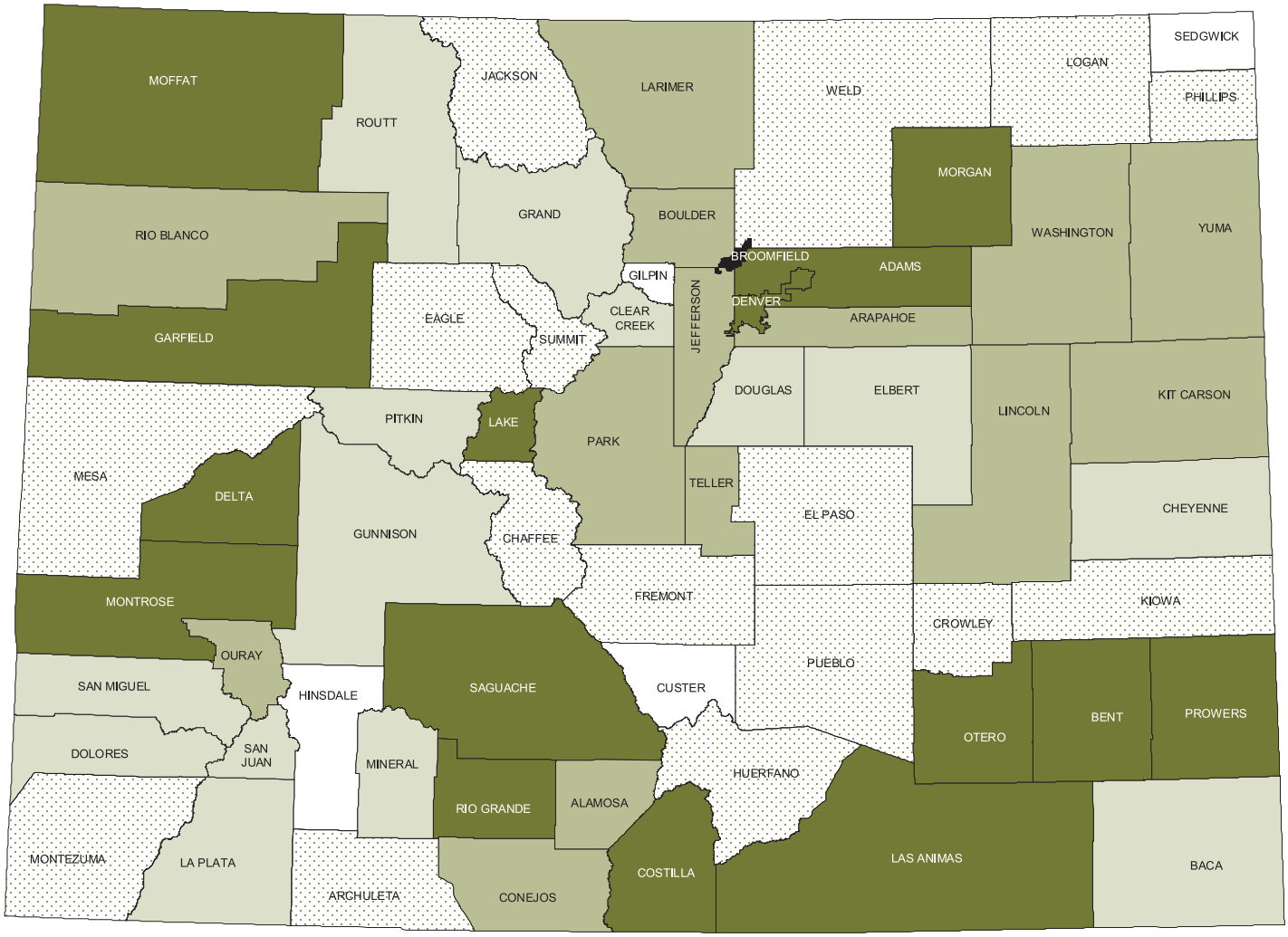
Colorado health watch

2005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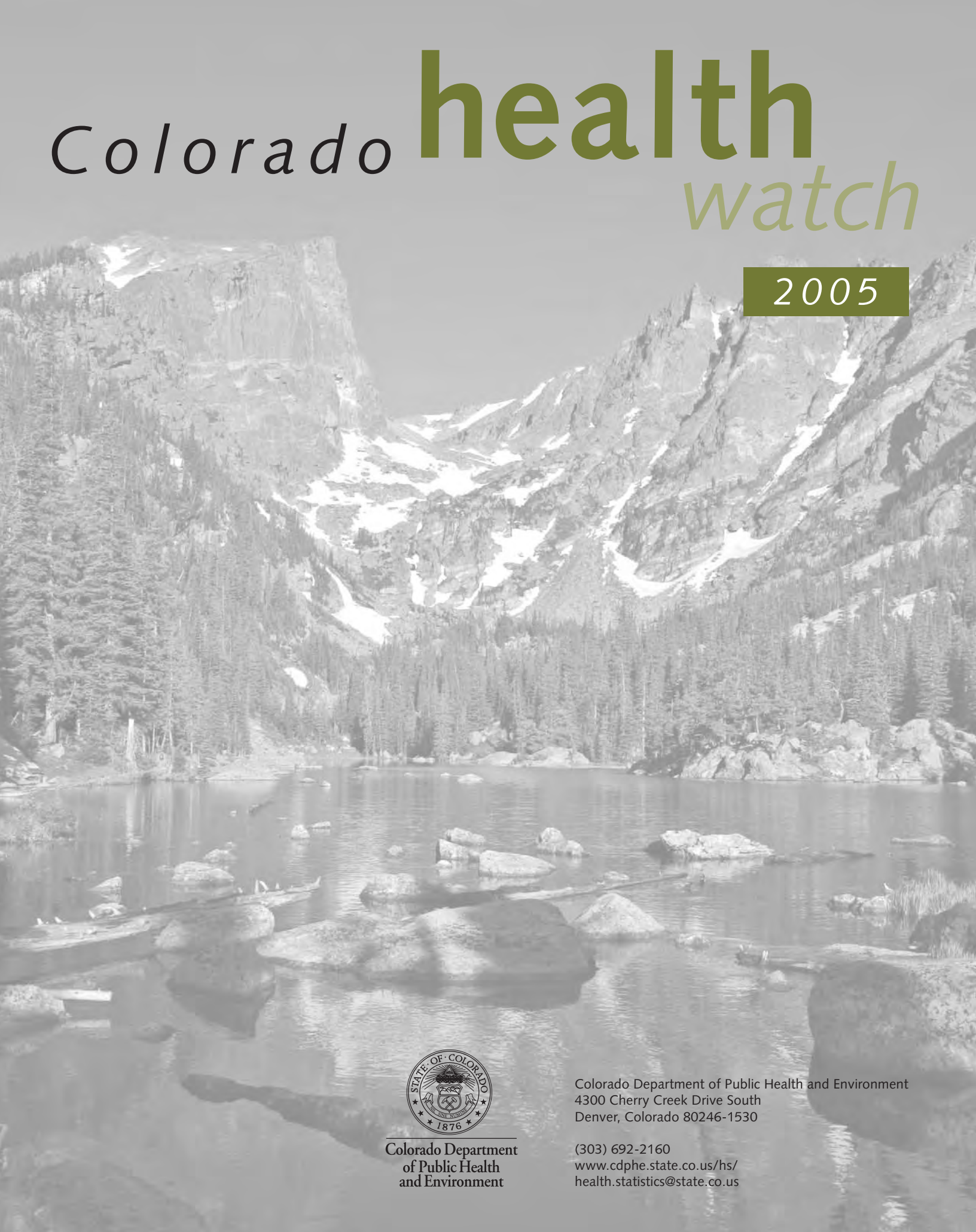
Colorado health watch

2005



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About the Report

The information contained here illustrates the health status of the Colorado population on certain key indicators by life cycle. The format was chosen to demonstrate the clear link between health risk behaviors, morbidity (illness conditions), and death and how behaviors engaged in at one point in the life cycle can impact health outcomes at a later point in life. The life cycle approach also highlights critical health threats and challenges that face people at different times in life.

A key role of public health is to monitor the health status of the population, thereby providing data that allow individuals, educators, health care professionals, and policy makers to make informed decisions about personal and population health. This report should serve as one source of health data that can be used in prioritizing health issues, planning programs, developing policies, and evaluating population-based health efforts.

Healthy People 2010

This report is closely tied to *Healthy People 2010: Understanding and Improving Health*, a document published by the U.S. Department of Health and Human Services in 2000. This document serves as a health promotion and disease prevention agenda for the nation. The overarching goals of *Healthy People 2010* are to:

- help individuals of all ages to increase life expectancy and improve their quality of life, and
- eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation.

Healthy People 2010 is comprised of 28 focus areas supported by 467 health objectives. Naturally, all of these objectives are not covered in this report; however, corresponding objectives are listed wherever possible. In future reports we hope to broaden the scope to include measurement of more objectives in more focus areas.

Sources of data included in this report

Sources of data in this report include:

- Population data: U.S. Bureau of the Census: www.census.gov.
- Vital statistics data: Birth, fetal death, induced termination of pregnancy, and death are reportable vital events as outlined in Colorado state statute. These events are reported to the state health department via standardized forms, entered into databases, aggregated, and analyzed. The result is vital statistics data.
- Pregnancy Risk Assessment Monitoring System (PRAMS) data: PRAMS is a population-based risk factor surveillance system designed to identify and monitor behaviors and experiences of women before, during, and after pregnancy. Information is collected by surveying a sample of women who have recently given birth. Approximately 3,000 Colorado women are surveyed each year.
- Child Health Survey data: Beginning in 2004, the Health Statistics Section partnered with several programs and organizations to develop and implement an annual Colorado Child Health Survey. Respondents to the Behavioral Risk Factor Surveillance System who had a child between ages 1-14 were asked a series of questions about the key health indicators and risk factors facing their children. Approximately 1000 surveys are collected each year.
- Youth Risk Behavior Survey (YRBS) data: The YRBS measures those behaviors related to the leading causes of mortality and morbidity among youth and assesses how these risk be-

haviors change over time. The YRBS measures behaviors that fall into six categories: behaviors that result in unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that result in HIV infection, other sexually transmitted diseases, and unintended pregnancies; dietary behaviors; and physical activity. The survey is conducted every other year among 9-12th graders in a randomly selected sample of Colorado public high schools.

- Behavioral Risk Factor Surveillance System (BRFSS): The BRFSS is a system of telephone surveys sponsored by the Centers for Disease Control and Prevention to monitor lifestyles and behaviors related to the leading causes of mortality and morbidity. Approximately 6,000 Colorado adults 18 years of age and older are surveyed each year.

- Census of Fatal Occupational Injuries (CFOI): The CFOI is a national census conducted in partnership with states to compile work-related fatality data. All fatal injuries that occurred while an employee was at work receiving pay or other compensation, was conducting work activity, or was present at the site of the incident as a condition of employment are included in the census.

Data at the county level

In an attempt to restrict the length of this report, most data are presented at the state level. However, many of these data are available at the regional, county, or subcounty level as well. There are several online sources for county-level data related to the indicators in this report:

Colorado Vital Statistics:
www.cdphe.state.co.us/hs/

Colorado PRAMS:
www.cdphe.state.co.us/hs/prams/

Colorado BRFSS:
www.cdphe.state.co.us/hs/brfss/

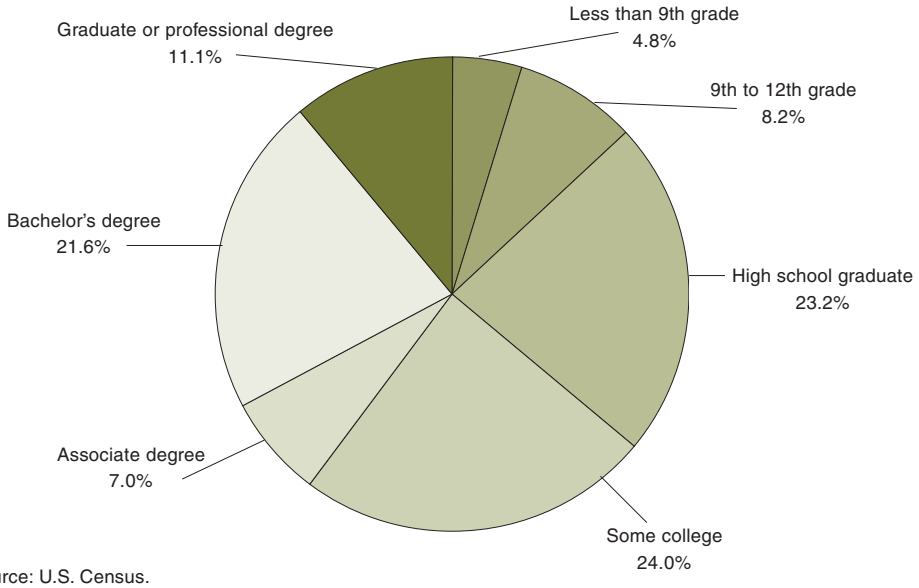
Colorado Health Information Dataset (CoHID): www.cdphe.state.co.us/cohid/

Contents

Population

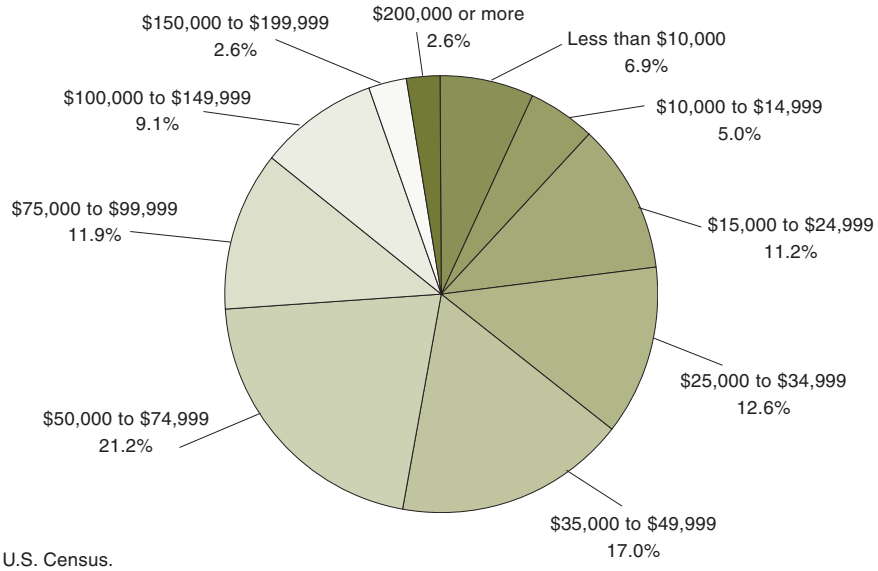
This brief summary describes the overall Colorado population in terms of basic demographics. Many aspects of health are related to the demographic characteristics of income and education, race and ethnicity, and geographic location (frontier versus rural versus urban). Understanding the demographic characteristics of the state of Colorado can help to explain the prevalence of health risk behaviors and outcomes.

Figure 1. Educational attainment: Colorado adults ages 25 and older, 1999



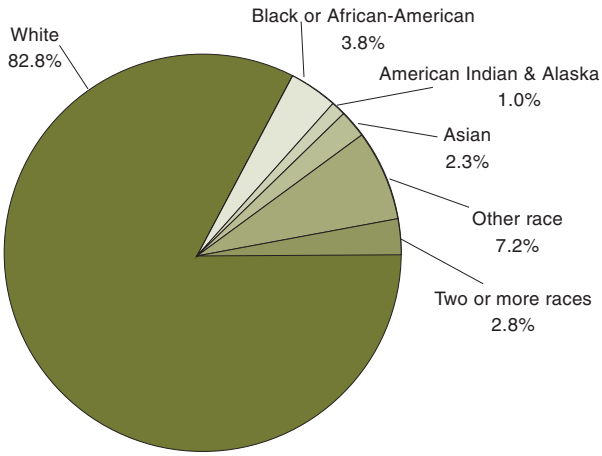
Source: U.S. Census.

Figure 2. Annual income: Colorado households, 1999



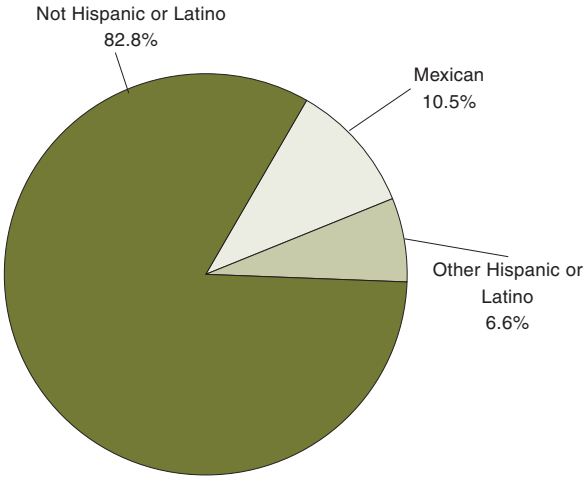
Source: U.S. Census.

Figure 3. Population by race: Colorado 2000



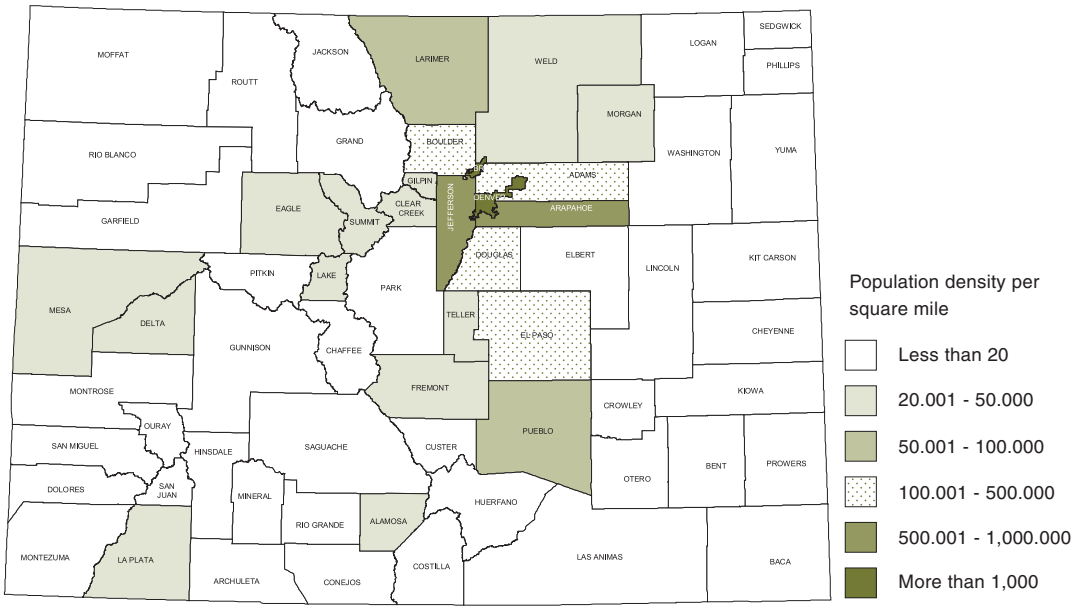
Source: U.S. Census.

Figure 4. Population by ethnicity: Colorado 2000



Source: U.S. Census.

Figure 5. Population density by county: Colorado, 2000



Source: U.S. Census.

Perinatal and Infant Health

This section of the report looks at key health indicators of pregnant women and infants. The health of this group is of critical importance, both as a reflection of the current health status of a large segment of the population and as a predictor of the health of the next generation (*Healthy People 2010*). Infants who receive the healthiest start in life have the best chance for continued health and well-being into childhood, adolescence, and adulthood. The indicators included here are primarily those that affect pregnant women and infant health and survival.

Many factors can impact the pregnancy and ultimate health and well-being of the infant and mother. Some of these factors are: whether the pregnancy was intended; access to prenatal care; smoking and alcohol abuse during pregnancy; physical abuse during pregnancy; and maternal weight gain. Low birth weight and preterm birth are among the leading causes of neonatal death. Breastfeeding is an important contributor to overall infant health because human breast milk presents the most complete form of nutrition for infants. Infant sleep position is an important factor in Sudden Infant Death Syndrome (SIDS), a leading cause of infant death after the first month of life.

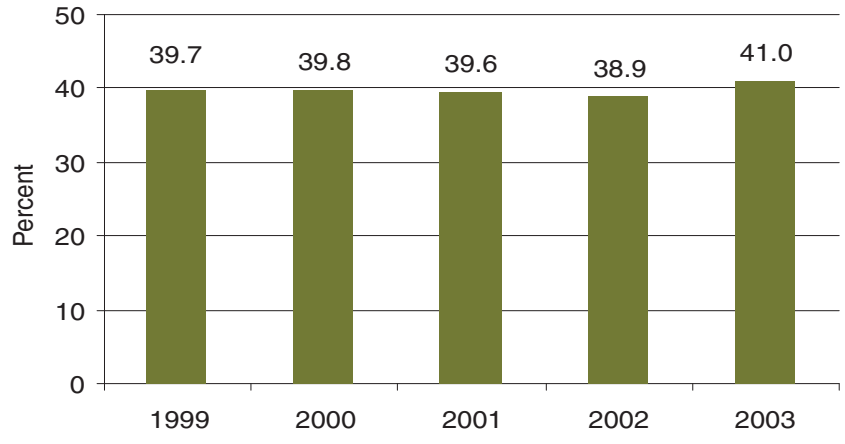
HP 2010 Objective: 70% of pregnancies to be intended at the time of conception (these pregnancies include those that end in live birth, miscarriage, and abortion)
Colorado Status: Colorado data are not directly comparable as they only reflect those pregnancies that ended in a live birth

Unintended Pregnancy

Approximately 40 percent of all live births in Colorado are the result of an unintended pregnancy (Figure 6). Unintended pregnancies are defined as those that are unwanted (pregnancy not wanted at any time) or mistimed (pregnancy not wanted until some time in the future) at the time of conception. Many women with unintended pregnancies receive late or inadequate prenatal care, suffer from poor nutrition, and often use harmful substances like alcohol, tobacco, and other drugs. Their infants are at higher risk for low birth weight, dying in the first year of life, and of being abused or neglected.

The *Healthy People 2010* objective is for 70 percent of pregnancies to be intended at the time of conception. These pregnancies include those that end in live birth, miscarriage, and abortion. Colorado data are not directly comparable as they only reflect those pregnancies that ended in a live birth.

Figure 6. Percent unintended* pregnancies among new mothers: Colorado residents, 1999-2003



* Unintended is defined as an unwanted (pregnancy not wanted at any time) or mistimed (pregnancy not wanted until some time in the future) pregnancy.

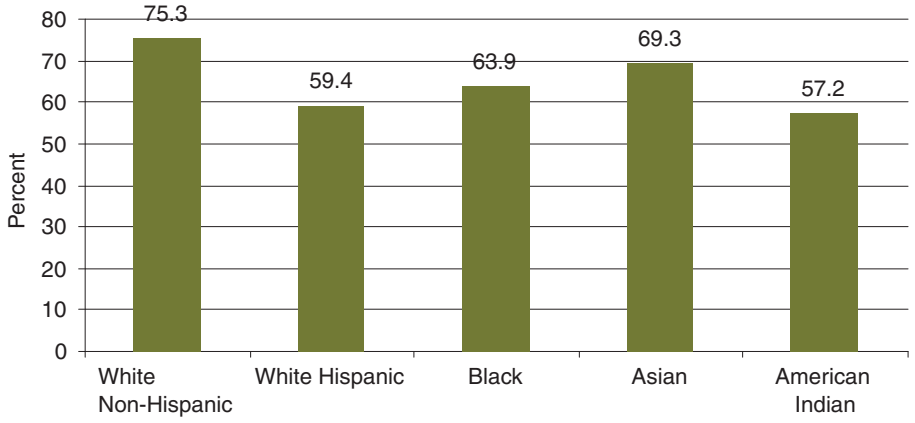
Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

HP 2010 Objective: 90% of women receive adequate prenatal care
Colorado Status: 69.5% of women received adequate prenatal care

Prenatal Care

An inadequate number of prenatal care visits is associated with an increased chance of late identification of high-risk conditions and decreased opportunity to help women address behavioral factors, such as smoking and drinking alcohol, that can contribute to poor birth outcomes. The *Healthy People 2010* objective is for 90 percent of women to receive adequate prenatal care. In Colorado in 2004, only 75.3 percent of White, non-Hispanic women received adequate care, and rates were even lower for women in other racial and ethnic groups (Figure 7). Overall, only 69.5 percent of Colorado women received adequate prenatal care in 2004.

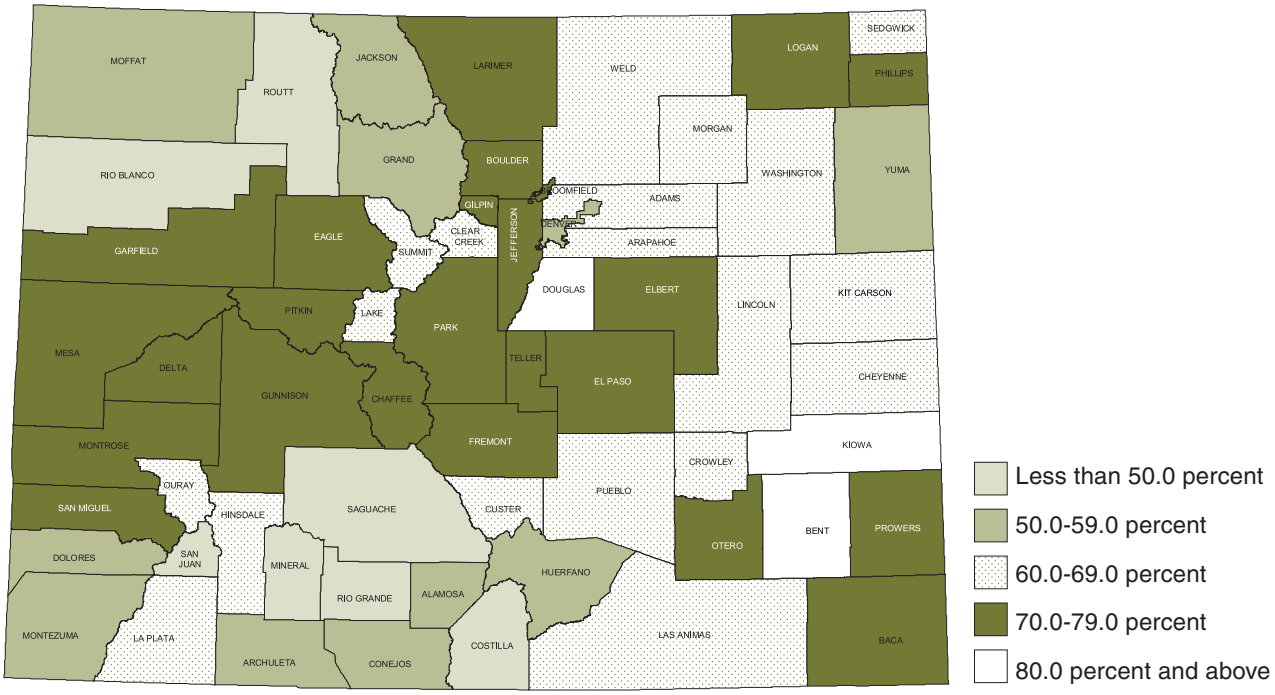
Figure 7. Adequate prenatal care* by race/ethnicity: Colorado residents, 2004



*Adequate prenatal care is measured by Kotelchuck Adequacy of Prenatal Care Utilization Index for all ages and includes the "Adequate" and "Adequate Plus" categories.
Denominator excludes cases with adequacy of prenatal care unknown.

Source: Birth records, Health Statistics Section, CDPHE.

Figure 8. Percent of adequate prenatal care by county: Colorado residents, 2004



*Adequate prenatal care is measured by Kotelchuck Adequacy of Prenatal Care Utilization Index for all ages and includes the "Adequate" and "Adequate Plus" categories.
Denominator excludes cases with adequacy of prenatal care unknown.

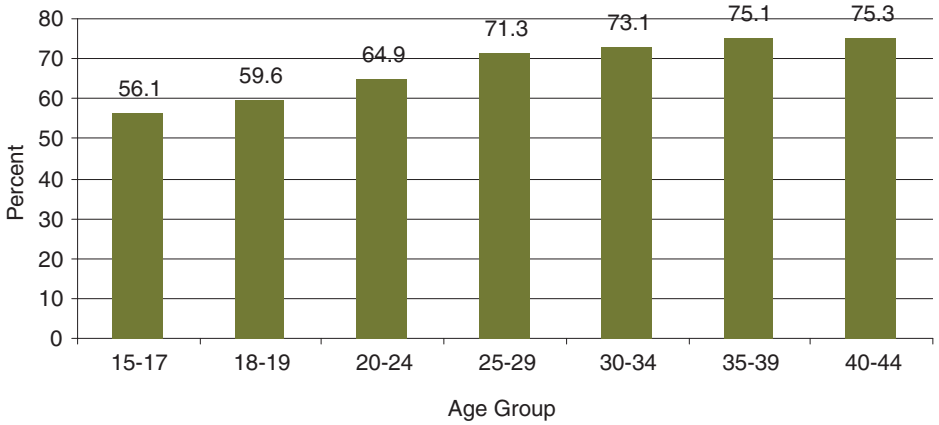
Source: Birth records, Health Statistics Section, CDPHE.

The Kotelchuck Adequacy of Prenatal Care Utilization Index combines information about prenatal care initiation, number of prenatal visits, and gestational age to determine the adequacy of prenatal care utilization for live births.

The index does not provide any information about the quality of prenatal care, only the utilization.

Although just over two-thirds of Colorado resident women ages 15-44 get adequate prenatal care, that percent drops to just over half for teens ages 15-17. Mothers in older age groups are more likely to get adequate prenatal care than younger mothers (Figure 9).

Figure 9. Percent adequate prenatal care* by age group of mother: Colorado residents, 2004



*Adequate prenatal care measured by Kotelchuck Adequacy of Prenatal Care Utilization Index for all ages and includes the "Adequate" and "Adequate Plus" categories.
Denominator excludes cases with adequacy of prenatal care unknown.

Source: Birth records, Health Statistics Section, CDPHE.

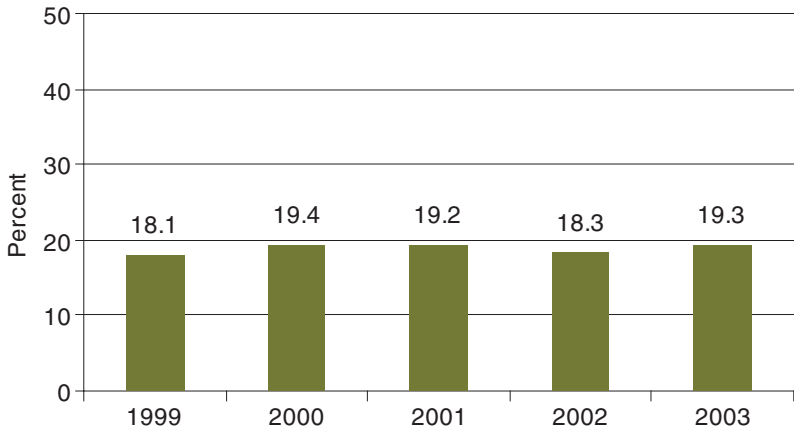
HP 2010 Objective: 90% of women receive prenatal care in the first trimester of pregnancy

Colorado Status: 79.3% of women received prenatal care in the first trimester in 2003

Approximately one-fifth of women in Colorado do not receive prenatal care services as early as they would like (Figure 10). The most common reasons for delayed prenatal care initiation include: inability to get an earlier appointment, the woman did not know she was pregnant, not enough money or insurance to pay for the visits, the woman did not have her Medicaid card, and the doctor or health plan would not start care earlier.

In 2003, Colorado ranked 42nd in the U.S. for the percentage of women receiving prenatal care in the first trimester of pregnancy with 79.3 percent (other states ranged from 92.8 to 68.9 percent). For the U.S. as a whole, 84.1 percent of women received first trimester prenatal care, and 3.5 percent received late or no prenatal care. The *Healthy People 2010* objective is for 90 percent of women to receive care in the first trimester of pregnancy.

Figure 10. Women who did not get prenatal care as early as they wanted: Colorado residents, 1999-2003



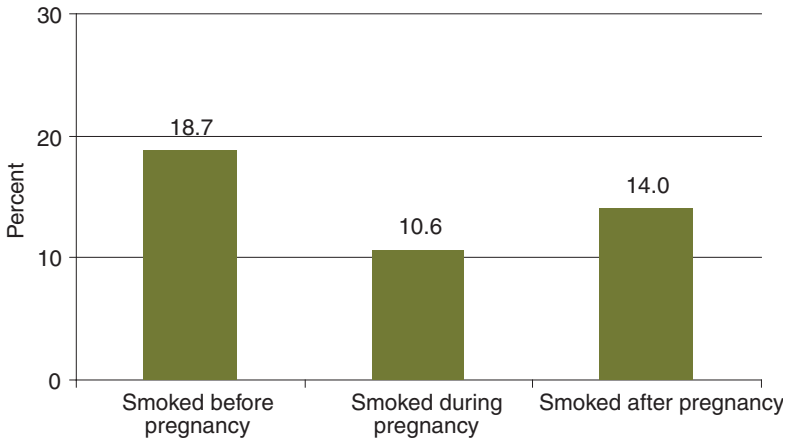
Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

HP 2010 Objective: 99% of women abstain from smoking during pregnancy
Colorado Status: 89.4% of Colorado women abstained during pregnancy in 2003

Smoking During Pregnancy

Smoking during pregnancy has been shown to contribute to low birth weight infants. Over the years, fewer women are smoking during pregnancy, and in the year 2003 about 11 percent of all women smoked during pregnancy (Figure 11). Many smokers quit smoking during their pregnancy, but more than half of smokers continued to smoke throughout their pregnancy. Although many women quit smoking while pregnant, some started up again after their babies were born, often exposing them to second-hand smoke. The *Healthy People 2010* objective states that 99 percent of women will abstain from smoking during pregnancy.

Figure 11. Women's smoking behaviors before, during and after pregnancy: Colorado residents, 2003



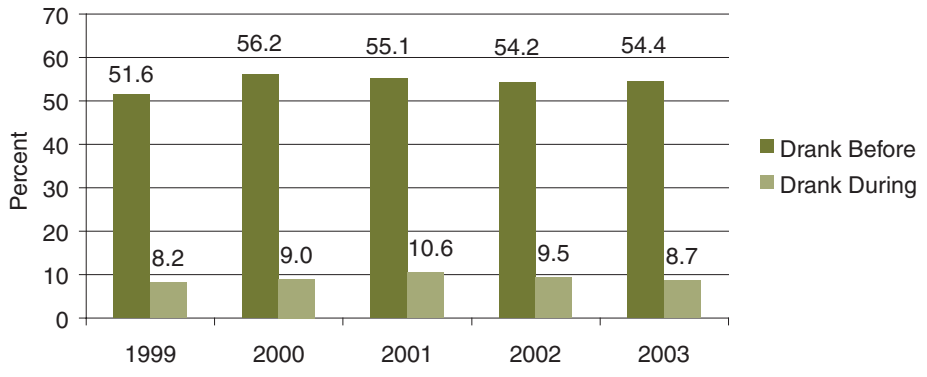
Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

HP 2010 Objective: 94% of women abstain from drinking alcohol during pregnancy
Colorado Status: 91.3% of women abstained during pregnancy in 2003

Alcohol Use During Pregnancy

Drinking early in pregnancy increases the risk of adverse outcomes including spontaneous abortion and growth or neurological problems. Many of these problems develop between 3 and 8 weeks gestation, often before women know they are pregnant. In Colorado, about 9 percent of women reported drinking alcoholic beverages during pregnancy, and this has remained fairly constant over time (Figure 12.) The majority (98%) of women who reported drinking, drank three or fewer drinks per week. The *Healthy People 2010* objective is for 94 percent of pregnant women to abstain from drinking alcohol.

Figure 12. Women who drank alcohol before and during pregnancy: Colorado residents, 1999-2003



Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

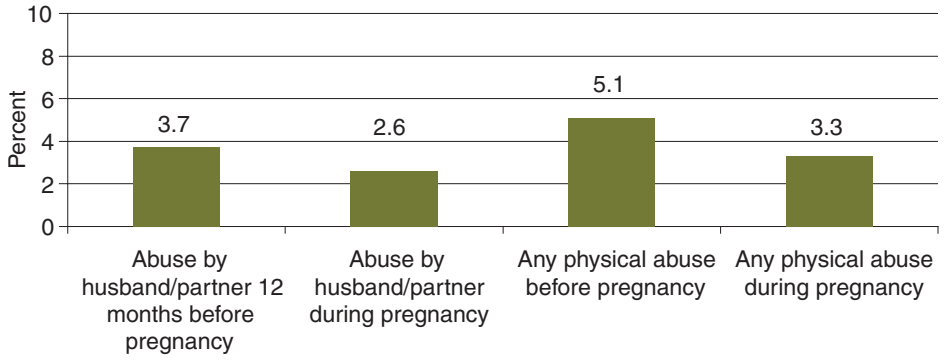
HP 2010 Objective: Fewer than 0.33% of people experience physical assault by current or former intimate partner

Colorado Status: 3.7% of women experienced physical assault by an intimate partner before pregnancy in 2003

Physical Abuse During Pregnancy

During the year before pregnancy, 3.7 percent of Colorado mothers were abused by their husband or partner, and 5.1 percent reported abuse by their husband/partner or somebody else (Figure 13). These rates correlate to approximately 2,500 and 3,500 women in Colorado, respectively. These rates decreased during pregnancy, but they were still far greater than the *Healthy People 2010* objective of fewer than 3.3 physical assaults by a current or former intimate partner per 1,000 persons (0.33%) 12 years or older. Physical abuse during pregnancy can result in fetal loss, early onset of labor, and delivery of a preterm low birth weight infant.

Figure 13. Physical abuse before and during pregnancy: Colorado residents, 2003



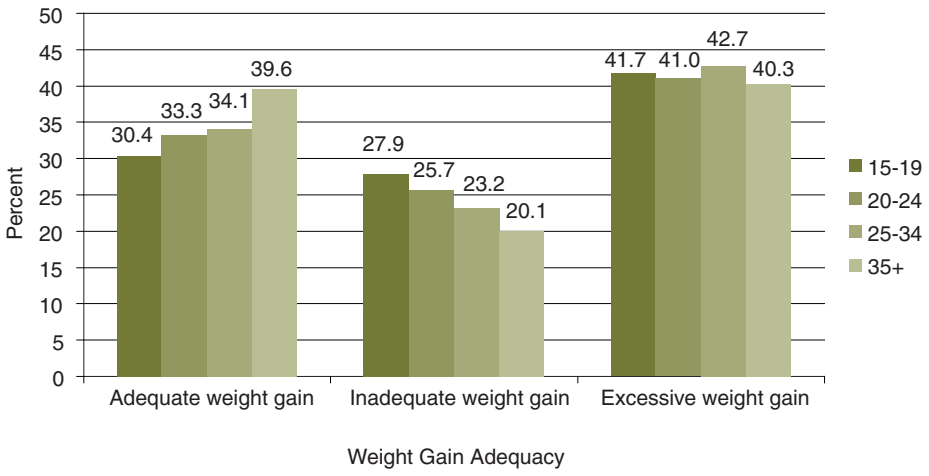
Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

Maternal Weight Gain During Pregnancy

Approximately one-third of women gained the appropriate amount of weight during pregnancy during the years 2001-03. However, the majority of Colorado women gained weight outside of the National Institute of Medicine guidelines, with approximately one-quarter gaining an inadequate amount and about 40 percent gaining an excessive amount of weight during pregnancy. The proportion of women who gained an inadequate amount of weight varied by age, with younger women being more at risk (Figure 14).

Inadequate prenatal weight gain is a significant risk factor for intrauterine growth retardation and low birth weight in infants and, during the third trimester of pregnancy, can be associated with increased risk of spontaneous preterm delivery. Excessive maternal weight gain is associated with excessive postpartum weight retention, which is of concern given the trend toward increasing obesity among U.S. women and the health risks associated with obesity.

Figure 14. Adequacy of weight gain during pregnancy by maternal age: Colorado residents, 2001-2003



Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

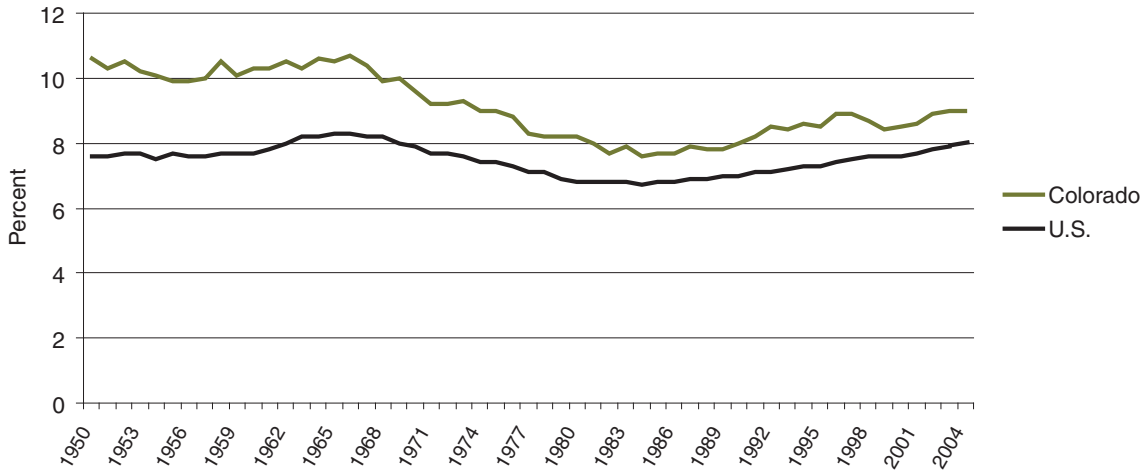
HP 2010 Objective: Reduce low birth weight births to 5%
Colorado Status: In 2004, 9.0% of births were low birth weight

Low Birth Weight

By definition, a newborn weighing less than 2,500 grams (less than 5 lb. 9 oz.) is considered a low weight birth. These infants are at much greater risk for long-term morbidity and early death. Colorado has continually experienced a relatively higher percentage of low weight births than the U.S. overall (Figure 15). In 2003, Colorado ranked 9th among the fifty states and the District of Columbia for highest percentage of low weight births with 9.0 percent of births being low weight.

The *Healthy People 2010* objective is for 90 percent of very low birth weight (<1,500 grams) infants to be delivered at facilities for high-risk deliveries and neonates. In Colorado, in 2004, 71.9 percent of those deliveries took place at such facilities.

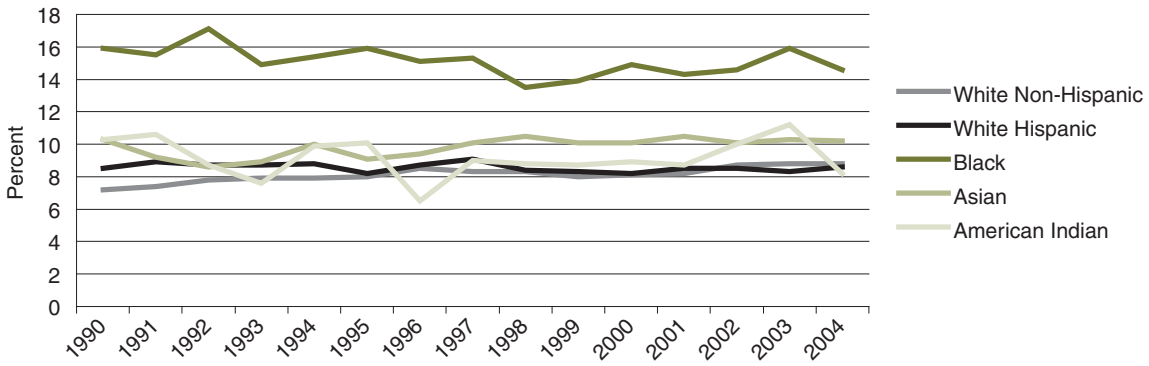
Figure 15. Percent low weight births: Colorado residents and United States*, 1950-2004



Sources: Birth records, Health Statistics Section, CDPHE.
National Center for Health Statistics.
U.S. data are preliminary for 2004.

A significant health disparity exists for infants born to Black women with regard to birth weight. In Colorado, as in the U.S., the proportion of low weight births to Black women is significantly higher than for other women (Figure 16).

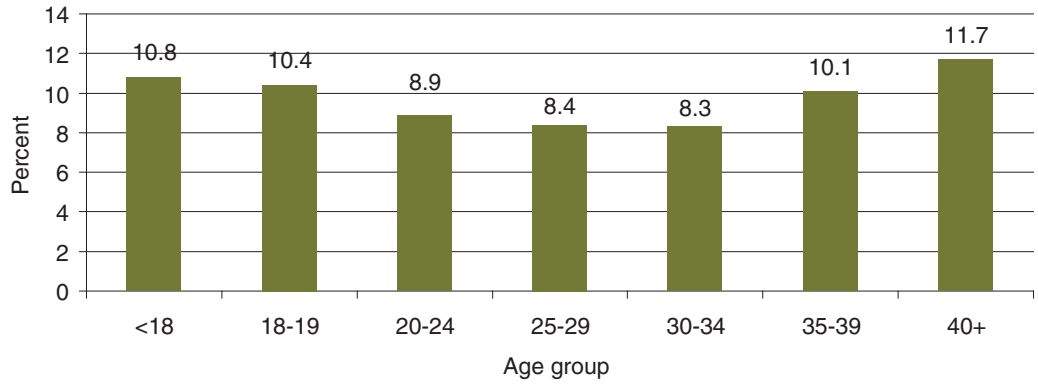
Figure 16. Percent low birth weight births (<2500 grams) by race/ethnicity of mother: Colorado residents, 1990-2004



Source: Birth records, Health Statistics Section, CDPHE.

Low birth weight births are also related to the age of the mother. The youngest and the oldest mothers are more likely to have a low birth weight infant (Figure 17).

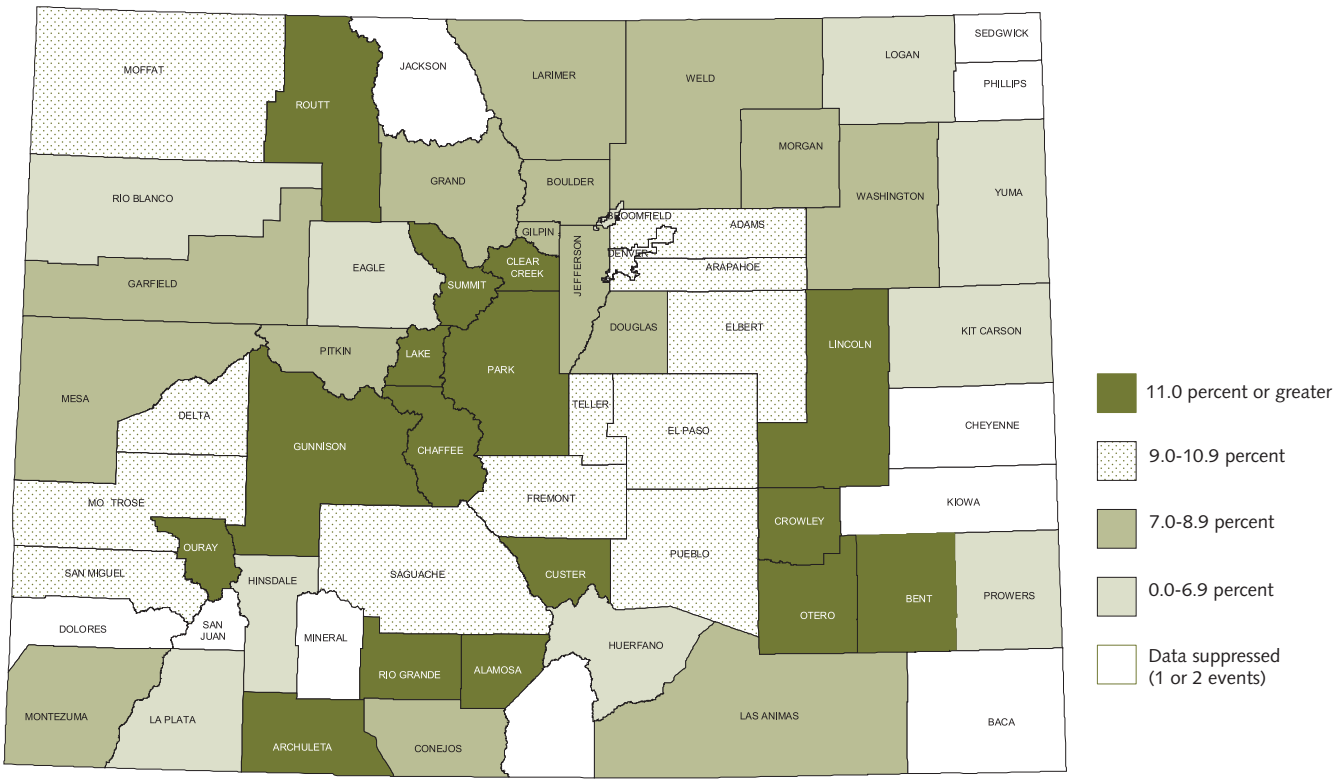
Figure 17. Percent low birth weight births (<2,500 grams) by age group of mother: Colorado residents, 2004



Source: Birth records, Health Statistics Section, CDPHE.

There is a great deal of variability among counties in the percent of births that are low birth weight.

Figure 18. Percent low birth weight births (<2,500 grams) by county: Colorado residents, 2004



Source: Birth records, Health Statistics Section, CDPHE.

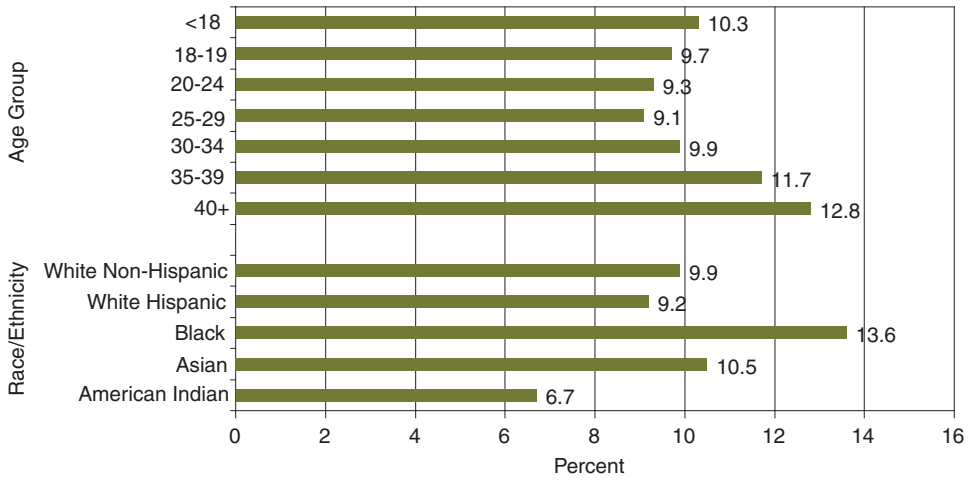
HP 2010 Objective: Reduce preterm births to no more than 7.6% of all births
Colorado Status: 9.8% of births were preterm in 2004

Preterm Birth

Preterm births are those occurring at less than 37 weeks gestational age. According to *Healthy People 2010*, preterm birth is the leading cause of neonatal death not associated with birth defects. Additionally, two-thirds of low birth weight infants and 98 percent of very low weight infants are born preterm. Consequently, reductions in preterm deliveries will result in large decreases in infant illness, disability, and death.

Inadequate weight gain and use of alcohol, tobacco, and other drugs during pregnancy are associated with preterm birth. In Colorado in 2004, the oldest and the youngest mothers had the highest percentages of preterm births (Figure 19). Black women are more likely than women of other racial/ethnic groups to have a preterm birth.

Figure 19. Percent preterm births (<37 weeks) by age group and race/ethnicity of mother: Colorado residents, 2004



Source: Birth records, Health Statistics Section, CDPHE.

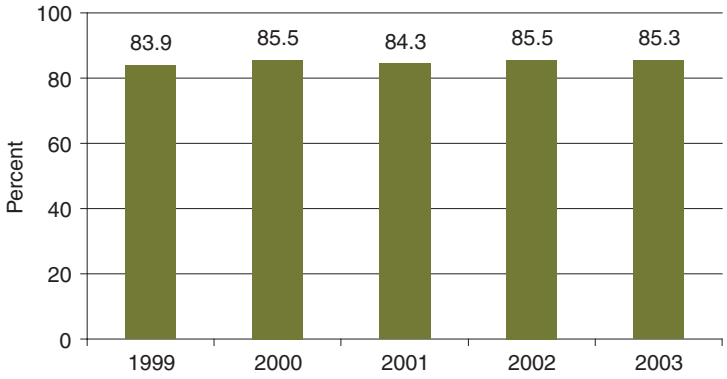
HP 2010 Objective: 75% of women initiate breastfeeding after delivery
Colorado Status: 85.3% of women initiated breastfeeding after delivery

Breastfeeding

Most Colorado women start breastfeeding shortly after their baby is born (Figure 20), but many do not continue long enough for the baby to gain all of the benefits. The American Academy of Pediatrics recommends breastfeeding for one year, but most women do not continue for that length of time. Although more women are breastfeeding, less than two-thirds currently do so for nine weeks or more (Figure 21). The *Healthy People 2010* objective states that 75 percent will initiate breastfeeding soon after delivery and 50 percent will breastfeed for six months.

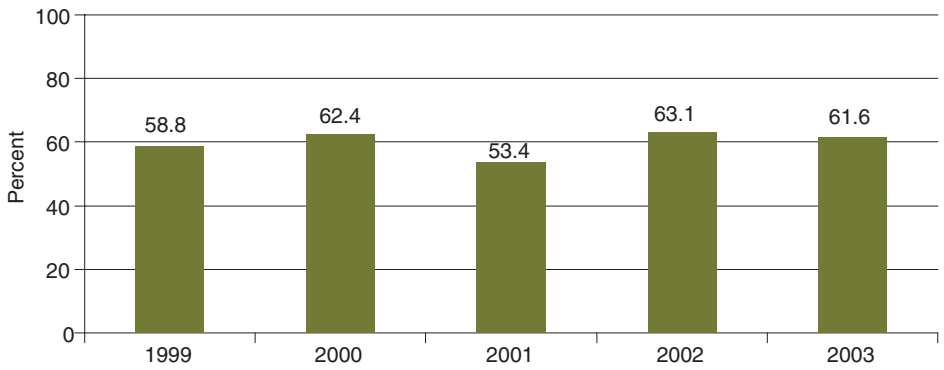
Breastfeeding has long been known to be beneficial to both the infant and the mother. Some of the benefits for babies are fewer middle-ear infections and fewer chronic illnesses such as diabetes, allergies, and obesity. Schoolchildren who were breastfed as infants have also been found to have IQs about eight points higher than those who were not.

Figure 20. Women who initiated breastfeeding after delivery: Colorado residents, 1999-2003



Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

Figure 21. Women who breastfed for nine or more weeks: Colorado residents, 1999-2003



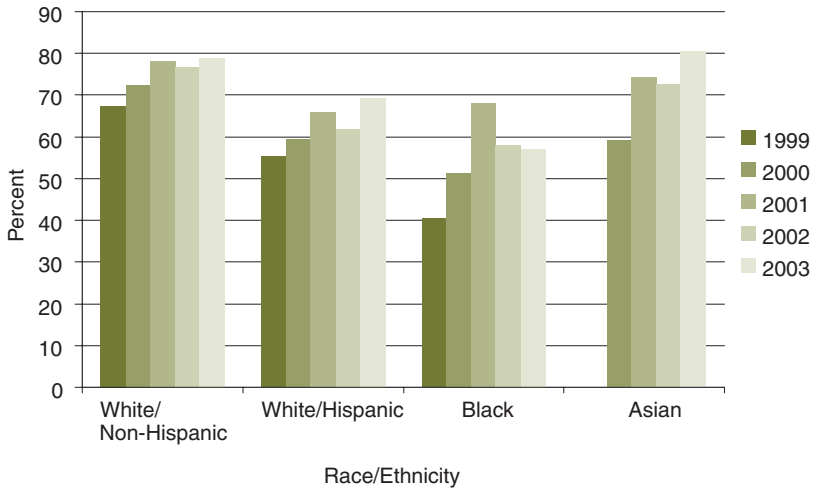
Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

HP 2010 Objective: At least 70% of infants sleep on their backs
Colorado Status: White non-Hispanic 78.8%; White Hispanic 69.3%; Black 57.1%; Asian 80.5% in 2003

Infant Sleep Position

Infant sleep position has been identified as an important factor in preventing Sudden Infant Death Syndrome (SIDS). Infants who sleep on their stomachs are estimated to be up to 9.3 times more likely to die of SIDS than infants who sleep on their backs. Since the implementation of the 1994 "Back to Sleep" campaign, the percent of infants who sleep on their backs has increased significantly. In Colorado, increasing trends are seen for infants who sleep on their backs for all race and ethnic groups (Figure 22). However, continued efforts are needed in Colorado's Hispanic and Black populations to meet the *Healthy People 2010* objective of at least 70 percent of infants being put to sleep on their backs.

Figure 22. Percent of infants who sleep on their backs by race/ethnicity: Colorado residents, 1999-2003



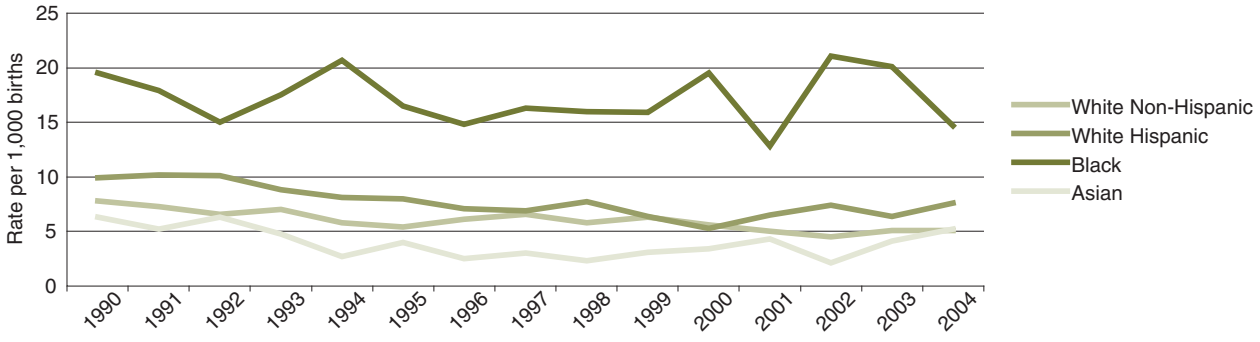
* No data are available for Asian infants for 1999
Source: Pregnancy Risk Assessment Monitoring System, Health Statistics Section, CDPHE.

HP 2010 Objective: Reduce infant mortality to 4.5 infant deaths per 1,000 live births
Colorado Status: 6.3 infant deaths per 1,000 live births

Infant Mortality

Of the 68,475 infants born to Colorado residents in 2004, 432 did not survive the first year of life. The infant mortality rate is the number of infant deaths per 1,000 live births. In 2004, the infant mortality rate for Colorado was 6.3. The *Healthy People 2010* objective is to reduce that rate to 4.5 infant deaths per 1,000 live births. Colorado has made progress in reducing this rate, as has the U.S., but there is still a large disparity in infant mortality by race/ethnicity (Figure 23). In 2004, the infant mortality rate for Black infants was two times as high as that for White Hispanic infants and approximately three times higher than the other racial/ethnic groups.

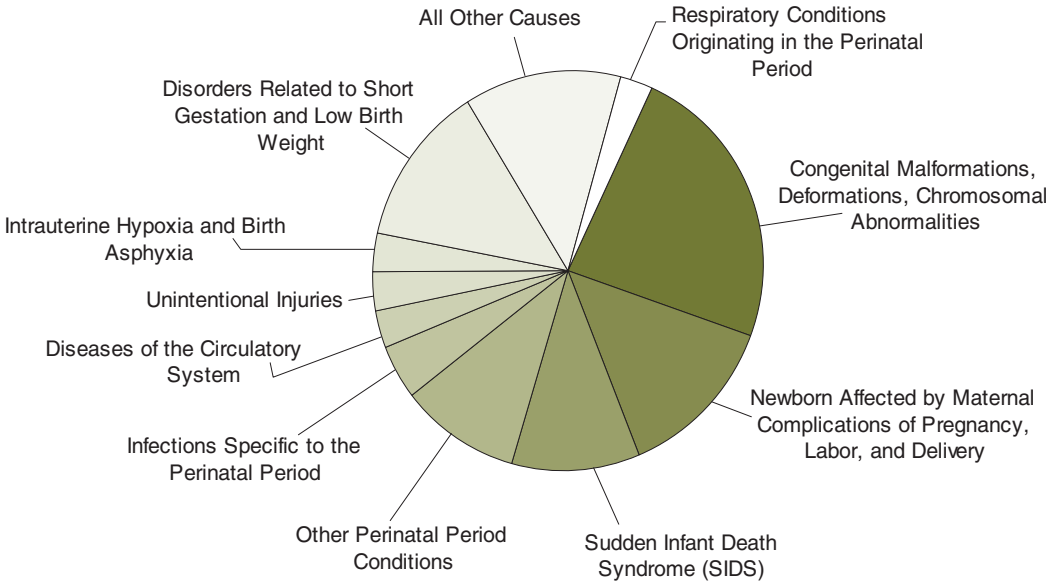
Figure 23. Infant mortality rates by race/ethnicity: Colorado residents, 1990-2004



Source: Death records, Health Statistics Section, CDPHE.

Four underlying cause categories were identified in 60 percent of all infant deaths to Colorado residents in 2004: congenital malformations, deformations, and chromosomal abnormalities; newborn affected by maternal complications of pregnancy, labor, and delivery; disorders related to short gestation and low birth weight; and Sudden Infant Death Syndrome (SIDS) (Figure 24). For each of these causes, the rate for Black infant mortality was higher than that for White infants (regardless of ethnicity).

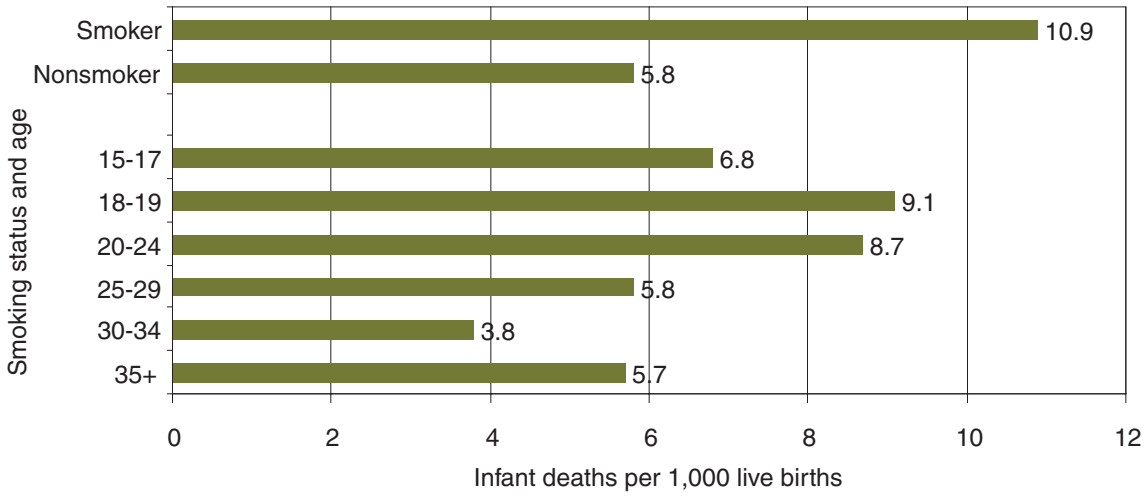
Figure 24. Percent of infant deaths by underlying cause: Colorado residents, 2004



Source: Death records, Health Statistics Section, CDPHE.

Infant mortality rates vary by such maternal characteristics as smoking during pregnancy and mother's age (Figure 25).

Figure 25. Infant mortality rates by prenatal smoking status and age of mother: Colorado residents, 2004



Source: Death records, Health Statistics Section, CDPHE.

Child Health

This section highlights key indicators of child health. Access to medical and oral health care is important for persons of every age. Nutrition, physical activity, and safety behaviors developed in childhood often carry over into adolescence and adulthood. Childhood obesity, a growing problem, is associated with the development of chronic disease both in childhood and later in life. Behavioral health is being increasingly recognized as an important part of overall well-being. Unintentional injury is the leading cause of death for children ages 1-14.

HP 2010 Objective: 100% of persons under age 65 with health care coverage
Colorado Status: 89.6% of Colorado children ages 1-14 have health care coverage

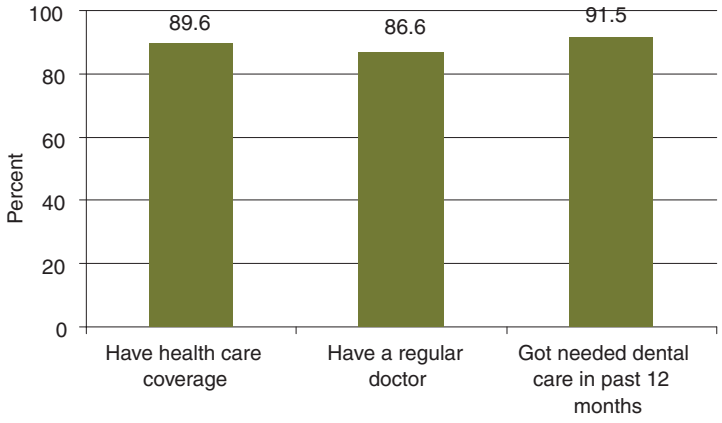
HP 2010 Objective: 96% of persons of all ages with a specific source of ongoing primary care
Colorado Status: 86.6% of Colorado children ages 1-14 have one or more persons they consider their personal doctor

Health Care Access

As stated in *Healthy People 2010*, health insurance provides access to health care. Persons with health insurance are more likely to have a primary care provider and to have received appropriate preventive care such as immunization. Having a health care provider that one thinks of as his/her main caregiver is also associated with receiving adequate and appropriate health care.

As shown in Figure 26, in 2004, 89.6 percent of Colorado children ages 1-14 had health care coverage. The *Healthy People 2010* objective is for 100 percent coverage of the population. Also in 2004, 86.6 percent of Colorado children ages 1-14 had one or more persons they considered their personal doctor, also falling short of the *Healthy People 2010* objective of 96 percent.

Figure 26. Medical and dental care: Colorado children ages 1-14, 2004



Source: Colorado Child Health Survey, Health Statistics Section, Colorado Department of Public Health and Environment

Oral health is an important component of overall health. According to research summarized in *Healthy People 2010*, dental caries (cavities) is the most common chronic disease of childhood with more than half of children having caries by second grade and 80% by the end of high school. Access to appropriate and timely dental care is important for individuals to achieve and maintain oral health. Barriers to care include cost; lack of dental insurance, public programs, or providers from underserved racial and ethnic groups; and fear of dental visits. According to parents surveyed in the 2004 Colorado Child Health Survey, 91.5 percent of children ages 1-14 got the dental care they needed in the past twelve months (Figure 26).

Physical Activity

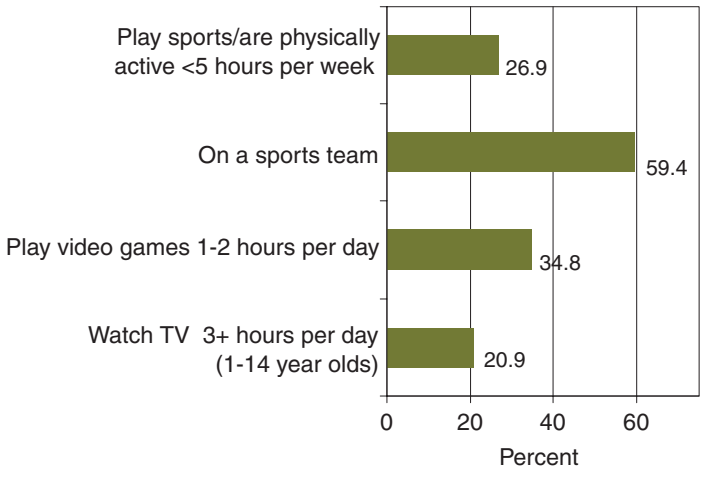
"Physical activity among children and adolescents is important because of the related health benefits (cardiorespiratory function, blood pressure control, and weight management) and because a physically active lifestyle adopted early in life may continue into adulthood. Even among children aged 3 to 4 years, those who were less active tended to remain less active after age 3 years than most of their peers" (*Healthy People 2010*.) As more U.S. children are overweight, adequate levels of physical activity are increasingly important.

Several organizations are currently promulgating research-based guidelines for physical activity levels for children. This is a summary of guidelines from the National Association for Health and Fitness:

- Children should accumulate at least 60 minutes, and up to several hours, of age-appropriate physical activity on all or most days of the week.
- Children should participate in several bouts of physical activity lasting 15 minutes or more each day.
- Children should participate each day in a variety of age-appropriate physical activities designed to achieve optimal health, wellness, fitness, and performance benefits.
- Extended periods (periods of two hours or more) of inactivity are discouraged for children, especially during the daytime hours.

Figure 27 shows that more than one in four (26.9%) Colorado children ages 5-14 get less than five hours of physical activity per week. However nearly 60 percent (59.4%) of 5-14 year-olds are on a sports team. More than one-third (34.8%) of children ages 5-14 play 1-2 hours of video games per day, and one-fifth (20.9%) of children ages 1-14 watch 3 or more hours of television per day.

Figure 27. Physical activity: Colorado children ages 5-14, 2004



Source: Colorado Child Health Survey, Health Statistics Section, Colorado Department of Public Health and Environment.

HP 2010 Objective: 75% of persons 2 years and older consume at least two daily servings of fruit
Colorado Status: 35.8% of Colorado children ages 1-14 consume at least two daily servings of fruit

HP 2010 Objective: 50% of persons 2 years and older consume at least three daily servings of vegetables
Colorado Status: 5.1% of Colorado children ages 1-14 consume at least three daily servings of vegetables

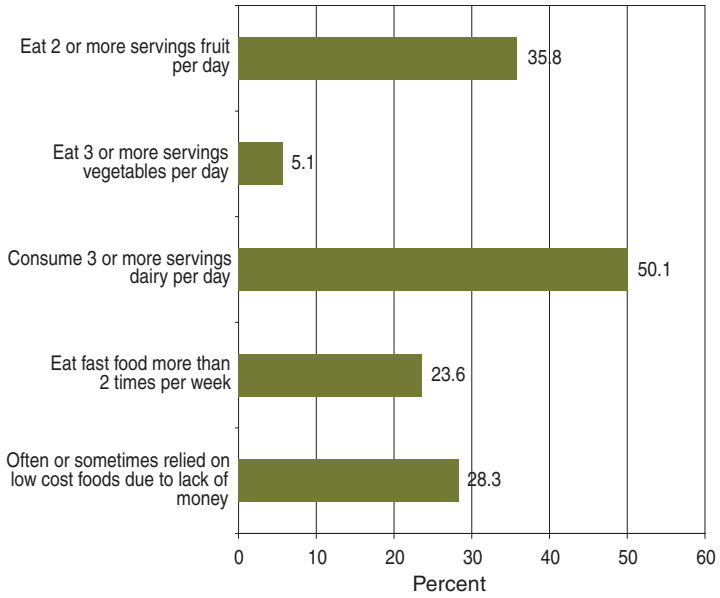
Nutrition

Good nutrition is essential for appropriate growth, development, and well-being. Healthy eating habits should be developed early and continue throughout the lifespan. It is especially important to consume adequate amounts of fruits, vegetables, whole grains, and calcium and to limit fats, sugar, and sodium. Fast food is frequently high in fat and sodium and eating out at fast food restaurants may be linked to increasing obesity among children.

Adequate household resources are necessary for obtaining enough food to prevent hunger and food insecurity. Food insecurity means that people do not have sufficient resources to have nutritionally adequate and safe foods available at all times.

As shown in Figure 28, only 35.8 percent of Colorado children ages 1-14 consume two or more daily fruit servings, and only 5.1 percent consume three or more vegetable servings falling far short of the Healthy People 2010 objectives. Only half (50.1%) of children consume three or more dairy servings each day, and nearly one-fourth (23.6%) eat fast food more than twice a week. Finally, more than one-fourth of children (28.3%) lived in households where their caretakers sometimes or often had to rely on only a few kinds of low-cost food to feed them because they were running out of money to buy food.

Figure 28. Nutrition and food security: Colorado children ages 1-14,



Source: Colorado Child Health Survey, Health Statistics Section, Colorado Department of Public Health and Environment.

HP 2010 Objective: No more than 5% of children and adolescents are overweight or obese

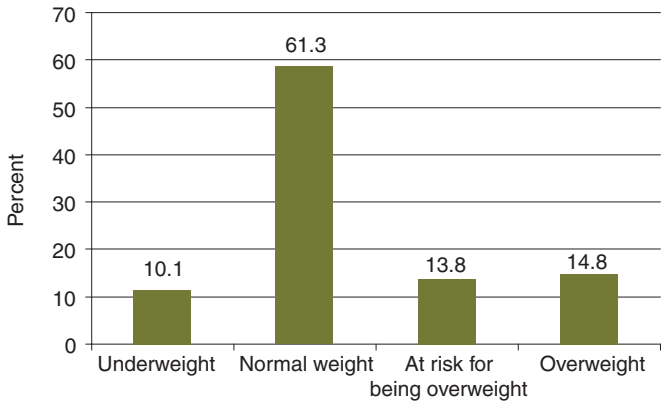
Colorado Status: 14.8% of children ages 2-14 are overweight

Overweight

There is much concern about the increasing prevalence of obesity in children and adolescents. Overweight and obesity acquired during childhood or adolescence may persist into adulthood and increase the risk for some chronic diseases later in life. As weight increases, so does the prevalence of health risks. The objective to reduce the prevalence of overweight and obesity among children and adolescents has a target set at no more than 5 percent and uses the gender- and age-specific 95th percentile of BMI from the revised Centers for Disease Control and Prevention (CDC) Growth Charts for the United States. The reduction of BMI in children and adolescents should be achieved by emphasizing physical activity and a properly balanced diet so that healthy growth is maintained (*Healthy People 2010*).

Figure 29 shows the proportion of Colorado children ages 2-14 who are considered underweight (Body Mass Index less than the 5th percentile), normal weight (BMI between the 5th and 84.9th percentiles), at risk for overweight (BMI between the 85th and 94.9th percentiles) and overweight (BMI in the 95th percentile or higher.) Although the majority of Colorado children are either underweight or normal weight (71.4%), 13.8 percent are at risk for overweight and 14.8 percent are overweight, almost three times the *Healthy People 2010* objective of 5 percent.

Figure 29. Body Mass Index (BMI)* percentiles: Colorado children ages 2-14, 2004



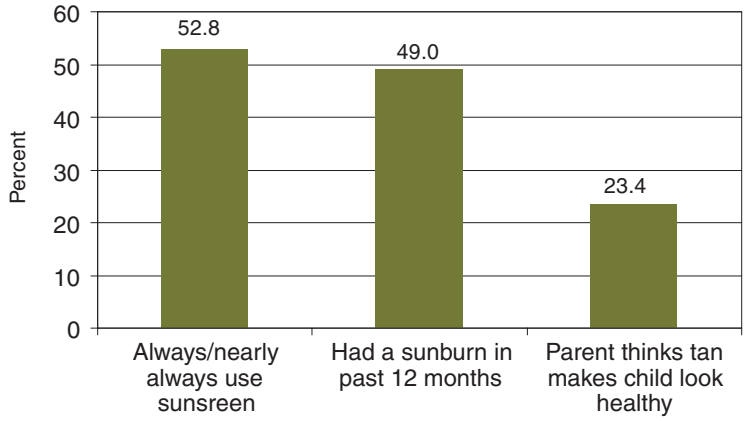
Source: Colorado Child Health Survey, Health Statistics Section, Colorado Department of Public Health and Environment.

Sun Safety

Intermittent exposure to the sun and a history of sunburns early in life are risk factors for skin cancer. These sun safety practices are recommended in order to reduce the risk of skin cancer: avoid the sun between 10 a.m. and 4 p.m., wear sun-protective clothing when exposed to sunlight, use sunscreen with a sun-protective factor (SPF) of 15 or higher, and avoid artificial sources of ultraviolet light.

As shown in Figure 30, only slightly more than half (52.8%) of Colorado children ages 1-14 always or almost always used sunscreen in 2004. Not surprisingly, 49 percent of children had a sunburn during the last 12 months. Nearly one-quarter (23.4%) of parents think that a tan makes a child look healthy.

Figure 30. Sun safety practices and attitudes: Colorado children ages 1-14, 2004



Source: Colorado Child Health Survey, Health Statistics Section, Colorado Department of Public Health and Environment.

Behavioral/Mental Health

"For many children aged 18 years and under, lifelong mental disorders may start in childhood or adolescence. For many other children, normal development is disrupted by biological, environmental, and psychosocial factors, which impair their mental health, interfere with education and social interactions, and keep them from realizing their full potential as adults. Expanding effective services for children, particularly for those with serious emotional disturbance, depends on promoting effective collaboration across critical areas of support: families, social services, health, mental health, juvenile justice, and schools. Better services and collaboration for children with serious emotional disturbance and their families will result in greater school retention, decreased contact with the juvenile justice system, increased stability of living arrangements, and improved educational, emotional, and behavioral development." (*Healthy People 2010*)

In 2004 in Colorado, 28.5 percent of children ages 1-14 had some difficulty with emotions, concentration, behavior, or getting along with others. Of these children, 54.7 percent had minor difficulties, 38.0 percent had moderate difficulties, and 7.2 percent had severe difficulties. Most of these children (65%) never received counseling or treatment for their difficulties.

HP 2010 Objective: 100% of motor vehicle occupants aged 4 years and under used child restraints

Colorado Status: 90.1% of motor vehicle occupants ages 1-14 always used a car seat, booster seat or seat belt

Unintentional Injuries

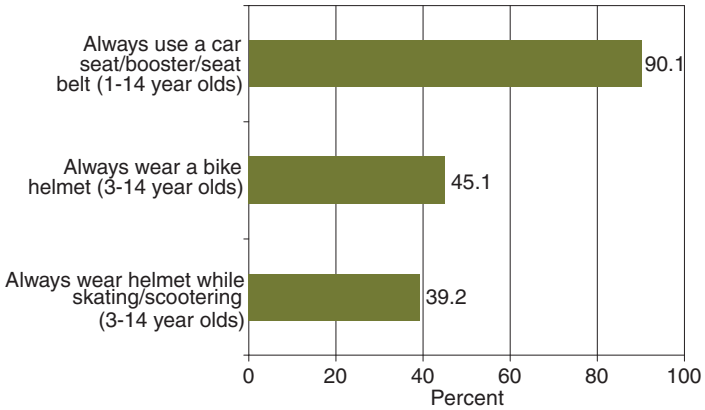
Injuries are a major public health problem resulting in significant numbers of hospitalizations and deaths each year. Injuries can be classified as either "intentional," meaning there was intent to harm such as homicide or suicide, or "unintentional." Unintentional injuries are sometimes labeled "accidents," but many injuries are not random, uncontrollable acts of fate. Rather, most injuries are predictable and preventable.

Among children ages 1-14 years, crash injuries are the leading cause of death. The use of age-appropriate car restraint systems can reduce this problem. All states have child restraint laws, but loopholes in the laws exempt many children from coverage under either safety belt or child restraint laws. Another problem is the persistence of incorrect use of child restraints and safety belts.

Head injuries are the most serious type of injury sustained by bicyclists of all ages. Bicycle helmets reduce the risk of bicycle-related head injury by 85 percent. (*Healthy People 2010*)

As shown in Figure 31, 90.1% of Colorado children ages 1-14 always used a car seat, booster seat, or seat belt when riding in a car. Only 45.1% of 3-14 year-olds always wore a bike helmet when riding a bike, and 39.2% always wore a helmet when skating or scootering.

Figure 31. Vehicle safety practices: Colorado children ages 1-14, 2004



Source: Colorado Child Health Survey, Health Statistics Section, Colorado Department of Public Health and Environment.

HP 2010 Objective: 25.0 deaths per 100,000 children ages 1-4
Colorado Status: 20.2 deaths per 100,000 children ages 1-4 in 2004

HP 2010 Objective: 14.3 deaths per 100,000 children ages 5-9
Colorado Status: 13.5 deaths per 100,000 children ages 5-9 in 2004

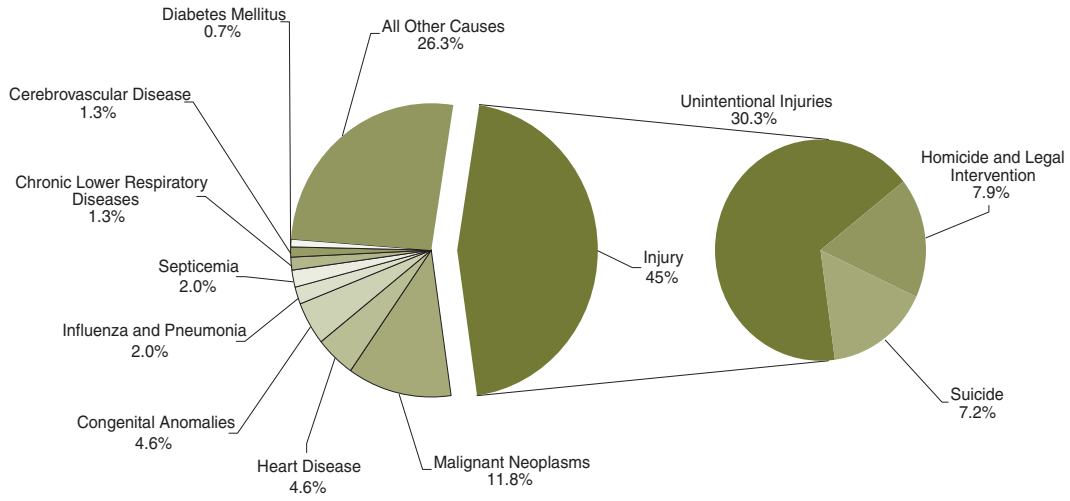
HP 2010 Objective: 16.8 deaths per 100,000 children ages 10-14
Colorado Status: 17.4 deaths per 100,000 children ages 10-14 in 2004

Child Mortality

A total of 54 Colorado children ages 1-4 died in 2004. At 20.2, the 2004 Colorado death rate per 100,000 population of children ages 1-4 is lower than the *Healthy People 2010* objective of 25.0 deaths per 100,000 in that age group. For the 5-9 age group, 42 children died and the Colorado rate for 2004 is 13.5, also lower than the *Healthy People 2010* objective of 14.3. For children ages 10-14, the 2004 Colorado rate of 17.4 is higher than the *Healthy People 2010* objective of 16.8. A total of 56 Colorado children ages 10-14 died in 2004.

Almost one-third of deaths to children ages 1-14 in Colorado in 2004 were due to unintentional injuries (Figure 32). When both unintentional and intentional (homicide and suicide) injuries are combined, almost half of all child deaths in this age group (45%) are injury-related. Most of these injury deaths are considered to be preventable.

Figure 32. Child deaths (ages 1-14) by underlying cause: Colorado residents, 2004



Source: Death records, Health Statistics Section, Colorado Department of Public Health and Environment.

Adolescent Health

This section describes a constellation of health risk factors for adolescents that contribute markedly to the leading causes of death, disability, and social problems among youth and adults. These include:

- Alcohol, tobacco, and marijuana use;
- Sexual behaviors that contribute to teen pregnancy and sexually transmitted diseases;
- Behaviors that contribute to unintentional injuries; and
- Overweight, nutrition, and physical activity patterns.

Tobacco and alcohol use initiated during adolescence, and often continued into adulthood, are risk factors for many chronic diseases, including the leading causes of death for adults, heart disease and cancer. Births to teens are often associated with a host of negative consequences for the teens as well as the infants. Pregnancy-related issues are the leading cause of hospitalizations for teens. Violence and unintended injuries account for approximately three-quarters of all deaths to teens. Behavioral patterns established in adolescence may also carry over into adulthood contributing to a leading cause of death for adults: unintentional injury. Adequate physical activity and nutrition are essential not only for appropriate growth during adolescence, but for prevention of chronic diseases such as heart disease and diabetes.

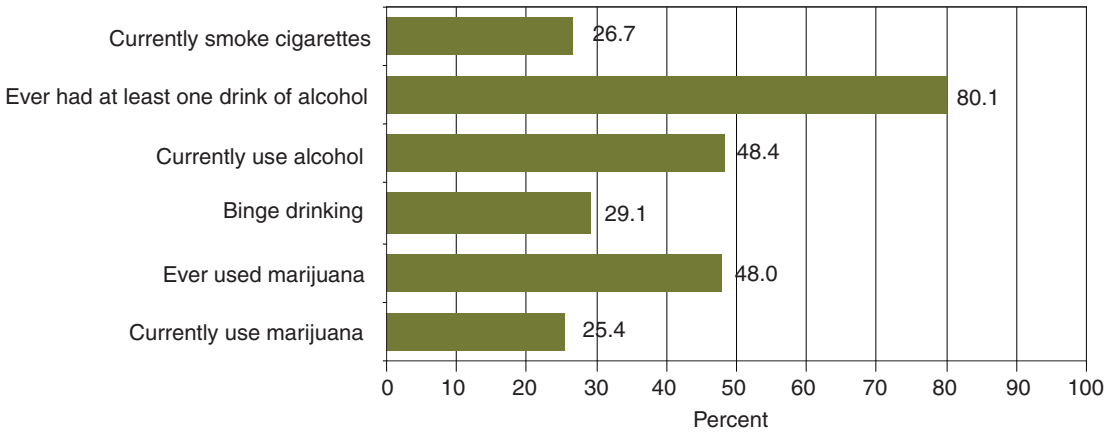
HP 2010 Objective: 29% of high school seniors to have never tried alcoholic beverages
Colorado Status: 19.9% of students grades 9-12 had never tried alcohol

HP 2010 Objective: 0.7% of adolescents ages 12-17 reported using marijuana in last 30 days
Colorado Status: 25.4% of students grades 9-12 reported using marijuana in past 30 days

Substance Use

Substance use among youth is a major predictor of continued use or abuse as an adult, which can often lead to physical and/or mental health problems. More than one-fourth of students surveyed were currently smoking cigarettes (Figure 33). Those adolescents who smoke are more likely to smoke as adults and to be at increased risk for cancer and heart disease. The use of drugs and/or alcohol can lead to dangerous behaviors, including unprotected or unwanted sex, driving under the influence, and more serious criminal behaviors. Nearly 50 percent of students surveyed used alcohol and one-quarter currently used marijuana.

Figure 33. Tobacco, alcohol, and marijuana use: Colorado students grades 9-12, 2003



Source: Youth Risk Behavior Survey, Health Statistics Section, CDPHE.

Teen Fertility Rates

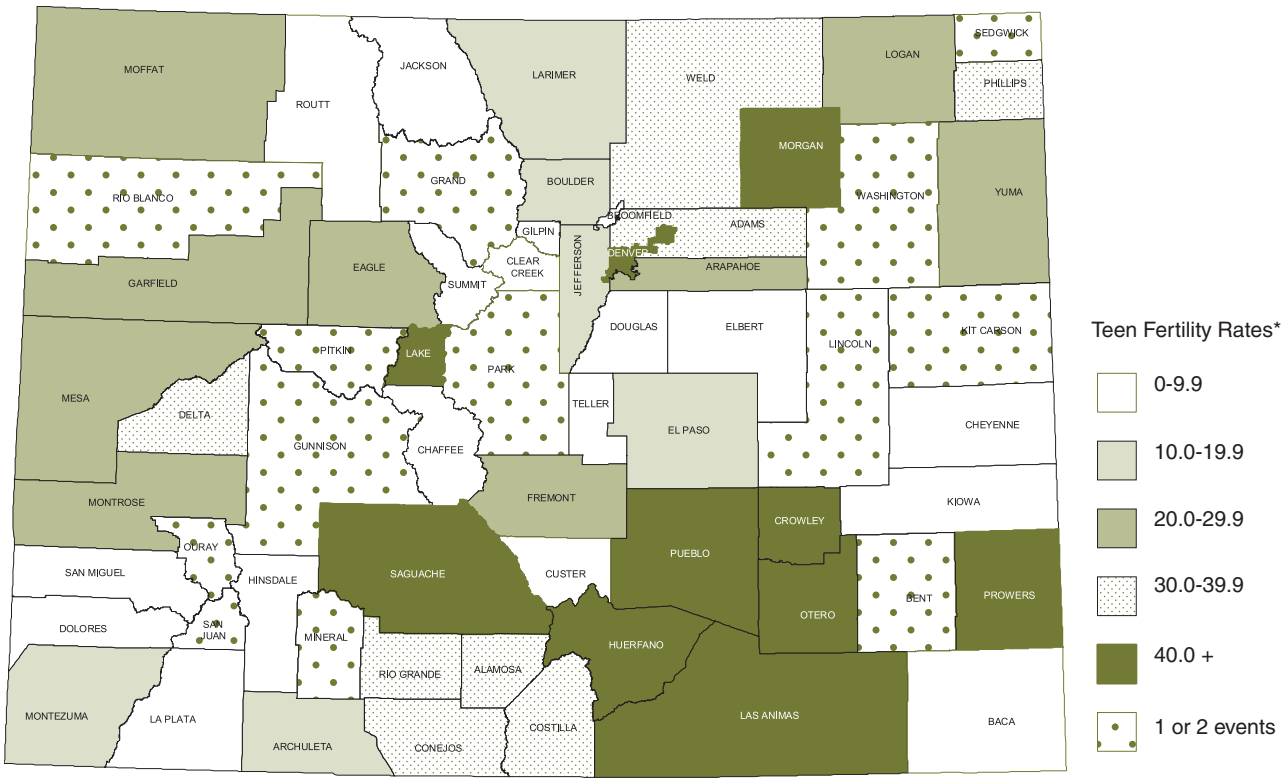
Births to teens are of concern because teen mothers are less likely to complete high school, and their children are at increased risk for a variety of negative health and educational outcomes. An age-specific fertility rate for ages 15-17 is the number of live births in an age group per 1,000 women in the population for that age group. In Colorado, this rate has declined since 1990 to a low of 24.6 in 2003, with a slight increase in 2004 to 24.8. These rates vary by race/ethnicity but appear to be decreasing for all groups, with the largest decrease among Black teens and smaller decreases for White non-Hispanic and White Hispanic teens. Still, there were more than 2,300 births to 15-17-year-old Colorado residents in 2004.

Almost half of all hospitalizations for teens ages 15-19 are related to pregnancy or childbirth. The total charges for these hospitalizations were more than $60 million in 2004.

Source: Birth records, Health Statistics Section, CDPHE.

Fertility rates for teens ages 15-17 vary by county (Figure 34).

Figure 34. Fertility rates* for teens ages 15-17 by county of residence: Colorado residents, 2004



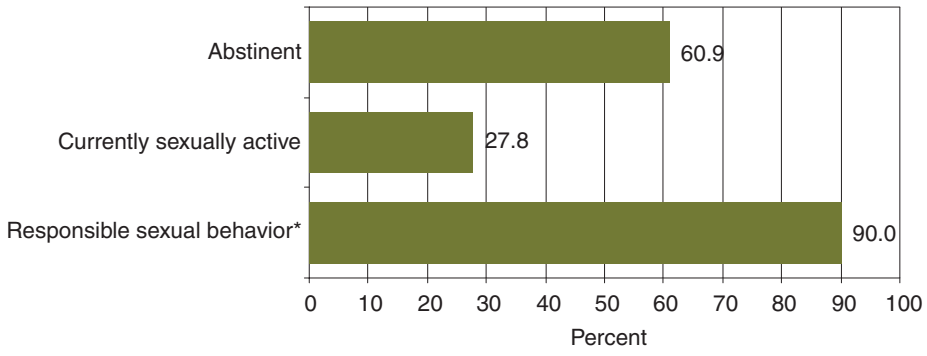
* Births per 1,000 females ages 15-17
Source: Birth records, Health Statistics Section, CDPHE.

HP 2010 Objective: 75% of 15- to 17-year-olds to remain abstinent
Colorado Status: 60.9% of students had remained abstinent

Abstinence and Sexual Behaviors

The Colorado Youth Risk Behavior Survey in 2001 estimated that 42 percent of teens in high school had ever had sex. This proportion dropped to 39.1 percent in 2003 (Figure 35). This may be one of the factors associated with the decline in teen fertility rates. Although the question about responsible sexual behavior had not been asked in the survey prior to 2001, questions about contraceptive use were asked. The responses to these questions indicated that use of condoms is increasing. This may also be contributing to the decline in teen fertility rates in Colorado.

Figure 35. Abstinence and sexual behaviors: Colorado students grades 9-12, 2003



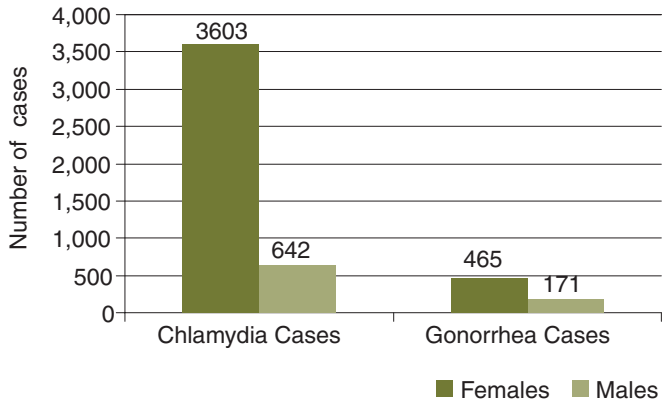
* Responsible sexual behavior includes never had sexual intercourse, had sexual intercourse but not in the three months preceding the survey, or had used a condom the last time they had sexual intercourse during the three months preceding the survey.

Source: Youth Risk Behavior Survey, Health Statistics Section, CDPHE.

Sexually Transmitted Disease

Sexually transmitted diseases (STDs) present a threat to the health of sexually active teens. The health consequences of untreated STDs include reproductive health problems, fetal and perinatal problems, and cancer. For biological reasons, females are more susceptible to STDs than males, and younger females are more susceptible than older females. Figure 36 shows the total number of cases of chlamydia and gonorrhea for females and males ages 15-19 in 2004. It is clear that a large health disparity exists for females, especially with regard to cases of chlamydia.

Figure 36. Number of cases of chlamydia and gonorrhea: Colorado teens ages 15-19, 2004



Source: Division of Disease Control and Environmental Epidemiology, CDPHE.

HP 2010 Objective: 92% of population to wear seat belts
Colorado Status: 90.8% of students wore seat belts more than rarely

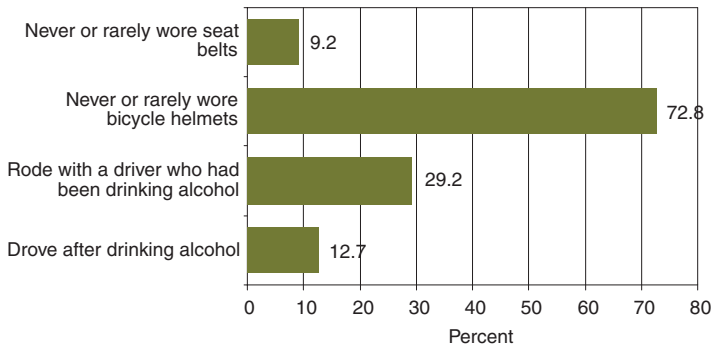
HP 2010 Objective: 30% or fewer students riding with someone who has been drinking
Colorado Status: 29.2% of students rode with someone who had been drinking

Unintentional Injuries

The Colorado Youth Risk Behavior Survey measures those health risk behaviors that are most closely associated with the leading causes of death and disability among adolescents. In 2004, unintentional injuries were the leading cause of death to Colorado residents ages 15-19 (55.4%), and motor vehicle-related injuries accounted for the majority of those deaths (44.6% of total deaths).

Twenty-nine percent of adolescents surveyed rode with a driver who had been drinking alcohol, and 13 percent had driven after drinking alcohol (Figure 37). Unintentional injuries were also responsible for almost 1,400 Colorado hospitalizations for 15-19-year olds and resulted in almost $50 million in total charges for inpatient hospital care.

Figure 37. Prevalence of behaviors that contribute to unintentional injuries: Colorado students grades 9-12, 2003



Source: Youth Risk Behavior Survey, Health Statistics Section, CDPHE.

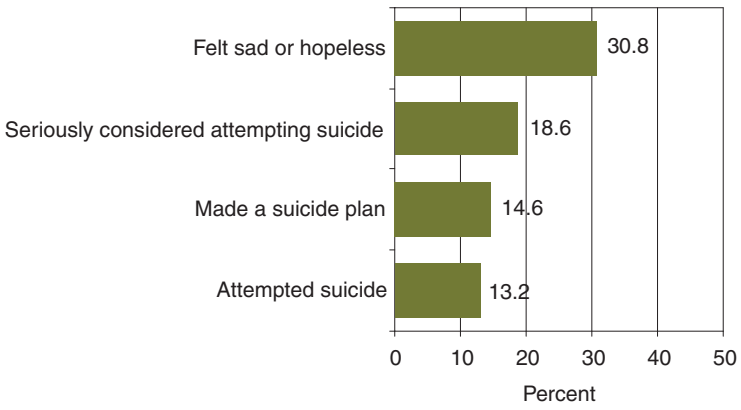
HP 2010 Objective: 1.0% or fewer suicide attempts by adolescents
Colorado Status: 13.2% of students attempted suicide

HP 2010 Objective: 6.0 or lower suicide rate per 100,000 population ages 15-19
Colorado Status: 13.7 suicide deaths per 100,000 Colorado residents ages 15-19

Suicide

In 2003, 30.8 percent of Colorado high school students reported feeling sad or hopeless, and thirteen percent attempted suicide (Figure 38). Suicide rates in Colorado and the Rocky Mountain region are among the highest in the U.S. In 2004, there were 47 suicide deaths to Colorado residents ages 15-19 for an age-specific rate of 13.7 per 100,000 population. In 2004, there were more than 250 hospital discharges of patients 15-19 in Colorado with injuries resulting from intentional self-harm; there were more than 180 discharges with principal diagnoses related to mental disorders that were associated with intentional self-harm.

Figure 38. Sadness, suicide ideation and attempts: Colorado students grades 9-12, 2003

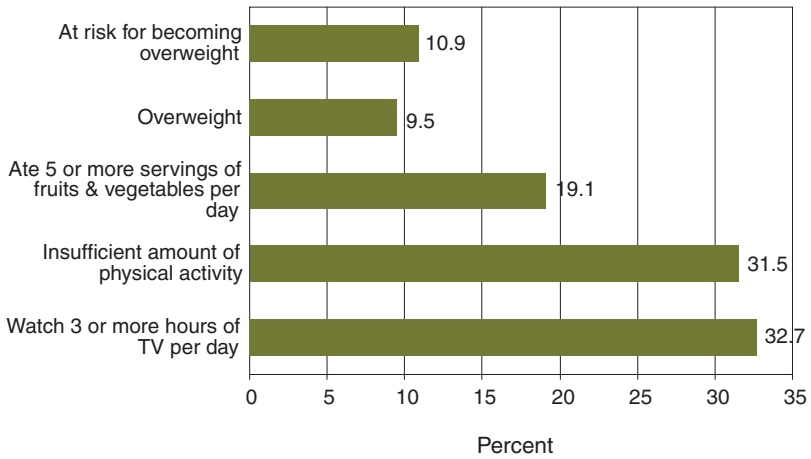


Source: Youth Risk Behavior Survey, Health Statistics Section, CDPHE.

Overweight, Nutrition, and Physical Activity

Diet and physical activity are an important part of a healthy lifestyle. Adequate nutrition and physical activity are important in maintaining appropriate body weight. Overweight and obesity are associated with many chronic diseases. Often nutritional and physical activity patterns established in childhood and adolescence carry over into adulthood. Figure 39 shows that in 2003, 10.9 percent of students in grades 9-12 were at risk for overweight (weight for height was nearing overweight), and an additional 9.5 percent were overweight. The Healthy People 2010 objective is 5 percent. Only 19.1 percent of students ate five or more servings of fruits and vegetables per day. Nearly one-third (31.5%) of students did not get sufficient physical activity in the seven days preceding the survey, and nearly one-third (32.7%) watched three or more hours of TV per day.

Figure 39. Overweight, nutrition, and physical activity: Colorado students grades 9-12, 2003

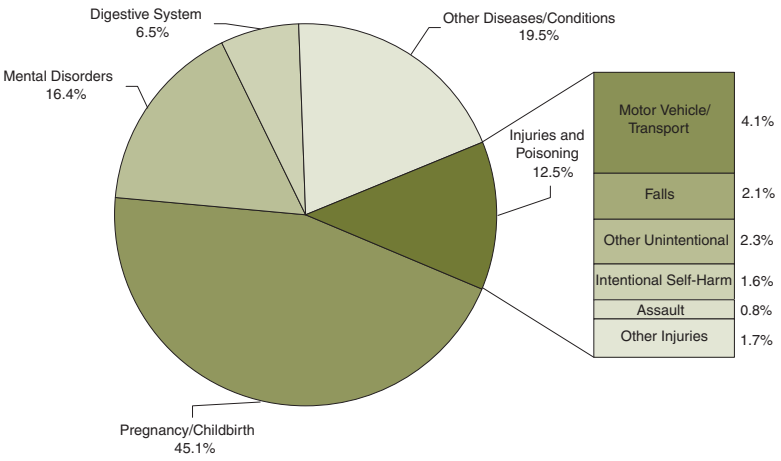


Source: Youth Risk Behavior Survey, Health Statistics Section, CDPHE.

Hospitalization

In 2004, nearly one-half of the more than 16,000 Colorado hospitalizations of patients ages 15-19 were related to pregnancy or childbirth (Figure 40). These accounted for approximately one-fourth of the total charges of more than $260 million that resulted from all hospitalizations for this age group. Diagnoses related to mental disorders accounted for an additional 16.4 percent of hospital discharges in this age group. Injuries and poisonings were the primary diagnoses for 12.5 percent of the hospital discharges for this age group but accounted for almost one-fourth of total charges.

Figure 40. Percent of hospital discharges by principal diagnosis type for patients ages 15-19: Colorado occurrences, 2004

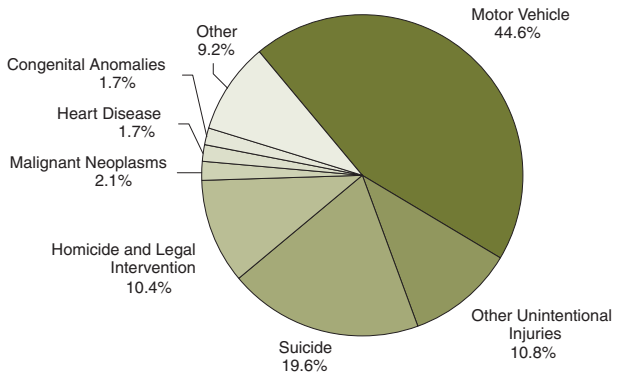


Source: Preliminary hospital discharge records, Colorado Health and Hospital Association.

Mortality

In 2004, there were 240 deaths to Colorado residents ages 15-19 resulting in an age-specific rate of 70.1 deaths per 100,000 population in this age group. The majority of these deaths (55.4%) were due to unintentional injuries, with motor vehicles accounting for 44.6 percent. Other injuries resulted in an additional 30.0 percent (suicide 19.6% and homicide 10.4%) of the deaths in this age group. Overall, more than eighty-five percent of these deaths were injury-related.

Figure 41. Deaths by leading cause: Colorado residents ages 15-19, 2004



Source: Death records, Health Statistics Section, CDPHE.

Adult Health

Certain risk behaviors initiated during childhood and adolescence and continued into adulthood contribute to the development of chronic disease conditions in adulthood. Heart disease and cancer, the leading causes of death in Colorado adults ages 45 and older, are related to lifetime patterns of poor nutrition, physical inactivity, smoking, and heavy alcohol consumption. Behaviors such as binge drinking contribute to unintentional injuries, the leading cause of death for adults ages 20-44 and third leading cause of death for adults ages 45-54. Access to health care and appropriate use of health screening can help to identify conditions early and provide opportunities for education and referral.

HP 2010 Objective: 100% health care coverage
Colorado Status: 84.3% had health care coverage

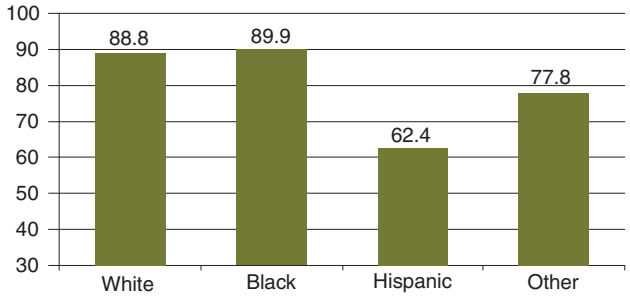
HP 2010 Objective: 98% have a specific source of health care
Colorado Status: 80% had a specific source of health care

Health Care Coverage

According to *Healthy People 2010*, "Access to health services—including preventive care, primary care, and tertiary care—often depends on whether a person has health insurance. Uninsured people are less than half as likely as people with health insurance to have a primary care provider; to have received appropriate preventive care, such as recent mammograms or Pap tests; or to have had any recent medical visits. Lack of insurance also affects access to care for relatively serious medical conditions. Evidence suggests that lack of insurance over an extended period significantly increases the risk of premature death and that death rates among hospitalized patients without health insurance are significantly higher than among patients with insurance." (Objective 1-1, Clinical Preventive Care)

Eighty-four percent of Colorado adults were covered by some form of health insurance in 2004. Whereas 88.8 percent of White and 89.9 percent of Black Coloradans have health care coverage, only 62.4 percent of Hispanics reported being covered by health insurance. The *Healthy People 2010* objective is for 100 percent coverage of the population.

Figure 42. Health care coverage by race and ethnicity: Colorado adults, 2004



Having a specific source of ongoing care is also an important factor in health care access. In 2004, 80.0 percent of Coloradans had a specific source of primary care, falling short of the *Healthy People 2010* objective of 98 percent.

Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

HP 2010 Objective: 90% of women ≥ 18 have had a pap smear in past three years
Colorado Status: 88.3% of women ≥ 18 have had a pap smear in past three years

HP 2010 Objective: 70% of women ≥ 40 have had a mammogram within past 2 years
Colorado Status: 71.3% of women ≥ 40 have had a mammogram within past 2 years

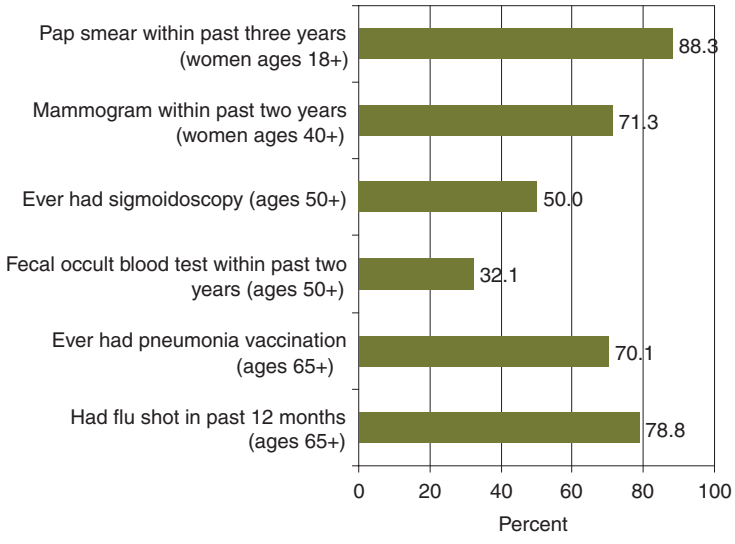
HP 2010 Objective: 50% of adults ≥ 50 have had fecal occult blood test; 50% have had sigmoidoscopy
Colorado Status: 32.1% of adults ≥ 50 have had fecal occult blood test; 50% have had sigmoidoscopy

HP 2010 Objective: 90% of adults> 65 have ever had pneumonia vaccine; 90% had flu shot in past 12 months
Colorado Status: 70.1% of adults> 65 have ever had pneumonia vaccine; 78.8% had flu shot in past 12 months

Preventive Health Practices

Preventive health measures such as immunizations against influenza and pneumonia and screening for cancer can be important factors in preventing illness and promoting early detection. In 2004, 88.3 percent of Colorado women ages 18 and over had a pap smear within the past three years. The *Healthy People 2010* objective is 90 percent. Also in 2004, 71.3 percent of Colorado women ages 40 and over had a mammogram in the past two years, exceeding the *Healthy People 2010* objective of 70 percent. The fecal occult blood test (FOBT) and sigmoidoscopy screen for colorectal cancer. In Colorado in 2004, 32.1 percent of adults 50 years and over had an FOBT within the past two years and 50 percent had ever had a sigmoidoscopy. Colorado falls short of the *Healthy People 2010* objective of 50 percent for the FOBT test, but meets the objective for the sigmoidoscopy test. The *Healthy People 2010* objectives are for 90 percent of adults ages 65 and over to have ever had a pneumonia vaccine and to have had a flu shot within the past 12 months. In Colorado, only 70.1 percent had ever had a pneumonia vaccine and 78.8 percent had a flu shot in 2004.

Figure 43. Preventive health practices: Colorado adults, 2004



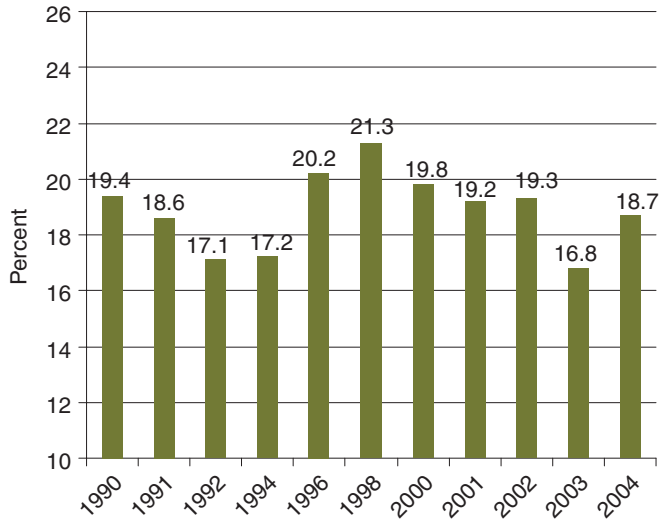
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

HP 2010 Objective: No more than 20% of adults are physically inactive
Colorado Status: 18.7% of adults were physically inactive

Physical Activity

Healthy People 2010 provides a summary of the research into the benefits of physical activity and shows that virtually all individuals will benefit from regular physical activity. Heart disease is one of the leading causes of death in Colorado and the United States. Physically inactive people are almost twice as likely to develop heart disease as persons who engage in regular physical activity. Lack of physical activity also puts people at higher risk for diabetes and some types of cancer. Those adults who report that they engage in no leisure time activity are considered physically inactive. In Colorado, between 16 and 21 percent of adults have reported being physically inactive in almost every year since 1990. At this level, Colorado typically meets the *Healthy People 2010* objective of no more than 20 percent of adults being physically inactive.

Figure 44. Physical Inactivity: Colorado adults, 1990-2004



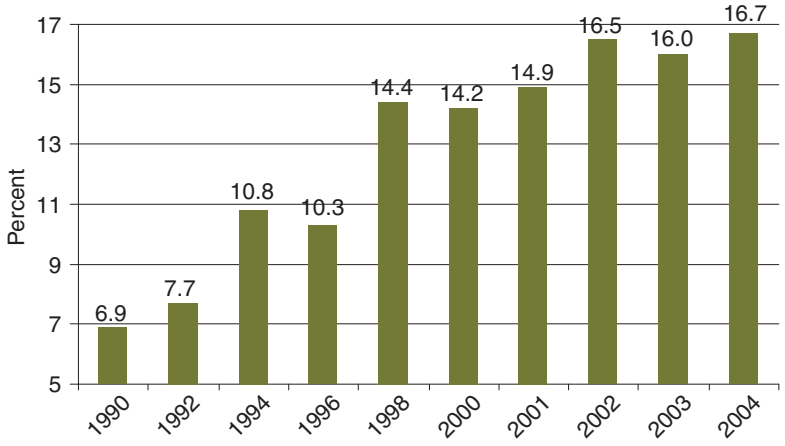
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

HP 2010 Objective: No more than 15% of adults are obese
Colorado Status: 16.7% of adults were obese

Obesity

Persons who are overweight or obese are at increased risk for high blood pressure, type 2 diabetes, heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems, and some types of cancer. The health outcomes related to these diseases, however, often can be improved through weight loss or, at a minimum, no further weight gain (*Healthy People 2010*). Adults with a body mass index (weight in kilograms/height in meters squared) above 30 are considered obese. In Colorado, as in the rest of the U.S., the proportion of adults who are obese is increasing dramatically. As shown in Figure 45, obesity has more than doubled in Colorado between 1990 and 2004. In 2004, 16.7 percent of Colorado adults were obese. The *Healthy People 2010* objective is for no more than 15 percent of adults to be obese.

Figure 45. Obesity: Colorado adults, 1990-2004



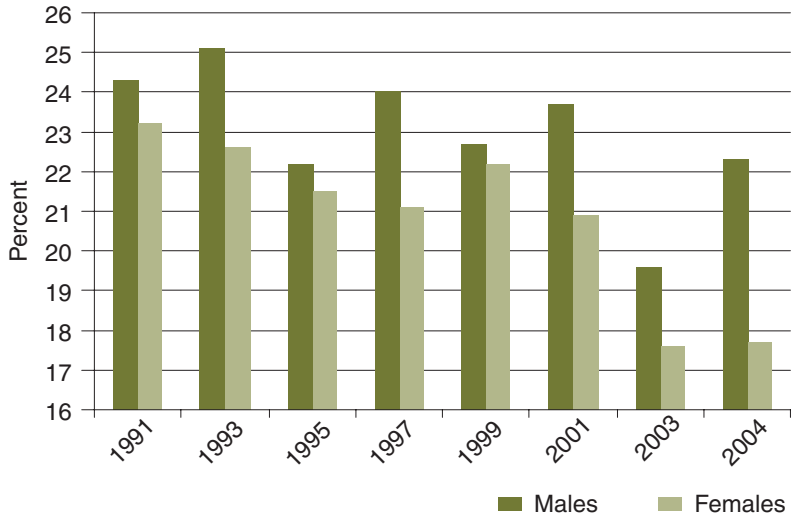
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

HP 2010 Objective: No more than 12% of adults smoke cigarettes
Colorado Status: 20.0% of adults smoke cigarettes

Cigarette Smoking

Cigarette smoking is the leading cause of preventable death in the United States. Cigarette smoking causes heart disease, several kinds of cancer (lung, larynx, esophagus, pharynx, mouth, and bladder), and chronic lung disease. Smoking during pregnancy contributes to spontaneous abortions, low birth weight, and Sudden Infant Death Syndrome. There is clear evidence of a decline in smoking by both Colorado males and females. However, at an overall rate of 20 percent, Colorado falls far short of the *Healthy People 2010* objective of no more than 12 percent.

Figure 46. Cigarette smokers: Colorado adults, 1991-2004



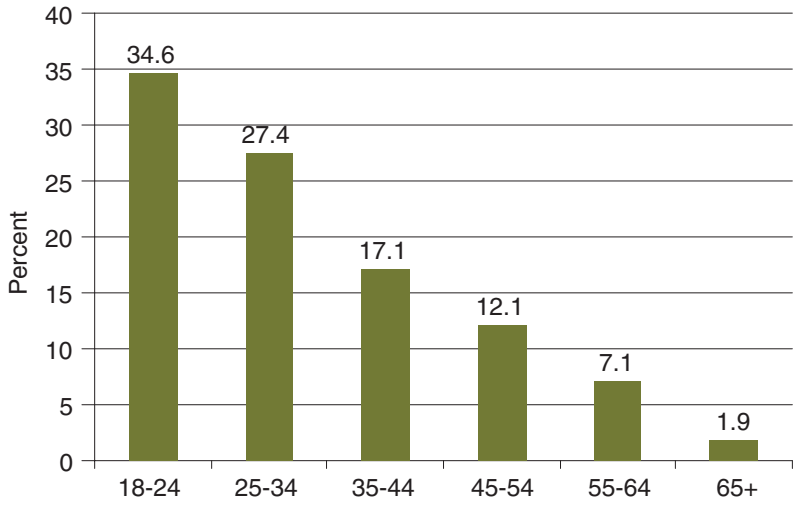
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

HP 2010 Objective: No more than 6% of adults engage in binge drinking
Colorado Status: 17.3% of adults engage in binge drinking

Binge Drinking

Research summarized in *Healthy People 2010* shows that alcohol use has been linked with a substantial proportion of injuries and deaths from motor vehicle crashes, falls, fires, and drownings, and is a factor in homicide, suicide, domestic violence, child abuse, and high-risk sexual behavior. Binge drinking is defined as having five or more drinks on one occasion during the past 30 days. Over one-third of Coloradans ages 18-24 reported binge drinking in 2004 (Figure 47). Overall, 17.3 percent of Colorado adults reported binge drinking within the past 30 days. The *Healthy People 2010* objective is for 6 percent or fewer adults to engage in binge drinking.

Figure 47. Binge drinking by age group: Colorado adults, 2004



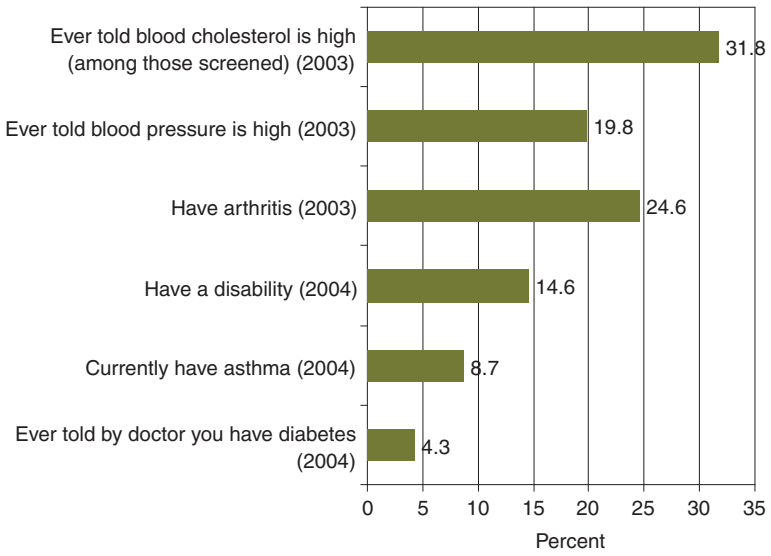
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

HP 2010 Objective: No more than 2.5% of adults have diabetes
Colorado Status: 4.3% of adults had diabetes

Morbidity

Several conditions can lead to premature death or can decrease quality of life. In 2003, more than 30 percent of Colorado adults had elevated blood cholesterol levels, and nearly 20 percent suffered from high blood pressure. These are two major risk factors for cardiovascular disease, a leading cause of death (Figure 48). Nearly one in four Coloradans reported that they have arthritis, which can limit daily activities and affect one's ability to work. In 2004, 14.6 percent of Colorado adults reported that they have a disabling condition which limits their activities. Nearly nine percent suffered from asthma, and 4.3 percent had clinically diagnosed diabetes. Diabetes is a major risk factor for heart attack and stroke. The *Healthy People 2010* objective is for fewer than 2.5 percent of people to have diabetes.

Figure 48. Morbidity: Colorado adults, 2003, 2004

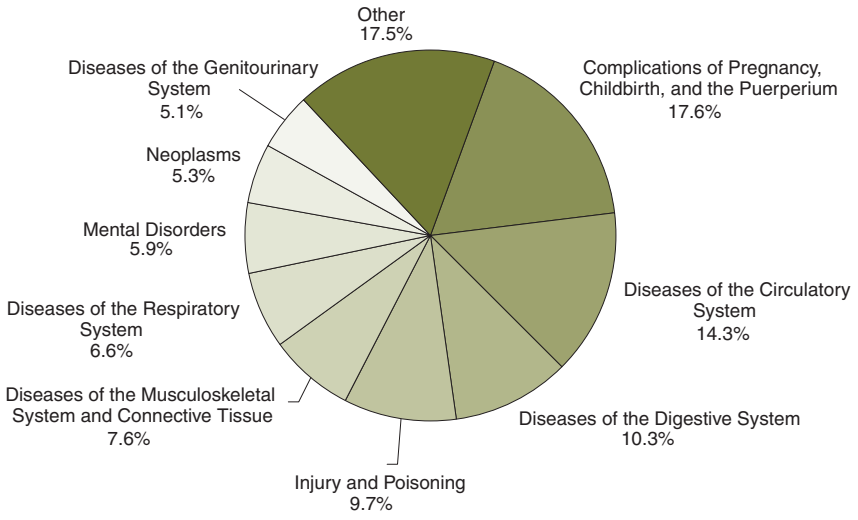


Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, CDPHE.

Hospitalization

For adults ages 20 and older, there were more than 360,000 hospital discharges in Colorado in 2004 and approximately $8.7 billion in total charges. Almost 18 percent of these discharges were related to pregnancy and childbirth (Figure 49), although diagnoses in this group accounted for just 6.4 percent of the total charges. Pregnancy and childbirth, diseases of the circulatory system, diseases of the digestive system, and injury and poisoning accounted for more than half of all hospital discharges. Together, diseases of the circulatory system and injury and poisoning accounted for more than one-third of all charges for hospital discharges in Colorado in 2004, although those were the diagnoses for less than one-quarter of all discharges.

Figure 49. Percent of hospital discharges by principal diagnosis type: Colorado occurrences for ages 20+, 2004

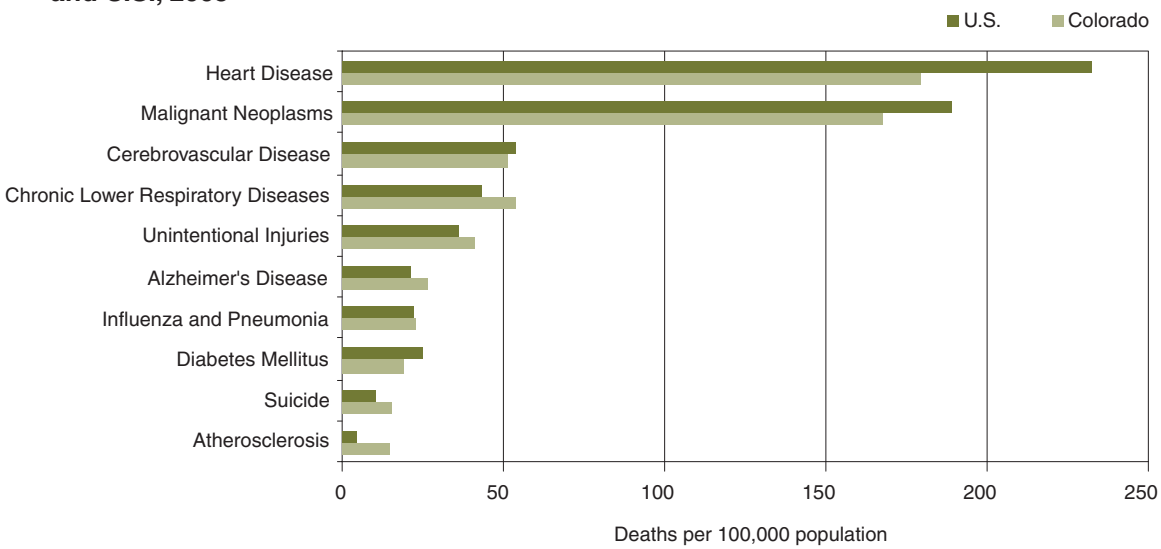


Source: Hospital discharge records, Colorado Health and Hospital Association.

Mortality

Colorado residents had a lower overall age-adjusted death rate than the U.S. in 2003 with 785.2 deaths per 100,000 population compared to 831.2 for the U.S. Colorado also had lower rates for the two leading causes of death: heart disease and cancer (Figure 50). However, Colorado had higher death rates for some underlying causes of death, such as chronic lower respiratory diseases, unintentional injuries, Alzheimer's disease, influenza and pneumonia, suicide, and atherosclerosis.

Figure 50. Age-adjusted* death rates for selected leading causes of death: Colorado residents and U.S., 2003**



*Rates are age-adjusted to the 2000 U.S. standard population using the direct method applied to 10-year age groups.
** U.S. data are preliminary for 2003.

Source: Death records, Health Statistics Section, CDPHE and National Center for Health Statistics.

Age-adjusted death rates in Colorado in 2004 varied by race/ethnicity. For chronic lower respiratory diseases and suicide, the highest rates were among White non-Hispanics. White Hispanics had the highest rates for unintentional injuries, influenza and pneumonia, and diabetes mellitus. The rates for heart disease, Alzheimer's disease, and atherosclerosis were highest among Blacks and lowest among White Hispanics while the rates for cerebrovascular disease and cancer were highest among Blacks and lowest among White non-Hispanics.

Mortality patterns differ by age group but have remained somewhat stable over time. Introduced in 2004 as the second leading cause for ages 1-9 was cancer. Unintentional injuries were the leading cause of death for the age group 1-44 years, with suicide being the second leading cause for those ages 15-34. For ages 15-24, the three leading causes of death were injury-related: unintentional injuries, suicide, and homicide, and for ages 0-54, at least one of the three leading causes was injury-related. Chronic diseases accounted for more deaths in the older age groups. Cancer was the leading cause for ages 45-74, and heart disease was second. These were reversed after age 75. It is important to understand these patterns in order to develop appropriate strategies to prevent deaths from different causes in different age groups.

Figure 51. Three leading causes of death by age group: Colorado residents, 2004

Age Group	First Cause	Second Cause	Third Cause
<1	Perinatal Period Conditions (201)	Congenital Anomalies (102)	Unintentional Injuries (13)
1-9	Unintentional Injuries (32)	Malignant Neoplasms (11)	Homicide (9)
10-14	Unintentional Injuries (14)	Suicide (11)	Malignant Neoplasms (7)
15-19	Unintentional Injuries (133)	Suicide (46)	Homicide (25)
20-24	Unintentional Injuries (113)	Suicide (54)	Homicide (36)
25-34	Unintentional Injuries (213)	Suicide (131)	Malignant Neoplasms (54)
35-44	Unintentional Injuries (269)	Malignant Neoplasms/Suicide (168)	Heart Disease (138)
45-54	Malignant Neoplasms (592)	Heart Disease (376)	Unintentional Injuries (276)
55-64	Malignant Neoplasms (1,130)	Heart Disease (617)	Chronic Lower Respiratory Diseases (196)
65-74	Malignant Neoplams (1,491)	Heart Disease (916)	Chronic Lower Respiratory Diseases (436)
75-84	Heart Disease (1,812)	Malignant Neoplasms (1,810)	Chronic Lower Respiratory Diseases (756)
85+	Heart Disease (2,128)	Malignant Neoplasms (906)	Cerebrovascular Disease (616)

Source: Death records, Health Statistics Section, CDPHE.

Injuries can be classified as unintentional or intentional and can be broken down within those groups by cause of death. They account for a large proportion of deaths in the younger age groups and are usually considered to be preventable. In addition to varying by age group, deaths from injuries are distributed differently among gender and racial/ethnic groups. Colorado is among a group of western states that have the highest suicide rates in the U.S. In Colorado in 2004, suicide was the leading cause of injury deaths for males and for White non-Hispanics and the second leading cause of injury death for females and White Hispanics (Figure 52), with motor vehicle-related deaths being first for those groups. Motor vehicle-related deaths were the second leading cause for males and White non-Hispanics. Homicide remained the first leading cause of injury death for Blacks.

Figure 52. Three leading types of injury death by gender and race/ethnicity: Colorado occurrences, 2004

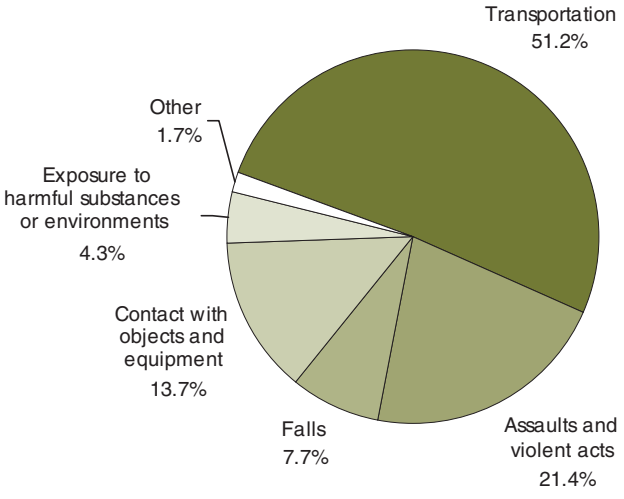
	First Cause	Second Cause	Third Cause
Female	Motor Vehicle (245)	Suicide (188)	Falls (175)
Male	Suicide (619)	Motor Vehicle (476)	Poisoning (266)
White Non-Hispanic	Suicide (667)	Motor Vehicle (509)	Falls (306)
White Hispanic	Motor Vehicle (175)	Suicide (95)	Homicide (78)
Black	Homicide (39)	Poisoning (37)	Suicide (24)

Source: Death records, Health Statistics Section, CDPHE.

Occupational Injuries

According to the Census of Fatal Occupational Injuries, there were 117 work-related fatalities in Colorado in 2004, for a rate of 4.6 fatalities per 100,000 employed civilians in the state. Transportation-related events were the cause of 51.3 percent of these deaths, followed by assaults and violent acts at 21.4 percent and contact with objects and equipment at 13.7 percent (Figure 53).

Figure 53. Work-related fatalities by type of event: Colorado occurrences, 2004



Source: Census of Fatal Occupational Injuries, Health Statistics Section, CDPHE.

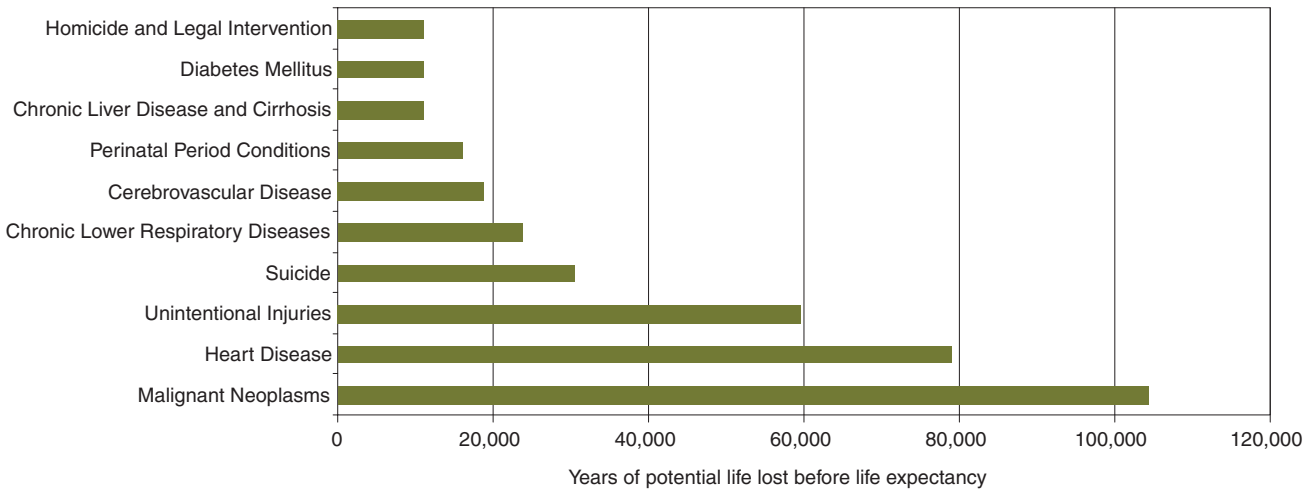
Life Expectancy

Life expectancy at birth is the average number of years that newborns would live if they were to experience the same age-specific death rates throughout their lives that occurred in 2004. In 1991, life expectancy at birth for Colorado residents was 76.9, and in 2004 it was 79.1 for an increase of 2.2 years of expected life or almost 3 percent. U.S. data are not available for 2004, but life expectancy at birth in 2003 was 77.6, a record high. Life expectancy in Colorado is 4.8 years higher for females than for males overall and is higher for females than for males among all racial/ethnic groups. White non-Hispanic females have the longest life expectancy at 81.5 years and Black males the shortest at 73.7 years.

Potential Life Lost

Years of potential life lost (YPLL) is a statistic that measures the relative effect of causes of death on premature mortality. It can be calculated as the potential number of years lost before life expectancy or before some other defined time, as age 65. Figure 54 depicts the number of years lost before life expectancy for some leading causes of death.

Figure 54. Years of potential life lost before life expectancy: Colorado residents, 2004



Source: Death records, Health Statistics Section, CDPHE.

Summary

On the whole, Colorado does well on many of the health indicators contained in this report, but there are also many opportunities for improving the health of the population.

Because of the critical importance of prenatal care in helping to ensure a healthy pregnancy and delivery, all pregnant women in Colorado should be able to access prenatal care at the beginning and throughout their entire pregnancy. Rates of access are particularly low for women of color. Barriers such as cost and availability of timely appointments should be removed to improve access. Prenatal care provides an important venue for providing advice and assistance to address many of the health issues facing pregnant women in Colorado, such as smoking during pregnancy, inadequate or excessive weight gain, breastfeeding, and infant sleep placement. Changes in these behaviors would help reduce the low birth weight and preterm delivery rates as well as positively impact the infant mortality rate.

As illustrated in this report, unintentional injury is the leading cause of death for children in Colorado. By their very nature, most injuries are predictable and preventable. Parents need continual education about safety measures for children, including the importance of proper usage of bike helmets, car safety seats, and smoke detectors. Colorado children are not meeting the *Healthy People 2010* goals for adequate physical activity and fruit and vegetable consumption. Correspondingly, children ages 2-14 are overweight at nearly three times the *Healthy People 2010* goal.

Many opportunities for health improvement exist for the adolescent population in Colorado. Very high rates of smoking, alcohol use, and marijuana use are in evidence. There is a good deal of research which points to promising strategies for reducing substance use among adolescents (see *Healthy People 2010*, Chapter 26, Substance Abuse and Chapter 27, Tobacco Use for a summary). These strategies include school-based programs focused on altering perceived peer-group norms about alcohol use and developing skills in resisting peer pressures to drink. Community-wide programs involving school curricula, peer leadership, parental involvement and education, and

community task forces also have reduced alcohol use among adolescents. Stronger penalties for driving under the influence, raising the minimum drinking age, and raising the price of alcohol and cigarettes have also been effective in reducing use. Health education curricula at the appropriate grade level can prevent initiation among youth, provide knowledge about effective cessation methods, and increase understanding of the health effects of tobacco use.

Adolescents in Colorado also have high rates of attempted and completed suicide. Unfortunately, very few intervention strategies have been evaluated, so evidence of effective suicide prevention strategies remains inconclusive.

The decline in teen fertility for 15-17-year-olds over the past decade is a very positive sign and is supported by the increase in reported abstinence and condom use among sexually active high school students in Colorado.

As with younger children, the leading cause of death for adolescents, injury, carries the promise of effective intervention strategies that, if implemented, could reduce the death rate for people in this age group.

As is true for pregnant women, all adults in Colorado require access to health care in order to maximize health outcomes. Health care coverage, an important predictor of access, is extremely low for Hispanics in Colorado. Despite somewhat limited access to health care, Colorado adults avail themselves of preventive health services, such as mammography.

Colorado adults have fairly low rates of physical inactivity. Colorado adults have correspondingly low rates of obesity, compared to the rest of the country.

Adults in Colorado exceed *Healthy People 2010* goals for binge drinking and cigarette smoking, two factors which contribute to leading causes of death: heart disease, cancer and injuries.

Opportunities exist for health improvement throughout the life cycle. The need for access to health care

exists at every stage. Health behaviors initiated in childhood and adolescence impact behaviors in adulthood, and health behavior is directly linked to leading causes of illness and death, illustrating the need for the development of healthy behaviors early in life.

Colorado Department
of Public Health
and Environment