# County Data Book

# Health Section

**Colorado State** University

*Knowledge to Go Places*

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# INTRODUCTION

The Health Section of the County Data Book contains data, information and trends regarding a variety of health issues in Colorado, its counties and where possible comparisons are made to United States averages. The analysis of health data helps to identify notable trend as well as to address other substantive health issues affecting the state. Most data in this section comes from the Colorado Department of Public Health and Environment (CDPHE) however other resources augment it. CDPHE is the leading public health agency in the state and highlights challenges facing the state, provides information, data, and interpretation of the issues, suggest systemic ways to address the issues, and aims to ensure implementation of logical means for improvement.

Access to data has dramatically changed over the last five years and now many agencies post their data on the Internet. Most agencies update their databases several times a year so we have decided to include the most requested data here and reference web sites for other data sets. These websites are listed at the end of each section. The topics covered in this section are listed in the Table of Contents (page iii).

**Health Challenges Facing Colorado**
The health issues facing Colorado are complex, unique and varied. Some of the many challenges facing Colorado include: changing population and demographic patterns; resource constraints; new diseases; chronic diseases; disparities in health status; and access to health insurance.

One of the major trends affecting health in the state includes changing population and demographic patterns. Colorado's population has grown at a rapid rate for nearly a decade, and its median age has been increasing gradually for the past several years. The combination of a growing and aging population places new pressures on the state's infrastructure, triggering an increase in demand for public health services.

Public health efforts that require additional funding in the state are faced with resource constraints due to restrictions on state government spending. While state revenues have increased with the strong economy, spending authority has been constrained by a state constitutional amendment known as TABOR, added in 1992. New investment in state infrastructure or programs, therefore, is severely curtailed.

The emergence of new, more virulent strains of disease has triggered growing public fear about the ability of public health and the medical community to protect the safety of all citizens. Increasing concerns about bio-terrorism and diseases that are antibiotic resistant will be expanding factors that must be addressed.

For many years, chronic diseases have remained the leading cause of death and years of potential life lost (YPLL) throughout the United States. In Colorado, for example, heart disease, cancer, stroke and chronic obstructive pulmonary (lung) disease account for more than 60 percent of all deaths recorded each year. This is a significant issue for public health because many of the risk factors that contribute to chronic disease (obesity, tobacco use, diet, etc.) can be minimized by a change in one's lifestyle.

Another critical area that needs emphasis relates to the reduction of disparities among groups most at risk. There are glaring disparities in the health status of different populations. These are easily noted when making racial/ethnic comparisons of different indicators of access to care. Ethnicity, age, gender, income, disability and geographic location have been identified as major contributing factors in determining the overall health status of the state's population.

Although Colorado has been able to lower the percent of children without health insurance coverage and has a higher than average employer sponsored health coverage rate, the rate of uninsured has been increasing. Additionally, there remain many disparities in the access to health insurance in the state. An unusual group of uninsured has also immerged as a new public health concern. Non-elderly adults are 40% more likely than children to be uninsured and less than half as likely to have public coverage.

An additional challenge facing Colorado's health care system is how well it can weather changing economic conditions. State programs, including Medicaid, offer only limited protection to Colorado's citizens. The current rate of uninsurance is low due to a healthy economy and an above national average number of small firms offering insurance to their employees (which is decreasing). These factors could change suddenly, however, and the state's system of support is not well equipped to expand to meet greater needs. The constitutionally required spending limits and the lean nature of the current Medicaid program mean that there is little room to stretch resources further. In addition, Colorado's emphasis on moving its Medicaid recipients into managed care may place some strains on the relatively healthy system of safety net providers that currently serves the uninsured.

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## 1    COLORADO VITAL STATISTICS 2000

On the following pages are listed and summarized various Colorado vital statistics. These data come from a report, <u>Annual Report of Vital Statistics</u>, that describes Colorado vital events, defined as births, deaths, spontaneous fetal deaths, induced terminations of pregnancy, marriages, and marriage dissolutions.  The monitoring of such major life events provides users with data for charting trends, identifying and researching health concerns, and allocating resources.  The report is produced by the *Health Statistics Section of the Colorado Department of Public Health and Environment (CDPHE)*.

County level data for all vital statistics is available through the CDPHE web site at **http://www.cdphe.state.co.us/hs/hsshom.asp** and in the annual vital statistics publication from the *Health Statistics Section of the CDPHE*.

Additionally, county data and additional statewide data are available through **http://www.cdphe.state.co.us/sascohidweb/Cohids.html**.  The "Colorado Health Information Dataset (CoHID)" is a combined effort of local and state public health agencies.  This is a new searchable database with the purpose of providing health, demographic, and environmental data for review and analysis on county, census tract, and zip code levels.  Using internet-based technologies, users may query and summarize from a variety of datasets.  *CoHID* resides within the *CDPHE*.

## COLORADO FACTS FOR 1998 THROUGH 2000

In 1998:
- Colorado had the **25th** largest population among all states
- The state's population has increased by **23.4%** over the past decade
- The Colorado race/ethnicity make-up includes **77.7 percent** white non-Hispanic Hispanics; **13.4 percent** white Hispanics; and **4.2 percent** blacks
- Denver County had the largest population; San Juan County had the smallest
- Colorado reported the third largest birth rate and fourth lowest death rate in the US
- Denver and Douglas Counties had the highest birth rates (**18.8**)
- Custer County reported the lowest age adjusted death rate

**On an average day in 2000, these events occurred to Colorado residents[1]...**
- 92 marriages

- 179 births including:
  - 134 to married women
  - 45 to unmarried women
  - 15 low weight births
  - 16 pre-term births

- 74 deaths including:
  - 17 from heart disease
  - 16 from cancer
  - 5 from unintentional injuries

**Colorado outperformed the nation in 1998 by experiencing[2]…**
- Lower rates of teenage births
- Lower proportion of Caesarian deliveries
- Lower infant mortality rates
- Lower death rates from heart disease and cancer (excluding skin cancer)
- Higher incidence rates of multiple sclerosis
- Higher incidence and death rates from skin cancer
- Lower rates of homicide
- Higher life expectancy

**Colorado fell below the nation in 1998 by experiencing…**
- Higher percentages of low weight births
- Higher death rates for suicide
- Higher death rates for chronic obstructive lung disease
- Higher death rates for atherosclerosis
- Higher rates of unintentional injury and motor vehicle deaths
- Higher rates of drug- and alcohol-induced deaths

[1] Colorado Vital Statistics 2000, CDPHE, January 2002
[2] Colorado Vital Statistics 1998, CDPHE, May 2000

# BIRTH RELATED DATA

Unless otherwise noted this data is for 2000[3].

### *Birth Highlights*
- Live Births – **65,429**
- Birth Rate **15.1 per 1,000** population
- The number of live births was up from **62,142** in 1999

### *Fertility*
- General Fertility Rate – **67.2 per 1,000** women age 15-44.
- The fertility rate for teens aged 10-14 increased **from 0.7** in 1999 to **0.8** in 2000.
- The fertility rate for teens aged 15-19 increased from **48.1** in 1999 **to 50.9** in 2000.

### *Teen Births*
- Teen Births (age 10–14) – **117**
- Teen Births (age 15–19) – **7,546**

### *Low Weight Births*
- Low Weight Births – **5,549 or 8.5%**
- The percent of low weight births rose from **8.4%** in 1999 to **8.5%** in 2000.
- Colorado has maintained a higher percent of low weight births than the nation since 1950.  The U.S. reported **7.6%** low weight births in 2000.

### *Unmarried Births*
- Births to Unmarried Women – **16,339 or 25.0%**
- The percentage of births to unmarried mothers fell from **25.4 percent** in 1999 to **25.0 percent** in 2000.
- The U.S. continued to report a higher percent to unmarried mothers than Colorado at **33.1 percent** in 2000.

### *Marriages*
- Colorado marriage applications in 1999 – **35,670**
- The number of marriage applications increased from **33,824** in 1998.
- The Colorado marriage rate rose to **8.6 marriages per 100,000** population in 1999 from **8.3 per 100,000** in 1998.

### *Divorces*
- Colorado had **20,188** marriage dissolutions in 1999.
- The marriage dissolution rate was **4.9 per 1,000** population in 1999.

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[3] Colorado Vital Statistics 2000, CDPHE, January 2002.

*Summary*

In both Colorado and the United States there has been a decrease in the birth rate (measured as number of births per 1,000 in population), however, the percentage of births to unmarried women has increased dramatically.  In Colorado, the number of births to unmarried women increased from **9.6 percent** of all births in 1970 to **25.0** percent in 2000.  All ethnic groups have shown an increase since 1970, with Asians showing the largest increase of **6.5%**, growing from **4.8%** of all births in 1970 to **11.3 %** in 2000.  Blacks, with **51.6%**, and American Indians, with **46.6%**, have the largest percentage of unmarried births.  The most recent figures do however show a decrease in births to unmarried women from highs in the early to mid-1990s for all ethnic groups.   From 1970 to 2000, the percent of teen births (age 10-19) has fallen from **17.3% to 11.7%**.  The percent of women that have prenatal blood tests for sexually transmitted diseases have increased since 1970.  In 2000, **92.8%** were tested for syphilis, **60.7%** were tested for HIV, and **90.7%** were tested for hepatitis.

**Tables 1 - 8** below provide additional trend data on births in Colorado during 2000.

**Table 1: Trends in Live Births**

| Annual numbers and rate per 1,000 population | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **1970** | | **1980** | | **1990** | | **2000** | |
| | **Number** | **Rate** | **Number** | **Rate** | **Number** | **Rate** | **Number** | **Rate** |
| **Colorado** | 41,480 | 18.6 | 49,716 | 17.1 | 53,491 | 16.2 | 65,429 | 15.1 |
| **U.S.** | 3,731,386 | 18.4 | 3,612,258 | 15.9 | 4,158,212 | 16.7 | 4,064,948 | 14.8 |
| Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | | | |

**Table 2: Trends in Live Births to Unmarried Women**

| Annual numbers and percent of live births | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **1970** | | **1980** | | **1990** | | **2000** | |
| | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| **Colorado** | 3,982 | 9.6 | 6,465 | 13.0 | 11,359 | 21.2 | 16,339 | 25.0 |
| **U.S.** | 399,258 | 10.7 | 664,655 | 18.4 | 1,164,299 | 28.0 | 1,345,498 | 33.1 |
| Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | | | |

**Table 3: Trends in the Number and Percent of Low Weight Births**

| Annual numbers and percent of live births | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **1970** | | **1980** | | **1990** | | **2000** | |
| | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| **Colorado** | 3,622 | 9.0 | 4,090 | 8.2 | 4,286 | 8.0 | 5,549 | 8.5 |
| **U.S.** | 276,123 | 7.4 | 245,634 | 6.8 | 291,075 | 7.0 | 308,936 | 7.6 |
| Note: Low birth rates are defined as weights less than 2,500 grams (5.5 pounds)<br>Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | | | |

**Table 4: Trends in the Number and Percent of Live Births to Unmarried Women by Ethnicity in Colorado**

| Annual numbers and percent of live births | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **1985** | | **1990** | | **1995** | | **2000** | |
| | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| **White/Non-Hispanic** | 4,983 | 11.4 | 5,683 | 14.3 | 6,850 | 17.9 | 7,280 | 17.4 |
| **White Hispanic** | 2,717 | 36.5 | 3,716 | 40.7 | 4,655 | 41.4 | 6,949 | 39.0 |
| **Black** | 1,202 | 50.0 | 1,572 | 54.6 | 1,398 | 53.6 | 1,563 | 51.6 |
| **Asian** | 50 | 4.8 | 124 | 11.2 | 229 | 15.2 | 235 | 11.3 |
| **American Indian** | 164 | 39.9 | 253 | 51.0 | 314 | 54.9 | 299 | 46.6 |
| Note: Low birth rates are defined as weights less than 2,500 grams<br>Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | | | |

**Table 5: Trends in the Number and Percent of Live Births to Women Aged 10-19**

| Annual numbers and percent of total live births to women aged 10-19 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1970** | | **1980** | | **1990** | | **1995** | | **2000** | |
| **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| 7,175 | 17.3 | 6,587 | 13.2 | 6,066 | 11.3 | 6,596 | 12.1 | 7,663 | 11.7 |
| Source: <u>Colorado Vital Statistics,</u> CDPHE | | | | | | | | | |

**Table 6: Trends in Live Births by Race/Ethnicity of Mother**

Annual numbers and percent of live births

|                      | 1980   | Percent | 1990   | Percent | 1995   | Percent | 2000   | Percent |
|----------------------|--------|---------|--------|---------|--------|---------|--------|---------|
| **White/Non-Hispanic** | 38,998 | 78.7    | 39,739 | 74.5    | 38,269 | 70.5    | 41,837 | 63.9    |
| **White/Hispanic**   | 7,200  | 14.5    | 9,131  | 17.1    | 11,244 | 20.7    | 17,817 | 27.2    |
| **Black**            | 2,037  | 4.1     | 2,879  | 5.4     | 2,608  | 4.8     | 3,029  | 4.6     |
| **Asian**            | 947    | 1.9     | 1,108  | 2.1     | 1,505  | 2.8     | 2,076  | 3.2     |
| **American Indian**  | 385    | 0.8     | 496    | 0.9     | 572    | 1.1     | 642    | 1.0     |
| Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | | | |

**Table 7: Live Births that had Prenatal Blood Tests Performed for Sexually Transmitted Diseases**

Annual numbers and percent of live births

|               | 1990   | Percent | 1995   | Percent | 1999   | Percent | 2000   | Percent |
|---------------|--------|---------|--------|---------|--------|---------|--------|---------|
| **Syphilis**  | 50,531 | 94.5    | 49,518 | 91.2    | 60,337 | 97.1    | 60,711 | 92.8    |
| **HIV**       | 5,454  | 10.2    | 16,435 | 30.3    | 38,459 | 61.9    | 41,646 | 63.7    |
| **Hepatitis** | 16,924 | 31.6    | 46,211 | 85.1    | 57,938 | 93.2    | 59,326 | 90.7    |
| Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | | | |

Further data on birth statistics and county level data can be found at
**http://www.cdphe.state.co.us/hs/hsshom.asp** and in the annual vital statistics
publication from the *Health Statistics Section of the CDPHE*.  **Table 8** on the following
page provides selected general birth statistics on the sixty-three counties in Colorado.

**Table 8: Selected County Birth Data, 2000**

| | Live Births | Fertility Rates (Live Births per 1,000 women age 15-64) | Teen Births (15-19) | Low Birth Weight (Percent of Live Births) |
|---|---|---|---|---|
| **Adams** | 6,143 | 72.3 | 853 | 8.2 |
| **Alamosa** | 252 | 70.6 | 41 | 11.9 |
| **Arapahoe** | 7,164 | 63.5 | 707 | 8.7 |
| **Archuleta** | 112 | 60.5 | 17 | 5.4 |
| **Baca** | 46 | 60.9 | 14 | 13.0 |
| **Bent** | 62 | 61.4 | 18 | 6.5 |
| **Boulder** | 3,875 | 54.4 | 272 | 7.6 |
| **Chaffee** | 156 | 59.3 | 19 | 13.5 |
| **Cheyenne** | 20 | 46.8 | * | * |
| **Clear Creek** | 95 | 50.3 | 7 | 13.7 |
| **Conejos** | 140 | 86.7 | 27 | 6.4 |
| **Costilla** | 41 | 62.9 | 5 | 12.2 |
| **Crowley** | 50 | 73.6 | 7 | * |
| **Custer** | 31 | 55.0 | 5 | 16.1 |
| **Delta** | 287 | 62.8 | 55 | 7.7 |
| **Denver** | 10,988 | 84.0 | 1,574 | 9.5 |
| **Dolores** | 26 | 80.7 | 5 | 26.9 |
| **Douglas** | 3,469 | 82.1 | 68 | 7.6 |
| **Eagle** | 778 | 75.0 | 76 | 8.2 |
| **Elbert** | 234 | 52.5 | 9 | 8.1 |
| **El Paso** | 8,99 | 69.8 | 998 | 9.0 |
| **Fremont** | 457 | 62.6 | 74 | 10.1 |
| **Garfield** | 793 | 80.8 | 112 | 6.6 |
| **Gilpin** | 67 | 64.1 | * | 19.4 |
| **Grand** | 148 | 53.6 | 17 | 12.2 |
| **Gunnison** | 190 | 53.9 | 12 | 10.0 |
| **Hinsdale** | 8 | 56.7 | * | * |
| **Huerfano** | 71 | 59.4 | 18 | 9.9 |
| **Jackson** | 12 | 41.8 | 3 | * |
| **Jefferson** | 6,703 | 57.7 | 523 | 8.4 |
| **Kiowa** | 12 | 39.6 | * | * |
| **Kit Carson** | 117 | 80.2 | 22 | 6.8 |
| **Lake** | 140 | 79.9 | 25 | 14.3 |
| **La Plata** | 440 | 43.7 | 45 | 3.9 |
| **Larimer** | 3,251 | 53.7 | 266 | 7.8 |
| **Las Animas** | 172 | 62.1 | 35 | 8.1 |
| **Lincoln** | 48 | 48.0 | 12 | 8.3 |
| **Logan** | 256 | 66.6 | 40 | 5.9 |
| **Mesa** | 1,473 | 62.2 | 232 | 7.1 |
| **Mineral** | 8 | 59.7 | * | * |
| **Moffat** | 178 | 64.1 | 24 | 10.7 |
| **Montezuma** | 309 | 66.3 | 44 | 5.8 |
| **Montrose** | 452 | 71.2 | 64 | 8.0 |
| **Morgan** | 452 | 81.6 | 76 | 6.7 |
| **Otero** | 281 | 71.2 | 61 | 10.7 |
| **Ouray** | 28 | 43.6 | * | 14.3 |
| **Park** | 156 | 51.2 | 10 | 14.8 |
| **Phillips** | 68 | 84.3 | 4 | 7.4 |
| **Pitkin** | 156 | 47.8 | 7 | 4.5 |
| **Prowers** | 252 | 85.3 | 50 | 6.3 |
| **Pueblo** | 1,945 | 66.7 | 365 | 8.4 |
| **Rio Blanco** | 69 | 55.0 | 5 | 8.7 |
| **Rio Grande** | 169 | 69.6 | 32 | 8.9 |
| **Routt** | 215 | 48.1 | 20 | 7.9 |
| **Saguache** | 80 | 69.4 | 18 | 19.0 |
| **San Juan** | 4 | 40.4 | * | * |
| **San Miguel** | 64 | 38.9 | 5 | * |
| **Sedgwick** | 30 | 66.7 | 3 | 10.0 |
| **Summit** | 333 | 56.9 | 23 | 14.1 |
| **Teller** | 201 | 47.1 | 20 | 6.0 |
| **Washington** | 60 | 68.6 | 6 | * |
| **Weld** | 3,172 | 74.6 | 475 | 7.0 |
| **Yuma** | 120 | 66.1 | 24 | 7.5 |

\* Fewer than three cases reported – Values not recorded
**Source: <u>Colorado Vital Statistics 2000</u>, CDPHE, 2001**

## DEATH RELATED DATA:

Unless otherwise noted this data is for 1999[4].

### *Deaths*
- Deaths – **27,229** in 2000
- The number of resident deaths increased from **27,033** in 1999.
- Colorado has consistently reported lower death rates than the nation overall.

### *Crude Death Rates*
- Colorado Crude Death Rate – **629.6 per 100,000** population in 2000.
- The crude death rate decreased from **650.7 per 100,000** population in 1999.
- The U.S. reported a crude rate of **877.0 per 100,000** in 1999.

### *Age Adjusted Death Rates*
- Age-adjusted Death Rate – **839.6 per 100,000** population in 1999.
- The U.S. had an age-adjusted rate of **881.9 per 100,000** population in 1999.

### *Summary*
The death rate per 1,000 in population in both Colorado and the United States has been falling since 1970. In Colorado, the rate decreased from **7.8** in 1970 to **6.3** in 2000. For the United States, the decrease was from **9.5** in 1970 to **8.8** in 1999. These rates are expected to increase as the "Baby Boomers" (those born between 1945 and 1964) continue to age.

Both nationally and within the state, the leading cause of death is heart disease. The age-adjusted rate was **267.7** per 100,000 population in the United States in 1999, while the rate was **141.9** per 100,000 population in Colorado in 2000. The leading cause of death in Colorado is not consistent for all ethnicities. Cancer is the leading cause of death for Asians and American Indians

The rate of infant deaths has fallen in the United States from **20 per 1,000** live births in 1970 to **7.2 infant deaths per 1,000** live births in 1999. For Colorado, the drop was from **20 infant deaths per 1,000** live births in 1970 to **6.1 deaths per 1,000** live births in 1999. The same trend can be observed in both neonatal and post neonatal deaths for the United States and Colorado

**Tables 9 – 17** provide additional death trends in Colorado and the United States.

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[4] <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001

**Table 9: Trends in Total Deaths**

| | 1970 | RATE | 1980 | RATE | 1990 | RATE | 2000* | RATE* |
|---|---|---|---|---|---|---|---|---|
| Annual numbers and rate per 1,000 population | | | | | | | | |
| **Colorado** | 17,439 | 7.8 | 18,927 | 6.5 | 21,514 | 6.5 | 27,229 | 6.3 |
| **U.S.** | 1,921,031 | 9.5 | 1,989,841 | 8.8 | 2,148,463 | 8.6 | 2,391,630 | 8.8 |

\* U.S. values are for 1999.
Source: Colorado Vital Statistics , CDPHE

**Table 10: Crude Death Rates by Cause**

| | Heart Disease | Rate | Cancer | Rate | COPD* | Rate | Cerebrovascular Disease | Rate |
|---|---|---|---|---|---|---|---|---|
| Deaths by annual number and rate per 100,000 population, 2000 | | | | | | | | |
| **Colorado** | 6,135 | 141.9 | 5,896 | 136.3 | 1,777 | 41.1 | 1,854 | 42.9 |
| **U.S.*** | 724,915 | 265.8 | 549,787 | 201.3 | 124,153 | 45.5 | 167,340 | 61.4 |

\* U.S. values are for 1999.
Note: Heart Disease does not include atherosclerosis
Note: Chronic Obstructive Pulmonary Disease (COPD) includes emphysema and other obstructive lung disorders.
Source: Colorado Vital Statistics, CDPHE

**Table 11: Age-adjusted Death Rates by Cause**

| | Heart Disease | Rate | Cancer | Rate | COPD* | Rate | Cerebrovascular Disease | Rate |
|---|---|---|---|---|---|---|---|---|
| Age-adjusted deaths by annual number and rate per 100,000 population, 1998 | | | | | | | | |
| **Colorado** | 6,135 | 182.6 | 5,896 | 168.1 | 1,777 | 53.3 | 1,854 | 56.6 |
| **United States*** | 724,915 | 267.7 | 549,787 | 202.6 | 124,153 | 45.8 | 167,340 | 61.8 |

\* U.S. values are for 1999
Note: *Chronic Obstructive Pulmonary Disease includes emphysema and other obstructive lung disorders.
Note: Age-adjusted rates are adjusted to the 1940 U.S. average using the direct method applied to 10-year age groups.  In this process the ages of the population are normalized so that populations are evaluated by the same standard.
Source: Colorado Vital Statistics, CDPHE

**Table 12: Trends in Unintentional Deaths by Injury Causes**

| Annual numbers for Colorado | | | | | |
|---|---|---|---|---|---|
| | **1995** | **1996** | **1997** | **1998** | **1999** |
| **Motor Vehicle** | 698 | 668 | 670 | 677 | 567 |
| **Other Transportation** | 51 | 53 | 73 | 51 | 138 |
| **Drowning** | 55 | 54 | 56 | 56 | 42 |
| **Poisoning** | 481 | 151 | 160 | 163 | 228 |
| **Falls** | 253 | 251 | 302 | 294 | 236 |
| **Fires and Burns** | 20 | 17 | 31 | 20 | 25 |
| **Other Unintentional** | 284 | 281 | 266 | 285 | 335 |
| Source: <u>Colorado Vital Statistics,</u> CDPHE | | | | | |

**Table 13: Trends in Intentional Deaths by Injury Causes**

| Annual numbers for Colorado | | | | | | |
|---|---|---|---|---|---|---|
| | **1994** | **1995** | **1996** | **1997** | **1998** | **1999** |
| **Suicide by Firearm** | 343 | 343 | 387 | 352 | 329 | 310 |
| **Suicide by Non-firearm** | 264 | 305 | 294 | 277 | 281 | 243 |
| **Homicide by Firearm** | 207 | 210 | 206 | 193 | 196 | 123 |
| **Homicide by Non-firearm** | 134 | 119 | 107 | 96 | 119 | 86 |
| **Legal Intervention** | 3 | 10 | 8 | 9 | 3 | 6 |
| **Undetermined Intent** | 70 | 83 | 61 | 82 | 86 | 110 |
| Source: <u>Colorado Vital Statistics 1999,</u> CDPHE, May 2001 | | | | | | |

Additional information and data on suicides can be found at
**http://www.cdphe.state.co.us/pp/suicide.htm** (the "**Suicide Prevention and
Intervention Plan")** and at **http://www.cdphe.state.co.us/hs/county98d3.pdf.**

**Table 14: Trends in Infant Deaths**

| Deaths by annual number and age specific rate per 1000 live births | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **1970** | **1980** | **1990** | **1997** | **1998** | **1999** | **2000** |
| **Colorado** | | | | | | | |
| **Number** | 829 | 500 | 470 | 397 | 396 | 415 | 402 |
| **Rate** | 20.0 | 10.1 | 8.8 | 7.0 | 6.7 | 6.7 | 6.1 |
| **United States** | | | | | | | |
| **Numbers** | 74,628 | 45,414 | 38,255 | 27,942 | 28,397 | 28,371 | * |
| **Rate** | 20.0 | 12.6 | 9.2 | 7.2 | 7.2 | 7.2 | * |
| * U.S. data available through 1999<br>Note: Infant is defined as any child less than one year of age<br>Source: Colorado Vital Statistics, CDPHE | | | | | | | |

**Table 15: Trends in Neonatal Deaths**

| Deaths by annual number and age specific rate per 1000 live births | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **1970** | **1980** | **1990** | **1997** | **1998** | **1999** | **2000** |
| **Colorado** | | | | | | | |
| **Number** | 628 | 329 | 275 | 265 | 262 | 266 | 279 |
| **Rate** | 15.1 | 6.6 | 5.1 | 4.7 | 4.4 | 4.3 | 4.3 |
| **United States** | | | | | | | |
| **Number** | 56,344 | 30,704 | 24,118 | 18,628 | 18,931 | 18,918 | * |
| **Rate** | 15.1 | 8.5 | 5.8 | 4.8 | 4.8 | 4.8 | * |
| * U.S. data available through 1999<br>Note: Neonatal is defined as any child in the first 28 days of life<br>Source: Colorado Vital Statistics 1999, CDPHE, May 2001 | | | | | | | |

**Table 16: Trends in Post-Neonatal Deaths**

| Deaths by annual number and age specific rate per 1000 live births | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **1970** | **1980** | **1990** | **1997** | **1998** | **1999** | **2000** |
| **Colorado** | | | | | | | |
| **Number** | 201 | 171 | 195 | 132 | 134 | 149 | 123 |
| **Rate** | 4.8 | 3.4 | 3.6 | 2.3 | 2.3 | 2.4 | 2.2 |
| **United States** | | | | | | | |
| **Number** | 18,284 | 14,810 | 14,137 | 9,702 | 9,466 | 9,458 | * |
| **Rate** | 4.9 | 4.1 | 3.4 | 2.5 | 2.4 | 2.4 | * |
| Note: Post-Neonatal is defined as any child between 28 days of age and one year of age<br>Source: Colorado Vital Statistics, CDPHE | | | | | | | |

**Table 17** provides some death and mortality figures for the sixty-three counties in Colorado.

**Table 17 County Death Data, 2000**

| | Total Deaths | Heart Disease Death Rates (Age Adjusted) * | Malignant Neoplasm Death Rates (Age Adjusted )* | Infant Death Rate (Crude) ** |
|---|---|---|---|---|
| **Adams** | 2,044 | 208.4 | 185.4 | 5.9 |
| **Alamosa** | 104 | 186.1 | 106.4 | *** |
| **Arapahoe** | 2,684 | 168.8 | 227.4 | 7.2 |
| **Archuleta** | 56 | 62.7 | 146.2 | *** |
| **Baca** | 62 | 332.7 | 198.3 | *** |
| **Bent** | 64 | 260.5 | 111.0 | *** |
| **Boulder** | 1,415 | 167.3 | 160.4 | 5.2 |
| **Chaffee** | 146 | 225.7 | 180.4 | *** |
| **Cheyenne** | 12 | 175.4 | 229.0 | *** |
| **Clear Creek** | 36 | 137.4 | 110.4 | *** |
| **Conejos** | 75 | 288.2 | 167.2 | *** |
| **Costilla** | 42 | 192.8 | 193.1 | *** |
| **Crowley** | 34 | 86.1 | 195.4 | *** |
| **Custer** | 15 | 156.4 | 67.8 | *** |
| **Delta** | 317 | 159.0 | 180.7 | *** |
| **Denver** | 4,557 | 200.5 | 185.6 | 6.0 |
| **Dolores** | 18 | 208.4 | 132.5 | *** |
| **Douglas** | 447 | 167.0 | 170.1 | 1.4 |
| **Eagle** | 67 | 74.0 | 86.1 | 5.1 |
| **Elbert** | 82 | 190.3 | 172.4 | *** |
| **El Paso** | 2,920 | 166.9 | 171.5 | 8.4 |
| **Fremont** | 462 | 223.1 | 176.0 | 8.8 |
| **Garfield** | 265 | 219.0 | 179.1 | 5.0 |
| **Gilpin** | 17 | 152.8 | 85.0 | *** |
| **Grand** | 69 | 272.4 | 135.6 | *** |
| **Gunnison** | 53 | 191.5 | 146.9 | *** |
| **Hinsdale** | *** | *** | *** | *** |
| **Huerfano** | 82 | 216.5 | 178.9 | *** |
| **Jackson** | 14 | *** | *** | *** |
| **Jefferson** | 3,123 | 170.7 | 152.0 | 6.4 |
| **Kiowa** | 17 | 143.4 | 260.2 | *** |
| **Kit Carson** | 81 | 125.3 | 149.7 | *** |
| **Lake** | 40 | 177.3 | 82.5 | 21.4 |
| **La Plata** | 238 | 156.6 | 153.6 | 9.1 |
| **Larimer** | 1,496 | 184.0 | 163.5 | 5.5 |
| **Las Animas** | 180 | 222.6 | 182.5 | 17.4 |
| **Lincoln** | 51 | 152.8 | 52.5 | *** |
| **Logan** | 188 | 228.2 | 145.1 | 11.7 |
| **Mesa** | 1,133 | 209.4 | 180.1 | 5.4 |
| **Mineral** | 6 | *** | *** | *** |
| **Moffat** | 105 | 194.8 | 193.2 | *** |
| **Montezuma** | 228 | 223.4 | 153.3 | 12.9 |
| **Montrose** | 285 | 173.9 | 162.0 | *** |
| **Morgan** | 257 | 209.1 | 158.0 | 5.6 |
| **Otero** | 235 | 197.2 | 173.9 | 10.7 |
| **Ouray** | 17 | *** | 105.2 | *** |
| **Park** | 61 | 72.1 | 111.9 | 32.1 |
| **Phillips** | 58 | 233.5 | 165.1 | *** |
| **Pitkin** | 39 | 113.8 | 99.7 | *** |
| **Prowers** | 127 | 175.4 | 191.1 | *** |
| **Pueblo** | 1,384 | 164.0 | 186.5 | 4.1 |
| **Rio Blanco** | 49 | 296.4 | 215.9 | *** |
| **Rio Grande** | 111 | 220.6 | 179.8 | *** |
| **Routt** | 65 | 117.9 | 174.6 | *** |
| **Saguache** | 47 | 254.3 | 224.4 | *** |
| **San Juan** | 5 | *** | *** | *** |
| **San Miguel** | 17 | 189.7 | 135.8 | *** |
| **Sedgwick** | 31 | 134.2 | 225.3 | *** |
| **Summit** | 37 | 82.9 | 130.4 | *** |
| **Teller** | 84 | 140.5 | 242.6 | *** |
| **Washington** | 48 | 203.9 | 161.2 | *** |
| **Weld** | 1,111 | 207.5 | 173.8 | 5.7 |
| **Yuma** | 99 | 220.4 | 180.5 | *** |

\*    Death rates are per 100,000 population
\*\*   Infant death rates are per 1,000 live births
\*\*\* Fewer than three cases – Specific values not reported
**Source: Colorado Vital Statistics 2000, CDPHE at web site http://www.cdphe.state.co.us/hs/county2000/county2000.asp**

Further data on death statistics and county level data can be found at
**http://www.cdphe.state.co.us/hs/hsshom.asp** and in the annual vital statistics
publication from the *Health Statistics Section of the CDPHE*.

**R1: Resources for Vital Statistics**

| Web Site | Level of Data Available | Comments |
|---|---|---|
| **http://www.cdphe.state.co.us/stats.asp** | National/State | Vital Statistics Records |
| **http://www.cdphe.state.co.us/hs/hsshom.asp** | State | Colorado Department of Public Health and Environment Health Statistics |
| **http://www.cdphe.state.co.us/pp/suicide.htm** | State | "Suicide Prevention and Intervention Plan" |
| **http://www.cdphe.state.co.us/hs/county98d3.pdf** | State | Data from Health Statistics Section |
| **http://www.cdphe.state.co.us/sascohidweb/Cohids.html** | State/County | Colorado Health Information Dataset |

## 2    HEALTH FACTORS

In Colorado there are two main health lifestyle monitoring systems used – the *Behavioral Risk Factor Surveillance System (BRFSS)* and the *Healthy People 2000-2010*.  Each of these systems has as a goal of getting people to recognize and develop healthier lifestyles. Additionally, statewide and county behavioral risk factor data is available through the CoHID database at **http://www.cdphe.state.co.us/sascohidweb/Cohids.html**.  In addition, this section also provides data and information on tobacco use in the United States and Colorado

***The Behavioral Risk Factor Surveillance System (BRFSS):***
The Colorado Behavioral Risk Factor Surveillance System (BRFSS) is a system of telephone surveys sponsored by the Centers for Disease Control to monitor lifestyles and behaviors related to the leading causes of mortality and morbidity. In recent years, health professionals and the public have become increasingly aware of the role lifestyle factors in determining health.

Behavioral factors that promote health and well being are the reduction of dietary fat, an increase in the number of fruits and vegetables in the diet, and the use of preventative medical services such as screening for cancer, high blood pressure, and high levels of blood cholesterol.  In addition, certain chronic health conditions contribute to increases in other health problems.  Three health problems that are associated with an increased risk of cardiovascular disease are:

- Diabetes mellitus

- Hypertension

- High blood cholesterol

In 1981, the Centers for Disease Control began using the Behavioral Risk Factor Surveillance System as a method of estimating the prevalence of high-risk behaviors and lifestyle factors that contribute to death and disease. Colorado participated in this project with point in time surveys in 1982 and 1987. The Survey Research Unit of the Health Statistics Section of the Colorado Department of Public Heath and Environment began collecting data on a monthly basis in January 1990. The Survey Research Unit now completes 150 BRFSS surveys a months with adult residents of Colorado.  All fifty states, plus the District of Columbia, Guam, Puerto Rico, and the Virgin Islands participate in the surveillance system.

Detailed data on these states and territories (as well as the comparisons) can be found through **http://www.cdc.gov/nccdphp/brfss/index.htm** or directly at **http://apps.nccd.cdc.gov/brfss/index.asp.**

**Table 18** provides trend data on BRFSS prevalence from 1990 through 1998.

**Table 18: Colorado Behavioral Risk Prevalences**

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Trend |
|---|---|---|---|---|---|---|---|---|---|---|
| **Behavioral Risk Factor** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | |
| **Seatbelt Nonuse** | 34.1 | 36.4 | 35.4 | 37.0 | N/A | 35.5 | 36.0 | 28.5 | N/A | Mixed |
| **Hypertension Awareness** | 16.7 | 19.0 | 17.4 | 21.1 | N/A | 21.4 | N/A | 20.4 | N/A | Improved |
| **Overweight** | 16.3 | 18.4 | 17.3 | 20.9 | 19.9 | 21.9 | 21.8 | 24.6 | 26.6 | Worsened |
| **Current Smoking** | 21.3 | 23.7 | 23.1 | 23.8 | 24.1 | 21.8 | 22.7 | 22.5 | 22.8 | Mixed |
| **Chronic Drinking** | 4.6 | 4.0 | 4.6 | 4.4 | N/A | 4.8 | N/A | 2.7 | N/A | Improved |
| **Binge Drinking** | 17.2 | 15.0 | 19.4 | 16.7 | N/A | 16.3 | N/A | 15.2 | N/A | Improved |
| **Drinking & Driving** | 2.9 | 2.3 | 2.9 | 2.5 | N/A | 3.1 | N/A | 2.5 | N/A | Mixed |
| **Sedentary Lifestyle** | 44.4 | 46.9 | 48.2 | N/A | 48.2 | N/A | 47.9 | N/A | 50.9 | Worsened |
| **No Health Care Coverage** | N/A | 15.1 | 14.2 | 15.8 | 14.8 | 14.2 | 13.4 | 11.9 | 14.9 | Mixed |
| **Fair or Poor Health** | N/A | N/A | N/A | 11.1 | 10.6 | 10.7 | 9.2 | 10.0 | N/A | Improved |
| Source: "Colorado Behavioral Risk Factor Surveillance", CDPHE, May 2001 | | | | | | | | | | |

Definitions:
- *Seatbelt Non-Use* – Respondents do not always wear seat belts
- *Hypertension Awareness* – Respondents who have ever been told they have high blood pressure.
- *Overweight* - Females with body mass index (weight in kilograms divided by height in meters squared) $\geq 27.3$ and males with an index $\geq 27.8$.
- *Current Smoking* - Respondents who report smoking 100 cigarettes in their lifetime and who smoke now.
- *Chronic Drinking* - Respondents who report an average of two or more drinks per day. This is based on the total number of drinks per month.
- *Binge Drinking* - Respondents who report having five or more drinks on an occasion, one or more times in the past month.
- *Drinking and Driving* - Respondents who report having driven after having too much to drink in the past month.
- *Sedentary Lifestyle* - Respondents who reported less than 20 minutes of exercise, and/or less then 3 times/week of activity during the past month.
- *No Health Care Coverage* - Respondents do not have health care coverage
- *Fair or Poor Health* - Respondents who report having a general health status of fair or poor.

***Healthy People 2000-2010:***

The state of Colorado does not publish goals for the *Behavioral Risk Factor Surveillance System* and the national comparisons are too large and detailed to include here (see at **http://www.cdc.gov/nccdphp/brfss/index.htm**).   However, the state, along with the *Centers for Disease Control (CDC)* has established goals and current attainment levels through the *Healthy People 2000* and *Healthy People 2010 Objectives*.  *Healthy People 2010* is a set of health objectives for the nation to achieve over the first decade of the new century. It can be used by many different people, states, communities, professional organizations, and others to help them develop programs to improve health.  The complete report is available at web site **http://www.health.gov/healthypeople/.**

*Healthy People 2010* builds on initiatives pursued over the past two decades. The 1979 Surgeon General's Report, *Healthy People*, and *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* both established national health objectives and served as the basis for the development of state and community plans. Like its predecessors, *Healthy People 2010* was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time.

*Healthy People 2010* established ten "Leading Health Indicators" that will be used to measure the health of the nation over the next ten years.  Each of the ten "Leading Health Indicators" has one or more objectives from *Healthy People 2010* associated with it. There are a total of **467** objectives being tracked by **190** data sources, **23** of which are major data sources.  A major data source is defined as a data system responsible for tracking five or more *Healthy People 2010* objectives.  As a group, the "Leading Health Indicators" reflect the major health concerns in the United States at the beginning of the 21st century.  The "Leading Health Indicators" were selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as public health issues. The indicators are:

- Physical Activity
- Overweight and Obesity
- Tobacco Use
- Substance Abuse
- Responsible Sexual Behavior
- Mental Health
- Injury and Violence
- Environmental Quality
- Immunization
- Access to Health Care

As stated earlier, the *Healthy People 2010* work was based on previous work, especially *Healthy People 2000*, which set and monitored lifestyle objectives. The *Healthy People 2000 Objectives*, results for 1997 and 1998, and trends are presented in **Table 19**:

**Table 19: Healthy People 2000 Objectives**

|  | Colorado, 1997 | Colorado, 1998 | Yr 2000 Target | Trend |
|---|---|---|---|---|
| **Overweight** | 25% | 27% | $\leq$20% | Worsened |
| **Regular and Sustained Physical Activity** | 25% | 25% | $\geq$30% | Unchanged |
| **Regular and Vigorous Physical Activity** | 17% | 15% | $\geq$20% | Worsened |
| **No Leisure-time Physical Activity** | 20% | 21% | $\leq$15% | Worsened |
| **Cigarette Smoking** | 23% | 23% | $\leq$15% | Unchanged |
| **Safety Belt Use** | 71% | 71% | $\geq$85% | Unchanged |
| **Cholesterol Screen (within past 5 yrs)** | 70% | 70% | $\geq$75% | Unchanged |
| **Fruit and Vegetable Consumption (5 or more servings/day)** | 26% | 26% | Not specified | Unchanged |
| **Clinical Breast Exam and Mammogram (ever had)*** | 81% | 84% | $\geq$80% | Improved |
| **Clinical Breast Exam and Mammogram (within past 2 yrs)**** | 67% | 68% | $\geq$60% | Improved |
| **Pap Smear, Women with Intact Uterine Cervix (within past 3 yrs)** | 87% | 86% | $\geq$85% | Worsened |
| **Sigmoidoscopy (ever had)**** | 43% | 43% | $\geq$40% | Unchanged |
| **Influenza Immunization (within past year)***** | 74% | 74% | $\geq$60% | Unchanged |
| **Pneumococcal Pneumonia Immunization (ever had)***** | 53% | 53% | $\geq$60% | Unchanged |

| * | Over the age of 40 |
| ** | Over the age of 50 |
| *** | Over the age of 65 |

Source: "Healthy People 2000 Objectives", Colorado Department of Public Health and Environment, 2000

Source: "Healthy People 2001 Objectives", Colorado Department of Public Health and Environment, 2001

*Tobacco Use in Colorado:*
According to the *State Tobacco Education and Prevention Partnership (STEPP)[5], s*moking is the most preventable cause of death in our society.  Nearly **1 in 5 deaths** in the US result from the use of tobacco.  The 1982 US Surgeon General's Report states "Cigarette smoking is the major single cause of cancer mortality in the United States."  Lung cancer mortality rates are about **23 times** higher for current male smokers and **13 times** higher for current female smokers compared to lifelong never-smokers.  In addition to being responsible for **87%** of lung cancers, smoking is also associated with cancers of the mouth, pharynx, larynx, esophagus, pancreas, uterine cervix, kidney, and bladder.  Smoking accounts for at least **30%** of all cancer deaths, is a major cause of heart disease, and is associated with conditions ranging from colds and gastric ulcers to chronic bronchitis, emphysema, and cerebrovascular disease (related to blood circulation).

Nationally, more than **47 million (24.1 percent)** of adults aged 18 years and older currently smoke in the United States - **26.4 percent of men and 22.0 percent of women**.  Additional national findings include:

- Adults with 16 or more years of education had the lowest smoking prevalence (**11.3 percent**), while adults with 9 to 11 years of education had higher smoking prevalence (**36.8 percent**) than adults with fewer or more years of education.

- Current smoking prevalence among young adults aged 18-24 years was **25.8 percent** in 1993, **28.7 percent** in 1997, and **27.9 percent** in 1998.

- The data suggest that smoking prevalence among 18 to 24 year olds now equals that of 25 to 44 year olds (**27.5 %**). In earlier years smoking prevalence among young adults was lower than that of 25 to 44 year olds. There was no significant change in smoking among adults aged 25-44 years for the same period.

- Smoking prevalence remained the highest among American Indians/Alaska Natives at **40 percent** in 1998.  Prevalence among African-Americans (**24.7 percent**) and whites (**25.0 percent**) remained higher than among Hispanics (**19.1 percent**) and Asians/Pacific Islanders (**13.7 percent**.).

- Smoking prevalence was higher among adults living below the poverty level (**32.3 percent**) than those living at or above the poverty level (**23.5 percent**).

- Nearly **45 million adults (25.7 million men and 19.1 million women)** were former smokers, which remains unchanged from 1995 and 1997.

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[5] "State Tobacco Education and Prevention Partnership Newsletter", Colorado Department of Public Health and Environment and Centers for Disease Control, April 2001.

In the *CDPHE* report "Who's Still Smoking in Colorado?  Colorado Quit Rates Rank Below National Average"[6], during 1999, roughly **668 thousand** (**22.5 percent**) adult smokers lived in Colorado. There was little difference in smoking behavior between men (**22.8 percent**) and women (**22.1 percent**) in Colorado.  Smoking levels also did not vary substantially among age groups in Colorado, except for lower smoking levels among those age 65 years or older.  Smoking was greatest among those with a high school education or less.

In "Cigarette Smoking: The Toll in Colorado"[7], the *CDPHE* reports region-specific estimates in Colorado of current cigarette smoking prevalence among males age 35-64 years.  Among those of age 35-64, the prevalence for males ranged from **16 percent** in the Rural Resort region to **33 percent** in Denver County; for females from **12 percent** in El Paso County to **30 percent** in Adams and Pueblo counties.  For persons age 65 years or older, the prevalence ranged from **5 percent** to **20 percent** for males and **3 percent to 23** percent for females.

Based on birth certificate data, cigarette smoking among pregnant women ranged from **5 percent** in Boulder County to **17 percent** in Pueblo County.

The estimated annual number of smoking-attributable deaths for all ages in Colorado was **4,700**.  This represented **18.5 percent** of all deaths in Colorado during the time period. Among those major counties and regions, the estimates for the number of annual smoking-attributable deaths ranged from **51** deaths in the Rural Resort to **832** deaths in Denver County.  The majority of those smoking-attributable deaths were caused by chronic diseases such as neoplasms, cardiovascular diseases, and respiratory diseases. On average, it is estimated that **nine** infant deaths each year in Colorado can be indirectly attributed to exposure to environmental smoking.

Nationwide, in 1999, **52.3 percent** (roughly **18.6 million**) of every day smokers quit smoking for a day or longer.  By gender, age group and educational level, Colorado adult every day smokers were below national averages in quit attempts, with only **43.7 percent** quitting for a day or longer.  The lag among Colorado's female every day smokers was even greater, with only **38.7 percent** attempting to quit compared to **51 percent** nationally.

Smoking prevalence has risen steadily among Colorado's young adults (age 18-24 years) from **15 percent** in 1991 to **31 percent** in 1999.  Younger people ages 18-34 have the highest smoking rate in the state at **31.4%.**  At this rate, **86,942** adolescents who smoke today are predicted to die prematurely due to smoking.

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[6] "Who's Still Smoking in Colorado? Colorado Quit Rates Rank Below National Average", Colorado Department of Public Health and Environment, Health Statistics Section, Health Brief #39, November 2000.

[7] "Cigarette Smoking: The Toll in Colorado", Colorado Department of Public Health and Environment, Health Statistics Section, Health Brief #38, November 2000.

In Colorado, the *Colorado Tobacco Education and Prevention Alliance* conducted the "Colorado Youth Tobacco Survey"[8] in 2000.  The survey found the following results:

- Nearly **one in three** of all of Colorado's middle school students and **two in three** high school students have tried cigarettes.

- Of the state's middle school students, **8.8 percent** reported being current smokers, while **25.3 percent** of high school students reported being current smokers.

- Among the Colorado's middle school students, more males **(9.3%)** smoke than do females **(8.4%)**.  However, among high school students, more females **(26.9%)** smoke than do male students **(23.9%)**.

- The number of Colorado middle school students currently using any tobacco product is **13.6%** compared to **12.8%** nationally for the same grade level.

- Colorado high school students report higher tobacco use levels **(34.8%)** than do their national counterparts **(34.4%)**.  This is the use of any tobacco product.

- The current tobacco use (including smokeless tobacco) in middle schools is higher for males **(15.9%)** than for females **(11.1%)**.

- The current tobacco use (including smokeless tobacco) in high schools is higher for males **(37.1%)** than for females **(31.6%)**.

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[8] Colorado Youth Tobacco Survey, The Colorado Tobacco Education and Prevention Alliance, April 2001

**R2: Resources for Health Risk Factors**

| Web Site | Level of Data Available | Comments |
|---|---|---|
| http://www.cdc.gov/nccdphp/brfss/ | National | US BRFSS data |
| http://www2.cdc.gov/nccdphp/osh/state/ | National | State-to-state data comparisons |
| http://www.cdc.gov/tobacco/ | National | CDC tobacco site |
| http://www.americanheart.org/statistics/index.html | National | 2001 Heart and Stroke Statistical Update |
| http://www.cdc.gov/nccdphp/brfss/index.htm | National/State | State-to-state comparisons |
| http://www.cdc.gov/nchs/data/hp2k99.pdf | National/State | National "Healthy People 2000" objectives |
| http://www.health.gov/healthypeople/ | National/State | National "Healthy People 2010" objectives |
| http://www.cdphe.state.co.us/hs/cobrfss.asp | State | Colorado's BRFSS data |
| http://www.cdphe.state.co.us/hs/Y2k98.html | State | "Healthy People 2000" objectives |
| http://www.cdphe.state.co.us/pp/tobacco/tobaccohom.asp | State | STEPP program results |
| http://www.ctepa.org/pdf/STATE_youth_survey_full.pdf | State | Youth tobacco use in Colorado survey |
| http://www.cdphe.state.co.us/pp/tobacco/tobaccohom.asp | State | STEPP program results |
| http://www.cdphe.state.co.us/hs/Webfolicacid.pdf | State | CDPHE Health Section Brief #36, August 2000. |
| http://www.cdphe.state.co.us/sascohidweb/Cohids.html | State/County | Colorado Health Information Dataset |

## 3    DISEASES

The Diseases chapter of the Health Section provides an overview, state level trends and data resources on the prevalence of different diseases in the state.  Contacts and highlights of various state prevention programs are also included.

**Chapter contents:**
- Cancer
- Diabetes
- Cardiovascular Disease
- Arthritis
- Sexually Transmitted Diseases

The Colorado Department of Public Health and Environment (CDPHE) is the primary agency that collects and maintains data on a variety of disease on the state and county level.  They also run various prevention programs.  A central web site for information on diseases, which includes data at the state and county levels and program descriptions, can be found at **http://www.cdphe.state.co.us/pp/**.

## CANCER IN COLORADO

Section contents:
- All Cancers Combined
- Lung Cancer
- Melanoma
- Breast Cancer
- Prostate
- Bladder
- Invasive Cervix
- Colon and Rectum

The Colorado Central Cancer Registry is the statewide cancer surveillance program of the Colorado Department of Public Health and Environment. The program's goal is to reduce death and illness due to cancer by informing citizens and health professionals through statistics and reports on incidence, treatment and survival, and deaths due to cancer.

Colorado law and regulations passed by the Colorado Board of Health mandate the Registry.  Information and data is collected from all Colorado hospitals, pathology labs, outpatient clinics, physicians solely responsible for diagnosis and treatment, and state Vital Statistics.  Pertinent data is registered on all malignant tumors, except basal and squamous cell carcinomas of the skin. All individual patient, physician, and hospital information is confidential as required by Colorado law.

**Cumulative risk**, an estimate of the chance of an individual being diagnosed with cancer by a particular age, e.g., by age 85, was computed based on Colorado 1994-98 age-specific rates.  The cumulative risk is a function of the cumulative rate.  The cumulative

rate equals the sum of each five-year age-specific rate, expressed as a decimal fraction, multiplied by five to account for the five-year age intervals and multiplied by 100 to express the cumulative rate as a percentage.

The cumulative risk $= 100(1-e^{(-cumulative\ rate/100)})$. It can be expressed as a percentage or a probability, e.g., for men the cumulative risk to age 85 for all cancers combined is about 52% or a probability of cancer of about 1 in 2.  This method may result in slightly different risks than those quoted by the American Cancer Society, which have been computed by the life-table approach used by the National Cancer Institute.

### *All Cancers Combined:*

These cancer statistics are important indicators for Colorado cancer trends and for evaluation of cancer prevention and control efforts.  For all cancers combined and for each of seven major cancers, selected statistical findings are presented.  These seven cancers, colon and rectum, lung, melanoma, breast, invasive cervix, prostate, and bladder, are either preventable or detectable at an early and more survival stage of the disease.

From 1992-1996, incidences of all types of cancer in males in Colorado occurred at a **rate of 459.4 cases per 100,000 population (in 1997, it was 429.9 per 100,000 population)**.  For the United States, the rate of incidence for males was **489.1 per 100,000 population** from 1992-1996.  Similar statistics can be seen for females as well.  For the years 1992-1996, the rate of cancer in Colorado women was **329.9 per 100,000** and the incidence rate for women in the United States in total was **345.8 per 100,000** population.  It should be noted however, that the rate of overall cancer for females in Colorado rose to **331.8 per 100,000** in 1997 (an increase of **1.9 cases per 100,000**).

### *Highlights[9]*

- In Colorado, the cumulative lifetime risk of cancer is **1 in 2 for men and 1 in 3 for women**.
- The cancer rates in Colorado from 1992-1996 were **3-4% lower** than the rates in the United States because of lower rates of lung and colorectal cancer.
- The 1998 cancer incidence rate for Colorado males was **4%** lower than the 1993-97 average rate due to large decreases in lung and prostate cancer incidences.
- During 1993-97, the average rates of cancer in black males was **10% higher** than the rates in non-Hispanic white males mostly due to higher rates of lung, prostate, stomach, laryngeal, and esophageal cancers.  In 1998 the difference grew to **19%.**
- Colorado 1993-97 cancer mortality rates were lower than the mortality rates in the United States for every available ethnic/race comparison and declined through 1997 and 1998.
- During 1998 in Colorado, cancer mortality rates were down **2-14%** from 1993-97 varying by race/ethnicity and gender.

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[9] Cancer in Colorado 1993-1998: Incidence Mortality and Survival, Prepared by the Colorado Central Cancer Registry, Colorado Department of Public Health and Environment, 2000.

**Table 20** provides the number of cases for the ten most commonly diagnosed cancers in Colorado from 1994-1998 by gender and for the total population.

**Table 20: Ten Most Common Diagnosed Cancers by Sex, Colorado, 1994-1998**

| Males | | | Females | | | Total | | |
|---|---|---|---|---|---|---|---|---|
| **Cancer** | **Number** | **Percent** | **Cancer** | **Number** | **Percent** | **Cancer** | **Number** | **Percent** |
| **Prostate** | 10,453 | 29.0 | **Breast** | 13,686 | 36.6 | Breast | 13,750 | 18.7 |
| Lung and Bronchus | 4,520 | 12.6 | **Colon and Rectum** | 3,808 | 10.2 | Prostate | 10,453 | 14.2 |
| **Colon and Rectum** | 3,999 | 11.1 | Lung and Bronchus | 3,446 | 9.2 | Lung and Bronchus | 7,966 | 10.9 |
| **Melanoma** | 2,468 | 6.9 | **Melanoma** | 2,093 | 5.6 | Colon and Rectum | 7,807 | 10.6 |
| **Bladder** | 2,303 | 6.4 | **Corpus Uteri and Uterus, NOS** | 1,909 | 5.1 | **Melanoma** | 4,561 | 6.2 |
| Non-Hodgkin's Lymphoma | 1,503 | 4.2 | **Ovary** | 1,421 | 3.8 | **Bladder** | 3,084 | 4.2 |
| **Leukemia** | 1,032 | 2.9 | Non-Hodgkin's Lymphoma | 1,285 | 3.4 | Non-Hodgkin's Lymphoma | 2,788 | 3.8 |
| **Kidney** | 1,029 | 2.9 | **Other and Ill Defined** | 928 | 2.5 | **Corpus Uteri and Uterus, NOS** | 1,909 | 2.6 |
| **Other and Ill Defined** | 825 | 2.3 | **Thyroid** | 857 | 2.3 | **Leukemia** | 1,782 | 2.4 |
| **Pancreas** | 784 | 2.2 | **Invasive Cervix** | 846 | 2.3 | **Other and Ill Defined** | 1,753 | 2.4 |
| Source: <u>Cancer in Colorado 1993-1998: Incidence Mortality and Survival</u>, Prepared by the Colorado Central Cancer Registry, Colorado Department of Public Health and Environment, 2001. | | | | | | | | |

*Lung Cancer:*

Between 1992-96 the average Colorado lung cancer incidence rates were **3-28% lower** than U.S. rates, but varied by gender and race.  Lung cancer incidences in men declined **13-22%** from **1992-1996 to 1997**, but were up 4% for non-Hispanic women.  During 1992-96, Colorado lung cancer rates for blacks were **24-28% higher** than were the rates for non-Hispanic whites.  The rates for Hispanics were **21-40% lower** than were the rates for non-Hispanic whites.  The mortality rates for men continued to fall through 1997 and 1998, but the mortality rates for women during the same time period rose.

**The cumulative lifetime risk of lung cancer is 1 in 10 for men and 1 in 17 for women**.

*Melanoma:*

The average Colorado melanoma incidence rates between 1992-96 for men was **31% higher,** and for women was **43% higher,** than the United States incidence rate as a

whole.  Of the **4,091 cases** reported in Colorado from 1992-96, **3,972** were among Non-Hispanic whites (**100** in the Hispanic whites and **five** in blacks).  During 1997, **940** cases were seen in non-Hispanic whites**, 24** in Hispanic whites, and **2** in blacks.  The Colorado average melanoma incidence rate for non-Hispanic white males climbed **9%** from the1993-97 to 1998 while the rate for females in this group decreased **8%**.

There were slight improvements in early detection of melanoma in Colorado between the average number reported in 1992-96 and those cases reported in 1997.  The five-year melanoma survival rate in Colorado was **84% in 1988-90 and 83% in 1991-94**.  Colorado mortality rates were similar to those in the rest of the United States despite the higher incidence rates.  This may be attributable to the early detection and treatment.

**The cumulative lifetime risk of melanoma in Colorado is 1 in 39 for men and 1 in 65 for women**.

*Breast Cancer:*

The breast cancer incidence and mortality rates in Colorado were similar to the average U.S. rates from 1993 to 1997.  The average melanoma incidence rate in Colorado for non-Hispanic white males climbed **9%** from 1993-97 to 1998, while the rate for females in this group decreased **8%**.  Black and Hispanic women in Colorado continued to have lower rates of breast cancer than do non-Hispanic whites in the 1993-97 time period and also in 1998.  Early detection and treatment continued to improve between 1993-97 and in 1998.  Five-year breast cancer survival rates in Colorado stayed constant at **85% between 1988-90 and 1991-94**, but survival for Hispanics and blacks was lower than for non-Hispanic whites.  Mortality rates continued to decline through 1998, but the mortality for blacks was higher than for non-Hispanic whites.

**The cumulative lifetime risk of breast cancer in women in Colorado is 1 in 7**.

*Prostate Cancer:*

The 1993-97 Colorado prostatic cancer rate was **7%** higher than the rate for the United States.  There was a steep rise in the rate of prostatic cancer in Colorado from the late 1980s to 1992, but there has been just as steep decline in the rate since, with the rate dropping to **135.3 cases per 100,000** individuals in 1997.  The 1998 prostatic cancer incidence rates for Colorado dropped 14- 20% from the 1993-97 rates, except for blacks whose rate dropped 2%. This decline is mirrored in the national figures and is attributed to increased screening for the disease.  Early detection of prostatic cancer improved from the 1993-97 period to 1998 in every race/ethnicity group, but early detection in blacks lagged behind.  The five-year **survival rate** for this type of cancer in Colorado improved from **86% in 1988-90 to 95% in 1991-94** with death rates generally down through 1998.

**The cumulative lifetime risk of prostatic cancer in Colorado is 1 in 4**.

*Bladder Cancer:*

Bladder cancer rates in Colorado were similar to the U.S. rates during the time period 1993-97.  Among Hispanic males, the bladder cancer average incidence rate in Colorado dropped **37%** from 1993-97 to 1998.  Decreases in incidence rates were seen for all females combined (down **18%**) and for Hispanic females (down **58%**).  Five-year bladder cancer **survival rates** in Colorado remained at **82% during 1988-90 and 1991-94**. Average `mortality rates for bladder cancer in Colorado during 1993-97 were similar to U.S. mortality rates except for` **21%** `lower rates in Colorado among all females and non-Hispanic white females.`

In Colorado, **the cumulative lifetime risk of bladder cancer is 1 in 20 for men and 1 in 74 for women**.

*Invasive Cervix Cancer:*

Incidence rates for invasive cervical cancer (Cervix Uteri) for all women in the years 1993-97 were **17%** below the U.S. rate.  The Colorado rate for non-Hispanic whites was **19%** below the U.S. rate for whites and the Colorado rate for blacks was **58%** lower than the rate for U.S.  `Every ethnicity`/race group in Colorado had a decrease in the average cervical cancer rate from 1992-96 to 1997.  These incidence rates leveled off in 1998.  In Colorado, the Hispanic population had over double (**125**%) the rate of incidences over the non-Hispanic white population.  Hispanics with invasive cervical cancer diagnosed in Colorado in period 1993-97 and 1998 were detected later than non-Hispanic whites and the time trend failed to improve.  Average mortality rates for all women in Colorado during 1993-97 were lower than U.S. rates by **22%**.

**The cumulative lifetime risk of invasive cervical cancer in Colorado is 1 in 118**.

*Colon and Rectum Cancer:*

The 1993-97 average colon and rectum cancer incidence rates in Colorado for every ethnicity and race were lower than the U.S. rates for the same period by **9-15%**.  Colorado colon and rectum rates for black and Hispanic men were higher than rates for non-Hispanic whites.  In contrast, rates for Hispanic women were lower than rates for non-Hispanic whites and rates for black women.  Most race/ethnicity groups in Colorado had increases in the average colon and rectal incidence rates between 1993-97 and in 1998.  The rate for black males increased **85%** (though much of this increase was fluctuation from a statistically low rate in 1997), while the rate for all males was up **7%**, and the rate for all females increased **9%**.  Continuing encouraging trends in earlier detection of colon and rectum cancer were seen between 1993-97 and in 1998.  Average `colon and rectal cancer mortality rates in Colorado during 1993-97 were` **9-21**`% lower than U.S. rates, varying by race/ethnicity and gender,` but the mortality trend was relatively unchanged through 1998 except for a slight decrease in rates for women.

**In Colorado, the cumulative lifetime risk of colon and rectum cancer is 1 in 13 for men and 1 in 18 for women**.

Additional information and data on cancer in Colorado can be found at
**http://www.cdphe.state.co.us/pp/cccr/cccrincidence9297.asp** and through the
*Colorado Central Cancer Registry at the Colorado Department of Public Health and Environment*.

**R3: Resources for Cancer**

| Web Site | Level of Data Available | Comments |
|---|---|---|
| **http://www.seer.ims.nci.nih.gov** | National | National Cancer Institute data links |
| **http://www.cancer.org** | National | American Cancer Society statistics |
| **http://www.cdphe.state.co.us/pp/cccr/cccrreports.asp** | State | State cancer data and reports |
| **http://www.intradenver.net/cancer/** | State | State American Cancer Society branch |
| **http://www.coloradohealthnet.org/cancer/support/css_toc.htm** | State | Colorado Cancer Support Services and Resources |
| **http://www.cdphe.state.co.us/pp/cccr/cccrhom.asp** | State | Colorado Central Cancer Registry |
| **http://www.cdphe.state.co.us/hs/county98d3.pdf** | State/County | County data |

## DIABETES IN COLORADO

The goal of the *Diabetes Control Program of the Colorado Department of Public Health and Environment* is to reduce morbidity and mortality due to diabetes through surveillance, health policy change, education, and intervention projects.  There are two types of diabetes.  People with "type 1" diabetes need to take insulin every day. This is the most severe form of diabetes and can result in blindness, amputation, other health problems, and eventually death.  This type of diabetes used to be called juvenile diabetes. The second form of diabetes is "type 2" and is less severe.  It can often be controlled by the food you eat and regular physical activity.  Some people may also need to take diabetes pills or insulin, but in general it is a less severe form. This type of diabetes used to be called adult onset diabetes.

### *Diabetes Statistics*

On a national basis, according to the *American Diabetes Association[10]*, the total annual economic cost of diabetes in 1997 was estimated to be **$98 billion**. That includes **$44 billion** in direct medical and treatment costs and **$54 billion** for indirect costs attributed to disability and mortality.  In 1997, total health expenditures incurred by people with diabetes amounted to **$77.7 billion** including health care costs not resulting from diabetes, such as heart disease. The per capita costs of health care for people with diabetes amounted to **$10,071**, while health care costs for people without diabetes amounted to **$2,699** in 1997.  The direct costs for diabetes treatment represented **5.8%** of the total personal health care expenditures in the U.S., while the percentage of Americans diagnosed with diabetes was **3.8%** of the population.  Indirect costs to the nation's economy include disability costs of **$37.1 billion** and mortality losses of **$16.9 billion**. There were **74,927** workers permanently disabled to diabetes in the United States in 1997.

In 1997, **110,189** adults **(3.8%** of the adult population**)** had been diagnosed with diabetes in Colorado. Another 100,000 persons are likely to have the disease and do not know it. The number of persons with diabetes in Colorado has risen by an estimated **26% since 1990**. This increase is partly due to the increase in the overall population and in the Hispanic and elderly populations who are at greater risk for diabetes.

The direct (medical care) and indirect (lost productivity and premature mortality) cost of diabetes in Colorado was estimated at **$1.4 billion** in 1997.  Diabetes ranks as the **8th** leading cause of death by disease with **7,281** deaths reported from **1989-94** and **1,801** deaths due to diabetes (any cause) in **1997**.  Of this number, **863** individuals were **men** and **938** individuals were **women**.  Race/ethnicity breakdowns show that **1,684** deaths were to **non-Hispanic whites, 281** deaths were to **Hispanics,** and **99** deaths were to **blacks**.

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[10] "Diabetes Facts and Figures", American Diabetes Association, 2000

On average the yearly number of persons hospitalized in Colorado with diabetes is **28,220** for diabetes as any mention, **7,358** for major cardiovascular disease, **462** for lower extremity amputation, and for **1,445** acute hyperglycemic complications. There were **322** new cases of end-stage renal disease (*ESRD*) due to diabetes in Colorado in 1997 and for 1990-97 there was **2,095** new cases *ESRD* reported. An estimated **200** persons with diabetes will go blind each year.[11]

County level data on diabetes and the effect of the disease is available through the *Diabetes Control Program* of the *Colorado Department of Public Health and Environment* in "The Burden of Diabetes" publications. These publications include state and county data on diabetes occurrences by demographic characteristics and by detailed hospitalization results. This data will be made available on-line in 2001 through the *CDPHE Diabetes Control Program* at web site **http://www.cdphe.state.co.us/pp/diabetes/home.asp**.

### *Diabetes Programs in Colorado*

A state plan, <u>Diabetes in Colorado: Approaching the Year 2000</u>, was released in November, 1992 by the CDPHE. There are four task forces of the *Diabetes Advisory Council* that plan and implement the recommendations in the plan:

- Health Care Delivery Task Force
- The High Risk Populations Task Force
- Professional Education Task Force
- Patient Education Task Force

For additional information on this report contact the *CDPHE Emergency Medical Services and Prevention Division* at (303) 692-2580.

The *Diabetes Control Program*, through the *CDPHE Emergency Medical Services and Prevention Division*, maintains surveillance data on diabetes in Colorado. Periodic reports with county or regional data are produced on diabetes-related mortality, adverse outcomes of pregnancy, hospitalizations, end-stage renal disease, prevalence, and economic costs.

The *Diabetes Control Program* also maintains intervention projects that focus on preventing complications of diabetes including cardiovascular disease, neuropathy, nephropathy, and retinopathy. The projects use a combination of methods including patient education, professional education, standard development, public awareness, and health care delivery system change. The projects are evaluated using various quantitative and qualitative methods.

Additionally, *Cooperative Extension* has teamed up with the *Diabetes Control Program* to address the dietary concerns of individuals with diabetes and caregivers. The main goal of this collaboration was to develop an educational approach that would supplement

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[11] "The Burden of Diabetes", Colorado Department of Public Health and Environment, 2000

information that was provided by registered dieticians and qualified health care providers, while providing practical hands-on meal planning experience.  The program is titled "Dining with Diabetes" and focuses on increasing the participant's knowledge of healthful food choices for people with diabetes and presents healthy versions of familiar foods.

**R4: Resources for Diabetes**

| Resource | Level of Data Available | Comments |
|---|---|---|
| **http://www.diabetes.org/ada/facts.asp#costs** | National | American Diabetes Association - U.S. diabetes statistics |
| **http://ndep.nih.gov/get-info/info-control.htm** | National | National Diabetes Education Program |
| **"Diabetes Facts and Figures"** | National | American Diabetes Association fact sheet |
| **http://www.cdphe.state.co.us/pp/dcphom.html** | State | Colorado diabetes statistics |
| **"The Burden of Diabetes"** | State | Colorado Diabetes Report |
| **http://www.cdphe.state.co.us/pp/diabetes/home.asp** | State/County | Colorado Diabetes Control Program |

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## CARDIOVASCULAR HEALTH IN COLORADO

The "2001 Heart and Stroke Statistical Update"[12] reports that since 1900, CVD has been the No. 1 killer in the United States every year but 1918.  The numbers of deaths due to cardiovascular disease (CVD) in the United States have declined over the past decade.  However, according to the *American Heart Association* these numbers are likely to rise because of the aging U.S. population.  CVD, principally heart disease and stroke, is the nation's leading killer for both men and women among all racial and ethnic groups.  CVD claimed **949,619** lives in the United States in 1998 (meaning **2,601** Americans die of CVD each day, an average of **1 death every 33 seconds**).  This is **40.6 percent** of all deaths or **1 of every 2.5 deaths**.  CVD claims almost **10,500** more lives each year than the **next 6** leading causes of death combined.  About **58 million** Americans (almost one-fourth of the nation's population) live with some form of cardiovascular disease.

In 1998, more than **150,000** Americans killed by CVD are under age 65, with **34 percent** of deaths occurring prematurely (before age 75, the approximate average life expectancy in that year).

Heart disease is the leading cause of premature, permanent disability among working adults.  Stroke alone accounts for disability among more than **one million** people nationwide.  Almost **six million** hospitalizations each year are due to cardiovascular disease.  In 1997, **$26.9 billion** in payments were made to Medicare beneficiaries for hospital expenses due to cardiovascular problems. That was an average of **$7,873** per discharge. Congestive heart failure, one form of cardiovascular disease, is the single most frequent cause of hospitalization for people aged 65 years or older.  The American Heart Association estimates that the cost of CVD and stroke in the United States in 1998 will be **$286.5 billion**.

Heart attack, stroke and other cardiovascular (heart and blood vessel) diseases have killed more women than men since 1984. The most recent statistics available indicate that **505,930** women in the United States died of cardiovascular diseases in 1996, nearly **twice as many as from all forms of cancer (257,635)**, including breast cancer (**43,800**).  **Four out of five** women and **one out of three** primary care physicians surveyed in a 1995 Gallup poll did not know that heart disease, not cancer, is the leading cause of death among women. The fact is, that more women die of cardiovascular diseases each year than from all forms of cancer, chronic lung disease, pneumonia, diabetes, accidents and AIDS combined.  Heart attack and stroke can strike at any age. Each year heart attacks alone kill almost **20,000** women under age 65 — more than **61 percent** of them are under age 55, and more than one-fourth of the women who have a brain attack in a given year are under age 65.

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[12] "2001 Heart and Stroke Statistical Update", American Heart Association, 2001.

*Children and Cardiovascular Diseases:*

- About **32 thousand** babies are born each year with heart defects. Doctors say that **30 percent** of all infant deaths are heart disease-related.

- **Four million** children have above normal blood pressure and **27 million** children already have high blood cholesterol. Many studies show that one-third of our nation's children are obese.

- Every day, about **9 million** children are exposed to second hand smoke by a family member.

- If current trends stay constant, about **3.5 million** of today's **83 million** children will eventually die from heart and blood vessel disease.

*Cardiovascular Disease in Colorado:*

- **18 deaths** per day are from heart disease.

- **5 deaths** per day are from stroke.

- Heart disease accounts for **26 percent** of all deaths in the state and stroke accounts for **7 percent** of all deaths in the state.

- **50 percent** of heart disease deaths and **63 percent** of stroke deaths occur in women.

- **20 percent** of Hispanic deaths are from heart disease and **6 percent** of Hispanic deaths are from stroke.

- **22 percent** of African American deaths are from heart disease and **8 percent** of African American deaths are from stroke.

Eating a diet low in fat and rich in whole grains, fruits and vegetables, along with physical activity can help lower the risk of heart disease.  Additionally, it is important for individuals to monitor their blood pressure, cholesterol levels, and weight.

For additional statistics, see "2001 Heart and Stroke Statistical Update" at web site **http://www.americanheart.org/statistics/pdf/HSSTATS2001_1.0.pdf**.

**Cardiovascular Health Programs in Colorado**
The *Colorado Health Information Data Set*[13] maintains data on the Colorado deaths from Cardiovascular Disease from 1990-2000 on state and county levels at web site **http://www.cdphe.state.co.us/scripts/htmsql.exe/SASCohidWeb/mortalityPub.hsql.**
The *Behavioral Risk Factor Surveillance System* report for Colorado gives additional data on cardiovascular health in the state.

**Table 21** provides the trend data on the number of deaths and the death rates from cardiovascular disease in Colorado from 1990 through 1998.

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[13] "Colorado Health Information Data Set", Colorado Department of Public Health and Environment, 2000

**Table 21: Trends in Cardiovascular Deaths in Colorado**

| Year | United States | | Colorado | |
|---|---|---|---|---|
| | **Deaths** | **Crude Death Rate** | **Deaths** | **Crude Death Rate** |
| **1990** | 916,000 | 368.3 | 8,105 | 245.3 |
| **1991** | 924,000 | 365.4 | 8,210 | 243.3 |
| **1992** | 938,700 | 364.9 | 8,408 | 241.7 |
| **1993** | 947,400 | 363.8 | 8,514 | 237.3 |
| **1994** | 949,500 | 362.4 | 8,684 | 235.4 |
| **1995** | 951,400 | 362.1 | 8,824 | 233.3 |
| **1996** | 950,200 | 358.2 | 9,122 | 235.9 |
| **1997** | 942,700 | 352.2 | 9,071 | 229.4 |
| **1998** | 942,900 | 349.1 | 9,195 | 226.8 |
| **1999** | 949,998 | 348.4 | 9,167 | 220.7 |
| **All** | 8,462,800 | 360.7 | 78,133 | 236.1 |

Note: Crude Death Rates are rates of deaths per 100,000 of population
Note: These rates include all forms of cardiovascular disease, including stroke, hypertension, and coronary heart disease.
Source: "Colorado Health Information Data Set", Colorado Department of Public Health and Environment, 2000

**R5: Resources for Cardiovascular Health**

| Web Site | Level of Data Available | Comments |
|---|---|---|
| **http://www.cdc.gov/health/cardiov.htm** | National | U.S. cardiovascular statistics from the CDC |
| **http://www.americanheart.org/statistics/index.html** | National | National cardiovascular data |
| **http://www.cdphe.state.co.us/hs/deaths1999.pdf** | National/State | Colorado death statistics from Vital Statistics |
| **http://www.americanheart.org/az-co-nm-wy/hfacts.html** | Regional | Regional cardiovascular data |
| **http://www.cdphe.state.co.us/scripts/htmsql.exe/SAScohidWeb/mortalityPub.hsql.** | State/County | Colorado mortality and morbidity rates |

## ARTHRITIS IN COLORADO

According to the *Centers for Disease Control,*[14] arthritis and other rheumatic conditions affect nearly **43 million** Americans, or about **one of every six people**, making it one of the most prevalent diseases in the United States.

The *CDC* also reports that arthritis is the leading cause of disability in the United States, limiting everyday activities for more than **7 million** Americans.  Each year, arthritis results in **44 million** outpatient visits, almost three-quarters of a million hospitalizations, estimated medical care costs of **$15 billion**, and estimated total costs (medical care and lost productivity) of almost **$65 billion**.  The impact of arthritis is expected to increase dramatically as baby boomers age.  By 2020, an estimated **60 million** Americans, or almost **20% of the population**, will be affected by arthritis, and nearly **12 million** will experience activity limitations.

The *CDPHE Arthritis Program* reports that, in Colorado, arthritis is the leading cause of disability among persons age 15 and older.  In 1995, there were an estimated **505,000** persons with arthritis in Colorado. Of that total, **88,000** experienced activity limitation. By the year 2010, that number is expected to reach **127,000**. The economic burden of arthritis in Colorado is estimated to be **over $900 million** annually.[15]

In 1999, the Colorado Department of Public Health and Environment was awarded a two-year grant to address the issue of arthritis. The intent of this grant is to aid Colorado by:
- Enhancing surveillance activities to define the burden of arthritis in Colorado,
- Convening an advisory committee with both public and private partners to develop and disseminate a statewide arthritis plan, and creating an Arthritis Prevention and Control Program.

**R6: Resources for Arthritis**

| Web Site | Level of Data Available | Comments |
|---|---|---|
| http://www.nih.gov/niams/news/niams-05.htm | National | National Institute of Arthritis and Musculoskeletal and Skin Diseases |
| http://www.cdc.gov/nccdphp/arthritis/mmwr.htm | National | Arthritis-Related Morbidity and Mortality Weekly Reports |
| http://www.arthritis.org/ | National | Arthritis Foundation Website |
| http://www.cdc.gov/nccdphp/art-aag.htm | National | CDC –Arthritis Section |
| http://www.cdphe.state.co.us/pp/arthritis/other.asp | National/State | Links to National Arthritis Programs |
| http://www.cdphe.state.co.us/pp/arthritis/index.asp | State | Colorado Arthritis Programs |

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[14] "Morbidity and Mortality Weekly Report", Centers for Disease Control, V 48, Number 17, May 7, 1999
[15] Colorado Arthritis Programs, Colorado Department of Public Health and Environment, 2000

## HIV/AIDS AND SEXUALLY TRANSMITTED DISEASES IN COLORADO

The HIV/STD Surveillance Program[16] monitors reported cases of AIDS, HIV, chlamydia, gonorrhea and syphilis. The program analyzes case report information and writes quarterly and yearly reports for widespread dissemination. The program also performs special studies such as HIV seroprevalence surveys, to enhance disease monitoring.

The "HIV and AIDS in Colorado: Monitoring the Epidemic"[17] reports that AIDS cases in Colorado peaked in 1993 and **decreased 21% between 1993 and 1995**. Since 1995, an even greater drop in the AIDS incidence and mortality rates have been observed due to the development of new anti-HIV drug therapies in 1996. In Colorado, AIDS cases **decreased by 34% between 1995 and 1997**, with declines shown among all racial and ethnic groups. AIDS related mortality peaked in 1995, but **declined by 43% from 1995 to 1996 and by 46% from 1996 to 1997**.

As a result of new drug therapies, fewer people are dying as a result of AIDS and fewer are progressing from HIV to AIDS. Therefore, there are now more cases of people living with HIV/AIDS in Colorado and the nation. By the end of 1999 there were an estimated **8,144 cases** of people living with HIV or AIDS in Colorado. This is an increase of **13%** beyond the numbers in 1995.

In Colorado, the exposure to HIV/AIDS is due largely to same sex relationships between men. This is comparable to the experiences in the eastern and southern parts of the United States and also in the larger metropolitan areas of the nation. For women, the leading cause of AIDS/HIV in Colorado is injecting drug use (IDU), with **52%** of new cases related to that activity. Colorado minorities (blacks especially) are over-represented in the population of HIV/AIDS cases. IDU is the main reason for the number of minority cases in the Colorado and the United States.

### *Sexually Transmitted Diseases:*

Sexually transmitted diseases (STDs) impose a welfare cost to society in a variety of ways. Over the last few years, the trend for most STDs in Colorado and nationally has been downward. However, rates of clamydia have climbed dramatically. The data below was compiled by Centers for Disease Control and the Disease Control and Environmental Epidemiology Division of the Colorado Department of Public Health and Environment. For Colorado, the division tracks, controls and prevents communicable diseases and other conditions in Colorado in order to reduce illness and premature deaths. The staff also assesses risks from toxic exposures in the environment to prevent adverse health effects. "The Sexually Transmitted Diseases in Colorado Surveillance Report: 1999" provides greater detailed reporting about STDs in Colorado.

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[16] "Surveillance & Statistics", Centers for Disease Control, 2001

[17] "HIV and AIDS in Colorado: Monitoring the Epidemic", Colorado Department of Public Health and Environment, December 2000

*Sexually Transmitted Diseases by Type and Year:*

*Chlamydia*:  Chlamydia is the most prevalent bacterial STD in the United States as well as the most frequent reportable STD in Colorado. Laboratories reported **10,708** positive **chlamydia** tests to the Colorado Department of Public Health and Environment in 1999. Of these, **75%** were in women and **25%** were in men.  Among women, the 15-19 year age group comprised the largest proportion of positives (**39%),** whereas, among men, the 20-24 year age group accounted for the largest proportion (**39%**).  For a larger breakdown of the data and county level data see website: **http://www.cdphe.state.co.us/dc/HIV_STDSurv/stdreport_99.pdf.**

**Table 22** compares chlamydia between Colorado and the United States.  Both entities show an increasing rate of cases from 1995 through 1999.  Colorado in 1999, with a rate of **273.2** reported cases of chlamydia per 100,000 population, had the **14th** largest number cases out of the fifty states, District of Columbia, and US territories.  This rate exceeded the US rate of **254.1** per 100,000 population.  For 1999, Colorado reported **10,848** cases. Of the 64 largest US cities with a population of greater than 200,000 people, Denver had the **9th** highest reported rate of chlamydia with **675.5** cases per 100,000 population.

**Table 22: Chlamydia Rates per 100,000 Population**

|  | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|
| **United States** | 190.4 | 192.9 | 207.0 | 234.2 | 254.1 |
| **Colorado** | 177.5 | 190.8 | 199.1 | 229.5 | 273.2 |
| Source: Centers for Disease Control**,** National Center for HIV, STD and TB Prevention, Division of Sexually Transmitted Diseases, 2000 | | | | | |

*Gonorrhea*: The numbers of reported cases of gonorrhea in Colorado increased **7%** in 1999 (**2501** cases) compared to 1998 (**2347** cases), contributing to an overall two-year increase of **11%** in reported cases. Gonorrhea rates, however, increased only **4%** from 1998 to 1999 and **6%** from 1997 to 1999.

**Table 23** compares Colorado and the United States from 1995 through 1999.  Colorado in 1999, with a rate of **63.6** reported cases of Gonorrhea per 100,000 population, had the **30th** largest number cases out of the fifty states, District of Columbia, and three US territories.  This rate was below of the US rate of **133.2** per 100,000 population.  For 1999, Colorado reported **2,526** cases. General trends for the US were downward until 1998, where the trend reversed.  For Colorado, 1999 saw a sharp increase in the number of reported cases.  Of the 64 largest US cities, Denver had the 29th highest reported rate of Gonorrhea with **231.8** cases per 100,000 population.

**Table 23: Gonorrhea Rates per 100,000 population**

|  | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|
| **United States** | 149.4 | 123.2 | 122.0 | 131.6 | 133.2 |
| **Colorado** | 74.8 | 53.0 | 59.5 | 51.2 | 63.6 |
| Source: Centers for Disease Control**,** National Center for HIV, STD and TB Prevention, Division of Sexually Transmitted Diseases, 2000 | | | | | |

*Syphilis:*

The number of reported cases of primary and secondary (P/S) syphilis in Colorado increased **37.5 percent** from 1999 to 2000.  However, this represents an increase of just **3 cases; from the low of 8 cases in 1999 to 11 cases in 2000.**

The **11 cases** of P/S syphilis reported to the Colorado Department of Public Health and Environment in 2000 represented a rate of **0.3 per 100,000** persons. Males accounted for the overwhelming majority (**nearly 91%**) of reported cases in 2000; they represented only **25%** of primary and secondary syphilis cases reported in 1999.  The 35 to 44 year age group represented **64%** of reported cases.  Blacks (who comprise **3.8%** of Colorado's population) are over-represented by a **factor of almost 12** at **45.5%** of new syphilis cases.  Hispanics are also over-represented, as they comprise **17.1%** of Colorado's population and **27.3%** of new syphilis cases.

**R7: Resources for HIV/AIDS and STDs**

| Web Site | Level | Comments |
|---|---|---|
| http://www.cdc.gov/nchstp/dstd/Stats_Trends/Stats_and_Trends.htm | National | STD statistics through the Centers for Disease Control |
| http://www.cdphe.state.co.us/dc/HIVSTDPROGS.asp | State | Colorado AIDS/HIV data |
| http://www.cdphe.state.co.us/pp/. | State/County | Colorado's Disease Programs |
| http://www.cdphe.state.co.us/dc/hivsites.html | State/County | Colorado HIV Related Internet Sites |
| http://www.cdphe.state.co.us/dc/HIV_STDSurv/stdreport_00.pdf | State/County | Colorado STD data |

### AIR QUALITY AND RELATED HEALTH ISSUES IN COLORADO

The public health importance of a clean and safe environment is enormous. In 1990, American industry emitted more than **2.4 billion** pounds of toxic pollutants into the atmosphere. In 1991, **98 areas** exceeded the Environmental Protection Agency's recommended levels for ozone, and an estimated **140 million** Americans lived in those areas. Also in 1991, **76 areas** exceeded recommended levels for carbon monoxide, **seventy** did so for particulate matter, and **fifty** did so for sulfur dioxide.

Such air pollution levels have been associated with increased respiratory health problems among people living in the affected areas. According to the *Healthy People 2000* report, each year in the United States:

- The health costs of human exposure to outdoor air pollutants range from **$40 to $50 billion**.
- An estimated **50,000 to 120,000** premature deaths are associated with exposure to air pollutants.
- People with asthma experience more than **100 million** days of restricted activity, costs for asthma exceed **$4 billion**, and about **4,000** people die of asthma.

The *Colorado Air Quality Control Commission Report to the Public* describes air quality conditions in the state during the past year and details the work of the Colorado Air Quality Control Commission, Colorado Air Pollution Control Division, and local health and environmental agencies and planning organizations. The report is available through the Colorado Department of Public Health and Environment or can be accessed on-line at **http://www.cdphe.state.co.us/ap/rttp99-00.asp.**

*Report Highlights:*
- Colorado maintained compliance with all federal health-based air pollution standards in 1999.
- Colorado has had no violations of the National Ambient Air Quality standards since 1995.
- Violations of the carbon monoxide and particulate matter standards occurred once (November 1999) in the Denver area. One exceedance is allowed per year for carbon monoxide and violations are calculated on a three-year basis for particulates (the three-year basis applies to ozone violations as well).
- Ozone reached unhealthful levels three times between May 1 and September 15, 1999.
- Weather played a large role in the exceedances in each case.

The majority of the report (pages 11-40) addresses pollution concerns and perspectives at the regional level. There are six regions for the state – Central Front Range, Eastern High Plains, Northern Front Range, Pikes Peak, South Central, and Western Slope regions.

The Air Pollution Control Division of the CDPHE also makes available an index with links to Colorado Air Quality Studies and Reports at

**http://www.cdphe.state.co.us/ap/studiesreports.asp**.  This site allows access to studies on the Colorado Emissions Program, the Colorado Greenhouse Gas Emission Inventory and Forecast, and Oxygenated Fuel studies among others.

From the Air Pollution Control Division web site, **http://www.cdphe.state.co.us/ap/,** access is available for present daily air quality reports for the Denver metro area and the previous day's air quality reports from seven locations around the state.  The site also reports on the hourly data for up to 13 environmental measurements from all 31 stations around the state in the previous month.  The web site also provides information on the programs and services listed in **Table 24**:

**Table 24: Air Pollution Programs and Services**

| Major Category Programs and Services | Specific Programs and Services |
|---|---|
| Organizational Programs | *Mobile Sources*, *Planning and Policy*, *Stationary Sources*, and *Technical Services* |
| Services for Communities and Municipalities | *Air Quality Planning*, *Community Based Environmental Protection*, *Environmental Education*, *Smoke Management and Open Burning*, *Urban Air Toxics Program Development*, and *Wood Burning Regulations and Information* Services |
| Services for Motorists and the Auto Service/Repair Industry | *Mobile Sources Program* |
| Services for Business and Industry | *Air Emissions Permits*, *Status of Permit Applications*, *Air Emissions Operating Permits for High Emitters*, *Downloadable Permit and Compliance Forms*, *Asbestos Control and Compliance*, *Hog Farms*, *Indoor Air Quality*, *Inspections and Enforcement*, *Pollution Prevention*, *Regulatory and Compliance Support and Assistance*, and *Small Business Assistance* Services |
| **Source: Colorado Department of Public Health and Environment, Air Pollution Control Division** | |

**R8: Resources for Air Pollution**

| Web Site | Level | Comments |
|---|---|---|
| **http://www.cdc.gov/nceh/asthma/brochures/airpollu.htm** | National | Centers for Disease Control - Air Pollution and Respiratory Health |
| **http://www.cdphe.state.co.us/ap/aphom.asp** | State, Monitoring Station | Main air pollution site for Colorado. |
| **http://www.epa.gov/air/data/** | State, County, Monitoring Station | Air Data.  Raw data and mapping available. |

## FOODBORNE ILLNESSES IN COLORADO

Consuming contaminated foods or beverages can result in foodborne illnesses. Many different disease-causing microbes, or pathogens, can contaminate foods, so there are many different foodborne infections. In addition, poisonous chemicals, or other harmful substances can cause foodborne diseases if they are present in food. More than 250 different foodborne diseases have been described. Most of these diseases are infections, caused by a variety of bacteria, viruses, and parasites that can be foodborne. Other diseases are poisonings, caused by harmful toxins or chemicals that have contaminated the food, for example, poisonous mushrooms. These different diseases have many different symptoms, so there is no one "syndrome" that is foodborne illness. However, the microbe or toxin enters the body through the gastrointestinal tract, and often causes the first symptoms there, so nausea, vomiting, abdominal cramps and diarrhea are common symptoms in many foodborne diseases.

Many microbes can spread in more than one way, so we cannot always know that a disease is foodborne. The distinction matters, because public health authorities need to know how a particular disease is spreading to take the appropriate steps to stop it. For example, *Escherichia coli* O157:H7 (E coli) infections can spread through contaminated (undercooked) food, contaminated drinking water, contaminated swimming water, and from toddler to toddler at a day care center. Depending on which means of spread caused a case, the measures to stop other cases from occurring could range from removing contaminated food from stores, chlorinating a swimming pool, or closing a child day care center. This ease of spreading the illness has led to an estimated 73,000 cases of infection and 61 deaths occur in the United States each year.

Foodborne diseases cause an estimated **76 million** illnesses and **5,000** deaths in the United States each year, but only a fraction of these illnesses are routinely reported to CDC because a complex chain of events must occur before a foodborne infection is reported; a break at any point in the chain will result in a case not being reported. In addition, most reported foodborne illnesses are sporadic in nature; only a small number are identified as being part of an outbreak and thus are reported through the Foodborne-Disease Outbreak Surveillance System. For example, *Salmonella* infection causes an estimated **1.4-million** foodborne illnesses annually. However, from 1993 through 1997, a total of **189,304** *Salmonella* infections (approximately **38,000** annually) were reported through the National *Salmonella* Surveillance System (16-20), which is a passive, laboratory-based system.

In contrast, during the same period, **357** recognized outbreaks of *Salmonella* infection resulting in **32,610** illnesses were reported through the Foodborne-Disease Outbreak Surveillance System.[18] Thus, the system greatly underestimates the burden of foodborne disease. Detailed data and information on foodborne diseases can be found through the "Surveillance for Foodborne Disease Outbreaks --United States, 1993-1997". The report is available on-line at

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[18] "Surveillance for Foodborne Disease Outbreaks --United States, 1993-1997", Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, March 2000

**http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/ss4901a1.htm**.  This site provides national data, as well as state-to-state comparisons on reported foodborne illnesses.

In Colorado, waterborne and foodborne illnesses are reported to the *Disease Control & Environmental Epidemiology Division of the CDPHE* and the local (county) health departments.  Waterborne and foodborne disease surveillance involves investigating cases of diarrheal or intestinal illnesses caused by inadequate water treatment systems or improper commercial food handling and implementing prevention measures. The staff works with the Water Quality Control Division in the investigation of waterborne disease outbreaks and with the Consumer Protection Division in responding to foodborne outbreaks.  Determining exactly which agent caused the illness is often very difficult and there appears to be no single dominant type of carrier.  The agents run the gamut with salads, deli meats, main dishes, fruits and vegetables the predominant ones**.  The most common determined error was temperature/refrigeration/reheating.  From 1995-1998, sixty of the 125 determined incidences were the result of those problems**.  The illness problems occurred most often in restaurants, but were also seen in catering establishments, delis, and private facilities such as homes.

Reports of foodborne illnesses for each county/region are available at the county health departments.  The county health department addresses and telephone numbers can be found at **http://www.cdphe.state.co.us/cp/Countylist.html**.

**Table 25** on the following page contains a summation of some data gathered by the Colorado Health Department.  It gives the number of foodborne incidences and the number of foodborne illnesses reported from 1995 through 1998. Incidences are the number of different times where cases are reported, while illnesses are the number of people treated for exposure to foodborne illnesses.  For more detailed information, please contact the Disease Control and Environmental Epidemiology Section of the Colorado Department of Public Health and Environment at **http://www.cdphe.state.co.us/dc/dceedhom.asp.**

**R9: Resources for Foodborne Disease**

| Web Site | Level | Comments |
|---|---|---|
| **http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/ss4901a1.htm** | National | "Surveillance for Foodborne Disease Outbreaks --United States, 1993-1997" report |
| **http://www.cdc.gov/ncidod/dbmd/diseaseinfo/foodborneinfections_t.htm** | National | Foodborne infections data and information |
| **http://www.cdc.gov/foodnet** | National | FoodNet Website |
| **http://www.cdphe.state.co.us/dc/dceedhom.asp** | State | Disease Control & Environmental Epidemiology |
| **http://www.cdphe.state.co.us/dc/Epidemiology/enteric_viralhep.html** | State | Waterborne, foodborne, and bloodborne illnesses and diseases information for Colorado |
| **http://www.cdphe.state.co.us/cp/Countylist.html** | State, County | List of local/regional health departments |

**Table 25: Total Number of Reported Incidences and Illness from Those Incidences**

| | 1995 Incidence Numbers | 1995 Illnesses | 1996 Incidence Numbers | 1996 Illnesses | 1997 Incidence Numbers | 1997 Illnesses | 1998 Incidence Numbers | 1998 Illnesses |
|---|---|---|---|---|---|---|---|---|
| **Boulder** | 3 | 18 | 1 | 123 | 5 | 52 | 5 | 27 |
| **B/L/W** | | | 1 | 23 | | | | |
| **Denver** | 11 | 69 | 8 | 86 | 5 | 28 | 12 | 139 |
| **Eagle** | 2 | 1 | 1 | 5 | | | | |
| **El Paso** | 10 | 41 | 1 | 2 | 2 | 101 | 4 | 74 |
| **Garfield** | | | | | 2 | 10 | | |
| **Grand** | | | 1 | 8 | | | | |
| **Gunnison** | | | 1 | 10 | | | | |
| **Jefferson** | 4 | 36 | 6 | 100 | 2 | 25 | 3 | 68 |
| **Larimer** | 5 | 299 | 5 | 134 | 1 | 5 | 2 | 30 |
| **Logan** | | | 1 | 20 | | | 1 | 13 |
| **Montrose** | | | | | | | 1 | 5 |
| **Otero** | 1 | 3 | | | | | | |
| **Park** | 1 | 2 | | | | | | |
| **Pitkin** | | | 1 | 15 | 1 | 2 | 1 | 18 |
| **Prowers** | 1 | 41 | | | | | | |
| **Pueblo** | 1 | 7 | 2 | 18 | 1 | 13 | 2 | 20 |
| **TCHD** | 6 | 240 | 7 | 100 | 6 | 130 | 5 | 35 |
| **Weld** | | | 1 | 5 | | | | |
| **Yuma** | 5 | 5 | | | | | | |
| **Other Colorado** | 1 | 8 | 1 | 5 | 1 | 15 | 3 | 14 |
| **Total** | **51** | **779** | **38** | **654** | **26** | **381** | **39** | **443** |

Note: B/L/W is Boulder/Larimer/Weld Counties and the report is due to a problem at a multi-county dairy
Note: TCHD is the Tri-County Health Department representing Adams, Arapahoe and Douglas Counties
Source:  Disease Control & Environmental Epidemiology Section, CDPHE.

## OCCUPATIONAL INJURIES IN COLORADO

The CDPHE performs the *Census of Fatal Occupational Injuries* (available at web site **http://www.cdphe.state.co.us/hs/cfoi/cfoihom.asp**).  The chart below is available in the *Census of Fatal Occupational Injuries* report and shows the occupational fatality rates for Colorado and the United States from 1994-98.  Except for an increase in 1997 due to a multiple-fatality plane crash, Colorado has seen occupational fatality rates decline since 1994.  Colorado's rates have been higher than national rates for three of the past five years.  The rates are **per 100,000** workers and the data was compiled by the U.S. Department of Labor.  **Table 26** provides the fatality rates for Colorado and for the United States from 1994 through 1998.  **Table 27** gives the number of fatal injuries that have occurred in Colorado by event from 1993 through 1998.  **Table 28** provides the data on the number of fatalities by job classification and **Table 29** provides the number of fatal injuries by industry for the years 1993 through 1998. **County level data** is available in "Colorado 1998 Census of Fatal Occupational Injuries: July, 2000" at web site **http://www.cdphe.state.co.us/hs/cfoi/cfoi98.pdf**

### Table 26: Occupational Fatality Rates per 100,000 Population

| Year | Colorado | U.S. |
|------|----------|------|
| **1994** | 6.3 | 5.3 |
| **1995** | 5.5 | 4.9 |
| **1996** | 4.2 | 4.8 |
| **1997** | 5.4 | 4.7 |
| **1998** | 3.5 | 5.3 |

Note: Rate is fatalities per 100,000 population
Source: Census of Fatal Occupational Injuries, CDPHE, July 2000

### Table 27: Colorado Fatal Injuries by Event or Exposure by Total Number

|  | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--|------|------|------|------|------|------|
| **Transportation** | 43 | 42 | 48 | 42 | 58 | 38 |
| **Assaults/Violent Acts** | 23 | 20 | 24 | 15 | 17 | 9 |
| **Object/Equipment** | 14 | 10 | 16 | 11 | 17 | 8 |
| **Falls** | 11 | 18 | 12 | 10 | 18 | 10 |
| **Exposure to Harm** | 5 | 14 | 10 | 11 | 7 | 4 |
| **Fire** |  | 15 |  |  |  |  |
| **Miscellaneous** | 3 |  | 2 | 1 | 3 |  |
| **Total** | **99** | **119** | **112** | **90** | **120** | **69** |

Note: "Objects/Equipment" is being struck by object, compressed by or caught in equipment
Note: "Exposure to Harm" is electrification, exposure to chemicals, or allergies
Source: Census of Fatal Occupational Injuries, Table 1, CDPHE, July 2000

**Table 28: Colorado Fatal Occupational Injuries by Occupation by Total Numbers**

|                                   | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|------|------|------|------|------|------|
| Managerial/Professional           | 16   | 15   | 15   | 15   | 19   | 9    |
| Technical/Sales/Support           | 14   | 18   | 15   | 13   | 12   | 7    |
| Service                           | 12   | 19   | 11   | 4    | 11   | 6    |
| Farming/Forestry/Fishing          | 20   | 13   | 15   | 9    | 14   | 7    |
| Precision Production/Craft/Repair | 19   | 18   | 16   | 13   | 17   | 14   |
| Operators/Fabricators/Laborers    | 15   | 28   | 32   | 31   | 40   | 32   |
| Miscellaneous                     | 3    | 8    | 8    | 5    | 7    | 2    |
| Total                             | 99   | 119  | 112  | 90   | 120  | 77   |
| Source: Census of Fatal Occupational Injuries, Table 3, CDPHE, July 2000 | | | | | | |

**Table 29: Colorado Fatal Occupational Injuries by Industry by Total Numbers**

|                                      | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------|------|------|------|------|------|------|
| Farming/Forestry/Fishing             | 16   | 16   | 19   | 10   | 15   | 8    |
| Mining                               | 8    | 4    |      |      | 30   | 4    |
| Construction                         | 10   | 15   | 16   | 15   | 5    | 20   |
| Manufacturing                        | 7    | 12   | 6    | 5    | 21   | 3    |
| Transportation and Public Utilities  | 10   | 15   | 1171 | 10   | 3    | 10   |
| Retail and Wholesale                 | 17   | 12   | 2211 | 12   | 8    | 9    |
| FIRE and Services                    | 20   | 15   | 22   | 20   | 17   | 14   |
| Other Private                        | 1    | 1    | 3    | 3    | 1    | 3    |
| Government                           | 10   | 29   | 18   | 15   | 20   | 6    |
| Total                                | 99   | 119  | 112  | 90   | 120  | 77   |
| Note: "FIRE" is Finance, Insurance, and Real Estate | | | | | | |
| Source: Census of Fatal Occupational Injuries, Table 4, CDPHE, July 2000 | | | | | | |

The report also includes data on fatal occupational injuries by selected characteristics. This is found in Table 2 at web site **http://www.cdphe.state.co.us/hs/cfoi/cfoihom.asp**.

This web site also supplies a link to web sites for the Bureau of Labor Statistics, the Occupational Safety and Health Administration, the National Institute for Occupational Safety and Health, and the Mine Safety and Health Administration.  All of these sites provide national data on occupational injuries.

**R10: Resources for Occupational Injuries**

| Web Site | Level | Comments |
|----------|-------|----------|
| http://stats.bls.gov/blshome.htm | National | Bureau of Labor Statistics |
| http://www.cdc.gov/niosh/homepage.html | National | National Institute for Occupational Safety and Health |
| http://www.msha.gov/ | National | Mine Safety and Health Administration |
| http://www.osha.gov/ | National | Occupational Safety and Health Administration |
| http://www.cdphe.state.co.us/hs/cfoi/cfoihom.asp | State | Colorado occupational fatalities |

# 4    MENTAL HEALTH

*Mental Health:*

Mental disorders are common in the United States and internationally. The *National Institute for Mental Health* in "The Numbers Count: Mental Disorders in America"[19] reports that an estimated **22.1 percent** of Americans ages 18 and older—about **1 in 5 adults**—suffer from a diagnosable mental disorder in a given year. When applied to the 1998 U.S. Census residential population estimate, this figure translates to **44.3 million** people. In addition, **4 of the 10** leading causes of disability in the U.S. and other developed countries are mental disorders-major depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder. Many people suffer from more than one mental disorder at a given time.

The burden of mental illness on health and productivity in the United States and throughout the world has long been underestimated.  Data developed by the *Global Burden of Disease* study conducted by the World Health Organization, the World Bank, and Harvard University (and reported in "The Impact of Mental Illness on Society"[20] by National Institute for Mental Health), reveal that mental illness, including suicide, accounts for **over 15 percent** of the burden of disease in established market economies, such as the United States. This is more than the disease burden caused by all cancers.

This *Global Burden of Disease* study developed a single measure to allow comparison of the burden of disease across many different disease conditions by including both death and disability.  This measure was called *Disability Adjusted Life Years (DALYs)*.  Using the *DALY*s measure, major depression ranked second only to ischemic heart disease in magnitude of disease burden in established market economies.  Schizophrenia, bipolar disorder, obsessive-compulsive disorder, panic disorder, and post-traumatic stress disorder also contributed significantly to the total burden of illness attributable to mental disorders.

The projections show that with the aging of the world population, psychiatric and neurological conditions could increase their share of the total global disease burden by almost half, **from 10.5 percent** of the total burden **to almost 15 percent** in 2020.

According to the "Mental Health: A Report of the Surgeon General"[21], a range of effective, well-documented treatments exist for most mental disorders, yet nearly half of all Americans who have a severe mental illness fail to seek treatment, according to the first-ever Surgeon General's report on mental health. The report also focuses on the

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[19] "The Numbers Count: Mental Disorders in America", National Institute for Mental Health, 2000.
[20] "The Impact of Mental Illness on Society", National Institute for Mental Health, 2000.
[21] "Mental Health: A Report of the Surgeon General, Chapter 1", National Institute for Mental Health, 1999.

connection between mental health and physical health, barriers to receiving mental health treatment, and the specific mental health issues of children, adults and the elderly.

The report also maintains that the costs of mental illness are exceedingly high. The direct costs of mental health services in the United States in 1996 totaled **$69.0 billion**.  This figure represents **7.3 percent** of total health spending.  An additional **$17.7 billion** was spent on Alzheimer's disease and **$12.6 billion** on substance abuse treatment. Direct costs correspond to spending for treatment and rehabilitation nationwide.  Indirect costs of mental illness, such as lost productivity at the workplace, school, and home, were estimated in 1990 at **$78.6 billion**.

The following highlights are for 1999 and are from "The Numbers Count: Mental Disorders in America" by the *National Institute for Mental Health*.[22]

### *National Highlights about Depression:*
- Approximately **18.8 million** American adults, or about **9.5 percent** of the U.S. population age 18 and older in a given year, have a depressive disorder.
- Nearly twice as many women (**12.0 percent**) as men (**6.6 percent**) are affected by a depressive disorder each year.
- Major depressive disorder is the leading cause of disability in the U.S. and established market economies worldwide
- Major depressive disorder affects approximately **9.9 million** American adults, or about **5.0 percent** of the U.S. population age 18 and older in a given year
- Dysthymic disorder (chronic, mild depression) affects approximately **5.4 percent** of the U.S. population age 18 and older during their *lifetime.*
- Bipolar disorder affects approximately **2.3 million** American adults, or about **1.2 percent** of the U.S. population age 18 and older in a given year.
- Men and women are equally likely to develop bipolar disorder.


### *National Highlights about Schizophrenia:*
- Approximately **2.2 million** American adults, or about **1.1 percent** of the population age 18 and older in a given year, have schizophrenia.
- Schizophrenia affects men and women with equal frequency.

### *National Highlights about Attention Deficit Hyperactivity Disorder (ADHD):*
- ADHD, one of the most common mental disorders in children and adolescents, affects an estimated **4.1** percent of youths, ages 9 to 17 in a 6-month period.
- About 2-3 times more boys than girls are affected.

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[22] "The Numbers Count: Mental Disorders in America", National Institute for Mental Health, 2000.

*National Highlights about Autism:*
- Autism affects an estimated **1 to 2 per 1,000** people.
- Autism and related disorders (also called autism spectrum disorders or pervasive developmental disorders) develop in childhood and generally are apparent by age three.
- Autism is about **4 times** more common in boys than girls. Girls with the disorder, however, tend to have more severe symptoms and greater cognitive impairment.

*National Highlights about Eating Disorders:*
Females are much more likely than males to develop an eating disorder. Only an estimated **5 to 15 percent** of people with anorexia or bulimia and an estimated percent of those with binge-eating disorder are male. In their lifetime, an estimated **0.5 percent to 3.7 percent** of females suffer from anorexia and an estimated **1.1 percent to 4.2 percent** suffers from bulimia.
- Community surveys have estimated that between **2 percent and 5 percent** of Americans experience binge-eating disorder in a 6-month period.
- The mortality rate among people with anorexia has been estimated at **0.56 percent per year**, or approximately **5.6 percent per decade**, which is about **12 times higher** than the annual death rate due to all causes of death among females ages 15-24 in the general population

*National Highlights about Alzheimer's Disease:*
Alzheimer's disease, the most common cause of dementia among people age 65 and older, affects an estimated **4 million** Americans.
- The duration of illness, from onset of symptoms to death, averages 8 to 10 years.

*National Highlights about Anxiety Disorders:*
- Approximately **19.1 million** American adults ages 18 to 54, or about **13.3 percent** of people in this age group in a given year, have an anxiety disorder.
- Approximately **2.4 million** American adults ages 18 to 54, or about **1.7 percent** of people in this age group in a given year, have panic disorder
- Approximately **3.3 million** American adults ages 18 to 54, or about **2.3 percent** of people in this age group in a given year, have Obsessive-Compulsive Disorder
- Approximately **5.2 million** American adults ages 18 to 54, or about **3.6 percent** of people in this age group in a given year, have Post Traumatic Stress Disorder.

In Colorado, *Mental Health Services* provides statewide services for persons with serious mental illness of all ages, delivering those services through contracts with six specialty clinics and seventeen private, non-profit community mental health centers.  The services provided include inpatient treatment, emergency services, case management, counseling and treatment, rehabilitation services, residential care, medication management, in-home family preservation, day services, residential support services, peer/family support and public education.  Two state mental health institutes at Pueblo and Fort Logan provide inpatient hospitalization for Colorado residents with serious mental illness.  These institutions function as part of the integrated public mental health system with policy direction and program monitoring provided by *Mental Health Services*.  *Mental Health*

*Assessment and Services Agencies (MHASA)* is the newest component of Colorado's public mental health system.  Presently, there are nine *MHASA*s responsible for implementing Medicaid mental health capitation and case management programs in all 63 counties through contracts with *Mental Health Services*.

Access to all state and national expenditure rates can be found at the *Center for Mental Health Services* at web site **http://www.mentalhealth.org/default.asp**.

For Colorado, the expenditures on the *State Mental Health Agency (SMHA)* in 1997 totaled **$219,002,945** (ranked **24th out of fifty states** and the U.S. territories) or **$56.71** per state resident (**ranked 25th nationally**).

Of great concern in Colorado are the incidences of suicide in the state.  Colorado has one of the highest rates of suicide in the country. Although it has **decreased from seventh in 1996 to 12th in 1998** it is still the second leading cause of death in every age group from 10 to 34 years of age. Colorado's rate of suicide has exceeded the national average since 1910 when suicide data were first collected. In 1998 the Governor appointed the *Suicide Prevention Advisory Commission* to develop a statewide suicide prevention plan for Colorado and in November of 2000 the office of *Suicide Prevention and Intervention* was opened. For more information you can download the "Suicide Prevention and Intervention Plan" at: **http://www.cdphe.state.co.us/pp/suicide.htm.**

### Substance Abuse

Substance abuse and mental health are frequently grouped because it is common for a person to be dually diagnosed or for one disorder to precede or facilitate the other.  Some people who already have a mental illness or psychological disorder may use drugs or alcohol as a means of self-medication.  Alternatively, a person may use a drug or alcohol and, as a result, develop or enhance a preexisting mental disorder.  In addition, the types of services or systems of care are commonly the same for both.

In a joint national study by the *National Institute on Drug Abuse* and the *National Institute on Alcohol Abuse and Alcoholism*,[23] the national costs of alcohol and drug abuse were estimated to be **$245.7 billion in 1992**, and increased to **$276.3 billion in 1995**. The largest impact of alcohol and drug abuse was on lost productivity due to premature death, illness, and victimization. The health care costs for alcohol abuse were about twice that for drug abuse.

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[23] "The Economic Costs of Alcohol and Drug Abuse in the United States", National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism, 1992.  Analysis by the Lewin Group, Harwood, H.; Fountain, D.; and Livermore, G. Bethesda, MD: DHHS, NIH, NIH Publication No. 98-4327 (September 1998).

In Colorado the adult drug crimes arrest rate per 100,000 hit a **two-decade high of 598.1** in 1999.  The juvenile drug crimes arrest rate per 100,000 has been increasing sharply since 1991 **peaking in 1998 at 384.7 only slightly decreasing to 366.4 in 1999**.

A 1998 study by *The National Center on Addiction and Substance Abuse* at Columbia University indicated the heaviest burden of substance abuse and addiction on public spending falls on the states and programs of localities that states support.[24]  Of the two million prisoners in the United States, more than **1.8 million** are in state and local institutions.  States run the Medicaid programs where smoking and alcohol abuse impose heavy burdens in cancer, heart disease and chronic and debilitating respiratory ailments and where drug use is the largest cause of new AIDS cases.  States fund and operate child welfare systems--social services, family courts, foster care and adoption agencies--where at least **70 percent** of the cases of abuse and neglect stem from alcohol- and drug-abusing parents.

From this 1998 study the following results were particularly disconcerting for the nation and for the state of Colorado.

- On average, each American paid **$277 per year** in state taxes to support social programs that deal with the burden of substance abuse and addiction, while spending only **$10 a year** for prevention and treatment.
- In Colorado, the per capita burden was slightly lower than average at **$217** however, the investment in prevention and treatment was the lowest in the nation at **$.14.**
- The states spend **113 times** as much to clean up the devastation substance abuse and addiction visit on children as they do to prevent and treat it. Colorado spends **1,542 times** as much to clean it up as they do on prevention.
- Of the $620 billion total the states spent, **$81.3 billion-- 13.1 percent**--was used to deal with substance abuse and addiction. Colorado **ranked 9th** in the country with **12.4%** of state spending related to substance abuse.
- On average, **for every $100.00** states spend on substance abuse they spend **$95.80** on the burden of substance abuse to public programs compared to **$3.70** for prevention, treatment and research **($0.50** is spent on regulation and compliance).
- Although the most significant opportunity to reduce the burden of substance abuse on public programs is through targeted and effective prevention programs, Colorado's proportion spent on the affects of substance abuse compared to prevention and treatment was **$99.94 vs. $0.06**.
- The average annual, state per capita spending on prevention, treatment and research is **$11.09**. Per capita spending in this area ranges from a low of **$0.14** in Colorado to a high of **$34.93** in Washington DC.

*The Evaluation and Information Services Section (EISS) of ADAD (Alcohol and Drug Abuse Division)* studies and reports on substance use and abuse, and to evaluate the

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[24] "Shoveling Up: The Impact of Substance Abuse on State Budgets", The National Center on Addiction and Substance Abuse, Columbia University, 1998.

effectiveness of treatment and prevention services in Colorado.  Two of their reports now available are: "Drug Use Trends in Denver and Colorado", and "Alcohol and Drug Use and Abuse in Colorado: A Household Telephone Survey of Adult Colorado Residents".

For more information on the work being accomplished at *ADAD*, please see: **http://www.cdhs.state.co.us/ohr/adad/index.html**. Additionally, *ADAD* annually releases a report called "Colorado Prevention-Related Indicators Report" containing county level social indicator data related to substance abuse prevention to help identify problem areas, provide baseline data on which to measure change, identify community needs, set program priorities, and develop strategic plans.  For a copy contact *Omni Institute* at (303) 839-9422.

The "Substance Abuse and Mental Health Services Administration's (SAMHSA) National Household Survey on Drug Abuse" is the primary source of information on the prevalence, patterns, and consequences of drug and alcohol use and abuse in the general U.S. civilian non-institutionalized population, age 12 and older. The publications in the *Household Survey Series* include standard *NHSDA Reports*, special studies and analytic reports.

**R11: Resources for Mental Health and Substance Abuse**

| Web Site | Level | Comments |
|---|---|---|
| **http://www.nimh.nih.gov** | National | National Institute of Mental Health |
| **http://www.nimh.nih.gov/publicat/numbers.cfm** | National | "The Numbers Count: Mental Disorders in America" |
| **http://www.nimh.nih.gov/publicat/burden.cfm** | National | "The Impact of Mental Illness on Society" |
| **http://www.surgeongeneral.gov/Library/MentalHealth/home.html** | National | Mental Health: A Report of the Surgeon General" |
| **http://www.samhsa.gov/oas/p0000016.htm** | National | Reports by the Substance Abuse and Mental Health Services Administration |
| **http://www.cdhs.state.co.us/ohr/adad/index.html** | State | ADAD homepage – Substance abuse |
| **http://www.cbhc.org/issues.htm** | State | Colorado Behavioral Health Council |
| **http://www.mhacolorado.org/research.htm** | State | Mental Health Association of Colorado Inc. |
| **http://www.cdphe.state.co.us/pp/suicide.htm** | State | Suicide prevention and intervention plan |
| **http://www.cdhs.state.co.us/ohr/mhs/index.html.** | State, County | Colorado Mental Health System |
| **http://www.cdphe.state.co.us/hs/county98d3.pdf** | State, County | Suicide data |

## 5   MOTHER AND CHILD HEALTH

In Colorado there are a variety of sources of data for information on the health of mothers and children. The *Colorado Children's Campaign* produces "KidsCount in Colorado". As a statewide nonprofit organization, the *Colorado Children's Campaign* promotes the well-being of all children through research, public awareness, and helping concerned citizens work on behalf of children, with special emphasis on early intervention and long-term prevention. The *Colorado Department of Public Health and Environment (CDPHE)* publishes two other data sets of importance, the *Maternal and Child Health (MCH) County Data Sets* and the *Pregnancy Risk Assessment Monitoring System (PRAMS)*. The *MCH Data Sets* provide objectives for both the state and the nation, gives statistics on the present position for Colorado, and provides the progress that each county is making in achieving the stated goals/objectives. *PRAMS* is produced along with the *Centers for Disease Control* and is part of a nationwide survey done on the lifestyle behavior of women during pregnancy. In addition to these three sources, data is included from the BRFSS, which provides statistics and information on the knowledge and consumption of folic acid in the diet of pregnant women. On a national level, the United States Department of Agriculture provides statistics on the eating habits of children in America.

The *Colorado Children's Campaign's* annual report on the status of children, "KidsCount in Colorado!", documents health, education, safety, and economic trends in each of Colorado's sixty-three counties. The report helps local groups and public policy makers identify new issues, evaluate the effectiveness of programs, and set priorities for the coming years.

In 1990, the *Colorado Children's Campaign* developed goals in critical areas of child health, education and safety and set about working to meet them. Progress towards these "Decade of the Child" goals, endorsed by over 1200 Colorado organizations and community leaders, is reported each year. The full "2000 KidsCount in Colorado!" report using 1998 data is not available on the web at this time, but highlights of this report can be accessed at **http://www.coloradokids.org/index.html**. The "2000 KidsCount" and "KidsCount in Colorado 2001" can be ordered through web site **http://www.coloradokids.org/data_on_kids.html.**

### *Highlights of the "2000 KidsCount in Colorado!":*
- Motor vehicle-related injuries are the leading cause of death among children ages 1-17.
- Of the children killed in motor vehicle-related incidents in Colorado (1995-1997), **83%** were not secured in seat belts or car seats.
- Approximately **70,000** Colorado children have asthma and incur **88%** more in health care costs than the general population of children.
- The "Decade of the Child" goal of **seven deaths per 1000 live births** has been realized, improving **from 8.8 per 1000** at the start of the decade to **6.7 per 1000** in 1998.

- According to 1995 data, Colorado had the **12<sup>th</sup>** lowest rate for infant mortality in the United States.
- National statistics show that black infants continue to die **at twice** the rate of white infants, though the rates for both are improving.
- Colorado's early prenatal care measure has **improved by 5.2%** since 1990, with **82.2%** of pregnant women receiving early prenatal care in 1998.  Although this is up from 1990, it is below the 1997 level of **82.9%**.  The "Decade of the Child" goal was **90%**.
- Each of the 11 largest counties in Colorado has seen increased rates of early prenatal care since 1990.
- National rates for pre-natal care have also shown improvement since 1990, with an **81%** rate reported in 1995.  Colorado **ranked 38th** in the nation based on 1995 data.
- In 1998, **78.2% of 19-35 month-old children** were fully immunized, compared to **58%** in 1991.  The "Decade of the Child" goal was **90%**.  (It should be noted that because survey methods changed significantly in 1994, it is inappropriate to draw conclusions about the precise change of immunizations rates since 1991.)
- Nationally, **78%** of children in 1997 were fully immunized.
- The teen suicide rate, a measure of suicides for teens aged 10-19, has decreased from **9.7 per 100,000** in 1990 to a rate of **8.4 suicide per 100,000 teens** in 1998. Colorado remains far from the "Decade of the Child" goal of **3.5 suicides per 100,000**.
- Colorado's low birth weight rate has worsened since 1990, reaching **8.7%** in 1998.  However, this is a lower percentage than in 1997, when it peaked at **8.9%**.
- Of the 11 largest counties, only Denver and Larimer have shown progress against low birth weight births since 1990 and none has reached the "Decade of the Child" **goal of 5%.**
- Colorado fairs poorly among the states, **ranking 41st** in the nation for low birth weight births, and **worst (51st)** for low birth weight births to white mothers.
- The percent of children with health insurance appears to be about the same level (**85%**) as was seen in 1990.  This is below the "Decade of the Child" goal of **100%** coverage by 2000.
- While Colorado's rate of uninsured children has remained stable at **15%**, since 1990, the actual number of children lacking health insurance has grown because of the state's increasing population.  In 1995, approximately **162,000** children in Colorado were without health insurance, an increase of **26,000** since the start of the decade.

County level data for the 1999 report can be found at the website: **http://www.coloradokids.org/Kids_Count_/99Map/99map.html**.

*Maternal and Child Health:*

The Colorado Department of Public Health and Environment maintains a comprehensive database on children's health standards.  The *Maternal and Child Health County Data Sets* (MCH) are recent information or data for each of Colorado's 63 counties for each of 35 Maternal and Child Health Performance and Outcome Measures.  Performance Measures are determined by the federal *Maternal and Child Health Bureau* and by the *Colorado Department of Public Health & Environment*.  This site contains data on 28 "performance" standards and seven "outcome" measures for both the state and the counties.

The *MCH Performance and Outcome Measures* are used by the *Maternal Child Health Bureau, U.S. Department of Health and Human Services, Health Resources & Services Administration*, to assess the progress of states in improving the health status of women, infants, children, and adolescents. Planners at the *Colorado Department of Public Health and Environment* use the information for assessing progress in Colorado, and local organized health departments and nursing services use the data for assessment and planning at the local level.

The *MCH Bureau* website is found at **www.mchdata.net**.   The site describes the *MCH Bureau Title V Information System* and provides a great deal of information on the progress of other states.

The *MCH County Data Sets*[25] consist of two pages for each county. The first page presents the county's *MCH Indicators*, which are rates for each of the *Performance and Outcome Measures*, where there are county (or regional) data available. The second page presents the *MCH Data*, i.e., the numerators and denominators used to calculate the county's rates for the indicators.  The counties are presented in alphabetical order.

This data can be accessed through the *CDPHE* web site (**http://www.cdphe.state.co.us**) or directly at the "Maternal and Child County Data Sets" web site.

**Table 30** below provides a comparison of Colorado progress and goals with national goals.  An explanation and results of the measures, time periods, and sources for the measures is on the pages that follow this table.  Values in bold type are those where a large discrepancy exists between the Colorado indicator and either the Colorado objective or the national goal/objective.

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[25] *Maternal and Child Health County Data Sets*, Div of Prevention and Intervention, CDPHE, March 2001.

**NPM ≡ National Performance Measure**
**SPM ≡ State Performance Measure**
**NOM ≡ National Outcome Measure**

**Table 30: Maternal and Child Health County Data Sets**

| Performance Measure | Colorado Indicator | Colorado Objective Fiscal Year 1999 | National MCH Target/Goal |
|---|---|---|---|
| NPM 1 | N/A | N/A | N/A |
| NPM 2 | 9 | 9 | 9 |
| NPM 3 | N/A | N/A | N/A |
| NPM 4 | 96.3% | 96.0% | 95.0% |
| NPM 5 | **74.8%** | **90.0%** | **90.0%** |
| NPM 6 | **30.3 per 1,000** | **29.5 per 1,000** | **50.0 per 1,000** |
| NPM 7 | **28.0%** | **30.0%** | **50.0%** |
| NPM 8 | 4.3 per 100,000 | 3.5 per 100,000 | 3.5 per 100,000 |
| NPM 9 | 82.3% | 90.0% | 75.0% |
| NPM 10 | 84.1% | 90.0% | N/A |
| NPM 11 | N/A | 78.0% | N/A |
| NPM 12 | 16.5% | 11.0% | N/A |
| NPM 13 | 87.1% | 93.0% | N/A |
| NPM 14 | 16 | 15 | 18 |
| NPM 15 | 1.3% | 1.3% | 1.0% |
| NPM 16 | **12.9 per 100,000** | **15.0 per 100,000** | **8.2 per 100,000** |
| NPM 17 | **62.4%** | **62.0%** | **90.0%** |
| NPM 18 | 81.7% | 83.0% | 90.0% |
| SPM 1 | N/A | 40.0% | 12.6% (12-17 yrs) 29.0% (18-20yrs) |
| SPM 2 | 38.9% | N/A | 30.0% |
| SPM 3 | **4.7 per 1,000** | **25.2 per 1,000** | **22.6 per 1,000** |
| SPM 4 | 47.0% | N/A | N/A |
| SPM 5 | 24.2 per 100,000 | 25.0 per 100,000 | 26.8 per 100,000 |
| SPM 6 | N/A | 11.0% | 15.0% |
| SPM 7 | 5.7% | N/A | N/A |
| SPM 8 | 22.3% | 25% | N/A |
| SPM 9 | 80.0% | 80.0% | N/A |
| SPM 10 (I) | **9.2 per 100,000** | **5.5 per 100,000** | **7.2 per 100,000** |
| SPM 10 (II) | **84.9 per 100,000** | **75.0 per 100,000** | **72.4 per 100,000** |
| NOM 1 | 6.7 per 1,000 | 6.7 per 1,000 | 7.0 per 1,000 |
| NOM 2 | **2.5** | **2.2** | **1.6** |
| NOM 3 | 4.4 per 1,000 | 4.5 per 1,000 | 4.5 per 1,000 |
| NOM 4 | 2.3 per 1,000 | 2.2 per 1,000 | 2.5 per 1,000 |
| NOM 5 | 10.6 per 1,000 | 11.0 per 1,000 | N/A |
| NOM 6 | 22.3 per 100,000 | 22.0 per 100,000 | 28.0 per 100,000 |
| SOM 1 | **8.7%** | **8.6%** | **5.0%** |

**National Performance Measure (NPM) 1**: The percent of state SSI (supplemental security income) beneficiaries less than 16 years old receiving rehabilitative services from the state *Children with Special Health Care Needs (CSHCN)* program. State and county level data will be available through IRIS in the future.

- There was no data available for the Colorado indicator, the Colorado goal, or the national goal for 1999.

**National Performance Measure 2:** The degree to which the state *Children with Special Health Care Needs (CSHCN)* program provides or pays for specialty and subspecialty services, including care coordination, not otherwise accessible or affordable to its clients.
- The scale has a high of nine points and that was the national and state goal for this measure. Colorado scored nine for FY2000.

**National Performance Measure 3**: The percent of *Children with Special Health Care Needs (CSHCN)* in the state who have a "medical/health home". State and county level data will be available through IRIS in the future.
- There was no data available for the Colorado indicator, the Colorado goal, or the national goal for 1999.

**National Performance Measure 4:** Percent of newborns in the state with at least one screening for each of PKU, hypothyroidism, galactosemia, and hemoglobinopathics. County level data is not available. The state figure is from calendar year 1999.
- The national target goal was **95.0%** and the state goal was **96.0%.** For 1999, Colorado achieved a level of **96.3%.**

**National Performance Measure 5:** Percent of children through age 2 who have completed immunizations for measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, hemophilus influenza, and hepatitis B. The state figure is from the *National Immunization Survey* for FY2000.
- The state and the national goal was **90.0%** immunization of children through age two. For 1999, Colorado's rate was **74.8%.**

**National Performance Measure 6**: The **rate of births (per 1,000 teenagers**) for teenagers aged 15 through 17 years. The data covers a three-year period, 1997-1999.
- The national goal was **50.0 per 1,000** teenagers. Colorado's average was well below that at **30.3 per 1,000**. Where this is significantly below the national goal, this value is short of the 1999 state goal of **29.5 births per 1,000 teenagers**.

**National Performance Measure 7**: The percent of third grade children who have received protective sealants on at least one permanent molar tooth. These data are based on findings from a convenience sample conducted during FY2000 and collected from 10 out of 63 counties.
- The national goal was **50.0%** and the state goal was **30.0%.** The state failed to reach either goal, with **28.0%** of third graders having received the sealant.

**National Performance Measure 8**: The rate of deaths to children aged 0- 14 caused by **motor vehicle crashes per 100,000** children for a three-year period, 1997-1999. The state rate includes all deaths to children occurring in Colorado; a small number of deaths to non-residents are included.
- The state, in 1999, had a child death rate by motor vehicle crash of **4.3 per 100,000** children. This was short of the state and national goal of **3.5 deaths per 100,000** children.

**National Performance Measure 9**: The percentage of mothers who breastfeed their infants at hospital discharge. The data presented is for the years 1997-1999 and is gathered from the *Pregnancy Risk Assessment Monitoring System (PRAMS)* survey data of all Colorado births.  These data are presented for both county and regions.  If a county's standard error was less than or equal to 4.75 (more statistical confidence in the number), that county's data are presented.  If the standard error was greater than 4.75, then the counties were grouped into 14 regions and the regional data are presented.

- The national goal for 1999 was **75.0%** of all mothers and the state goal was **90.0%.**  The actual percentage for Colorado was **82.3%** - a figure that comes between the goals.

**National Performance Measure 10:** The percentage of newborns that have been screened for hearing impairment before being discharged from the hospital.  Data are from calendar year 2000.  The data were reported by hospitals and refer to births occurring in the hospitals.

- There was no nationally established goal for this measure.  The state goal was **90.0%** of newborns screened for hearing impairment.  The actual percentage of children screened for hearing impairment in Colorado was **84.1%.**

**National Performance Measure 11:** Percent of *Children with Special Health Care Needs (CSHCN)* in the state *CSHCN* program with a source of insurance for primary and specialty care. State and county level data will be available through IRIS in the future.

- There was no nationally established goal for this measure.  In 1999, Colorado's goal was **78.0%.**  There was no measure of Colorado's progress in 1999.

**National Performance Measure 12:** Percent of children under age 19 without health insurance. The 1999 estimate was performed by the *American Academy of Pediatrics, Division of Health Policy Research Analysis*.

- There was no nationally established goal for this measure.  The goal for Colorado was **11.0%** and the actual figure was **16.5%** in 1999.

**National Performance Measure 13:** Percent of potentially Medicaid eligible children who have received a service paid by the Medicaid program. The county level data were not available. The state figure is from FY 1998.

- There was no nationally established goal for this measure.   The Colorado objective for 1999 was **93.0%** and the actual percentage of Medicaid eligible children receiving service paid for by Medicaid was **87.1%.**

**National Performance Measure 14:** The degree to which the state assures family participation in program and policy activities in the state *CSHCN* program.  In FY2000, Colorado scored **16 out of a possible 18 points**.

- The national target was **18** and the state target was **15**.

**National Performance Measure 15:** Percent of very low birth weight live births. The data presented for 1997-1999 is a 3-year rate.

- The national objective was **1.0%** and the Colorado objective was **1.3%.** The actual percentage of low birth rates in Colorado for 1999 was **1.3%.**

**National Performance Measure 16:** The rate of **suicide deaths (per 100,000 youths)** among youths aged 15-19. The 1995-1999 data is presented as a five-year rate.

- The national goal was **8.2 per 100,000** youths and the state goal was **15.0 per 100,000**. Colorado had a **12.9 per 100,000** rate – better the state goal, but worse than the national goal.

**National Performance Measure 17:** Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates. The 1995-1999 data are presented as a five-year rate. The data are calculated by county of residence of the birth. Six counties (Costilla, Gilpin, Hinsdale, Mineral, San Juan and Sedgwick) had no very low birth weight births.

- In 1999, Colorado had **62.4%** of very low birth weight infants delivered at facilities for high-risk deliveries and neonates. The national goal was 90.0% and the state goal was **62.0%.**

**National Performance Measure 18:** Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester for the 1999 calendar year.

- The national objective was **90.0%** and the state objective was **83.0%.** The actual state figure achieved was **81.7%.**

**State Performance Measure (SPM) 1:** The proportion of high school students reporting having drunk alcohol in the past month. Current data are not available.

- There was no current Colorado data available for this measure. The Colorado goal was **40%** for all high school students. The national goal was **12.6%** for those aged 12-17 and **29.0%** for ages 18-20.

**State Performance Measure 2:** The proportion of pregnancies that is unintended as reported between 1997-1999. The data comes from the *Pregnancy Risk Assessment Monitoring System (PRAMS)* survey for all Colorado births. The data refer to all births, not all pregnancies. These data are presented by both county and regions. If a county's standard error was less than or equal to **4.75** (more statistical confidence in the number), that county's data are presented. If the standard error was greater than 4.75, then the counties were grouped into 14 regions and the regional data are presented.

- Colorado has not established an objective for this measure. However, there was a national objective of 30.0% and Colorado level of unintended pregnancies in 1999 was **38.9%,** far above the national goal.

**State Performance Measure 3:** The incidence of maltreatment of children younger than 18 (including physical abuse, sexual abuse, emotional abuse, and/or neglect). The data presented are substitute measures. These figures DO NOT count the number of children, or victims, of child abuse, as recommended by the *Maternal Child Health (MCH)*

Bureau, but rather the number of incidents per 1,000 children less than 18 years of age in a county.  Several children may be included in one incident and only a portion of all reported cases are investigated and then confirmed. The substitute measure presented for calendar year 1999 for the state **is 4.7 confirmed incidents per 1,000 children**. This substitute measure for the state is presented in the profiles along with the county figures that were calculated using the same incidents-based data.

- The national goal was **22.6 per 1,000** children and the state goal was **25.2 per 1,000** children.  For 1999, Colorado used a substitute value to represent the actual number of incidences and therefore this value should be viewed with a certain level of skepticism.

**State Performance Measure 4**: The proportion of child-care settings that utilize comprehensive health and safety consultation and training. Data are for FY1999 and refer to the percentage of settings with at least six consultation contacts during the year. Data are not available on a county level.

- Neither Colorado nor the United States had an established objective for this measure.  However, for 1999 Colorado reported that **47.0%** of childcare settings had at least six consultation contacts during the year.

**State Performance Measure 5:** The rate of deaths among adolescents aged 15-19 caused by **motor vehicle crashes per 100,000** teens. The data presented for 1997-1999 is a 3-year rate.

- The national goal was **26.8 deaths per 100,000** teens and the state goal was **25.0 deaths per 100,000** teen deaths.  During 1999, Colorado had a death rate from motorcycle crashes below both values – **24.2 deaths per 100,000**.

**State Performance Measure 6**: The proportion of high school students reporting regular use of tobacco products. No data are currently available.

- There was no current Colorado data available for this measure.  The national objective was **15.0 percent** and the state objective was **11.0%**.

**State Performance Measure 7**: The proportion of children and adolescents attending public schools who have access to basic preventive and primary, physical and behavioral health services through school-based health centers. Data are from school year 1999-2000. (Data from the *Board of Occupational and Community Education Services (BOCES)* have been excluded).

- Neither Colorado nor the United States had an established objective for this measure in 1999.  The value in Colorado during the year was **5.7%.**

**State Performance Measure 8:** Percent of Medicaid-eligible children who receive dental services as part of their comprehensive services.  County level data not available. The state figure is from FY2000.

- There was no nationally established goal for this measure.  The state goal was **25.0%,** with Colorado falling below the goal at **22.3%.**

**State Performance Measure 9:** The percentage complete of an integrated data system for maternal and child health programs (to improve ability to monitor and assess health needs of women and children). The state figure is from FY2000.

- There was no nationally established goal for this measure. Colorado achieved an **80.0%** completion level, matching the state goal for this measure.

**State Performance Measure 10, Part I:** The rate of homicides among teens 15-19 per 100,000 teens. The 1995-1999 data are presented as a five-year rate.

- The national goal was 7.2 teen homicides per 100,000 teens and the state goal was **5.5 homicides per 100,000 teens**. The actual Colorado value **was 9.2 teen homicides per 100,000** individuals between the ages of 15 and 19. This value is considerably greater than either the state or national goal.

**State Performance Measure 10, Part II**: The rate of homicides among black male teens per 100,000 black male teens. The 1995-1999 data are presented as a five-year rate. If the county figure is listed as "N/A" then there were no black male teen homicides in those county AND no black male teens in this county.

- The rate in Colorado for 1999 was **84.9 homicides per 100,000** black male teens. The goal for Colorado was **75.0 homicides per 100,000** and for the United States the goal was **72.4 per 100,000** black male teenagers.

**National Outcome Measure (NOM) 1:** The infant **mortality rate per 1,000** live births.

- The infant mortality rate in Colorado in 1999 was **6.7 per 1,000** live births, the same as the goal for the year. The national goal was **7.0 per 1,000** live births.

**National Outcome Measure 2**: The ratio of the black infant mortality rate to the white infant mortality rate. The 1995-1999 data yield a comparison of 5-year rates.

➢ The white infant mortality rate is computed by dividing the number of white infant deaths by the number of white infant live births. The same is done to calculate the black infant mortality rate. The black rate is then divided by the white rate for a ratio.

- The national goal was a ratio of **1.6:1**. The goal for Colorado was **2.2:1** and the state actually achieved a ratio of **2.5:1**

**National Outcome Measure 3**: The neonatal **mortality rate per 1,000** live births. The 1995-1999 data are presented as a five-year rate.

- The national and state goals were the same – a neonatal mortality rate of **4.5 per 1,000** live births. Colorado surpassed this goal with **4.4 neonatal deaths per 1,000** live births.

**National Outcome Measure 4**: The postneonatal **mortality rate per 1,000 live births** for a five-year rate from 1995-1999 data.

- Colorado's postneonatal mortality rate in 1999 was **2.3 per 1,000** live births. This was above the state goal of **2.2 deaths per 1,000** live births, but below the national objective of **2.5 per 1,000** live births.

**National Outcome Measure 5:** The perinatal **mortality rate per 1,000 live births**. The 1995-1999 data are presented as a five-year rate.
- There was no nationally established goal for this measure.  The state goal was **11.0 per 1,000** live births and Colorado performed better than that with a rate of **10.6 per 1,000 births**.

**National Outcome Measure 6**: The child **death rate per 100,000** children aged 1-14. The 1995-1999 data are presented as a five-year rate.
- The goal for the United States was a rate of **28.0 deaths per 100,000** children and the goal for Colorado was **22.0 per 100,000** children.  Colorado's actual rate was **22.3 child deaths per 100,000** children aged 1-14.

**State Outcome Measure (SOM) 1:** The low birth weight (**5 pounds 8 ounces or less**) rate. The 1997-1999 data are presented as a three-year rate.
- The national objective was a low birth rate percentage of 5.0%.  Colorado's goal was significantly higher at **8.6% of births**.  Still the actual 1999 figures for Colorado, at **8.7%,** were higher than the state objective.

*Note*:  A glossary of terminology for the MCH Data Set can be found at web site, **http://www.cdphe.state.co.us/ps/mch/mchadmin/mchdatasets/mchdatahomnew.asp#whereview**


*Pregnancy Risk Assessment Monitoring System (PRAMS)[26]:*

One of the more significant projects that the *CDPHE* is operating in connection with the *CDC* is the *Pregnancy Risk Assessment Monitoring System (PRAMS)*.  While the United States infant mortality rate is declining, it still remains higher than rates in other developed countries. The low birth weight rate for the nation has increased in recent years to a level higher than that of 15 years ago.  Studies indicate that adverse maternal behaviors may be inhibiting further declines in these rates. *PRAMS* is a population-based risk factor surveillance system designed to identify and monitor behaviors and experiences of women before, during, and after pregnancy.  The findings from the *PRAMS* survey are used to develop and assess perinatal health programs in public and private health care settings.  *PRAMS* surveys these women on the following topics:
- Prevalence of unintended pregnancy among women having a live birth
- Prevalence of late entry into prenatal care (after the first trimester)
- Prevalence of breast feeding initiation
- Prevalence of smoking during the last three months of pregnancy
- Prevalence of drinking alcohol during the last three months of pregnancy
- Prevalence of physical abuse by husband or partner during pregnancy

Each prevalence is analyzed by age, race, ethnicity, education, Medicaid recipient status, and income.  Detailed individual state analysis and state-to-state comparisons are

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[26] *"*PRAMS 1998 Surveillance Report*", Colorado Pregnancy Risk Assessment and Monitoring System*, Colorado Department of Public Health and Environment, 2000.

available at web site **http://www.cdc.gov/nccdphp/drh/prams/pdf/97/PRAMS_97.pdf**.
Below are a few highlights of the report on Colorado.

*Highlights for the 1998 Report:*

- **74.3 percent** of those monitored were married and **91.2 percent** were white

- **7.8 percent** of the babies born were of low birth weight (< 2500 grams)

- **66.8 percent** of births to those under the age of 20 years were unintended and **52.0 percent** of births to those between ages 20-25 were unintended.

- **53.4 percent** of unintended births were to Medicaid recipients.

- **48.5 percent** of those with less than twelve years of formal education did not begin pre-natal care until after the first trimester.

- Over **seventy percent** of all mothers breastfed infants regardless of race/ethnicity, education level, income, or Medicaid status.

- Less than **twenty-five percent** of all smoked during pregnancy regardless of race/ethnicity, education level, income, or Medicaid status.

- A higher percentage of mothers with incomes greater than $40,000 (**13.5%**) and over the age of 35 (**18.4%**) drank during the last three months of their pregnancies.

- More than twice the percentage of Hispanic women (**5.8%**) were physically abused by their husband or partner during pregnancy than any other monitored ethnic/racial group.

***Folic Acid and Prevention of Birth Defects (Results from the Behavioral Risk Factor Surveillance System, 1996 and 1998):***

Neural tube defects are serious birth defects of the spine and brain. According to the *Health Statistics Section Brief #36*[27] the following information about the linkage of the intake of folic acid to birth defects. Approximately **2,500 to 3,000** infants are born with neural tube defects each year in the United States. The B vitamin folic acid can reduce the occurrence of spina bifida and anencephaly by at least **50 percent** when consumed daily before conception and during early pregnancy. In 1992, the Public Health Service recommended that all women of childbearing age who are capable of becoming pregnant consume **400 micro-grams** of folic acid daily. Folic acid is found in the diet in orange juice, beans, green leafy vegetables, and fortified cereals and grains. However, it is

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[27] "Folic Acid and Prevention of Birth Defects: Results from the Behavioral Risk Factor Surveillance System, 1996 and 1998", Colorado Department of Public Health and Environment Health Statistics Section Brief #36, August 2000.

difficult to get the recommended amount of folic acid by diet alone.  Women can receive the recommended amount by taking a multivitamin or folic acid supplement daily.  The surveys examined folic acid intake and knowledge of folic acid benefits in Colorado women ages 18-44 years.

In 1996 and 1998, most women in Colorado between the ages of 18 and 44 years took a vitamin or supplement (**62 percent**).  About half, **53 percent** in 1996 and **55 percent** in 1998, of all women took a vitamin or supplement containing folic acid.  However, the percent of women taking folic acid daily in 1996 was only **44 percent** and had increased slightly in 1998 to **45 percent**.

Daily use of folic acid ranged from **23 to 57 percent** depending on age, race/ethnicity, marital status, education, and income.  Women who were least likely to report taking folic acid daily were younger, Hispanic, having less than a high school degree, and with lower incomes.  In 1996, the difference in folic acid use among women in the lowest and highest income categories was statistically significant **(37.3% vs. 57.1%)**.  In 1998, women with more than a high school education were statistically significantly more likely to use folic acid than women with less than a high school education **(48.3% vs. 26.4%)**.  Differences in daily folic acid use by race/ethnicity, between white/non-Hispanic and Hispanic women, were only statistically significant within each year.  When comparing 1996 to 1998, no statistically significant differences of daily folic acid use were found in any demographic category.

Overall, **44 percent** of women were aware of the benefits of folic acid in the prevention of birth defects in 1996 compared to **36 percent** in 1998.  In 1996, knowledge of the benefits of folic acid ranged from **22 to 56 percent** depending on age, race/ethnicity, marital status, education, and income.  Women who were white/non-Hispanic, married, had more than a high school education or incomes over $50,000 were more likely to know that folic acid use can prevent some birth defects.

However, significant differences were found in only two categories: education and income.  Significant differences were found between those with more than a high school education (**51 percent**) and those who had a high school education (**35 percent**), or less than a high school education (**22 percent**) and between those with incomes below $25,000 (**31 percent**) and those with incomes over $50,000 (**56 percent**).  In 1998, the difference in knowledge between high school graduates and those with more than a high school education was again significant **(17.7% vs. 44.2%)**, as was the  difference in knowledge between women in the lowest (**25.0%**) and highest income categories **(46.2%)**.  The knowledge of high school graduates was significantly lower in 1998 compared to high school graduates in 1996 (**18 percent vs. 34 percent**).  In addition, the difference in knowledge between white/non-Hispanic and Hispanic women was statistically significant in 1998 but not in 1996.  Among women with knowledge that folic acid can prevent some birth defects, **54 and 51 percent** reported taking folic acid daily in 1996 and 1998 respectively.  Statistically, this represents no significant difference between years.

For more information about folic acid and birth defects contact *Colorado Responds to Children with Special Needs* at 303-692-2663.  To see detailed tables on folic acid, see web site **http://www.cdphe.state.co.us/hs/Webfolicacid.pdf**.

### *Children's Eating Habits:*

More U.S. children are eating away from home now than did in the late 1970's. They're also consuming more beverages and grain-based snack foods and combination foods, such as pizza. And they're eating less fat and drinking less milk, according to data from the first year of the current three-year U.S. Department of Agriculture nationwide food consumption survey--*What We Eat In America.*  Highlights of the report were presented in the USDA report, "What and Where Our Children Eat -- 1994 Nationwide Survey Results"[28] include the following:

- On any given day in 1994, nearly **half** of three- to five-year-olds consumed some food or drink provided outside the home, compared to **one-third** in the 1977-78 survey.  Food eaten away from home now contributes an average **20 percent** of total calories for this age group.

- Roughly **two-thirds** of school-age youths six through 19 consumed food and drink provided away from home in 1994, up from **about 55 percent** in 1977-78.
- On average, outside food contributes about **one-quarter** of total calories for six- to 11-year-olds, increasing to **one-third** of total calories for 12- to 19-year-olds. But **one in three** school-age kids gets more than **40 percent** of total calories from outside food.

- The three- to five year-olds most often ate at someone else's house, followed by fast food restaurants and then day care.  Grade-school-age children most often ate at the school cafeteria, followed by someone else's house and fast food restaurants.

- By the teen years, fast food restaurants were the most frequent source of outside food for boys and a close second to the school cafeteria for girls.

- Except for milk, U.S. kids are drinking more beverages across the board.  The biggest increase has been in consumption of non-citrus juices, which include apple juice, grape juice and juice blends.  Two to three times more children and teens drank non-citrus fruit juices on a given day in 1994 than did in 1977-78. And preschoolers consumed **four times** more of it.

- Soft drinks also had a dramatic increase in consumption among all groups, especially among teenage boys whose intake nearly tripled between 1977-78 and 1994. Nearly **three-fourths** of teenage boys drank an average of 34 ounces--

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[28] "What and Where Our Children Eat -- 1994 Nationwide Survey Results", USDA, Agricultural Research Service Report, April 18, 1996.

almost three 12-oz. cans' worth--per day in 1994, and **two-thirds** of teenage girls had 23 ounces--about two cans' worth.

- Milk consumption, on the other hand, dropped markedly across all age and gender groups since the late 1970's.  A little more than **half** of teens drank milk in 1994, compared to some **three-fourths** in the late 1970's.

- Low-fat and skim milk are now consumed more frequently than whole milk among all but the five-and-under group.  The proportion of school-age youths drinking low- or no-fat milk has doubled since the late 1970's.

- U.S. kids reflected the national trend in consumption of crackers, popcorn, pretzels and corn chips. The proportion of children and teens consuming these grain-based snack foods doubled between 1977-78 and 1994, noting that they're slightly more popular among girls. **Thirty-five percent** of school-age girls ate at least one of these snack foods in a day in 1994.

- Grain-based combinations, such as pasta with sauce, rice dishes and pizza, also were more popular in 1994.  About **45 percent** of children and teens ate at least one of these combinations on a given day versus about **25 percent** in the late 1970's.

- Fruit consumption declines as children get older.  **Seven out of ten** children under age five consumed some fruit or fruit juice on any one day, dropping to **less than half** among teens.

- This decline is not seen for vegetables.  At **least three-fourths** of all children, regardless of age, reported eating at least one vegetable on a given day.

- Today's children are consuming less fat as a percentage of total calories, reflecting the trend for the population as a whole. In 1994, fat intake ranged from an average of **32 percent** for teen girls to **34 percent** for preschoolers.  That's compared to the **37 to 40 percent** range in the late 1970's.

- Children and teen-aged boys are meeting the *Recommended Dietary Allowance* for most nutrients, but teen-aged girls averaged **85 percent** or less of the RDA for calcium, magnesium, zinc and vitamin E.

**R12: Resources for Children and Health**

| Web Site | Level | Comments |
|---|---|---|
| http://www.urban.org | National | Data on child care and health |
| http://www.mchdata.net | National | National Maternal and Child Data Sets |
| http://www.barc.usda.gov/bhnrc/foodsurvey/Kidspr.html | National | USDA, Agricultural Research Service reports |
| http://www.cdc.gov/nccdphp/drh/prams/pdf/98prams/prams_98.pdf | National, State | PRAMS 1998 Surveillance Report |
| http://www.cdphe.state.co.us/hs/prams.html. | State | PRAMS main page |
| http://www.coloradokids.org/data_on_kids.html | State, County | Prenatal care, low birth weight, child abuse, deaths of infants and youths |
| http://www.cdphe.state.co.us/fc/mchdatasets/indicators.PDF. | State, County | Maternal and Child County Data Sets |
| http://www.coloradokids.org/ | State, County | Colorado Children's Campaign |
| http://www.coloradokids.org/Kids_Count_/Summary99/summary99.html. | State, County | KidsCount Data |
| http://www.coloradokids.org/Kids_Count_/99Map/99map.html | State, County | County level data on children |

# 6   DENTAL HEALTH

Tooth decay is one of the most prevalent chronic illnesses facing children in the United States today.  Almost **60 percent** of children ages 5 to 17 have dental disease in their primary or permanent teeth.  Moreover, dental disease is concentrated in low-income populations.  Poor children have five times more untreated dental disease than children in higher-income families.  **Eighty percent** of untreated dental disease in permanent teeth is found in roughly **25 percent** of 5- to 17-year-old children, most of whom come from low-income and other vulnerable populations.

The *State Children's Health Insurance Program (SCHIP)* provides states with an opportunity to expand health insurance and, by extension, financial access to dental care. Colorado's *SCHIP* program built upon the state's *Colorado Child Health Plan (CCHP)*, which was implemented in the early 1990s to provide preventive and primary care services to low-income children in rural areas of the state. At first, *CCHP* did not include dental benefits. When the federal *SCHIP* legislation was passed, Colorado chose *CCHP* as its basis for a *SCHIP* program, and began examining options for broadening the benefit package so that it met Title XXI specifications.

The choice of the benefit package was heavily influenced by the policy context in which *SCHIP* was debated and implemented. Three interconnected issues influenced the selection of a benefit package. **First**, the state is, in general, politically conservative. **Second**, as Medicaid had grown to be the second-largest program in the state's budget, there were concerns about the cost of a new insurance program—and dental was perceived to be an expensive service. **Third**, the state was firmly committed to creating a program that resembled a commercial insurance product to the greatest extent possible, and most private policies did not cover dental benefits. To this end, the state followed a conservative path and chose a benefit pack-age equivalent to that mandated by the state for the small group insurance market—the most common benefit package offered in the state, and one that does not cover dental benefits.

During the first two years following the implementation of *CCHP*, considerable attention began to be focused on children's oral health problems. In 2000, the governor appointed the new *Dental Access Commission* to examine strategies for improving access to dental services under both Medicaid and *SCHIP*. The Colorado legislature also began addressing the issue and, in early 2000, passed a bill adding a dental benefit to the *SCHIP* program. The state plan was to begin covering dental services in 2001, if an adequate network of providers was recruited to contract with *CCHP*.

For the last 55 years, water fluoridation has been a proven public health measure shown to be safe, economical, and effective in protecting the teeth of the population served the optimal amount of fluoride. Currently, about **82 percent** of Colorado residents drink water that is adequate and above in fluoride.

*Highlights for Colorado[29]:*

- Tooth decay is the most common chronic disease among children in the United States
- In Colorado, approximately **31%** of children age 6 to 8 have untreated dental caries; for children age 15, **half (50%)** have untreated dental caries.
- In fiscal year 1998-99, only **23%** of Colorado's Medicaid-eligible children received dental services. In comparison, over half of children **(55%)** with commercial dental insurance received dental services.
- In Colorado, only 2.6% of practicing dentists are pediatric specialists.

*Highlights for the United States[30]:*

- While about **44 million** Americans lack medical insurance, about **108 million** lack dental insurance.  Only **60 percent** of baby boomers receive dental insurance through their employers, while most older workers lose their dental insurance at retirement.[31]
- There are **2.6** children without dental insurance for every child without health insurance.
- Use of dental services in children increases with the education level attainment of the parent.  Children of parents with little or no high school education have **26%** odds of a dental visit, while the children of college graduates have a **57%** probability of a dental visit in a year.
- Children of color are less likely to visit a dentist in a year than are white children (**29% versus 49%**).
- Only the low-income near elderly with employer coverage reported significantly lower levels of unmet dental need than the uninsured (**10 percent** versus **20 percent**), indicative of the lack of a dental care benefit in Medicare and the fact that dental care exists only as an optional benefit in Medicaid, a program in which participation by dentists is often low. Similarly, many plans purchased in the non-group market may not provide dental benefits.
- Uninsured low-income 55- to 64-year-olds were much less likely to have had a dentist visit in the 12 months preceding the survey than those with insurance coverage. Thirty-three percent of the uninsured reported at least one doctor visit in the preceding year, well below the numbers for adults with private or Medicaid coverage (between **37 percent** and **53 percent**, respectively).
- One-fifth (**20.9 percent**) of all children had no dental visits, and **47.9 percent** had fewer than two visits in the previous 12-month period in 1997.
- Low-income children were also much more likely than higher-income children to have had fewer than two annual visits, (**58.4 versus 40.2 percent**, respectively).

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29 "Addressing the Crisis of Oral Health Access For Colorado's Children", Colorado Commission on Children's Dental Health, December 2000.

30 Kenney, Genevieve, Grace Ko, and Barbara Ormond, "Gaps in Prevention and Treatment: Dental Care for Low-Income Children", Urban Institute

31 Satcher, David.  Remarks at the Release of "Oral Health in America: A Report of the Surgeon General", May 25, 2000.

- Nearly twice as many low-income children as higher-income children reported unmet dental needs (**9.6 versus 5.4 percent**), and they were **15 percentage** points more likely to have had no dental visits (**29.5 versus 14.6 percent**).
- **12.2 percent** of children ages 13 to 17 were reported to have unmet dental needs, while only **7.2 percent** of the 3- to 5-year-olds did, with the middle age group falling in between.

**Colorado School-Based Pit and Fissure Sealants:**

*The "Chopper Topper" Project*
Dental sealants are thin plastic coatings that are applied to the chewing surfaces of the molars, that is, into the depressions called pits and fissures on the chewing surface.
The thin plastic coatings bond with the enamel, to act as a barrier protecting the chewing surface from plaques and acids that can cause tooth decay.

The *Chopper Topper* Project is sponsored by the *Oral Health Program*, and it is designed to identify second grade children who will benefit from the placement of pit and fissure sealants on permanent molar teeth. *The Project* also includes:
- A dental screening
- A classroom presentation on oral hygiene and sealants
- A presentation on oral health for parents
- Appropriate referrals for children who need restorative or emergency care

For 1999, the *Chopper Topper* program operated in 15 elementary schools.  A total of **2,241** children were screened, and **1890** children received sealants, with a total of **6,240** teeth being sealed. Moreover, about **18%** of the children screened were in need of urgent care for abscesses or rampant tooth decay, and were referred for restorative care.

**R13: Resources for Dental Health**

| Web Site | Level | Comments |
|---|---|---|
| **http://www.ada.org/public/index.asp** | National | ADA main web site |
| **http://www.surgeongeneral.gov/library/oralhealth/** | National | Surgeon General's report on oral health |
| **http://newfederalism.urban.org/html/series_b/b15/b15.html** | National, State | "Gaps in Prevention and Treatment: Dental Care for Low-Income Children" |
| **http://www.childent.org/Publications/** | National, State | "Children's Dental Health Project" |
| **http://www.cdphe.state.co.us/pp/oralhealth/cccdhrpt.pdf** | State | Colorado Commission on Dental Health report |
| **http://www.kindsmiles.org** | State | Kids In Need of Dental Service |

## 7    HEALTH INSURANCE

The Health Insurance chapter provides an overview, state level trends and data resources on the prevalence of different programs in the state and in the United States.  Contacts and highlights of various state prevention programs are also included.

- Health Insurance Access and Usage
- Medicaid
- Colorado Indigent Health Care Plan
- Child Health Plan/Child Health Plan Plus
- Colorado Child Health Insurance Plan
- State Children's Health Insurance Program (SCHIP)

The US Census Bureau, in the report "Percent of People Without Health Insurance Coverage Throughout the Year by State (3-year Average):  1997 to 1999"[32] As recently as 1997, the percentage of the Colorado population that did not have health care coverage was significantly lower than the national average.  However, since that time there has been a significant increase in the "uncovered" in Colorado and a drop in the percentage of people uncovered nationally.  By 1999, Colorado reported **16.8 percent** of its residents as uncovered (up from **15.1 percent** in 1997) while the United States reported 15.5 percent uncovered (down from 16.1 in 1997).  In 1997, Colorado **ranked 25th** (out of the 50 states and the District of Columbia) in the country for having the most people *not* covered by health insurance.  In 1999, Colorado **ranked 13th** in comparison to the rest of the nation.  **Table 31** presents a comparison between the percent of people in Colorado without health insurance for an entire year and the percent of people in the United States without health insurance for the year.  In 1997, Colorado had a smaller percentage of uninsured people, but by 1999 the percentage of uninsured in Colorado was greater by **1.3%.**

**Table 31: Percent of People Without Health Insurance for an Entire Year: 1997-1998**

|  | 1999 | 1998 | 1997 | Three Year Average (1997-1999) |
|---|---|---|---|---|
| **Colorado** | 16.8 | 15.1 | 15.1 | 15.7 |
| **United States** | 15.5 | 16.3 | 16.1 | 16.0 |
| Source: "Percent of People Without Health Insurance Coverage Throughout the Year by State (3-year Average):  1997 to 1999", US Census Bureau, http://www.census.gov/hhes/hlthins/hlthin99/hi99te.html, October 10, 2000. | | | | |

 Twenty-nine percent of Colorado's **1,111,000** children (<19) are considered poor (based on 1997-99 average).  **88,000** of those children or **7.8%** of the total number of children in Colorado were not covered by health insurance.  This number has decreased since the mid nineties where over **8.8 percent** of the children were without coverage.

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[32] "Percent of People Without Health Insurance Coverage Throughout the Year by State (3-year Average): 1997 to 1999", US Census Bureau, October 10, 2000.

*Highlights (unless otherwise mentioned, these are national numbers):*

- Employment-based insurance, the leading source of health insurance coverage drove the national increase in insurance coverage rates. Colorado's employer sponsored health insurance rate is much higher than the U.S. average (**72.2% vs. 62.8%**).
- The poor and near poor are less likely to have health insurance than the total population (**32.2% vs. 15.5%**).
- The proportion of people without health insurance ranged from **24.1 percent** for those in households with annual incomes of less than $25,000 to **8.3 percent** for those in households with incomes of $75,000 or more.
- People 18-24 were less likely than other age groups to have health insurance coverage during 1999 – **71%** compared with **82.9%** of those 25 to 64, and reflecting widespread Medicare coverage, **98.7%** of those 65 and over.
- Workers 18-64 were more likely to have health insurance (**82.6%**) than non-workers (**73.5%**) but among the poor, workers were less likely to be covered (**52%**) than poor non-workers (**59.2%**).
- The percentage of children without health insurance has dropped primarily due to the increase in employment based insurance. Due to the increase in government health insurance coverage, rates among poor children also fell. Older children (>12) are less likely to have coverage than those under 12.
- Non-elderly adults are **40 percent** more likely than children to be uninsured and less than half as likely to have public coverage.
- Individuals ages 55 to 64 were more likely to have private non-group coverage: **9.3 percent** of this age group reported private non-group coverage.
- In 1997, low-income 55- to 64-year-olds had a substantial uninsurance rate of **23.4 percent**, but it was significantly lower than the **35.1 percent** reported for those ages 35 to 54 and the **41.8 percent** reported for those ages 18 to 34.
- Young adults (18 to 24 years old) remained the least likely of any age group to have health insurance coverage, but their chances of having coverage increased by **1 percentage** point to **71.0** percent in 1999.
- Although the Medicaid program insured **12.9 million** poor people during at least a portion of 1999, **10.4 million** poor, or **32.4 percent**, had no health insurance of any kind during the year. Both the number and percentage of uninsured poor remained unchanged from 1998.
- Compared with the previous year, the proportion of people with health insurance increased for those with household incomes under $50,000, but was unchanged for those with higher incomes.
- Among those 18 to 64 years old in 1999, full-time workers were less likely than their part-time counterparts to be without health insurance (**16.4 percent** versus **22.4 percent**). However, just under half **47.5 percent** of poor full-time workers were uninsured in 1999, not statistically different from the percentage of poor part-time workers without insurance.

- The proportion without health insurance was higher for Hispanics **33.4 percent**) than for non-Hispanic Whites (**11.0 percent**). The noncoverage rate for African Americans was **21.2 percent**, not statistically different from the **20.8 percent** for Asians and Pacific Islanders.
- **27.1 percent** of American Indians and Alaska Natives were without health insurance coverage.
- The foreign-born population was more likely than the native population to be uninsured **33.4 percent** versus **13.5 percent**.
- Based on comparisons of two-year averages (1998-1999 versus 1997-1998), the proportion of the population without health insurance fell in 15 states and rose in eight others.

*Future Challenges:*

Traditionally, policy debate about the uninsured has focused on expanding public coverage of children.  However, non-elderly adults are **40%** more likely than children to be uninsured and less than half as likely to have public coverage.  Colorado's non-elderly population in Medicaid, **5.9%**, is less than half the national average of **12.2 percent** and the lowest of all the states (1994-1995).  The non-elderly adult population without private insurance and without the likelihood of public coverage are most often those *least* associated with Medicaid eligibility (men, married parents, healthy individuals and those employed).  This is of some concern in Colorado due to the increase in businesses not offering coverage.

*Medicaid Expenditures and Enrollment:*

Nationally, Medicaid enrollment fell by **200,000** people or **0.5 percent** from 1997 to 1998 while overall speeding increased by **$8.7 billion** or **5.2 percent**. Spending per enrollee increased by **6.8 percent** indicating that states had a tougher time holding down costs. Researchers find that Medicaid spending could grow by up to **10 percent** in the near future because of rising health care costs, particularly prescription drugs, the eroding impact of Medicaid managed care, wage pressures in the health care industry, the use of supplemental financing programs, and enrollment increases.

In 1995, Colorado's Medicaid program, with a **budget of $1.6 billion**, accounted for **18.2 percent of state general fund expenditures**, up from **10.5 percent in 1990**.  Medicaid was the fastest-growing major public expenditure, increasing at an annual rate of more than **20 percent** over that period.  Between 1992 and 1995, spending growth slowed to half the rate of the 1990–92 period.  Yet average annual growth during this later period was **more than 50 percent** higher than that for the country overall—**15.3 percent in Colorado**, compared with **9.9 percent in the United States**. A large jump in *Disproportionate Share Hospital (DSH)* payments accounts for nearly all of this discrepancy; Colorado's *DSH* expenditures grew an average of **43.2 percent** per year between 1992 and 1995, compared with **2.7 percent** average annual growth nationwide. This was, however, largely a one-time expansion.

Colorado has closely tracked national trends in Medicaid enrollment and expenditures per enrollee.  In both Colorado and the nation, spending increases among elderly and child enrollees over the period 1992–95 were attributable more to growth in expenditures per enrollee than enrollment growth, whereas the reverse was true for the blind and disabled and non-disabled adults.  In 1995, Colorado spent somewhat less per elderly enrollee and blind and disabled enrollee than the national averages, while it spent more per adult enrollee and child enrollee than the national averages.  As was the case nationwide, children were the least costly Medicaid enrollees in Colorado (**$1,247** per enrollee) and the elderly were the most expensive (**$8,493** per enrollee).

Eligibility for Medicaid in Colorado is primarily limited to federally mandated categories, reflecting a state attempt to contain costs. As a result, federally mandated expansions for pregnant women and children beginning in the late 1980s caused Medicaid enrollment in Colorado to soar between 1990 and 1992, at a rate exceeding the national average.  The state's enrollment growth for non-disabled adults and children slowed significantly after 1992, largely due to families leaving welfare rolls.  Colorado has attempted to provide a buffer for these families: In its 1997 session, the legislature authorized a buy-in program that will extend Medicaid coverage indefinitely for former welfare recipients who return to work.  The buy-in nature of the program is consistent with Colorado's philosophy of making health care available without increasing government outlays.

*Other Insurance Programs:*

Working outside the eligibility and health benefit requirements of Medicaid, the state has operated several smaller state-only health care programs, including the *Colorado Indigent Care Program (CICP)* and the *Child Health Plan (CHP).  CICP* provides inpatient and outpatient coverage for uninsured residents of all ages with income **below 185 percent** of the federal poverty level.  The program is essentially a means to reimburse providers for a fraction (less than 30 percent) of the uncompensated care they provide.  In State Fiscal Year (SFY) 1996 there were **133,772** unduplicated *CICP* users with **574,096** visits to hospitals and clinics. Funding for hospitals under *CICP* is largely through the Medicaid *DSH* program and equaled **$34 million** in 1996. Standard *DSH* payments to hospitals totaled **$36 million** in 1996–97.  *Denver Health Medical Center* and the *University Hospital* are major recipients of both programs, as is the state, which retained **$150** million of the **$361 million** in federal matching funds generated through the *DSH* program between SFY 1993–94 and SFY 1996–97.

Prior to 1998, *CHP* covered outpatient services for children in rural areas who were under the age of 13 with family income less than 185 percent of the federal poverty level. Families paid an **annual premium of $25 per child**.  Under House Bill 97-1304, CHP is merged with a portion of CICP funds and offers both inpatient and outpatient services through capitated managed care plans to rural and urban children up to age 18. The family income standard remains the same as before, and premiums are assessed on a sliding scale based on income. This expansion was incorporated into Colorado's *Children's Health Insurance Program (CHIP)* proposal. The proposal was approved by the federal government in February 1998, and *CHP* was renamed *Child Health Plan Plus.*

*CHP+* has the flexibility to require cost sharing that is not allowed under Medicaid, permitting Colorado to emphasize individual responsibility.  Moreover, the state's preference for private-sector solutions is visible in a proposal to use some *CHIP* funds to buy into employer-sponsored coverage for eligible children whose working parents have the option but cannot afford it.

The *State Children's Health Insurance Program (SCHIP)* is often referred to as the largest expansion of the federal commitment to health insurance since the enactment of Medicare and Medicaid in 1965.  The program, designed to provide health insurance coverage to low-income children ages 18 and under, makes approximately **$4 billion** available to states each year, beginning in fiscal year 1998.  To obtain these federal funds, states must contribute matching funds at rates that are **70 percent** of their state share under Medicaid.  Under *SCHIP*, states can expand their existing Medicaid programs, establish a program separate from Medicaid, or combine the two approaches.

The legislation that established *SCHIP* made available **$40 billion** in federal funds to states for fiscal years 1998 through 2007.  During the first four years of the program (FY 1998 through FY 2001), states have access to slightly more than **$4 billion per year**.  However, the states have used far less than the funds made available.  **Table 31** provides the data for Colorado and the United States for FY 1998-FY2000 from the report.

**Table 32: Allotments and Expenditures for SCHIPP**

| | FY98 | | | FY99 | | | FY00 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Allotment ($million) | Expenditures ($million) | Expend. as a % of FY98 allotments | Allotment ($million) | Expenditures ($millions) | Expend. as a % of FY99 allotments | Allotment ($million) | Projected expend. ($million) | Expend. as a % of FY00 allotments |
| **Colorado** | 41.8 | 1.0 | 2% | 41.6 | 9.0 | 22% | 46.9 | 17.3 | 37% |
| **United States** | 4224.3 | 121.2 | 3% | 4204.3 | 898.2 | 21% | 4204.3 | 2057 | 49% |
| Source: "Low Income Uninsured Children by State: 1997, 1998, and 1999", US Census Bureau, http://www.census.gov/hhes/hlthins/lowinckid.html, November 3, 2000. Source: "State Profiles of Health Insurance, Access and Use", The Urban Institute, http://newfederalism.urban.org, 1997. | | | | | | | | | |

In addition to the *Census Bureau* and *Urban Institute* sites, data on health care available through the *BRFSS* prevalence data and can be found under "Health Care Access" on the drop down list at the web page for the *CDC*.  Lesser detailed, but quick reference data on child health care is maintained by the *Annie E. Casey Foundation*.

**R14: Resources for Health Insurance**

| Web Site | Level | Comments |
|---|---|---|
| http://newfederalism.urban.org/ | National | Numerous reports on welfare and other poverty statistics |
| http://www.census.gov/hhes/www/hlthin99.html | National | "Health Insurance Coverage 1999" |
| http://newfederalism.urban.org | National | "State Profiles of Health Insurance, Access and Use", The Urban Institute, , 1997. |
| http://newfederalism.urban.org/html/Highlights/COHealth.pdf | National, State | Health policy for low income in Colorado report – "State Profiles of Health Insurance, Access and Use" |
| http://www2.cdc.gov/nccdphp/brfss/index.asp | National, State | Health care coverage |
| http://www.census.gov/hhes/hlthins/hlthin99/hi99te.html | National, State | "Percent of People Without Health Insurance Coverage Throughout the Year by State (3 Year Averages): 1997 to 1999" |
| http://www.census.gov/hhes/hlthins/lowinckid.html | National, State | "Low Income Uninsured Children by State: 1997, 1998, and 1999" – Census |
| http://search.fedstats.gov/s97is.vts | National, State | National and state health insurance data |
| http://www.aecf.org/ | National, State | Annie E. Casey Foundation- "Kids Count" report |
| http://newfederalism.urban.org/html/anf_a44.html | National, State | State Children's Health Insurance Program |
| http://newfederalism.urban.org/html/series_b/b21/b21.html - table 3 | National, State | Elderly Health Insurance Coverage |