poisoning death rates from 2001 to 2007, an average increase of over 16% per year. However, there has been a 40.0% decline in the age-adjusted poisoning death rates from 2007 to 2010.
- In 2007, the latest year with comparable data, Utah's age-adjusted poisoning death rate of 21.4 per 100,000 population exceeded the U.S. poisoning death rate of 13.2 per 100,000.
- From 2006 to 2010, poisoning deaths were highest among Utahns between the ages of 45-54, with a rate of 39.4 per 100,000 population. In addition, males had a significantly higher age-adjusted poisoning death rate compared to females (21.8 and 15.8 per 100,000 population, respectively).
- Prescription pain medications underlie many Utah poisoning deaths. In 2010, 26.6% of Utah poisoning deaths were of undetermined intent, 19.3% were suicides, and 54.1% were unintentional.

Fall Injury Hospitalizations

- From 2008-2010 there were 496 fall-related deaths and 14,520 hospitalizations in Utah. Utah's overall age-adjusted rate for unintentional fall injury hospitalization during 2008-2010 was 21.95 per 10,000 population.
- More than 70% (368) of the deaths and more than 60% (8,884) of the hospitalizations were among Utahns aged 65 and older. Elderly females aged 65 and older had a significantly higher rate of hospitalizations due to falls (148.7 per 10,000 population) than males aged 65 and older (80.5 per 10,000 population).
- Between 1992-2010, urban counties have consistently had higher rates of fall hospitalizations than rural and frontier counties.

Motor Vehicle Traffic Crash Deaths

- In 2010, motor vehicle crashes (MVC) accounted for 231 deaths in Utah, a crude death rate of 8.1 per 100,000 population.
- The MVC death rate has been decreasing in Utah over the past two decades.
- Utah had a lower rate of MVC deaths per miles driven (1.06 fatalities per million vehicle miles traveled) than the U.S. (1.26 fatalities per million vehicle miles traveled) in 2008, the most recent year with comparable data.¹
- Age-adjusted MVC death rates were significantly higher for males (10.73 per 100,000 population) than for females (6.8 per 100,000 population) in Utah in 2010.

- In 2010, males aged 65 and older had the highest MVC death rates (21.1 per 100,000 population) followed by males aged 45-64 (14.6 per 100,000 population) and males aged 15-19 (11.9 per 100,000 population). Among females the highest MVC death rate was among Utahns aged 65 and older (13.6 per 100,000 population).

Mental Health

Mental illnesses are medical conditions that disrupt a person's thinking, feeling, mood, ability to relate to others, and daily functioning. Mental health and mental disorders can be influenced by numerous conditions including biologic and genetic vulnerabilities, acute or chronic physical illnesses, and environmental conditions and stresses. A history of mental illness is a risk factor for suicide.

Health Status: Mental Health Past 30 Days

- In 2010, approximately 15% (crude rate) of Utah adults reported seven or more days when their mental health was not good in the past 30 days. Looking at age-adjusted rates for 2010, significantly fewer Utah adults (14.5%) reported seven or more days when their mental health was not good in the past 30 days when compared to adults in the U.S. as a whole (15.8%).
- The age-adjusted percentage of Utah adults who reported seven or more days when their mental health was not good in the past 30 days was higher for adults with lower education and income levels, and lower for older adults.
- Using age-adjusted rates with combined data from 2006-2010, results showed that Utah's Pacific Islander (16.9%) and American Indian/Alaska Native (19.2%) populations reported the highest percentages of seven or more days when their mental health was not good in the past 30 days. And Utah Asian adults reported the lowest percentage at 7.2%.

Suicide

- From 2006 to 2010, Utah's age-adjusted suicide rate was 15.8 per 100,000 persons. This is an average of 402 suicides per year. The 2010 Utah age-adjusted suicide rate was 17.0 per 100,000 population.
- Utah's suicide rate has been consistently higher than the national rate. From 2004 to 2008, according to the National Center for Health Statistics, the age-adjusted suicide rate for the U.S. was 11.2 per 100,000 population while Utah's age-adjusted suicide rate was 15.2 per 100,000 population during the same time period.
- In Utah from 2006 to 2010, males had higher suicide rates than females in every age group. Males 50-54 years of age (42.4 per 100,000 population) had the highest suicide rates among males, and females ages 40-44 years old (14.2 per 100,000 population) had the highest suicide rates among females.

Underlying Demographic Context of the Population

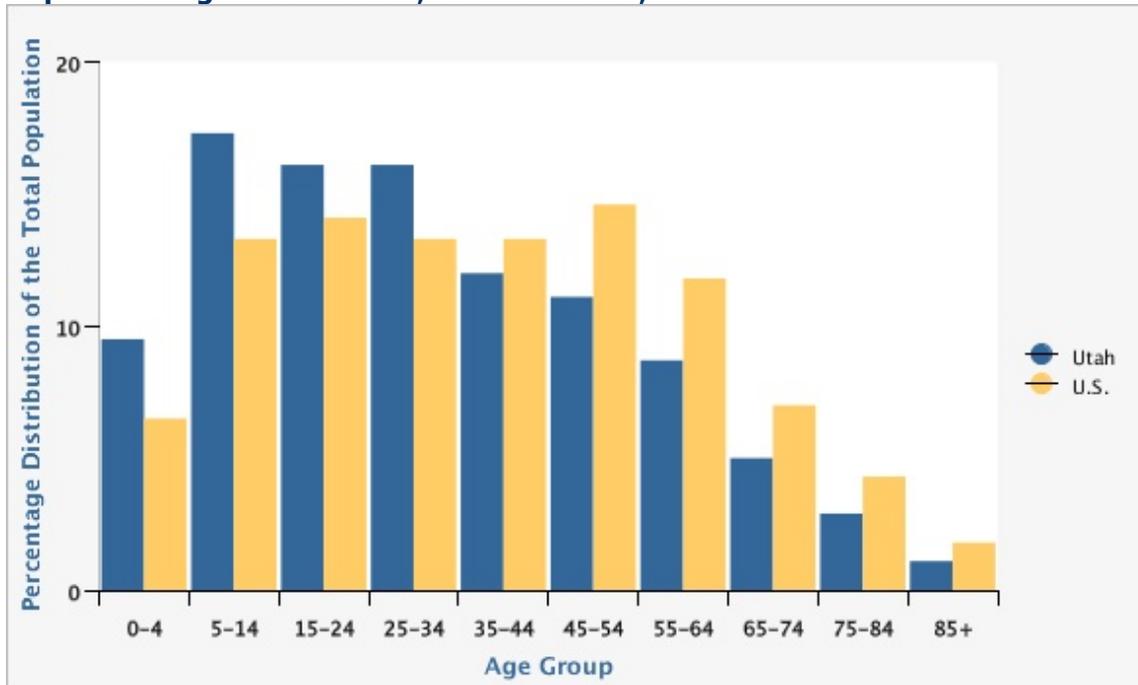
The characteristics of Utah's population, such as age distribution, cultures, racial and ethnic composition, educational achievement, income levels, and living and working conditions, affect population health in important ways. For example, children and the elderly have an increased susceptibility to certain kinds of diseases. We refer to these measures collectively as the demographic context of the Utah population or social determinants of health. Utah's population was 2,763,885 in the 2010 Census, a 23.8% increase from 2000. We summarize a number of these population characteristics here.

Age Distribution of the Population

Why Is This Important?

People's age, sex, culture, and living and working conditions affect their health in important ways that must be considered in planning for the public health of the population. Having a large percentage of the population made up of young children emphasizes the importance of making available key preventive health measures (e.g. immunizations) and age-appropriate screenings to identify developmental delays at a time when treatment is most effective.

Population Age Distribution, Utah and U.S., 2010



The graph above shows higher percentages of Utah's population in the younger age groups and smaller percentages in the older age groups as compared to the U.S. population as a whole.

Data Sources

U.S. Census Bureau, 2010 Census.

How Are We Doing?

Utahns, on a percentage basis, are on average younger than the rest of the U.S. population. According to the Census Bureau's 2010 American Community Survey (ACS), Utah had the youngest state population in the U.S. with a median age of 29.2 years versus 37.2 years nationally.

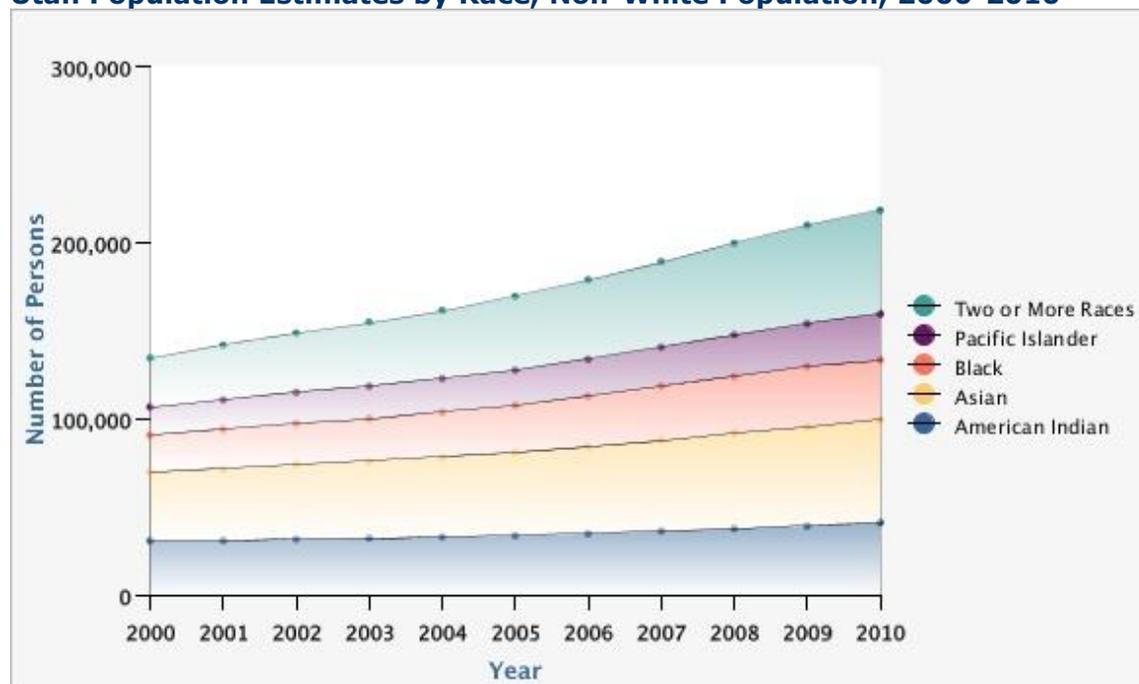
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Racial and Ethnic Composition of the Population

Why Is This Important?

Our current health system was developed based on the needs and perspectives of the White/Anglo-American Utah culture. As a result, Utahns of other cultures often experience barriers to receiving culturally sensitive and appropriate health care. Because of this and other social factors (e.g., proportion of workers in "blue collar" jobs without health benefits, lack of trust in the health care system, greater burden of poverty among many racial and ethnic groups), the health status of non-Anglo ethnic groups is often poorer than that of the mainstream population. Reducing racial and ethnically-based health disparities is an overarching goal of the U.S. Public Health Service's Healthy People 2010 and 2020 initiatives and the Utah Department of Health's Office of Health Disparities Reduction.

Utah Population Estimates by Race, Non-White Population, 2000-2010



Data Sources

U.S. Census Bureau, 2010 Census. U.S. Census Bureau, Population Estimates Program.

Data Notes

The years 2000 and 2010 are from the decennial censuses, years 2001 through 2009 are intercensal estimates.

Risk Factors

Racial and ethnic minority populations are disproportionately subject to some lifestyle, socio-economic, and other risk factors for poor health outcomes.

How Are We Doing?

The Black, Asian, Pacific Islander, and Hispanic/Latino populations are growing at faster rates than the state population as a whole. At the time of the 2000 U.S. Census, 85% of Utah's population was White only and non-Hispanic. It is now at approximately 80% according to the 2010 American Community Survey 1-year estimates from the U.S. Census. Almost 4 out of every 20 Utahns belong to an ethnic or racial minority group, including Hispanic, Asian, Pacific Islander, American Indian, and Black.

Utah can improve the health of all its citizens, Anglo or otherwise, through promotion of healthy lifestyles and improving access to timely health care that includes routine screening and effective treatment of physical and mental health problems when indicated.

What Is Being Done?

There are various programs across the state directed at improving the health of individuals from diverse backgrounds and ensuring their access to care.

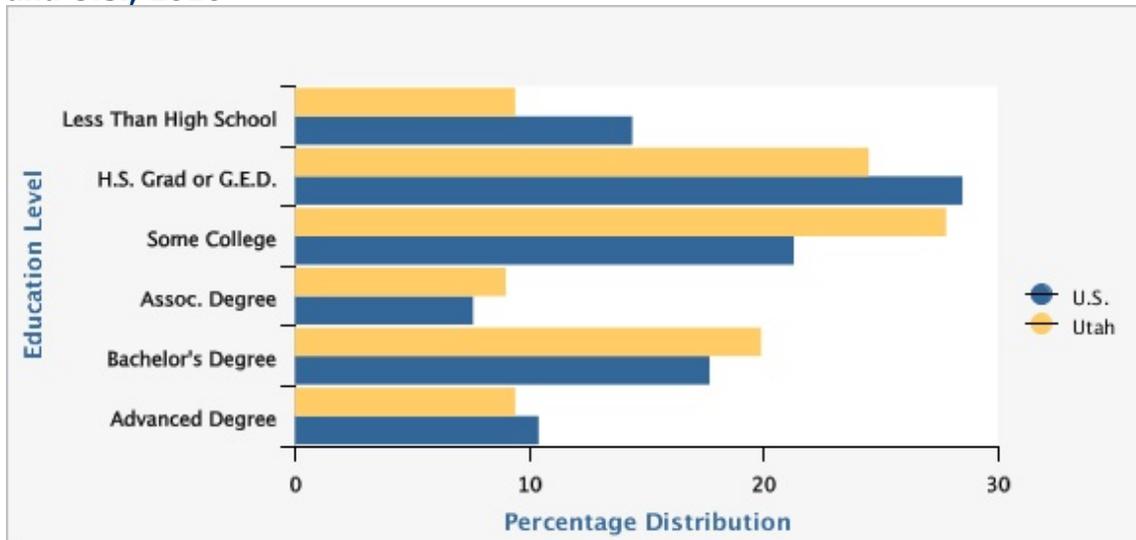
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Education Level in the Population

Why Is This Important?

Education level is strongly related to health status. It is too simplistic to say that better education causes better health; however, higher levels of education often result in higher family income, greater self-determination and understanding of health and illness factors, improved mental health, and a higher level of social and family support. All of those factors can result in better health.

Educational Attainment: Highest Level of Attainment, Aged 25 Years or Over, Utah and U.S., 2010



Data Sources

American Community Survey. U.S. Bureau of the Census.

How Are We Doing?

Among Utah adults aged 25 and over in 2010, 90.6% were high school graduates or higher and 29.3% had a bachelor's or advanced degree. This compares with 87.7% and 26.1% in 2000.

Healthy People Objective ECBP-6:

Increase the proportion of the population that completes high school education

U.S. Target: 97.9 percent

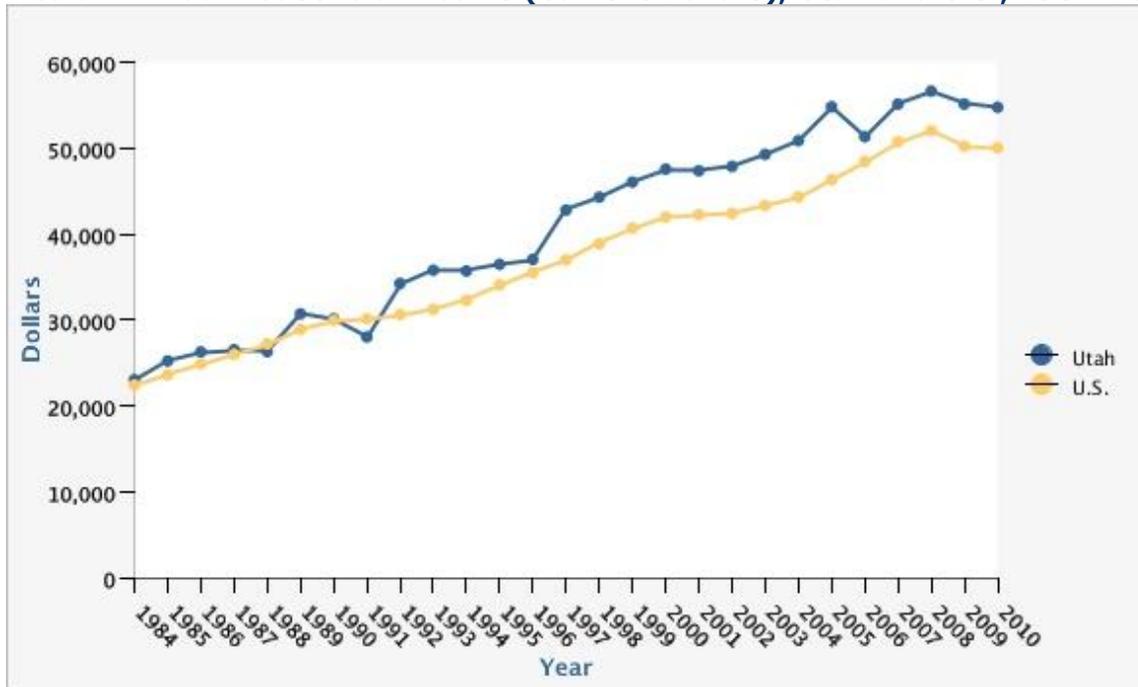
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Household Income

Why Is This Important?

Income is strongly related to health status. Low-income persons tend to have poorer health status, in part because they cannot always afford good health care. However, some people have low income levels because chronic mental or physical illness limits their ability to complete educational goals and earn a good income.

Median Annual Household Income (Current Dollars), Utah and U.S., 1984-2010



Data Sources

U.S. Bureau of the Census. American Community Survey.

Data Notes

Values are current dollars (not inflation-adjusted).

Risk Factors

One of the best ways for adults (both men and women) to avoid poverty is to get a good education and prepare for a competitive job market.

How Are We Doing?

Utah's median household income has increased since 1984, even after adjusting for inflation. However, during the recent recession, income levels dropped off.

What Is Being Done?

The Utah Department of Health has no programs directed specifically at increasing household income levels. However, there are programs such as Medicaid, Primary Care Network, and CHIP (Children's Health Insurance Program) that pay for health care for eligible children and adults.

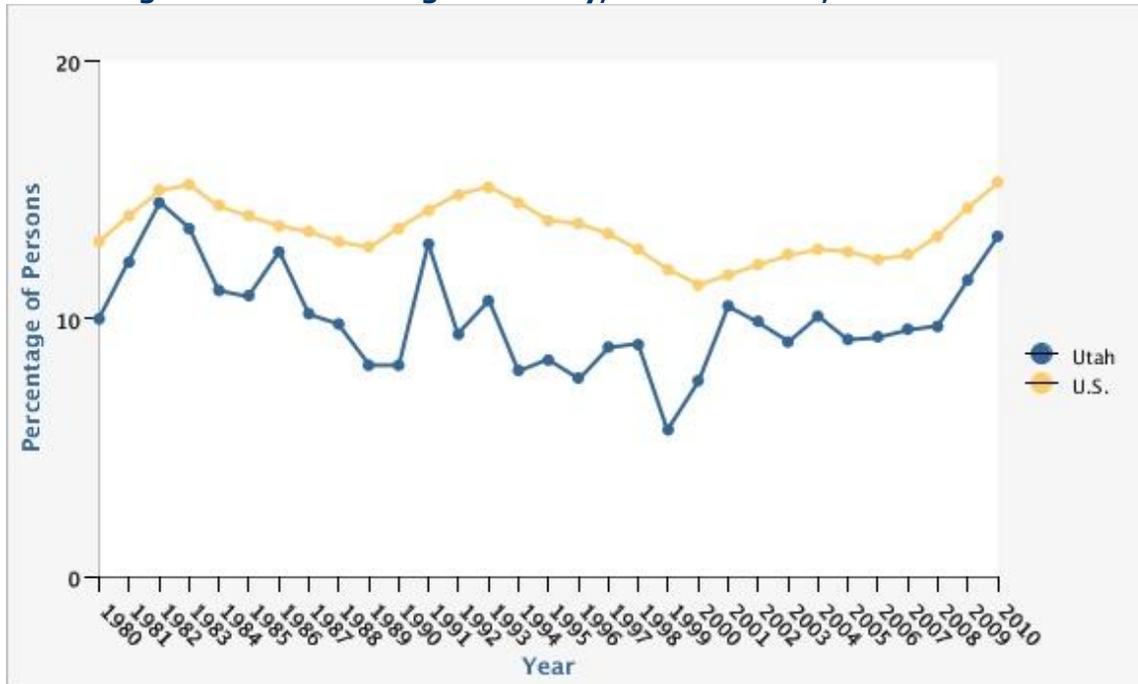
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Persons Living in Poverty

Why Is This Important?

Poverty takes into account both income and family size, and has both immediate and long-lasting effects on health. Income provides an assessment of the financial resources available to individual persons or families for basic necessities (e.g., food, clothing, and health care) to maintain or improve their well-being. Persons living in poverty are worse off than persons in more affluent households for many of the indicators tracked by the Utah Department of Health.

Percentage of Persons Living in Poverty, Utah and U.S., 1980-2010



Data Sources

American Community Survey. U.S. Bureau of the Census.

Data Notes

Data from the 2010 American Community Survey (ACS). The ACS is conducted by mail to persons with mailing addresses, with telephone and in-person follow-up, like the decennial census. In 2010, the U.S. Census Bureau poverty threshold was \$22,050 for a family of four. From the ACS: Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value.

How Are We Doing?

In 2010, the most recent year for which we have data, approximately 360,400 Utahns were living in poverty, 135,400 of whom were children age 17 or under. From 2008 to 2010, the overall percentage of Utahns living in poverty increased from 9.7% to 13.2%, an increase of 36%.

What Is Being Done?

Health care "safety net" programs, such as Medicaid, CHIP, and the Primary Care Network (PCN) provide some relief to those who are eligible. Utah's community health centers also fill a critical niche in providing high-quality health care services to Utahns of any income level.

Programs such as Head Start and those that provide assistance linking people with jobs aim to reduce poverty by increasing social functioning and self-sufficiency. Other programs, such as minimum wage requirements, food stamps, Temporary Assistance for Needy Families (TANF), and government subsidized health insurance and child care, provide assistance to families needing additional support.

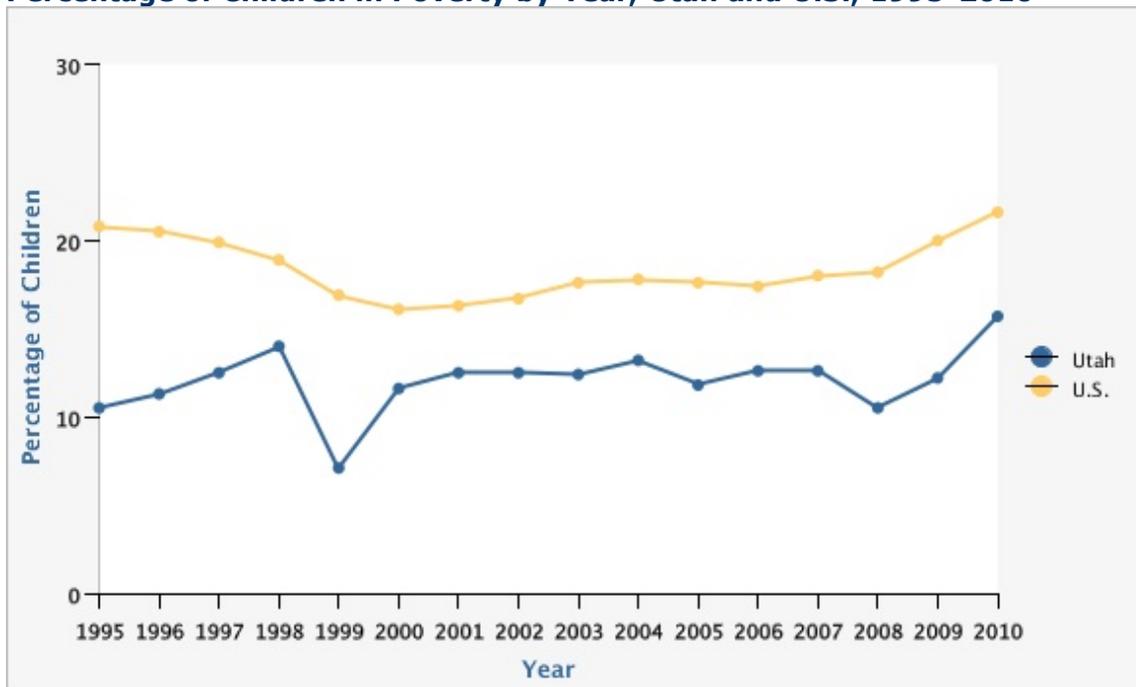
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Childhood Poverty

Why Is This Important?

Poverty in the early years of a child's life, more than at any other time, has especially harmful effects on continuing healthy development and well-being, including developmental delays and infant mortality. Well-being in later childhood, such as teen pregnancy, substance abuse, and educational attainment, are also influenced by early childhood poverty.²

Percentage of Children in Poverty by Year, Utah and U.S., 1995-2010



Data Sources

American Community Survey.

Data Notes

Data from the 2010 American Community Survey (ACS). The ACS is conducted by mail to persons with mailing addresses, with telephone and in-person follow-up, like the decennial census. In 2010, the U.S. Census Bureau poverty threshold was \$22,050 for a family of four. From the ACS: Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value.

Risk Factors

One of the best ways for adults to avoid poverty is to get a good education. Adolescents who give birth are more likely to live in poverty since they are more likely to limit their education.

The association between poverty and health status is probably bi-directional. That is, persons with chronic mental or physical illness are less able to achieve their educational goals and get good jobs. At the same time, persons who have lower incomes are less able to afford health care and may have less healthy lifestyles. For instance, persons with lower education and income levels are more likely to smoke cigarettes and less likely to get regular exercise.

How Are We Doing?

In 2010, the most recent year for which we have data at the state level, an estimated 15.7% of Utah children aged 17 or under (approximately 135,400 Utah children) were living in poverty as defined as less than 100 percent of the poverty level. From 2008 to 2010, there was a 50% increase in the percentage of Utah children aged birth-17 living in poverty, from 10.5% to 15.7%.

Children born into poverty are less likely to have regular health care, proper nutrition, and opportunities for mental stimulation and enrichment.

What Is Being Done?

While the Utah Department of Health has no program designed to reduce the number of children in poverty, there are programs such as Medicaid and CHIP (Children's Health Insurance Program) that pay for health care for eligible children.

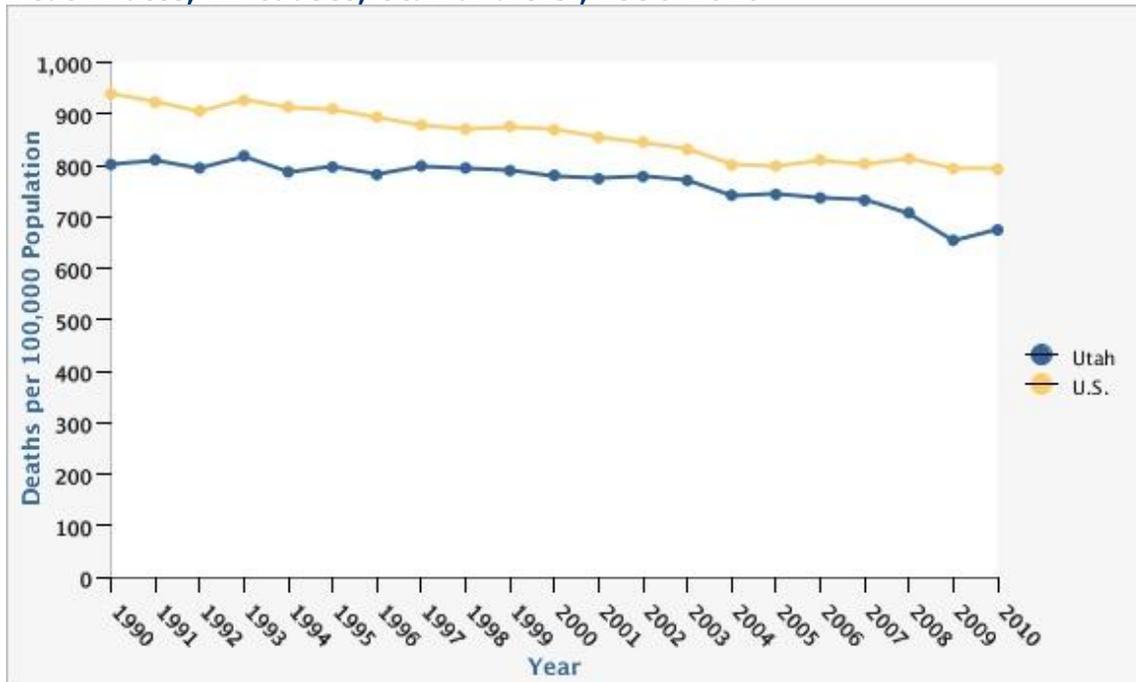
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Deaths From All Causes

Why Is This Important?

The overall death rate of a population reflects the average life expectancy of individuals in that population. The lower the death rate, the higher the life expectancy.

Death Rates, All Causes, Utah and U.S., 1990-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Age-adjusted to U.S. 2000 standard population.

Risk Factors

It is a given that we all must die. The best we can hope for is to be healthy and active until death, and that our deaths be painless, graceful, and quick.

Healthy lifestyles and early detection of disease lead to both longer life and improved quality of life across the lifespan.

How Are We Doing?

Factors contributing to the low death rate in Utah include healthy lifestyles (especially low rates of tobacco, alcohol, and substance use), lower rates of poverty, and better access to excellent health care. An important implication of the decreasing death rates of Utahns is that there are increasing numbers of older individuals. This trend will place increasing economic demands on Utah's health care system, including aging services, long-term health care, and assisted living options.

What Is Being Done?

The UDOH Office of Vital Records and Statistics certifies Utah's deaths and maintains records of specific characteristics such as cause of death, age of decedent, and other factors associated with the incident, such as firearms, motor vehicles, or drug overdoses.

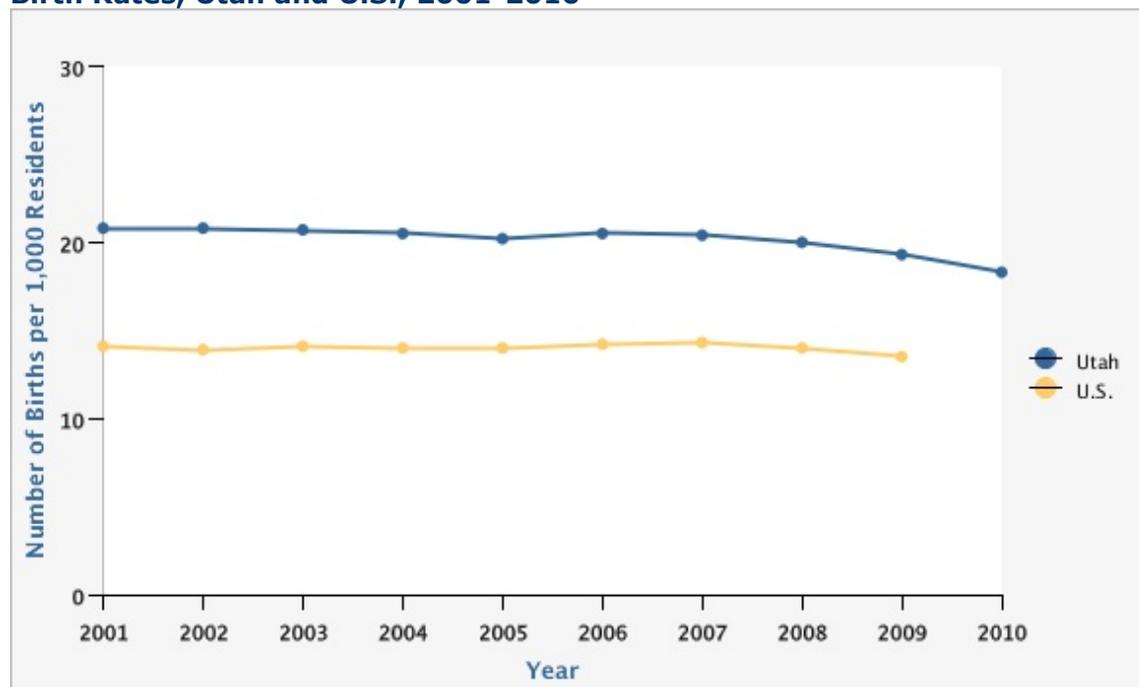
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Birth Rates

Why Is This Important?

Birth rate is the number of live births in a given year per 1,000 persons in the total population. Tracking birth rate patterns among Utah and U.S. women as a whole is critical to understanding population growth and change in this country and in Utah. Birth rates directly relate to a population's need for timely and appropriate preconceptional, prenatal, neonatal, and postpartum care.

Birth Rates, Utah and U.S., 2001-2010



Data Sources

Utah Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.
National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

U.S. preliminary 2009 data are the latest available. Utah birth rate for 2009 is from final data. Due to revisions of the 2001 through 2008 Utah population estimates, trend information on birth rates for Utah are available only from 2001 forward.

How Are We Doing?

In 2010, there were 52,164 (final data) live births to Utah residents, a rate of 18.3 per 1,000 Utahns. This represents a decrease from the 2009 birth rate of 19.2.

What Is Being Done?

Having an overall high birth rate is not a risk factor for poor health outcomes. However, elevated teen pregnancy rates are a concern as these pregnancies are considered to be at higher risk. The preliminary U.S. data for 2009 indicate that the teen birth rate for teens ages 15 through 19 years of age decreased from 41.5 births per 1,000 females in 2008 to 39.1 in 2009 (preliminary data) - a record low for the U.S. Utah's teen birth rate decreased from 31.0 live births per 1,000 female teens aged 15 to 19 in 2009 to a rate of 27.6 live births per 1,000 female teens ages 15 through 19 in 2010. A variety of educational and prevention activities are targeted to decrease teen birth rates.

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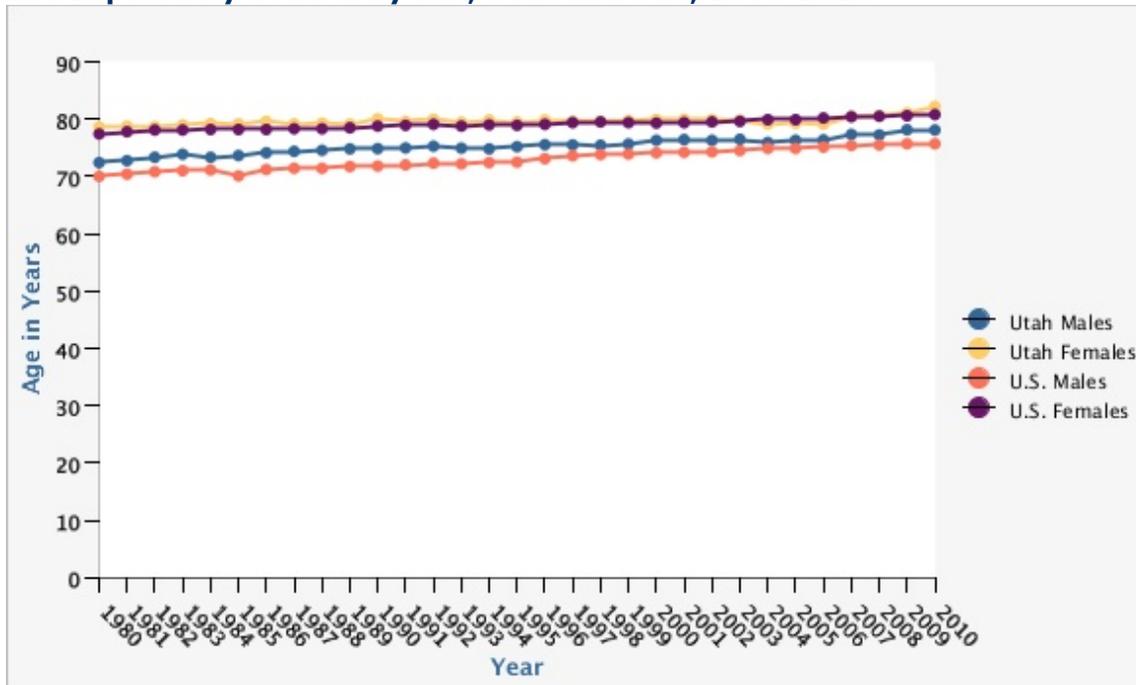
Life Expectancy at Birth

Why Is This Important?

Shifts in life expectancy are often used to describe trends in mortality. Being able to predict how populations will age has enormous implications for the planning and provision of services and support. Small increases in life expectancy translate into large increases in the population.

As the life expectancy of a population lengthens, the number of people living with chronic illnesses tends to increase because chronic illnesses are more common among older persons.

Life Expectancy at Birth by Sex, Utah and U.S., 1980-2010



In Utah, life expectancy at birth for males increased from 72.4 years in 1980 to 78.1 years in 2010, and for females from 78.6 to 82.2 years. In comparison, life expectancy at birth in the U.S. rose from 70.0 to 75.7 years for males, and 77.4 to 80.8 years for females.

Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention. U.S. Bureau of the Census.

Data Notes

The method developed by C.L. Chiang was used to compute life expectancy. *2010 U.S. estimate is a projection by U.S. Census Bureau.

How Are We Doing?

Prevention and control of infectious diseases has had a profound impact on life expectancy during the 20th century. In the United States life expectancy at birth from 1900 to 2010 increased from 48 to 75.7 years for men, and from 51 to 80.8 years for women. In contrast to life expectancy at birth, which increased sharply early in the century, life expectancy at age 65 improved primarily after 1950. Among men, life expectancy at age 65 rose from 12 to 17.2 years and among women from 12 to 19.9

years between 1900 and 2008. Improvements in nutrition, hygiene, and medical care contributed to decreases in death rates throughout the lifespan.

What Is Being Done?

Now that people are living longer, it is important to look at ways that those added years can be lived in good health. Exercise, healthy diet and weight, not smoking, moderate use of alcohol, and injury prevention habits such as wearing seat belts all contribute to a healthy life span.

Improvements in life expectancy increase the proportion of older individuals living in society. Policy-makers must be aware of this trend in order to provide viable and attractive options for elderly persons who require assistance with activities of daily living.

Date Indicator Content Last Updated: 10/24/2011

Healthy Births

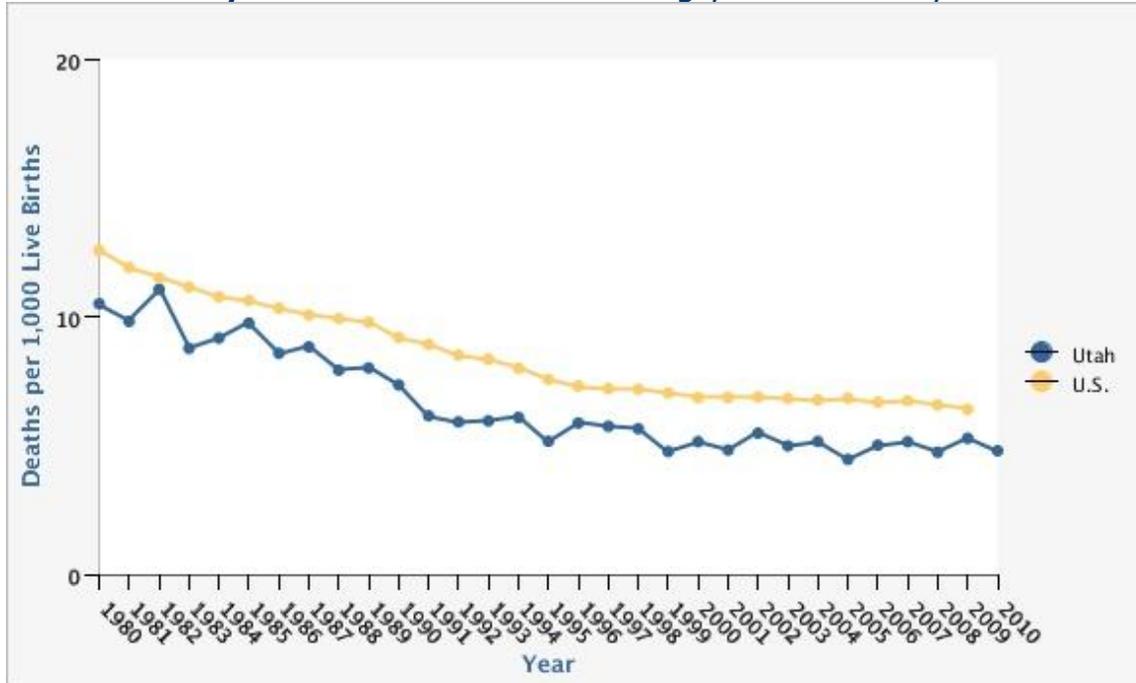
A healthy pregnancy and birth is vital to the well-being of women and infants particularly, but also families and communities. Preconception and prenatal care can reduce birth defects, low birth weight, and other preventable problems. Adolescents have a higher risk of a number of adverse pregnancy outcomes.

Infant Mortality

Why Is This Important?

The infant death rate is an important measure of a nation's health and a worldwide indicator of health status and social well-being. It is a critical indicator of the health of a population. Three causes account for more than half of all infant deaths in Utah: birth defects (1.40 per 1,000 live births); conditions in the perinatal period (includes disorders related to short gestation or preterm birth and can reflect the overall state of maternal health, as well as the quality and accessibility of primary health care for pregnant women) (2.09 per 1,000); and other medical conditions (0.52 per 1,000).

Infant Mortality: Deaths at Under 1 Year of Age, Utah and U.S., 1980-2010



Data Sources

Utah Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.
Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.
National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

U.S. figures from www.cdc.gov/nchs/fastats/infant_health.htm. U.S. rates for 2008 and 2009 are preliminary figures from National Center for Health Statistics. Utah rate of 4.75 for 2010 is from Utah Office of Vital Records and Statistics.

Risk Factors

Some of the mother's behaviors during the perinatal period, such as poor nutrition and inadequate or excessive weight gain, lack of prenatal care, and use of tobacco products and alcohol, are associated with an increased risk of infant mortality.

How Are We Doing?

The infant mortality rate has been declining throughout the past 20 years both locally and nationally. Despite this decline, the problem of infant mortality remains substantial. During 2010, 251 Utah

infants died during their first year of life, each death representing a tragedy for parents, siblings, and other family members.

In Utah, although the infant mortality rate is lower than the nation's, the rate of preterm birth has remained between 9.5-10% of all live births in the state for the past ten years. And nationwide, the percent of preterm live births has risen 36% since 1984.³

What Is Being Done?

Improvements in early obstetric intervention and perinatal and postneonatal care have been linked to this decline in infant mortality. However, there still remain significant disparities among various racial/ethnic groups. The UDOH Maternal and Infant Health Program is currently 1) reviewing data obtained from the Pregnancy Risk Assessment Monitoring System (PRAMS) and the Perinatal Mortality Review Program (PMRP) to identify modifiable risk factors for infant mortality and develop appropriate interventions; 2) making health information available on-line for researchers, students, health care professionals, and the general public to increase awareness of factors associated with infant death (i.e. the Indicator Based Information System (IBIS) database and the Reproductive Health/Maternal and Infant Health Program website); 3) educating prenatal health care providers to help pregnant clients cease smoking to reduce the postneonatal mortality rate and reduce low birth weight births which contribute to neonatal mortality; 4) promoting preconception and interconception health care for all women of childbearing age, with special emphasis on attaining and maintaining healthy weight; 5) working with community partners and health professionals to disseminate information on 17P, a newer drug to help prevent recurrent preterm birth; and 6) collaborating with the Office of Health Disparities Reduction on targeted interventions toward decreasing infant mortality in disparate populations.

Healthy People Objective MICH-1.3:

All infant deaths (within 1 year)

U.S. Target: 6.0 infant deaths per 1,000 live births

State Target: 4.6 infant deaths per 1,000 live births

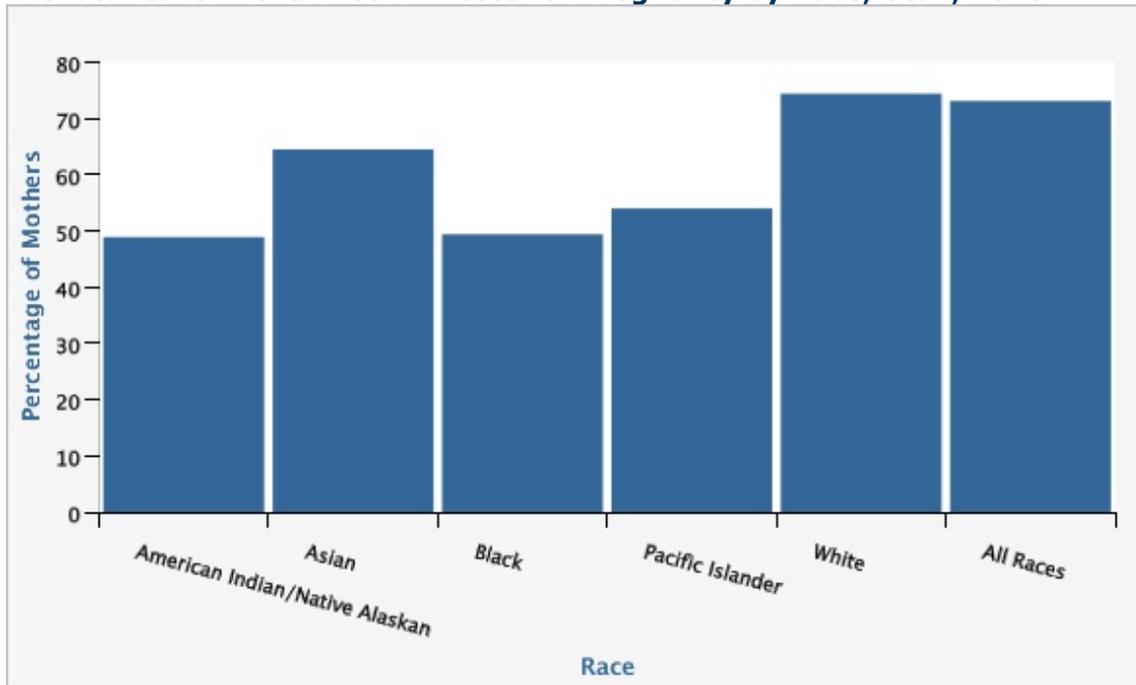
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Prenatal Care

Why Is This Important?

Women who receive early and consistent prenatal care (PNC) enhance their likelihood of giving birth to a healthy child. Health care providers recommend that women begin prenatal care in the first trimester of their pregnancy.

Prenatal Care in the First Trimester of Pregnancy by Race, Utah, 2010



Data Sources

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

How Are We Doing?

The percentage of women entering prenatal care in the first trimester of pregnancy has increased from 71.6% in 2009 to 73.1% in 2010.

What Is Being Done?

The Utah Department of Health Baby Your Baby Program sponsors a statewide media campaign and provides information and referral services to pregnant women in Utah. The Pregnancy Risk Line is a phone service available to pregnant women, the public, and health care providers who have questions about possible effects of medications, chemicals, or infectious agents on a developing baby or breastfed infant. The Pregnancy Risk Assessment Monitoring System (PRAMS) collects and analyzes data to identify characteristics of Utah women and their utilization of prenatal care. The Maternal and Infant Health Program will utilize these data to target interventions in those populations identified as having poor first trimester entry.

Healthy People Objective MICH-10.1:

Prenatal care beginning in first trimester

U.S. Target: 77.9 percent

State Target: 77.9 percent

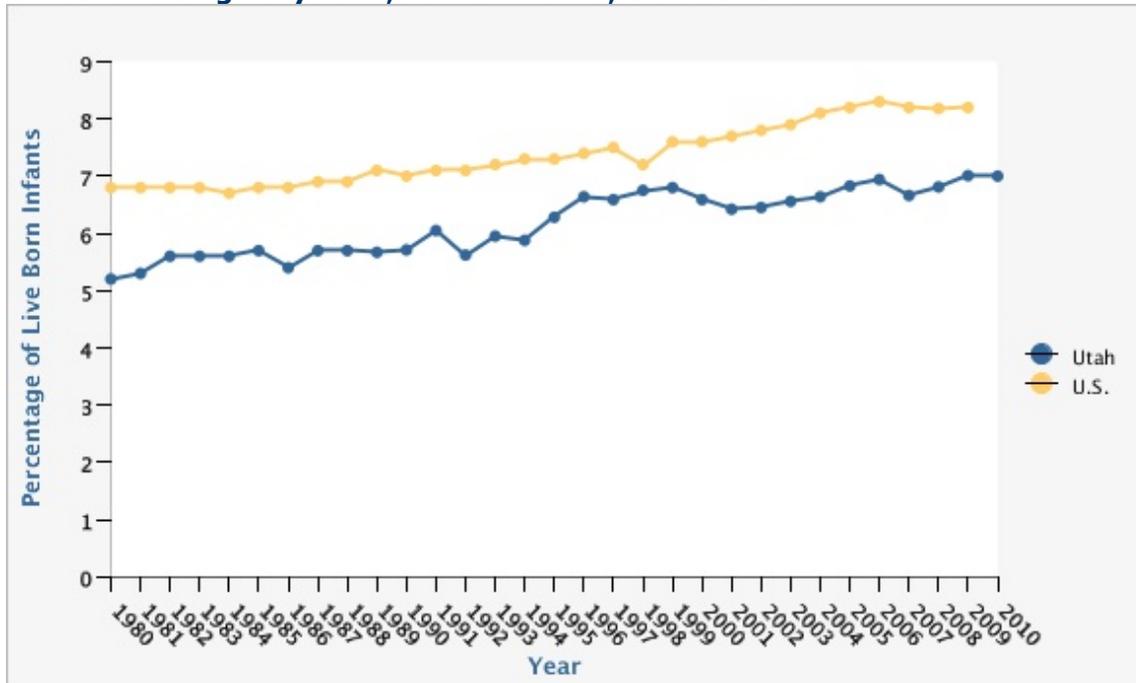
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Low Birth Weight

Why Is This Important?

Low birth weight increases the risk for infant mortality and morbidity. As birth weight decreases, the risk for death increases. Low birth weight infants who survive often require intensive care at birth, may develop chronic illnesses, and later may require special education services. Health care costs and length of hospital stay are higher for low birth weight infants. Utah inpatient hospital discharge data (2010) indicate that the average hospital charge for a low birth weight infant was \$44,472 compared to \$2,218 for a normal birth weight infant.

Low Birth Weight by Year, Utah and U.S., 1980-2010



Data Sources

Utah Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Low birth weight is defined as less than 2,500 grams (about 5 pounds, 8 ounces). 2009 U.S. data are preliminary.

Risk Factors

Risk factors for low birth weight include:

- Preterm births
- Maternal chronic disease, such as hypertension
- Maternal obstetric family history, such as having been born low birth weight themselves
- Multiple gestation (e.g. twins)
- Low pre-pregnancy weight
- Tobacco or alcohol use during pregnancy
- Lack of or inadequate prenatal care
- Short intervals between pregnancies
- Previous pregnancy resulting in a low birth weight infant

How Are We Doing?

Utah's low birth weight percentage increased from 6.0% in 1991 to 7.0% in 2010. While this is below the Healthy People 2020 Objective target (7.8%), the increasing trend is of concern.

What Is Being Done?

In an effort to reduce the low birth weight rate, emphasis has been placed on promoting preconception health to encourage women to be at optimal health at the time of conception as chronic health conditions, physical, emotional, and behavioral health issues can have a strong impact on the developing fetus. Chronic maternal disease such as hypertension and diabetes should be diagnosed and optimally managed prior to conception. In addition, work is ongoing to promote optimal weight in women of reproductive age prior to pregnancy as both maternal underweight and obesity are associated with low birth weight infants. Efforts are also underway to promote optimal pregnancy spacing as short interpregnancy intervals are associated with low birth weight infants. Programs to reduce tobacco use during pregnancy have been developed and are being implemented in many local health departments. The Utah Department of Health has implemented the "Power Your Life" campaign to reach women of reproductive age about the importance of being healthy prior to pregnancy to improve outcomes. The centerpiece of the campaign is the Power Your Life website at www.poweryourlife.org.

Women are also encouraged to seek early and continuous care throughout their pregnancies and to achieve an adequate weight gain during pregnancy. All women should receive a thorough formal risk assessment at their initial prenatal visit, with updates throughout pregnancy to identify risk factors for low birth weight and develop appropriate interventions, if needed. Standards for assisted reproductive technology should be adhered to, to reduce the frequency of higher order multiple pregnancies. Additionally, all women should be educated regarding the danger signs of pregnancy and the importance of fetal kick counts to facilitate early recognition of problems to permit earlier intervention, thereby improving pregnancy outcomes. Pregnant women also need appropriate referrals to services such as WIC, and nutritional and psychosocial counseling for at risk women.

Healthy People Objective MICH-8.1:

Low birth weight (LBW)

U.S. Target: 7.8 percent

State Target: 6.7 percent

Date Indicator Content Last Updated: 10/20/2011

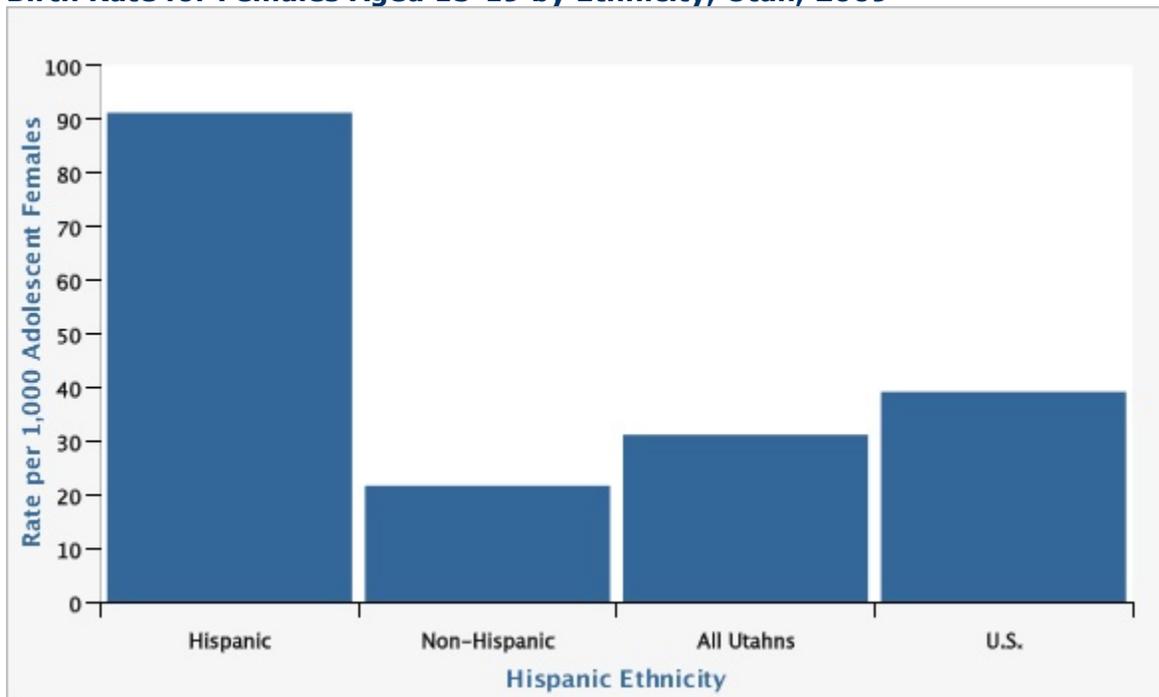
Adolescent Births

Why Is This Important?

Research indicates that bearing a child during adolescence is associated with long-term difficulties for the mother, her child, and society. These consequences are often attributable to poverty and other adverse socioeconomic circumstances that frequently accompany early childbearing.

Compared to babies born to older mothers, babies born to adolescent mothers, particularly young adolescent mothers, are at higher risk of low birth weight and infant mortality. These babies are more likely to grow up in homes that offer lower levels of emotional support and cognitive stimulation, and they are less likely to earn a high school diploma. For the mothers, giving birth during adolescence is associated with limited educational attainment, which in turn can reduce future employment prospects and earning potential.

Birth Rate for Females Aged 15-19 by Ethnicity, Utah, 2009



Data Sources

Utah Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health.
Population Estimates: Utah Governor's Office of Planning and Budget.

Data Notes

U.S. data is preliminary for 2009.

Risk Factors

Experiencing birth during adolescence can increase a teen's risk of acquiring a sexually-transmitted infection as well as seriously hinder future financial stability due to limited educational attainment.

How Are We Doing?

The teen birth rates per 1,000 females aged 15-19 in Utah, for the past five years were:

2006: 32.7

2007: 34.7

2008: 34.4

2009: 31.0
2010: 27.6

A high proportion, 77.4% of Utah females aged 15-17 and 72.1% of Utah females aged 18-19, reported their pregnancy as unintended in the 2009 Pregnancy Risk Assessment and Monitoring Survey (PRAMS).

What Is Being Done?

The Utah Department of Health Maternal and Infant Health Program (MIHP) continues to work on improving the health of Utah adolescents. MIHP oversees the Utah Adolescent Health Network, a group of diverse stakeholders of adolescent health from government, academic, non-profit, and community organizations. Quarterly network meetings serve as a venue for overall adolescent health professional development training. Meetings include a presentation or training by an expert in a general adolescent health topic, presentation discussion, and member networking and project sharing. In 2010, the network completed and released a state report: Utah Adolescent Reproductive Health Report. This report provides a snapshot of reproductive health issues pertaining to Utah adolescents. This report is available electronically on the following website:
http://health.utah.gov/mihp/pdf/2010_Adolescent_Health_Update.pdf.

Teen Pregnancy Prevention Programs:

The Utah Department of Health receives federal funding from the U.S. Department of Health and Human Services, Administration for Children and Families for two programs addressing teen pregnancy prevention in Utah.

The first program is for Abstinence Education Programs targeting Utah youth ages 10-16 with a specific focus on youth in the Utah Juvenile Justice System, youth of Hispanic origin and/or non-White race, and youth residing in areas with adolescent birth rates higher than Utah's state rate. Total annual funding awarded to Utah is \$319,037. Through a competitive bid process, the Utah Department of Health (UDOH) sub-contracted these federal funds to several community organizations.

The second program is for Personal Responsibility Education Programs (PREP). Funds must be used for a program designed to educate adolescents on both abstinence and contraception to prevent pregnancy and sexually transmitted infections, including HIV/AIDS, and three adulthood preparation subjects (healthy relationships, education and career success, and healthy life skills). Total annual funding awarded to Utah is \$525,264. Through a competitive bid process, the Utah Department of Health sub-contracted these funds to several community organizations. The target population is Utah youth ages 14-19 with a specific focus on youth in the Utah Juvenile Justice System, youth of Hispanic origin and/or non-White race, current teen moms, and youth residing in areas with adolescent birth rates higher than Utah's state rate.

For more information or questions regarding the two programs mentioned above, contact 801-538-9317, or jmayfield@utah.gov.

Parents Matter Program:

This is an evidence-based, parent intervention designed to promote positive parenting and effective parent-child communication about sexuality and sexual risk reduction for parents of 9- to 12-year-olds. The Parents Matter program will be provided based on the availability of funds. For more information on this program, please visit the following website:
<http://www.cdcnpin.org/parentsmatter/program.asp>.

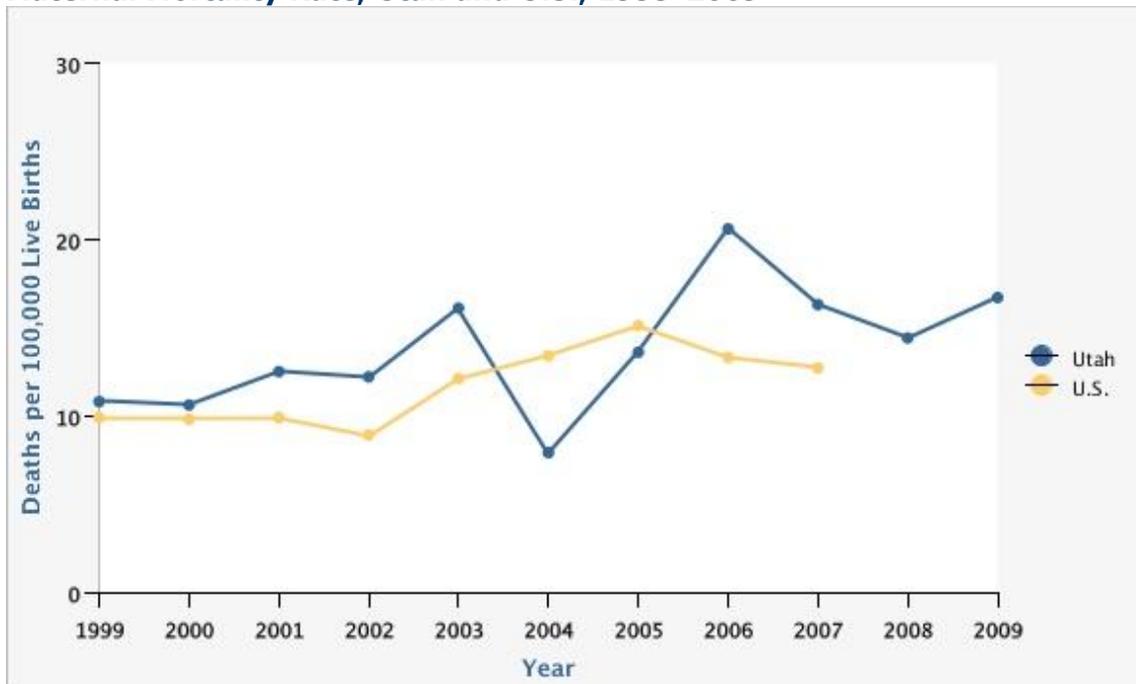
Date Indicator Content Last Updated: 09/09/2011

Maternal Mortality

Why Is This Important?

Each year in the United States, one woman dies from a pregnancy complication for every 10,000 births. Every death prevented is meaningful. Surveillance of maternal mortality identifies ways to improve the health, health behaviors, and health care of women before and during pregnancy. Surveillance also identifies gaps in the health care system and social services, health care access, and the quality of prenatal and perinatal care.

Maternal Mortality Rate, Utah and U.S., 1999-2009



Data Sources

Office of Vital Records and Statistics, Utah Department of Health. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Wide fluctuations in Utah rates may be attributable to the small numbers involved. Maternal death cases are identified in the following manner: all death certificates for women of childbearing years (ages 15-44) regardless of cause are linked to fetal death and/or infant birth/death certificates when the delivery occurred within one year of the maternal death. The certificates are reviewed to determine whether the maternal death was related to pregnancy. In some cases medical records are needed to determine this. The maternal death rate for this indicator is not limited to the death certificate checkbox or cause of death ICD-10 codes only. Cases are hand calculated every year to help ensure accuracy.

Risk Factors

Pregnancy-related mortality for Black women is consistently higher than for White women. Older women, particularly women aged 35 years or older, are also at increased risk for pregnancy-related deaths. Women who received no prenatal care also had a higher risk of pregnancy-related mortality compared to those who received "adequate" prenatal care.

How Are We Doing?

Utah's maternal mortality has decreased from 36 deaths per year in 1940 to a range of 2-11 deaths per year between 1999 and 2009. However, Utah's rate of maternal mortality has now nearly doubled from what it was in 2004. Utah's maternal mortality rate is higher than the U.S. rate.

What Is Being Done?

Activities conducted by the Division of Family Health and Preparedness include, among others, ongoing maternal and infant mortality surveillance through the Perinatal Mortality Review Program. The Division also offers public education about the importance of planning for pregnancy, preconception and interconception health, and recognition and treatment of maternal depression. Issues of health care quality are also being examined in the area of perinatal care for mothers and infants.

Healthy People Objective MICH-5:

Reduce the rate of maternal mortality

U.S. Target: 11.4 maternal deaths per 100,000 live births

State Target: 11.4 maternal deaths per 100,000 live births

Date Indicator Content Last Updated: 10/17/2011

Obesity and Related Factors

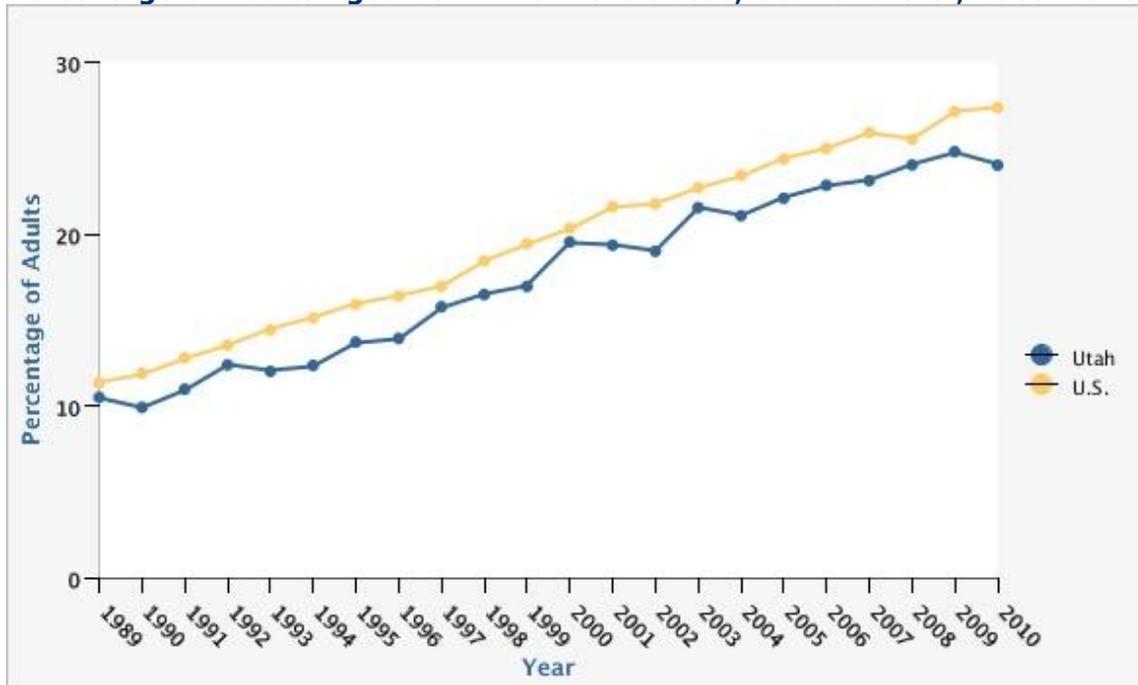
People who are overweight or obese are at increased risk for weight-related chronic diseases such as hypertension, high low-density lipoprotein (LDL) cholesterol, type 2 diabetes, coronary heart disease, stroke, and osteoarthritis. Physical activity has been shown to reduce the risk of many of these same diseases, and improve general physical and mental health. While breastfeeding imparts health benefits to both babies and mothers, it has been shown that mothers who breastfeed, lose the weight gained during pregnancy more quickly than mothers who do not breastfeed; and that breastfeeding also lowers the risk of a number of health problems for babies, including obesity.

Obesity Among Adults

Why Is This Important?

Adults who are obese are at increased risk of morbidity from hypertension, high LDL cholesterol, type 2 diabetes, coronary heart disease, stroke, and osteoarthritis. Obesity is the second leading cause of preventable death in the United States. Only smoking may exceed obesity in contributing to total U.S. mortality rates.

Percentage of Adults Aged 18+ Who Were Obese, Utah and U.S., 1989-2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Obesity is defined as a BMI of 30 or more. Age-adjusted to U.S. 2000 standard population. U.S. data does not include U.S. territories, but does include Dist. of Columbia.

Risk Factors

Genetic or familial factors may increase the risk for being overweight or obese for some people, but anyone whose calorie intake exceeds the number of calories they burn is at risk. Physical activity and a healthy diet are both important for obtaining and maintaining a healthy weight.

Adults who are obese are at increased risk of morbidity from hypertension, elevated LDL cholesterol, type 2 diabetes, coronary heart disease, stroke, osteoarthritis, sleep apnea, respiratory problems, and endometrial, breast, prostate, and colon cancers.

How Are We Doing?

In just 11 years, the age-adjusted proportion of obese Utah adults increased from 15.8% in 1997 to 24.0% in 2010.

What Is Being Done?

In 2008, through funding from the Centers for Disease Control and Prevention, a Physical Activity, Nutrition, and Obesity (PANO) program was established in the Department's Bureau of Health Promotion. The purpose of the grant is to increase healthful eating and physical activity to prevent and control obesity and other chronic diseases by building and sustaining statewide capacity and implementing population-based strategies and interventions. In the first year, partners were convened to develop a statewide obesity plan. The state plan was released April 2010 and addresses the six areas of focus for the grant (as required by CDC) including 1) increase physical activity; 2) increase consumption of fruits and vegetables; 3) decrease the consumption of sugar sweetened beverages; 4) increase breastfeeding initiation, duration, and exclusivity; 5) reduce the consumption of high energy dense foods; and 6) decrease television viewing. Years 2-5 of the grant period focus on implementing objectives in the state plan.

In 2007, a newly-formed nonprofit Utah Partnership for Healthy Weight was incorporated. Currently the Partnership is focused on bringing informational and financial resources not readily available to state health departments to obesity prevention efforts in Utah. The Partnership works to coordinate the many ongoing and future initiatives within Utah's communities. UDOH staff attend regular meetings of the Partnership and also serve as Partnership board members.

In Schools:

- (1) The Gold Medal School (GMS) Initiative helps elementary schools set up policy and environmental supports that make it easier for students and staff to be physically active and eat healthy food.
- (2) The Physical Activity, Nutrition, and Obesity Program (PANO) and Action for Healthy Kids are working with local school boards to improve or develop policies for nutritious foods in schools. This includes recommendations for healthy vending options.
- (3) The "Unplug 'n Play" program encourages students and their families to limit TV and other screen time to less than two hours per day.
- (4) Height and weight trends are being tracked in a sample of elementary students to monitor Utah students.
- (5) Action for Healthy Kids brings partners together to improve nutrition and physical activity environments in Utah's schools by implementing the school-based state plan strategies.

In Worksites:

- (1) The Utah Council for Worksite Health Promotion gives awards to Utah businesses that offer employee fitness and health promotion programs. The Council takes the lead in implementing worksite-based state plan strategies.

In the Community:

- (1) The "A Healthier You Legacy Awards Program" is a collaborative effort of the UDOH and community partners. It is a unique program that started as part of the Salt Lake 2002 Olympic Winter Games. The Program recognizes the efforts of communities, schools, and worksites to increase opportunities for their constituents to participate in health-enhancing areas: nutrition, physical activity, and healthy behaviors. Criteria categories for the award include policy, infrastructure, and outcomes. Recipients can receive bronze, silver, gold, and platinum awards for meeting criteria under these categories.
- (2) UDOH joined with Intermountain Healthcare and KUTV in a health promotion program aimed at improving the overall health of Utah residents. The Check Your Health media campaign promotes the message "Eat Healthy, Be Active!" The campaign encourages all Utah families to make healthy food choices, develop a regular family mealtime, use correct portion sizes, and get at least 30 minutes of moderate to vigorous physical activity every day. The campaign specifically targets females ages 25-54.
- (3) Local health departments receive federal dollars to mobilize community partners to improve or develop active community environments where people can walk and bike safely.
- (4) The PANO program leads a statewide coalition to implement strategies within the state plan.

Healthy People Objective NWS-9:

Reduce the proportion of adults who are obese

U.S. Target: 30.6 percent

State Target: 24.0 percent

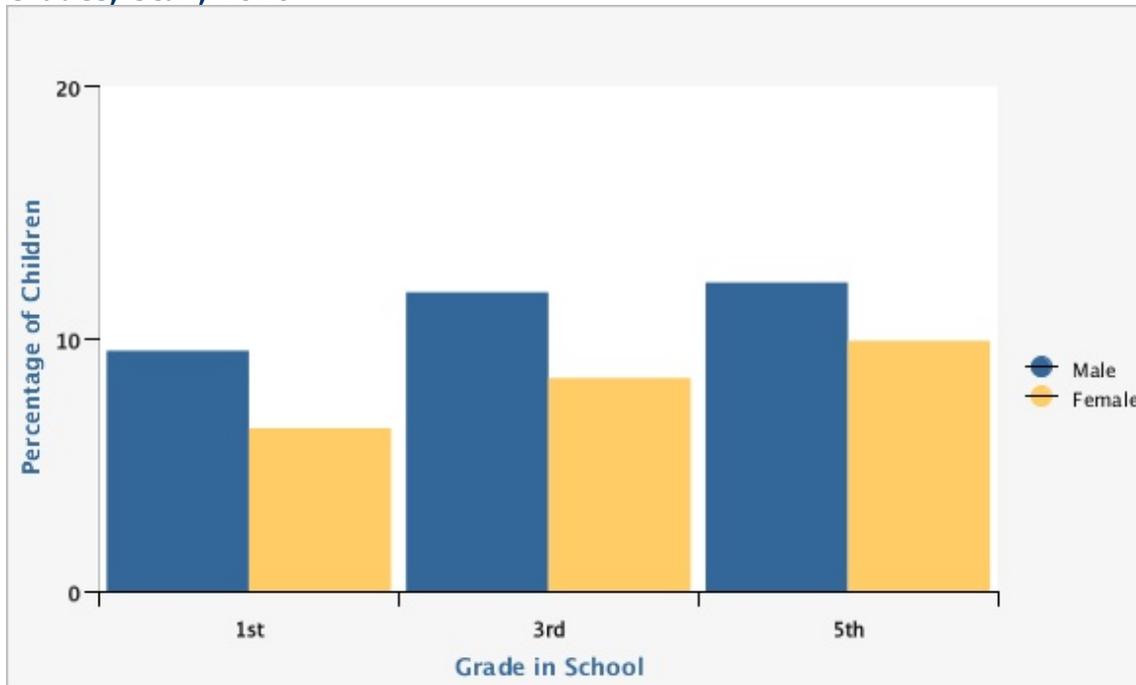
Date Indicator Content Last Updated: 10/27/2011

Obesity Among Children and Adolescents

Why Is This Important?

The number of overweight or obese children and adolescents is increasing and diseases previously thought to be diseases of adults, such as type 2 diabetes, high blood pressure, and high cholesterol, are now being diagnosed in children and adolescents. The social and psychological impacts of childhood obesity include social isolation, increased rate of suicidal thoughts, low self-esteem, increase rate of anxiety disorders and depression, and increased likelihood of being bullied.

Percentage of Utah Children Who Were Obese by Grade and Sex, 1st, 3rd, and 5th Grades, Utah, 2010



Data Sources

Utah Department of Health, Bureau of Health Promotion, Heart Disease and Stroke Prevention Program. (2002) Height/Weight Measurement.

Data Notes

Childhood obesity is determined by calculating BMI using the height, weight, age, and sex of the child. The child is considered to be obese if the resulting BMI is greater than or equal to the 95th percentile for age and sex based on the Centers for Disease Control and Prevention Growth Charts (2 to 20 years: Boys Body Mass index-for-age percentiles and 2 to 20 years: Girls Body Mass index-for-age percentiles). In 2010 height and weight measurements were collected from 4,310 1st, 3rd, and 5th grade students in 69 randomly selected public elementary schools in Utah.

How Are We Doing?

The percentage of obese children in Utah has increased dramatically over the past decade. From 1994 to 2010 the number of obese third grade boys increased by 97%, from 6.0% in 1994 to 11.8% in 2010. The percentage of obese third grade girls increased by 40% over the same time period. In 2010, 8.4% of third grade girls were obese compared to 6.0% in 1994.

In 2011, 8.6% of public high school students were obese; boys were almost three times as likely as girls to be obese (12.2% compared to 4.8%). It is likely that these data, based on self-reported height and weight, underrepresent the prevalence of overweight among high school students.

What Is Being Done?

In 2008, through funding from the Centers for Disease Control and Prevention, a Physical Activity, Nutrition, and Obesity (PANO) program was established in the Department's Bureau of Health Promotion. The purpose of the grant is to increase healthful eating and physical activity to prevent and control obesity and other chronic diseases by building and sustaining statewide capacity and implementing population-based strategies and interventions. In the first year, partners were convened to develop a statewide obesity plan. The state plan was released in April 2010 and addresses the six areas of focus for the grant (as required by CDC) including 1) increase physical activity; 2) increase consumption of fruits and vegetables; 3) decrease the consumption of sugar sweetened beverages; 4) increase breastfeeding initiation, duration, and exclusivity; 5) reduce the consumption of high energy dense foods; and 6) decrease television viewing. Years 2-5 of the grant period focus on implementing objectives in the state plan.

In 2007, a newly-formed nonprofit Utah Partnership for Healthy Weight was incorporated. Currently the Partnership is focused on bringing informational and financial resources not readily available to state health departments, to obesity prevention efforts in Utah. The Partnership works to coordinate the many ongoing and future initiatives within Utah's communities. UDOH staff attend regular meetings of the Partnership and also serve as Partnership board members.

In Schools:

- (1) The Gold Medal School (GMS) Initiative helps elementary schools set up policy and environmental supports that make it easier for students and staff to be physically active and eat healthy food.
- (2) The Physical Activity, Nutrition, and Obesity Program (PANO) and Action for Healthy Kids are working with local school boards to improve or develop policies for nutritious foods in schools. This includes recommendations for healthy vending options.
- (3) The "Unplug 'n Play" program encourages students and their families to limit TV and other screen time to less than two hours per day.
- (4) Height and weight trends are being tracked in a sample of elementary students to monitor Utah students.
- (5) Action for Healthy Kids brings partners together to improve nutrition and physical activity environments in Utah's schools by implementing the school-based state plan strategies.

In the Community:

- (1) The "A Healthier You Legacy Awards Program" is a collaborative effort of the UDOH and community partners. It is a unique program that started as part of the Salt Lake 2002 Olympic Winter Games. The Program recognizes the efforts of communities, schools, and worksites to increase opportunities for their constituents to participate in health-enhancing areas: nutrition, physical activity, and healthy behaviors. Criteria categories for the award include policy, infrastructure, and outcomes. Recipients can receive bronze, silver, gold, and platinum awards for meeting criteria under these categories.
- (2) UDOH joined with Intermountain Healthcare and KUTV in a health promotion program aimed at improving the overall health of Utah residents. The Check Your Health media campaign promotes the message "Eat Healthy, Be Active!" The campaign encourages all Utah families to make healthy food choices, develop a regular family mealtime, use correct portion sizes, and get at least 30 minutes of moderate to vigorous physical activity every day. The campaign specifically targets females ages 25-54.
- (3) Local health departments receive federal dollars to mobilize community partners to improve or develop active community environments where people can walk and bike safely.
- (4) The PANO program leads a statewide coalition to implement strategies within the state plan.

Healthy People Objective NWS-10:

Reduce the proportion of children and adolescents who are considered obese

U.S. Target: Not applicable, see subobjectives in this category

(<http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=29>)

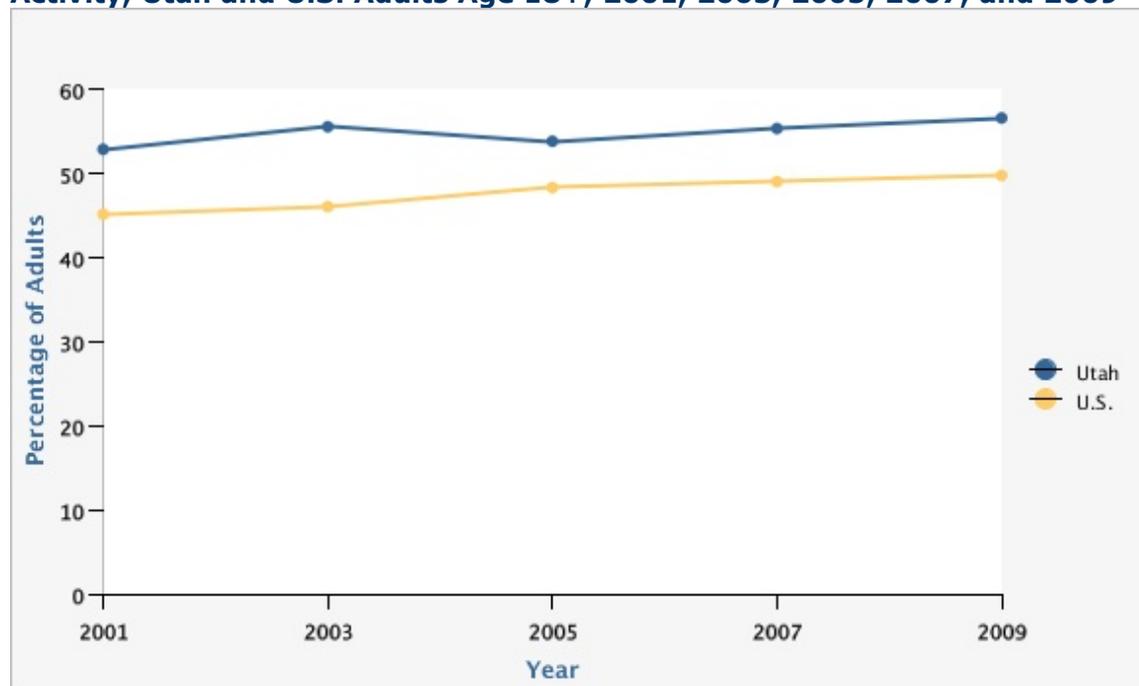
Date Indicator Content Last Updated: 10/27/2011

Physical Activity: Recommended Levels Among Adults

Why Is This Important?

Physical activity is recognized as an independent protective factor against cardiovascular disease. Physical activity has been shown to reduce the risk of some cancers, type 2 diabetes, stroke, and heart disease; and improve general physical and mental health.⁴ Weight-bearing activity can improve bone density, reducing the risk of hip fractures in elderly persons. Regular activity helps to relieve pain from osteoarthritis.⁵ Regular physical activity is also known to improve affective disorders such as depression and anxiety, and increase quality of life and independent living among the elderly.⁶

Percentage of Adults Who Reported Getting the Recommended Amount of Physical Activity, Utah and U.S. Adults Age 18+, 2001, 2003, 2005, 2007, and 2009



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Age-adjusted to U.S. 2000 population.

Risk Factors

The percentage of persons who reported getting the recommended amount of physical activity was higher as income increased and was higher as education increased.

How Are We Doing?

In 2009, 58.7% of Utah males and 56.6% of Utah females reported getting the recommended amount of physical activity. Lowest rates were found in Davis County Health District (49.2%), and highest rates were found in Summit County Local Health District (65.6%). Small area rates ranged from 35.7% (Woods Cross/North Salt Lake) to 72.9% (Cedar City).

What Is Being Done?

In 2008, through funding from the Centers for Disease Control and Prevention, a Physical Activity, Nutrition, and Obesity (PANO) program was established in the Department's Bureau of Health Promotion. The purpose of the grant is to increase healthful eating and physical activity to prevent and control obesity and other chronic diseases by building and sustaining statewide capacity and implementing population-based strategies and interventions. The State Nutrition & Physical Activity Plan was released in April 2010 and addresses the six areas of focus for the grant (as required by CDC) including 1) increase physical activity; 2) increase consumption of fruits and vegetables; 3) decrease the consumption of sugar sweetened beverages; 4) increase breastfeeding initiation, duration, and exclusivity; 5) reduce the consumption of high energy dense foods; and 6) decrease television viewing. Implementation of the plan is currently underway.

In 2007, a newly-formed nonprofit Utah Partnership for Healthy Weight was incorporated. Currently the Partnership is focused on bringing informational and financial resources not readily available to state health departments, to obesity prevention efforts in Utah. The Partnership works to coordinate the many ongoing and future initiatives within Utah's communities. UDOH staff attend regular meetings of the Partnership and also serve as Partnership board members.

In Schools:

- (1) The Gold Medal School Program (GMS) helps elementary schools establish policy and environmental supports that make it easier for students and staff to be physically active and eat healthy food.
- (2) The Physical Activity, Nutrition, and Obesity (PANO) Program assists elementary schools with Walk to School Day and Safe Routes to School.

In Worksites:

- (1) The Utah Council for Worksite Health Promotion awards recognition to businesses that offer employee fitness and health promotion programs.
- (2) The Bureau of Health Promotion's worksite wellness workgroup provides toolkits and other resources for employers interested in implementing wellness programs.

In the Community:

- (1) The PANO program and local health departments work with partners to improve or develop active community environments where people can walk and bike safely.
- (2) The PANO program sponsors UtahWalks, a website with information on places to walk and bike throughout Utah. It also has ideas on how to create places for people to walk and bike.

Healthy People Objective PA-2:

Increase the proportion of adults who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity

U.S. Target: Not applicable, see subobjectives in this category

(<http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=33>)

Date Indicator Content Last Updated: 10/27/2011

Physical Activity Among Adolescents

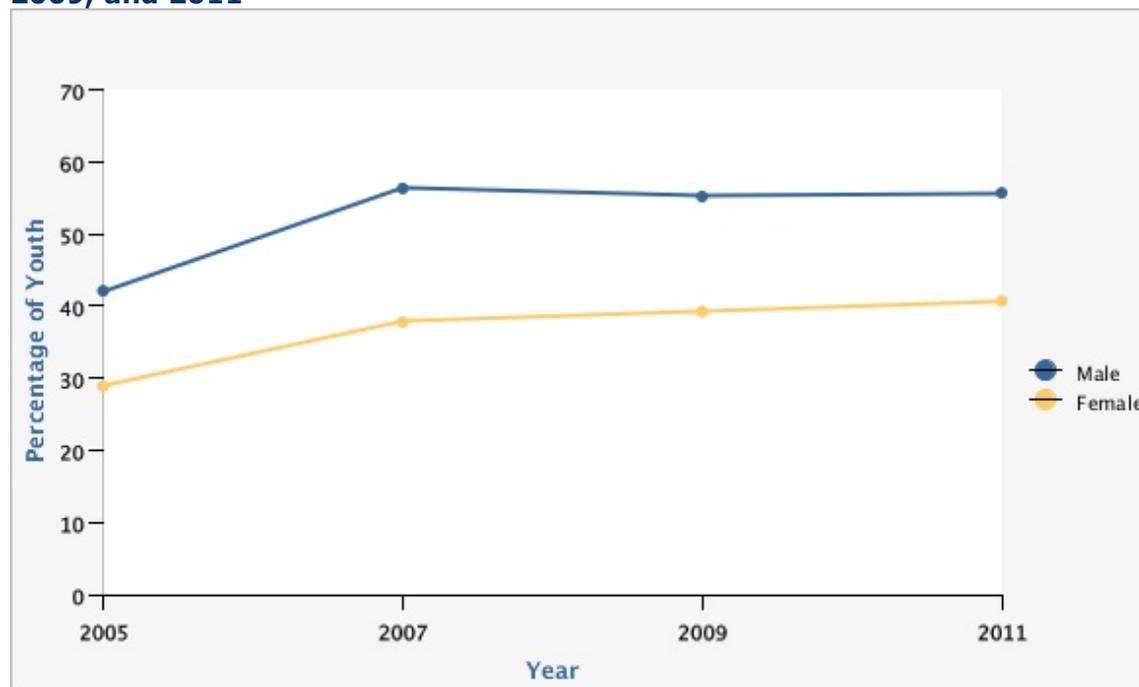
Why Is This Important?

According to the 2011 Youth Risk Behavior Survey (YRBS), 12.2 percent of all Utah public high school students were overweight and 8.6 percent were obese. Since diet and physical activity have been shown to help reduce weight and also to maintain weight, monitoring physical activity levels in adolescents is important.

The recommendation based on the most current (as of Oct. 7, 2008) HHS Physical Activity Guidelines for Americans is:

Children and adolescents should participate in one hour or more of physical activity per day; and most of the activity should be moderate or vigorous aerobic physical activity. They should participate in vigorous physical activity at least three days a week. They should participate in muscle-strengthening activities, such as push-ups and sit-ups and playing tug-of-war, three days a week. They should incorporate bone-strengthening activities, such as jumping rope, hopping, or running, at least three days a week.

Recommended Physical Activity by Sex, Utah Youth Grades 9-12, 2005, 2007, 2009, and 2011



Data Sources

Utah Youth Risk Behavior Surveillance System, Utah Department of Health.

Data Notes

Prior to 2008, this indicator measured the percentage of high school students who reported that they exercised or participated in physical activity for at least 20 minutes that made them sweat and breathe hard, such as basketball, soccer, running, swimming laps, fast bicycling, fast dancing, or similar aerobic activities. This was revised in 2008 to reflect the most current recommendations from the Health and Human Services Physical Activity Guidelines for Americans.

How Are We Doing?

In 2011, 40.7% of girls and 55.7% of boys in Utah high schools reported getting at least 60 minutes of physical activity at least 5 days per week. These percentages are similar to the 2007 and 2009 estimates, possibly indicating a leveling-off of the Utah adolescent physical activity rate.

What Is Being Done?

In 2008, through funding from the Centers for Disease Control and Prevention, a Physical Activity, Nutrition, and Obesity (PANO) program was established in the Department's Bureau of Health Promotion. The purpose of the grant is to increase healthful eating and physical activity to prevent and control obesity and other chronic diseases by building and sustaining statewide capacity and implementing population-based strategies and interventions. The State Nutrition & Physical Activity Plan was released in April 2010 and addresses the six areas of focus for the grant (as required by CDC) including 1) increase physical activity; 2) increase consumption of fruits and vegetables; 3) decrease the consumption of sugar sweetened beverages; 4) increase breastfeeding initiation, duration, and exclusivity; 5) reduce the consumption of high energy dense foods; and 6) decrease television viewing. Implementation of the plan is currently underway.

In 2007, a newly-formed nonprofit Utah Partnership for Healthy Weight was incorporated. Currently the Partnership is focused on bringing informational and financial resources not readily available to state health departments, to obesity prevention efforts in Utah. The Partnership works to coordinate the many ongoing and future initiatives within Utah's communities. UDOH staff attend regular meetings of the Partnership and also serve as Partnership board members.

In Schools:

- (1) The Gold Medal School (GMS) Initiative helps elementary schools set up policy and environmental supports that make it easier for students and staff to be physically active and eat healthy food.
- (2) The "Unplug 'n Play" program encourages students and their families to limit TV and other screen time to less than two hours per day.
- (3) Walk to School Day is promoted each year in October to encourage students and their parents to walk to school safely. The goal is to encourage regular walking or cycling to school throughout the year. This is promoted through cooperation of the PANO program, Safe Routes to School, the Utah Highway Safety Office, and Safe Kids Utah.
- (4) Height and weight trends are being tracked in a sample of elementary students to monitor Utah students.
- (5) Action for Healthy Kids brings partners together to improve nutrition and physical activity environments in Utah's schools by implementing the school-based state plan strategies.

In the Community:

- (1) The "A Healthier You Legacy Awards Program" is a collaborative effort of the UDOH and community partners. It is a unique program that started as part of the Salt Lake 2002 Olympic Winter Games. The Program recognizes the efforts of communities, schools, and worksites to increase opportunities for their constituents to participate in health-enhancing areas: nutrition, physical activity, and healthy behaviors. Criteria categories for the award include policy, infrastructure, and outcomes. Recipients can receive bronze, silver, gold, and platinum awards for meeting criteria under these categories.
- (2) UDOH joined with Intermountain Healthcare and KUTV in a health promotion program aimed at improving the overall health of Utah residents. The Check Your Health media campaign promotes the message "Eat Healthy, Be Active!" The campaign encourages all Utah families to make healthy food choices, develop a regular family mealtime, use correct portion sizes, and get at least 30 minutes of moderate to vigorous physical activity every day. The campaign specifically targets females ages 25-54.
- (3) Local health departments receive federal dollars to mobilize community partners to improve or develop active community environments where people can walk and bike safely.
- (4) The PANO program leads a statewide coalition to implement community-based strategies within the state plan.

Healthy People Objective PA-3:

Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity

U.S. Target: Not applicable, see subobjectives in this category

(<http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=33>)

Date Indicator Content Last Updated: 10/31/2011

Access to Health Care

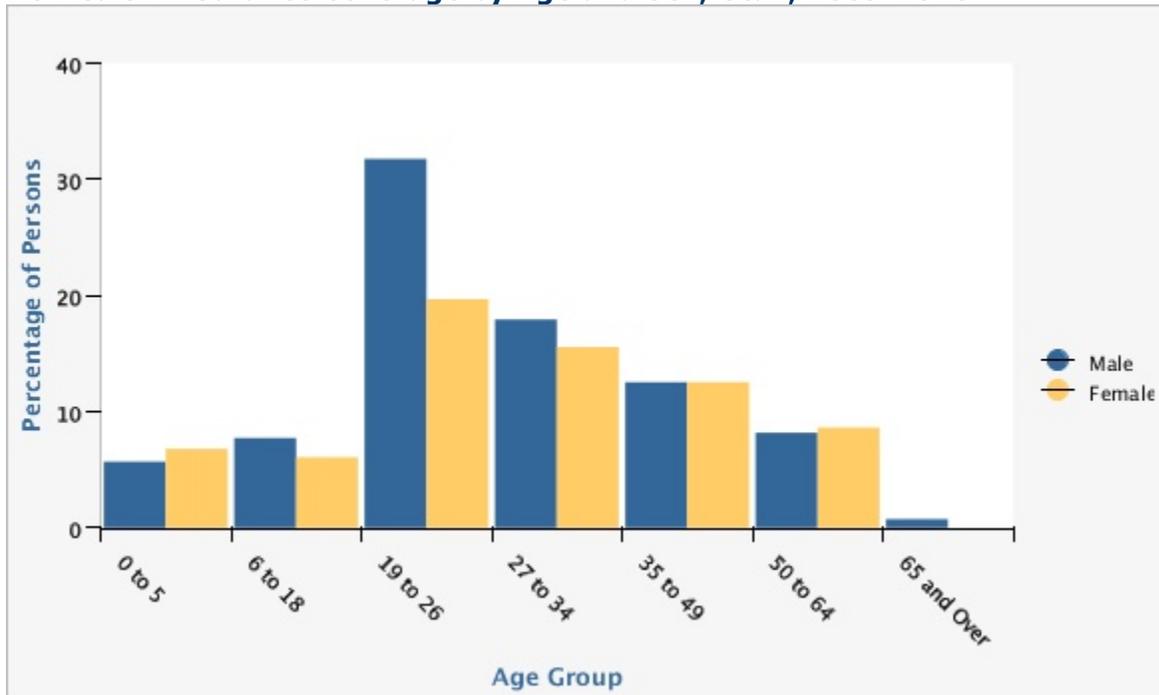
Access to health care is an issue for many Utah residents, whether it is due to financial barriers (poverty and/or lack of insurance), geographic barriers (distance to needed services), cultural barriers (including language/translation issues), or when needed services are not available. Delaying needed health care for whatever reason can lead to worsening health problems that are more difficult and expensive to treat than those avoided completely or treated earlier.

Health Insurance Coverage

Why Is This Important?

Persons with health insurance were more likely than persons without health insurance to have a regular source of primary health care, and were more likely to have routine preventive care. Persons without coverage have often delayed seeking needed care and found services difficult to afford.

No Health Insurance Coverage by Age and Sex, Utah, 2009-2010



Data Sources

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

Data Notes

State estimates of the uninsured were formerly calculated from Utah Healthcare Access Survey (UHAS, formerly HSS) data. Beginning in 2009, these data are being collected on the Behavioral Risk Factor Surveillance System (BRFSS). These estimates include only respondents with landline telephones and use a weighting methodology that is outdated. The Utah BRFSS Program is currently in the process of switching over to a methodology that includes data collection on landline and cell phones and uses an updated weighting methodology for analysis. The 2011 estimates will include both of these changes and will lead to higher estimates of the uninsured. For more information on the change in survey instruments, please see:

http://health.utah.gov/opha/publications/hsu/09May_Insurance.pdf. For more historical estimates of the uninsured in Utah, please see:

http://health.utah.gov/opha/publications/2010brfss/Highlights_2010.pdf. For more information about the changing methodology, please see:

<http://health.utah.gov/opha/publications/brfss/Raking/Raking%20impact%202011.pdf>. Values have been suppressed because the sample sizes were too small to produce reliable estimates for these categories: Female, 65 and Over.

Risk Factors

There is an association between poverty and lack of insurance. In 2010, approximately 39.2% of people living below the federal poverty level were uninsured compared to only 1.8% uninsured among people living at 300% or more of the federal poverty level.

How Are We Doing?

An estimated 301,700 Utahns (10.6%) were without health insurance coverage in 2010. However, the estimate may actually be as high as 15.3%, or 421,900 Utah residents, according to a Census Bureau survey that is mailed and includes follow-up phone calls and face-to-face interviews when needed. Unlike the BRFSS, the Census survey does reach people with cell phones only and people without phones at all. By either measure, the uninsured rate in Utah has increased in recent years.

What Is Being Done?

The Utah Department of Health administers programs to improve access to care, such as Medicaid, Children's Health Insurance Program (CHIP), the Primary Care Network (PCN), and Utah's Premium Partnership for Health Insurance (UPP). The Department also works to improve the "safety net" for persons who lack health insurance. This is done through primary care grants to rural areas and clinics for children with disabilities. Local health departments provide preventive services such as immunizations and screenings at low or no cost to eligible persons who cannot afford them.

Healthy People Objective AHS-1.1:

Increase the proportion of persons with health insurance: Medical insurance

U.S. Target: 100 percent

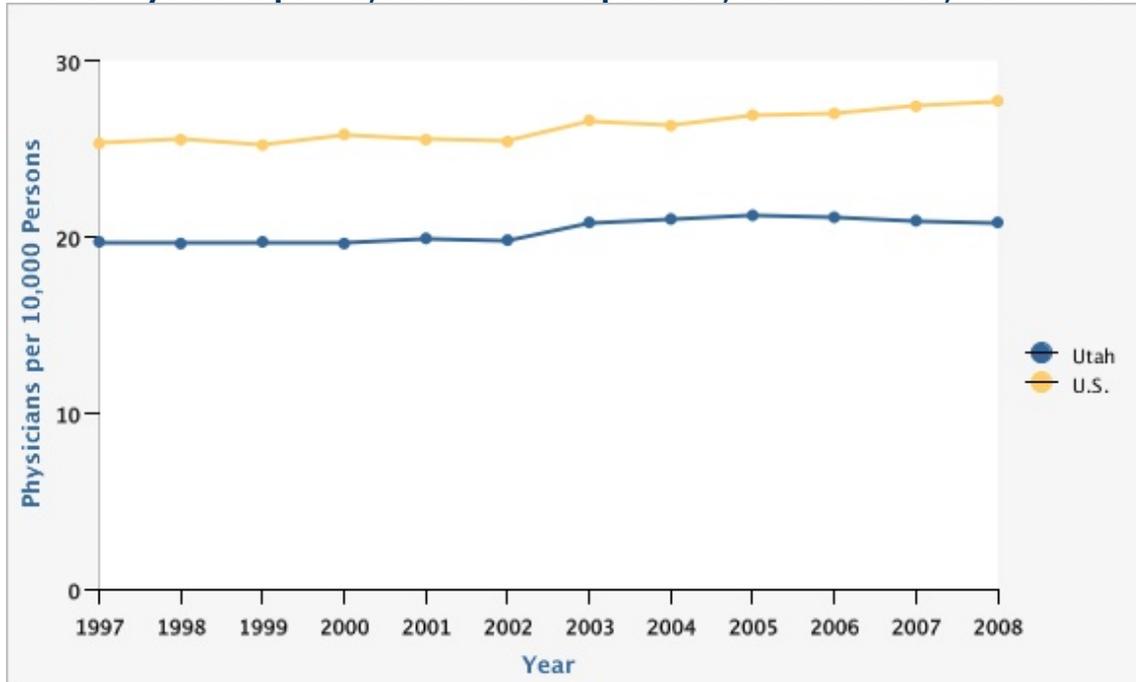
Date Indicator Content Last Updated: 10/19/2011

Physicians per 10,000 Civilian Population

Why Is This Important?

The ratio of physicians to persons in a population is an indication of the capacity of the health system and the access to care for persons in that population.

Active Physicians per 10,000 Civilian Population, Utah and U.S., 1997-2008



Data Sources

National Center for Health Statistics.

Data Notes

Includes active doctors of medicine and active doctors of osteopathy. Starting with 2003 data, federal and nonfederal physicians are included. Data prior to 2003 included nonfederal physicians only.

How Are We Doing?

The physician supply has more than kept up with growth in the population; however, access is also influenced by the availability of doctors by specialty area and by geographic area.

The optimal ratio of physicians to population depends on many factors, including population density and the health status and health care utilization patterns of the population. Utah predicts that about 1,100 physicians will retire in the next ten years, which may cause shortages in provision of specialty care.

What Is Being Done?

The Utah Department of Health administers the Utah Health Care Work Force Financial Assistance Program to increase and maintain the number of health care professionals practicing in rural and underserved areas of Utah.

The Department administers programs to improve access to care, such as CHIP (Children's Health Insurance Program), PCN (Primary Care Network), Utah's Premium Partnership for Health Insurance (UPP), Medicaid, and State Primary Care Grants Program.

Date Indicator Content Last Updated: 10/13/2011

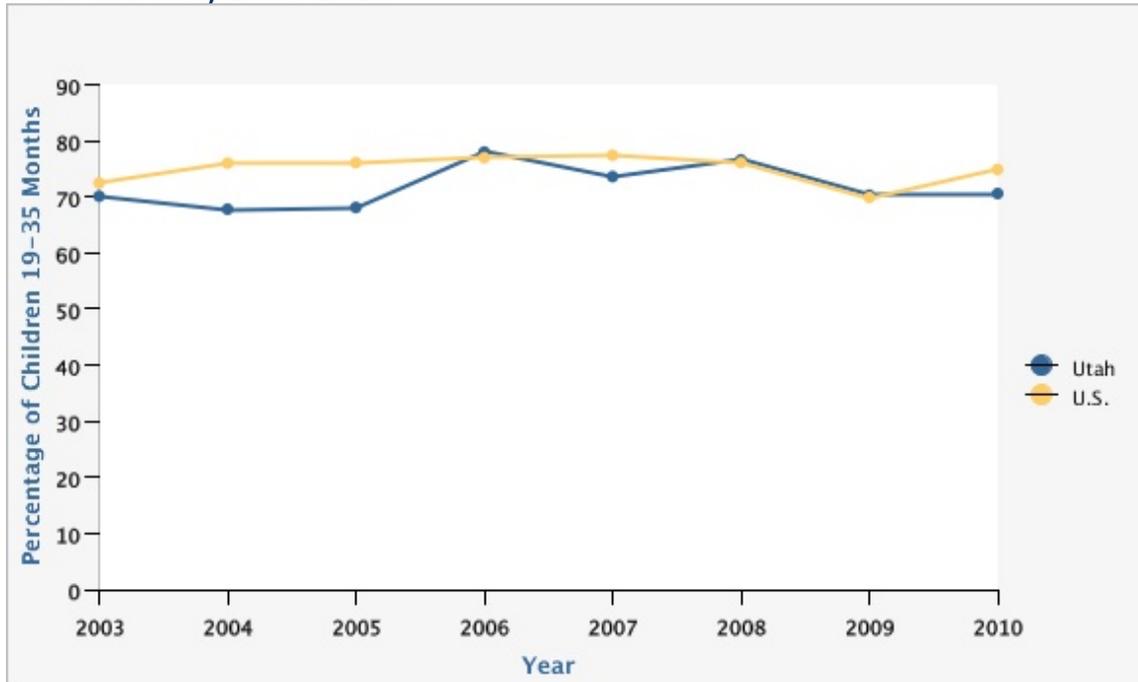
Immunizations 4:3:1:3:3:1

Why Is This Important?

Immunizations are the most cost-effective health prevention measures. Development of vaccinations had been cited by the U.S. Public Health Service as one of the Ten Great Public Health Achievements in the 20th Century.⁷ Vaccines play an essential role in reducing and eliminating disease.

By two years of age, it is recommended that all children should have received 4 doses of diphtheria-tetanus-pertussis (DTP), 3 doses of polio, 1 dose of measles-mumps-rubella (MMR), 3 doses of Hepatitis B, 3 doses of Haemophilus Influenzae, type B (Hib), and 1 dose of Varicella vaccine. This recommendation is referred to in shorthand as "4:3:1:3:3:1."

Estimated Vaccination Coverage With 4:3:1:3:3:1 Among Children 19-35 Months, Utah and U.S., 2003-2010



Data Sources

National Immunization Survey, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention. Utah Department of Health.

How Are We Doing?

Utah's coverage levels decreased from having 76.6% of 2-year-old children fully immunized in 2008 to having 70.3% of 2-year-old children fully immunized in 2009 to having 70.6% in 2010. These data also typically fluctuate from year to year and it is useful to look at 5-10 year trends to gain a clear understanding of how well Utah is immunizing its children.

What Is Being Done?

The Utah Department of Health's Immunization Program conducts annual assessments of private and public health care providers' immunization records to obtain state immunization levels. During these site visits, Utah Immunization Program provider representatives also train clinic staff on appropriate vaccine storage, handling, and administration according to the Advisory Committee on Immunization Practices (ACIP) recommended practices. Utah also has immunization coalitions that are working to maintain or improve current levels of immunization and to increase public awareness of immunizations.

Utah's Statewide Immunization Information System (USIIS) provides a mechanism for health care providers to track patient immunizations and send reminder cards to Utah parents whose children are due for immunizations. USIIS also includes adult immunizations, such as pneumonia, tetanus, influenza, and smallpox.

Due to the increased costs of vaccine, public health clinics are now able to provide publicly purchased vaccine only to those who meet eligibility criteria and don't have insurance coverage.

Healthy People Objective IID-7:

Achieve and maintain effective vaccination coverage levels for universally recommended vaccines among young children

U.S. Target: Not applicable, see subobjectives in this category

(<http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=23>)

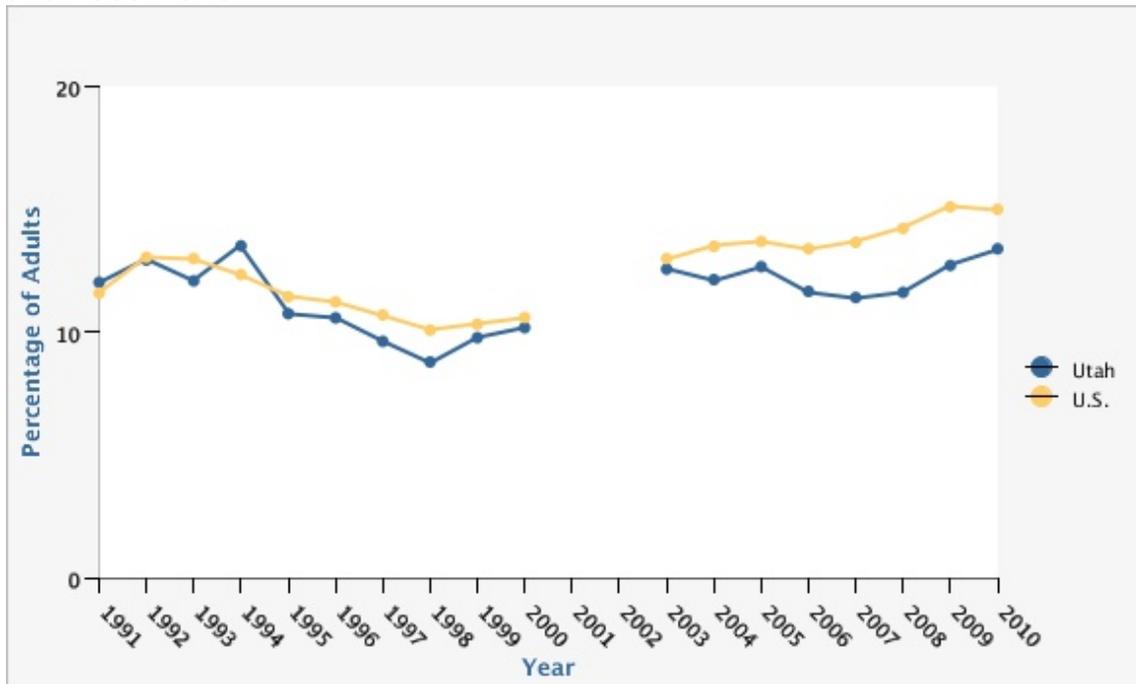
Date Indicator Content Last Updated: 10/12/2011

Cost as a Barrier to Health Care

Why Is This Important?

Access to health care is still a problem for many Utahns. Individuals who cannot obtain needed health care tend to have higher rates of death and disability from chronic disease. Cost is the most commonly reported barrier to getting needed health care.

Adults Reporting Cost as a Barrier to Care in Past Year, Utah and U.S., 1991-2000 and 2003-2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Age adjusted to U.S. 2000 standard population. U.S. data are the average for all states and the District of Columbia but do not include the U.S. territories. This question was not asked in 2001 or 2002.

How Are We Doing?

The crude percentage of Utah adults who reported being unable to see a doctor in the past 12 months due to cost was 14.2% in 2010. This percentage was the highest for adults aged 18-24 (20.5%) and lowest for Utah adults aged 65 and older (3.8%). Utah adults with low incomes had a higher rate of reporting cost as a barrier to health care than those with higher incomes as did those without health insurance versus the insured.

What Is Being Done?

The Utah Department of Health administers programs to improve access to care, such as Medicaid, the Children's Health Insurance Program (CHIP), the Primary Care Network (PCN), UPP (Utah's Premium Partnership for Health Insurance), primary care grants, and clinics for children with disabilities. Local health departments provide preventive services such as immunizations and screenings at low or no cost to eligible persons who cannot afford them.

Members of the Association for Utah Community Health (AUCH), including Federally Qualified Health Centers and other providers, strive to meet the needs of the medically underserved in Utah.

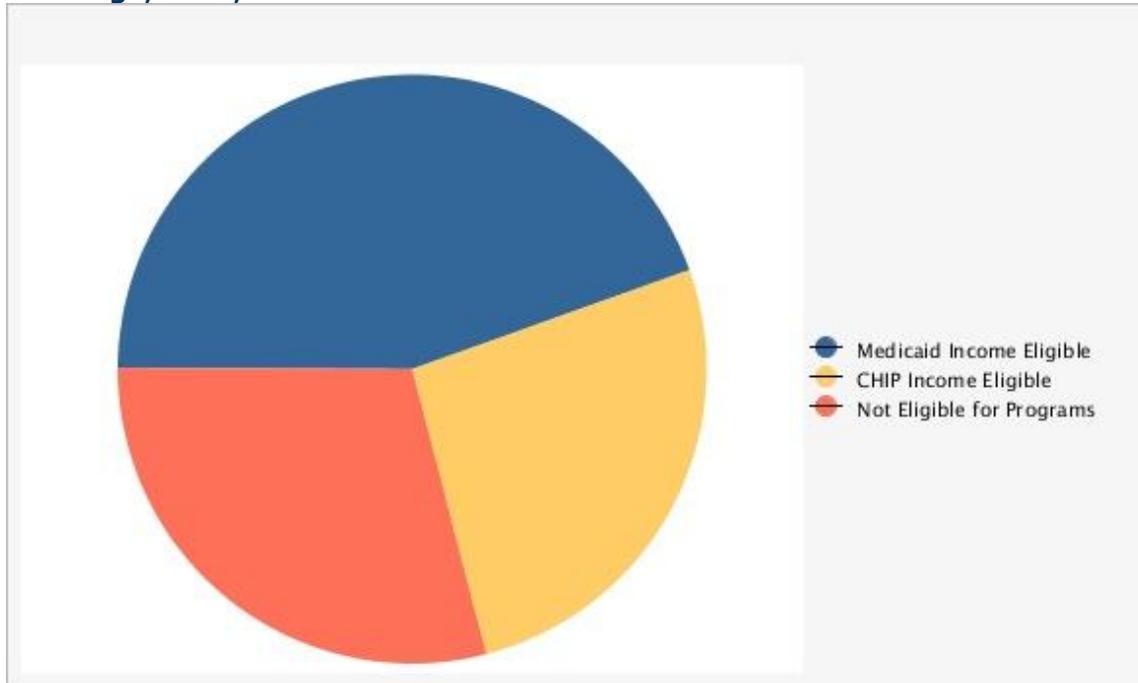
Date Indicator Content Last Updated: 10/24/2011

Medicaid and CHIP Penetration

Why Is This Important?

Children who are not insured by private or employer-provided plans have an opportunity to be covered by Medicaid or the Children's Health Insurance Program (CHIP) if they are age 0-18 and live in households with incomes below 200% of poverty. This element is very important given the relationship between having insurance and accessing health care.

CHIP and Medicaid Program Eligibility, Children 0-18 Without Health Insurance Coverage, Utah, 2010



7.0% of Utah children aged 0-18 lacked health insurance coverage. The percentages in this figure represent the estimated percentage of all uninsured Utah children aged 0-18 in each category.

Data Sources

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

Data Notes

State estimates of the uninsured were formerly calculated from Utah Healthcare Access Survey (UHAS, formerly HSS) data. Beginning in 2009, these data are being collected on the Behavioral Risk Factor Surveillance System (BRFSS). These estimates include only respondents with landline telephones and use a weighting methodology that is outdated. The Utah BRFSS Program is currently in the process of switching over to a methodology that includes data collection on landline and cell phones and uses an updated weighting methodology for analysis. The 2011 estimates will include both of these changes and will lead to higher estimates of the uninsured. For more information on the change in survey instruments, please see:

http://health.utah.gov/opha/publications/hsu/09May_Insurance.pdf. For more historical estimates of the uninsured in Utah, please see:

http://health.utah.gov/opha/publications/2010brfss/Highlights_2010.pdf. For more information about the changing methodology, please see:

<http://health.utah.gov/opha/publications/brfss/Raking/Raking%20impact%202011.pdf>.

Risk Factors

Income is used as a primary factor in eligibility requirements for both Medicaid and CHIP.

How Are We Doing?

In 2010, approximately 7.0% of Utah children aged 0 to 18 years had no health insurance coverage. This represents a slight increase from the previous year (6.7%), though this change was not statistically significant.

The 2010 Behavioral Risk Factor Surveillance System (BRFSS) estimated that approximately 70% of uninsured children in Utah were income eligible for health care services through CHIP or Medicaid programs. Eligibility determination requires a review of circumstances in addition to income.

Date Indicator Content Last Updated: 10/21/2011

Air Quality

Air pollution contributes to a number of health problems for many Utahns. How air pollution affects an individual's health depends on the particular pollutants that individual is exposed to, the length of time and concentration of the exposure, and that individual's tolerance level and other health risks. Air pollution can indirectly affect health through deposition into drinking water sources or by entering the food chain. Poor air quality is thought to exacerbate asthma and heart disease and increase the risk of developing respiratory infections. Poor air quality may also impact fetal development. The rate of adverse birth outcomes in newborns has increased in Utah over the last 10 years. Approximately 7.0% of births will be low birth weight and 9.8% will be pre-term.

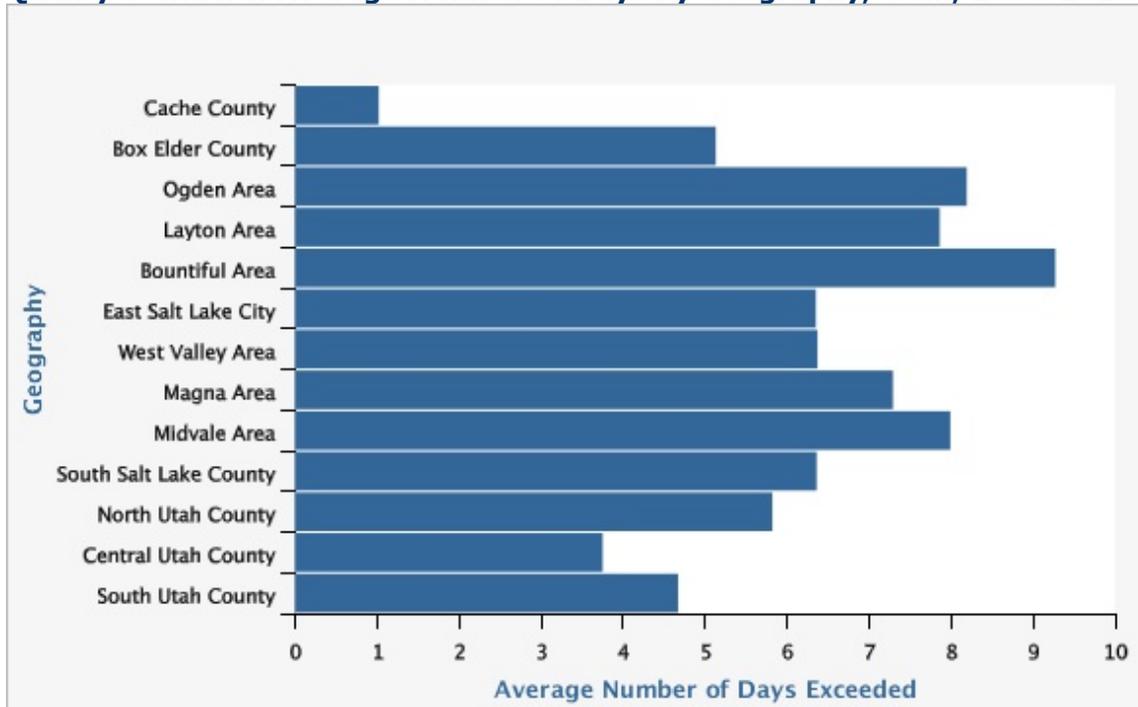
Air Quality: Ozone

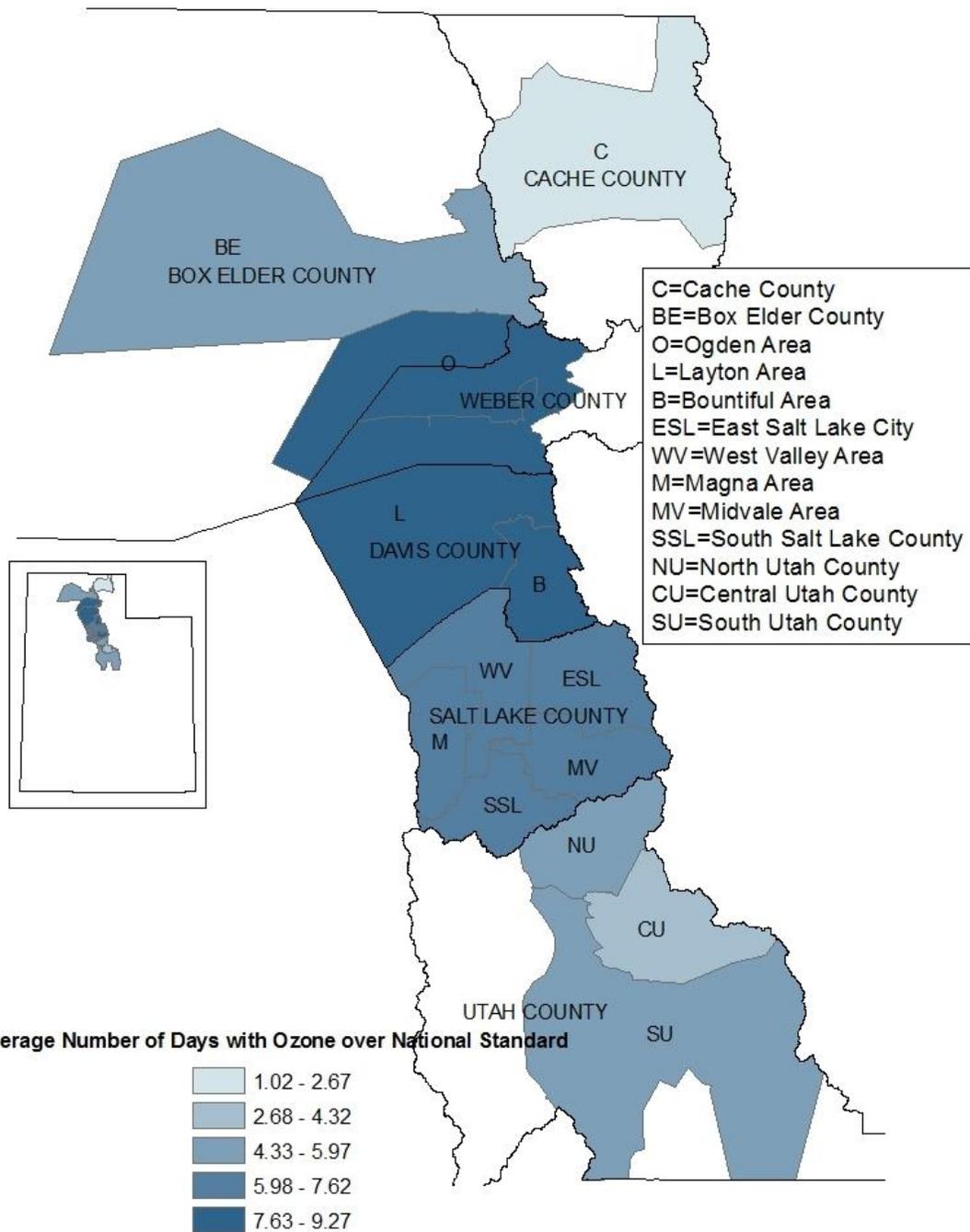
Why Is This Important?

Ozone can cause several adverse health effects in anyone, but especially in sensitive populations such as children, older adults, people with preexisting lung diseases such as asthma, and people who are physically active outdoors. Some of these health problems include painful breathing, chest tightness, headache, coughing, increased asthma symptoms, lung inflammation, temporary reduction in lung capacity, and over time ozone is associated with chronic lung problems and respiratory infections. Adverse health effects from ozone are more likely to occur when ozone levels exceed the Environmental Protection Agency's standard, but are possible when ozone levels are below the standard, especially in sensitive populations.

Ground-level ozone, not to be confused with the atmosphere's protective ozone layer, is created by reactions between environmental pollutants and light and heat. Ozone is the main component of smog and is dangerous to our health and environment. The creation of ozone is facilitated by warm weather and sunshine, therefore, ozone levels are usually higher in the summer and in the mid-afternoon.

Maximum 8-hour Average Ozone Concentrations Over the National Ambient Air Quality Standard: Average Number of Days Exceeded by Geography, Utah, 2000-2010





Data Sources

U.S. Environmental Protection Agency, Air Quality System (AQS).

Data Notes

Averages calculated using available years which can vary depending on location. This map was made using an interval break method called "equal interval" where classes are based on equal-sized sub-ranges according to numeric value.

How Are We Doing?

Several of the most urban counties in Utah have days that do not comply with the new ozone standard of 0.075 ppm. Utah's Department of Environmental Quality (DEQ) is working to decrease the number of days over the ozone standard.

What Is Being Done?

In response to the EPA's new ozone standard of 0.075 ppm, the Department of Environmental Quality (DEQ) has begun fitting school buses with cleaner technology, and state office buildings have begun using more energy-efficient practices and policies.

The DEQ's 3-day air quality forecasting program uses a red, yellow, and green stoplight color code to inform the public about how they can help keep pollution levels low and safe. A green day informs the public that pollution levels are low, and they can safely drive and spend time outside. A yellow day informs the public that they should consider limiting driving to reduce pollution levels. A red day strongly encourages the public to reduce driving and other polluting activities to prevent pollution levels from exceeding the health standard.

Ultimately, the air quality for Utah's citizens is dependent on each individual taking steps to reduce the amount of energy being used and pollution being emitted.

Date Indicator Content Last Updated: 10/28/2011

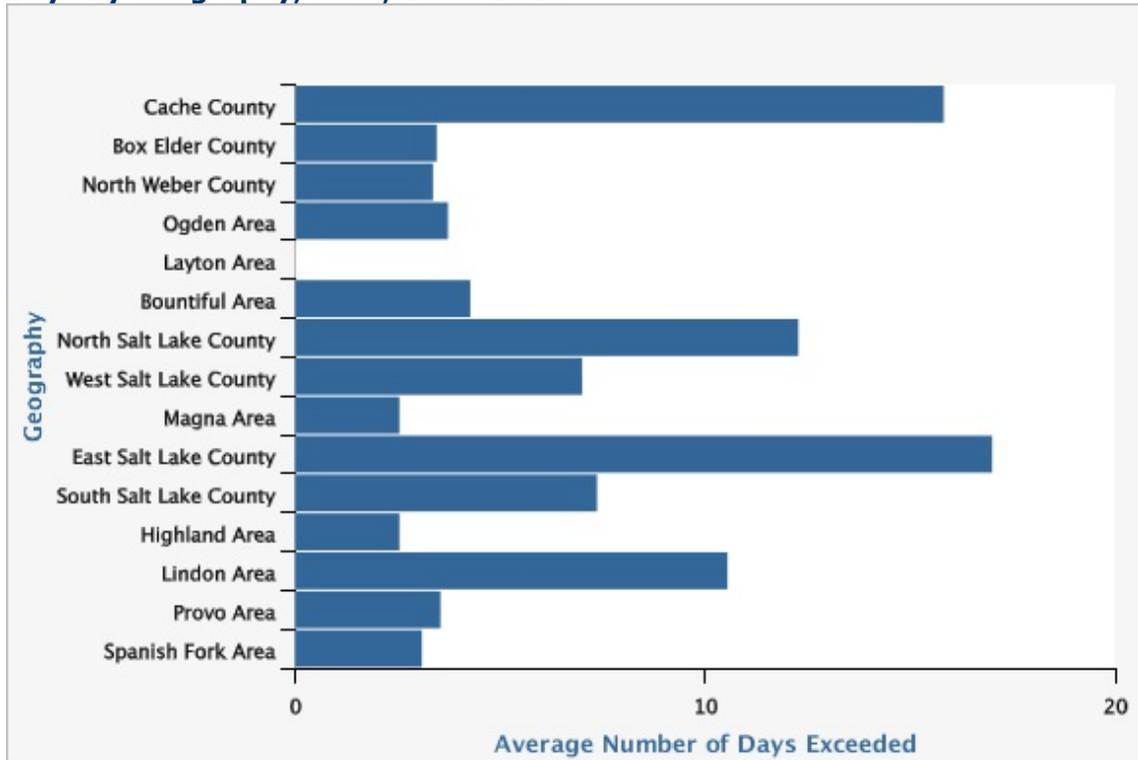
Air Quality: PM2.5

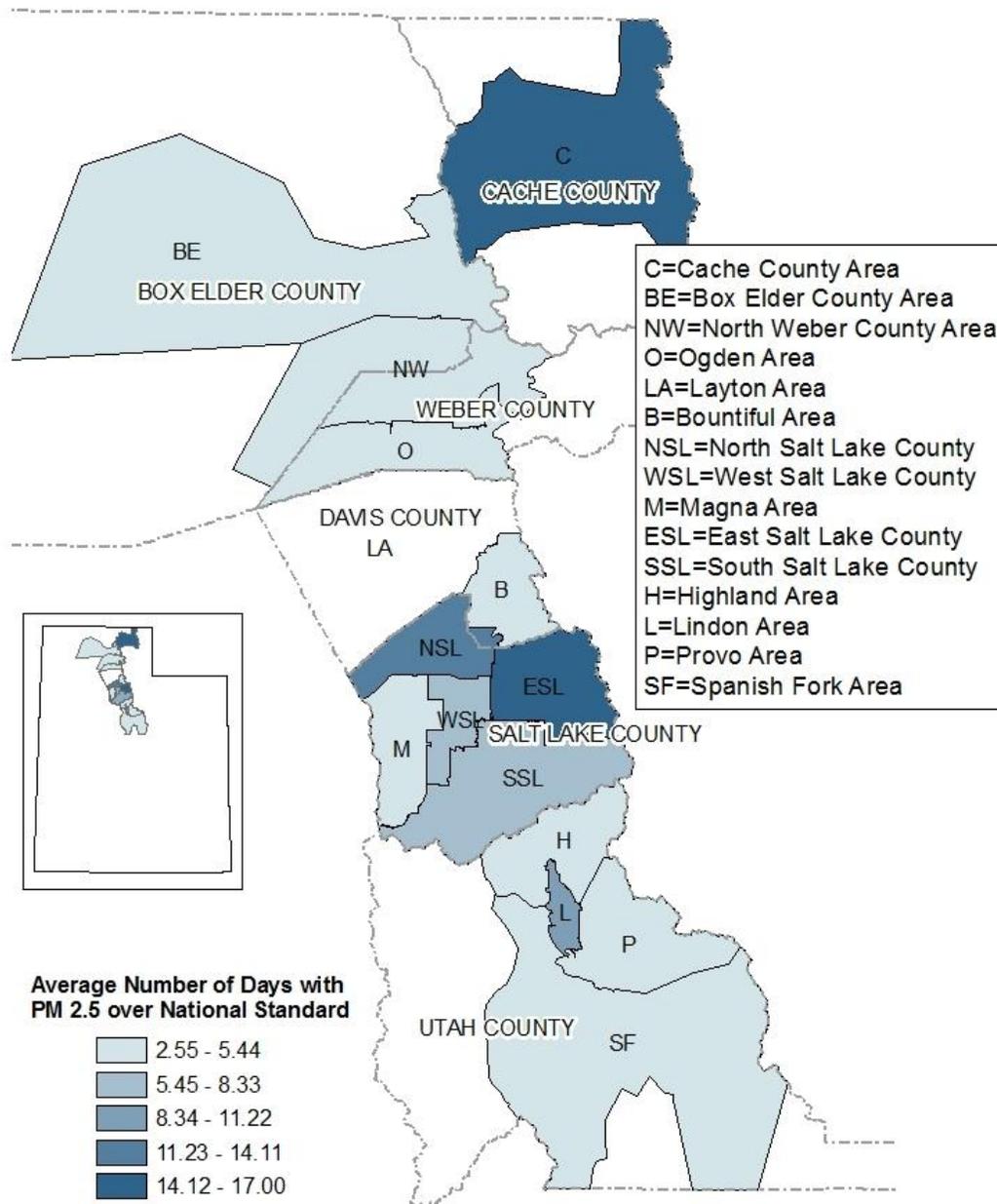
Why Is This Important?

Fine particulate matter (PM2.5) is very small and can get deep inside the lungs and cause a variety of health problems. These health problems can affect anyone, but especially sensitive populations such as children, older adults, people with preexisting heart and lung problems, and those who are physically active outdoors. Some of these health problems include painful breathing, chest tightness, headache, coughing, increased asthma symptoms, temporary reduction in lung capacity, abnormal heart beat, nonfatal heart attacks, and over time PM2.5 is associated with chronic lung problems and respiratory infections. Adverse health effects from PM2.5 are more likely to occur when PM2.5 levels exceed the Environmental Protection Agency's standard, but are possible when PM2.5 levels are below the standard, especially in sensitive populations.

In addition to these adverse outcomes, PM2.5 can influence the environment in ways that will eventually affect human health. Fine particles cause haze which reduces visibility. The long-term effects of PM2.5, which settles in the soil, natural water sources, forests, and agricultural areas, are still to be determined.

PM2.5 Levels Over the National Ambient Air Quality Standard: Average Number of Days by Geography, Utah, 2000-2010





Data Sources

U.S. Environmental Protection Agency, Air Quality System (AQS).

Data Notes

** Data for Layton Area not available in current dataset. Averages calculated using available years which can vary depending on location. This map was made using an interval break method called "equal interval" where classes are based on equal-sized sub-ranges according to numeric value.

How Are We Doing?

Several of the most urban counties in Utah have days that do not comply with the PM2.5 standard. This may, in part, be due to Utah's unique geography and seasonal conditions. PM2.5 levels increase seasonally in the winter and often due to inversions. Utah's Department of Environmental Quality (DEQ) is working to decrease the number of days over the PM2.5 standard.

What Is Being Done?

The Utah Department of Environmental Quality (DEQ) is working to decrease Utah's PM2.5 emissions to comply with national standards. Because the majority of particulate matter is caused by automobile emissions, the DEQ encourages the public to take mass transit and stay indoors on days with high pollution levels. In addition, the DEQ has studied the effects of high particulate matter levels on children playing outside at recess so that schools may make wise decisions about when to keep children indoors.

The DEQ's 3-day air quality forecasting program uses a red, yellow, and green stoplight color code to inform the public about how they can help keep pollution levels low and safe. A green day informs the public that pollution levels are low, and they can safely drive and spend time outside. A yellow day informs the public that they should consider limiting driving to reduce pollution levels. A red day strongly encourages the public to reduce driving and other polluting activities to prevent pollution levels from exceeding the health standard.

Ultimately, the air quality for Utah's citizens is dependent on each individual taking steps to reduce the amount of energy being used and pollution being emitted.

Date Indicator Content Last Updated: 10/17/2011

Asthma-related Emergency Department Visits

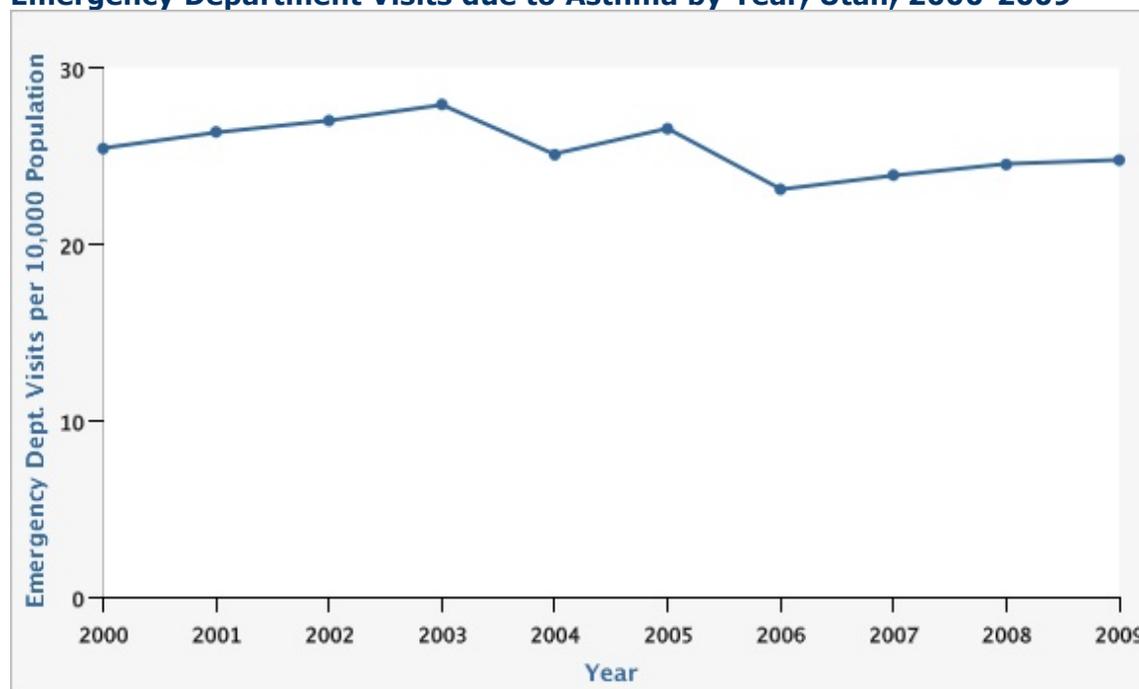
Why Is This Important?

Asthma can usually be managed in an outpatient setting, reducing the need for emergency department visits. Tracking rates of emergency department visits can aid in identifying populations or areas with inadequate access to routine medical care.

An asthma attack can necessitate an emergency department visit and can be initiated by a variety of triggers. Some of these include exposures to environmental tobacco smoke, dust mites, cockroach allergen, mold, pets, strenuous physical exercise, and air pollution. Two key air pollutants that can affect asthma are ozone (found in smog) and PM or particulate matter (found in haze, smoke, and dust).

The majority of problems associated with asthma, including emergency department visits, are preventable if asthma is managed according to established guidelines. Effective management includes control of exposures to factors that trigger exacerbations, adequate pharmacological management, continual monitoring of the disease, and patient education in asthma care.

Emergency Department Visits due to Asthma by Year, Utah, 2000-2009



Data Sources

Emergency Department Encounter Database, Bureau of Emergency Medical Services, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget.

Data Notes

The ICD-9 code used to define asthma is 493. All ED encounters are included in the presented data, which includes those that were treated and released, as well as those that resulted in hospital admission. Age-adjusted to the U.S. 2000 standard population.

How Are We Doing?

Utah is well below the Healthy People 2020 objectives for ages 0-4 and 5-64. The emergency department visit rate among the elderly ages 65+ (17.2 per 10,000 population) currently exceeds the HP2020 objective (13.2 per 10,000 population). In 2009 Utah's overall emergency department visit

rate due to asthma was 25.9 per 10,000 population. Asthma emergency department visits are higher among male children and adolescents. However, among adults, females have higher rates.

What Is Being Done?

The Utah Asthma Task Force, with participation from the Utah Department of Health's Asthma Program, the American Lung Association of Utah, health care providers, school personnel, and other professionals working with asthma, developed the Utah Asthma Plan. This statewide plan identifies numerous strategies that will help fulfill the vision of "Utah communities working together to improve the quality of life for people with chronic asthma symptoms by increasing awareness, access, and education." Action groups are currently working on a number of projects identified in the state plan. In addition, surveillance activities (data evaluation) and other sources are ongoing to assess the burden of asthma and trends, and to assess how asthma affects the quality of life relative to health.

Healthy People Objective RD-3:

Reduce hospital emergency department visits for asthma

U.S. Target: Not applicable, see subobjectives in this category

(<http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=36>)

Date Indicator Content Last Updated: 11/15/2011

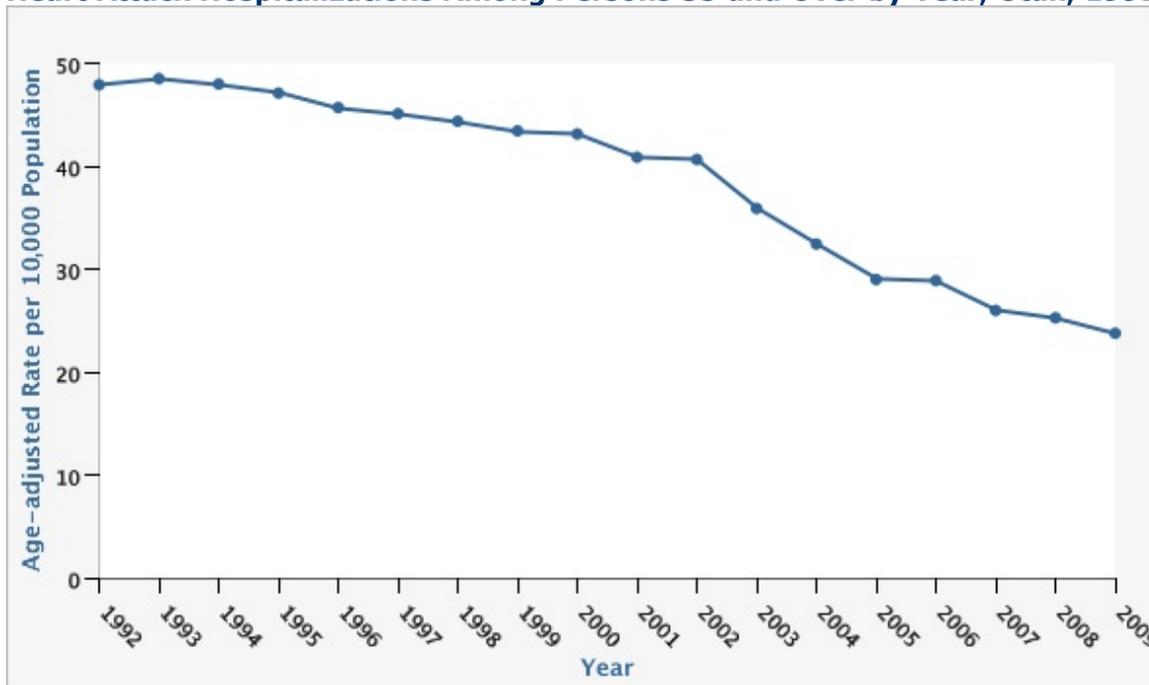
Heart Attack: Hospitalizations

Why Is This Important?

Heart attacks (myocardial infarctions) are associated with coronary heart disease, the number one killer of Utahns. There are several types of risk factors associated with heart attacks. Some of these include family history, high blood pressure, tobacco use, high cholesterol, physical inactivity, diabetes, obesity, and exposures to environmental contaminants.

Recent studies have shown significant relationships between air pollutants and increased risk of heart attack or other forms of coronary heart disease. Particulate matter (PM2.5) has shown to be associated with increased risk in particularly sensitive subpopulations such as the elderly, patients with preexisting heart disease, and those who are survivors of heart attack.

Heart Attack Hospitalizations Among Persons 35 and Over by Year, Utah, 1992-2009



Data Sources

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

Data Notes

Heart attack was defined with ICD-9 code 410 to select cases. Rates were age-adjusted by the direct method to the 2000 standard U.S. population.

What Is Being Done?

Over the past three years, the Utah Bureau of Emergency Medical Services and Preparedness (BEMS) has enlisted the expertise of hospital cardiac care experts, cardiologists, emergency physicians, EMS providers, the Utah Hospital Association, and the American Heart Association to develop a system to speed the recognition and treatment of heart attack patients. The focus of this system is to integrate EMS and hospitals to get patients with a certain type of heart attack, called STEMI, to the hospital best able to treat them in the shortest possible time.

The Utah STEMI system involves a multi-faceted approach to heart attack victims. EMS agencies, utilizing field ECGs, identify STEMI patients and alert hospital emergency departments of the patient

condition and time of arrival. The field ECG is transmitted to the receiving hospital directly from the patient's location, allowing immediate review by the hospital physicians. This allows them to assist in the field care of the patient, as well as to activate their hospital STEMI team to ready the cath lab. As a result of this coordinated response, precious minutes are saved.

Date Indicator Content Last Updated: 10/20/2011

Diabetes

Diabetes is a serious chronic illness that affects an increasing number of people. It is the leading cause of blindness among individuals under age 75, non-traumatic lower-extremity amputations, and renal failure. Diabetes is costly and burdens the health care system, with at least \$116 billion in direct medical costs every year. Children born in the year 2000 have a one in three chance of developing diabetes during their lifetime.

Diabetes Prevalence

Why Is This Important?

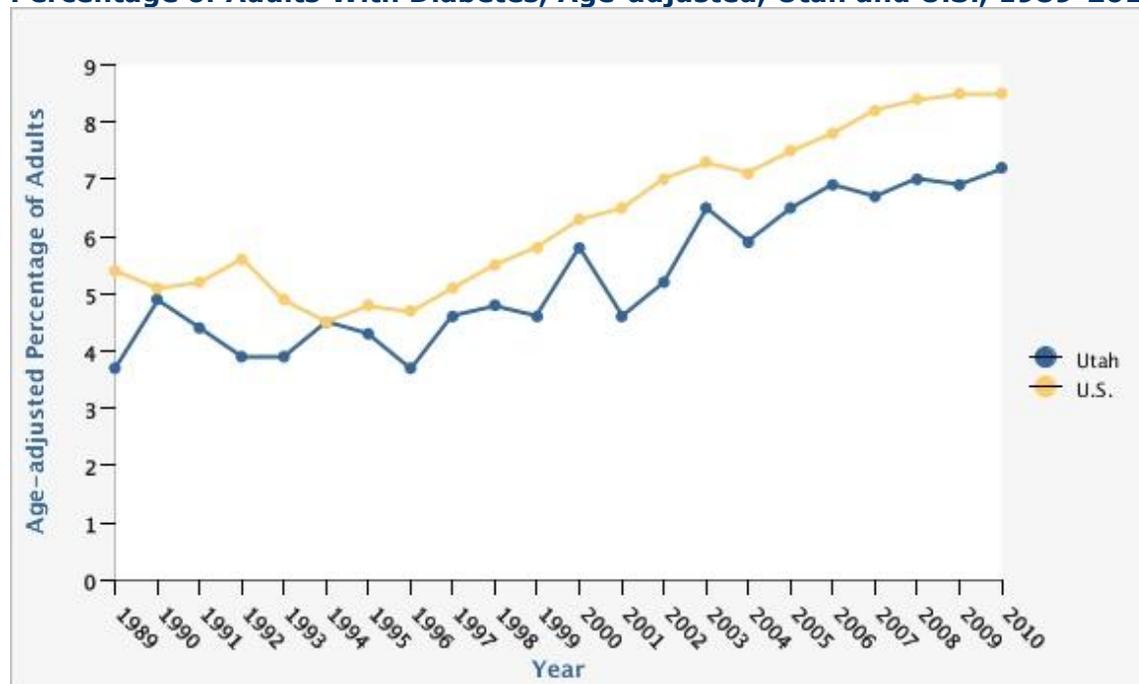
Diabetes has reached epidemic proportions in the U.S. Nearly 24 million Americans (about 8% of the U.S. population) have diabetes. However, data from the National Health and Nutrition Survey indicate that about one-fourth to one-third of people with diabetes (over 6 million Americans) have diabetes but don't know they have it and are undiagnosed. In Utah, approximately 45,000 people have diabetes but are not yet diagnosed.

Diabetes is a disease that can have devastating consequences. It is the leading cause of non-traumatic lower-extremity amputation and renal failure. It is also the leading cause of blindness among adults younger than 75. It is one of the leading causes of heart disease.

Diabetes places an enormous burden on health care resources, approximately \$174 billion annually (\$116 billion in direct medical costs and \$58 billion in indirect costs such as disability, work loss, and premature mortality).⁸

A model using simulated data projected that diabetes incidence will increase from the current rate of 8 cases per 1,000 population to about 15 in 2050. Prevalence of diabetes (including undiagnosed cases) can be as high as one of three Americans by 2050.⁹

Percentage of Adults With Diabetes, Age-adjusted, Utah and U.S., 1989-2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

"Don't know" and "Refused" responses were eliminated from the denominator. Rates are age-adjusted and standardized to the U.S. 2000 population.

Risk Factors

Being overweight or obese is a major risk factor for developing diabetes. The risk of developing diabetes can be substantially reduced through weight loss and regular physical activity. The Diabetes Primary Prevention Study (DPP) showed that weight loss and participation in regular physical activity can significantly decrease the risk. The DPP clinical trial included over 3,000 people who had impaired fasting glucose and were at an increased risk for developing diabetes. Participants who engaged in moderately intense physical activity for 30 minutes per day and lost 5 to 7 percent of their body weight decreased their risk of diabetes dramatically. This behavioral activity was effective for all participants in the study, regardless of age or ethnic group.¹⁰ Some risk factors cannot be modified, such as older age or membership in a minority racial or ethnic group. Nevertheless, risk can be substantially reduced through adhering to a nutritious diet and participating in regular physical activity.

How Are We Doing?

The prevalence of diabetes has risen steadily, both nationally and in Utah. Several factors contribute to the continual climb in diabetes prevalence. Increasing rates of obesity and sedentary lifestyles add to the number of people at risk for developing diabetes, while improvements in medical care mean people with diabetes are living longer. The 1997 change in the key diagnostic criterion (fasting blood glucose <126 mg/dL) contributed to the increased number of people who were clinically diagnosed. Finally, the proportion of undiagnosed diabetes cases has declined substantially in the past decade. However, the number of undiagnosed individuals is still estimated to be 6.2 million, roughly 30% of the total diabetes population.

What Is Being Done?

The Utah Diabetes Prevention and Control Program (DPCP) works to increase public awareness of the warning signs, symptoms, and risk factors for developing diabetes. The program seeks innovative ways to encourage people at risk to recognize that they may be at risk and need to be tested. The program is promoting A1C awareness among people already diagnosed with diabetes and has produced television and radio public service announcements stressing the urgency of getting A1C levels under control. The program also developed a brochure, "Wish You Could Reverse Time?" to complement its public service announcements. The DPCP, in conjunction with the Utah Health Plan Partnership, has also developed magnets to remind Utahns with diabetes of the importance of managing their ABCs (A1C, blood pressure, and cholesterol levels). The Program also assists community-based organizations as they work to increase awareness of diabetes and its risk factors among members of their populations.

Most recently, the DPCP initiated a program, Faces of Diabetes, that allows individuals to post their personal experiences with diabetes online. This resource allows viewers to learn about diabetes management and challenges by listening to others' stories.

The Arthritis Program supports Chronic Disease Self-Management Programs throughout the state. (This program is also called the Living Well with Chronic Conditions Program.) This six-week program is usually available at no cost and taught by community members. Information is available from Rebecca Castleton, 801-538-9340, rcastlet@utah.gov.

Healthy People Objective D-1:

Reduce the annual number of new cases of diagnosed diabetes in the population

U.S. Target: 7.2 new cases per 1,000 population aged 18 to 84 years

State Target: 7.2 new cases per 1,000 population aged 18 to 84 years

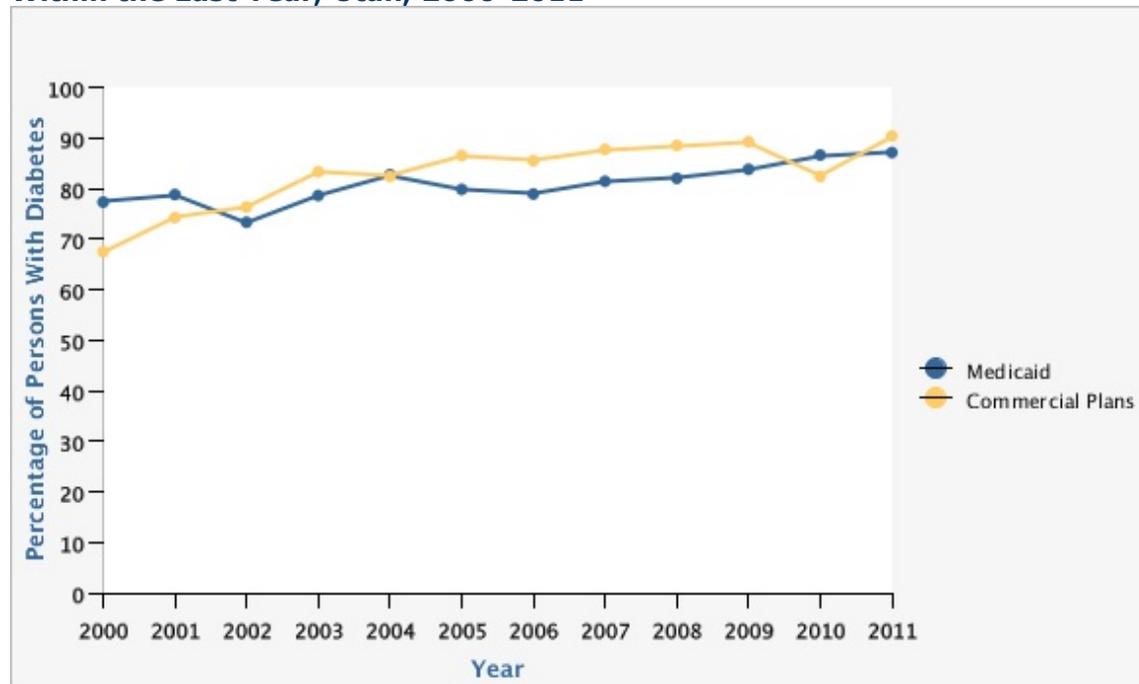
Date Indicator Content Last Updated: 10/26/2011

HEDIS (Healthcare Effectiveness Data and Information Set) Measures: Diabetes Care - Hemoglobin A1c (A1C)

Why Is This Important?

The Hemoglobin A1c (A1C) test measures the average level of blood glucose over a three-month period for persons with diabetes. Because blood glucose can fluctuate significantly and levels may be affected by illness or stress, the A1C test provides a much more accurate picture of a patient's blood glucose level than tests which measure levels at one point in time.

Percentage of Persons With Diabetes Who Had Their Hemoglobin A1c Tested Within the Last Year, Utah, 2000-2011



Data Sources

Healthcare Effectiveness Data and Information Set (HEDIS), National Center for Quality Assurance (NCQA).

How Are We Doing?

The American Diabetes Association recommends an A1C exam about every three months.

What Is Being Done?

The Utah Diabetes Control Program (UDCP) seeks to increase the proportion of people with diabetes who obtain an A1C exam. The UDCP conducts a statewide media campaign to educate Utahns with diabetes about the importance of diabetes control which includes having regular A1C tests. The UDCP also strives to encourage health care providers, especially those in family practice or general practice, to offer this exam to their patients with diabetes at least twice a year. In addition, the UDCP works with seven Utah health plans to promote health care quality improvement. Incentives are offered for people with diabetes who obtain A1C exams.

Healthy People Objective D-11:

Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year

U.S. Target: 71.1 percent

Date Indicator Content Last Updated: 10/11/2011

Cancer

Cancer is the second leading cause of death in the U.S. and in Utah. Cancer generally develops over several years and has many causes. Several factors both inside and outside the body contribute to the development of cancer. Some of these factors include genetics, tobacco use, diet, weight, physical inactivity, and excessive sunlight exposure. Other factors include exposure to ionizing radiation and environmental chemicals that may be present in the workplace, food, air, or water such as asbestos, benzene, and arsenic.

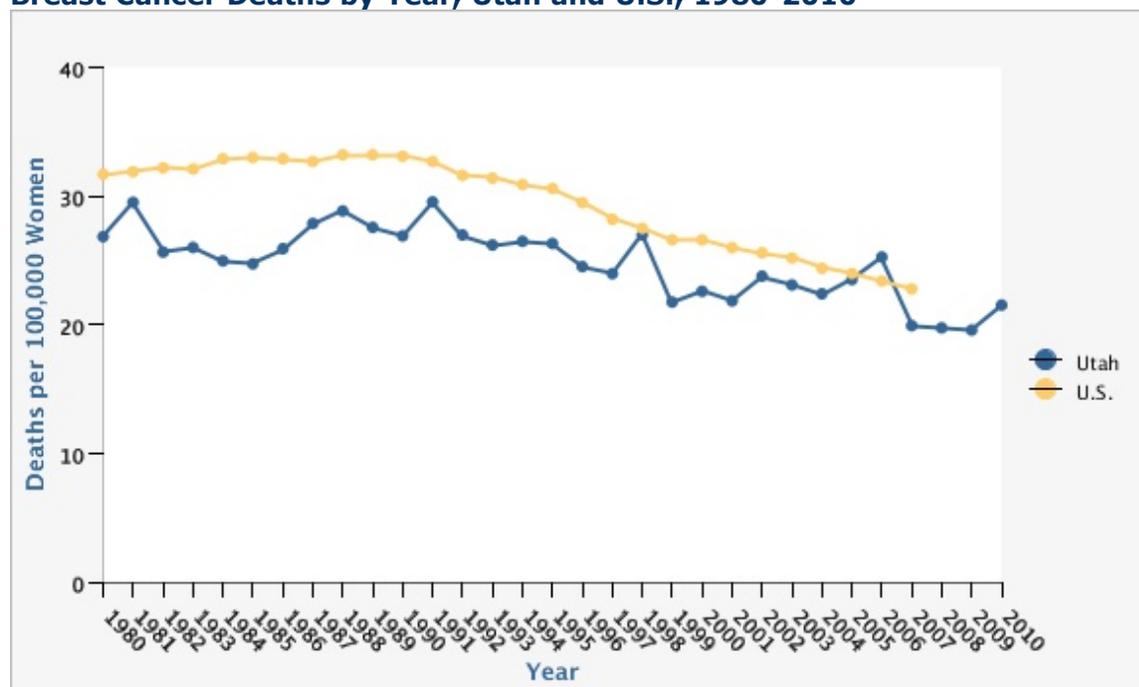
Breast Cancer Deaths

Why Is This Important?

Breast cancer is the most commonly occurring cancer in U.S. women (excluding basal and squamous cell skin cancers) and a leading cause of female cancer deaths in both Utah and the U.S. Nationally, deaths from lung cancer surpass deaths from breast cancer; however, breast cancer is the leading cause of cancer death among Utah women. Deaths from breast cancer can be substantially reduced if the tumor is discovered at an early stage. Mammography is currently the best method for detecting cancer early. Clinical trials have demonstrated that routine screening with mammography can reduce breast cancer deaths by 20% to 30% in women aged 50 to 69 years,^{11,12,13,14,15,16} and by about 17% in women aged 40 to 49 years.^{17,18}

We do not yet know exactly what causes breast cancer, but we do know that certain risk factors are linked to the disease. Some of these risk factors include age, socio-economic status, exposure to ionizing radiation, family history, alcohol, and hormonal influence. Some studies indicate that environmental contaminants such as benzene and organic solvents can cause mammary tumors, but clear links have not been established.

Breast Cancer Deaths by Year, Utah and U.S., 1980-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Codes used to define female breast cancer: ICD-9 174, ICD-10 C50. Age-adjusted to U.S. 2000 standard population. U.S. data available through 2007.

Risk Factors

The most important risk factor for breast cancer is increasing age. Other established risk factors include personal or family history of breast cancer, history of abnormal breast biopsy, genetic

alterations, early age at onset of menses, late age at onset of menopause, never having children or having a first live birth at age 30 or older, and history of exposure to high dose radiation. Associations have also been suggested between breast cancer and oral contraceptives, long-term use of hormone replacement therapy, obesity (in post-menopausal women), alcohol, and a diet high in fat. Some studies suggest that exercise in youth might give life-long protection against breast cancer and that even moderate physical activity as an adult could lower breast cancer risk. More research is needed to confirm these findings.

How Are We Doing?

Utah's age-adjusted breast cancer mortality rate did not change appreciably from 1980 to 1998 (26.8 per 100,000 females and 27.0 per 100,000 females, respectively). The mortality rate decreased to 21.8 per 100,000 females in 1999, and in 2010 the rate was 21.5 per 100,000 females. Breast cancer mortality rates increased significantly with age. Between 2007 and 2010, small area breast cancer mortality rates ranged from a high of 33.0 per 100,000 females in American Fork/Alpine to a low of 9.8 per 100,000 females in Foothill/U of U (excluding any small area with incomplete data).

What Is Being Done?

The 2000 Utah legislature approved a resolution encouraging private health insurance companies and employers to include insurance coverage for the screening and detection of breast, colorectal, and prostate cancers.

The UDOH Utah Cancer Control Program (UCCP) distributes free mammography vouchers to women who receive a clinical breast exam at a UCCP sponsored clinic and meet age and income guidelines.

In addition, the Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, testicular, prostate, skin, breast, and colorectal cancers as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

Healthy People Objective C-3:

Reduce the female breast cancer death rate

U.S. Target: 20.6 deaths per 100,000 females

State Target: 20.6 deaths per 100,000 females

Date Indicator Content Last Updated: 09/29/2011

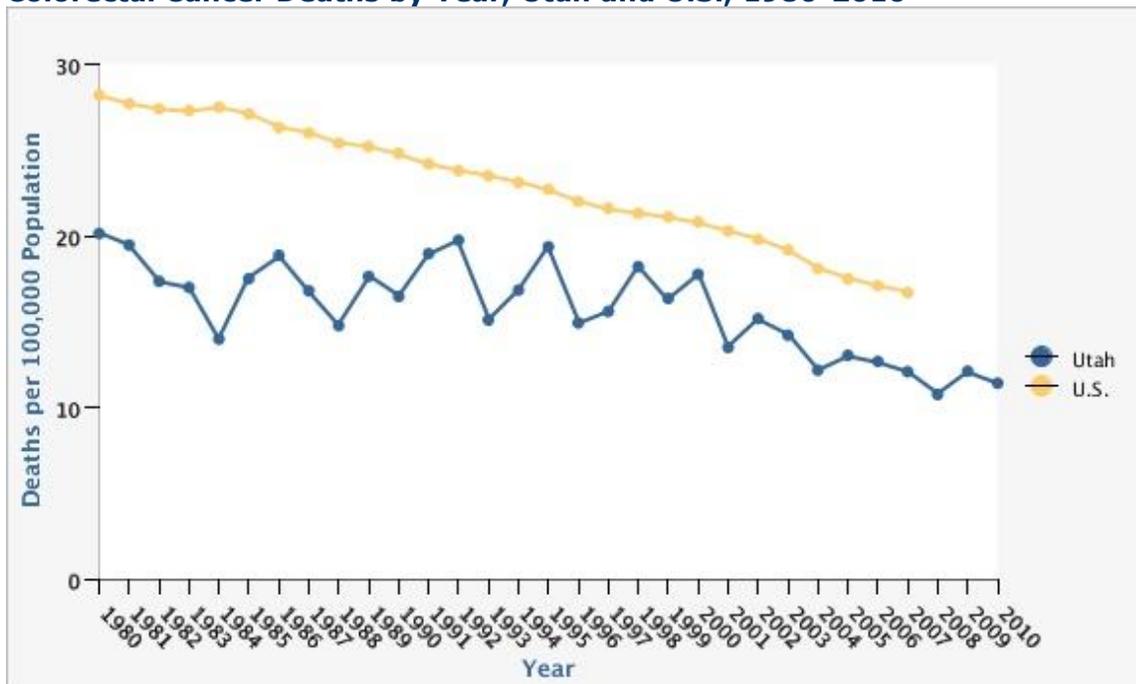
Colorectal Cancer Deaths

Why Is This Important?

Colorectal cancer is the second leading cause of cancer-related deaths in Utah and the U.S. When national cancer-related deaths are estimated separately for males and females, colorectal cancer is the third leading cause of cancer death behind lung and breast cancer for females and behind lung and prostate cancer for males. Deaths from colorectal cancer can be substantially reduced when precancerous polyps are detected early and removed. When colorectal cancer is diagnosed early, 90% of patients survive at least five years.¹⁹

Several scientific organizations recommend that routine screening for colorectal cancer begin at age 50 for adults at average risk. Persons at high risk may need to begin screening at a younger age. Routine screening can include either annual fecal occult blood test (FOBT), and/or flexible sigmoidoscopy every five years or colonoscopy every 10 years or double-contrast barium enema every 5 to 10 years. A randomized clinical trial has demonstrated that annual screening with FOBT can reduce colorectal cancer deaths by 33 percent in individuals over age 50.²⁰ The National Cancer Institute advises each individual to discuss risk factors and screening options with his or her health care provider. Medicare and many insurance plans now help to pay for colorectal cancer screening.

Colorectal Cancer Deaths by Year, Utah and U.S., 1980-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

ICD-9 codes used to define colorectal cancer: 153-154; ICD-10 codes used to define colorectal cancer: C18-C21. Age-adjusted to U.S. 2000 standard population. U.S. data available through 2007.

Risk Factors

Risk factors for colorectal cancer include increasing age, inflammatory bowel disease, a family history of polyps or colorectal cancer, a personal history of polyps or colorectal cancer, and certain hereditary syndromes. Physical inactivity, a low fiber/high fat diet, obesity, excessive alcohol consumption, and tobacco use may all increase risk. A diet high in fruits and vegetables, hormone replacement therapy in post-menopausal women, and aspirin use may reduce colorectal cancer risk.

How Are We Doing?

Utah's age-adjusted colorectal cancer mortality rate ranged from a high of 20.1 per 100,000 population in 1980 to a low of 10.8 per 100,000 population in 2008. Colorectal cancer mortality rates increased with age, and women aged 65 to 84 had significantly lower mortality rates than Utah men in this age group. Among health districts, the age-adjusted colorectal cancer mortality rate ranged from a high of 17.9 per 100,000 population in Central Utah Health District to a low of 8.2 per 100,000 population in Southwest Health District. Southwest Health District had significantly lower colorectal cancer mortality rates than Central Utah and Weber-Morgan Health Districts. Looking at small areas (excluding those without complete data), Other Southwest and Other Washington County had the lowest colorectal cancer mortality rates (both 7.1 per 100,000 population) and Roy/Hooper had the highest (22.0 per 100,000 population).

What Is Being Done?

The 2000 Utah legislature approved a resolution encouraging private health insurance companies and employers to include insurance coverage for the screening and detection of breast, colorectal, and prostate cancers.

In June 2002, the Utah Cancer Control Program (UCCP) received a grant from the CDC to launch a statewide education campaign. In 2009, the UCCP received a CDC grant to begin offering colorectal cancer screenings to low-income and uninsured Utahns. In addition to the screening program, monies were used for educational and promotional activities. Education efforts serve to increase awareness about colorectal cancer and promote screening and early detection for Utahns aged 50 and older.

In addition, the Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, testicular, prostate, skin, breast, and colorectal cancers as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

Healthy People Objective C-5:

Reduce the colorectal cancer death rate

U.S. Target: 14.5 deaths per 100,000 population

State Target: 11 deaths per 100,000 population

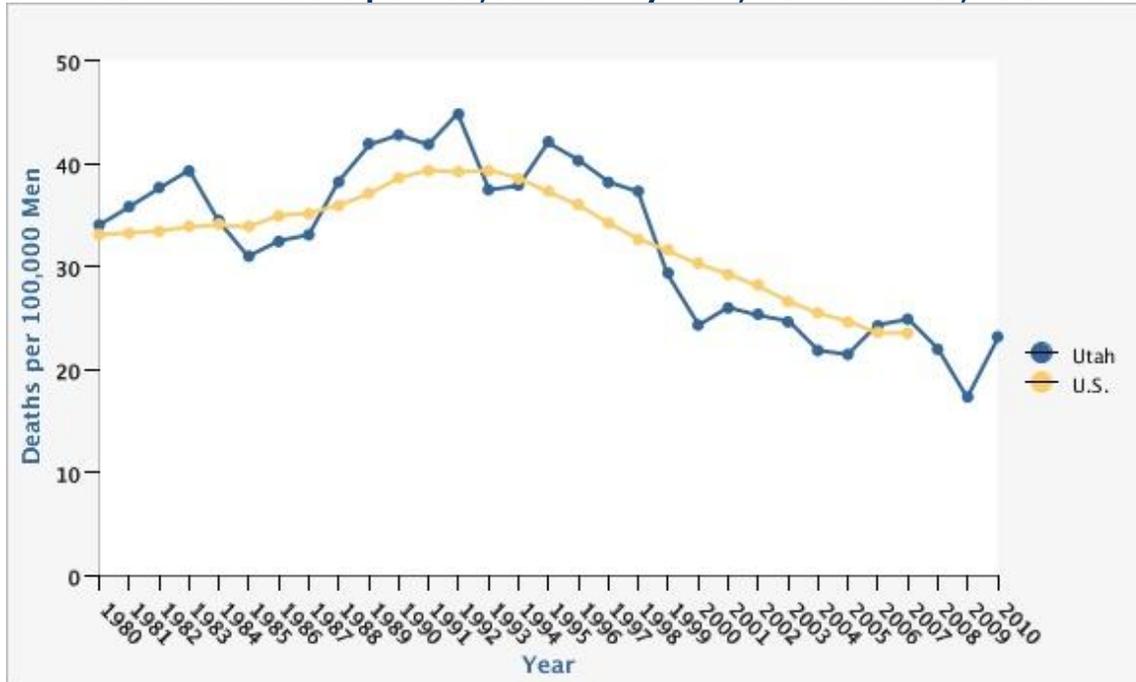
Date Indicator Content Last Updated: 10/18/2011

Prostate Cancer Deaths

Why Is This Important?

Prostate cancer is the second most commonly occurring form of cancer for men, after skin cancer, and is the second leading cause of cancer death for men in Utah and the U.S.

Prostate Cancer Deaths per 100,000 Men by Year, Utah and U.S., 1980-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

ICD-9 codes used to define prostate cancer: 185; ICD-10 codes used to define prostate cancer: C61. Age-adjusted to U.S. 2000 standard population. U.S. data available through 2007.

How Are We Doing?

From 1988 to 1992 there was an increase of deaths due to prostate cancer. Since then prostate cancer mortality rates have declined. Utah reached its 2010 goal of less than 28.2 deaths per 100,000 males and now works toward the Healthy People 2020 goal of 21.2 deaths per 100,000 males. There was no significant difference in prostate cancer mortality among Utah's ethnic or racial groups.

What Is Being Done?

The 2000 Utah legislature approved a resolution encouraging private health insurance companies and employers to include insurance coverage for the screening and detection of breast, colorectal, and prostate cancers. The Utah Department of Health (UDOH) is exploring ways to increase the number of men ages 40 or over who make regular visits to a health care provider to receive appropriate preventive services such as prostate-specific antigen screening. The UDOH has developed an electronic source of information about prostate cancer screening issues for providers and the general public. In 2004, 2005, and 2006, the Utah Cancer Control Program was awarded federal funds used to

launch a statewide media campaign with the goal of increasing prostate cancer awareness. Funding was also used to co-sponsor Utah's annual urological cancer conference.

In addition, the Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, testicular, prostate, skin, breast, and colorectal cancers as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

Healthy People Objective C-7:

Reduce the prostate cancer death rate

U.S. Target: 21.2 deaths per 100,000 males

State Target: 21.2 deaths per 100,000 males

Date Indicator Content Last Updated: 10/13/2011

Melanoma of the Skin Deaths

Why Is This Important?

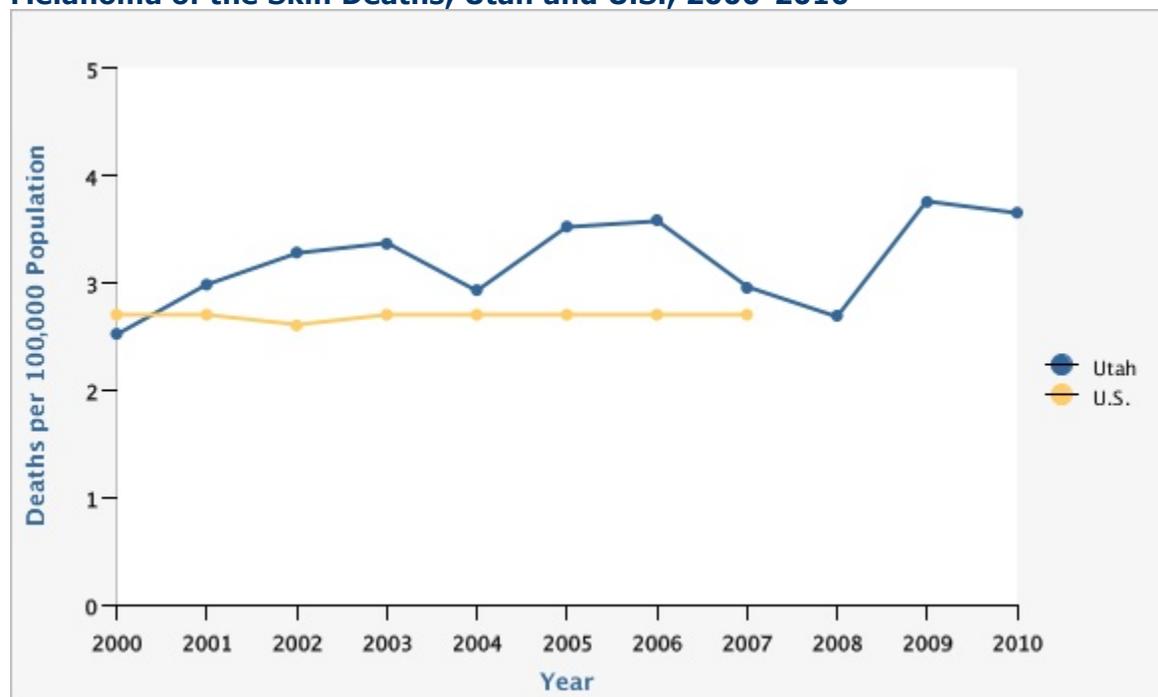
According to the American Cancer Society, melanoma is much less common than other skin cancers such as basal cell and squamous cell, but it is far more dangerous.

Risk factors that can be controlled are exposure to sunlight and UV radiation during work and play. A history of sunburns early in life increases one's risk for melanoma. Risk for melanoma also increases with the severity of the sunburn or blisters. Lifetime sun exposure, even if sunburn does not occur, is another risk factor for melanoma.

Another modifiable risk factor is location. People who live of certain areas in the U.S. experience higher rates of melanoma. These are areas with a high elevation, warmer climate, and where sunlight can be reflected by sand, water, snow, and ice.

Risk for melanoma is greatly increased by tanning, both outside with oils and by using sunlamps and tanning booths. Even people who tan well without burning are at risk for melanoma. Tan skin is evidence of skin damaged by UV radiation. Health care providers strongly encourage people, especially young people, to avoid tanning beds, booths, and sunlamps. The risk of melanoma is greatly increased by using these artificial sources of UV radiation before age 30.

Melanoma of the Skin Deaths, Utah and U.S., 2000-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Codes used to define melanoma of the skin: ICD-9 172.9, ICD-10 C43-C44. Age-adjusted to U.S. 2000 standard population.

How Are We Doing?

Between 2000 and 2010, the age-adjusted melanoma mortality rate in Utah has gone from 2.5 per 100,000 to 3.7 per 100,000.

Utah had a significant increase in melanoma deaths over the past few years, going from 2.7 per 100,000 in 2008 to 3.7 per 100,000 in 2010.

What Is Being Done?

The Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, testicular, prostate, skin, breast, and colorectal cancers as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

Healthy People Objective C-8:

Reduce the melanoma cancer death rate

U.S. Target: 2.4 deaths per 100,000 population

State Target: 3.4 new cases per 100,000 population

Date Indicator Content Last Updated: 10/13/2011

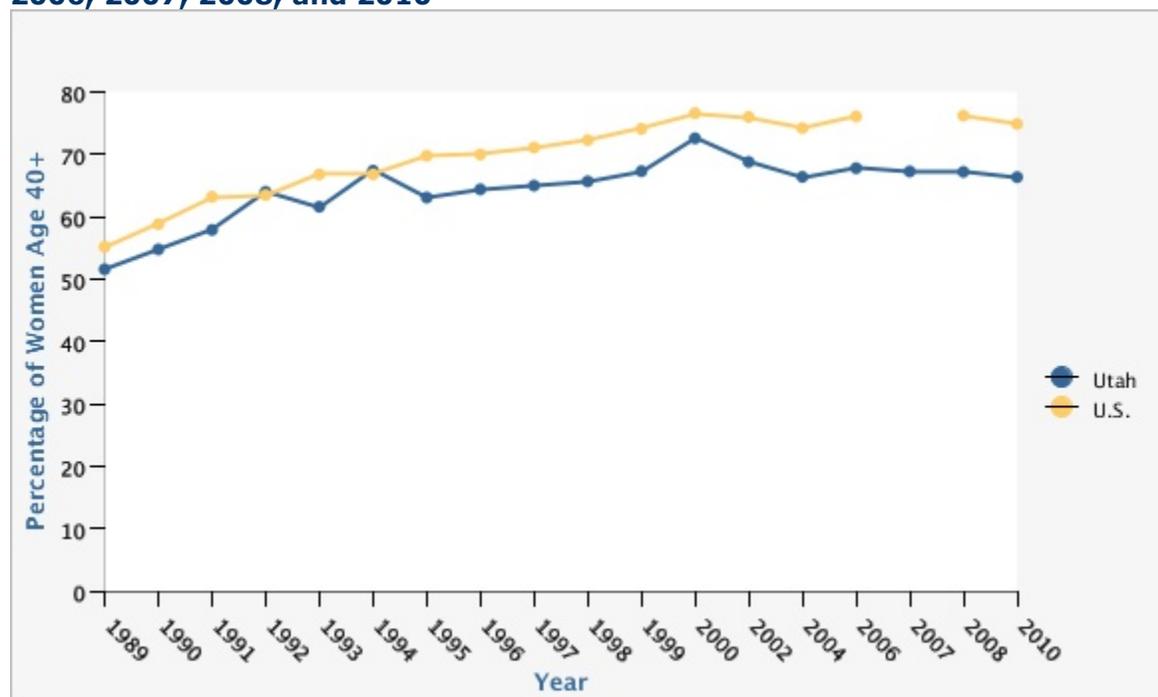
Breast Cancer - Mammography

Why Is This Important?

Breast cancer is the most commonly occurring cancer in U.S. women (excluding basal and squamous cell skin cancers) and the leading cause of female cancer death in Utah. Deaths from breast cancer can be substantially reduced if the tumor is discovered at an early stage. Mammography is currently the best method for detecting cancer early. Clinical trials have demonstrated that routine screening with mammography can reduce breast cancer deaths by 20% to 30% in women aged 50 to 69 years,^{11,12,13,14,15,16} and by about 17% in women aged 40 to 49 years.^{17,18}

There is consensus that women aged 40 or older should undergo routine screening with mammography at least every two years. The American Cancer Society recommends that women aged 40 or older have an annual mammogram, while the National Cancer Institute, the U.S. Preventive Services Task Force, and the U.S. Department of Health and Human Services recommend that women 40 years or older undergo mammography every one to two years.^{19,21,22} Women who are at higher than average risk of breast cancer should seek expert medical advice about whether they should begin screening before age 40 and the frequency of that screening.²¹

Mammogram Within the Past Two Years, Utah and U.S., 1989-2000, 2002, 2004, 2006, 2007, 2008, and 2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Age-adjusted to U.S. 2000 standard population.

Risk Factors

The most important risk factor for breast cancer is increasing age. Other established risk factors include personal or family history of breast cancer, history of abnormal breast biopsy, genetic

alterations, early age at onset of menses, late age at onset of menopause, never having children or having a first live birth at age 30 or older, and history of exposure to high dose radiation. Associations have also been suggested between breast cancer and oral contraceptives, long-term use of hormone replacement therapy, obesity (in post-menopausal women), alcohol, and a diet high in fat. Some studies suggest that exercise in youth might give life-long protection against breast cancer and that even moderate physical activity as an adult could lower breast cancer risk. More research is needed to confirm these findings.

How Are We Doing?

Between 1989 and 2010, the percentage of Utah women aged 40 or older who reported receiving a mammogram within the last two years increased from 51.6 percent to 66.4 percent. There was no significant difference in mammography screening rates among the different racial and ethnic groups. One of the 12 local health districts reported significantly lower screening rates than the state (Central Health District). After dividing the health districts into small areas the prevalence of mammograms ranged from a high of 79.9 percent in Foothill/U of U to a low of 42.4 percent in South Salt Lake.

What Is Being Done?

The UDOH Utah Cancer Control Program (UCCP) distributes free mammography vouchers to women who receive a clinical breast exam at a UCCP sponsored clinic and meet age and income guidelines. The 2000 Utah legislature approved a resolution encouraging private health insurance companies and employers to include insurance coverage for the screening and detection of breast, colorectal, and prostate cancers.

In addition, the Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, testicular, prostate, skin, breast, and colorectal cancers as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

Healthy People Objective C-17:

Increase the proportion of women who receive a breast cancer screening based on the most recent guidelines

U.S. Target: 81.1 percent

State Target: 74.14 percent

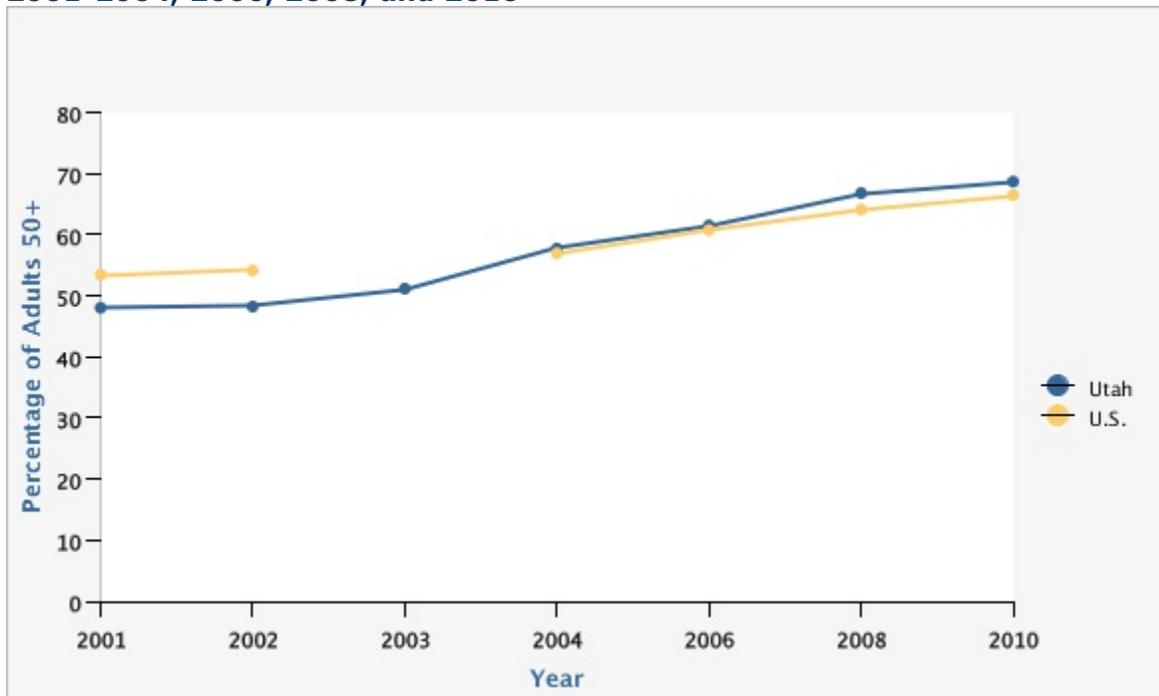
Date Indicator Content Last Updated: 10/03/2011

Colorectal Cancer Screening

Why Is This Important?

Colorectal cancer is the second leading cause of cancer-related deaths in the U.S. and Utah. Screening for this cancer is important as deaths can be substantially reduced when precancerous polyps are detected early and removed. The chance of surviving colorectal cancer exceeds 90% when the cancer is diagnosed before it has extended beyond the intestinal wall.²³

Percentage of Persons Age 50+ Who Reported Having Had a Sigmoidoscopy or Colonoscopy in the Past 10 Years or an FOBT in the Last Year, Utah and U.S., 2001-2004, 2006, 2008, and 2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Age-adjusted to U.S. 2000 standard population. All years for which Utah and U.S. data were available are graphed.

Risk Factors

Colorectal cancer risk increases with age, inflammatory bowel disease, a personal or family history of colorectal cancer or polyps, and certain hereditary syndromes. A diet high in fat and low in fiber, lack of regular physical activity, obesity, excessive alcohol consumption, and smoking are also thought to increase risk. A diet high in fruits and vegetables, hormone replacement therapy in post-menopausal women, and aspirin use may reduce colorectal cancer risk.

How Are We Doing?

Utah rates of sigmoidoscopies, colonoscopies, and FOBTs have increased from 48.0 percent in 2001 to 68.7 percent in 2010. Between 2008 and 2010 Hispanic/Latino adults aged 50 and older were significantly less likely than non-Hispanic/Latino adults to report having a sigmoidoscopy or

colonoscopy within the past 10 years or an FOBT in the last year (56.1 percent compared with 66.4 percent). Among small areas, West Jordan Northeast had the highest rates of adults aged 50 and older having had a colonoscopy or sigmoidoscopy in the past 10 years or an FOBT in the past year (81.2 percent) and South Salt Lake had the lowest at 39.3 percent.

What Is Being Done?

The 2000 Utah legislature approved a resolution encouraging private health insurance companies and employers to include insurance coverage for the screening and detection of breast, colorectal, and prostate cancers.

In June 2002, the Utah Cancer Control Program (UCCP) received a grant from the CDC to launch a statewide education campaign. In 2009, the UCCP received a CDC grant to begin offering colorectal cancer screenings to low-income and uninsured Utahns. In addition to the screening program, monies were used for educational and promotional activities. Education efforts serve to increase awareness about colorectal cancer and promote screening and early detection for Utahns aged 50 and older.

In addition, the Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, testicular, prostate, skin, breast, and colorectal cancers as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

Healthy People Objective C-16:

Increase the proportion of adults who receive a colorectal cancer screening based on the most recent guidelines

U.S. Target: 70.5 percent

State Target: 70.0 percent

Date Indicator Content Last Updated: 10/06/2011

Tobacco Use

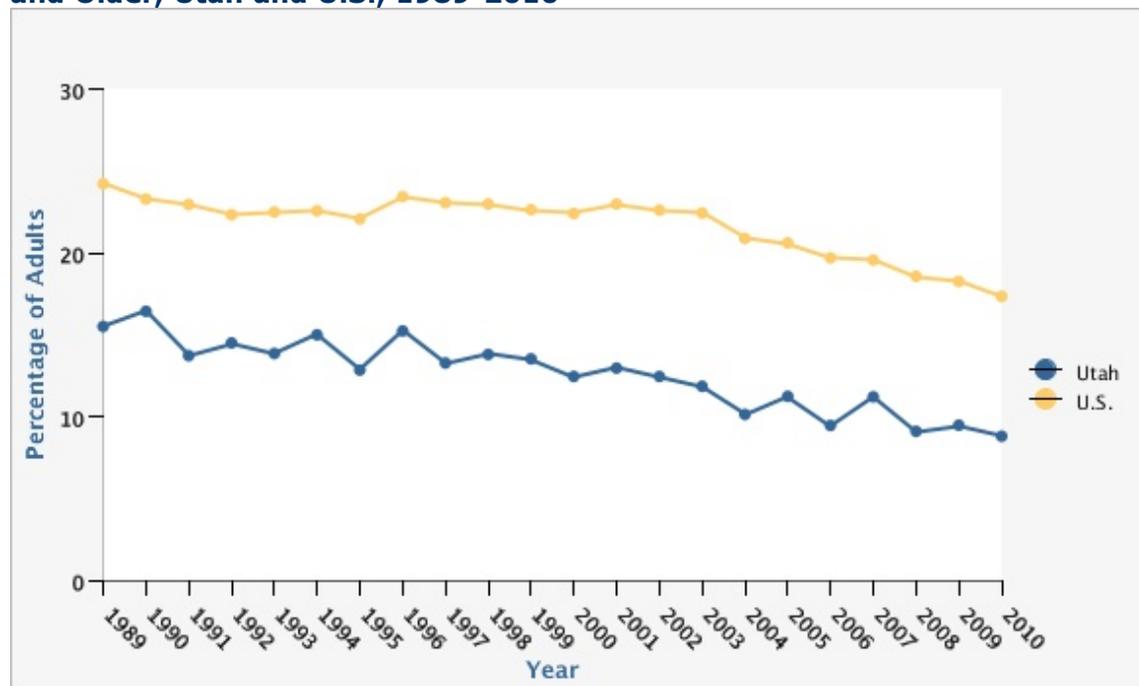
Tobacco use continues to be the single most preventable cause of death and disease in the United States. Many Americans die from tobacco-related illnesses each year, and many more tobacco users have a serious tobacco-related illness. Tobacco costs the U.S. nearly \$2 billion annually in medical expenses and lost productivity.

Smoking Among Adults

Why Is This Important?

Tobacco use remains the leading preventable cause of death and disease in the United States. In Utah, smoking claims more than 1,150 lives each year. It exacerbates or causes nearly every chronic condition and contributes to Utah's primary causes of death including heart disease, respiratory disease, and cancer. Smoking increases the risk for cancer of the lungs, larynx, esophagus, mouth, and bladder and contributes to cancer of the cervix, pancreas, and kidneys. Exposure to secondhand smoke increases the risk for heart disease and lung cancer among nonsmokers.

Percentage of Adults Who Reported Current Cigarette Smoking, Adults Aged 18 and Older, Utah and U.S., 1989-2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

The Behavioral Risk Factor Surveillance System (BRFSS) survey is conducted with a representative sample of non-institutionalized Utah adults living in households with a landline telephone. A new weighting methodology that better represents populations of low socioeconomic status and inclusion of cell phone interviews will lead to an increase in the estimated smoking rates for Utah adults. Age-adjusted to U.S. 2000 population.

Risk Factors

Cigarette smoking is more common among persons with lower levels of formal education and among those in lower income groups.

How Are We Doing?

Utah's adult smoking rate has decreased by one-third since the UDOH Tobacco Prevention and Control Program started receiving Master Settlement Agreement funds in 2000. Declines in smoking before 2000 had not been statistically significant.

People with low household income and fewer years of formal education report higher rates of tobacco use than the general population. Recent surveys show that approximately 80% of Utah smokers want to quit. Comprehensive and free tobacco cessation services are essential to help Utah smokers quit and ensure a decline in tobacco use rates among all population groups.

What Is Being Done?

The Tobacco Prevention and Control Program (TPCP) at the Utah Department of Health and its partners use comprehensive programs to prevent the initiation of tobacco use among young people, to help tobacco users quit, to eliminate nonsmokers' exposure to secondhand smoke, and to reduce tobacco-related disparities. These programs include The TRUTH anti-tobacco marketing campaign, free and confidential tobacco cessation services, school- and community-based prevention programs, and efforts to improve tobacco policies in order to protect nonsmokers from secondhand smoke and support tobacco-free norms. The TRUTH campaign uses television, radio, billboard, print, and on-line media to reach mainstream and high risk youth, adults, pregnant women, racial and ethnic minorities, and rural populations. The campaign's goals are to counter tobacco industry promotions, inform Utahns about quitting services, and reinforce and support local tobacco control efforts. Quitting services available to Utahns include a toll-free Tobacco Quit Line (1-800-QUIT-NOW), a web-based quitting service (utahquitnet.com), free quitting medications and counseling services for uninsured tobacco users and tobacco users on Medicaid, as well as group-based quitting classes for adults and youth in local communities. Efforts to protect nonsmokers from secondhand smoke focus on strengthening tobacco-free policies in apartment complexes, workplaces, schools, and outdoor venues frequented by children.

Healthy People Objective TU-1.1:

Reduce tobacco use by adults: Cigarette smoking

U.S. Target: 12.0 percent

State Target: 9.0 percent

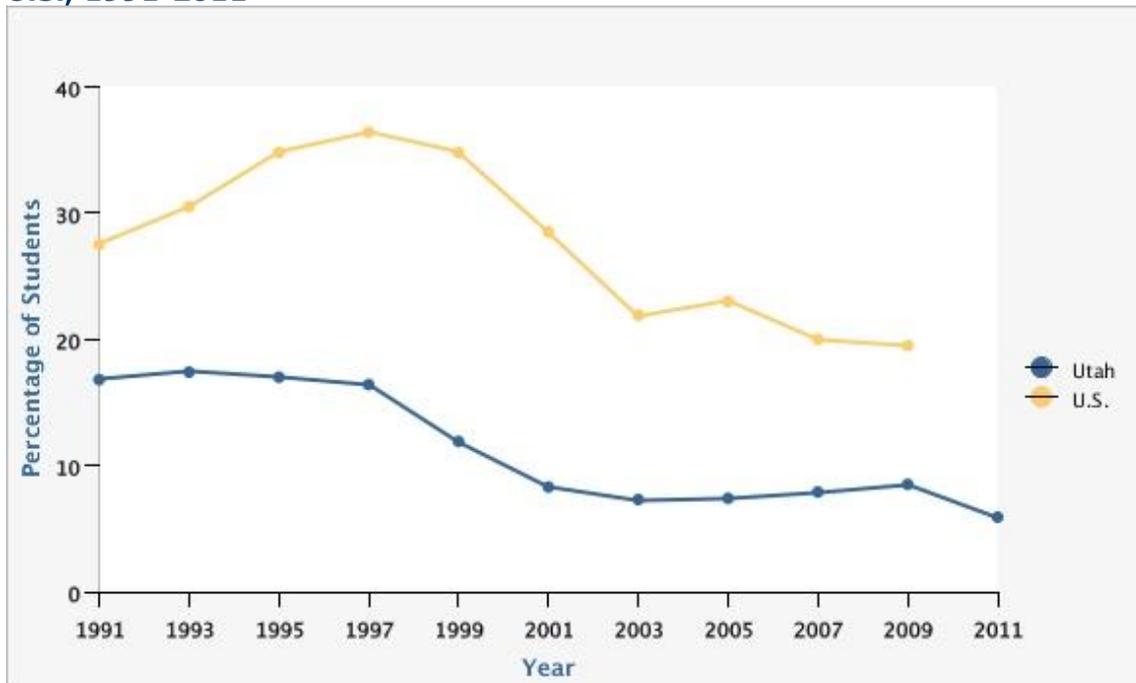
Date Indicator Content Last Updated: 10/18/2011

Smoking Among Adolescents

Why Is This Important?

Tobacco use remains the leading cause of preventable disease and death in the United States. Children and adolescents who smoke cigarettes are at increased risk for developing respiratory illnesses, impaired lung growth, cancer, heart disease, and weakened immune systems. One third of adolescents who continue to use tobacco will die from tobacco-related diseases. In addition, youth smokers are less physically fit and less likely to be committed to their education than their nonsmoking peers. Since nearly all adult smokers begin smoking during adolescence, preventing youth from starting to use tobacco products is expected to result in substantial declines in tobacco-related disease and death.

Current Cigarette Smoking by Year, High School Students, Grades 9-12, Utah and U.S., 1991-2011



Data Sources

Utah Youth Risk Behavior Surveillance System, Utah Department of Health. Youth Risk Behavior Surveillance System, National Center for Chronic Disease Prevention and Health Promotion.

Data Notes

The Youth Risk Behavior Survey (YRBS) is conducted with a representative sample of Utah public high school students in grades 9 to 12. Surveys were only conducted in odd numbered years.

How Are We Doing?

Utah teen smoking almost doubled from the mid-80s to the mid-90s.²⁴ Since the mid-90s, Utah's high school smoking rate has declined from 17% to 6%.

What Is Being Done?

The Tobacco Prevention and Control Program at the Utah Department of Health and its partners work toward reducing youth tobacco use through a variety of programs and initiatives.

These programs include The TRUTH anti-tobacco marketing campaign, school- and community-based prevention activities, tobacco cessation programs tailored to teens, and efforts to strengthen

tobacco-free norms and protect children and nonsmokers from secondhand smoke through expanded tobacco-free policies.

The TRUTH campaign uses television, radio, billboard, and print media as well as web-based advertising to reach mainstream and high risk youth with anti-tobacco messages. The campaign's goals are to counter tobacco industry advertising, inform Utahns about quitting services, and reinforce and support local tobacco control initiatives. Quitting services available to Utah teens include a toll-free Tobacco Quit Line tailored to teens (1-800-QUIT-NOW), a web-based quitting service (utahquitnet.com), and group-based quitting classes. Efforts to strengthen tobacco-free policies focus on schools, multi-unit housing, and outdoor venues frequented by children and adolescents.

Healthy People Objective TU-2.2:

Reduce tobacco use by adolescents: Cigarettes (past month)

U.S. Target: 16.0 percent

State Target: 5.0 percent

Date Indicator Content Last Updated: 10/18/2011

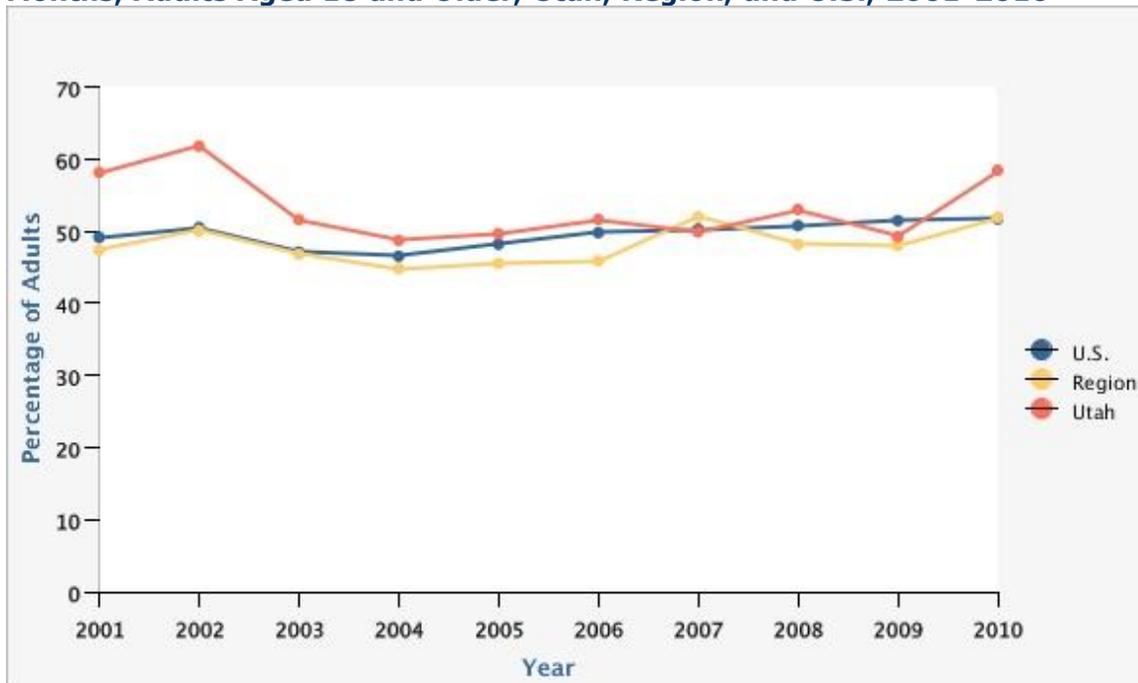
Smoking Cessation Attempt

Why Is This Important?

Quitting smoking carries major and immediate health benefits for men and women of all ages, including those in the older age groups who have smoked for many years:

- Quitting smoking decreases the risk of lung cancer as well as cancer of the mouth, larynx, bladder, kidney, pancreas, and cervix.
- Quitting smoking reduces the risk of respiratory diseases such as emphysema, chronic bronchitis, pneumonia, and chronic obstructive pulmonary disease (COPD).
- Quitting smoking reduces the risk of stroke and heart disease.

Percentage of Current Daily Smokers Who Reported a Quit Attempt in the Past 12 Months, Adults Aged 18 and Older, Utah, Region, and U.S., 2001-2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

The Behavioral Risk Factor Surveillance System (BRFSS) survey is conducted with a representative sample of non-institutionalized Utah adults living in households with a landline telephone. Age-adjusted to U.S. 2000 population. The region includes Arizona, Colorado, Idaho, Nevada, New Mexico, Utah, and Wyoming.

What Is Being Done?

To help smokers quit, the Tobacco Prevention and Control Program at the Utah Department of Health offers telephone and web-based tobacco cessation services. Utah's TRUTH anti-tobacco marketing campaign encourages Utah smokers to make quit attempts and informs about the availability of quit programs. Local health departments promote quit services at the community level and offer local programs to assist pregnant and teen smokers with quitting.

Healthy People Objective TU-4.1:

Increase smoking cessation attempts by adult smokers

U.S. Target: 80.0 percent

State Target: 67.0 percent

Date Indicator Content Last Updated: 10/25/2011

Heart Disease

Heart disease is a generic term that describes many different problems affecting the heart. It can affect your coronary arteries, heart valves, and heart muscle and can also affect your heart rate and rhythm. Heart disease is the number one killer of Americans. Modifiable risk factors for heart disease include high blood pressure, high blood cholesterol, smoking, and obesity. Coronary artery disease occurs when the arteries that supply blood to the heart muscle become hardened and narrowed.

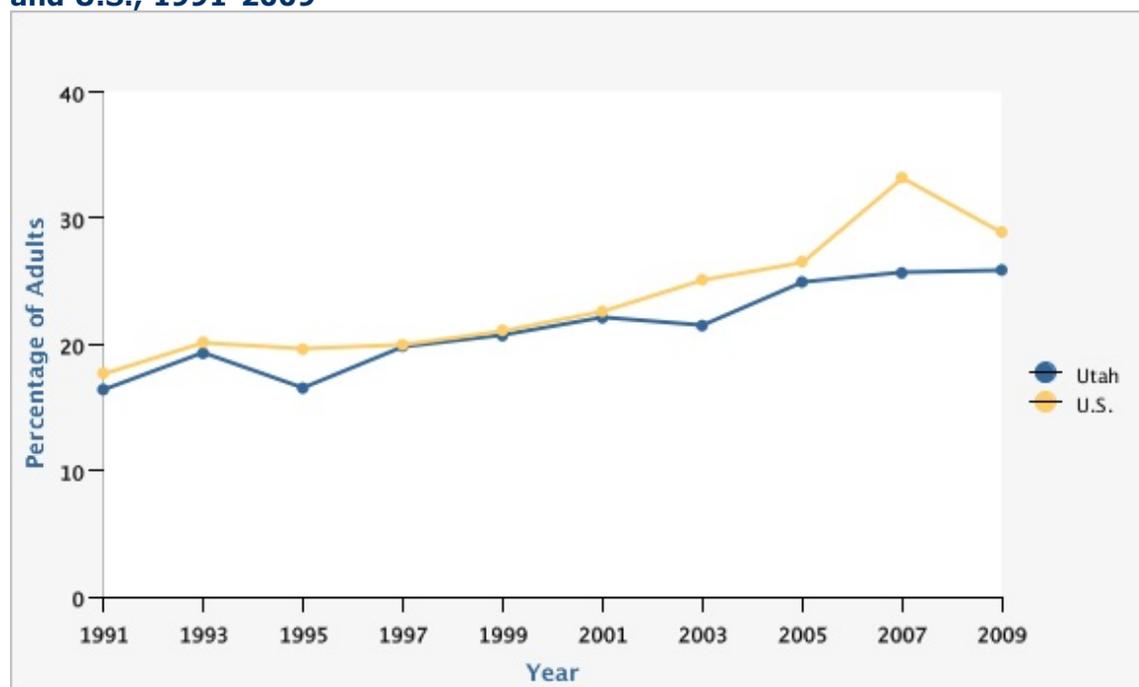
Blood Cholesterol: Doctor-diagnosed High Cholesterol

Why Is This Important?

High blood cholesterol is a major risk factor for heart disease and stroke. It is preventable. If identified early, it can be controlled with medication and lifestyle changes, such as eating a diet low in saturated fat and cholesterol, increasing physical activity, and reducing excess weight.

Because high blood cholesterol does not produce obvious symptoms, experts recommend that all adults aged 20 years and older have their cholesterol levels checked at least once every five years to help them take action to prevent or lower their risk of cardiovascular disease.

Doctor-diagnosed Hypercholesterolemia (High Blood Cholesterol) by Year, Utah and U.S., 1991-2009



In 2009, the prevalence of high blood cholesterol was lower among Utah adults than among the general U.S. adult population (25.9% UT, 28.9% U.S.).

Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Doctor-diagnosed hypercholesterolemia is based on the answer to the question: "Have you ever been told by a doctor, nurse, or other health professional that you have high blood cholesterol?" This question is asked in odd-numbered years. Age-adjusted to 2000 U.S. standard population.

Risk Factors

Some risk factors for high cholesterol can be reduced through lifestyle changes. The risk factors include lack of exercise, overweight and obesity, cigarette smoking, and high cholesterol diet. Some risk factors are more difficult to control, such as family history and liver functioning. Certain medications can contribute to high cholesterol as well. Individuals are encouraged to discuss their risk factors with a physician and request blood cholesterol screening at least every five years.

How Are We Doing?

In 2009, the age-adjusted percentage of Utah adults who reported being told they had high cholesterol was 25.9 percent. However, this is expected to underestimate the actual prevalence because Utah has the lowest rate of 5-year cholesterol screens among the 50 states.

Dr.-diagnosed high cholesterol was more prevalent among males than females in the two youngest age categories and similar among genders in the two oldest age categories. Generally, high cholesterol prevalence increases with age. Among Utahns aged 65 and over, 48.7 percent of men and 46.4 percent of women reported high cholesterol.

A higher percentage of non-Hispanic White Utahns reported doctor-diagnosed high cholesterol than Hispanics of all races and non-Hispanic non-Whites. Among racial groups, White Utahns reported the highest percentage of doctor-diagnosed high cholesterol, 24.9%. Black Utahns reported the lowest percentage, 13.9%. Black persons also reported the lowest rates of cholesterol screening, which may contribute to a low diagnosis rate.

The age-adjusted prevalence of high cholesterol varies geographically. Grand/San Juan Counties reported the lowest percentage of doctor-diagnosed high cholesterol, 16.6%. Midvale (37.1%) had the highest prevalence.

What Is Being Done?

The Heart Disease and Stroke Prevention Program works with health care organizations, such as health plans and community health centers, to improve quality of care for cardiovascular conditions and control risk factors for heart disease, such as high blood pressure and high cholesterol.

Healthy People Objective HDS-7:

Reduce the proportion of adults with high total blood cholesterol levels

U.S. Target: 13.5 percent

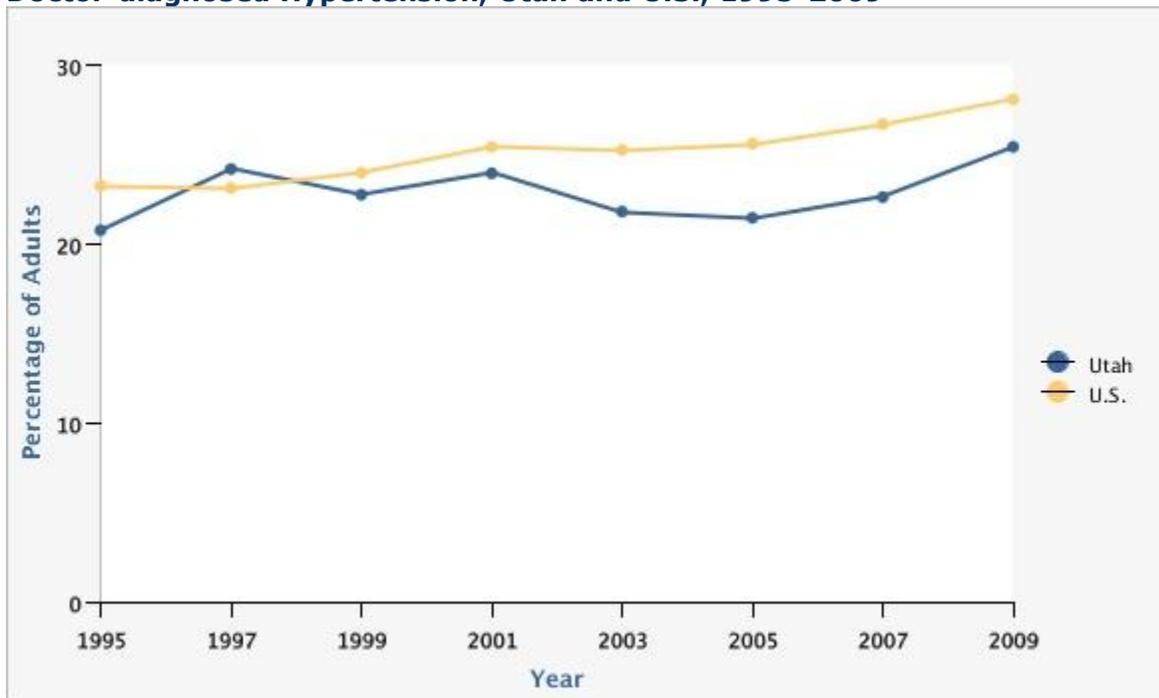
Date Indicator Content Last Updated: 01/11/2012

Blood Pressure: Doctor-diagnosed Hypertension

Why Is This Important?

High blood pressure (hypertension) is an important risk factor for heart disease and stroke. It is preventable, and in most cases it can be treated with medication and lifestyle changes, such as diet, exercise, and tobacco cessation. Treatment works best when high blood pressure is identified early. Because high blood pressure does not produce symptoms, regular screening is recommended.

Doctor-diagnosed Hypertension, Utah and U.S., 1995-2009



In 2009, Utah (25.4%) had lower age-adjusted high blood pressure prevalence than the U.S. (28.1%).

Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Doctor-diagnosed hypertension is based on the answer to the question: "Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?" Those with hypertension only during pregnancy are excluded from the denominator. Age-adjusted to the 2000 U.S. population.

Risk Factors

Some risk factors for high blood pressure can be reduced through lifestyle changes. These include exercise, reducing excess weight, tobacco cessation, and low-sodium diet. The Institute of Medicine also recommends increasing dietary potassium, which can be achieved by eating more fruits and vegetables. Some risk factors are more difficult to control, such as family history and genetics. Certain medications can affect blood pressure as well. Individuals are encouraged to discuss their risk factors with a physician and monitor their blood pressure regularly.

How Are We Doing?

The proportion of Utah adults who reported being told they had high blood pressure has remained relatively constant over the past decade. In 2009, 25.4 percent of Utah adults reported being told they had high blood pressure (age-adjusted using 8 age groups). This is slightly below the U.S. Healthy People 2020 target of 26.9%. Utah's state 2020 target is 22.8%.

The percentage of adults who reported being told they had high blood pressure was similar for males and females across age groups.

Prevalence of high blood pressure increases with age. In 2009, more than half of adults age 65+ (54.6 percent of men and 60.4 percent of women) reported being told they had high blood pressure.

High blood pressure prevalence is similar among ethnic groups but varies by race. During combined years 2005, 2007, and 2009, non-Hispanic non-White Utahns (27.7%) reported a higher proportion of doctor-diagnosed high blood pressure than Hispanics of all races (22.2%) and non-Hispanic Whites (22.4%). Among race categories, Black Utahns had the highest rate (34.6%) and Whites had the lowest rate (22.3%).

High blood pressure prevalence varies geographically. During the combined years 2005, 2007, and 2009, the Provo/BYU area had the lowest proportion of doctor-diagnosed high blood pressure (14.7%), and Carbon/Emery Counties had the highest (30.5%).

What Is Being Done?

The Heart Disease and Stroke Prevention Program works with health care organizations, such as health plans and community health centers, to improve quality of care for cardiovascular conditions and control risk factors for heart disease, including high blood pressure and high cholesterol.

Healthy People Objective HDS-5.1:

Reduce the proportion of adults with hypertension

U.S. Target: 26.9 percent

State Target: 22.8 per 100,000 population

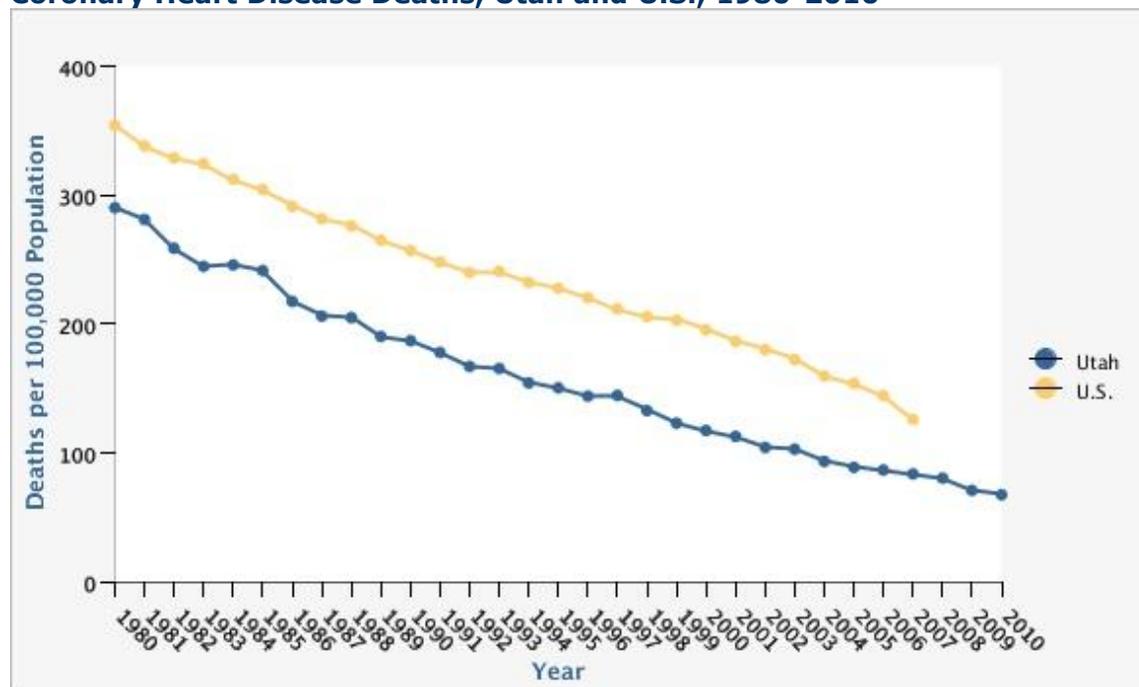
Date Indicator Content Last Updated: 01/11/2012

Coronary Heart Disease Deaths

Why Is This Important?

Coronary heart disease (CHD) is a condition in which blood flow to the heart is reduced. When the coronary arteries become narrowed or clogged, an inadequate amount of blood oxygen reaches the heart tissue. The part of the heart not receiving oxygen begins to die, and some of the heart muscle may be permanently damaged. Prevention of CHD is key to reducing mortality from heart disease.

Coronary Heart Disease Deaths, Utah and U.S., 1980-2010



In 2010, Utah's age-adjusted death rate from coronary heart disease was 67.5.

Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. U.S. Centers for Disease Control and Prevention, on-line data - CDC WONDER. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Age-adjusted to 2000 U.S. standard population using 11 age categories. Data for 1980 to 2009 are based on ICD-9 codes 402, 410-414, 429.2; ICD-10 codes I20-I25, I11. Estimates from 1998 and before have been comparably modified to be consistent with ICD-10 coding system definitions. For 2010 and onward, I11 was dropped from the coronary heart disease death definition.

Risk Factors

Individuals who smoke cigarettes, have high blood pressure, elevated cholesterol, diabetes, poor nutrition, a family history of heart disease, or who are overweight, obese, or physically inactive are at greater risk of developing coronary heart disease than individuals without these risk factors.

How Are We Doing?

The U.S. death rate from coronary heart disease has declined significantly over the past 30 years. Utah has experienced a similar decline. The 2010 Utah crude rate was 49.4 deaths per 100,000 people.

What Is Being Done?

The Utah Heart Disease and Stroke Prevention Program (HDSPP) receives federal funding to reduce morbidity and mortality from cardiovascular disease in Utah. HDSPP collaborates with other Utah Department of Health programs, community health centers, the regional Medicare Quality Improvement Organization, the American Heart Association, and others to implement policy and environmental changes that will improve control of high blood pressure and high cholesterol.

Healthy People Objective HDS-2:

Reduce coronary heart disease deaths

U.S. Target: 100.8 deaths per 100,000 population

State Target: 54.0 per 100,000 population

Date Indicator Content Last Updated: 10/19/2011

Injury Prevention

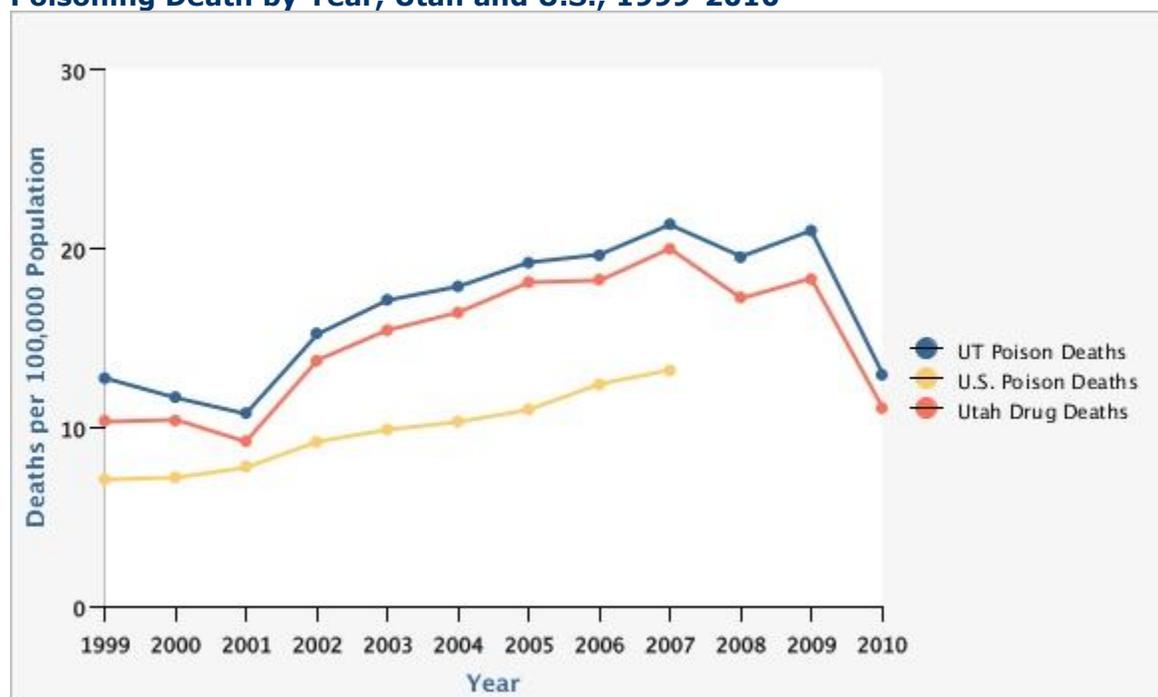
In 2009, more than 1,500 Utahns - or 30 people every week - died from injuries. Each year, treating injuries costs Utahns an average of \$486 million in hospitalization and emergency department charges. Injuries are the leading cause of death for Utahns ages 1-44, with poisonings, firearms, and motor vehicle crashes the leading methods.

Drug Overdose and Poisoning Incidents

Why Is This Important?

In 2002 the age-adjusted rate of poisoning deaths (15.2 per 100,000 population) surpassed the rate of motor vehicle crash (MVC) deaths (13.4 per 100,000 population) in Utah. Until this time, motor vehicle crashes had been responsible for more lives lost than any other cause of injury. By 2009, the age-adjusted death rate from poisonings (21.0 per 100,000 population) was almost three times as high as it was from MVC deaths (8.7 per 100,000 population). Although still higher than the MVC death rate, a significant decrease in the poisoning death rate was seen in 2010 (12.9 per 100,000 population). Drugs, and in particular prescription pain medications, are responsible for many of the poisoning deaths in Utah.

Poisoning Death by Year, Utah and U.S., 1999-2010



The vast majority of Utah poisoning deaths are due to drug/medication consumption. Utah's poisoning death rate (21.4 per 100,000 population in 2007) exceeds the U.S. poisoning death rate (13.2 per 100,000 population in 2007).

Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. National Center for Injury Prevention and Control's Web-based Injury Statistics Query and Reporting System (WISQARS). Population Estimates: Utah Governor's Office of Planning and Budget.

Data Notes

Utah drug deaths are a subset of Utah poisoning deaths. Data are age-adjusted (2000 U.S. standard population).

How Are We Doing?

Utah has seen a 97.4% increase in age-adjusted poisoning death rates from 2001 to 2007, an average increase of over 16% per year. However, there was a 40.0% decline in the age-adjusted poisoning death rates from 2007 to 2010.

Prescription pain medications underlie many Utah poisoning deaths. In 2010, 26.6% of Utah poisoning deaths were of undetermined intent, 19.3% were suicides, and 54.1% were unintentional.

From 2006 to 2010, poisoning deaths were highest among Utahns between the ages of 45-54, with a rate of 39.4 per 100,000 population. In addition, males had a significantly higher age-adjusted poisoning death rate compared to females (21.8 and 15.8 per 100,000 population, respectively).

Children infrequently require hospitalization for the ingestion of poison, but 1 to 4 year-olds had significantly higher poisoning emergency department (ED) visits rates than any other age group in 2009. For adults (ages 18 and over) as age increases, ED visits declined.

Age-adjusted ED treat-and-release visit rates due to poisoning have not changed significantly from 1999 to 2009, however, median treat-and-release charges have increased 280% (from \$456 in 1999 to \$1,734 in 2009).

Age-adjusted hospitalization rates due to poisoning have increased steadily from 1998 (4.5 admissions per 10,000 population) to 2010 (9.0 admissions per 10,000 population). Median hospitalization charges for admissions due to poisonings increased 173% in this time period from \$3,689.27 in 1998 to \$10,079.50 in 2010.

What Is Being Done?

In July 2007, the Utah State Legislature passed House Bill 137 appropriating funding to the Utah Department of Health (UDOH) to establish a program to reduce deaths and other harm from prescription opiates. Since 2007 the Utah Department of Health 1) launched a media campaign, Use Only As Directed, to educate the public about how to use prescription pain medication safely (visit Useonlyasdirected.org for more information); 2) launched a statewide provider education intervention where physicians have the opportunity to receive CMEs for participation in small and large group presentations; and 3) is currently collaborating with other stakeholders through an advisory committee and work groups. For information on any of these topics email: useonlyasdirected@utah.gov.

The UDOH Violence and Injury Prevention Program (VIPPP) is funded by the U.S. Centers for Disease Control and Prevention (CDC) to implement the Utah Violent Death Reporting System (UTVDRS). UTVDRS is a data collection and monitoring system that will help Utahns better understand the public health problem of violence by informing decision makers about the magnitude, trends, and characteristics of violent deaths such as poisoning deaths of undetermined intent, homicide poisoning deaths, and suicide poisoning deaths, and to evaluate and continue to improve state-based violence prevention policies and programs. Data are collected from the Office of the Medical Examiner, Vital Records, and law enforcement agencies and are linked together to help identify risk factors, understand circumstances, and better characterize perpetrators of violent deaths. UTVDRS is currently in its seventh year of data collection.

Healthy People Objective IVP-9.1:

Prevent an increase in the rate of poisoning deaths: All persons

U.S. Target: 13.1 deaths per 100,000 population

State Target: 12.9 per 100,000 population

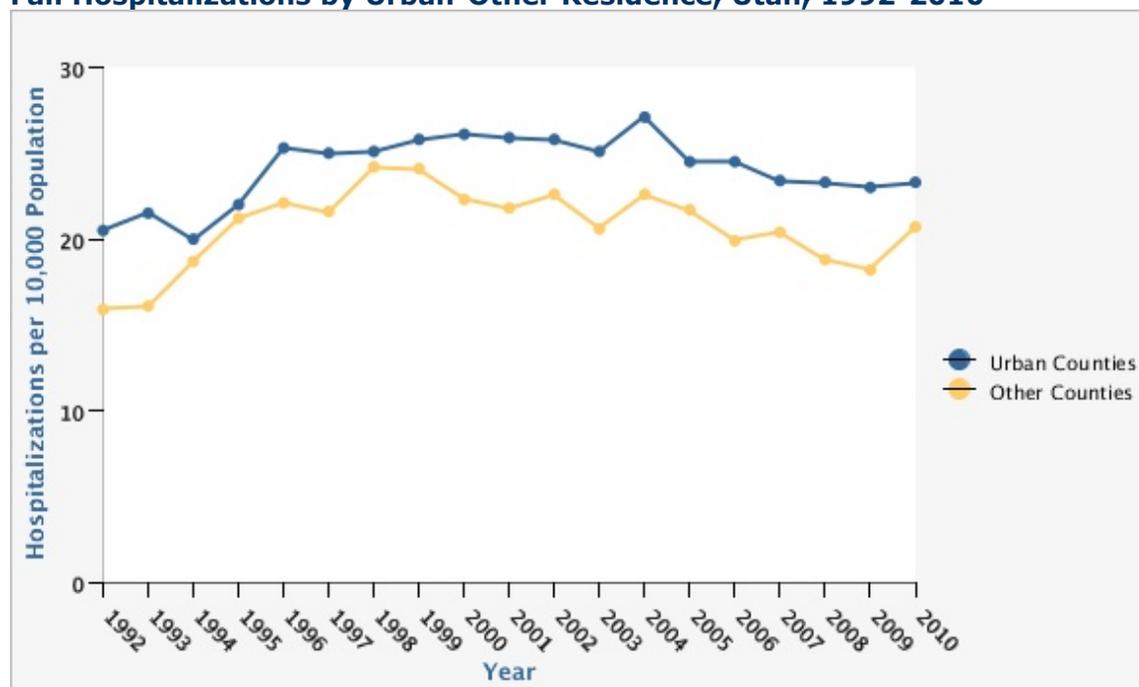
Date Indicator Content Last Updated: 10/11/2011

Fall Injury Hospitalizations

Why Is This Important?

Falls are a leading cause of injury death for Utahns aged 65 and older. In Utah fall-related inpatient hospital charges totaled over \$135 million in 2010.

Fall Hospitalizations by Urban-Other Residence, Utah, 1992-2010



Data Sources

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

Data Notes

ICD-9 codes include E880-E886.9 and E888; ICD-10 codes include W00-W19. Age-adjusted to U.S. 2000 population. County designation is based on the patient's residence and not where the fall occurred. Urban Counties include Utah, Salt Lake, Davis, and Weber.

Risk Factors

Risk factors for falls include older age, poor eyesight, lack of regular exercise, poor nutrition, substance abuse and smoking, and misuse of medications. Some medications can cause drowsiness or dizziness and some drugs can interact with other medications or alcohol and cause problems that may lead to falling. In addition, certain health conditions can increase the risk of falls including osteoporosis, arthritis, clinical depression, dementia, and neurological or musculoskeletal disorders like Parkinson's and Alzheimer's disease. In the home environmental hazards such as poor lighting, lack of grab bars and handrails, slippery or wet surfaces, uneven floors and surfaces, clutter, and loose throw rugs are factors in many falls.

How Are We Doing?

From 2008-2010 there were 496 fall-related deaths and 14,520 hospitalizations in Utah. Utah's overall age-adjusted rate for unintentional fall injury hospitalization during 2008-2010 was 22.0 per 10,000 population. More than 70% (368) of the deaths and more than 60% (8,884) of the hospitalizations were among Utahns aged 65 and older. Elderly females aged 65 and older had a significantly higher

rate of hospitalizations due to falls (148.7 per 10,000 population) than males aged 65 and older (80.5 per 10,000 population).

Between 1992-2010, urban counties have consistently had higher rates of fall hospitalizations than rural and frontier counties.

What Is Being Done?

The Utah Department of Health Violence and Injury Prevention Program (VIPP) receives funding from the U.S. Centers for Disease Control and Prevention to collect traumatic brain injury surveillance data, including a falls-specific data module, for the state of Utah. This is done through review of hospital discharge data, vital statistics data, and hospital records abstractions.

Local health departments and other community-based agencies have implemented evidence-based falls prevention programs, such as the Stepping On program and Matter of Balance program. These programs work to increase strength and balance, reduce fall hazards in the home, and build self-efficacy among participants to reduce the fear of falling. National research shows the programs reduce falls among participants. The classes are free to the public. A list of current classes is available at <http://health.utah.gov/vipp/olderAdults/overview.html>.

The Utah Falls Prevention Coalition was established by the VIPP in 2011 with the purpose of developing a strategic, statewide response to Utah's growing rate of falls among older adults in the state. Until this time, there had been no single, statewide response to address this public health problem in Utah. Many organizations were implementing falls prevention activities but resources and activities were scattered and disjointed when looked at from a public health perspective. The Coalition has three main purposes: 1) bring together partners who have an interest in falls prevention among older adults, 2) develop goals and strategies on falls prevention among older adults to include in the Utah Violence and Injury Plan, and 3) ready the state for future funding opportunities on falls prevention.

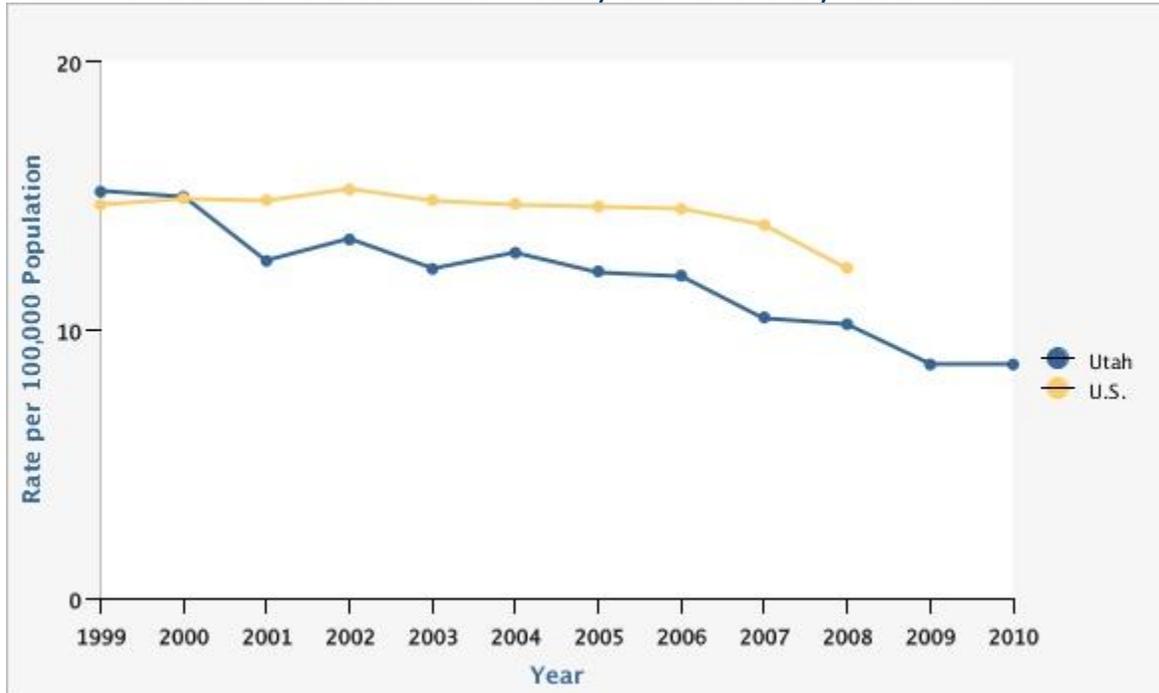
Date Indicator Content Last Updated: 10/27/2011

Motor Vehicle Traffic Crash Deaths

Why Is This Important?

Motor vehicle crashes (MVCs) are the second leading cause of unintentional injury death in Utah, after poisoning. In 2010, MVCs accounted for 231 deaths.

Motor Vehicle Traffic Crash Death Rates, Utah and U.S., 1999-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Center for Injury Prevention and Control's Web-based Injury Statistics Query and Reporting System (WISQARS).

Data Notes

ICD-10 codes V02-04 [.1-.9], V09.2, V12-14 [.3-.9], V19 [.4-.6], V20-V28 [.3-.9], V29-79 [.4-.9], V80 [.3-.5], V81-82 [.1], V83-86 [.0-.3], V87 [.0-.8], V89.2. Data have been age-adjusted to the U.S. 2000 standard population.

Risk Factors

The five most important factors contributing to motor vehicle crash injuries are not wearing a seat belt, drowsy driving, impaired driving (alcohol or drugs), aggressive driving, and distracted driving.

Not using a safety belt or a child safety restraint while traveling in a motor vehicle greatly increases the chance of being injured or killed in a crash. When not using these safety devices, a person is more likely to be ejected from the vehicle.

A person's driving ability is affected by a Blood Alcohol Concentration (BAC) as low as .02%. The likelihood of a crash increases significantly over .05%. Fifteen percent of fatal crashes in Utah involve alcohol-impaired drivers.²⁵ When alcohol is involved, crashes tend to be more severe. As blood alcohol levels increase, balance, coordination, and reasoning ability worsen.

Additional information can be found at <http://publicsafety.utah.gov/highwaysafety/>.

How Are We Doing?

The motor vehicle crash (MVC) death rate has been decreasing in Utah over the past two decades.

For male age groups 15-19, 20-24, 25-44, and 45-64, there have been statistically significant decreases in motor vehicle death rates from 1999 through 2010. Although there has been a decrease in the rate for males age 65+, it was not statistically significant. Note: there were too few cases in the 0-14 age groups to include in yearly analysis.

For female age groups 15-19, 20-24, and 45-64, there have been statistically significant decreases in motor vehicle death rates from 1999 through 2010. Although there has been a decrease in the rate for females ages 25-44 and 65+, it was not statistically significant. Note: there were too few cases in the 0-14 age groups to include in yearly analysis.

Residents who live in rural areas tend to have higher MVC death rates than those residing in urban areas. During 2008-2010, TriCounty (28.4 per 100,000 population) and Southeastern (21.2 per 100,000 population) health districts had the highest MVC death rates, and Davis County (6.8 per 100,000 population), Utah County (7.6 per 100,000 population), and Salt Lake Valley (7.6 per 100,000 population) had the lowest.

Age-adjusted MVC death rates were significantly higher for males (10.7 per 100,000 population) than for females (6.8 per 100,000 population) in Utah in 2010.

Utah males aged 65 and older had the highest MVC death rates (21.1 per 100,000 population) in 2010, followed by males aged 45-64 (14.6 per 100,000 population) and males aged 15-19 (11.9 per 100,000 population). Among females, the highest MVC death rate was among Utahns aged 65 and older (13.6 per 100,000 population). Note: there were too few cases in the 0-14 age groups to include in yearly analysis.

What Is Being Done?

The Violence and Injury Prevention Program (VIPP) provides funding to Utah's 12 local health departments to implement motor vehicle safety programs and Safe Kids coalitions/chapters activities. These programs focus on child passenger safety and teen driving. The VIPP partners with the Utah Teen Driving Safety Task Force, Zero Fatalities Program, Utah Highway Safety Office, among other state and local agencies to prevent MVC deaths. For the past four years, a book has been published that tells the stories of teens who died in motor vehicle-related crashes. The book is distributed to each drivers education instructor in the state as a prevention tool. The books can be downloaded at <http://health.utah.gov/vipp/motorVehicleSafety/MotorVehicleData.html> or www.dontdrivestupid.com.

The Utah Department of Transportation's Zero Fatalities Program (<http://ut.zerofatalities.com/>) is a comprehensive, educational campaign aimed at reducing Utah's top five causes of traffic related deaths: not buckling up, drowsy driving, impaired driving, distracted driving, and aggressive driving.

Utah is one of 18 states that does not have a primary seat belt law. Primary seat belt laws allow law enforcement officers to ticket a driver for not wearing a seat belt, without any other traffic offense taking place. Secondary seat belt laws state that law enforcement officers may issue a ticket for not wearing a seat belt only when there is another citable traffic infraction. The Utah Department of Public Safety conducts an annual safety belt observational survey to determine safety belt use for Utah. Overall, safety belt use in Utah for 2011 was 89.2%, the highest recorded usage to date.

In 1999, a graduated driver licensing law (GDL) was enacted in Utah to address the concern of teenage driving and crashes. GDL programs allow young drivers to safely gain driving experience before obtaining full driving privileges. GDL programs are proven to reduce the number of fatal crashes among young drivers. Several changes have been made to Utah's GDL since 1999.

In 2000, the Utah Legislature upgraded the law to make child safety seat use mandatory for children through age four. In 2008, the Utah Legislature enacted a booster seat law, requiring children younger than 8 years of age to use an appropriate child restraint device like a car seat or a booster seat. Previously, the law only required children under the age of 5 to use an approved child restraint device.

The new law now protects children from 5 up to 8 years of age through use of a booster seat or car seat. However, children younger than 8 who are at least 57 inches tall are exempt from the law and may use a regular seat belt.

In 2009, the Utah Legislature passed HB290 which prohibits texting and use of electronic mail while driving.

Healthy People Objective IVP-13.1:

Reduce motor vehicle crash-related deaths: Deaths per 100,000 population

U.S. Target: 12.4 deaths per 100,000 population

State Target: 8.7 deaths per 100,000 population

Date Indicator Content Last Updated: 10/24/2011

Mental Health

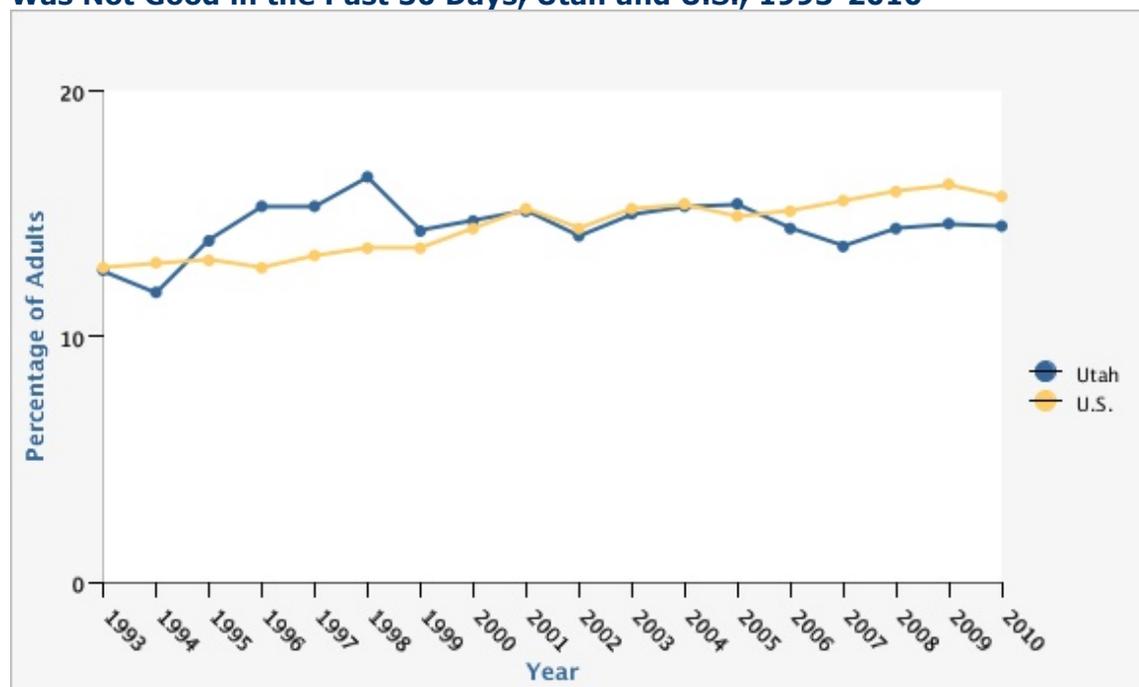
Mental illnesses are medical conditions that disrupt a person's thinking, feeling, mood, ability to relate to others, and daily functioning. Mental health and mental disorders can be influenced by numerous conditions including biologic and genetic vulnerabilities, acute or chronic physical illnesses, and environmental conditions and stresses. A history of mental illness is a risk factor for suicide.

Health Status: Mental Health Past 30 Days

Why Is This Important?

Mental health is one of the 12 Healthy People 2020 Leading Health Indicators. Mental health refers to an individual's ability to negotiate the daily challenges and social interactions of life without experiencing undue emotional or behavioral incapacity. Mental health and mental disorders can be influenced by numerous conditions including biologic and genetic vulnerabilities, acute or chronic physical dysfunction, and environmental conditions and stresses. Approximately 32% of the U.S. population is affected by mental illness in any given year.²⁶ The BRFSS mental health question is an attempt to obtain a global measure of recent mental and emotional distress.

Percentage of Adults Who Reported Seven or More Days When Their Mental Health Was Not Good in the Past 30 Days, Utah and U.S., 1993-2010



Data Sources

Utah Data: Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health. U.S. Data: National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System (BRFSS).

Data Notes

Age-adjusted to the U.S. 2000 standard population. U.S. data are the average for all states and the District of Columbia but do not include the U.S. territories. In 2002 the U.S. data includes only 22 states that asked the question.

How Are We Doing?

In 2010, approximately 15% (crude rate) of Utah adults reported seven or more days when their mental health was not good in the past 30 days. This percentage was higher for adults with lower education and income levels, and lower for older adults.

In order to analyze the BRFSS data by Utah's racial and ethnic populations, we combined years 2006-2010. According to this analysis using age-adjusted rates, Utah's Pacific Islander (16.9%) and American Indian/Alaska Native (19.2%) populations reported the highest percentages of seven or

more days when their mental health was not good in the past 30 days. And Utah Asian adults reported the lowest percentage at 7.2%.

Date Indicator Content Last Updated: 10/24/2011

Suicide

Why Is This Important?

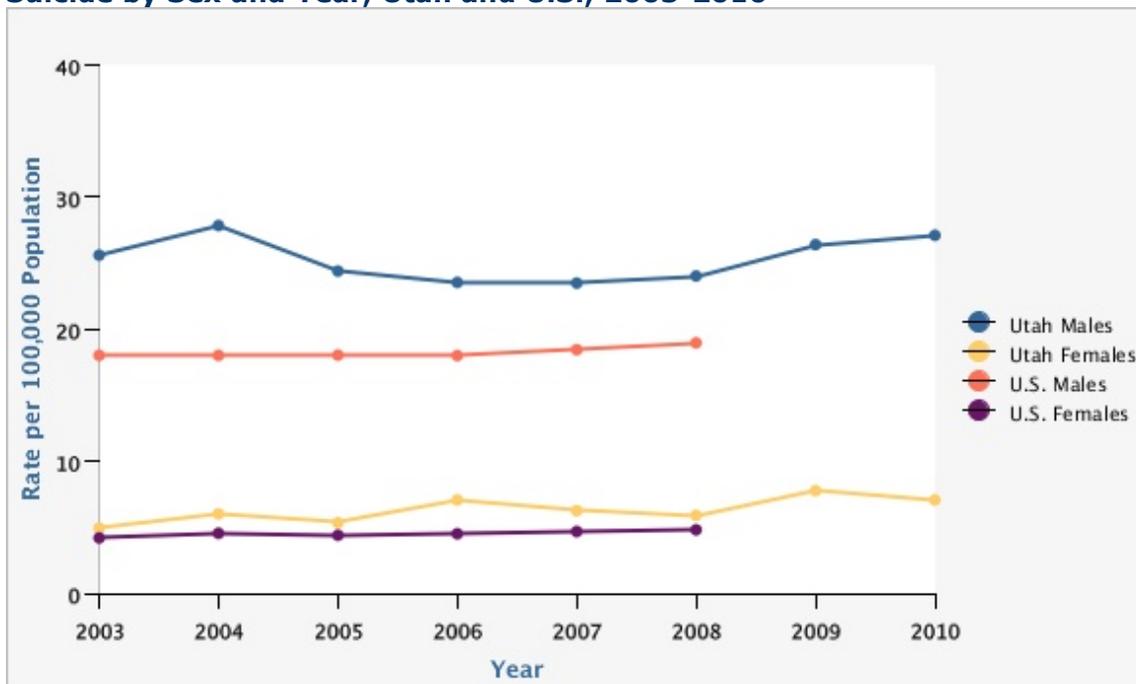
From 2006 to 2010, Utah's age-adjusted suicide rate was 15.8 per 100,000 persons. This is an average of 402 suicides per year. Utah has one of the highest age-adjusted suicide rates in the U.S. It is the second leading cause of death for Utahns ages 15 to 44 years old.

Completed suicides are only part of the problem. More people are hospitalized or treated in an emergency room for suicide attempts than are fatally injured. According to the 2011 Youth Risk Behavior Survey, during the past 12 months before the survey, 7.2% of Utah high school students attempted suicide one or more times and 3.1% of these students suffered an injury, poisoning, or an overdose that had to be treated by a doctor or nurse. The most recent data show that 2,657 Utahns were seen in emergency departments (2009) and 1,446 Utahns were hospitalized for self-inflicted injuries (2010).

Data from the 2005-2007 Behavioral Risk Factor Surveillance Data showed that 4.6% of Utahns 18 years and older reported thoughts of hurting themselves or that they would be better off dead. Males and females 85 years and older had the highest prevalence (8.0% and 12.4%), followed by males and females 18-24 years of age (7.1% and 9.1%). All suicide attempts should be taken seriously. Those who survive suicide attempts are often seriously injured and many have depression and other mental health problems.

Suicide is a complex public health issue where victims may be blamed and family members stigmatized. Consequently, suicide is not openly discussed making it difficult to collect meaningful data that is vital to suicide prevention efforts.

Suicide by Sex and Year, Utah and U.S., 2003-2010



Data Sources

Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health. Population Estimates: Utah Governor's Office of Planning and Budget. National Vital Statistics System, National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

Data Notes

Suicides are determined using ICD-10 codes X60-X84, Y87.0, U03. Data are age-adjusted to the U.S. 2000 standard population.

Risk Factors

Many conditions and stressors may be related to suicide including:²⁷

- Previous suicide attempt(s)
- History of depression or other mental illness
- Alcohol or drug abuse
- Family history of suicide or violence
- Physical illness
- Local epidemics of suicide

How Are We Doing?

The 2010 Utah age-adjusted suicide rate was 17.0 per 100,000 population. In the last five years, males (27.1 per 100,000 population) had a significantly higher suicide rate than females (7.1 per 100,000 population).

According to 2005-2009 data from the Utah Violent Death Reporting System, non-Hispanic/Latino persons had a significantly higher age-adjusted suicide rate than Hispanic and Latino persons (15.9 and 8.1 per 100,000 population respectively). African-American/Black persons and Hispanic and Latino persons had significantly lower age-adjusted suicide rates than the state rate.

In Utah from 2006 to 2010, males had higher suicide rates than females in every age group. Males 45-54 years of age (39.6 per 100,000 population) had the highest suicide rates among males, and females ages 35-44 years old (14.0 per 100,000 population) had the highest suicide rates among females.

From 2006 to 2010, TriCounty, Southeastern Utah, Central Utah, and Weber-Morgan Local Health Districts had significantly higher age-adjusted suicide rates than the state rate.

Among small areas, Ben Lomond, Downtown Ogden, Sevier/Piute/Wayne Counties, South Salt Lake, Carbon/Emery Counties, TriCounty LHD, and West Valley East had significantly higher age-adjusted suicide rate than the state rate.

What Is Being Done?

The UDOH Violence and Injury Prevention Program (VIPP) is funded by the U.S. Centers for Disease Control and Prevention (CDC) to implement the Utah Violent Death Reporting System (UTVDRS). UTVDRS is a data collection and monitoring system that will help Utahns better understand the public health problem of violence by informing decision makers about the magnitude, trends, and characteristics of violent deaths such as suicide, and to evaluate and continue to improve state-based violence prevention policies and programs. Data are collected from the Office of the Medical Examiner, Vital Records, and law enforcement agencies and are linked together to help identify risk factors, understand circumstances, and better characterize perpetrators of violent deaths. UTVDRS is currently in its seventh year of data collection.

Healthy People Objective MHMD-1:

Reduce the suicide rate

U.S. Target: 10.2 suicides per 100,000

State Target: 13.3 suicides per 100,000 population

Date Indicator Content Last Updated: 10/21/2011

References

- ¹ Fatality Analysis Reporting System; <http://www-fars.nhtsa.dot.gov/Main/reportslinks.aspx>
- ² October, 2002 "Room to Grow" website:
http://www.roomtogrow.org/index.php?option=com_content&view=article&id=46&Itemid=65
- ³ NCHS Data Brief No. 23, Nov. 2009
- ⁴ Centers for Disease Control and Prevention. Physical activity and health: a report of the surgeon general. Atlanta (GA): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Promotion; 1996.
- ⁵ Knowler WC, Barrett-Connor E, Fowler SE, Hamman RF, Lachin JM, et al. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med* 2002;346(6):393-403.
- ⁶ Kesaniemi, Y., et al. (1994). Dose-response issues concerning physical activity and health: an evidence-based symposium. *Medicine and Science in Sports and Exercise*, 33(6 suppl), S351-S358
- ⁷ Centers for Disease Control and Prevention. (1999). Achievements in Public Health, 1900-1999: Impact of vaccines universally recommended for children -- United States 1990-1998. *Morbidity and Mortality Weekly Report*, Vol. 48, (12);243-248. Atlanta, GA: author.
- ⁸ American Diabetes Association, <http://care.diabetesjournals.org/content/31/3/596.abstract>
- ⁹ <http://www.pophealthmetrics.com/content/8/1/29>
- ¹⁰ <http://www.cdc.gov/diabetes/news/docs/dpp.htm>
- ¹¹ Tabar L, Fagerberg G, Duffy SW, et al. Update of the Swedish two-county program of mammographic screening for breast cancer. *Radiol Clin North Am* 1992;30:187-210.
- ¹² Roberts MM, Alexander FE, Anderson TJ, et al. Edinburgh trial of screening for breast cancer: mortality at seven years. *Lancet* 1990;335:241-246.
- ¹³ Shapiro S, Venet W, Strax P, et al, eds. Periodic screening for breast cancer. Baltimore: Johns Hopkins University Press, 1988.
- ¹⁴ Andersson I, Aspegren K, Janzon L, et al. Mammographic screening and mortality from breast cancer: the Malmo mammographic screening trial. *BMJ* 1988;297:943-948.
- ¹⁵ Frisell J, Eklund G, Hellstrom L, et al. Randomized study of mammography screening-preliminary report on mortality in the Stockholm trial. *Breast Cancer Res Treat* 1991;18:49-56.
- ¹⁶ Nystrom L, Rutqvist LE, Wall S, et al. Breast cancer screening with mammography: overview of Swedish randomized trials. *Lancet* 1993;341:973-978.
- ¹⁷ National Institutes of Health Consensus Development Panel: National Institutes of Health Consensus Development Conference Statement: breast cancer screening for women ages 40-49, January 21-23, 1997, *Journal of the National Cancer Institute* 89 (14):1015-1026, 1997.
- ¹⁸ National Cancer Advisory Board: National Cancer Advisory Board mammography recommendations for women ages 40-49, Bethesda, Maryland, National Cancer Advisory Board, 1997.
- ¹⁹ American Cancer Society, *Cancer Facts & Figures* 2006.
- ²⁰ Mandel JS, Bond JH, Church TR, et al. Reducing mortality from colorectal cancer by screening for fecal occult blood. *New England Journal of Medicine* 328 (19): 1365-1371, 1993.
- ²¹ NCI Statement on Mammography Screening, Press Release, January 31, 2002, updated February 21, 2002. National Cancer Institute, Bethesda, MD.
<http://www.wysiwyg://13http://newscenter.cancer.gov/pressreleases/mammstatement31jan02.html>
- ²² HHS Affirms Value of Mammography for Detecting Breast Cancer, Press Release, February 21, 2002. U.S. Department of Health and Human Services, Washington, D.C.
<http://www.hhs.gov/news/press/2002pres/20020221.html>
- ²³ www.cancer.org
- ²⁴ Bahr, S. et al. (1998). *Drug Use Among Utah Students, 1997*. Provo: Brigham Young University, Department of Sociology. (Research was completed in collaboration with the Utah Division of Substance Abuse and Mental Health and the Utah State Office of Education.)
- ²⁵ Utah Department of Public Safety, "Utah Crash Summary 2008"
- ²⁶ Kessler, R.C., Chiu, W.T., Demler, O., Merikangas, K. R., Walters, E.E. (2005). Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry*, 62(6), 617-627.
- ²⁷ <http://www.cdc.gov/ViolencePrevention/suicide/riskprotectivefactors.html> (accessed 10/21/2011)