2003 Utah Public Health Outcome Measures Report

December 2003

Scott D. Williams, M.D., M.P.H.
Executive Director

Utah Department of Health
For comprehensive information of all priority outcome measures of the Utah Department of Health, visit the Department’s Indicator-Based Information System of Public Health (IBIS-PH) at http://health.utah.gov/ibis-ph/.

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Executive Summary

The Utah Department of Health (UDOH) exists to protect the public’s health through preventing illness, injury, disability, and premature death, assuring access to necessary health care and promoting healthy lifestyles. Reporting on Utah’s priority health needs and our progress in addressing them provides a roadmap for individuals, communities, and professionals so they may take specific steps to ensure that health goals are being met.

This year, a special section includes findings of the Medicaid Benefits Change Impact Study. The study evaluated the effects of changes made to Utah’s Medicaid program benefits during state fiscal years 2002 and 2003, intended to decrease costs and inappropriate use of care. Study findings included the following:

- New co-pay requirements produced small decreases in some types of claims, without producing undue financial burden for most clients.
- Loss of dental and vision services were found to have created hardships for enrollees, including untreated problems for some and high out-of-pocket costs for others.

Underlying Demographic Context of the Population

- The nation has recently experienced an economic recession, and although the recession is over, its effects are still being felt. In 2002, 228,000 Utahns were living in poverty, and 94,000 of them were children age 17 or under. There haven’t been as many Utahns in poverty for over 20 years.
- Only 85% of Utah’s population was White/non-Hispanic in the 2000 U.S. Census. Members of Utah’s race and ethnic communities bear a disproportionate burden of injury, illness, and death. For example, teen births among Hispanic/Latina girls was 5½ times the rate for non-Hispanic/Latina girls. The infant mortality rate among Black infants was more than double, and the motor vehicle crash death rate among American Indian Utahns was fourfold that found in the general population.

Health Care Services and Systems

- Access to health care is still a problem for many Utahns. In 2001, almost 200,000 Utahns lacked health insurance coverage, and 240,000 who had coverage were under-insured. Each year in Utah, thousands of persons are hospitalized for conditions that would have been easier, cheaper, and more effectively treated in outpatient settings. Providing access to health care, and especially preventive health services, helps Utah’s citizens, its economy, and society.
- Utah’s Children’s Health Insurance Program (CHIP) was implemented in 1998 and now has 28,000 children on its rolls. With an additional 27,000 uninsured and income-eligible children who could benefit from CHIP coverage, funding for the CHIP program is limited, and enrollment is currently capped.
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- Utah adults age 19 to 64 with incomes under 150% of the Federal Poverty Level may now be eligible for coverage under a new “Primary Care Network” insurance plan. In 2001, an estimated 144,000 Utah adults age 19 to 64 were uninsured, 62,000 of whom had incomes under 150% of the Federal Poverty Level. Both CHIP and the PCN leverage state dollars with generous federal matching funds. Funding for the PCN is limited, and enrollment is reaching capacity.

- The UDOH licenses 682 health facilities and 2,700 child care facilities to assure that they meet minimum standards for health and safety. Public outreach educates consumers on what qualities to look for, beyond that minimum standard.

- Utah is a national leader in developing collaborative and cost-effective methods for tracking patient safety and reducing adverse medical events in hospitals. From October 15, 2001 to October 15, 2003, Utah hospitals reported 68 sentinel events to UDOH. Hospitals have improved adverse drug event reporting since 2001. Approximately 8,557 potential inpatient medication complications (3.5% of all discharges) in 2002 were detected through the hospital discharge data system.

- The UDOH supports access to emergency medical services throughout the state, including grants to over 150 local emergency medical services agencies to assist them in providing adequate emergency medical services within their communities.

Health Screening and Preventive Care

- Immunization for vaccine-preventable diseases is one of the most cost-effective public health interventions. Utah’s state and local immunization programs launched tracking systems, reminder cards, and a media campaign that have been successful at improving Utah’s childhood immunization rate for five recommended vaccinations to 75.7% in 2002. Among Utah’s seniors (age 65+), 71% received influenza vaccine in the last year (2002).

- The percentage of pregnant women who seek prenatal care in the first trimester of pregnancy appears to have leveled off at around 78%. Barriers to prenatal care include cost, availability of timely appointments, and lack of health insurance coverage for care.

- Having a routine dental cleaning and check-up is important for overall oral health. Among adults in Utah during 2002, 73% had a routine dental cleaning in the past year.

- In 2002, 66% of Utah women age 40 or over had had a mammogram in the past two years.

- Almost all newborns were screened for metabolic (96%) and hearing (98%) disorders as required by law. Early screening allows for early intervention, which can prevent disability and, in some cases, save lives.

Risk Factors for Illness

- Environmental risk factors often have a stronger effect on children than adults. There were estimated to have been over 3,000 Utah children age 0-5 who had elevated blood lead levels in 2002, and more than 43,000 who had been exposed to secondhand tobacco smoke in 2001.

- In 2002, over half of all Utah adults (56%) were at increased risk of adverse health effects due to their weight, with 18% meeting the definition of obese (compared with 10% in 1990). The percent-
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The age of Utah adults eating recommended servings of fruits (31%) and vegetables (21%) is lower than the U.S. average.

- In 2000, 30% of Utah adults engaged in 30 minutes of regular physical activity on most days of the week. Nationally, the rate was 26%.
- In 2002, 12.5% of Utah adults smoked cigarettes, the lowest rate in the U.S. In 2003, 7.3% of Utah youth in grades 9-12 smoked cigarettes, down from 16% in 1997; an estimated 90% of adult smokers began as adolescents.
- Among Utah adults and front seat passengers, 85% were observed in 2003 wearing their seat belts, and 89% of children age 0-10 were observed to be properly restrained (seat belt or car seat) in a 2001 study by the Utah Department of Public Safety.
- Utah high school students were less likely to drink alcohol in the last 30 days compared with those in the U.S. (17.9% vs. 47.1%, 2001). Binge drinking among adults was less common in Utah (Utah 10.1%, U.S. 15.7%, 2002). However, there were still 50 alcohol and drug-related motor vehicle crash fatalities in Utah in 2002.
- In 2002, there were over 3,600 Utah teen births (to mothers aged 19 or younger). In a 1999 survey of Utah mothers, over 80% of those aged 19 and younger indicated that their pregnancy was unintended. In 2002, 1,031 births, or approximately 3 per day, were to Utah girls age 17 or younger.

Common Preventable Diseases and Conditions

- Motor vehicle traffic crashes are the leading cause of injury death in Utah, causing approximately 300 deaths each year, 25,000 emergency department visits, and almost $27 million a year in hospital charges. The most important factors contributing to motor vehicle traffic crash injuries are failure to use seat belts, excessive speed, and driving under the influence of alcohol or drugs. Other injuries, such as suicide, falls, and firearm-related injuries, account for a significant proportion of deaths among Utahns.
- Utah’s rates of the food-borne infections from Salmonella and E. coli have decreased in the last two or three years. However, Utah’s local health departments have only half the staff they need to perform restaurant inspections, leaving Utahns at greater risk for serious food-borne illnesses.
- Other serious infections, such as tuberculosis and HIV/AIDS, continue to infect many Utahns each year. Chlamydia is the most frequently reported sexually transmitted disease in Utah and the U.S. Utah’s chlamydia rates are less than half the U.S. rates, but our rates have been on the rise, and in 2002 Utah reported 3,078 cases (up from 2,190 in 2000).
- During 2003, in the U.S., West Nile Virus infected 8,734 humans causing 208 deaths. A disproportionate number of cases (2,477) and deaths (45) were in Colorado. Utah had 1 human case that was acquired in the state, and an additional 6 cases acquired in other states. Many more cases are expected in Utah during the 2004 mosquito season.
- Working in collaboration with health care providers and Utah’s 12 local health departments, the UDOH manages a system to track nearly 70 reportable communicable diseases. Interventions to prevent further cases and to control outbreaks are initiated based on that surveillance system.
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- Utah’s infant mortality rate (5.5 per 1,000 live births, 2002) is lower than that of the U.S., and among the lowest of all states. Interventions, such as prenatal care, newborn intensive care, and “backsleeping” to prevent sudden infant death syndrome, have been great successes for medicine and public health.

- The UDOH works to reduce illness, disability, and death from chronic conditions by promoting healthy lifestyles, screening for diseases such as heart disease and cancer, and by educating consumers, providers, and others about effective treatment and management strategies for chronic diseases such as arthritis, asthma, and diabetes.

Public Health Assessment

- A 1988 Institute of Medicine report recommended that government’s role in public health was to 1) assure access to quality health care, 2) develop health policy, and 3) assess the health status of the population. Utah’s assessment efforts include regular monitoring of infectious diseases and environmental health hazards, surveillance of health events (e.g., births, deaths, hospitalizations), monitoring health system characteristics, and tracking population health status and progress toward health objectives, such as those found in this report.

- Local health departments are often the front line for the reporting of communicable diseases and other events, such as signs and symptoms of exposure to biologic agents of terrorism. Utah’s Health Alert Network (HAN) consists of a network of local, state, and private health providers who share information through instantaneous electronic transmission to provide a timely response to disease outbreaks whether natural or the results of terrorism.

- Using federal funds, the UDOH has substantially improved preparedness for a possible bioterrorist attack, including improving ability to detect an attack and preparedness to respond should such an attack occur.

- The Utah Department of Health promotes evidence-based decision-making by improving the use of health information to guide health policy decisions and evaluate our efforts to assure the health of Utahns, and affording access to public health data and information through its on-line Indicator-Based Information System for Public Health (http://health.utah.gov/ibis-ph).
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Preface

The Institute of Medicine, a national health advisory institute chartered by the National Academy of Sciences, issued a statement on the role of government in public health in 1988. They proposed government’s role to be three-pronged: 1) to develop policy that supports the health of populations, 2) to assure access to health care and the quality of that care, and 3) to assess the health status of the population.

An understanding of the health status of a population is necessary to plan, implement, and evaluate public health programs that are intended to control and prevent adverse health events. The U.S. Public Health Service responded to the need for accurate and timely public health assessment data in Healthy People 2000 National Health Promotion and Disease Prevention Objectives by recommending that public health entities regularly and systematically track measures of population health. The objectives were updated in 2000, setting goals for the year 2010. (More information about Healthy People 2010 may be found on the Internet at http://www.healthypeople.gov.)

Over the past decade, the Utah Department of Health has substantially improved its assessment capacity by 1) establishing the Office of Public Health Assessment to support and coordinate public health assessment activities across the Department, 2) establishing the Office of Health Care Statistics (formerly the Office of Health Data Analysis) to collect, analyze, and disseminate health care system data, 3) affording easy access to major data bases and developing methods to analyze the data contained in them, including development of innovative interactive information systems, and 4) substantially improving the use of health information to guide health policy decisions and evaluate our efforts to assure the health of Utahns.

The Utah Department of Health regularly publishes a variety of outcome measures for the following purposes:
- Track and evaluate progress toward goals
- Guide policy decisions, priorities, and long-range strategic plans
- Develop, focus, and streamline data collection and reporting capacity in the Department
- Provide comprehensive information of Utah’s health and health care system to inform anyone involved in private or public health activities

Many, but not all, of the Department’s outcome measures have been included in this report. Persons seeking additional information may want to visit the Department’s Indicator-Based Information System for Public Health (IBIS-PH) at http://health.utah.gov/ibis-ph.
The mission of the Utah Department of Health is to protect the public’s health through:

- preventing avoidable illness, injury, disability, and premature death;
- assuring access to affordable, quality health care; and
- promoting healthy lifestyles

The Department will implement this mission through assessment, policy development, and assurance.

**Assessment**

- Collecting, analyzing, and disseminating information on public health, including data on health status, community health needs, the health care delivery system, and their relationships to health.
- Identifying and prioritizing health problems.

**Policy Development**

- Proposing public health policies, rules, and initiatives based on data assessment.
- Seeking public input in the development of public health policies, rules, and initiatives.
- Advocating the adoption and implementation of policies that promote healthy lifestyles and protect the public’s health.

**Assurance**

- Developing standards and procedures and assuring compliance with public health rules and laws.
- Planning and implementing programs that assure availability of affordable and acceptable health care and basic public health services for all Utahns.
- Strengthening local health departments and fostering community and private sector health activities.
The Utah Department of Health is organized into four divisions and several support function offices, such as Human Resource Management, Fiscal Operations, and Information Technology.

- The **Division of Health Care Financing** (HCF) administers the Utah Medicaid Program, the Children’s Health Insurance Program (CHIP) and the Primary Care Network (PCN) and focuses on optimizing the cost, access, and quality of health services paid for by these three programs.

- The **Division of Community and Family Health Services** (CFHS) conducts statewide prevention-oriented programs and medical care services in the areas of reproductive health, child and adolescent health, children with special health care needs, dental health, chronic disease, and violence and injury prevention.

- The **Division of Health Systems Improvement** (HSI) assures quality by enforcing minimum standards among designated health (nursing homes, assisted living, emergency response, ambulatory surgical centers, and others) and child care facilities and providers and assists the development of health systems in primary care and rural, and emergency health services.

- The **Division of Epidemiology and Laboratory Services** (ELS) performs essential laboratory tests and quality assurance; works with local health departments to conduct notifiable disease surveillance, and to investigate outbreaks of disease and suspected bioterrorism to identify and eliminate the sources; and coordinates statewide prevention services for HIV/AIDS, sexually transmitted diseases, and tuberculosis.

- The **Office of the Medical Examiner** (OME) investigates deaths that occur under circumstances that may have implications for the public’s health and safety.

- The **Center for Health Data** (CHD) provides an integrated understanding of Utah’s health and health systems and includes the Office of Vital Records and Statistics (OVRS) which provides legal birth and death certificates and vital statistics information; the Office of Health Care Statistics (OHCS) which collects and analyzes hospital, physician, emergency department, Medicaid, and health plan data to identify patterns of utilization, cost, effectiveness, variation, and consumer satisfaction in Utah’s health care systems; the Office of Public Health Assessment (OPHA) which collects, analyzes, reports, interprets, and distributes health information of Utah’s health status and health behaviors; and the Utah Statewide Immunization Information System (USIIS), a voluntary, restricted-access, registry of childhood vaccinations.
Primary Roles of the Four Health Services Divisions in the Utah Department of Health

<table>
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<tr>
<th>Health Systems Improvement</th>
<th>Health Care Financing</th>
<th>Epidemiology and Laboratory Services</th>
<th>Community and Family Health Services</th>
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<td>Health Care Services and Systems</td>
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<td>Access to Care</td>
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<td>Lifestyle Risk Factors</td>
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<td>Common Preventable Diseases and Conditions</td>
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<td>Health Problems Among Pregnant Women &amp; Infants</td>
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<td>Infectious Diseases</td>
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<td>Injury &amp; Violence</td>
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<td>Chronic Diseases &amp; Conditions</td>
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<td>Common Diseases Causing Death in Adults</td>
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* Local health departments also provide many essential health services (see page xvi).
### Utah Department of Health
### Fiscal Year 2003 Revenues and Expenditures

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<th>Actual FY2003</th>
<th>Authorized FY2004</th>
<th>Request FY2005</th>
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<td>Restricted and Trust Funds</td>
<td>16,483,700</td>
<td>16,687,000</td>
<td>16,682,700</td>
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<td>Transfers</td>
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<td>110,826,306</td>
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<td>2,040,019</td>
<td>3,802,306</td>
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<td>(2,383,740)</td>
<td>(1,098,036)</td>
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<td>Lapsing Funds</td>
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<td><strong>Total Financing</strong></td>
<td>$1,343,097,682</td>
<td>$1,534,939,500</td>
<td>$1,557,821,300</td>
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| **Program Expenditures** |                |                   |                |
| Executive Director's Office| $17,404,808  | $27,755,800       | $26,461,100    |
| Health Systems Improvement  | 13,115,937   | 13,666,100        | 13,561,800     |
| Epidemiology and Lab Services | 16,786,788  | 17,073,100        | 16,638,000     |
| Community & Family Health  | 93,136,967   | 98,440,200        | 97,627,600     |
| Health Care Financing       | 72,941,682   | 72,237,200        | 70,790,900     |
| Medical Assistance          | 1,100,162,664| 1,269,054,200     | 1,296,050,000  |
| Children's Health Insurance Program | 29,548,836 | 36,712,900       | 36,691,900     |
| **Total Budget**           | $1,343,097,682| $1,534,939,500    | $1,557,821,300|

| Positions                 | 1,245         | 1,308             | 1,300          |
Local Public Health

- At the local level, public health services in Utah are organized into 12 health districts with 55 service delivery sites. Six of the 12 local health departments are single county and six are multi-county districts.

- The local health districts in Utah include the following:
  - Bear River (Box Elder, Cache, Rich counties)
  - Central Utah (Juab, Millard, Piute, Sevier, Wayne, Sanpete counties)
  - Davis County
  - Salt Lake Valley
  - Southeastern Utah (Carbon, Emery, Grand, San Juan counties)
  - Southwest Utah (Garfield, Iron, Kane, Washington, Beaver counties)
  - Summit County
  - Tooele County
  - TriCounty (Daggett, Duchesne, Uintah counties)
  - Utah County
  - Wasatch County
  - Weber-Morgan

- Local health departments provide many essential health services including investigation of disease outbreaks, regulation of known sources of health hazards such as food establishments, and health education and prevention services such as immunizations and preventive health screenings.

- The private health care system, including hospitals, physicians, health plans, schools, and private-non-profit agencies, deliver many important local public health services as well.

- The highest priority health problems vary among local districts, especially between the more urbanized Wasatch Front districts and the more rural districts.

- During the 2002 Winter Olympics, local health departments assured availability of coordinated emergency medical services, enforced environmental and food regulations, performed disease surveillance and control, and participated in disaster preparedness and public information.

- Local health departments are often the front line for the reporting of communicable diseases and other events, such as signs and symptoms of exposure to biologic agents of terrorism. HAN, Utah’s Health Alert Network, consists of a network of local, state, and private health providers who share information through instantaneous electronic transmission to provide a timely response to disease outbreaks whether natural or the result of terrorism.
• Utah’s public health capacity is provided by both state and local public health entities, as well as community health centers and community based organizations.
Part 1. Medicaid Benefits Change Impact Study
Executive Summary

Through intent language the Utah State Legislature asked the Department of Health to analyze the impact of recent changes in Medicaid benefits on individuals and families and potential cost shifting among health services. The Department has undertaken a comprehensive analysis of the impact of these changes on health care utilization and outcomes. This report contains highlights of the findings based on both a survey of Medicaid enrollees and analysis of Medicaid administrative data.

There were four principal types of changes in the Medicaid benefit structure in state fiscal years 2002 and 2003:

- **Rate Reductions**: Reimbursement rates were reduced for pharmacies and hospitals.

- **Program Changes**:
  - The “7 Prescription Limit” triggered pharmacy review for high-volume pharmacy users.
  - The Primary Care Network (PCN) enrollment began in July 2002. At this time, the Medicaid program also began making a distinction between Traditional and Non-Traditional enrollees. Non-Traditional enrollees are primarily parents of eligible children, while Traditional enrollees include pregnant women, children, and most blind, disabled, and elderly enrollees. Traditional, Non-Traditional, and Primary Care Network programs provided differing benefit levels. Non-Traditional enrollees were asked to make co-pays for some services, and experienced limitations on others.

- **Co-payments**: New or increased co-pays have been implemented for most fee-for-service Medicaid enrollees for physician services, outpatient services, pharmacy and inpatient hospitalizations.

- **Changes in Coverage**: For most adults, dental and vision-related care are no longer covered; podiatry coverage was reduced, then partially restored; and coverage for speech and hearing-related services, and physical and occupational therapy was eliminated, but has been restored as of July 1, 2003.

These changes were intended to reduce costs and decrease inappropriate utilization through cost-sharing.

Summary of the findings are presented as follows:

- **Utilization Summary** – In most cases, the utilization analyses show that the co-pay requirements had no statistically significant impact on utilization. However, in a few cases, there are statistically significant decreases in utilization at the time of implementation or increases in the co-pays, notably:
  - A decrease of about 30 prescriptions per week per 1,000 enrollees for Non-Traditional enrollees at the time of the increase to a $2 co-pay.
  - A decrease of about 21 outpatient claims per month per 1,000 enrollees for Traditional enrollees at the implementation of the $2 co-pay.
  - No increase in emergency room dental claims when dental coverage was eliminated.

- **Survey Results Summary** – Several survey questions address the human toll of the changes.
  - **Co-pays**: In general the survey results show that for the majority of enrollees the co-pays were not a burden and accomplished the stated objectives. However, for a subset of the population the co-pays for physician services and pharmacy created a financial burden.
  - **Changes in Coverage**: The survey suggests that among the services that are no longer covered, loss of dental and vision services created the greatest hardship for enrollees. While some enrollees reported getting needed dental care by paying for it themselves, a greater number had dental needs that were not addressed, primarily due to inability to pay.
  - **Coping Strategies**: Respondents reported employing a broad range of coping strategies, including cutting back on overall consumption of goods and services, as well as expenditures for nonessentials in nutrition and non-health commodities.
Methodology

Two primary data sources were used in the analysis: the Medicaid administrative data and Medicaid Benefits Survey.

Medicaid Administrative Data

- Medicaid Data Warehouse – The Division of Health Care Financing maintains a comprehensive database of Medicaid claims. The database contains information about the procedures performed, the provider, and the enrollee receiving treatment, as well as payment and other financial information about the claim.

- Fee-for-Service Only – At present, the Data Warehouse does not contain data for claims processed by health plans that provide services to Medicaid enrollees through HMO capitated contractual arrangements. As a result, the findings of these analyses apply only to Medicaid fee-for-service enrollees, and not to the entire population of Medicaid enrollees.

- Intervention Analysis – The primary statistical method used to analyze the utilization data is an intervention analysis model that identifies and separates the overall trend of the data (the “time series” component) from the changes in the trend that can be attributed to the changes in Medicaid benefits (the “intervention”). In the graphs presenting those results, we have included the original data, a line that indicates the predicted trend in the absence of interventions, and a fitted trend line with the interventions. The estimated magnitude of the effect of the interventions on the trend is given, along with inferential statistics. Statistical significance is determined using a 5% confidence level.

The Medicaid Benefits Survey

- The Focus Groups – Focus groups were conducted in six cities (Brigham City, Gunnison, Layton, Provo, Salt Lake City, and Roosevelt) to aid in development of the survey questionnaire. Results of those groups identified issues that required further study. About twelve Medicaid enrollees who had either called to complain about the changes or who had recently used services affected by the changes were invited to participate in hour-long sessions discussing the impact of the changes in Medicaid benefits on them and their families in July 2003.

- The Survey Instrument – A four-page paper-and-pencil (mail) survey contained 27 questions covering enrollees’ experiences with the changes in benefits. We also included questions related to health status and health care utilization.

- The Sampling Frame – The sampling frame included Medicaid enrollees age 19 or over who had been continuously enrolled for the previous six months. Medicare recipients, institutionalized persons, and persons receiving benefits through the “pregnant women and infants” aid category were excluded from the survey sample because the changes would not likely have applied to them. There were approximately 23,200 enrollees in the remaining categories. Because it is possible for enrollees not meeting these guidelines to be in some of the other aid categories, we asked a question on the survey to verify eligibility. Eighty-one percent of the respondents reported meeting all of the eligibility criteria. This survey is representative of about 18,750 Medicaid enrollees. Since those surveyed are a random sample of eligible enrollees, percentages from the survey can be used to estimate impacts on the entire population of affected Medicaid enrollees.

- The Survey Protocol – The first wave of the surveys was mailed to 600 randomly selected enrollees on August 20, 2003. Eleven surveys were returned undeliverable. Of the remaining 589, 401 completed surveys were returned by the cut-off date of September 24, 2003 giving a response rate of 68%. A total of 324 met the eligibility criteria. 51% of these respondents were Traditional enrollees and 49% were Non-Traditional enrollees (compared to 53% Traditional vs. 47% Non-Traditional in the sampling frame).
The Impact of Changes in Pharmacy Benefits on Utilization

Recent changes in Medicaid pharmacy benefits were designed to share costs and encourage more appropriate utilization. A recent study by the Office of Health Care Statistics examines how these changes in benefits have impacted pharmacy utilization by Non-Traditional Medicaid enrollees.

Notes:
1. The data are weekly data on pharmacy utilization rates (per 1,000 enrollees) calculated using Medicaid administrative data.
2. The trend lines are from an intervention analysis model. This model identifies and separates the overall trend of utilization from the changes in that trend that can be attributed to the changes in Medicaid benefits.

- In October 2001, Medicaid began requiring a pharmacy review for any enrollee receiving more than seven prescriptions. Contrary to what one would expect, the analysis revealed a slight increase in utilization that immediately followed this change, however, it was small and not statistically significant (p=0.08).
- In July 2002, Medicaid divided enrollees into three programs: Traditional, Non-Traditional, and PCN. Non-Traditional patients were required to pay a $2 co-pay for each prescription filled. Additionally, Non-Traditional patients were required to receive generic substitutes in some cases, and there were some limitations on the drugs that were available. The statistical analysis shows a drop in utilization rates of about 30 claims per 1,000 enrollees at the time of this change. This change is statistically significant (p=0.01).
- In January 2003, Medicaid increased its pharmacy provider discount to be equal to Average Wholesale Price (AWP) minus 15%. There does not appear to be a significant change in utilization associated with this change.
- The model predicts a slight downward overall trend in pharmacy utilization occurring in the absence of changes.
The Impact of Changes in Pharmacy Co-pays on Enrollees’ Experience

Analysis of data from a recent survey of Medicaid enrollees conducted by the Office of Health Care Statistics shows how pharmacy co-pays have impacted enrollees’ experience with filling prescriptions.

MEDICAID ENROLLEES’ EXPERIENCE WITH PHARMACY CO-PAYS
Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

Thinking of your experience with health care providers over the last 6 months, which of the following statements describe your experience with filling prescriptions?

Notes:
1. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent. * indicates statistically significant (at 5% level) difference between Traditional and Non-Traditional enrollees.
2. Percentages add to more than 100% because respondents were asked to mark all situations that applied.

- 79% of the respondents reported having a prescription filled and paying the corresponding $2 or $3 co-pay. Traditional enrollees were more likely to have had a prescription filled and paid the co-pay than Non-Traditional enrollees.
- 13% of respondents reported not getting a prescription filled because they couldn’t afford the co-pay. This corresponds to about 2,500 Medicaid enrollees. Non-Traditional enrollees were more likely than Traditional enrollees to have not had a prescription filled because they couldn’t afford the co-pay.
- 4% of respondents reported being able to get the prescription filled without paying the co-pay. The most common reasons listed were that they were not asked and that they didn’t have the money (about 1/3 each).
- 12% of respondents did not experience any of these situations, presumably because they did not need to fill a prescription.
- Responses to another survey question show that over half of the respondents were taking three or more medications at the time of the survey.
The Impact of Changes in Physician Services Co-pays on Utilization

Recently, Medicaid began to require some enrollees to pay small co-pays for physician services. These changes were designed to share costs and encourage more appropriate utilization. A recent study by the Office of Health Care Statistics examines how these co-pays have impacted utilization of physician services by Traditional Medicaid enrollees.

In November 2001, Medicaid began requiring Traditional enrollees to pay a $2 co-pay per visit, with a $100 per year out-of-pocket limit. The statistical analysis revealed an increase in utilization immediately following this change, however, it was small and not statistically significant (p=0.16).

In February 2003, Medicaid raised the physician services co-pay to $3 per visit. Again, the statistical analysis revealed a slight increase in utilization at this time that was not statistically significant (p=0.11).

The model predicts a downward trend in physician utilization that would have occurred in the absence of the changes in benefits. A likely cause is that Medicaid enrollments have been increasing and the newer enrollees were generally healthier than former enrollees, causing the average health to increase. Other possible causes include increasing difficulty in finding appropriate providers, a decrease in inappropriate utilization, an improvement in average enrollee health, an increase in the effectiveness of prescription drugs, and a shift toward treatment in other settings.

The most important finding of this analysis was that there were no dramatic decreases in utilization associated with the implementation of the co-pays. This is consistent with the argument that the small co-pay are not significant barriers to needed care.

Notes:
1. The data are monthly data on physician services utilization rates (per 1,000 enrollees) calculated using Medicaid administrative data.
2. The trend lines are from an intervention analysis model. This model identifies and separates the overall trend of utilization from the changes in that trend that can be attributed to the changes in Medicaid benefits.
The Impact of Changes in Physician Services Co-pays on Enrollees’ Experience

Analysis of data from a recent survey of Medicaid enrollees conducted by the Office of Health Care Statistics shows how physician services co-pays have impacted their experience with visiting a doctor’s office or clinic.

MEDICAID ENROLLEES’ EXPERIENCE WITH PHYSICIAN CO-PAYS
Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

Thinking of your experience with health care providers over the last 6 months, which of the following statements describe your experience with care at a doctor’s office?

- Went and paid the $3 co-pay
- Went but didn’t pay the $3 co-pay
- Did not go because couldn’t afford the $3 co-pay
- Went to the ER to avoid paying the $3 co-pay
- None of the above situations apply

Notes:
1. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent.
2. Percentages add to more than 100% because respondents marked all that applied.

- 70% of respondents reported having gone to a doctor’s office and paying the corresponding $3 co-pay.
- 11% of respondents reported not going to the doctor’s office because they couldn’t afford the co-pay. This corresponds to about 2,000 Medicaid enrollees.
- Of those who reported going to the doctor’s office, but not paying the co-pay, the most common reasons listed were that they couldn’t afford it (about 1/3), they were not asked to pay (about 1/5), and that they had other insurance that paid it (about 1/5).
- Less than 1% of enrollees reported that they should have gone to a doctor’s office, but went to the Emergency Room to avoid the co-pay.
- 19% did not experience any of these situations, presumably because they did not need to go to a doctor’s office.
- Responses to another question show that about half of the respondents had seen a doctor in the previous four weeks, and among those about half went to a doctor’s office or clinic more than once.
Enrollees’ Subjective Evaluation of Co-pays

Co-pays for physician services and pharmacy are intended to share costs and encourage more appropriate utilization. In a recent survey of Medicaid enrollees conducted by the Office of Health Care Statistics, respondents were presented with selected statements about co-pays.

MEDICAID ENROLLEES’ OPINIONS ABOUT CO-PAYS
Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

Read the following statements about the co-pays for doctor visits and prescriptions. Do you Strongly Agree, Agree, Disagree, or Strongly Disagree?

Notes:
1. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent.
2. Percentages add to more than 100% because respondents marked all that applied.

- **Co-participation**: 72% of respondents indicated that they agreed or strongly agreed that it made them feel good to be able to contribute toward their health care. Non-Traditional enrollees were more likely than Traditional to agree with this statement.

- **Encourage More Appropriate Care**: 47% agreed or strongly agreed that co-pays are effective in limiting inappropriate care.

- **Financial Difficulty**: 42% agreed or strongly agreed that while co-pays are small, they present a huge problem. This corresponds to about 8,000 Medicaid enrollees.
  - Similarly, 39% agreed or strongly agreed that the co-pays cause serious financial difficulties.
  - Traditional enrollees were more likely than Non-Traditional enrollees to agree with these statements.

- **Utilization**: 36% agreed or strongly agreed that the co-pays cause them to go to the doctor less often.

- **Summary**: The majority of respondents agreed with the co-participation approach to co-pays. However, about two-fifths expressed concerns about potential financial difficulties associated with the co-pays.
Enrollees’ Perceptions About the Impact of Co-pays on Health Care Access

Analysis of data from a recent survey of Medicaid enrollees conducted by the Office of Health Care Statistics shows what enrollees perceive would happen to them if they were not able to afford the co-pays for physician services and pharmacy. For many enrollees this question is hypothetical.

MEDICAID ENROLLEES’ PERCEPTIONS ABOUT CO-PAYS AND ACCESS

Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

When you need care from a doctor or need a prescription but don’t have the money for the co-pay, which of the following would probably happen?

<table>
<thead>
<tr>
<th>% of Respondents</th>
<th>All</th>
<th>Non-Traditional</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would not get the health care *</td>
<td>54.7%</td>
<td>46.0%</td>
<td>37.6%</td>
</tr>
<tr>
<td>I have no idea what I would do</td>
<td>-32.1%</td>
<td>-31.5%</td>
<td>-30.6%</td>
</tr>
<tr>
<td>I would ask family or friends to loan or give me money</td>
<td>32.7%</td>
<td>28.3%</td>
<td>32.7%</td>
</tr>
<tr>
<td>I could get treatment anyway</td>
<td>23.0%</td>
<td>20.8%</td>
<td>21.9%</td>
</tr>
<tr>
<td>My church or a community group would help pay for it</td>
<td>6.3%</td>
<td>4.2%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

Notes:
1. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent. * indicates statistically significant (at 5% level) difference between Traditional and Non-Traditional enrollees.
2. Some categories were combined for expositional purposes.
3. Percentages add to more than 100% because respondents marked all that applied.

The most common response was that the enrollees would probably not get needed health care if they didn’t have the money for the physician or pharmacy co-pays. Yet, in two separate questions, only 13% report having not filled a prescription and 11% report not having gone to see a doctor because they couldn’t afford the co-pays. About one-third of respondents indicate that they do not know what they would do if they couldn’t afford the co-pays. This suggests that many enrollees have not experienced this situation.

Non-Traditional clients are statistically more likely to expect that they wouldn’t get care if they couldn’t afford the co-pay than are Traditional clients.

31% of respondents expect that they could get money from family or friends if needed.

22% expect that a provider would still be available, either because they would be treated for free or the doctor or pharmacist would work with them.

5% of respondents expect that church or community groups would help pay for the co-pays for pharmacy or physician services.
The Impact of Changes in Outpatient Co-pays on Utilization

Recently, Medicaid began to require some enrollees to pay small co-pays for outpatient services. These changes were designed to share costs and encourage more appropriate utilization. A recent study by the Office of Health Care Statistics examines how these co-pays have impacted utilization of outpatient services by Medicaid enrollees.

### OUTPATIENT CLAIMS – MEDICAID ENROLLEES

Medical Fee-for-Service Outpatient Claims by Date of Service, Non-pregnant Adults

#### Notes:
1. The data are monthly data on outpatient services utilization rates (per 1,000 enrollees) calculated using Medicaid administrative data.
2. The trend lines are from an intervention analysis model. This model identifies and separates the overall trend of utilization from the changes in that trend that can be attributed to the changes in Medicaid benefits.

*In November 2001, Medicaid began requiring enrollees to pay a $2 co-pay per outpatient visit. The statistical analysis shows a significant decrease in utilization by traditional enrollees of about 21 claims per 1,000 (p=0.02), but no significant effect for Non-Traditional enrollees.*

*In July 2002, Medicaid made program distinctions between Traditional, Non-traditional, and PCN enrollees, and increased the outpatient services co-pay for Non-Traditional enrollees to $3. Again, the statistical analysis shows no significant change in utilization for the Non-Traditional enrollees (p=0.63).*

The most important finding of this analysis is that there was a significant decrease in utilization of outpatient services associated with cost-sharing increases for Traditional Medicaid enrollees, but not for Non-Traditional enrollees.

In a recent survey of Medicaid enrollees only 16% of respondents indicated that removing the $2 co-pay for outpatient services be of “Most” help to them, the lowest rating of any of the changes covered by the survey.
The Impact of Changes in Inpatient Hospital Coinsurance on Utilization

Recent changes in Medicaid inpatient hospital benefits were designed to share costs and encourage more appropriate utilization. A recent study by the Office of Health Care Statistics examines how these changes in benefits have inpatient hospital utilization by Medicaid enrollees.

In February 2002, Medicaid began requiring enrollees to pay a $220 coinsurance for each inpatient hospitalization. The statistical analysis shows a temporary increase in hospitalizations right before the change, followed by a temporary decrease in hospitalizations right after the change. However, there is no statistically significant (p=0.67) evidence of a permanent change in the trend due to the hospital co-pay.

In January 2003, Medicaid reduced its hospital reimbursement rate as a cost savings device. The statistical analysis shows an increase in utilization at that time, but it is not statistically significant (p=0.33).

The most important finding of this analysis is that there were no dramatic decreases in utilization associated with the implementation of the inpatient coinsurance. This is consistent with the argument that the coinsurance is not a significant barrier to needed hospital care.

Part of the reason that the coinsurance doesn’t seem to impact utilization may be that hospitals frequently do not collect it. In a recent survey of Medicaid enrollees, respondents who were hospitalized in the last six months for scheduled services were about four times more likely to report not paying the coinsurance as paying it – 4 respondents reported paying it versus 17 that reported not paying it (out of 324 enrollees responding to the survey).
The Impact of Changes in Dental Benefits on Enrollees’ Experience

On June 1, 2002, Medicaid limited dental coverage for non-pregnant adults to the treatment of pain and infection. Preventive and restorative care is no longer a covered benefit. A recent study by the Office of Health Care Statistics uses survey data and administrative data to estimate the impact on enrollees.

MEDICAID ENROLLEES’ EXPERIENCE WITH DENTAL CARE
Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

In the past 6 months have you paid out of your own pocket for any of the following health care? If Yes, how much?

<table>
<thead>
<tr>
<th>Dental Care: % Yes</th>
<th>Average (Median)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Respondents</td>
<td>34.4%</td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>36.7%</td>
</tr>
<tr>
<td>Traditional</td>
<td>28.7%</td>
</tr>
</tbody>
</table>

Are there any health care services that you need right now but you are not getting because Medicaid doesn’t cover it and you can’t afford to pay for them on your own? How much would it cost to get all of the health care you need that is not covered by Medicaid?

<table>
<thead>
<tr>
<th>Dental Care: Estimated Total Cost of Needed Dental Care</th>
<th>(% of Responses &gt; $500)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Respondents</td>
<td>69.4%</td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>79.3%</td>
</tr>
<tr>
<td>Traditional</td>
<td>60.0%</td>
</tr>
</tbody>
</table>

Notes:
1. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent.

Survey Results: Responses to the Medicaid Benefits Survey suggest that the reduction in dental care benefits has impacted enrollees the most of any of the changes.

- Out-of-pocket Dental Expenses: 34% of the respondents reported having paid for dental care out of their own pocket in the last six months (the highest rate of any services on the survey). The average (median) out-of-pocket payment was $200.
- Dental Care Not Received: About 70% of respondents (corresponding to about 16,000 enrollees) reported needing dental care not covered by Medicaid that they could not afford. Of those who reported an estimate of how much this care would cost, over half reported that it would cost more than $500.
- Perceptions: When asked which changes in Medicaid would help them the most, 81% of the respondents gave “Cover adult dental care” the highest rating. This was the highest percentage of any of the choices listed. (See chart on last page of this section.)

Utilization: In a separate study of utilization using Medicaid administrative data, the Office of Health Care Statistics compared the utilization rates of dental care and emergency room dental care before and after the change in benefits. As one would expect, dental claims and costs per enrollee fell dramatically for the non-pregnant adult population after this change. However, there is no evidence of cost shifting to more expensive emergency room dental use immediately after this change took place.
Strategies Enrollees Employ When Health Care Expenses Cause Difficulties

In a recent survey of Medicaid enrollees by the Office of Health Care Statistics, 38% of respondents indicated that there was a time in the past six months when they had to pay so much for health care that they had to cut back in other areas. Analysis of their responses documents the coping strategies they employ.

MEDICAID ENROLLEES' COPING STRATEGIES
Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

When your health care expenses forced you to cut back on other things, which of the following did you do?

- Went without buying needed clothing: 62.1%
- Cut back on "staple" foods: 48.4%
- Cut back on "comfort" foods: 47.6%
- Cut back on self-improvement: 46.8%
- Tried to stretch out my prescriptions: 46.0%
- Cut back on entertainment: 45.2%
- Spent less on communication: 43.5%
- Spent less on transportation: 41.9%
- Cut back on communication*: 38.7%
- Cut back on on entertainment: 25.8%
- Sold personal possessions*: 21.0%
- Took out a loan or bought things on credit: 14.5%
- Made things myself instead of buying them: 13.7%
- Worked more hours or took a second job: 10.0%
- Spent less on housing*: 0.0%
- Went without buying needed clothing: 0.0%
- Cut back on "staple" foods: 0.0%
- Cut back on "comfort" foods: 0.0%
- Cut back on self-improvement: 0.0%
- Tried to stretch out my prescriptions: 0.0%
- Cut back on entertainment: 0.0%
- Spent less on communication: 0.0%
- Spent less on transportation: 0.0%
- Cut back on communication*: 0.0%
- Cut back on on entertainment: 0.0%
- Sold personal possessions*: 0.0%
- Took out a loan or bought things on credit: 0.0%
- Worked more hours or took a second job: 0.0%
- Spent less on housing*: 0.0%
- Went without buying needed clothing: 0.0%

Notes:
1. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent. * indicates statistically significant (at 5% level) difference between Traditional and Non-Traditional enrollees.
2. These results are based on the surveys of 124 respondents that indicated that health care expenses had forced them to cut back.
3. Percentages add to more than 100% because respondents marked all that applied.

- 38% of Medicaid enrollees have experienced health care costs that forced them to cut back in other areas. This corresponds to roughly 7,000 Medicaid enrollees.
- When they were forced to cut back, respondents reported employing a broad range of coping strategies, including cutting back on overall consumption of goods and services as well as nonessentials.
- Coping strategies associated with increasing productivity were among the least commonly reported.
- Non-Traditional enrollees were statistically more likely than Traditional enrollees to spend less on housing (54% vs. 29%), cut back on communication (48% vs. 29%), and sell personal possessions (32% vs. 19%). Other differences were not statistically significant.
- The survey did not address the intensity of these coping strategies.
Enrollees’ Subjective Evaluation of Priorities for Restoring Benefits

In a recent survey of Medicaid enrollees conducted by the Office of Health Care Statistics, respondents were asked to evaluate the value of restoring selected benefits.

**MEDICAID ENROLLEES’ PERCEPTION ABOUT RESTORING BENEFITS**

Data From a Survey of Non-pregnant Medicaid Adults Not Receiving Medicare

*If Medicaid could make any of the changes listed below, how much would each of them help you? Please use a scale of 0 to 4 where 0 would help you the least and 4 would help you the most.*

Notes:
1. Respondents were asked which of the seven listed changes would benefit them the most (on a scale of 0 to 4). Categories not shown are “Cover Podiatry,” “Remove Physician Co-pay,” and “Remove Outpatient Co-pay.” % Responding “4 - Most” is less than 25% for each.
2. The survey was administered by mail to a random sample of Medicaid enrollees in August-September, 2003. There were 324 usable surveys returned from 589 surveys sent. * indicates statistically significant (at 5% level) difference between Traditional and Non-Traditional enrollees.

Responses to the Medicaid Benefits Survey suggest that restoring dental and vision benefits would be of the most help to Medicaid enrollees. Over 80% of respondents identified dental coverage as helping them the most. Almost 70% said that restoring vision coverage would help them the most.

8% of respondents gave all seven benefit changes the highest rating, “4 – Most.” Traditional enrollees were more likely than Non-Traditional enrollees (10% vs. 6%) to have given every category the highest rating.

Less than 25% of respondents gave the highest rating to covering podiatry, or removing the co-pays for physician and outpatient service.

The Medicaid Benefits Change Impact Study was conducted by the Utah Department of Health, Office of Health Care Statistics (OHCS). For more information, contact OHCS at (801) 538-7048.
Part 2. Public Health Outcome Measures

Underlying Demographic Context of the Population

- Characteristics of the Population
- Birth and Death Rates
- Household and Family Characteristics
- Socio-Economic Characteristics
Age Distribution of the Population

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.

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

- Utahns are on average younger than the rest of the U.S. population.

- In the 2000 U.S. Census, 44% of Utah’s estimated 2.3 million people were age 24 or under, compared with 34% in the U.S.

- Age is one of the most important risk factors for many diseases, including Utah’s leading causes of death, heart disease, and cancer. The relative youth of Utah’s population is one important factor in our relative good health. In order to remove the “age effect” and allow accurate comparisons, health data are commonly age-adjusted for presentation in reports such as this one.

- Utah had 701,281 households according to the 2000 Census. Utahns had larger households, on average: 3.13 persons compared with 2.59 in the U.S. from state to state.
Utah’s Racial and Ethnic Populations

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), 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 initiative.

- The Black, Asian, Pacific Islander, and Hispanic/Latino populations are growing at faster rates than the state population as a whole. Only 85% of Utah’s population was White only and non-Hispanic at the time of the 2000 U.S. Census. Three out of every 20 Utahns belongs 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.

- Utah’s diverse ethnic populations often have special needs for health care services.

- Especially for new immigrants, the health system is complicated and unfamiliar. Persons from different cultures often need information to better understand how to meet their needs through that system.

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

Birth rate is simply the number of live births in a given year per 1,000 persons in the 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 our individual state.

- Utah continues to report the highest birth rate in the nation (21.2 per 1,000 total population in 2002). The overall U.S. rate (13.9 per 1,000 population in 2002) is considerably lower, with several states (Vermont and Maine) reporting rates as low as 10.4 and 10.7 respectively per 1,000 total population in 2001.

- There were 49,140 live births in Utah during 2002. Of these, 94.0% were to White women, 1.4% to Native American women, 0.7% were to Black women, and 1.6% were to Asian or Pacific Islanders. During this same year, 14.2% of all births in Utah were to women who reported they were of Hispanic origin.

- Family planning services are available in Utah from several sources: community and private providers, Title X clinics (Planned Parenthood Association of Utah), and city and county health departments. Utah law requires parental consent for minors to obtain contraception information and services from local health departments in Utah.

- Recent reports have indicated that close interpregnancy spacing increases risk for adverse pregnancy outcomes. Although national data on this indicator are unavailable for comparison, Utah’s high birth rate would indicate that women experience shorter interpregnancy spacing than in the U.S. as a whole.
Birth and Death Rates

Death Rates: Deaths From All Causes

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.

- In 2002, 13,042 Utah residents died. The Utah death rate, adjusted for differences in the ages of the populations, is about 5% lower than the death rate for the United States. Although Utah’s death rate is still below that of the U.S., Utah’s rate has increased slightly, while the U.S. rate continues to decline. The leading causes of death (heart disease, cancer, and stroke) are much the same for Utah and the rest of the U.S., regardless of sex, race, or ethnicity.

- 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.

- Advances in medical technology are one of the factors lowering death rates in Utah and elsewhere. One issue with extending lives through medical technology is that individuals often have chronic disabilities that have implications for their quality of life. Healthy lifestyles and early detection of disease lead to both longer life and improved quality of life across the lifespan.

- 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.

Sources: U.S. Bureau of the Census; U.S. Center for Disease Control and Prevention, on-line data - CDC WONDER; Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health; Utah Governor’s Office of Planning and Budget

Note: Age-adjusted to U.S. 2000 standard population. 2002 U.S. data are provisional.
Life Expectancy at Birth

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.

- 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 2000 increased from 48 to 74 years for men, and from 51 to 79 years for women. In contrast to life expectancy at birth, which improved 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 years and among women from 12 to 19 years. Improvements in nutrition, hygiene, and medical care contributed to decreases in death rates throughout the lifespan.

- Women typically outlive men. Females born in Utah today can expect to live 80 years, and males born in Utah can expect to live 76 years. Utah ranks 49th in the percentage of the population over age 65.

- 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. Policymakers 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.
Marriage and Divorce

Marriage and divorce are important determinants of the social structure of a population, which affects its health status. Marriage and divorce rates are simply the number of marriages (or divorces) per 1,000 persons in the population.

- Utah’s divorce rate is very similar to that found in the U.S., but our marriage rate is higher.
- In the 2000 U.S. Census, 59.5% of Utahns age 15 or over were married, compared with 54.4% in the U.S.
Household Structure

The number of parents living with a child helps to determine the human and economic resources available to that child. Children who live with one parent are more likely to live in poverty than are children who grow up in households with two adults. Single parents also face specific challenges including lack of leisure time, increased need for child care, and stressed financial resources.

- Non-family households (either a householder living alone or with other, unrelated, persons) constituted less than a quarter (23.7%) of Utah households in the 2000 decennial census, essentially unchanged from 1990. The proportion of single householders with children was 7.7%, also essentially unchanged from 1990. However, the likelihood that the household was headed by a female declined slightly, owing to a small increase in the proportion of male single householders with children.

- At the time of the 2000 U.S. Census, there were a total of 126,183 Utah children under age six and 411,780 children under age 18 who had both parents or an only parent in the labor force.

- A majority (63%) of Utah households included a married couple, either with or without children. This proportion was essentially unchanged from 1990 to 2000. There was a small increase in the proportion of Utah married couples without children. While most married couples in the U.S. do not have children living with them, the majority of married couples in Utah do have children present.

- In the U.S., the proportion of non-family households (single persons and unrelated persons living together) increased from 1990 to 2000, as did the proportion of households that contained a single householder with children. The proportion of married family households, with or without children, declined.
Socio-Economic Characteristics

Education Level in the Population

Education level is strongly related to health status. It is too simplistic to say that better education causes better health. It is more likely that some other factor(s), such as higher income, self-determination, mental health, or quality of social and family support, lead to both higher education levels and better health.

Healthy People 2010 Objective 7-1 Goal: High school completion (ages 18 to 24 years) (90%). (See Appendix)

• Utahns have made some relatively large improvements in education level. Among Utah adults age 25 and over in 2000, 9.4% had less than high school education, compared with 14.9% in 1990; 36.8% had a 4-year college or post-graduate degree, compared with 22.2% in 1990.

• Education levels in the U.S. have improved markedly also, although Utahns still tend to have more years of schooling than their American counterparts on average. While 18.4% U.S. residents age 25 and over had not completed high school, only 9.4% Utahns in the same age group did not complete high school.

• Socio-economic status (including income and education) is strongly related to health status outcomes. It is unclear to what extent poor education status leads to poor health outcomes, or whether poor health leads to an inability to complete one’s educational goals. Both are probably true to some extent.

Highest Level of Educational Attainment Among Persons Age 25 Years or Over, Utah and U.S., 2000

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than High School</td>
<td>9.4%</td>
</tr>
<tr>
<td>H.S. Grad or G.E.D.</td>
<td>25.0%</td>
</tr>
<tr>
<td>Some College</td>
<td>20.5%</td>
</tr>
<tr>
<td>Assoc. Degree</td>
<td>8.5%</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>16.1%</td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

Source: U.S. Bureau of the Census
Household Income

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.

- Utah’s median household income has increased since 1984, even after adjusting for inflation. However, during the recent recession, income levels dropped off.
- Utah’s median household income has generally kept pace with that in the U.S., but Utah’s households are larger, making per capita income in Utah lower than in the U.S. overall.
- Health insurance coverage is related to income -- persons with higher household incomes are more likely to be covered by health insurance. This is true despite the fact that public programs such as CHIP, Medicaid, and Utah’s Primary Care Network (PCN) are available to low-income persons. Until recently, however, only children, pregnant women, single parents, and disabled adults could gain Medicaid eligibility by virtue of their low income status. Now, low-income adults who are not disabled may also be eligible for certain types of health care coverage through the Utah Department of Health.
- 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. Adolescents who give birth are more likely to live in poverty.
Persons Living in Poverty

Poverty takes into account both income and family size, and has both immediate and long-lasting effects on health. 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.

- Health status and access to health care services is strongly related to income and poverty. Between March 2001 and July 2003, the nation has experienced an economic recession, and although the recession is over, its effects are still being felt.
- In 2002, the most recent year for which we have data, 228,000 Utahns were living in poverty, and 94,000 of them were children age 17 or under. There haven’t been as many Utahns in poverty for over 20 years.
- 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.
Childhood Poverty

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.\(^5\)

- In 2002, an estimated 12.5% of Utah children age 17 or under (94,000 Utah children) were living in poverty. The number of Utah children in poverty has increased from about 90,000 in 1997. Children born into poverty are less likely to have regular health care, proper nutrition, and opportunities for mental stimulation and enrichment.

- Utah has a lower proportion of children in poverty than the U.S. as a whole.

- Being a younger or single parent increases the risk of living in poverty.

- Low socio-economic status is a risk factor for many diseases and health problems for persons of all ages. Children in poverty are at higher risk for health problems such as asthma and dental disease. Children in poverty are also at increased risk of hunger and poor performance in school. An important goal of services to children in poverty is to break the "cycle of poverty" in which children in poverty are raised in conditions that promote poverty in adulthood.

- 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 (Childrens’ Health Insurance Program) that pay for health care for eligible children.
Health Care Services and Systems

Goal: All Utahns will have access to high-quality, affordable health care services.

- **Access to Care**
  - Affordability
  - Availability

- **Quality of Health Care**

- **Cost of Health Care**

- **Health Care Utilization & Preventive Services**
  - Preventive Health Visits and Screening
  - Prenatal Care During First Trimester
  - Immunizations
Health Insurance Coverage

Persons with health insurance are more likely than persons without health insurance to have a regular source of primary health care, and are more likely to have routine preventive care. Health insurance coverage is an important part of the health care system. Persons without coverage find it difficult to afford health care, and often delay or fail to obtain necessary care. Dental and mental health care are especially fragile elements of health care coverage.

- An estimated 199,100 Utahns (8.7%) were without health insurance coverage in 2001. This percentage has increased from an estimated 7.6% in 1996, when the last Health Status Survey was conducted.
- Over the past ten years, the percentage of persons in Utah and in the U.S. who lacked coverage increased. However, the Utah percentage increased at a faster rate, and is now approximately the same as the U.S. rate.
- Younger persons, especially males age 18 to 34, and those with low income levels, are at a greater risk of being uninsured. Surprisingly, three quarters of uninsured Utah adults in 2001 were employed either part-time or full-time.
- The Utah Department of Health administers programs to improve access to care, such as Medicaid, Children’s Health Insurance Program (CHIP), and the new Primary Care Network (PCN). 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.

Sources: Utah Health Status Survey, Office of Public Health Assessment, Utah Department of Health; U.S. Current Population Survey

Note: The U.S. estimates presented here have been modified from those reported by the U.S. Current Population Survey (CPS). The Utah Health Status Survey (HSS) estimates were adjusted to the HSS new method, CPS estimates for the U.S. were adjusted to the CPS new method, and then adjusted to levels comparable with the 2001 Utah Health Status Survey.
Access to Care: Affordability

Medicaid/CHIP Penetration

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.

CHIP and Medicaid Program Eligibility, Children 0-18
Without Health Insurance Coverage, Utah, 2001

- In 2001, approximately 7.0% of Utah children age 0-18 were unprotected by any type of health insurance coverage. Of those children, most were eligible for either Medicaid or CHIP.
- Medicaid and CHIP combined to cover approximately 70% of the children in Utah who were eligible to receive health care through those programs.
- Eligibility for Medicaid and CHIP is based largely on family income, as a percentage of the Federal Poverty Level. However, other factors are involved in determination of program eligibility, such as disability (Medicaid), or recent private plan coverage (CHIP). Children born outside the U.S. who have not lived in the U.S. for at least five years are not eligible for Medicaid or CHIP, regardless of their family’s income.
- Only children with no other health plan coverage are eligible to receive CHIP services.
- 2001 data were the most recent available at the time the report went to press. Data from national surveys suggest that the uninsured rate among Utah children has remained fairly consistent since 2001.

Note: Approximately 20% of the children on Medicaid also have some type of private or employer-based coverage. Children with dual coverage were coded as “Medicaid” covered for this measure. 7% of Utah children aged 0-18 lacked health insurance coverage.
Cost as a Barrier to Health Care

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.

- Persons with low incomes were much more likely to report problems with access to care than persons with higher incomes.
- The percentage of adults in Utah who reported cost as a barrier to care decreased from 12.0% in 1991 to 10.2% in 2000. This question was not asked in 2001 and 2002.
- When comparing Utah to the U.S. as a whole, the percentage of adults who reported they were unable to get needed health care in the past year due to cost was similar over the years. In 2000, this percentage was 10.6% for the U.S. compared to 10.2% in Utah.
- Young adults were more likely to report cost as a barrier to care than other adults. Using 1998-2000 data combined, almost 13% of Utah adults ages 25-34 years said cost was a barrier to care, whereas this percentage was only 3.8% for Utahns ages 65 and older.
- Persons without access to health care tend to delay getting care until a problem becomes too painful or dangerous to avoid seeking medical care. At that point, health problems are often expensive to treat and sometimes have serious long-term implications for the individual’s health.
- 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), 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.
Ambulatory Care Sensitive Conditions: Asthma Hospitalization Among Children

Ambulatory care sensitive (ACS) conditions are conditions for which hospitalization can usually be prevented when they have been effectively managed in outpatient settings. High rates for ACS conditions indicate poor access to outpatient health care. Asthma can usually be managed in outpatient settings, precluding the need for hospitalization. Examining rates of hospitalization can help to identify populations or areas where access to medical care is inadequate or where the systems for providing that care are not working.

Healthy People 2010 Objective 1-9a Goal: Hospitalization for ambulatory care sensitive conditions - Pediatric asthma (admissions per 10,000 population, ages under 18 years) (17.3). (See Appendix)

- In 2002, the total number of hospital discharges for asthma in Utah was 1,443 (0-17 years: 691). The rate of asthma discharges in Utah was 6.22 per 10,000 persons in 2002 (0-17 years: 9.41/10,000).
- Utah had lower hospitalization rates among children (0-17 years) than was found in the U.S. between 1997 and 2000.
- Income, age, and education are important population characteristics related to hospitalization for ACS conditions. Poor air quality and cigarette smoking are risk factors for asthma.
- The Utah Asthma Program is located at the Utah Department of Health in the Bureau of Health Promotion. It began in January 2002 with the intent to:
  1) create an infrastructure to address asthma from a public health perspective;
  2) create a public health assessment and monitoring system for asthma;
  3) build partnerships and improve partner capacity; and
  4) develop population-based strategies to improve asthma care and management.

Sources: Healthcare Cost and Utilization Project (HCUP), AHRQ; Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health
Note: ICD-9 code 493
Ambulatory Care Sensitive Conditions: Diabetes Hospitalization Among Adults

Ambulatory care sensitive (ACS) conditions are conditions for which effective outpatient care may prevent hospitalizations; hence, the conditions are "sensitive" to ambulatory care. Diabetes is one disease for which regular physician visits may help to control blood sugar levels and prevent otherwise avoidable hospitalizations. Ambulatory care conditions encompass two major acute complications of diabetes, ketoacidosis and hyperosmolar coma. Diabetic ketoacidosis is one of the most preventable complications of diabetes and is usually caused by having too little insulin in the blood (type 1 diabetes). This condition is usually limited to people who use insulin to manage their diabetes. Hyperosmolar coma occurs in people with type 2 diabetes when blood sugar levels skyrocket. Both ketoacidosis and hyperosmolar coma are medical emergencies that can be life-threatening without prompt medical attention.

Healthy People 2010 Objective 1-9b Goal: Hospitalization for Ambulatory Care Sensitive Conditions - Uncontrolled Diabetes (Admissions per 10,000 Population, Ages 18 to 64 Years) (5.4). (See Appendix)

- In 2002, there were 1,259 hospital discharges for Utah residents aged 18 to 64 listing diabetes as the primary diagnosis. It is estimated that over half of these hospitalizations (689 discharges) were for ambulatory care conditions that could have potentially been avoided.
- Primary preventive care and regular office visits to a health care provider are essential for maintaining good blood sugar control. People who lack health insurance are less likely to have access to outpatient services that could decrease the risk of acute diabetes complications. Diabetes education can also help prevent complications through improved awareness of self-management techniques.
Ambulatory Care Sensitive Conditions: Pneumonia and Influenza
Hospitalization Among the Elderly

Ambulatory care sensitive (ACS) conditions are conditions for which hospitalization can be prevented when they are effectively managed in outpatient settings. High rates for ACS conditions indicate poor access to outpatient health care. Both pneumonia and influenza can largely be prevented through immunization. Examining rates of hospitalization for pneumonia and influenza can help to identify populations or areas where access to medical care is inadequate or where the systems for providing that care are not working.

Healthy People 2010 Objective 1-9c Goal: Hospitalization for Ambulatory Care Sensitive Conditions - Immunization-Preventable Pneumonia or Influenza (Admissions per 10,000 Population, Ages 65 Years and Older) (8). (See Appendix)

- The Utah rates have been gradually dropping since 1999. However, in 2002 there was a slight increase in the pneumonia and influenza hospitalization rate among Utah’s seniors. Since 1998, Utah’s pneumonia and influenza rates have been lower than the U.S. rates.
- Income, age, and education are important population characteristics related to hospitalization for ACS conditions. People who lack health insurance coverage are likely to lack access to quality outpatient care, and in turn, are likely to be admitted as inpatients when ACS conditions worsen.
- For patients at higher risk, two vaccinations can help prevent pneumonia and influenza. Pneumococcal vaccine is recommended for all immunocompetent individuals age 65 and over and for selected others at high risk. Influenza vaccine is recommended annually for all persons age 50 and older and for persons age six months and older with selected conditions placing them at high risk. A pneumococcal conjugate vaccine is recommended for children.

Sources: Healthcare Cost and Utilization Project (HCUP), AHRQ; Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health

Note: ICD-9 codes 481 or 487.
Physicians per 10,000 Population

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.

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.

The Utah rate of physicians to persons in the population has been somewhat lower than the U.S. ratio, and the gap has gradually widened over time.

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 through educational loan repayment.

The Utah Health Care Work Force Financial Assistance Program has successfully assisted in retaining health care professionals serving Utah’s rural and underserved populations through providing educational loan repayment. The Utah Medical Education Council continues to complete a survey of Utah health care professionals entitled “Utah’s Clinical Healthcare Workforce: Achieving Balance Through 2020” (December 2000). The results of this survey are available at: [http://www.medicaled.state.ut.us/](http://www.medicaled.state.ut.us/).

Recent dramatic increases in malpractice premiums, especially for certain specialties, is raising concerns about imminent shortages in critical services such as obstetrics and trauma surgery.
UDOH Support for Health Professional Education (Grants Program)

The Utah Health Care Work Force Financial Assistance Program was created to provide professional education scholarships and loan repayment assistance to health care professionals who locate or continue to practice in underserved areas of Utah. The purpose of the Utah Health Care Work Force Financial Assistance Program is to increase and maintain the number of health care professionals practicing in rural and underserved areas of Utah.

- The Division of Health Systems Improvement, Office of Primary Care & Rural Health, supports the Utah Health Care Work Force Financial Assistance Program (26-46, UCA). The Utah Health Care Work Force Financial Assistance Program will increase and maintain the number of health care professionals practicing in rural and underserved areas of Utah through educational loan repayment assistance grants. The Program also supports activities of three federal programs [National Health Service Corps Loan Repayment Program (100% federal), National Health Services Corps State Loan Repayment Program (50% federal/50% state), and the Primary Care Office Conrad State 30 J-1 Visa Waiver Program].

- Since 1990, health professionals recruited to work in medically underserved areas of Utah through the state funded Utah Health Care Work Force Financial Assistance Program cover 28 of Utah’s 29 counties, and include: 5 dentists, 10 mental health therapists, 168 nurses, 69 physicians, and 20 physician assistants.

- Populations served by health professionals awarded grant funding under the Utah Health Care Work Force Financial Assistance Program include: special populations served (HIV/AIDS patients, clients 17 years old and younger, clients 65 years old and older, ethnic minority population(s), and/or migrant/seasonal farmworkers), sites serving a large proportion of patients who meet the following criteria - CHIP patients, Medicaid patients, Medicare patients, and patients who have no insurance/self-pay.

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Health Professional Education Loan Repayment Grants
Amount Awarded by Profession and Fiscal Year,
Utah, FY99-FY03

Source: Office of Primary Care and Rural Health, Utah Department of Health
EMS Response Time

Timely emergency services response can save lives of patients with life-threatening conditions such as severe injury and acute myocardial infarction (heart attack). The time from dispatch to arrival on the scene is an important measure of the capacity of the state Emergency Medical System to respond to calls for assistance.

In 2000, EMS response minutes from dispatch to scene ranged from 7.6 (urban counties) to 14.6 (sub-frontier counties). Average EMS response time for rural and frontier counties was 10.2 and 12.9 minutes, respectively.

The UDOH Bureau of Emergency Medical Services monitors EMS response time and develops programs to improve delivery of EMS services throughout Utah, especially in non-urban areas.
Access to Care: Availability

UDOH Support for Local Emergency Medical Services

Provision of high quality emergency medical care requires that standards for equipment, training of personnel, and medical care be maintained and followed. Local communities lack the revenue base required to fully support necessary activities. State support for local EMS improves statewide access to prompt emergency medical services.

- During FY2002, there were close to 150,000 EMS responses to emergency calls. It is not uncommon for a call to generate more than one response (e.g., a Fire Department Emergency Medical Technician and an ambulance). Approximately 50% of Utah’s EMS providers have around-the-clock staffing while the remainder have on-call staff. All agencies provide services 24 hours per day.

- Costs of life-saving medical equipment are higher than many local communities can support. Each year, over 150 local EMS agencies are assisted in securing operational and supplemental funding so they may provide adequate emergency medical services within their communities.

- A surcharge on criminal fines and forfeitures in Utah helps to provide funding for maintenance of high quality emergency medical services.
Laboratory Capacity

Utah’s laboratory system consists of a state laboratory and a network of independent labs throughout the state. The laboratory system has the following capacities, as indicated by the “Yes” or “No” in the text below.

*Healthy People 2010 Objective 23-13 Goal: Access to Public Health Laboratory Services (Data not collected). (See Appendix)*

**Reportable Diseases**—Capacity to rapidly identify pathogens causing reportable diseases. Reportable diseases are those that are considered threats to public health because they are both serious and easily spread.

- Tuberculosis in 3 days: Yes
- *Salmonella* in 24 hours: Yes
- HIV in 24 hours: Yes
- Chlamydia in 24 hours: Yes
- Influenza in 8 hours: Yes
- Bioterrorism agents: 2 hours for preliminary screening*: Yes

* The state laboratory has increased its capacity since the 9/11 attacks and anthrax exposures. The UDOH is part of CDC’s Laboratory Reference Network, which gives us access to all the capabilities in that network.

**Drug-Resistant Organisms**—Capacity to identify selected drug-resistant organisms. Antibiotic resistance is becoming a global crisis. Antibiotics can no longer protect us against particular strains of common organisms. Saving infected persons, and prevention of further spread of these organisms requires early identification and treatment of persons with the infection.

- TB: Yes
- *Enterococcus*: Yes
- *Streptococcus*: Yes
- *Meningococcus*: Yes
- *Salmonella*: Yes

**Environmental Contaminants**—Capacity to identify environmental contaminants associated with human diseases. Environmental contaminants are a source of human diseases and problems. Once identified, some of these contaminants are easily removed from the environment, others are more difficult.

- PCB: Yes
- Pesticides: Yes
- Nitrates in drinking water: Yes
- Radon: Yes
- *Giardia* in drinking water: Yes
- *Cryptosporidium* in drinking water: Yes
- Lead: Yes
- Chemical agents (neurotoxins): No*

* rapid tests are still being developed

**Medical Examiner’s Office**—Capacity to conduct investigations to support the Medical Examiner. The Medical Examiners Office conducts tests on violent or suspicious deaths in Utah. Drugs or alcohol are often involved in violent deaths.

- Drugs: Yes
- Alcohol: Yes

- Federal Bioterrorism dollars are enhancing the national network of public health laboratories. Rapid reporting of laboratory results is important because they provide “early warning” of conditions that are being diagnosed by physicians.
Managed Care Enrollment

Managed care has emerged over the past several years as a way to hold down medical costs that were increasing at rates much higher than inflation. Managed care attempts to balance the needs of patients with the need to hold down medical costs.

- The proportion of Utahns whose health insurance coverage is provided through managed care organizations increased from 43% in 1993 to over 60%, but remained fairly level from 1997 to 2001. In 2001, 34% were insured by a commercial health maintenance organization (HMO) and 28% by a preferred provider organization (PPO). An additional 6.5% were covered by a governmentally funded managed care organization (e.g. Medicaid, CHIP, PEHP).

- Care for persons in PPOs is not as rigidly managed as care for persons in HMOs, but PPO premiums are generally more expensive. HMOs are evolving and the distinctions between PPO and HMO are blurring. HMOs may include traditional “closed panel” plans or more flexible “point-of-service” options, where enrollees may seek care outside of the network for a higher co-payment.
Managed Care Survey

Health Maintenance Organizations (HMOs) emerged out of the managed care movement beginning in the U.S. in the 1970s. HMOs attempt to balance the needs of patients with the need to hold down medical costs. Some consumer groups raised concerns that managed care plans overemphasized cost-cutting at the expense of patient care and customer service. The National Committee for Quality Assurance (NCQA) sought to address this concern by assisting employers in making informed decisions in the health insurance marketplace. The HMO survey is a part of NCQA’s Health plan Employer Data and Information Set (HEDIS) which provides results of standardized performance measures to employers purchasing health plans.

- The Consumer Assessment of Health Plans Survey (CAHPS) assesses satisfaction levels of health plan enrollees. The Utah HMO survey is administered annually by the UDOH Office of Health Care Statistics.
- Overall satisfaction is slightly higher among Medicaid enrollees, compared to commercial enrollees. Getting needed care, particularly among Medicaid enrollees, is an area that needs improvement.
- Satisfaction with quality of care and medical services was strongly associated with a person’s overall satisfaction with their health plan.
- The UDOH Office of Health Care Statistics produces and releases “Utah HMO Performance Report” every year with updated HMO survey results and other HEDIS measures. These can be viewed and downloaded at [http://health.utah.gov/hda/consumerreports.htm](http://health.utah.gov/hda/consumerreports.htm).
Adverse Events Related to Hospital Inpatient Care

Medical injuries are a recently identified public health problem that can impose serious consequences on individuals and their families including lost life, disability, and economic burdens. Proper reporting and data collection and analysis are critical first steps to effective prevention. With the development and/or improvement of patient safety programs and medical-injury tracking systems in Utah hospitals, an improvement in reporting of such injuries in the hospital discharge abstracts is desired and expected over the next three years.

- From 1995 through 2002 in Utah, about 1 in 230 inpatient discharges (7,292 discharges) had a "misadventure of surgical and medical care." The overwhelming majority (93.0%) of these misadventures were unintended cuts, punctures, or perforations during medical care (6,782 discharges). A total of 100,106 discharges (6.0% of all discharges over this time period) involved other complications of medical and surgical procedures. An additional 44,146 (2.6% of all discharges over this time period) included complications due to medications or adverse drug events (ADEs).

- During the first 22 month period (October 2001 to August 2003), among the approximately 914,000 inpatient hospital and outpatient surgical center discharges, 55 sentinel events were reported, including deaths, loss of mental or physical function, and wrong-site or wrong-patient surgeries. During the calendar year for 2002 (January through December), 3.0% of inpatients experienced Adverse Drug Events (ADEs). ADEs include drug allergies, adverse effects, interactions, and errors in administration of medications. Not all ADEs are preventable.

- Two new administrative rules (R380-200, Patient Safety Sentinel Event Reporting, and R380-210, Health Care Facility Patient Safety Program) went into effect in October 2001. These rules focus on reporting of sentinel events and ADEs, along with associated quality improvement efforts.
HEDIS Measures: HbA1c (Diabetes Care)

The Hemoglobin A1c (HbA1c) test measures the average level of blood glucose over a three-month period for people with diabetes. Because blood glucose levels can fluctuate significantly and levels may be affected by illness or stress, the HbA1c test provides a much more accurate picture of a patient’s blood glucose level than tests which measure levels at one point in time.

Healthy People 2010 Objective 5-12 Goal: Annual glycosylated hemoglobin measurement - Persons with diabetes - Mean data from 39 States (age-adjusted, ages 18 years and older) (50%). (See Appendix)

- Information from the American Association of Diabetes Educators (AADE) indicates that 75% of people with type 2 diabetes do not know their HbA1c levels. A similar survey conducted in 2000 by the National Quality Control Association found that 75% of people with diabetes are not getting their HbA1c tested. The American Diabetes Association recommends an HbA1c exam about every three months.

- The cost of hospitalizations associated with diabetes has been increasing in recent years. In 1998, $189 million were spent on 17,588 diabetes-related hospitalizations. In 2000, about $211 million were spent to cover 18,022 hospitalizations related to diabetes.

- The Utah Diabetes Control Program (UDCP) seeks to increase the proportion of people with diabetes who obtain an HbA1c exam. The UDCP conducts a statewide media campaign to educate Utahns with diabetes about the importance of diabetes control which includes having regular HbA1c 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 HbA1c exams.

Source: Health Plan Employer Data Information Set (HEDIS), National Center for Quality Assurance (NCQA)
Assisted Living Occupancy Rate: Type I

The U.S. Census Bureau estimated that in 2000 Utah had 190,222 persons 65 years of age or older. By 2020, this figure will have increased 75%, to an estimated 334,000. Occupancy rate is used as a performance indicator for nursing homes and assisted living facilities. An occupancy rate that is near 100% indicates lack of capacity, which can lead to delays in hospital discharge as well as other problems. However, low occupancy rates indicate a high supply, with a potential for poor patient care in new facilities that are not yet fully staffed, and in facilities suffering from insufficient revenues.

<table>
<thead>
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<th>Year</th>
<th>Occupancy Rate</th>
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<tbody>
<tr>
<td>2001</td>
<td>76%</td>
</tr>
<tr>
<td>2002</td>
<td>59%</td>
</tr>
<tr>
<td>2003</td>
<td>76%</td>
</tr>
</tbody>
</table>

Source: Bureau of Program Certification and Resident Assessment, Division of Health Systems Improvement, UDOH
Note: Data reported are for August of each year.

- Assisted Living Type I and II and Nursing Facilities differ in the amount of assistance provided to each resident. All provide 24-hour care, 3 meals a day, general monitoring, and assistance with administration of medications. Assisted Living Type I facilities are appropriate for residents who have stable health conditions and need minimal assistance with activities of daily living (ADLs). Assisted Living Type II facilities may provide significant assistance with up to two ADLs.
- Assisted living facilities are becoming an increasingly popular setting for providing long-term care through a combination of housing, personal support services, and health care. Consumer demand is expected to grow significantly.
- Assisted living care is taking on a variety of new looks, including home health care, and provision of supportive services to elderly persons in small residential facilities.
- Lists of licensed assisted living facilities are provided on the UDOH website, at: http://health.utah.gov/licensing/AL1.htm.
Assisted Living Occupancy Rate: Type II

Occupancy rate is used as a performance indicator for nursing homes and assisted living facilities. An occupancy rate that is near 100% indicates lack of capacity, which can lead to delays in hospital discharge as well as other problems. However, low occupancy rates indicate a high supply, with a potential for poor patient care in new facilities that are not yet fully staffed, and in facilities suffering from insufficient revenues. Assisted living Type II facilities provide full assistance with Activities of Daily Living, RN consultation, and a one-person assist for evacuating the facility in case of an emergency.

Percentage of Type II Assisted Living Facility Beds Occupied, Utah, 2001-2003

- The Utah Department of Health has predicted that the current overall number of assisted living and nursing home beds will be adequate to meet demand through the year 2005. However, the long-term care supply will need to be improved in certain areas of the state where supply is low compared with demand.

- Lists of licensed assisted living Type II facilities are provided on the UDOH website, at: http://health.utah.gov/licensing/AL2.htm.
Nursing Home Occupancy Rate

Long-term care is an aspect of the health care system that is changing rapidly, with an increasing emphasis on the continuum of life care and development of creative alternatives to the traditional nursing home model. Occupancy rate is used as a performance indicator for nursing homes and assisted living facilities. An occupancy rate that is near 100% indicates lack of capacity, which can lead to delays in hospital discharge as well as other problems. However, low occupancy rates indicate a high supply, with a potential for poor patient care in new facilities that are not yet fully staffed, and in facilities suffering from insufficient revenues.

Some rural areas in Utah have occupancy rates above 90% - an indication of demand outpacing supply. Some of these areas plan to build additional nursing home facilities, while others are using other alternatives, such as transitional care facilities and hospital “swing beds.”

In 1989, the Utah Department of Health declared an emergency moratorium on Medicaid certification of new nursing home bed certification. By discouraging additional nursing facility certification of facilities, the moratorium was designed to stabilize the nursing home industry and give the state an opportunity to develop alternative solutions for a better long-term care system.

The data presented here reflect Medicaid-certified nursing home beds, only, and as such are just an indicator of the whole picture. More detailed information may be found in a recent report published by the UDOH, Office of Health Care Statistics, and may be found on the Internet at: http://health.utah.gov/hda/Reports/NHM02.pdf.

Lists of nursing care facilities are provided on the UDOH website, at: http://health.utah.gov/licensing/NCF.htm.
Child Care: Numbers of Facilities and Capacity

With increasing demands on the family, parents look to quality child care to help them manage family and work. About 70% of working parents of children ages 0-12 have someone else look after their children while they are at work. Arrangements vary from licensed care to unlicensed and unreimbursed care. To be licensed, childcare providers must pass a background check and receive annual training.

- A small increase was noted in capacity in 2003; more providers are moving to a Residential Certificate (RC) category, which has fewer regulations. The Residential Certificate is the fastest growing category of child care. There is no required continuing education for the residential certificate provider.
- Turnover continues to occur at 25% for in-home providers.
- To ensure quality care, Utah needs to increase the number of providers and capacity.
- The existing capacity listed here includes only licensed and certified child care slots. It is estimated that the number of unlicensed child care slots may equal or exceed the number of licensed slots.
- The capacity is calculated on the number of square feet per facility. The actual number of children enrolled may exceed the licensed or certified number of slots, e.g. two children may attend part-time and share one licensed or certified slot.

Source: Bureau of Licensing, Division of Health Systems Improvement, UDOH; U.S. Bureau of the Census
Note: Demand for child care has been estimated by the Department of Workforce Services to be 12 slots for every 100 Utah children age 0-12.

<table>
<thead>
<tr>
<th>Estimated Demand for Child Care Slots</th>
<th>Existing Licensed/Certified Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Child Care</td>
<td>21,746</td>
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<tr>
<td>Licensed Family Group</td>
<td>3,512</td>
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<tr>
<td>Hourly Child Care</td>
<td>1,744</td>
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<tr>
<td>Residential Certificate Child Care</td>
<td>5,881</td>
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<tr>
<td>Total</td>
<td>64,826</td>
</tr>
</tbody>
</table>

2003 Utah Public Health Outcome Measures Report, Utah Department of Health
Cost of Health Care

Health Care Expenditures by Category

Cost is the primary barrier to health care for persons without health insurance, and is also the primary barrier to getting health care coverage among the uninsured. Personal health care costs have been increasing over the past several decades, and in 1998, they were equal to over 10% of Utah’s gross state product. It is important to know what components comprise health care expenditures to understand where costs are incurred and so that increases in individual components may be evaluated.

• The U.S. Health Care Financing Administration updates state-level medical cost estimates every few years, but has not done so since 1998.

• The largest annual per capita personal health care expenditure is hospital care, followed closely by physician and other professional services. These two categories account for 66% of all per capita personal health care expenditures.

• The numbers in the graph above have been adjusted for inflation (adjusted to 1998 dollars). This was done using the U.S. Medical Care Consumer Price Index. The resulting numbers compare the rise in Utah’s personal health care expenditures to the increase in the cost of medical care in the U.S. during the same period.

• The largest increase from 1980-1998 was found for home health care (26%) followed by prescription drugs (12%).
Health Care Spending

Health care expenditures in Utah have historically been lower and have grown more slowly than expenditures nationally. Favorable demographics (younger population) and healthier lifestyles contribute to these relatively low per capita health care expenditures. However, an aging and expanding population, medical technology advancements, and the limits of managed care to contain costs may cause per capita expenditures to rise.

- The U.S. Health Care Financing Administration updates state-level medical cost estimates every few years, but has not done so since 1998.
- Per capita expenditures for medical care in Utah has risen steadily over the last several years, but so have per capita incomes. As a percentage of per capita income, per capita expenditures for medical care leveled-off in the late nineties. The notable exception has been expenditures for prescription medicine.
- Managed care provided a temporary reprieve from double digit increases in total expenditures. This lower rate of increase is probably not sustainable and other data suggest increasing expenditures for health care services since 1998.
Health Care Costs Increase

The annual rate of increase in medical care costs is often compared to the U.S. Consumer Price Index to gauge whether increases in costs exceed the rate of inflation.

- The U.S. Health Care Financing Administration updates state-level medical cost estimates every few years, but has not done so since 1998.
- Beginning in 1991, the rate of increase in Utah’s per capita medical costs began to decline, but appears to have leveled-off in the mid-1990s.
- Although the rate of increase has dropped, per capita medical costs have increased annually throughout the period represented above.
- The rate of increase may be rising again, as more improved and expensive medical treatments become available.
- Utah’s medical care cost increases are similar to those found in the U.S. and the Rocky Mountain region.

Source: U.S. Health Care Financing Administration, Office of the Actuary, National Health Statistics Group
Medicaid Expenditures by Service Category

Medicaid medical assistance expenditures comprise just over 80% of the annual budget of the Utah Department of Health (including both federal and state sources). As Utah’s population has grown, so has the number of Utahns receiving assistance from Medicaid. The increase in Medicaid enrollees combined with increases in the costs of providing health care cause the Medicaid medical assistance expenditures to rise over time.

- Over the past several years, initiatives to increase services to Medicaid clients, such as cancer screening, healthy mothers and babies, well child care, dental care, and assistive medical devices, has contributed to increases in overall health care utilization and Medicaid expenditures. Rising health care costs overall are one factor causing Utah’s Medicaid costs to increase. Shifts in the economy also influence the number of Utahns who are eligible to receive Medicaid-covered services.

- In the Fall of 2002, two HMOs decided that Medicaid reimbursement rates were too low. Some of the affected clients were taken up by other HMOs in the system, but most are now on a modified managed care arrangement.

- Because of Utah’s relatively healthy population, we have lower per capita total health care expenditures than most states (regardless of payor), and lower per capita Medicaid expenditures than most states. Utah’s per-capita Medicaid expenditures (dollars spent per state population) is second lowest in the U.S.

- A recent cost-neutral Medicaid waiver was approved, and the Primary Care Network (PCN) was implemented. The PCN serves adults age 19 to 64 whose incomes are at or below 150% of the poverty level. The PCN program covers only primary and preventative care.

- A large proportion of Utah’s Medicaid expenditures go toward pregnant mothers, infants, and children in low-income households. Over one fourth of all births in Utah are paid by Utah’s Medicaid program.
Medicaid Inflation

The Medicaid inflation rate is an indicator of overall health care inflation. Although Medicaid reimbursement amounts are predetermined, they are based on prior year payments for health care.

• Decreases were observed in 2003 for ambulatory care, inpatient hospital, and pharmacy services due to an increase in the number of fee-for-service enrollees in 2003. Twelve thousand of those enrolled through the state’s Primary Care Network (PCN) plan. PCN enrollees receive fewer services than traditional Medicaid enrollees, incurring fewer costs. An additional 32,000 fee-for-service enrollees came on when IHC refused to cover them under its HMO health plan, citing inadequate reimbursement amounts and loss of revenues as the reason.

• Over the entire period, the greatest increases were seen for pharmacy coverage, which increased at an average of 13.4% per year, to $844 per enrollee in FY2003.

• Long term care is the most expensive type of care to provide. Utah’s population is aging, which has implications for both state and federal Medicaid funding.
Primary Provider - Usual Place of Care

As each new health care need arises, an individual’s first point of contact with the health care system is typically his or her primary care provider. In most cases a primary provider can effectively and efficiently manage a patient’s medical care because they understand that person’s medical history and social context. Having a regular source of health care is also an indicator of overall access to care.

In 2001, 91% of Utahns reported they had a place where they usually accessed health care. This is up from 82% in 1996.

Lack of a primary provider or usual place for care was more common among young persons, especially men age 18 to 34 (only 80% had a usual place of care). Fewer people had a primary provider or usual place of care in Salt Lake Valley (89%), Summit County (89%), and Weber-Morgan (89%) Health Districts than in other areas of the state.

Persons who have health insurance coverage are more likely to have a usual place of care. Additionally, those with a usual place of care are more likely to receive routine medical visits and health screening exams. By identifying diseases early, they can be more effectively treated, and disease and disability averted.

Utah’s population is highly concentrated in urban areas, leaving large regions of the state sparsely populated. In rural areas, Utahns often have to travel long distances to see a health care provider, and providers may not be available when they are needed.

The Utah Department of Health has programs such as Medicaid, Children’s Health Insurance Program (CHIP), and the Primary Care Network (PCN) to pay health care costs for low-income children and adults and those with disabilities. The Utah Department of Health also has a health professional education grants program to help ensure an adequate primary care workforce across the state.

Source: Utah Health Status Survey, Office of Public Health Assessment, Utah Department of Health
Health Care Utilization: Preventive Health Visits and Screening

Routine Medical Care Visits

Clinical preventive services are important for maintaining good health. Early detection and treatment of disease improves the chances of full recovery. Physician counseling can influence health behaviors and prevent disease entirely in many cases. It is especially important for persons in poor health to have a primary physician who understands their medical history and problems and can give them appropriate care that fits their medical and social context.

- Utah adults are less likely to get routine annual medical exams than are their counterparts nationally.
- Women are generally more likely than men to have a routine check-up presumably because of childbearing and other reproductive health-related issues. Older Utahns, who are at greater risk for a chronic medical condition, are more likely to report a routine check-up than are younger adults.
- People without health insurance coverage are less likely to get routine medical care than those with insurance.
- It is probably safe to assume that almost all persons in fair or poor health should have a visit with their primary health care provider at least once every 12 months. Yet in Utah, more than one fourth of those in fair or poor health had no primary care visit in the last year.

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

Note: Age-adjusted to U.S. 2000 standard population.
Routine Dental Health Care Visits

Regular dental visits are important in the prevention, early detection, and treatment of oral and craniofacial diseases and conditions for all ages. Adults need regular professional care to avoid tooth loss, the need for complex restorative treatment, and even systemic health problems. Even people without teeth need to be monitored regularly for oral health which may be affected by systemic conditions, medications, prosthetic devices, and exposure to tobacco.

- The percentage of Utah adults who reported a dental visit in the past year increased from 72.9% in 1995 to 76.2% in 2001, and then decreased slightly in 2002 to 72.9%. The Utah 2002 percentage was slightly higher than that for adults in the U.S. (69.4%).

- Adults ages 65 years and older are less likely to report a routine dental visit in the past year than all other adults. Those Utahns with less than a high school education and those with annual household incomes less than $15,000 were least likely to receive routine dental care. In state surveys, Utahns have reported problems with access to dental care. The cost of dental care is the most commonly cited reason for problems with access. Utah adults with dental insurance were more likely to report a dental visit in the past year than those without dental insurance.

- Gum infections have been called the “sixth complication of diabetes,” because people with diabetes are more likely to have periodontal disease. Mothers who suffer from gum disease are significantly more likely to deliver their babies prematurely than women without that illness. Regular preventive dental care for pregnant women and, more generally, for women in their childbearing years, could prevent this illness and decrease the number of premature births.

- The Utah Department of Health Oral Health Program’s current priorities include promoting fluoride and dental sealants, preventing tooth decay in young children and encouraging annual dental visits for both children and adults.

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

Note: Age-adjusted to U.S. 2000 population. U.S. data are the average of all states and the District of Columbia; they do not include U.S. territories.
Newborn Heelstick Screening

Screening of newborns for genetic disorders and disabling conditions facilitates early entry into comprehensive care programs, which can improve quality of life, avoid disability, and save lives. Utah infants are screened for phenylketonuria (PKU), congenital hypothyroidism, and galactosemia. Hemoglobinopathy was added in September 2001.

- Other diseases that can be detected by screening at birth include cystic fibrosis and congenital adrenal hypoplasia (CAH). The sensitivity and specificity of the tests, and the preventability and prevalence of the diseases will determine whether these screenings will become beneficial in Utah.
- All genetic disorders can occur in any race. There is no correlation with income or social status. Risk factors for genetic conditions include family history.
- Most newborns with metabolic disorders appear normal. Signs and symptoms do not develop until the disorder is advanced and morbidity has been established. Early intervention (treatment, dietary changes, etc.) before signs and symptoms appear can minimize, if not eliminate, the impact on the newborn’s life (allow normal growth and development).
- Screening is a system-level intervention overseen in Utah by the UDOH Division of Community and Family Health Services. Partners include institutions of birth, the State Laboratory, and the child’s primary care provider (also known as the child’s Medical Home). Specialty multidisciplinary clinics, which may include pediatric geneticists and genetic counselors, complement the child’s Medical Home in providing specialized services and care for the family and newborn. All components help in the education of the family and newborn.
- During the next decade, genetic technology will dramatically increase the potential to screen newborns for inherited diseases. Significant future policy decisions will include the means to pay for the prevention services made possible through such emerging technology.
Newborn Hearing Screening

*It is extremely important for hearing impairments to be detected early, so that optimal speech and language development may occur. The most effective method to implement early identification of hearing loss is to screen all babies before they leave the birthing hospital.*

- The UDOH Hearing, Speech and Vision Program oversees newborn hearing screening in Utah. 98% of Utah newborns are currently screened (data as of 8/20/03).
- The percentage of U.S. total births screened as newborns was 86.0% as of May 2003. Utah ranks as one of the top newborn hearing screening programs nationally.
- State legislation requires that as of July 1, 1999, all newborns, including those born at home, must have their hearing screened by one month of age.
- All hospitals are required to participate by legislative mandate. However, actual screening rates are dependent upon the level of commitment in each individual hospital, regardless of demographics.
- The National Joint Committee on Infant Hearing, Year 2000 Position Statement lists 11 risk factors, which are addressed.
- The critical age for initiating habilitation for hearing impairment is six months. Most infants receiving intervention by this age develop language approximating their normal hearing peers. Intervention delayed beyond six months has been shown to have less successful outcomes.
Breast Cancer Screening - Mammography

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 death in both Utah and the U.S. Deaths from breast cancer can be substantially reduced if the tumor is discovered at an early stage. 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, and by about 17% in women aged 40 to 49 years. Recent research suggests that ultrasound may be a better screening tool for some women.

**Healthy People 2010 Objective 3-13 Goal: Mammograms - Adults receiving within past 2 years (age-adjusted, females aged 40 years and older) (70%). (See Appendix)**

- Between 1990 and 2000, the percentage of Utah women aged 40 or older who reported receiving a routine screening mammogram within the last two years increased from 52.4% to 70.2%. This percentage dropped to 65.5% in 2002.
- Since 1994, the percentage of Utah women aged 40 or older who reported receiving routine screening mammograms has been below that seen for U.S. women (please see graph).
- According to data collected by the Utah Behavioral Risk Factor Surveillance System, use of mammography is lower among women without health insurance compared to women with health insurance.
- 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.
- 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.

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

Note: Age-adjusted to U.S. 2000 standard population.
Colorectal Cancer Screening

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.

- About one third (31%) of Utah adults 50 and older were screened for colon cancer within the past five years. Utah women were less likely to be screened within the past five years compared to Utah men. Furthermore, only about 15% of older Utahns reported having an annual fecal occult blood test (FOBT) within the past year.\(^{16}\)

- Nationally, the percentage of older adults having sigmoidoscopy or colonoscopy rose from 29% in 1993 to 38% in 2002.\(^{16}\) Utah rates have increased from 21% in 1993 to 36% in 2002.

- Screening for colorectal cancer has been identified by the CDC and the U.S. Preventive Services Task Force as a priority issue for individuals 50 years of age or older.

- 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, 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.

- When colorectal cancers are detected at an early, localized stage of disease, the 5-year survival rate is 90%. However, only 37% of colorectal cancers are discovered at that stage.\(^{17}\)

- The Utah Cancer Control Program (UCCP) provides free FOBT kits upon request to women who present for screening at UCCP sponsored breast and cervical cancer screening clinics. Efforts are also underway to increase awareness about colorectal cancer and promote regular screening for this cancer.
Prenatal Care

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

*Healthy People 2010 Objective 16-6A Goal: Prenatal Care - Beginning in first trimester (90%). (See Appendix)*

- The percentage of Utah mothers receiving prenatal care in the first trimester has been on a decline since 1995. The Utah rate in 2002 (78%) was below that of the nation (83.8%-NCHS preliminary data).
- Pregnant teens 15-19 years of age, mothers with low level of education, race other than White, being unmarried, residing in an urban setting, lower socio-economic status, lack of health insurance, and those who reported smoking prior to pregnancy are less likely to get early prenatal care. If a pregnancy is planned, a woman is more likely to seek early and adequate prenatal care.
- 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. A pregnancy risk line is available to pregnant women. The Pregnancy Risk Assessment Monitoring System (PRAMS) collects and analyzes data to identify characteristics of Utah women and their utilization of prenatal care. The Reproductive Health Program will utilize this data to target interventions in those populations identified as having poor first trimester entry.

Source: Office of Vital Records and Statistics, Utah Department of Health
Note: Percentage of mothers of live born infants where prenatal care was reported to have been received in the first trimester (Births where prenatal care was unreported were counted in the denominator.) U.S. 2002 rate is preliminary.
Immunizations 4:3:1:3:3

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. 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, and 3 doses of Haemophilus Influenza, type B (Hib) vaccines. This recommendation is referred to in shorthand as “4:3:1:3:3.”

- Utah’s 4:3:1:3:3 rate in 2002 places Utah at 26th in the nation, which is an improvement from 2001 when Utah ranked 48th.
- 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 will be expanded in 2003 to include adult immunizations, such as pneumonia, tetanus, influenza, and smallpox.
- In Utah, cases of vaccine-preventable diseases are down. The availability of vaccines has reduced levels of communicable diseases by more than 97% from peak levels.
- Utah Department of Health’s Immunization Program conducts annual assessments of private and public health care providers’ immunization records to obtain state immunization levels. Utah also has immunization coalitions that are working to maintain or improve current levels of immunization and to increase public awareness of immunizations.
- 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.

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

Influenza, or flu, is an acute viral infection involving the respiratory tract that can occur in epidemics or pandemics. Influenza can cause a person, especially older persons, to be more susceptible to bacterial pneumonia. People 50 years of age or older and those with health conditions and compromised immune systems should receive influenza vaccine yearly in October. All others wishing to protect themselves against influenza should be immunized in November or December.

Healthy People 2010 Objective 14-29a Goal: Influenza and pneumococcal vaccination of high-risk adults - Noninstitutionalized adults - Influenza vaccine (age-adjusted, ages 65 years and older) (90%). (See Appendix)

- The percentage of Utahns aged 65+ who received a flu vaccine is measured by the Behavioral Risk Factor Surveillance System (BRFSS) survey, and was found to be 71% in 2002, slightly up from 69% in 2001.
- In 2002, most (384) of the 423 deaths from influenza and pneumonia were among persons age 65 and over. There was a total of 6,770 hospitalizations for influenza and pneumonia, 3,478 of them among persons in the 65+ age group. The total hospital charges were almost $68 million, with 53% of all hospital charges (almost $36 million) for persons age 65 and over.
- The UDOH Immunization Program and Office of Epidemiology educate health care providers, clinic staff, and the public about prevention methods and support investigation of outbreaks.
Risk Factors for Illness

Goal: Utahns will achieve a higher quality of life by adopting safe, healthy lifestyles and providing safe and healthy environments.

- Environmental Risk Factors
- Lifestyle Risk Factors
Blood Lead in Children

Lead poisoning is the most significant and prevalent disease of environmental origin among children living in the United States. Despite considerable knowledge and increased screening and intervention efforts, lead exposures remain prevalent. Environmental lead is a toxic substance that is affecting the growth and development of up to one million U.S. preschool children today, with effects ranging from learning disabilities to death.

Lead-contaminated water, soil, and paint have been recognized as potential sources of children's lead exposure. Dust from deteriorating lead-based paint is considered to be the largest contributor to the lead problem. Until the 1950s, many homes were covered inside and out with leaded paints and in 1977 it was banned from use in homes. Another environmental source of lead in Utah, is household dust and soil containing particles of lead from mining waste. Communities built near or on mining and smelting waste piles, where children may play, is a significant source of lead exposure in children.


Sources: Utah Blood Lead Registry; Environmental Epidemiology Program, Division of Epidemiology and Laboratory Services, Utah Department of Health

Note: Prior to 1996, results on children were not collected, therefore, this calculation was not made for those years.

- The Utah Department of Health/Environmental Epidemiology Program (EEP) collaborates with clinical laboratories to report all blood lead tests conducted on Utah residents. The local health department assists the EEP by providing case management of children identified with an elevated blood lead level (EBL), and providing educational, medical, and environmental assessments to parents. Surveillance data is kept in the Utah Blood Lead Registry (UBLR), housed in the EEP. The analysis of the data helps in determining trends, prevalence of EBL children, screening rates among specific high-risk populations and areas identified high risk such as older housing and mining communities.

- Utah Administrative Code R386-703 (Injury Reporting Rule) establishes an injury surveillance and reporting system for major injuries occurring in Utah. Lead poisoning was added to the list of reportable injuries in 1990. Since January 1997, all persons with whole blood lead concentrations of >10 ug/dL are reportable.
Safe Restaurant Food

Foodborne disease outbreaks sometimes result from failures in protective systems, but are more often the result of improper food handling. Children, the very old, and people with weakened immune systems are at increased risk of infection and death resulting from food contamination.

The number of licensed food establishments increased 3% from 7,997 in 2001 to 8,220 in 2002.

The Food and Drug Administration recommends a minimum staffing ratio of 1 restaurant inspector (full-time equivalent, or FTE) for every 150 food establishments. Only four local health departments met this standard in 2001.

Local health departments had 37.4 FTEs committed to inspecting 8,220 food service establishments in 2002. To meet minimum staffing ratios, local health departments would need more than 17 additional FTEs.

Since 1996, a 30% annual turnover rate for local health department restaurant inspectors has been documented.

The Utah Department of Health has only one FTE available to provide training, standardization, data collection, and other support for the statewide food protection program.
Air Quality

Air quality plays a fundamental role in health and disease. Particulate matter, carbon monoxide, and sulfur dioxide affect breathing and respiratory function. Existing respiratory and cardiovascular disease may be aggravated, the body’s defense system against bacteria and viruses may be altered, and lung tissue may be damaged. Health threats are most serious for those who suffer from cardiovascular disease, asthma, emphysema, influenza, and bronchitis. Children and the elderly are also likely to be adversely affected by heavy concentrations of these pollutants.

HEALTHY PEOPLE 2010 OBJECTIVE 8-1A GOAL: HARMFUL AIR POLLUTANTS - PERSONS EXPOSED TO OZONE (0%). (SEE APPENDIX)

Number of Exceedences per Year, Utah, 1996-2002

- Air quality is a serious health concern for the United States and for Utah. Despite its large land area, Utah’s population is very highly concentrated in urban areas. Along the Wasatch Front, 60% of particulate matter and 70% of carbon monoxide emissions come from vehicles. The I/M (Motor Vehicle Inspection/Maintenance) programs in Davis, Salt Lake, Utah, and Weber counties facilitate proper maintenance of cars and trucks to reduce emissions.

- The Utah Division of Air Quality issues health advisories whenever pollution increases to levels of concern as determined by U.S. Environmental Protection Agency criteria. Health advisories are most critical for people with respiratory and heart diseases, the elderly, and children. When a health advisory is issued, they should limit outdoor exertion whenever possible.

- A variety of regulatory controls on industrial sources reduce particulate emissions. During the last several years, the Western Regional Air Partnership (WRAP), has forged a plan to reduce man-made haze. WRAP’s efforts should reduce haze in urban and rural, scenic areas.
Environmental Risk Factors

Secondhand Smoke - Children Exposed

Childhood exposure to secondhand smoke, which can begin before birth and continue through childhood, is a major cause of morbidity in children. The presence of a smoker in a child’s household has been shown to increase the child’s risk for middle ear infections, asthma and other respiratory tract illnesses, sudden infant death syndrome (SIDS), and fire-related deaths and injuries. In addition, teens who live with smokers are more likely to become smokers themselves. Educational interventions and public policy to prevent children’s exposure to tobacco smoke can lead to improved health and substantial savings in societal and health care costs.

Healthy People 2010 Objective 27-9 Goal: Exposure to tobacco smoke at home - Children (ages 6 years and under) (10%). (See Appendix)

Percentage of Children Who Had Been Exposed to Cigarette Smoke Inside the Home by Local Health District, Utah Children Age 17 or Less, 2001

- Bear River 2.8%
- Central 7.4%
- Davis County 4.2%
- Salt Lake Valley 7.6%
- Southeastern 17.6%
- Southwest 3.5%
- Summit 7.5%
- Tooele 9.2%
- TriCounty 16.8%
- Utah County less than 1%
- Wasatch 4.1%
- Weber-Morgan 9.0%

Source: Utah Health Status Survey, Office of Public Health Assessment, Utah Department of Health
Note: Due to a low rate of in-home secondhand smoke exposure and an insufficient sample size no estimate could be calculated for Utah County Health District.

- It was estimated by the 2001 Utah Health Status Survey that 6% of children (43,500 Utah children) were exposed to secondhand smoke by adults who smoked inside the home.
- Children who live in households with an annual income of less than $20,000 are more likely to be exposed to tobacco smoke in their homes than children who live in households with annual incomes of $45,000 or higher.
- Educational interventions and public policy to prevent children’s exposure to tobacco smoke can lead to improved health and substantial savings in societal and health care costs.
- The TRUTH anti-tobacco media campaign educates Utahns about the health risks of secondhand smoke. In addition, the Tobacco Prevention and Control Program and its partners, local health departments, health care providers, and apartment/condominium owners, are working together to provide families with information and assistance to prevent secondhand smoke exposure in their homes.
Overweight or Obese

Being overweight increases the risk of many chronic diseases, including heart disease, stroke, hypertension, type 2 diabetes, osteoarthritis, and some cancers. Obesity is the second leading cause of preventable death in the U.S. Utahns have been gaining weight so rapidly that in 2002 over half of all adults were overweight or obese. The obesity epidemic among Utahns threatens to reverse the decades-long progress made in reducing death from chronic disease.

Healthy People 2010 Objective 19-2 Goal: Obesity in Adults (age-adjusted, ages 20 years and older) (15%). (See Appendix)

- The percentage of adults who were overweight or obese increased steadily in Utah and the U.S. in the last decade with a slight downward trend in 2002 in females. In Utah, the percentage of overweight or obese individuals increased from 35.0% in 1989 to 55.6% in 2002. In fact, the number of overweight or obese Utahns has more than doubled since 1989 from an estimated 388,500 persons to an estimated 811,265 persons in 2002.

- More Utah men than women were overweight or obese during the time period 1989 through 2002, and this trend was seen across all age groups. The percentage of overweight or obese Utahns increased with age through 64 years and then decreased for those 65 years or older.

- 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 maintaining a healthy weight.

- The Utah Alliance for Cardiovascular Health has developed a comprehensive state plan. The plan includes UDOH activities for obesity prevention and reduction.
Lifestyle Risk Factors

5 A Day - Fruit (2 or More)

There are many benefits to eating fresh fruits and vegetables, including weight loss, a decrease in the risk of certain types of cancer, and a lower risk of heart disease. Some of the benefits result directly from the fruits and vegetables, and other benefits derive from the fact that if a person consumes five servings of fruits or vegetables a day, he or she is usually consuming fewer less-healthy foods, such as foods that are high in fat or calories.

Healthy People 2010 Objective 19-5 Goal: Fruit intake - At least two daily servings (age-adjusted, ages 2 years and older) (75%). (See Appendix)

- In 2002, only 31% of Utah adults reported eating two or more servings of fruit each day.
- There is some evidence that people who form the habit of eating fruits and vegetables early in life are likely to maintain the behavior as adults.20
- People who eat few fruits and vegetables are at higher risk for developing several types of cancer, heart disease, stroke, and other chronic diseases.
- 5 a Day, a statewide partnership-based program, promotes the message to eat five servings of fruits and vegetables each day for better health. 5 a Day at School has reached more than 90% of Utah’s elementary schools. Since the implementation of the 5 a Day program in 1994, Utah adults’ awareness of the 5 a Day message has increased from 4.6% to 34.7%.


Sources: Utah Data: Behavioral Risk Factors 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)

Note: Age-adjusted to U.S. 2000 standard population.
U.S. data do not include U.S. territories, but do include District of Columbia.
In the odd years, not all states asked the 'Fruit and Vegetable' questions on their state BRFSS surveys, so the U.S. number shown is simply the average of the previous and next year.
5 A Day - Vegetables (3 or More)

There are many benefits to eating fresh fruits and vegetables, including weight loss, a decrease in the risk of certain types of cancer, and a lower risk of heart disease. Some of the benefits result directly from the fruits and vegetables, and other benefits derive from the fact that if a person consumes five servings of fruits or vegetables a day, he or she is usually consuming fewer less-healthy foods, such as foods that are high in fat or calories.

Healthy People 2010 Objective 19-6 Goal: Vegetable intake - At least three daily servings, with at least 1/3 being of dark green or deep yellow (age-adjusted, ages 2 years and older) (50%). (See Appendix)

- Only 20.9% of Utah adults reported eating three or more daily servings of vegetables in 2002.
- The percentage of Utah adults who reported eating three or more daily servings of vegetables has consistently been below the U.S. percentage. For example, this percentage was 20.9% in Utah and 26.3% in the U.S. in 2002.
- Overall, more men than women reported eating 5 a Day and older Utahns were more likely to eat 5 a Day than younger Utahns.
- 5 a Day, a statewide partnership-based program, promotes the message to eat five servings of fruits and vegetables each day for better health. 5 a Day at School has reached more than 90% of Utah’s elementary schools.
Breastfeeding in Early Postpartum Period

Breastfeeding provides a variety of important benefits for infants, mothers, families, society, and environment. It is the normal, preferred feeding for all infants, including premature and sick babies, with rare exceptions. Breastmilk benefits the newborn infant by providing the ideal balance of nutrients, enzymes, immunoglobulin, anti-infective and anti-inflammatory substances, hormones, and growth factors. Breastfeeding helps the mother return to the physiologic pre-pregnant state. It benefits both mother and child by providing a time of intense, nurturing maternal-infant interaction. In addition, breastfeeding provides social and economic benefits to the family, including reduced health care costs and reduced employee absenteeism for care related to children's illnesses.

Healthy People 2010 Objective 16-19a Goal: Breastfeeding - In Early Postpartum Period (75%). (See Appendix)

- The Healthy People 2010 goal of early postpartum breastfeeding rates of at least 75% has been met in Utah, for both the general population and the WIC Program for 2002. The Utah WIC Program ranks 4th among participating states for percentage of infants ever breastfed.

- Pregnant women are encouraged to discuss their feeding choices with their prenatal care provider to receive prenatal education, to request assistance from a lactation professional in the hospital, and to be seen by their health care provider within the first week to ensure normal initiation of breastfeeding. No hospitals in Utah have achieved "Baby Friendly" status based on the Ten Steps established by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF).

- Breastfeeding promotes optimal health status for infants and mothers, and may provide long-term health benefits as well (for the infant, protects against obesity, diabetes, Crohn’s disease, promotes positive oral health; for the mother, protects against anemia, overweight, breast cancer, and osteoporosis).
Physical Activity

Physical activity is recognized as an independent protective factor against cardiovascular disease. It has been shown to reduce the risk of some cancers, diabetes, stroke, and heart disease, and improve general physical and mental health. Weight-bearing activity improves bone density, reducing the risk of hip fracture in elderly persons. Regular activity helps to relieve pain from osteoarthritis. It would be difficult to overestimate the health-promoting influence of regular physical activity.

**Healthy People 2010 Objective 22-2 Goal: Moderate physical activity (age-adjusted, ages 18 years and older) (30%). (See Appendix)**

- In 2001, 53% of Utah males and 55% of Utah females reported at least 30 minutes of moderate physical activity on five or more days a week. In 2001, the BRFSS survey questions changed to include both leisure-time and work-related physical activity.
- When compared to the nation, Utahns are more physically active. In 2000, 30.0% of Utahns engaged in 30 minutes of regular physical activity on most days of the week. Nationally, the rate was 26.0%.
- Small changes in levels of physical activity such as walking or gardening can lead to big improvements in personal health. Even moderate amounts of exercise can substantially reduce an individual’s chance of dying from heart disease, cancer, or other causes.
- The Cardiovascular Health Program and the Utah Alliance for Cardiovascular Health promotes physical activity among Utahns by working collaboratively with communities, worksites, schools, and local health departments.
Lifestyle Risk Factors

Adolescent Births

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 the 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 birthweight 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.

- Over 80% of births to adolescent mothers age 19 and younger were reported by the mother as “unintended” in the 1999 Pregnancy Risk Assessment and Monitoring Survey (PRAMS).

- Utah's adolescent birth rate has been lower than the United States’ overall rate during the 1990s, but is higher than several other states. Utah’s adolescent birth rate has declined over the past decade as have national rates.

- 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.

- Prevention of teen pregnancy includes programs to encourage sexual abstinence and family planning services. A detailed report on adolescent pregnancy in Utah has been published by the Utah Department of Health and can be accessed on the internet (www.health.utah.gov/rhp).

- The Utah Department of Health funds nine abstinence-only community-based projects for youth 9-14 years throughout the state with federal abstinence education monies.
Births From Unintended Pregnancies

Unintended pregnancy is a general term that includes pregnancies that a woman reports were either mistimed or unwanted at the time of conception. Having an unintended pregnancy can contribute to short interpregnancy spacing (span between the birth of one child and the conception of another), which increases the risk of infant morbidity and mortality. In addition, unintended pregnancy can contribute to an increase in the rate of abortions as well as late entry into prenatal care. Women with inadequate care due to late entry are more likely to deliver a low birth weight baby.

In 1999, 33.7% (15,000) of live births in Utah were the result of unintended pregnancies. Overall, slightly less than 20% of Utah women were using birth control at the time they conceived. Of the women who reported their pregnancies as unintended, 42.7% said they were using birth control at the time of conception. Even when properly used, contraceptive methods can fail. But more often, failure results from improper use.

In order to accomplish, and to exceed, the HP2010 goal of 70% of pregnancies being intended, public health efforts may include:

- **Health Education** - increase knowledge of human reproduction, conception, and proper use of available contraceptive methods; and promote optimal spacing of pregnancies for healthy outcomes.
- **Reproductive Health Services** - increase dialogue between health care providers and women regarding reproductive health and family planning options.
- **Access to Health Care** - improve insurance coverage for family planning services expanded with Primary Care Network.

![Percentage of Women With Live Births Who Reported Their Most Recent Pregnancy Was Unintended by Age Group, Utah, 1999](chart)

Source: Utah Pregnancy Risk Assessment Monitoring System (PRAMS), Utah Department of Health
Cigarette Smoking Among Adults

More than 440,000 deaths each year are attributed to cigarette smoking, making it the leading preventable cause of death in the U.S. Smoking increases the risk of chronic lung disease, coronary heart disease, and stroke, as well as cancer of the lungs, larynx, esophagus, mouth, and bladder. In addition, smoking contributes to cancer of the cervix, pancreas, and kidneys. Environmental tobacco smoke has been shown to increase the risk of heart disease and lung cancer among nonsmokers.

Healthy People 2010 Objective 27-1a Goal: Cigarette smoking - Adults (age-adjusted, ages 18 years and older) (12%). (See Appendix)

- Although the proportion of Utahns who smoke has decreased in recent years, approximately 200,000 Utah adults still use tobacco. Quitting tobacco use provides major health benefits at any age and increases life expectancy for former tobacco users.

- Cigarette smoking is more common among persons in younger age groups, those with lower levels of education, and those in lower income groups.

- In recent years the Tobacco Prevention and Control Program (TPCP) at the Utah Department of Health (UDOH) and its partners expanded efforts to educate Utahns about the health risks of tobacco use through The TRUTH media campaign and school- and community-based tobacco programs. The TPCP also ensures availability of comprehensive statewide and local services to help tobacco users quit including the Utah Tobacco Quit Line, QuitNet, and local programs for teens, adults, and pregnant women. UDOH data indicate that these efforts are starting to pay off. Tobacco use rates among youth and adults are on a downward trend, more smokers report that they are trying to quit, and fewer retailers are selling tobacco to minors. Continued commitment to TPCP programs will ensure that more Utahns will be protected from disability, disease, and death caused by tobacco use.

80 2003 Utah Public Health Outcome Measures Report, Utah Department of Health
Substance Abuse - Adolescents

According to the U.S. Public Health Service, “Health risk behaviors that contribute to the leading causes of illness, death, and social problems among youth and adults often are established during youth, extend into adulthood, and are interrelated.”

Percentage of Students Who Used an Illegal Substance on One or More of the Past 30 Days, Utah and U.S.

- The most commonly-abused substance among those measured during the Spring of 2003 was alcohol (21%), followed by marijuana (11%), inhalants (5%), and cocaine (4%). While alcohol use was down from 27% in 1991, use of the other three substances has either stayed the same or increased.
- Fourteen percent of Utah high school students had five or more drinks of alcohol in a row (also known as binge drinking) during the past 30 days. On the 2003 survey, a small percentage of students had also reported having used methamphetamines (6% during lifetime), heroin (3% during lifetime), ecstasy (5% during lifetime), and non-prescribed steroids (7% during lifetime).
- While not all youth who abuse substances are necessarily at risk for suicide, youth who commit or attempt suicide are very commonly substance abusers.
Lifestyle Risk Factors

Alcohol Consumption - Binge Drinking

Binge drinking is an indicator of potentially serious alcohol abuse, and is related to driving under the influence of alcohol. It is a problem nationally, especially among males and young adults. Alcohol abuse is strongly associated with injuries and violence, chronic liver disease, fetal alcohol syndrome, and risk of other acute and chronic health conditions. Binge drinking among women of childbearing age is a problem because of the risk for prenatal alcohol exposure. Birth defects associated with prenatal alcohol exposure can occur during the first 6 to 8 weeks of pregnancy.

**Healthy People 2010 Objective 26-11c Goal: Binge Drinking - Adults (ages 18 years and older) (6.00%). (See Appendix)**

In Utah, the percentage of adults who reported binge drinking in the past 30 days fluctuated between a high of 12% in 1989 to a low of 7.7% in 1997. In 2002, 10.1% of Utah adults reported recent binge drinking. Utah still has a way to go to reach the Healthy People 2010 objective of 6%.

The percentage of adults who reported binge drinking in the past 30 days was substantially lower in Utah than in the U.S. for all years reported between 1989-2002.

Binge drinking is more common among males and young adults in Utah.

Substance abuse services are provided by local county governments with administrative oversight and monitoring by the Utah Department of Human Services. Prevention programs are developed and implemented in cooperation with Utah’s 13 Local Substance Abuse Authority districts and their local partners.

DUI: The State of Utah has implemented Prime for Life, a program for convicted DUI drivers.
Alcohol-related Motor Vehicle Crash Deaths

Motor vehicle crash deaths were the leading cause of injury death in Utah. Alcohol is a factor in over one fourth of all motor vehicle crashes.

During 1993-2001, 698 persons died in alcohol-related motor vehicle crashes. Those 20-29 years of age are involved in more alcohol-related motor vehicle crashes and sustain more fatalities as a result than any other age group.

Utah has the lowest percentage of motor vehicles crash fatalities resultant of alcohol-related impairment.

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%.

Alcohol is a contributing factor in 26.5% of Utah’s motor vehicle crashes. When alcohol is involved, crashes tend to be more severe.
Seat Belts: Safety Restraint Use

Motor vehicle crashes (MVCs) are the leading cause of injury death and the second leading cause of hospitalization from injury for all ages in Utah. Seat belts are the single most effective safety device in preventing serious injuries and reducing fatalities in MVCs, according to the National Highway Traffic Safety Administration (NHTSA). NHTSA has found that deaths and serious injuries caused by MVCs could be reduced by approximately 50% with proper and consistent use of safety belts. NHTSA estimates that from 1975 through 2001, 147,246 lives were saved by safety belts in the United States. NHTSA also found that the average inpatient cost for crash victims who were not using safety belts was 55% higher than for those who were belted. Ejection from the vehicle is one of the most injurious events that can happen to a person in a crash. Safety belts are effective in preventing total ejections.

- Overall safety belt usage has increased from 18% in 1986 to 85% in 2003.
- In the early 1990s, Utah’s seat belt usage rate was lower than that of the nation. However, beginning in the year 2000, Utah’s rate began to exceed that of the U.S. In 2002, Utah’s rate was 85%.
- Younger and less educated drivers are at a greater risk of failure to use safety restraints.
- Lack of automobile seat belt use is related to hospital emergency room visits and hospital admissions due to motor vehicle crash injuries.
- Failure to use seat belts increases the risk of motor vehicle crash deaths.
- The Utah Legislature has passed laws to increase the use of safety restraints and save lives. The support of law enforcement has also been a catalyst in increasing the use of safety restraints and saving lives. Currently, Utah has only a secondary enforcement seat belt law, so there is room for improvement.
Common Preventable Diseases and Conditions

Goal: Utah will reduce illness, disability, and death from common preventable diseases and conditions.

- Health Problems of Mothers and Infants
- Infectious Diseases
- Injury and Violence
- Chronic Diseases and Conditions
- Diseases Commonly Causing Death in Adults
Infant Mortality

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: birth defects, conditions in the perinatal period (includes disorders of short gestation and can reflect the overall state of maternal health, as well as the quality and accessibility of primary health care for pregnant women), and SIDS. “Other conditions” includes deaths due to unintentional and intentional injuries. Infant mortality, when resulting from a complicated delivery, is associated with increased risk of maternal mortality.

Healthy People 2010 Objective 16-1c Goal: All Infant Deaths (within 1 year) (per 1,000 live births) (4.5). (See Appendix)

- During 2002, 270 Utah infants died during their first year of life, each death representing a tragedy for parents, siblings, and other family members. Moreover, there are populations in Utah whose rates far exceed the state average (5.5 per 1,000 live births). For instance, from 2000-2002, the death rate for Black infants was 8.5 per 1,000 live births, and for Asian/Pacific Islander infants was 6.5 per 1,000 live births.
- Infant mortality is more prevalent among mothers in younger age groups and in some race/ethnicity groups (e.g. African Americans).
- Health insurance coverage and availability of adequate prenatal care reduce the risk of infant mortality.
- Some of the mother’s behaviors during the prenatal period, such as smoking and using alcohol, increase the risk of infant mortality.
- Infant mortality, when resulting from a complicated delivery, is associated with increased risk of maternal mortality.
Low Birth Weight

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 data indicate that for infants weighing between 1,500 and 2,499 grams costs are six times higher, and almost 85 times higher for newborns with a birth weight less than 1,500 grams.

Healthy People 2010 Objective 16-10A Goal: Low birth weight (LBW), infants (less than 2,500 grams) (5.00%). (See Appendix)

- Utah’s low birth weight percentage increased from 6.0% in 1991 to 6.6% in 2002, moving away from the Healthy People 2010 Objective of 5.0%. Nationally, the percentage of low birth weight births increased from 7.1% in 1991 to 7.8% in 2002. Utah’s trend parallels this increase.

- Population subgroups at higher risk of having a low birth weight infant include: maternal age (mothers younger than 25 and older than 39); race and ethnicity (Utahns who are Black, Hispanic, or Asian-Pacific Islander have higher rates of low birth weight than the general population of Utahns); low income; low educational attainment; and being unmarried.

- 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; and previous pregnancy resulting in a low birth weight infant.
Backsleeping for Infants

Research has shown that placing babies on their backs to sleep greatly reduces their risk for sudden infant death syndrome (SIDS).

Healthy People 2010 Objective 16-13 Goal: Infants put to sleep on their backs (Infants aged under 1 year) (70%). (See Appendix)

The majority of Utah infants are placed on their back to sleep. In 1999, Pregnancy Risk Assessment Monitoring System (PRAMS) data revealed that 74.6% of infants were sleeping on their backs. 2002 data were not available at the time of publication.

Out of the 17 states surveyed, Utah reported the highest prevalence of infants sleeping on their backs. Prevalence ranged from 35% (Louisiana) to 75% (Utah).

Many hospitals provide SIDS/Back to Sleep information in newborn packets.

Risk factors for SIDS include maternal smoking, environmental tobacco smoke, overheating/overbundling, having soft items in baby’s sleeping area, being male, being 2-4-months of age.

Infant deaths from SIDS have significantly declined since 1992-1993 (106 deaths). There were 24 deaths in 2000-2001, with 7 of those in 2001.

Since the Back to Sleep Campaign began in 1994, encouraging caregivers to place their babies on their backs to sleep, the rate of SIDS deaths has dropped over 40% in the United States.

Source: Utah Pregnancy Risk Assessment Monitoring System (PRAMS), Utah Department of Health
Note: New York data do not include New York City
Infectious Diseases

Pertussis Cases

Pertussis is a contagious, bacterial respiratory disease. Although pertussis may be a mild disease in older children and adults, in younger children this disease can be complicated by pneumonia and occasionally inflammation of the brain. Although not common (1 out of 200), pertussis can cause death (especially in children less than one year of age). In the 20th century, pertussis was one of the most common childhood diseases and a major cause of childhood mortality in the United States. Since widespread use of the vaccine began, incidence has decreased.

**Healthy People 2010 Objective 14-1G Goal: Vaccine-preventable diseases - Pertussis Children (number of cases, children aged under 7 years) (2,000 total cases in the U.S.). (See Appendix)**

Rates of Reported Pertussis Cases, Utah and U.S., 1988-2002

- In 1998, Utah experienced a statewide outbreak with an incidence rate more than five times that of the U.S. Rates of pertussis infection have been similar in Utah and the U.S., with the exception of 1998.
- Pertussis affects all populations. Adults generally have milder symptoms often without the characteristic “whoop,” so they are often not reported. However, adult pertussis cases are often not recognized and can be an important source of spread. Young infants are at the highest risk for clinical disease and complications (pneumonia and encephalitis).
- Surveillance data are used to identify persons or areas in which additional efforts are required to reduce disease incidence. Surveillance data help to promptly identify outbreaks in which immunization and prophylaxis of contacts can help limit the spread of disease. Surveillance data are also used in evaluating vaccination policies at the state level.
- Childhood immunization is the most effective weapon against childhood diseases. The UDOH immunization program works with parents, physicians, and local health departments to provide immunization histories for all children under age two and remind parents when vaccinations are due.
Measles Cases

Measles is caused by a virus and is a very infectious disease that can be particularly serious in infants and adults. Although measles usually lasts only one to two weeks, it can cause such complications as pneumonia, ear infections, and encephalitis (inflammation of the brain). In very young or malnourished patients, blindness can occur. The U.S. has established the goal of eliminating the transmission of endemic measles strains. Current surveillance data indicate this goal has been achieved.

Healthy People 2010 Objective 14-1e Goal: Vaccine-preventable Diseases - Measles (number of cases) (0). (See Appendix)

Rates of Reported Measles Cases, Utah and U.S., 1988-2002

- Before measles vaccine was introduced in 1963, more than one half million cases of measles were reported annually in the U.S. Since then measles incidence has steadily decreased. The recent low rates of infection in Utah can be attributed both to improved immunization rates, as well as the natural cyclical nature of the disease. Since 1998, Utah has had lower rates than the U.S. with only three confirmed cases being reported.

- Persons coming from other countries frequently import the highly contagious measles virus into the U.S. Each imported measles case could start an outbreak, especially if under-vaccinated groups are exposed. Surveillance and prompt investigation of cases and contacts help in halting the spread of disease.

- Per Communicable Disease Rule R386-702-3, health care providers and laboratories are required to report suspected cases of measles immediately by telephone to the Office of Epidemiology or the local health department. The Office of Epidemiology assists local health departments with the investigation of cases and implementation of control measures to prevent further cases. The Office of Epidemiology conducts ongoing statewide surveillance of measles cases.
Hepatitis A

Hepatitis A is the most common type of hepatitis reported in the United States. Utah was identified as one of 11 states with average annual disease rates at least twice the national average during 1987-1997.

Surveillance data are used to detect outbreaks, determine the effectiveness of hepatitis A vaccination, monitor disease incidence in all age groups, determine the epidemiologic characteristics of infected persons including source of infection, and assess and reduce missed opportunities for vaccination. 

**Healthy People 2010 Objective 14-6 Goal: Hepatitis A - (New cases per 100,000 population) (4.5).** *(See Appendix)*

- Since 1997, the incidence of hepatitis A in Utah has decreased, and recent average annual rates have been lower than the national average. Most cases of hepatitis A are due to person-to-person transmission.
- The decline in hepatitis A cases is most likely due to better hygiene (especially hand washing and food preparation), broader use of the new hepatitis A vaccine, but it may also be due to the natural cycle of the disease.
- Per Communicable Disease Rule R386-702-3, health care providers and laboratories are required to report suspected cases of hepatitis A immediately by telephone to the Office of Epidemiology or the local health department. The Office of Epidemiology assists local health departments with the investigation of cases and implementation of control measures to prevent further cases. The Office of Epidemiology conducts ongoing statewide surveillance of hepatitis A cases.
**Tuberculosis Cases**

*Tuberculosis (TB)* is caused by a type of bacteria called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but they may attack any part of the body. TB is typically spread through the air from one person to another. The U.S. experienced a resurgence of TB between 1985 and 1992, when the number of TB cases increased by 20%. Early detection and treatment of TB are essential to control the spread of the disease and to prevent outbreaks. Some people may have what is known as latent TB. Some people with latent TB may later develop active TB.

**Healthy People 2010 Objective 14-11 Goal: Tuberculosis - (new cases per 100,000 population)** (1). *(See Appendix)*

- The 2002 TB case rate was 1.3 per 100,000 persons, a decrease from 1.6 per 100,000 persons in 2001. The case rate of TB in Utah has consistently been about one third of that found in the U.S. overall.
- In the years 1998-2002, more than half of persons diagnosed with TB in Utah were born outside of the U.S. This shows the importance of effectively screening and treating individuals from high TB prevalence areas. Other risk factors include: alcohol, injecting drug use, homelessness, and HIV infection.
- It is very important that patients with active tuberculosis disease adhere to their treatment regimen. Treatment adherence is not only important for effective therapy in patients, but also to prevent an increase in cases of drug-resistant *Mycobacterium tuberculosis*. In 2002, 22% of persons with TB in Utah on which drug sensitivity testing was performed had organisms that were resistant to one or more of the anti-tuberculosis medications, a decrease from 30% in 2001. However, from 1998 to 2001, there was a gradual increase in the number of cases of TB that had resistance to one or more anti-tuberculosis medications, from as low as 12% in 1998 to 30% in 2001. This troubling statistic highlights the need for continued drug sensitivity testing for all TB culture isolates, and the need for directly observed therapy (DOT) for all TB patients to ensure that they take all their medications.
Food-borne Illness - *Salmonella*

Salmonella are bacteria which cause an infection primarily in the stomach and intestines. About 2,000 types of Salmonella have been identified. Infections may enter the blood stream and become very serious. The infection is acquired by eating or drinking food containing the bacteria. It can also be spread by direct contact with an infected person or animal. Salmonella bacteria are commonly found in food products such as eggs, egg products, meats, poultry, unpasteurized milk, other unpasteurized dairy products, and cheese. Domestic animals including chickens, cattle, pigs, ducks, and reptiles have been found to carry the bacteria.

- Reported rates of *Salmonella* infection decreased from 26.7 cases per 100,000 in 1999 to 10.0 in 2001. Much of this decrease is attributed to improved food handling practices, especially involving egg products.
- The Office of Epidemiology assists local health departments with the investigation of cases and implementation of control measures to prevent further cases. Some general guidelines to prevent the spread of *Salmonella* are:
  - Always refrigerate meat and eggs.
  - Always cook meats completely (no pink in the middle) and never eat raw meat.
  - Always cook eggs and food containing raw eggs completely. Never eat dough or batter that contain raw eggs.
  - Avoid using unpasteurized milk or juices.
  - Carefully wash hands before and after preparing food.
  - Always wash hands with soap and warm water after using the toilet, changing diapers, or after playing with your pet.
**Food-borne Illness - E. coli**

E. coli are bacteria that normally live in the intestines of humans and animals. Although most strains of these bacteria are harmless, some strains can cause serious illness. These infections are acquired by eating food containing the bacteria. The bacteria live in the intestines of some healthy cattle, and contamination of the meat can occur in the slaughtering process. Eating meat, especially ground beef that has been inadequately cooked, is the most common way of getting the infection. Other possible sources of infection include unpasteurized milk and juice, drinking or swimming in water that is contaminated with sewage, or eating unwashed fruits or vegetables.

- **E. coli O157:H7** was first reported in Utah in 1990 with only six cases. Cases have increased since then due to increased reporting and better laboratory methods for detection. All age groups can be infected with *E. coli*, but young children, the elderly, and those with compromised immune systems are the most severely affected.

Sources: Utah Department of Health, Office of Epidemiology
Note: The Utah Department of Health did not track non-O157:H7 *E. coli* prior to 1998.

- **E. coli** O157:H7 was first reported in Utah in 1990 with only six cases. Cases have increased since then due to increased reporting and better laboratory methods for detection. All age groups can be infected with *E. coli*, but young children, the elderly, and those with compromised immune systems are the most severely affected.

- The following will help in stopping the spread of *E. coli*:
  - Always refrigerate meat products. Never leave raw meat at room temperature.
  - Ground beef should be packaged and stored so that its juices (blood) do not drip onto other foods.
  - Do not contaminate other foods by placing them on the same platter or surface that held raw meat or by using utensils which have been contaminated by raw meat.
  - Always cook meats completely (no pink in the middle) and the juices run clear.
  - Avoid using unpasteurized milk or juices.
  - Carefully wash hands before and after preparing food.
  - Always wash hands with soap and warm water after using the toilet or changing diapers.
Chlamydia Cases

Two thirds of all sexually transmitted diseases (STDs) occur among the age group of 15 to 25 years in the U.S. This is evident in Utah as well with 72% of chlamydia cases being among those between 15 and 24 years of age (2002). Untreated chlamydia infections can damage the reproductive systems of both males and females. Females with chlamydia infection are at risk for developing pelvic inflammatory disease (PID) and both men and women may become infertile as a result of untreated chlamydia infections. In addition, pregnant women with chlamydia can pass the infection to their infant during delivery, potentially resulting in pneumonia or neonatal ophthalmia.

Rates of Reported Chlamydia Cases by Year, Utah and U.S., 1992-2002

- Chlamydia rates in Utah and in the U.S. have increased over the last ten years and continue to rise. This can be attributed to increased screening efforts, use of increasingly sensitive diagnostic testing, efforts to increase reporting by providers and laboratories, and improved information systems for reporting. Such increased rates can be interpreted as an advancement in chlamydia infection control as more infections are identified and treated, providing opportunity to intervene in the spread of infection.

- Chlamydia rates in Utah are significantly lower than rates in the U.S. every year. In 2002, Utah’s chlamydia rates ranked 46th in the nation. The overall rate for chlamydia in the U.S. was 296.5 cases per 100,000 persons; the Utah reported chlamydia rate was lower at 152.5 cases per 100,000 persons. The rate for females age 15 to 19 years in Utah was 933.4 cases per 100,000 persons compared with 2,619.1 cases per 100,000 persons in the U.S. The rate for males age 15 to 19 years in Utah was 220.8 compared with 408.4 cases per 100,000 persons in the U.S.

- Persons who test positive for chlamydia are confidentially interviewed by a public health nurse to educate the patient, ensure proper treatment, and to obtain sexual partner information for follow up. This process helps prevent reported cases from spreading disease and the patient from becoming reinfected.

Syphilis Cases - Primary and Secondary

Syphilis is a complex sexually transmitted disease (STD) caused by the bacterium Treponema pallidum. Syphilis is passed from person to person through direct contact with a syphilis sore. In later stages of the disease, the bacteria move throughout the body, damaging many organs over time. The open nature of the syphilitic sores makes it easier to acquire HIV, if exposed, or to transmit the virus, if infected. Public health intervention and education measures are crucial in eliminating syphilis.

Healthy People 2010 Objective 25-3 Goal: Primary and Secondary Syphilis - Transmission of (per 100,000 population) (0.2). (See Appendix)

- In the State of Utah in 2002, all primary and secondary (P&S) syphilis cases were among males. The 2002 P&S syphilis rate of 0.35 per 100,000 is not significantly higher than the Healthy People 2010 objective of 0.2 infections per 100,000 persons.
- P&S syphilis rates in Utah have also been lower than rates in the U.S. every year. In 2002, Utah’s P&S syphilis rates ranked 42nd in the nation. The overall rate for P&S syphilis in the U.S. was 2.4 cases per 100,000 persons; the Utah reported P&S syphilis rate was lower at 0.35 cases per 100,000 persons. Nationally, rates were highest among 35-to-39-year-olds (6.0/100,000) and males (9.9/100,000). In the State of Utah, rates were highest among 40-to-44-year-olds (1.96/100,000) and males (0.69/100,000).
- Syphilis is the target of a nation-wide elimination effort. Elimination of syphilis will aid in the fight against HIV, as the open nature of the syphilitic sores makes it easier to acquire HIV, if exposed, or to transmit the virus, if infected. Public health intervention and education measures are crucial in eliminating syphilis.
Infectious Diseases

Gonorrhea Cases

Although much less common than chlamydia infections, gonorrhea, caused by Neisseria gonorrhoeae, is a priority public health concern in the State of Utah. Long-term consequences similar to those of chlamydia result in negative health outcomes. Untreated gonorrhea infections can damage the reproductive systems of both males and females. Females with gonorrhea infection are at risk for developing pelvic inflammatory disease (PID) and both men and women may become infertile as a result of untreated gonorrhea infections. Susceptibility to more serious infections such as HIV also increases when an individual is infected with gonorrhea. Furthermore, pregnant women with gonorrhea can pass the infection to their infant during delivery, potentially resulting in ophthalmia neonatorum. Gonorrhea can spread to joints and become systemic (disseminated gonorrhea). In addition to the cervix and urethra, the rectum and pharynx are also important sites of gonococcal infection.

Healthy People 2010 Objective 25-2 Goal: Gonorrhea - New Cases (per 100,000 population) (19). (See Appendix)

- In the State of Utah, there has been an overall decrease in reported gonorrhea rates since 1992 (19.5/100,000 in 1992; 15.9/100,000 in 2002). Gonorrhea rates in the state are highest among males (19.0/100,000 in 2002) and 20-to-24-year-olds, 47.9/100,000. Nationally, gonorrhea rates are also highest among 20-to-24-year-olds (593.0/100,000 in 2002), and similar between men (124.2/100,000) and women (125.3/100,000).
- Gonorrhea rates in Utah are well below rates in the U.S. every year. In 2002, Utah’s gonorrhea rates ranked 43rd in the nation. The overall rate for gonorrhea in the U.S. was 125.0 cases per 100,000 persons; the Utah reported gonorrhea rate was lower at 15.9 cases per 100,000 persons.
- For additional data please visit [http://health.utah.gov/els/hivaids/std_stats.htm](http://health.utah.gov/els/hivaids/std_stats.htm).
HIV and AIDS

HIV is a blood-borne virus. Transmission occurs primarily through sexual contact with an infected person, sharing needles for the injection of drugs, or before, during, or after the birth of children of HIV-infected mothers. No treatment is available to cure AIDS, although antimicrobial and antiretroviral treatments now available extend survival among those who are infected with human immunodeficiency virus (HIV).

- A cumulative total of 2,131 AIDS cases had been reported in Utah as of December 31, 2002. A total of 1,086 (51%) Utahns with AIDS had died. A cumulative total of 618 HIV-positive individuals who had not progressed to AIDS had been documented.

- The Bureau of Communicable Disease Control and the HIV/AIDS Surveillance Program has the responsibility for tracking HIV/AIDS in order to monitor trends in the disease and whenever possible to interrupt the transmission of HIV.

- AIDS-related deaths have been decreasing, primarily because of improved efficacy of combination antiretroviral therapies. This trend has led to an increased number of people living with HIV disease in Utah, thus placing an added burden on health care systems and increasing the need for HIV prevention programs.

- Community-based prevention efforts include:
  - Encouraging safer sexual practices.
  - Encouraging drug users to get treatment to stop using drugs and teach them harm reduction.
  - Encouraging pregnant women or women considering pregnancy to be tested for HIV.
Injury and Violence

Unintentional Injury Deaths

Most injuries can be prevented by choosing safe behaviors, using safety equipment, and obeying safety laws. High prevention priority areas include: motor vehicle crash injury, pedestrian injury, bicycle injury, and fall-related injury.

In Utah, unintentional injuries are a leading cause of death and disability. They account for approximately 570 deaths and 8,000 hospitalizations each year. In addition, thousands of less severe injuries are being treated in doctor’s offices, clinics, emergency rooms, homes, schools, work sites, etc.

Healthy People 2010 Objective 15-13 Goal: Deaths from Unintentional Injuries - (Age-Adjusted per 100,000 Standard Population) (17.5). (See Appendix)


- Utah’s annual rate of unintentional injury deaths has declined from 49.8 per 100,000 persons in 1980 to 35.6 per 100,000 persons in 2002. Increased efforts in public awareness, strengthening prevention activities, establishing resources, and developing collaborations with various state and local agencies have all contributed to the decline.
- Death rates in Utah and the U.S. for unintentional injuries declined throughout the 1980s, up until 1992, when the rates seem to have leveled-off, and may even be increasing again.
- The Violence and Injury Prevention Program (VIPP) is working with several agencies, such as the Utah Department of Public Safety and Primary Children’s Medical Center, to promote the use of safety belts, child safety seats, booster seats, and bicycle helmets.
Motor Vehicle Traffic Crash Deaths

Motor vehicle crashes (MVCs) are the leading cause of injury death for all ages. From 1997 to 2001, motor vehicle crashes accounted for an average of 348 deaths annually. In addition, each year over 30,000 people in Utah will be injured and over $30 million will be spent on inpatient hospitalizations due to MVCs in Utah.

**Healthy People 2010 Objective 15-15a Goal: Deaths from Motor Vehicle Crashes - (Age-adjusted per 100,000 standard population) (9.2). (See Appendix)**

- Motor vehicle crash death rates are highest among people aged 15-24 years and 65 years and older.
- In 2001, Utah saw 15.7 MVC deaths (age-adjusted) per 100,000 persons, compared to the national rate of 15.0 MVC deaths per 100,000 persons.
- Younger age or inexperience of the driver contribute to an increased risk of death or injury from motor vehicle crashes. Excessive speed and fatigue are other factors resulting in increased risk of motor vehicle crashes and deaths due to those crashes.
- The most important factors contributing to motor vehicle crash injuries are failure to use seat belts, excessive speed, and driving under the influence of alcohol or drugs. Not using a safety belt or a child safety restraint while traveling in a motor vehicle greatly increases the probability of being injured or killed in a crash.

Sources: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health; 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

Note: Data have been age-adjusted to U.S. 2000 standard population.; ICD-9 codes E810-E819.
Fall Injury Hospitalizations

Falls are the most common cause of injury hospitalization and the second leading cause of unintentional injury death. Persons 65 years of age and older account for a disproportionate number of these deaths.

- During the past five years (1998-2002), there were 461 fall-related deaths and 20,814 fall-related hospitalizations in Utah. Greater than 60% of these injuries were sustained by people aged 65 years and older (339 deaths; 12,804 hospitalizations).
- Several local health departments have implemented fall prevention programs. Those programs are multifaceted and attempt to prevent falls among the young and the elderly.
- The Utah Department of Health Violence and Injury Prevention Program provides consultation and assistance to local health departments that are developing fall prevention programs and has developed resource manuals for them.

Source: Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health
Note: Age-adjusted to U.S. 2000 population; Urban Counties include Salt Lake, Davis, Weber, and Utah Counties.; ICD-9 codes E880-E888.
Work-related Injury Deaths

Work-related injuries and illnesses continue to place an enormous burden on U.S. workers and the economy. In 1993, work-related injuries cost $121 billion in medical care, lost productivity, and wages. Efforts to reduce occupational injuries are often successful and cost-effective.

- Work-related injuries are an important cause of unintentional injury deaths. About 50 Utahns die each year from a work-related injury.
- The Utah Department of Health Office of Epidemiology recently received a grant from the National Institute for Occupational Safety and Health (NIOSH) to gather data and address work-related burn injuries.
Injury and Violence

Firearm-related Emergency Department Visits

*Firearm-related injuries account for over 200 deaths per year in Utah. Most of these firearm deaths are due to suicide.*

**HEALTHY PEOPLE 2010 OBJECTIVE 15-5 GOAL: NONFATAL FIREARM-RELATED INJURIES (PER 100,000 POPULATION)**

(8.6). *(SEE APPENDIX)*

**Firearm-related Hospital Emergency Department Visits, Utah, 1996-2001**

- About 200 people are killed by firearms each year in Utah. During 1999-2002, firearms killed 817 people in Utah. Less than 1% of those deaths were unintentional or “accidents.” Approximately 2% resulted from legal intervention and 15% were homicide. Eighty-two percent of all firearms deaths were suicide, with 87% of firearm suicides among males. Of suicides committed by Utah adolescents age 15-19 years, 83% are committed with a firearm.

- Appropriate locked and unloaded storage of firearms could help prevent firearm-related injuries by reducing availability and access to guns. The following recommendations are cited in a policy statement by the American Academy of Pediatrics published in April 2000:
  1. Firearm-related injuries are often fatal; since most deaths of children occur before their arrival at the hospital, primary prevention is essential.
  2. Suicide completion rises if guns are used; therefore, youth access to guns must be restricted.
  3. Access to guns increases the number of conflict-related deaths and injuries.
  4. Youth access to guns creates a risk for serious unintentional injury and death.
  5. Most firearm-related injuries and deaths of children and adolescents involve a handgun.

- Education programs, such as “Gunwise” are conducted by local health departments, Primary Children’s Medical Center, the Division of Wildlife Resources, and others to make parents aware that they must accept personal responsibility for proper storage of guns in their homes.

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

Note: Age-adjusted to U.S. 2000 population; Urban Counties include Salt Lake, Davis, Weber, and Utah Counties.; E922, E955, E965.0-E965.4, E968.6, E970, E985.0-E985.4
Suicide Deaths

Suicide is the second leading cause of injury death in Utah, accounting for almost as many deaths as motor vehicle crashes. Utah’s rate is 10th highest in the nation. It is the leading cause of death for Utah males aged 15-44. Although males are more likely to complete suicide, the rate of suicide attempts requiring hospitalization is higher for females.

Healthy People 2010 Objective 18-1 Goal: Suicide (age-adjusted per 100,000 standard population) (5). (See Appendix)

In 2002, there were 336 Utah deaths from suicide. Since 1980, suicide rates have decreased for Utah females (7.1 to 4.6 per 100,000), but rates have increased for males (18.7 to 22.9 per 100,000). For nearly two decades, the Utah suicide rate has been higher than the U.S. rate (13.8 versus 10.7 in 2001). The Utah suicide rate for young males is one of the highest in the nation.

From 1988-1997, suicide deaths were highest among White non-Hispanic (1,976) and Hispanic (128) boys and men. Most (63%) youth suicide completers aged 13-21 had contact with the Juvenile Court.

The most common risk factors for suicide are: untreated mental health conditions (depression, anxiety, etc.), behavioral problems, low self-esteem, substance use and abuse, and contact with Juvenile Court.

In 1999, with the cooperation of several agencies and partners, the Violence and Injury Prevention Program (VIIPP) facilitated the formation of the Utah Youth Suicide Prevention Task Force. Members include youth experts and advocates from many disciplines. Primary objectives of the Task Force are improvement in suicide prevention through the early identification, intervention, and referral of high-risk youth.

Sources: Utah Governor’s Office of Planning and Budget; Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health

Note: Age-adjusted to U.S. 2000 population
ICD-9 codes E950-E959
Injury and Violence

Homicide

There were, on average, 57 homicides among Utah residents each of the past four years (1999-2002). Nationally, homicide is the second leading cause of death among adolescents aged 11-19 years. The reasons for these deaths vary. Some are due to gang violence or are drug related, others are related to domestic violence.

Healthy People 2010 Objective 15-32 Goal: Homicides (age-adjusted per 100,000 standard population) (3). (See Appendix)

- Overall, the U.S. has seen a steady decline in homicide deaths since 1991. The Utah homicide rate has remained fairly consistent, aside from occasional, probably random, variation.
- Most homicides are committed with firearms, occur during an argument, and occur among people who know each other.
- National research suggests the following factors contribute to child homicide: beliefs supportive of violence, social cognitive deficits, poor monitoring and supervision of children, exposure to violence, parental drug/alcohol abuse, adolescent drug/alcohol abuse, association with peers engaged in high-risk behavior, poverty and low economic opportunity, and high levels of family disruption.
- Preventing homicide requires a community effort, including measures such as reducing gang activity, teaching conflict resolution in schools and to adults, and ensuring that firearms are both stored and handled appropriately. The UDOH Violence and Injury Prevention Program trains medical care providers to identify, refer, and treat domestic violence victims. The state has established several review committees to investigate the causes and risk factors of specific homicides and recommend prevention strategies.

Sources: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health; 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

Note: Data are age-adjusted to the U.S. 2000 standard population. ICD-9 codes E960-E969, ICD-10 codes X85-Y09, Y87.1
Rape/Attempted Rape Incidence

Rape devastates families and changes lives forever. Rape is a violent act that impacts everyone—men, women, and children of all ages, races, religions, and income levels. Rape victims often suffer long-term emotional consequences of the rape incident.

- The figures displayed above reflect only those incidents that were reported to authorities. It is estimated that only 16% of rapes are reported to law enforcement.

- 2002 Female Rape/Attempted Rape Incidence
  Utah - 913 reported rapes/attempted rapes, 39.3 per 100,000
  U.S. - 95,136 reported rapes/attempted rapes, 33.0 per 100,000 (4.7% increase from 2001)

- A statewide toll-free 24-hour rape and sexual assault crisis and information line is maintained by ten rape crisis centers, providing confidential crisis services, information, support, and referral to victims/survivors of rape and sexual assault.

- Hospital intervention teams are maintained and coordinated by ten rape crisis centers to provide services within the medical/health care setting to all reporting sexual assault victims and their families, and oversee the collection of evidence for prosecution.

- The ten Rape Crisis Centers in Utah provide public awareness presentations to increase sensitivity and understanding within communities regarding the causes and impact of sexual violence and prevention/risk skill building.
Health Status: Physical Health Last 30 Days

General physical health status is the culmination of all the things that affect a person’s health. A person may have had poor health because of an injury, an acute infection such as a cold or flu, or a chronic health problem. This measure can be used to identify health disparities, track population trends, plan public health programs, and measure progress at the state level toward the two major goals of Healthy People 2010: Improving the Quality and Years of Healthy Life and Eliminating Health Disparities.

- In 2002, an estimated 13.2% of Utah adults reported seven or more days in the past 30 days when their physical health was NOT good. This percentage has remained fairly constant since 1993; fluctuating between 13.2% and 16.6% (age-adjusted rates).

- For some years, a larger percentage of adults in Utah reported seven or more days their physical health was NOT good in the past 30 days as compared to the U.S. However, in 2002, this percentage was smaller in Utah than in the U.S.; 13.2% in Utah vs. 14.5% in the 22 states that asked the question (age-adjusted rates).

- Because people often seek health care when they feel unhealthy, poor self-perceived health can be associated with burden on the health care delivery system.

- Poor health status is related to many of the risk factors for disease and injury such as overweight/obesity, physical inactivity, smoking, and lack of immunization.

- Until the last few years efforts to control chronic diseases have focused on preventing premature mortality. Reducing morbidity and improving disease self-management skills are now receiving considerably more attention from chronic disease prevention and control programs.
Health Status: Mental Health Last 30 Days

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.

• In 2002, approximately 15.2% of Utah adults reported seven or more days in the past 30 days when their mental health was NOT good. This percentage was higher for adults with lower education and income levels, and lower for older adults.

• Looking at age-adjusted rates for 1993-2002, Utah adults were similarly likely to report 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.

• In Utah, the likelihood of reporting seven or more days of poor mental health was related to age, sex, income, and education. The likelihood decreased with age, income, and education, and was higher for women than for men.

• Health insurance coverage for mental health problems is often inadequate for persons requiring long-term outpatient psychotherapy. Many psychotherapeutic medications (such as antidepressants and anti-anxiety drugs) are prescribed by primary care physicians. Primary care visits are an opportunity to identify and treat some mental health problems.

• Persons with mental disorders are often less successful at negotiating the challenges of educational completion and career advancement. As a result, they are at risk for problems associated with poverty.
Chronic Diseases and Conditions

Limitation in Activities

Persons whose activities are limited due to physical, mental, or emotional problems may need more specialized health care than persons without such limitation. Their medical costs are generally higher and they are more likely to miss days from school or work.

- In 2002, 14% of all Utahns were estimated to have some type of limitation in their activities due to a physical, mental, or emotional problem. This percentage ranged from 6.8% for adults ages 25-34 to 30.4% for those adults 65 years and older.

- Limitation of activity is more prevalent in older age. The percentage of adults who reported activity limitation was virtually the same for Utah and the U.S. in each age group in 2001. (This question was not asked in all states in 2002.)

- Lack of insurance can be a barrier to health care, resulting in complications due to chronic disease, thus increasing the chance for limitation in activities.

- Personal behaviors that affect overall health status can contribute to the kinds of chronic conditions that lead to limitations in activities.

- Limitation in activity is directly related to a person’s overall health status, including physical, mental, and emotional health.
Dental Caries Experience: Children Age 6-8

Dental caries (tooth decay) is one of the most common health problems in the United States and the most common chronic childhood disease. It is five times as common as asthma in children. It is also one of the most preventable diseases. Oral health affects a person’s overall general health.

**Healthy People 2010 Objective 21-1b Goal: Dental caries experience - Primary or permanent teeth - Children (ages 6 to 8 years) (42%). (See Appendix)**

- Utah continues to lag behind the U.S. in the percentage of caries-free children. In 1994, 48% of 6-8-year-olds in the U.S. were caries-free. Utah children have more cavities in part because of the lack of fluoridation in Utah’s drinking water. Community water fluoridation will be implemented in Salt Lake and Davis Counties by the end of 2003.

- In a recent survey of parents of first through third grade children, one in five did not have insurance that pays for dental care. One in ten children required dental care during the past year but were unable to obtain needed dental treatment.

- Currently, only 3% of Utahns are drinking fluoridated water. Other risk factors include eating habits, such as frequent snacking and soft drink consumption, not brushing/flossing regularly, and not visiting the dentist regularly. Dental disease affects children from poor families five times as much as children from higher income families. Minority ethnic populations have a higher incidence of caries experience and untreated caries and a lower rate of sealant placement.

- Oral disease has been linked to several other chronic diseases, including cardiovascular disease and diabetes. Periodontal disease in pregnant women has also been linked to preterm, low birth weight babies.

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**Percentage of Children Who Had Ever Had Dental Caries by Local Health District, Utah Children 6-8 Years Old, 2000**

- Bear River: 51%
- Central: 65%
- Davis County: 58%
- Salt Lake Valley: 58%
- Southeastern: 73%
- Southwest: 56%
- Summit: 67%
- Tooele: 33%
- TriCounty: 73%
- Utah County: 58%
- Wasatch: 60%
- Weber-Morgan: 61%

Source: Utah Oral Health Survey, 2000, Utah Department of Health
Note: The Utah 2000 rate was 58%.
Dental Disease: Untreated Decay in Children Age 6-8

Dental caries (tooth decay) is one of the most common health problems in the United States. Among school-aged children, 45% have caries in their permanent teeth. Among adults, 94% show evidence of past or current dental caries. Untreated dental caries is an important indicator of adequate and timely access to dental care.

Healthy People 2010 Objective 21-2b Goal: Untreated Dental Decay - Primary or Permanent Teeth - Children (Ages 6 to 8 Years) (21%). (See Appendix)

- Of the first through third grade students screened in 2000, 22% had obvious untreated decay and 2% of the children had urgent dental needs. Those findings are comparable to those found in other states.
- Individuals without dental insurance coverage have more untreated decay and were twice as likely to report that they could not access needed dental treatment during the past year.
- Oral disease has been linked to several other chronic diseases, including cardiovascular disease and diabetes. Periodontal disease in pregnant women has also been linked to preterm, low birth weight babies.
- Some Utah Department of Health activities addressing access to dental care include:
  - Medicaid provides over 100,000 children age 1 through 18 years with dental benefits.
  - Children’s Health Insurance Program (CHIP) will make 30,000 children eligible for basic dental services only (screening, sealants, and emergency care).
  - The Utah Oral Health Initiative facilitates the formation of local oral health coalitions to improve access to dental care.
  - The Caring Foundation for Children is providing dental benefits for children who do not qualify for CHIP because they have other medical only health coverage.
Dental Sealants: Children Age 8

Eighty percent of a child’s dental decay is found on the occlusal or biting surface of the tooth. Occlusal sealants form a barrier to protect this part of the tooth. The occlusal surface of teeth with deep pits and fissures are difficult to clean and therefore this part of the tooth is more susceptible to decay.

**Healthy People 2010 Objective 21-8A Goal: Dental Sealants - Children (age 8 years) (50%). (See Appendix)**

- Sealants have proven to be an effective decay preventive measure for children when placed on the biting surfaces of the back teeth. The most recent survey indicates that 50% of eight-year-old children have at least one sealant on their first permanent molar.
- With half of the eight-year-old children having a sealant, Utah ranks considerably higher than the U.S. average. The latest U.S. results (1991) showed less than 20% with sealants.
- Dental disease affects children from poor families five times as much as children from higher income families. Minority ethnic populations have a higher incidence of caries experience and untreated caries and a lower rate of sealant placement.
- Private dental insurance often covers sealant placement with some exclusions. Medicaid and CHIP include sealant coverage for low-income children; however, access remains a barrier to treatment. Individuals without dental insurance coverage are less likely to have sealants.
- Dental insurance coverage for sealants influences their use. CHIP and Medicaid cover sealants to promote dental health in those at-risk populations. Local health departments and institutions with dental hygiene education programs conduct sealant placement projects for low-income children.

**Note:** The Utah rate was 50%.
Diabetes as Underlying Cause of Death

Diabetes is the sixth leading cause of death in the U.S. and in Utah.

- Rates for diabetes deaths in Utah are consistently higher than those for the U.S.
- Diabetes is often underreported on death certificates. Nevertheless, in 2002, diabetes was listed as the underlying cause for over 500 deaths, or about one of every 26 deaths in the state.
- People with diabetes have death rates two to four times higher than people without diabetes. Death rates could be reduced with aggressive management techniques, including regular routine check-ups, regular screening for complications, consistent self-monitoring of blood sugar, regular exercise and maintaining a healthy weight.
- The Utah Diabetes Prevention and Control Program encourages people with diabetes to have diabetes education and endeavors to make information about controlling diabetes readily available through media messages.
Coronary Heart Disease Deaths

Coronary heart disease (CHD), resulting from blockage of the arteries that provide blood to heart muscles, is the leading cause of death in Utah. Prevention of CHD is the key to reducing mortality from heart disease.25

**Healthy People 2010 Objective 12-1 Goal: Coronary Heart Disease (CHD) Deaths (age-adjusted per 100,000 standard population) (166). (See Appendix)**

- Deaths due to CHD have declined over the past ten years in both Utah and the U.S. Utah’s 2002 age-adjusted CHD death rate of 102.2/100,000 was lower than the U.S. 2001 rate.
- Health care system factors relate primarily to access to provider care and patient/provider knowledge of signs and symptoms of coronary heart disease and cardiac incidents.
- 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.
- Coronary heart disease is a chronic condition in which atherosclerosis develops in the coronary arteries that supply blood to heart muscles. There were a total of 7,788 discharges from Utah hospitals with a first-listed diagnosis of coronary heart disease in 2002, at a total cost of $188 million.
Diseases Commonly Causing Death in Adults

Stroke (Cerebrovascular Disease) Deaths

Stroke, the death of brain tissue usually resulting from artery blockage, is the third leading cause of death in Utah, behind heart disease and cancer. About 600,000 people in the U.S. suffer a new or recurrent stroke each year. Stroke is a leading cause of long-term disability.

Healthy People 2010 Objective 12-7 Goal: Stroke Deaths (age-adjusted per 100,000 standard population) (48). (See Appendix)

- Death rates for stroke have generally declined in recent decades. Much of this decline can be attributed to control of high blood pressure. Death rates for stroke have not been declining in the United States and Utah as rapidly as heart disease deaths. Utah’s death rate from stroke in 2002 was 59.3 per 100,000 (up from 57.3 in 2001), similar to the U.S. 2001 rate of 60.8 per 100,000.

- Stroke is more common in older compared to younger persons. In fact, for people over age 55, the risk of stroke more than doubles in each successive decade. The incidence of stroke also varies by race and ethnicity. For example, Black persons have a 38% greater risk of first strokes than do White persons.

- Risk factors for stroke include high blood pressure (the most important risk factor), increasing age, family history of stroke, personal history of stroke, cigarette smoking, diabetes, heart disease, carotid artery disease, transient ischemic attacks, and a high red blood cell count. Elevated cholesterol level, obesity, and lack of physical activity, all risk factors for heart disease, also increase the risk of stroke. Many of these risk factors can be modified successfully by adopting lifestyle changes.

- Stroke is a major cause of long-term disability in the U.S.; 15% to 30% of stroke survivors are permanently disabled. In addition, 22% of men and 25% of women who have an initial stroke die within one year.
Cancer Deaths

Cancer is the second leading cause of death in the U.S. and in Utah. The financial costs of cancer are substantial, with an overall annual cost estimated at $171.6 billion. Treatment for lung, prostate, and breast cancers accounts for more than half of the direct medical costs.

**Healthy People 2010 Objective 3-1 Goal: Overall Cancer Deaths (Age-Adjusted per 100,000 Standard Population) (ICD-9: 140-208) (159.9). (See Appendix)**

- Utah's death rate from all cancers is the lowest in the nation and has remained fairly stable over the time period from 1980 through 2002.
- Increasing age is a risk factor for developing cancer. About 80% of all cancers are diagnosed in persons aged 55 years or older. Other risk factors for cancer include a person's gender and family medical history. Cancer may also be linked to environmental exposures and lifestyle choices such as use of tobacco and alcohol, diet, and sun exposure. In fact, tobacco is associated with 87% of all cases of cancer of the lung, trachea, and bronchus, and lung cancer was responsible for 28% of all cancer deaths in 2001.
- The Utah Comprehensive Cancer Control Initiative (UCCCI) is a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCCCI is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. 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.
Diseases Commonly Causing Death in Adults

Lung Cancer Deaths

Lung cancer is the leading cause of cancer-related death in Utah and the U.S. It is estimated that lung cancer will be responsible for 28% of all cancer deaths (approximately 157,200 U.S. deaths) in 2003. Because symptoms often do not appear until the disease is advanced, early detection of this cancer is difficult. Tobacco is associated with 87% of all cases of cancer of the lung, trachea, and bronchus.

Healthy People 2010 Objective 3-2 Goal: Lung cancer deaths (age-adjusted per 100,000 standard population) (ICD-9: 162.2 - 162.9) (44.9). (See Appendix)

- Utah’s death rate from lung cancer has changed little over the past 20 years and was 23.9 per 100,000 population in 1980 and 24.3 per 100,000 population in 2002 (rates are age-adjusted to the 2000 U.S. standard population).
- During 1995-1999 (the most recent national data available from the National Cancer Institute), Utah had the lowest average annual lung cancer mortality rate in the nation: 25.7 per 100,000 compared to 57.7 per 100,000 population respectively (rates are age-adjusted to the 2000 U.S. standard population).
- The risk of developing lung cancer increases with age. Cigarette smoking is the most important risk factor for lung cancer. Other risk factors include occupational exposures such as radon and asbestos and indoor and outdoor pollution, including environmental tobacco smoke.
- Utah’s public health efforts to reduce the adverse health effects of tobacco use have focused on promoting smoking cessation, limiting exposure to environmental tobacco smoke, and reducing youth access to tobacco products.

Lung Cancer Mortality Rate by Year, Utah and U.S., 1980-2002

Sources: U.S. Center for Disease Control and Prevention, on-line data - CDC WONDER; Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health

Note: Codes used to define lung cancer: ICD-9 162.2 - 162.9, ICD-10 C34. ICD-10 definition also includes cancer of the trachea. However, there were no deaths in Utah from cancer of the trachea from 1995 to 1999, suggesting that this change has resulted in little or no artificial difference in comparing death rates from the two time periods. Age-adjusted to U.S. 2000 standard population.
Breast Cancer Deaths

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.

Healthy People 2010 Objective 3-3 Goal: Female breast cancer deaths (age-adjusted per 100,000 standard population) (ICD-9: 174) (22.3). (See Appendix)

- Utah’s death rate from breast cancer did not change appreciably from 1988 to 1998 (29.0 per 100,000 females and 27.1 per 100,000 females respectively) (rates are age-adjusted to the 2000 U.S. standard population). The mortality rate decreased to 21.8 per 100,000 females in 1999 then increased to 24.2 per 100,000 females in 2002.
- The female breast cancer mortality rate in Utah has been consistently lower than the rate for the U.S.
- 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,8-13 and by about 17% in women aged 40 to 49 years.14-15
- The Utah Cancer Control Program (UCCP) provides free to low cost clinical breast exams and mammograms to women who meet age and income guidelines. Eligible women with abnormal screening exams are offered diagnostic evaluation by participating providers. In addition, the UCCP provides education about the need for early detection and the availability of screening services, conducts outreach to eligible women, uses an annual reminder system, collects outcome data and disseminates information about breast cancer.
Colorectal Cancer Deaths

Colorectal cancer is the second leading cause of cancer-related deaths in the U.S. and Utah. 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.

Healthy People 2010 Objective 3-5 Goal: Colorectal cancer deaths (age-adjusted per 100,000 standard population) (ICD-9: 153.0-154.1, 159.0) (13.9). (See Appendix)

- Utah’s death rate from colorectal cancer was 16.0 per 100,000 population in 2002 (rates are age-adjusted to the 2000 U.S. standard population).
- During 1995 through 1999 (the most recent national data available from the National Cancer Institute), Utah had the second lowest colorectal cancer mortality rate in the nation: 16.7 per 100,000 compared to 21.7 per 100,000, respectively (rates are age-adjusted to the 2000 U.S. standard population).30
- 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.
- Routine screening for colorectal cancer should begin at age 50 for adults of average risk. 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.

Sources: U.S. Center for Disease Control and Prevention, on-line data - CDC WONDER; Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health

Note: ICD-9 codes: 153.0-154.1, 159.0; ICD-10 codes: C18-C20, C26; Age-adjusted to U.S. 2000 standard population.
Diseases Commonly Causing Death in Adults

Prostate Cancer Deaths

Prostate cancer is the second most common 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.

Healthy People 2010 Objective 3-7 Goal: Prostate Cancer Deaths (age adjusted per 100,000 standard population) (ICD-9: 185) (28.8). (See Appendix)

- There was a dramatic increase in prostate cancer mortality during the years 1988-1992. Since then the rates have declined. In 2000, Utah met the HP2010 objective of less than 28.8 deaths per 100,000 men. The rates increased slightly in 2001 and 2002 exceeding the HP2010 target.
- Prostate cancer mortality is similar in Utah and the U.S.
- 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 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.
- In addition, the Utah Department of Health initiated the Utah Comprehensive Cancer Control Initiative (UCCCI), a statewide partnership whose goal is to reduce the burden of cancer. The mission of the UCCCI is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. 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.

Sources: Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health
Notes: ICD9 codes used to define prostate cancer: 185; ICD10 codes used to define prostate cancer: C61; Age-adjusted to U.S. 2000 standard population
Healthy People 2010:

National Health Promotion and Disease Prevention Objectives

The U.S. Public Health Service, in an effort to address the need to cut health-care costs, to prevent the premature onset of disease and disability, and to help all Americans achieve healthier more productive lives, established a series of national health objectives. Health objectives were recently revised to reflect goals for the year 2010. A complete list of the objectives may be found in Healthy People 2010 and on the Internet at http://www.healthypeople.gov/. The Public Health Service recommends that public health entities regularly and systematically track population health objectives. A list of all HP2010 objectives and their Utah-specific priorities and targets may be found on the Internet at http://health.utah.gov/ibis-ph/hp2010_focusareas.htm.

Some of the Healthy People 2010 (HP2010) goals, primarily goals for death rates, are stated in terms of an age-standardized value. Age-adjusted rates control for age effects, allowing better comparability of rates across areas and time. When comparing across geographic areas, such as comparing a state to the entire United States, or one state to another, age-standardizing, or age-adjusting controls for area-to-area differences in health events that can be explained by differing ages of the area populations. For example, a state with an older population will have higher death rates for cancer, even though its exposure levels and cancer rates for specific age groups are the same as those of other states. Utah has a young population, causing our crude death rates for age-related conditions to be lower than the U.S. rates. By using age-standardized rates, Utah and U.S. rates may be meaningfully compared. Age-adjusting is also used to compare death rates across time, as the age-distributions of populations vary over different time periods. For more information on age-adjustment of health data, see Lilienfeld and Stolley (1994).

In many cases, a related HP2010 Objective existed for a measure, but was not identical in definition to the measure we reported. In these cases, no reference was made to the HP2010 Objective. The UDOH continues to work toward alignment of our reported measures with various reporting standards when it’s appropriate and will do so for HP2010 Objectives over time.
Appendix B; Utah Public Health on the Internet

Utah Public Health on the Internet

- Utah Department of Health (UDOH) – http://health.utah.gov

UDOH Division of Epidemiology and Laboratory Services – http://www.health.utah.gov/els/index.html
- Communicable Disease Control (links to HIV/AIDS, Tuberculosis, Sexually Transmitted Diseases, Hepatitis C) – http://www.health.utah.gov/els/hivaids/index.html

UDOH Division of Community and Family Health Services – http://health.utah.gov/cfhs/index.html
- Cardiovascular Program – http://www.hearthighway.org/
- Asthma Program – http://health.utah.gov/asthma/
- Cancer Control Program – http://www.utahcancer.org
- Baby Watch, Early Intervention – http://www.utahbabywatch.org
- Immunizations – http://www.immunize-utah.org/default.htm
Appendix B; Utah Public Health on the Internet

- Reproductive Health Program – http://www.health.utah.gov/rhp/

**UDOH Division of Health Systems Improvement** – http://health.utah.gov/hsi/

- Emergency Medical Services – http://health.utah.gov/ems/
  Childcare Licensing – http://health.utah.gov/licensing/
- Primary Care and Rural Health – http://health.utah.gov/primary_care/

**UDOH Division of Health Care Financing (Utah Medicaid Program)** – http://health.utah.gov/medicaid/

- Children’s Health Insurance Program (CHIP) – http://health.utah.gov/chip/
- Primary Care Network (PCN) – http://health.utah.gov/pcn/

- Utah’s Local Health Departments – http://www.health.utah.gov/lhd/

- National Links
  - U.S. Department of Health and Human Services – http://www.hhs.gov/
  - Centers for Disease Control and Prevention – http://www.cdc.gov/
  - Behavioral Risk Factor Surveillance System (BRFSS) – http://www.cdc.gov/brfss/
  - American Public Health Association – http://www.apha.org/
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We welcome your opinions of this report. Please help us by completing this page and returning it to:

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