CO
09

Understanding the Numbers

Indicator Details and Promising Initiatives

The Colorado Health Report Card

The Colorado Health Foundation™

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Acknowledgments

The 2009 Colorado Health Report Card and this document, *Understanding the Numbers*, were prepared by staff at the Colorado Health Institute: Jessica Dunbar, MSPH, senior research analyst; Anna Furniss, SAS programmer/analyst; and Tasia Sinn, research fellow; Amy Downs, MPP, director for research and policy; Pamela Hanes, PhD, president and CEO; and Sherry Freeland Walker, communications director, provided editorial support.

The Colorado Health Foundation partners included: Debra Thomas, vice president, Communication and Education; Shepard Nevel, vice president, Policy and Operations; Caren Henderson, communications director; Alexis Weightman, director of evaluations; and Vanessa Hannemann, public policy officer.

Additional input was provided by staff at the Colorado Department of Public Health and Environment including: Ned Calonge, M.D., M.P.H., chief medical officer; Alyson Shupe, Ph.D., chief, Health Statistics; Jillian Jacobellis, PhD, director, Prevention Services Division; Ricky Tolliver, analyst, Health Statistics Section; and staff from the Prevention Services Division.

Introduction

Understanding the Numbers: Indicator Details and Promising Initiatives is designed to give both lay readers and technical experts additional information about the development of the 2009 Colorado Health Report Card, as well as in-depth information for each of the 38 indicators selected. *Understanding the Numbers* provides a discussion of:

- How each indicator was selected;
- Data source used for each indicator;
- Indicator ranking and grading;
- Significant differences between Colorado and other states; and
- The relationship of indicators to the federal *Healthy People 2010* initiative.

The majority of this document consists of two-page fact sheets for each indicator. The fact sheets provide a definition of the indicator, a brief discussion of its significance and additional information on Colorado's performance on the indicator. The fact sheets also identify initiatives in Colorado and elsewhere that hold promise for improving population health related to the indicator.

Indicator selection

The 2009 Colorado Health Report Card describes how Colorado compares to other states on 38 indicators organized by five phases of the life cycle—*Healthy Beginnings, Healthy Children, Healthy Adolescents, Healthy Adults* and *Healthy Aging*. Final indicator selection was based on a review of the 20 indicators used in the 2006 Report Card, indicators used in other national and state report card efforts, consultation with the Colorado Health Report Card Advisory Committee and input from technical experts at the Colorado Department of Public Health and Environment. In addition to a focus on life cycle phases, selected indicators illuminate several important dimensions of population health in Colorado: access to health care (insurance coverage), health risks (such as smoking), chronic health conditions (such as diabetes) and health outcomes (such as mortality).

- Twenty-eight indicators measure Colorado's progress toward achieving national public health objectives set forth in *Healthy People 2010*.
- Data for 27 indicators are available for all states. Data for two of the *Healthy Beginnings* and eight *Healthy Adolescents* indicators are not collected by all states.

Data sources

The indicators selected for the 2009 Colorado Health Report Card come from seven different data sources. The most frequently used source, the Behavioral Risk Factor Surveillance System (BRFSS), was used for 15 indicators. The BRFSS, Vital Statistics and the Pregnancy Risk Assessment Monitoring System (PRAMS), are each maintained by state health departments in cooperation with the federal Centers for Disease Control and Prevention (CDC).[1] CDC's administrative oversight and funding of these state data collection efforts ensures that indicators are comparable across states by using common data collection instruments. The Current Population Survey (CPS) is administered and maintained by the U.S. Census Bureau. The National Immunization Survey and the national Survey of children's Health (NSCH) are administered through CDC.

Appendix I identifies the data source for each indicator.

Appendix II contains a brief description of each data source and a link to the relevant Web site for more information. All indicator values and ranks are the most current available as of September 30, 2009.

Ranking, grading and differences between states

Ranking

All of the indicators selected for the 2009 Colorado Health Report Card are reported in a consistent manner across all or most states,[2] allowing us to rank Colorado's performance relative to other states. For each indicator, the "best" performing state is ranked first. Colorado ranks first on two indicators—a low incidence of working-age adults who are obese and older adults who have been vaccinated against the flu and pneumonia—to 45th for low rates of uninsurance coverage for children. An "adjusted rank" was calculated for the 10 indicators for which fewer than 50 states reported data. The rationale for this is that being 10th out of 30 states, for example, is not as good as being 10th out of 50 states. To illustrate how the calculation was derived, for the "abstinence from smoking during the last three months of pregnancy" indicator, Colorado ranked fifth among the 19 states that report data for this indicator.[3]

To calculate an adjusted rank, we divided five by 19 and multiplied this number by 50. The resulting "score" yielded an adjusted rank of 13 (scores were rounded to the nearest whole number). The affected indicator fact sheets show actual rank and number of states reporting followed by the adjusted rank, for example, 5/19 = 13/50. For several indicators more than one state may have the same value. For example, 8.9 percent of babies in Colorado, Wyoming and New Mexico were born at a low birth weight; all three states were assigned the rank of 36. The next state, North Carolina, with 9.1 percent of babies born at a low birth weight, was ranked 39th.

Grading

A grade is assigned to each life cycle phase based on Colorado's average rank for all indicators included in the phase. For example, the average rank for the six *Healthy Children* indicators is 31. The letter grade of D+ was assigned according to the rank/letter grade equivalencies shown in the table to the right. Because most states are like Colorado in that they have inconsistent indicator rankings within a life cycle domain, it is unlikely that any state would have an average domain rank above 5 or below 45.[4]

Average Rank	Letter Grade
1–3	A+
4–6	A
7–10	A-
11–13	B+
14–16	B
17–20	B-
21–23	C+
24–26	C
27–30	C-
31–33	D+
34–36	D
37–40	D-
41–43	F+
44–46	F
47–50	F-

Differences between Colorado and other states

Data from the 2009 Behavioral Risk Factor Surveillance System (BRFSS) was used to calculate the averages for each state for several health indicators. Statistical tests were used to determine if the average for Colorado was significantly different than the averages for other states.[5] A color coding system was developed for the state ranking graph to visually demonstrate which states had averages that were not statistically different from Colorado (medium shade of orange) and which states had averages that were statistically different from Colorado's average (light shade of orange).

Report Card indicators and the *Healthy People 2010* initiative

Healthy People 2010 is a compilation of disease prevention and health promotion objectives for the nation to achieve during the first decade of the 21st century. Created by experts from inside and outside of government, it identifies a wide range of public health priorities and couples them with measurable objectives. *Healthy People 2010* includes 467 objectives designed to increase the quality and years of healthy life of all Americans by eliminating health disparities.[6]

Twenty-eight of the indicators selected for the 2009 Colorado Health Report Card are among the objectives included in *Healthy People 2010*. These indicators allow us to compare Colorado's performance not only against other states but also against targets developed by experts in the public health community. A few of these targets, such as teen fertility, have already been achieved in Colorado and the United States. Regrettably, most have not. At the Centers for Disease Control and Prevention, staff of the *Healthy People 2010* initiative are in the process of developing a revised set of objectives for 2020 to be released in 2010.

In some cases *Healthy People 2010* targets are for age ranges different from the indicators used in this report. For example, *Healthy People 2010* objective 22-1 is "Reduce the proportion of adults who engage in no leisure-time physical activity." The target is 20 percent for persons ages 18 and over (i.e., 80 percent should engage in some leisure-time physical activity each month). In this Report Card we have reported physical activity separately for adults 18–64 and adults 65 and over. Not surprisingly, adults 18–64 are more likely to engage in leisure-time physical activity (82 percent) than adults 65 and over (74 percent). Later in this report we show the *Healthy People 2010* target value (80 percent) on the working-age adult and older adult physical activity fact sheets, noting that the target applies to a broader age range in Appendix I. Similarly, the *Healthy People 2010* target for fruit and vegetable consumption is for 75 percent of people ages two and over to consume at least two servings of fruit and three servings of vegetables, at least one of which is dark green or orange. We have shown the 75 percent fruit and vegetable target for children, adolescents and adults even though this target was not developed specifically for each of these life cycle phases.

Introduction to indicator-specific sheets

The bulk of this document consists of indicator-specific fact sheets for each of the 38 indicators selected. Each fact sheet includes:

- A technical definition of the indicator;
- A brief discussion of the indicator's significance;
- A brief discussion of Colorado's performance on the indicator, including trends over time and disparities that exist between subgroups of Colorado's residents; and
- A brief description of one or two promising initiatives, both in Colorado and elsewhere, that were designed to improve population health on the specific indicator described.

The table at the beginning of the sheet illustrates (see example below):

- Colorado's most recent value for the indicator and the year for which it is available;
- Colorado's rank and the year for which it is available. Some indicator fact sheets show actual rank and number of states reporting followed by the adjusted rank, for example, 26/33 = 39/50;
- For some indicators, data available for *all or most states* lags one or more years. The third column highlights Colorado's *ranked value* that may be one or more years older than the most recent data available just for Colorado highlighted in the first column;
- The name and year for the top performing state;
- The value and year for the top performing state, and,
- The *Healthy People 2010* (HP2010) target value, where applicable.

Most recent CO value (2007)	CO rank (2006)	CO value (2006)	Best state (2006)	Best state value (2006)	HP2010 target
21.9%	26/33 = 39/50	19.9%	New York	9.0%	NA

Finally, most fact sheets include three graphs:

- A graph that shows values for all states ranked from best (left) to worst (right) with the column for Colorado indicated in dark orange. States whose values are not significantly different from Colorado's are shown in a slightly lighter orange. Statistical tests, which are used to determine statistically significant differences, are not available for all indicators.
- A graph that shows historical values for Colorado, typically beginning in 2000 or 2001. The values for most indicators have been relatively stable since 2000.
- A graph that shows current values for identified Colorado subpopulations. These are gender, race/ethnicity, income or geographic area.

Sources for all of the information included in the fact sheets are identified in the endnotes for each fact sheet. The source Web sites provide additional information on each indicator.

Note on the selection of promising initiatives

The Colorado Health Report Card is designed to provide reliable measures of Colorado's movement toward "becoming the healthiest state in the nation." Further, it is intended to motivate individuals, organizations and policymakers to take the next steps needed to improve our performance. To this end, we have identified a number of initiatives and/or programs in Colorado and elsewhere that illustrate positive action steps made by public and private organizations which hold promise toward improving population health. In the selection of these initiatives, we have highlighted those that offer innovative approaches to change; some have been formally evaluated, others have not. Many of the initiatives are relatively new and therefore do not have an established track record, yet they are indeed promising.

1. Not all states participate in the NCHS, YRBSS and PRAMS. The number of states providing indicator values derived from these surveys is stated on each indicator fact sheet and in Appendix I.
2. Values for all 50 states are available for 27 of the 38 indicators.
3. Most indicators are shown as percents to the first decimal place (e.g., 22.7 percent). When two or more states have the same value to the first decimal place they are given the same rank. (See discussion of confidence intervals and small differences.)
4. Average ranks and equivalent letter grades have not been calculated for the other 49 states.
5. The Colorado Health Institute was only able to conduct statistical tests on the raw data that came from the BRFSS. While other indicators came from surveys that had a representative sample of the population in all or most states, CHI did not have access to the raw data to calculate state averages and conduct statistical tests to determine whether or not Colorado's values significantly differed from other state values. Therefore, only indicators in the healthy adult and healthy older adult life stages that use data from the BRFSS include the color coding in the state ranking graph.
6. *Healthy People 2010.*

Healthy Beginnings

Every child deserves a healthy start. Delayed prenatal care and smoking while pregnant are among the factors that contribute to low birth weight and to babies who die in the first year of life. As children grow, the best way to protect them against disease is to see that they receive all the recommended childhood vaccinations. Colorado does poorly compared to other states in a number of these areas, thus earning a grade of C. Policymakers, health care providers and families can all do better in ensuring that all of our children have a healthy beginning that can contribute to a longer life expectancy.

Health Indicator	Rank among states
19.9 percent of women receive initial prenatal care later than the first trimester or not at all	**39th**
89.4 percent of women abstain from cigarette smoking during the last three months of pregnancy	**13th**
8.9 percent of babies are born with a low birth weight (less than 5 pounds, 9 ounces)	**36th**
Infant mortality rate (**6.4 infant deaths per 1,000 live births**)	**18th**
81.2 percent of preschool-age children received all recommended doses of five key vaccines	**17th**

Average Rank	**24.7**
Average Grade	C

Policy Overview

Healthy Beginnings

How are we doing?

Colorado has consistently underperformed relative to other states on a number of maternal and child health indicators. This is particularly evident in two areas where Colorado ranks in the lower half of states—early initiation of prenatal care and low birth weight. Alternatively, pregnant women in Colorado seem to be faring well in comparison to other states in the high rates of pregnant women who abstain from smoking cigarettes during pregnancy.

What is Colorado doing right?

The percentage of women that abstain from smoking during pregnancy is much higher than in Colorado's general population where 19 percent of Colorado adults are smokers. Increasing cigarette excise taxes to both reduce consumption and provide funds to support prevention programs has shown to be a proven strategy to decrease smoking prevalence. In 2004, Colorado voters approved Amendment 35 to raise the cigarette tax to 84 cents and allowed for a 20 percent tax increase on other tobacco products. Revenues from this tax were to be designated for health care services and tobacco education programs although the recent recession has re-directed a substantial portion of these funds to cover general fund obligations in the 2009–10 state budget.

Where can Colorado improve?

Lack of educational opportunity, low income and lack of access to health care coverage are all associated with inadequate or no prenatal care and the likelihood of a pregnant woman delivering a low birth weight baby. Policy solutions that do not address these factors most likely will keep Colorado's rankings in the lower tier of states.

The rate of women in Colorado who did not receive prenatal care in the first trimester, or did not receive prenatal care at all, was 20 percent, more than two times higher than the best state (New York). Among the top ranking states on this indicator were New York, Maine, Massachusetts and Minnesota. Likewise, Minnesota and Maine were also in the top tier of states for low rates of women delivering low birth rate babies. In all of these states, the uninsurance rate for children was well below 10 percent, whereas Colorado's childhood uninsured rate is 14 percent. Among states with high levels of insurance coverage for both adults and children there is a commensurate lower rate of women initiating prenatal care later than the first trimester or not at all.

The Medicaid and CHP+ programs provide health care coverage for low-income pregnant women. Colorado Medicaid pays for 37 percent of all deliveries and 30 percent of all prenatal care in the state.

The Colorado Department of Health Care Policy and Financing (HCPF) is implementing a number of initiatives to reverse the inadequate prenatal care and low birth weight trends:

- In partnership with the Colorado Department of Public Health and Environment, HCPF has sought permission from the federal government to extend Medicaid eligibility for family planning services to men and women (ages 19–50) with annual incomes between $16,500 and $22,000 who would otherwise not be eligible for the Medicaid program.
- The Medicaid and CHP+ programs both allow pregnant women to initiate prenatal care early in their pregnancy while their program eligibility is being determined through a *presumptive eligibility* process.
- As a result of the Colorado Health Care Affordability Act passed by the legislature in 2009, pregnant women with incomes up to 250 percent of the federal poverty level will be eligible for the CHP+ maternity program as of 2010.

Prenatal Care

Healthy Beginnings

Most recent CO value (2007)	CO rank (2006)	CO value (2006)	Best state (2006)	Best state value (2006)	HP2010 target
21.9%	26/33 = 39/50	19.9%	New York	9.0%	NA

Indicator Definition

The percentage of women who received prenatal care after first trimester and those who received no care during pregnancy.

Indicator Significance

Women who receive prenatal care early in their pregnancy tend to have bigger, healthier babies and suffer fewer complications associated with childbirth. Those early prenatal visits help assure they have a healthy pregnancy and receive proper guidance about diet, nutrition and exercise. Prenatal care providers also monitor weight gain and health risk factors throughout the pregnancy. Although prenatal care cannot fully eliminate the risk factors associated with poverty and age, early access to comprehensive prenatal care enables women to make healthy lifestyle choices during pregnancy. The number of women in the United States receiving no prenatal care or prenatal care after the first trimester decreased from 24 percent in 1990 to 11 percent in 2006.[1]

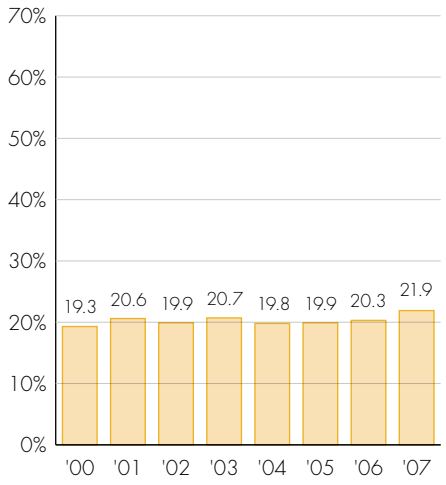
Colorado Specifics

Colorado ranks low among states (39th) in delayed or no prenatal care. The number of Colorado women receiving late or no prenatal care has remained fairly constant over the past seven years at around 20 percent. Hispanic, black and American Indian women have higher rates of delayed or no prenatal care when compared to white or Asian pregnant women in Colorado.[2]

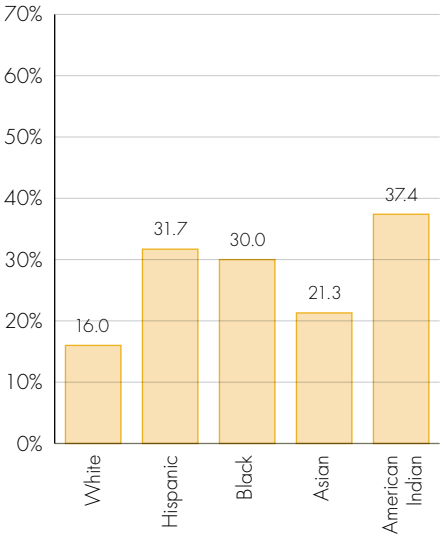
Promising Initiatives

B4 Babies & Beyond in Mesa County is a program that provides prenatal education and access to early and comprehensive prenatal care while serving as an out-station eligibility site for enrolling qualified low-income pregnant women in Medicaid and Child Health Plan *Plus* (CHP+).[3] The program also enrolls newborns in the Medicaid and CHP+ programs. Established in 1990, this program is now one of 23 community-based programs managed by a Grand Junction-based nonprofit, Hilltop Resources. Approximately 47 percent of all pregnant women in Mesa County are served through the program, and 100 percent of physicians and certified midwives who deliver babies in the region participate in the program. In 2008, approximately 1,000 pregnant women and 800 newborns gained health care coverage through *B4 Babies*.

***Women who started prenatal care later than first trimester or not at all** in Colorado[4]**



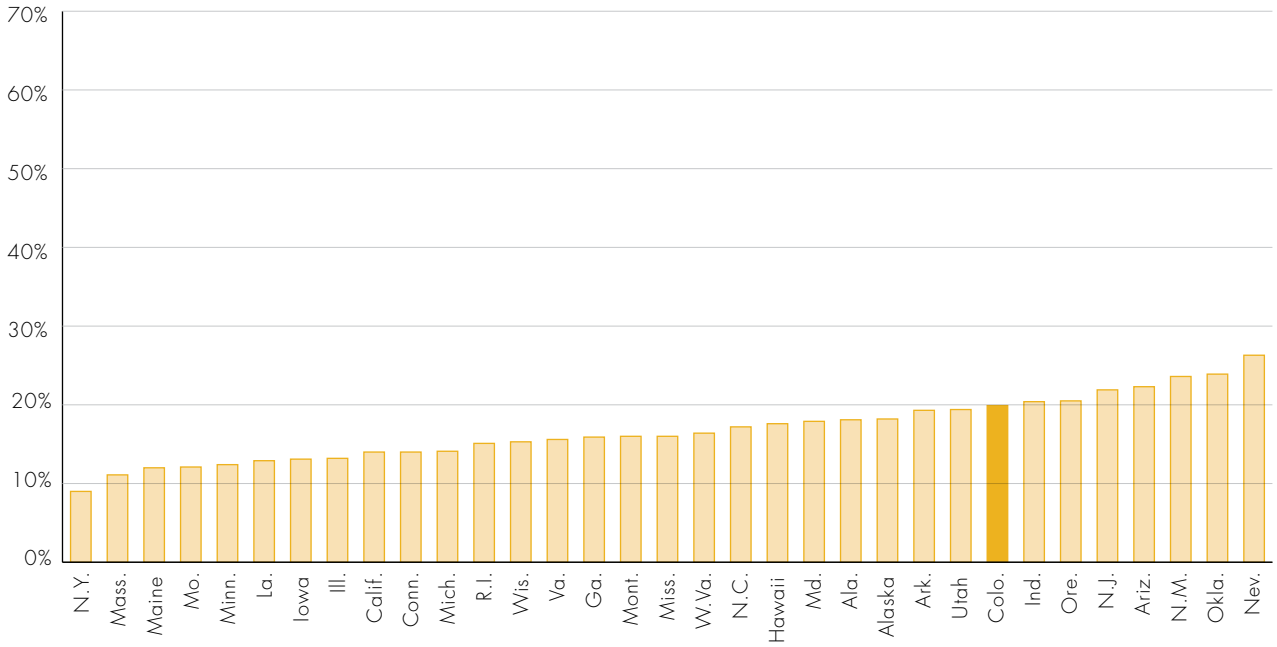
***Women who started prenatal care later than first trimester or not at all** by race/ethnicity in Colorado[5]*



Prenatal Care (continued)

Since the program's inception, a primary goal has been to lower access barriers to health care for low-income pregnant women. To help meet that goal, all services provided through the program are free of charge for women who are not eligible for CHP+ or Medicaid. Program participants receive any or all of the following services: application assistance and screening for Medicaid and CHP+ eligibility; issuance of temporary insurance cards; assistance with finding a physician and setting up prenatal appointments and information about healthy choices to make during pregnancy. Participants can also get help with referrals to community resources, translation and transportation services when needed.

Women who started prenatal care later than first trimester or not at all[6]



Text

1. Centers for Disease Control and Prevention, Vital Statistics, 1990 and 2006 birth data.
2. Child Trends DataBank. "Late or No Prenatal Care"; 2003.
3. Hilltop, B4 Babies & Beyond.

Charts

4. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2000–2007.

   * Note: Prenatal care estimates from the Colorado Department of Public Health and Environment differ slightly from rates from the Centers for Disease Control and Prevention's National Center for Health Statistics used to rank states.

5. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2007.
6. **Source:** Centers for Disease Control and Prevention, National Vital Statistics System, 2006.

Smoking While Pregnant

Healthy Beginnings

Most recent CO value (2007)	CO rank (2000–2003)	CO value (2000–2003)	Best state (2000–2003)	Best state value (2000–2003)	HP2010 target
89.3%	5/19 = 13/50	89.4%	Utah	96.1%	99%

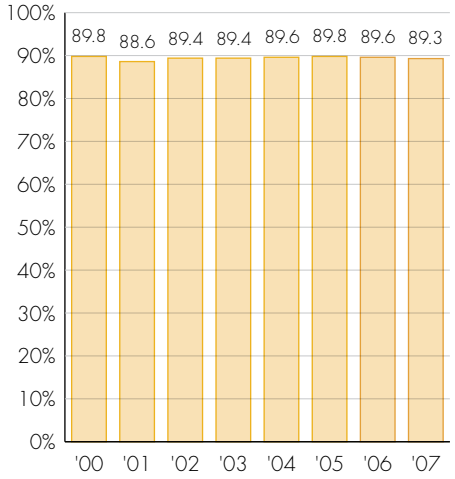
Indicator Definition

The percentage of women who report abstinence from cigarette smoking during the last three months of pregnancy.

Indicator Significance

Smoking during pregnancy is the single most preventable cause of prenatal and birth-related complications affecting both mothers and newborns. Pregnancy complications often result from prenatal exposure to cigarette smoke, which contains more than 4,000 chemicals, many of them toxic. Smoking cigarettes during pregnancy doubles the risk of low birth weight and retarded fetal development. But research shows that if a mother quits smoking during the first trimester of pregnancy, the risk decreases significantly. Secondhand smoke also contributes to health problems for both mothers and their unborn fetuses. More than 18 percent of U.S. women smoke and an estimated half of these women continue to smoke during pregnancy. If these women would stop smoking during pregnancy, the number of stillbirths would drop by an estimated 11 percent, and newborn deaths would be cut by an estimated 5 percent, statistics compiled by the U.S. Public Health Service suggest.[1]

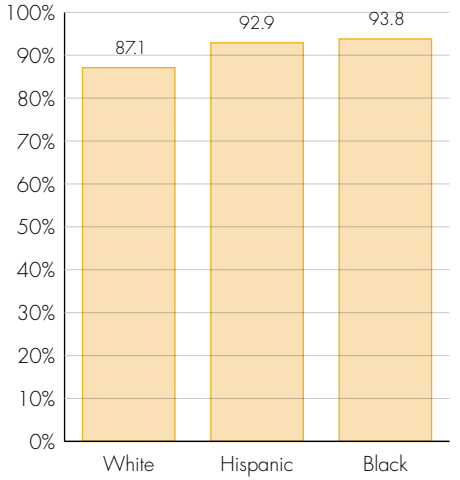
Women who abstained from cigarette smoking during last three months of pregnancy in Colorado[4]



Colorado Specifics

The percentage of women who abstain from smoking during pregnancy has changed very little in Colorado in the past seven years, hovering around 90 percent. This places Colorado fifth among the 19 states that report data. A higher percentage of black women (93.8 percent) and Hispanic women (92.9 percent) report abstaining from smoking during the last three months of pregnancy compared to white women (87.1 percent). Analysis of 2003 data by the Colorado Department of Public Health and Environment also found a relationship between smoking during pregnancy and a mother's education: Among mothers with more than 12 years of education, 97 percent abstained from smoking during pregnancy, versus 82 percent among less-educated mothers. The infant mortality rate for mothers who smoke during pregnancy is 10.7 per 1,000 live births compared to 5.9 for those who do not smoke.[2]

Women who abstained from cigarette smoking during last three months of pregnancy by race/ethnicity in Colorado[5]



Promising Initiatives

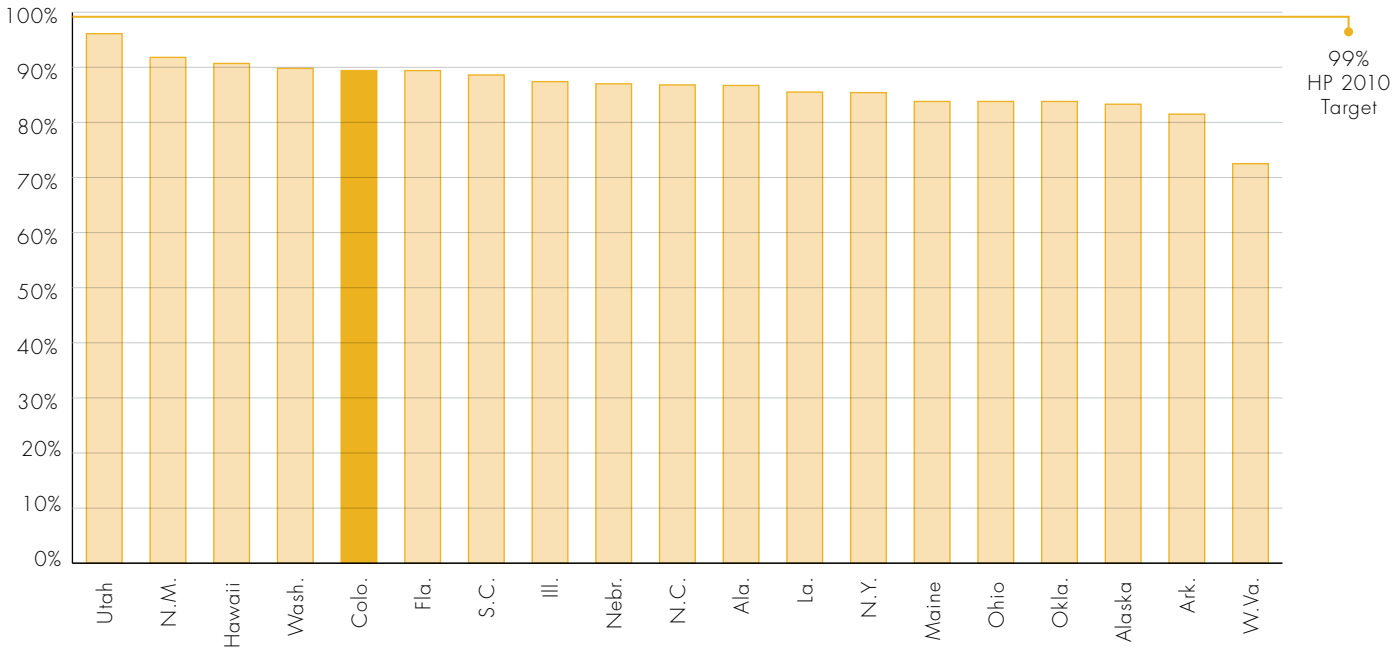
In 2006, a smoking cessation program in Mesa and Chaffee counties called *Baby & Me Tobacco Free* was established through grants from the March of Dimes and Rocky Mountain Health Plans Foundation. The aim of the program is to reduce the number of low birth weight babies in these counties by reducing the number of women who smoke during and after pregnancy.[3] Pregnant smokers who are referred to the program by their physician, clinic or local health department complete smoking cessation counseling and carbon monoxide (CO) testing at a county health

Smoking While Pregnant (continued)

department or other agency. After giving birth, they return monthly for carbon monoxide monitoring. Every month a mother remains tobacco-free, she receives a $25 voucher for diapers up to one year after delivery.

Plans to expand the program have been made possible through funding from the Colorado Health Foundation. In 2008, new programs were established in 18 counties and an additional 23 counties will have programs in place in 2009, with expansions to the remaining Colorado counties planned for 2010. Initial results from the Mesa County program show 55 percent of participants remained smoke free throughout their pregnancy and approximately 100 women who delivered tested negative for smoking at delivery. At present, close to 400 participants are participating in the program beyond Mesa County.

Women who abstained from cigarette smoking during last three months of pregnancy[6]



Text

1. March of Dimes. Quick Reference: Fact Sheets. "Smoking During Pregnancy."
2. March of Dimes. Quick Reference: Fact Sheets. "Smoking During Pregnancy."

   Colorado Department of Public Health and Environment. "Colorado Pregnancy Risk Assessment Monitoring System (PRAMS) 2003 Surveillance Report"; 2003.

   Colorado Department of Public Health and Environment. "Colorado Health Watch 2006"; 2006.
3. Rocky Mountain Health Plans Foundation.

Charts

4. **Source:** Colorado PRAMs, 2000–2006, Colorado Department of Public Health and Environment.
5. **Source:** Colorado PRAMS, 2006, Colorado Department of Public Health and Environment.
6. **Source:** Pregnancy Risk Assessment Monitoring System, 2000–2003, Centers for Disease Control and Prevention.

Low Birth Weight

Healthy Beginnings

Most recent CO value (2007)	CO rank (2006)	CO value (2006)	Best state (2006)	Best state value (2006)	HP2010 target
9.0%	36/50	8.9%	Alaska	5.9%	5%

Indicator Definition

Percent of babies born weighing less than 5 pounds, 9 ounces (2,500 grams).

Indicator Significance

Low birth weight babies are more likely to experience neurological and developmental disabilities, and even death, than are babies who weigh more at birth. Nationally, the rate of low birth weight has steadily increased, from 6.7 percent in 1984 to 8.3 percent in 2006. Multiple births increase the likelihood of low birth weight: 57 percent of twins and 94 percent of triplets are born weighing less than 5 pounds, 9 ounces. Inadequate maternal weight gain, inadequate prenatal care, incidence of induced delivery, cesarean section, assisted reproductive technology and smoking during pregnancy can all contribute to low birth weight. With advances in technology, more premature infants and infants born small for their gestational age can be saved.[1]

Colorado Specifics

Historically, Colorado has had a relatively high percentage of low-weight births. In 2006 it ranked 36th, with 8.9 percent of births below 5 pounds, 9 ounces—well above the 5.9 percent achieved by the top-performing state, Alaska. Over the past seven years in Colorado, the percentage of low-weight births has increased slightly, from 8.4 percent in 2000 to 9.0 percent in 2007. Black mothers have a substantially higher incidence of low-weight births (15 percent) than other mothers.

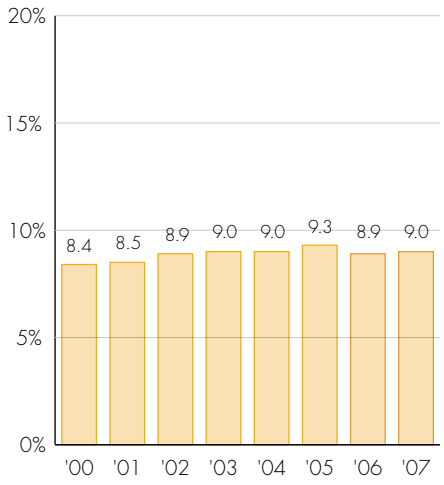
Factors associated with Colorado's high proportion of low-weight births include altitude, inadequate maternal weight gain, smoking during pregnancy, multiple births and various complications of pregnancy.[2]

Promising Initiatives

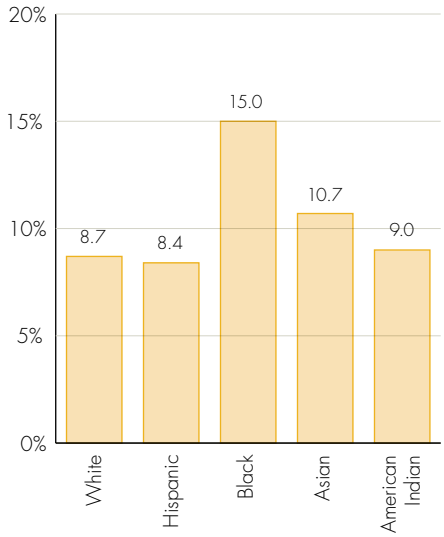
Prenatal Plus, a program that targets high-risk, Medicaid-eligible mothers, aims to reduce low birth weight babies by providing case management, nutrition and psychosocial services to pregnant women. Established in Colorado in 1996, *Prenatal Plus* provides services that complement medical prenatal care by addressing the lifestyle, behavioral and non-medical aspects of a woman's life that are likely to affect her pregnancy. This program is jointly administered by the Colorado Department of Public Health and Environment and the Department of Health Care Policy and Financing.[3]

In 2007, approximately 1,900 women received *Prenatal Plus* services across 21 provider sites in Colorado. This evidence-based program has been shown to reduce the number of low birth weight babies born to targeted mothers and provide cost savings to the Medicaid program. A recent study found six out of 10 (61 percent)

Low-weight births
*in Colorado[6]**



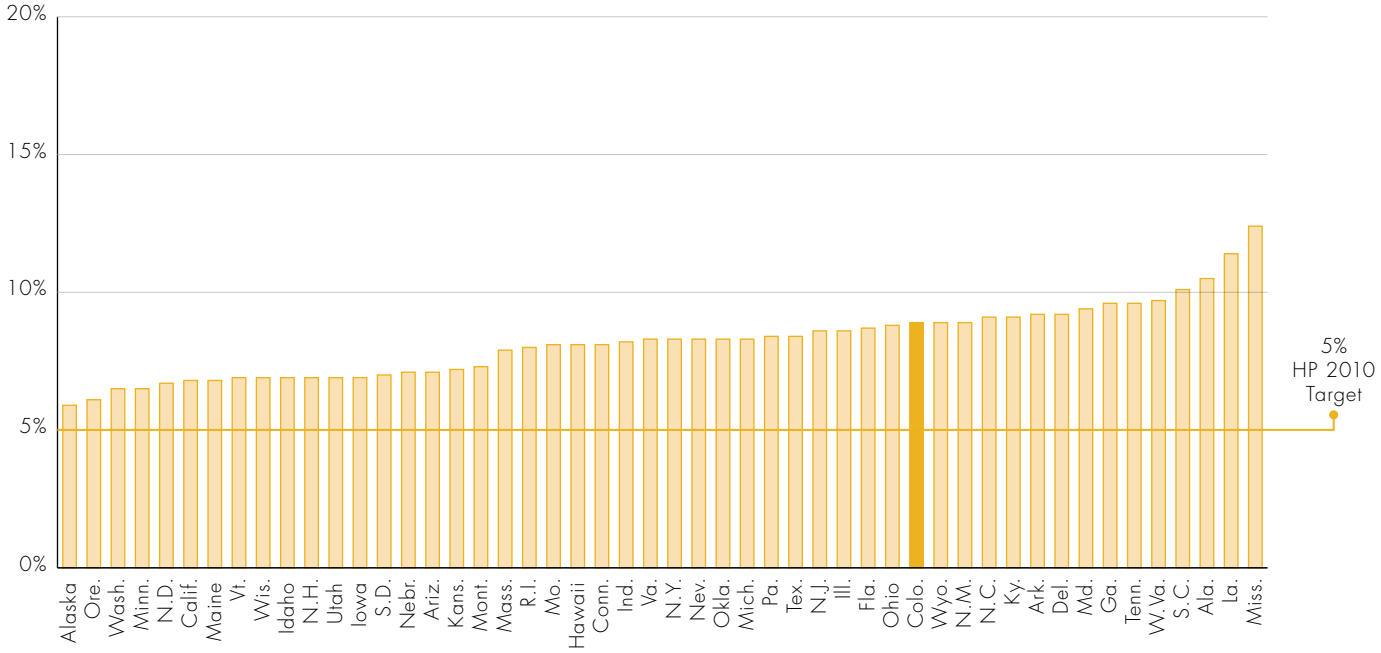
Low-weight births
by race/ethnicity in Colorado[7]



Low Birth Weight (continued)

program participants were able to mitigate their identified risk factors before delivery, resulting in a low birth weight rate well below the state average (7.2 percent vs. 9.0 percent).[4] A cost-effectiveness study conducted in 2002 found that for every $1 spent on *Prenatal Plus* services, $2.48 was saved in Medicaid costs through the first year of the infant's life.[5]

Low-weight births[8]



Text

1. Centers for Disease Control and Prevention, National Vital Statistics System, 2006.
2. Colorado Department of Public Health and Environment. "Tipping the Scales: Weighing in on Solutions to the Low Birth Weight Problem in Colorado"; 2000.
3. *Prenatal Plus*, Colorado Department of Public Health and Environment.
4. Colorado Department of Public Health and Environment. (2007). "*Prenatal Plus* Annual Report."
5. Colorado Department of Public Health and Environment. (2002). "The Effects of the *Prenatal Plus* Program on Infant Birth Weight and Medicaid Costs."

Charts

6. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2000–2007.

   * **Note:** Low birth weight rates from the Colorado Department of Public Health and Environment differ slightly from rates from the Centers for Disease Control and Prevention's National Center for Health Statistics used to rank states.

7. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2007.
8. **Source:** Centers for Disease Control and Prevention, National Vital Statistics System, 2006.

Infant Mortality

Healthy Beginnings

Most recent CO value (2007)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
6.2	18/50	6.4	Utah	4.5	4.5

Indicator Definition

The number of infant deaths (under one year of age) per 1,000 live births.

Indicator Significance

The infant mortality rate is widely used as an indicator of population health and illuminates how socioeconomic conditions can influence both infant and maternal health. About two-thirds of infant deaths in the United States occur during the first month of life, and are due primarily to premature delivery or other complications of childbirth.

Advances in prenatal and neonatal care have resulted in dramatic decreases in infant mortality. One hundred years ago, 10 percent of infants died in the first year of life compared to less than 1 percent today. Nevertheless, the U.S. infant mortality rate lags behind most industrialized countries. In 2009, the infant mortality rate in Japan was 2.8 per 1,000 compared to 6.3 per 1,000 in the United States. Also in 2005, the infant mortality rate was 2.4 times higher among blacks compared to whites.[1]

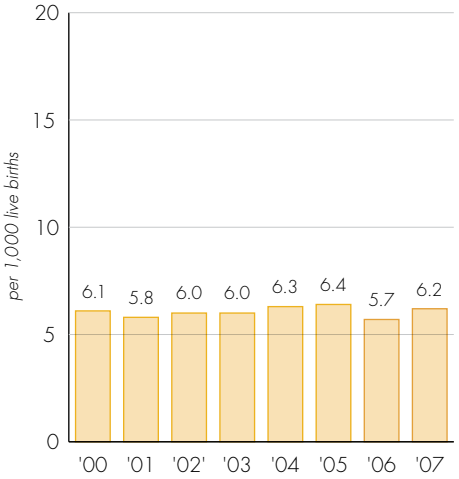
Colorado Specifics

Colorado ranked 18th among the states in 2005 with an infant mortality rate of 6.4 per 1,000 live births. This was slightly below the national average (6.9) but substantially above the best performing state, Utah (4.5). Over the past seven years Colorado's infant mortality rate has stayed relatively constant, ranging between 5.7 and 6.4 deaths per 1,000 live births. The rate is lowest among Asians (3.0 per 1,000) and highest among blacks (12.9 per 1,000).

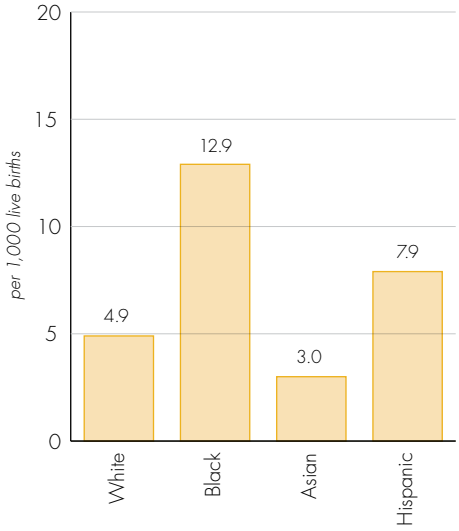
Promising Initiatives

In 1991 the Health Resources and Services Administration of the U.S. Department of Health and Human Services funded 15 urban and rural sites in communities with infant mortality rates that were 1.5–2.5 times the national average to launch the *Healthy Start* initiative. This initiative has now grown to include 96 federally funded *Healthy Start* programs nationwide that have demonstrated significant reductions in preterm births and low birth weight rates in *Healthy Start* communities. Communities have flexibility in designing a program that meets their unique needs, provided they can demonstrate decreased infant mortality rates and provision of adequate prenatal care; promotion of positive prenatal health behaviors; helping women and children meet their basic health needs (nutrition, housing, psychosocial support); and reducing access barriers to health care.[2]

Infant mortality rate
in Colorado[4]



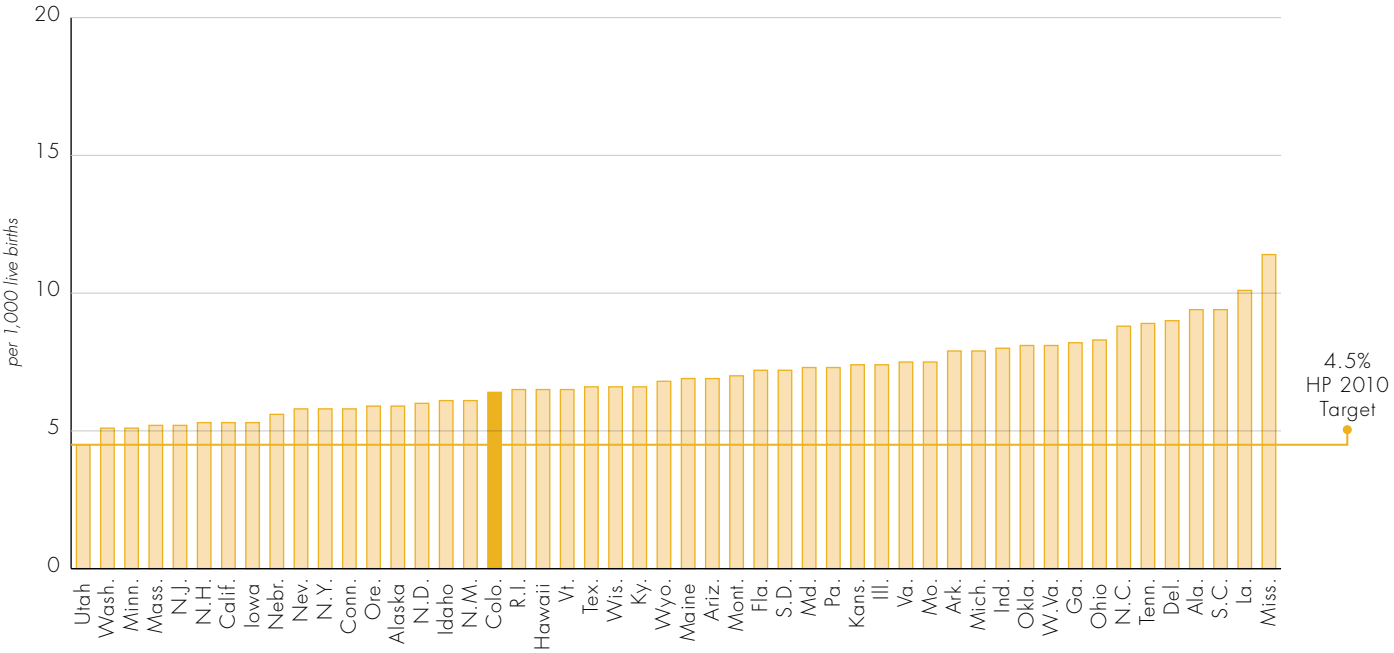
Infant mortality rate
by race/ethnicity in Colorado[5]



Infant Mortality (continued)

The *Healthy Start* program in Aurora works to address the significant health disparities in infant mortality rates between black births and all others. A local partnership including the Tri-County Health Department, local elected officials, black sororities, clinicians, participants from Arapahoe County Human Services, the Metro Community Provider Network and the Colorado Chapter of the March of Dimes was formed to target high-risk women in Aurora before they get pregnant and then support them through the prenatal period and after delivery with medical and supportive services that reduce risks and lower infant mortality rates within the black population.[3]

Infant mortality rate[6]



Text

1. Forum on Child and Family Statistics.
   Central Intelligence Agency, World Factbook, Infant mortality rate by country.
   Centers for Disease Control and Prevention, National Vital Statistics Reports: Deaths, Final Data for 2005.
2. Healthy Start Association.
3. Aurora Healthier Beginnings, Aurora Healthy Baby Initiative.

Charts

4. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2000–2007.
5. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2007.
6. **Source:** Centers for Disease Control and Prevention, National Vital Statistics System, 2005.

Immunizations

Healthy Beginnings

Most recent CO value (2007–2008)	CO rank (2007–2008)	CO value (2007–2008)	Best state (2007–2008)	Best state value (2007–2008)	HP2010 target
81.2%	17/50	81.2%	New Jersey	88.1%	90%

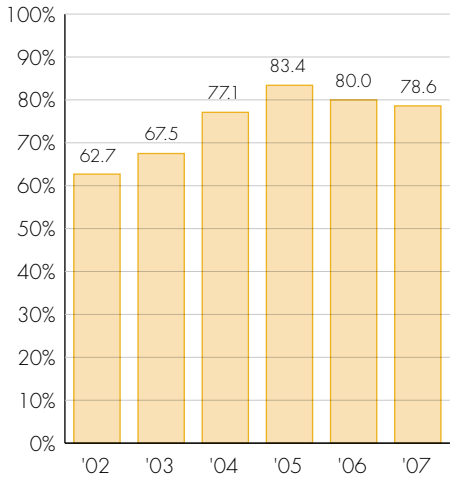
Indicator Definition

Children (ages 19–35 months) who have received the recommended vaccination series 4:3:1:3:3 which includes four or more doses of diphtheria, tetanus and pertussis; three or more doses of poliovirus vaccine; one or more doses of any measles containing vaccine; three or more doses of *Haemophilus influenzae* type b (Hib) vaccine; and three or more doses of hepatitis B vaccine.

Indicator Significance

Immunizations are considered to be one of the greatest and most cost-effective achievements of biomedical science and public health. At the outset of the 20th century, there were over a million cases annually of diseases such as smallpox, diphtheria, pertussis (whooping cough) and measles in the United States. Thanks to advances in childhood immunization, there are fewer than 10,000 cases of these diseases today in a much larger population. Parental beliefs and customs, and fears about the safety of vaccines impede full immunization. Other barriers include the costs of the growing number of vaccinations recommended by the American Academy of Pediatrics and the Advisory Committee on Immunization Practices.[1,2]

***Young children receiving all recommended vaccinations** in Colorado[4]**



Colorado Specifics

Colorado faced a shortage of the pertussis vaccine in 2002, resulting in a rank at the bottom for vaccination coverage of Colorado's 19- to 35-month-olds. Since then, it has experienced a marked improvement, reaching 83.4 percent in 2005. The most recent data show Colorado dropping slightly to 81.2 percent of infants receiving the full series of recommended vaccinations. Colorado's rank increased, though, from 36th among the states in 2006–2007 to 17th in 2007–2008.

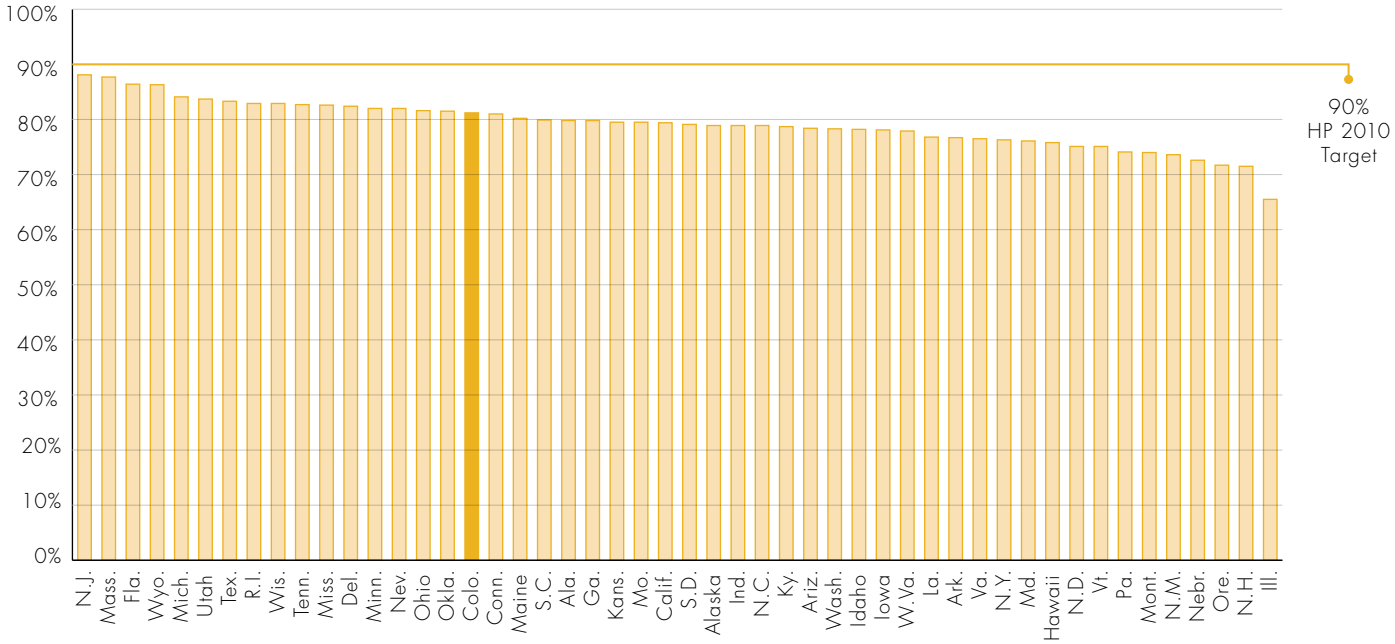
Promising Initiatives

Salud Family Health Center in Fort Lupton, Colorado, initiated an immunization outreach program in 2002 to increase immunization rates among low-income, rural children. Reminder cards were given to patients in their primary language and posters were placed in clinic exam rooms reminding parents and physicians to vaccinate children while in the clinic for any visit. Up to three reminder cards were sent to parents of all children seen in select pediatric clinics.[3]

Evaluation of the outreach program found immunization rates increased from 61 percent at the start of the intervention to 73 percent at termination (nine months later). This change represented an increase in all antigens, with the most significant increase in the H. influenza type B vaccine. The reminder cards sent to parents encouraging them to stay on track with their child's immunization schedule were found to be effective with one fully immunized child for every eight children receiving a recall card.

Immunizations (continued)

Young children receiving all recommended vaccinations[5]



Text

1. Centers for Disease Control and Prevention. "Ten Great Public Health Achievements—United States, 1900–1999"; May 2, 2001.

   Centers for Disease Control and Prevention. "Achievements in Public Health, 1900–1999 Impact of Vaccines Universally Recommended for Children—United States, 1990–1998." *MMWR Weekly*; April 2, 1999.

2. Kimmel, S.R., et al. "Breaking the Barriers to Childhood Immunization." *American Family Physician*; April 1996.

3. Paul, H., MD, et al. "Reminder Cards and Immunization Rates Among Latinos and the Rural Poor in Northeast Colorado." *Journal of the American Board of Family Medicine*; Vol. 20(6): 581-586; 2007.

Charts

4. **Source:** Centers for Disease Control and Prevention, National Immunization Survey, 2002–2007.

   * Note: Immunization estimates from the National Immunization Survey differ slightly between the Colorado trend graph and the all state ranking graph. Estimates in the trend graph are for the calendar year, whereas estimates in the all state ranking graph include the last two quarters of 2007 and the first two quarters of 2008.

5. **Source:** Centers for Disease Control and Prevention, National Immunization Survey, 2007–2008.

Healthy Children

Too many Colorado children live in poverty, and too few have health insurance. Roughly 127,000 (15 percent) of the state's children 12 years and younger lived at or below the federal poverty level during 2006–2008 (about $20,650 for a family of four in 2007). Approximately 120,000 children had no form of insurance during this time period as well. Children without insurance are more likely to lack a medical home and thus are less likely to get coordinated medical, mental and dental care. Too few Colorado children get enough exercise, and 14 percent are obese. Unlike Colorado's adults who have the lowest obesity rate in the nation, Colorado's children rank in the middle of the pack with respect to obesity. This poor ranking along with lower ranks in many other indicators results in a low grade of D+.

Insuring our children, seeing that they have a medical home and making sure they get enough exercise will better prepare them for the challenges of adolescence and adulthood.

Health Indicator	Rank among states
13.8 percent of children are not covered by private or public health insurance	**45th**
14.6 percent of children live in families with incomes below the federal poverty level	**13th**
59.3 percent of children have a medical home that is accessible, continuous, comprehensive, family-centered, coordinated and compassionate	**30th**
77.0 percent of children received all the routine dental preventive care needed in the past 12 months	**38th**
64.1 percent of school-age children participated in vigorous physical activity for four or more days per week	**34th**
14.2 percent of children are obese	**23rd**

Average Rank	**30.5**
Average Grade	**D+**

Policy Overview

Healthy Children

How are we doing?

Between 2008 and 2009 Colorado's grade for children dropped from a C- to a D+. The lower grade is primarily a result of the relatively large proportion of children who are uninsured coupled with the state's rise in childhood obesity rates. While Colorado ranks in the top half of states for the percent of children living in poverty, its rate of 15 percent is almost double that of the best state (New Hampshire).

What is Colorado doing right?

Colorado ranks 13th among all states for the percent of children living in poverty—this represents approximately one out of every seven children in Colorado. Not a statistic to be proud of, Colorado is still in the top half of states for childhood poverty rates which can be partly explained by its highly educated workforce.

Although Colorado's childhood poverty rate is in the top tier of states, it has increased over the past decade from 13 to 15 percent, translating to an additional 19,000 children between the ages of 0-12 years living in poverty. Research shows a relationship between childhood poverty, poor health and low academic performance.

The Colorado General Assembly passed a bill in 2009 establishing the *Economic Opportunity Poverty Reduction Task Force* and charged it with developing a statewide plan by the end of 2010 for reducing poverty in Colorado by at least 50 percent by 2019.

Where can Colorado improve?

In 2007, over 14 percent of Colorado's children were obese (ranking 23rd among the states) compared to only 10 percent in 2003 (3rd ranked). Colorado is still one of the few states that does not require physical activity in schools. In 2008, the Colorado General Assembly passed a bill prohibiting schools in Colorado from selling unhealthy beverages and instructing the Colorado Department of Education to determine what types of drinks can be sold. Currently, the Board permits school districts to sell a variety of beverages including water, low-fat and flavored milk, and fruit juices.

Nationwide, Oregon had the largest decrease in childhood obesity rates from 2003 to 2007—from 14 and to 10 percent (National Survey of Children's Health). Although an Oregon expert notes the decrease can not be attributed to any one policy, the state passed recent legislation to improve the nutritional content of school breakfasts and lunches, and increase the minimum time each day spent in physical education during school hours. In addition, several community coalitions focusing on increasing the number of women who have breastfed their infants past six months, were successful in passing one of the strongest workplace accommodation bills in the country for mothers returning to work. A growing body of research has found that breastfed babies are less likely to be overweight and obese as children and adults. Oregon now has the highest rate of exclusively breastfed babies at six-months in the country (25%).

Approximately 14 percent of children in Colorado lack health insurance coverage—one of the highest childhood uninsured rates in the country. In recent years the state has taken steps to increase childhood coverage by raising the income eligibility threshold in the CHP+ program. Through the passage of the Health Care Affordability Act of 2009, CHP+ eligibility is scheduled to increase to 250 percent of the federal poverty level (about $55,000 for a family of four) from 205 percent in 2010.

Illinois has made significant gains in getting kids covered through the passage of the *All Kids Initiative* and *Cover All Kids Health Insurance Act*. As of July 2006, insurance coverage was made available to *any* child who was uninsured for 12 months or more who lived in Illinois and was 18 years or younger. Enrollment in the program surpassed original targets. This was attributed to innovative, targeted outreach efforts through partnerships between state agencies, community organizations, medical providers and insurance companies. Additionally, a consumer friendly application form has been credited with being part of the success as well as the universality of the program.

Building on Illinois' success, Pennsylvania and Tennessee have enacted similar legislation to cover all children in their respective states.

Uninsured

Healthy Children

Most recent CO value (2006–2008)	CO rank (2006–2008)	CO value (2006–2008)	Best state (2006–2008)	Best state value (2006–2008)	HP2010 target
13.8%	45/50	13.8%	Massachusetts	3.0%	0%

Indicator Definition

Children (ages 0–12 years) are considered uninsured if they do not have a public or private source of health care coverage for the entire past calendar year.

Indicator Significance

According to the U.S. Census Bureau's Current Population Survey, during 2008 some 4.8 million children (9 percent) 12 years old and younger were uninsured nationwide.[1] The lack of insurance coverage is a significant barrier to health care access and increases the likelihood that uninsured children will not receive the medical care they need when they need it. Uninsured children are three times more likely to forgo seeing a doctor. Without access to primary care, children are less likely to be fully immunized, less likely to receive recommended growth and developmental assessments, and parents and children are less likely to receive important guidance about health, nutrition and childhood safety. Finally, care for acute and chronic illness is often delayed until conditions become severe, resulting in more costly treatment.[2]

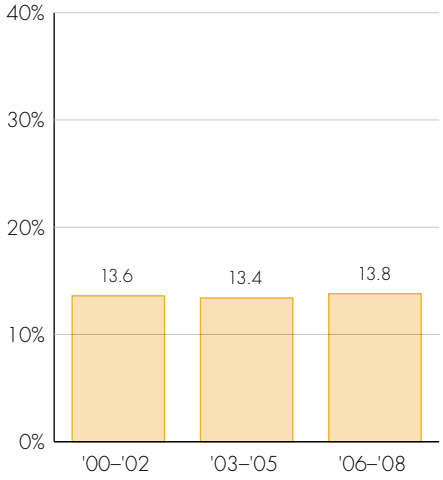
Colorado Specifics

More than 68 percent of Colorado's children are insured through private insurance, mostly through employer-sponsored coverage and sometimes through individually purchased policies. An additional 18 percent are covered by Medicaid or the state's Child Health Plan *Plus* (CHP+) program and 4 percent are covered through some other type of insurance, including military coverage and Medicare.[3] Remaining are about 120,000 (14 percent or about one in six) of Colorado's children without health care coverage. This rate puts Colorado at 45th among the 50 states. Over the past five years the rate has remained fairly stable. Families with incomes below the federal poverty level are more than six times as likely to be uninsured as families with incomes at 400 percent of FPL or above.[4]

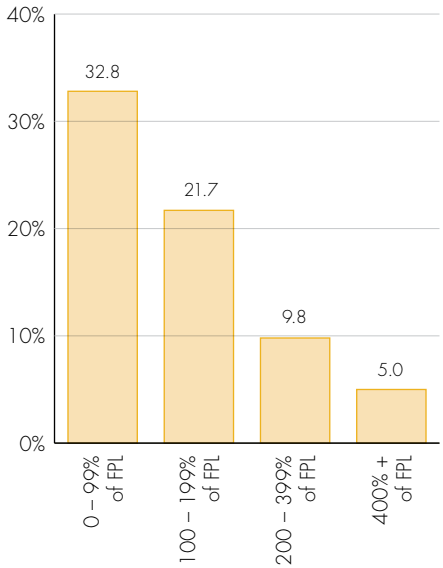
Promising Initiatives

In 2009, The Colorado Trust committed $4.5 million over three years to fund 14 safety net providers across Colorado (community clinics, federally qualified health centers, school-based health centers and local public health departments) through an *Expanding Access to Health Care for Children* grant program. Various strategies are being employed by the grantees to meet the program goal including hiring new clinical and outreach staff and ensuring that efficient referral networks are in place in their community to improve continuity and comprehensiveness of health care services for children. In an effort to better understand the impact grantees are

Children without health insurance
in Colorado[6]



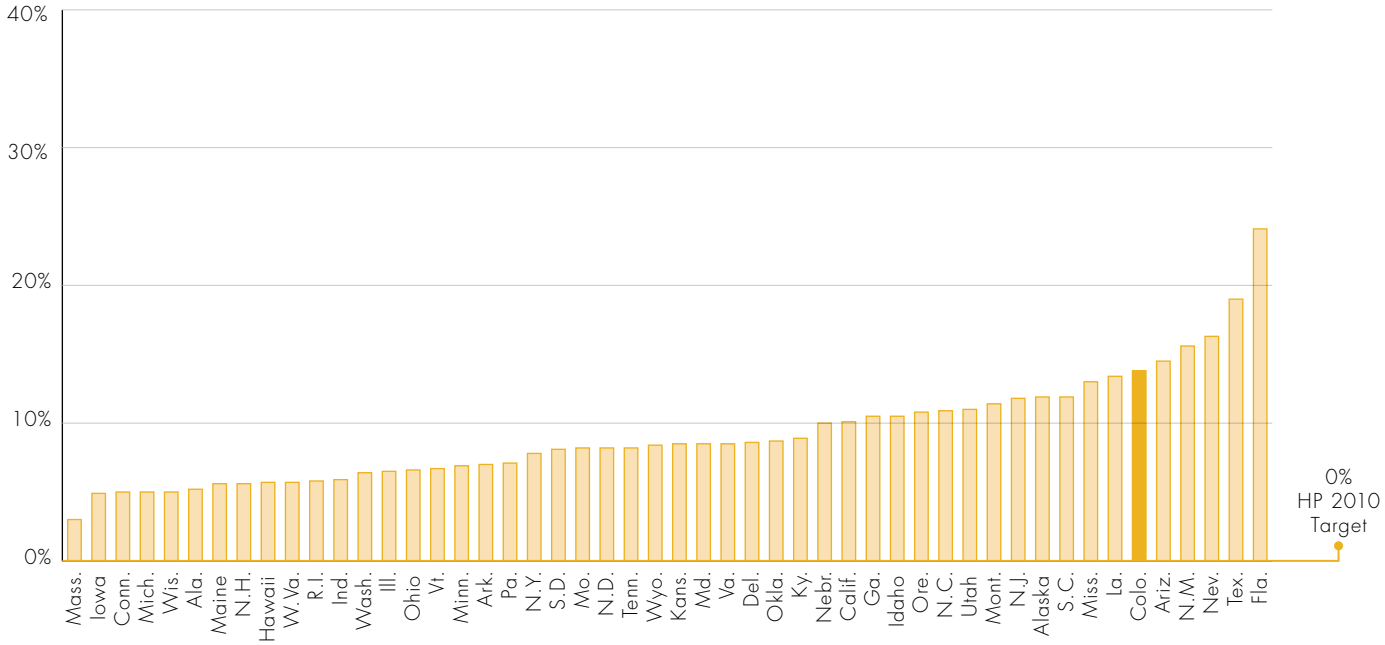
Children without health insurance
by income in Colorado[7]



Uninsured (continued)

making on the populations they serve, all grantees are required to participate in the Safety Net Indicators and Monitoring System hosted by the Colorado Health Institute. The SNIMS was established in 2005 to monitor the sustainability and capacity of Colorado's health care safety net to meet the physical, mental and oral health primary care needs of vulnerable Coloradans.[5]

Children without health insurance[8]



Text

1. U.S. Census Bureau, Current Population Survey; CY 2008
2. Kaiser Commission on Medicaid and the Uninsured. "Enrolling Uninsured Low-Income Children in Medicaid and SCHIP"; January 2007.
3. Rates are based on estimates from the Current Population Survey (2006–2008) and refer to children ages 0–12 years. Those who report multiple types of insurance coverage (i.e., private, public or military) are included in each category; therefore, total percentage can be more than 100 percent.
4. U.S. Census Bureau, Current Population Survey; CY 2006–2008.
5. The Colorado Trust.

Charts

6. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2000–2008.
7. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2006–2008.
8. **Source:** U.S. Census Bureau, Current Population Survey, 2006–2008.

Poverty

Healthy Children

Most recent CO value (2006–2008)	CO rank (2006–2008)	CO value (2006–2008)	Best state (2006–2008)	Best state value (2006–2008)	HP2010 target
14.6%	13/50	14.6%	New Hampshire	7.7%	NA

Indicator Definition

The percentage of children (ages 0–12 years) who live in a family with an annual income below the federal poverty level, which in 2007 was $20,650 for a family of four.

Indicator Significance

Low-income children are at risk for a range of health-related problems that stem from not having health insurance coverage or access to comprehensive health care services.[1] Nationwide, more than 10.7 million children 12 years and younger (20 percent) lived in families with incomes that fell below the federal poverty level in 2008.[2]

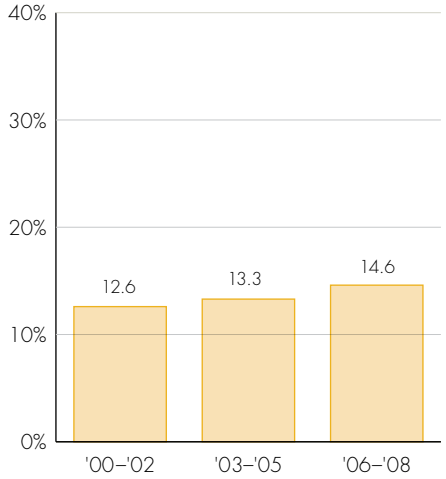
Colorado Specifics

Poverty dramatically affects Colorado's children and their overall well-being, contributing to poor health and low academic performance. Colorado ranks 13th out of 50 states for children living below the federal poverty level, with 15 percent or approximately 127,000 children living in poor families.[3] Colorado's child poverty rate has inched up slightly in recent years. Child poverty rates are four times higher for black and Hispanic children compared to white children. While the poverty rates for Colorado black and Hispanic children are higher than national levels, the poverty level for white children is much lower than the national average, creating greater ethnic and racial disparities in Colorado.

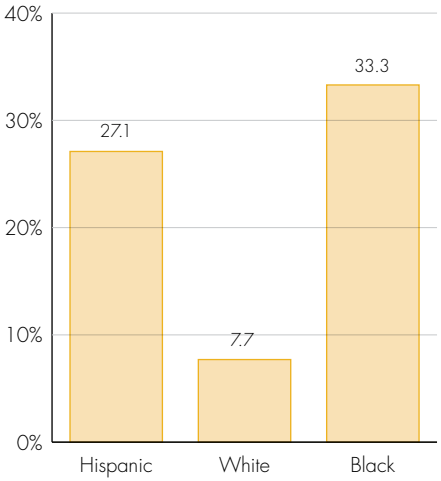
Promising Initiatives

The *Harlem Children's Zone* (HCZ) has developed a comprehensive and holistic approach to combating childhood poverty in New York City by responding to the social, health and educational needs of low-income children and their families. The HCZ began as a one-block pilot in the 1990s in a neighborhood with high rates of childhood poverty (39 percent) and has now expanded to 60 city blocks in Harlem. The HCZ model is based on five core principles: engage the entire neighborhood to transform the physical and social environment in which children grow and develop (culture change); create a pipeline of support through programs inside and outside the schools that link children, their families and the community in an uninterrupted support network; build community partnerships between residents, institutions and stakeholders to create a healthy environment; evaluate program outcomes and build in an informed outcomes-based decision-making process; and reinforce a culture of success based on accountability, teamwork and community leadership.[4]

Children living in families with incomes below the federal poverty level in Colorado[5]



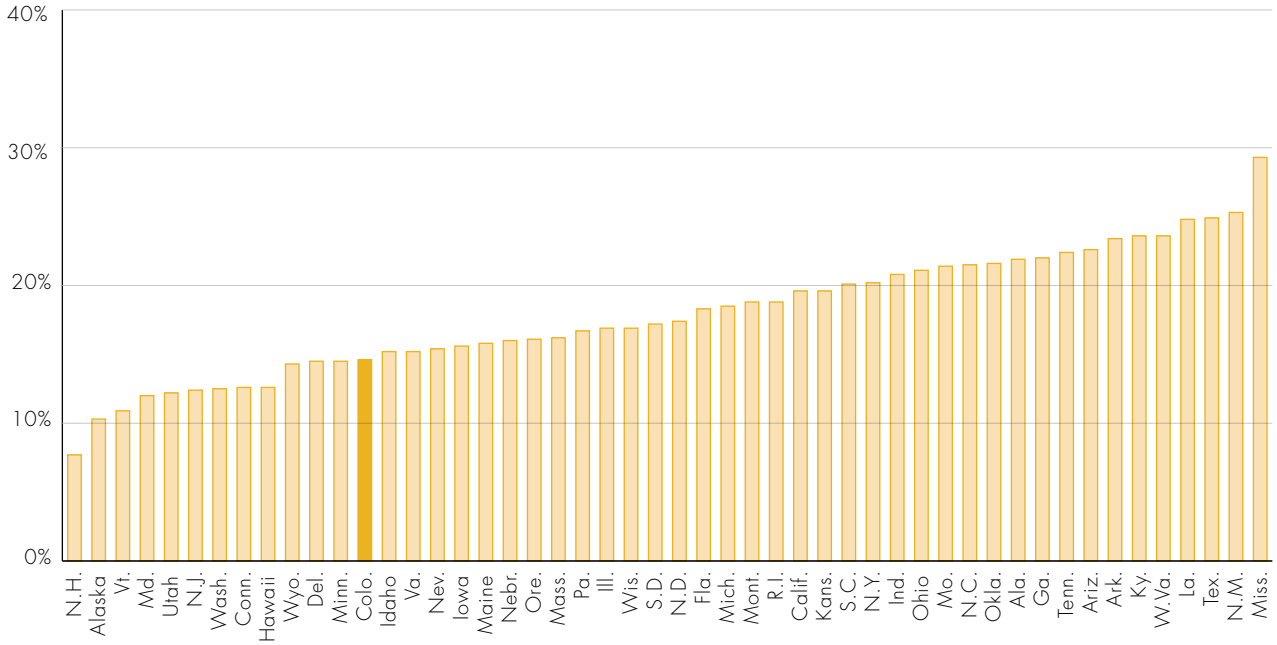
Children living in families with incomes below the federal poverty level by race/ethnicity in Colorado[6]



Poverty (continued)

One of the main goals of the HCZ is to intervene as early as possible in the lives of children by laying the foundation for healthy growth and development and ensuring that children are fully engaged in success-oriented activities as they grow. Baby College is one strategy that includes workshops for expectant parents and those with infants up to 3 years old. The "college" provides parents with the skills and knowledge necessary to raise healthy children in a healthy environment. There are also school-based programs for all children between preschool and senior high school. A related goal is to educate parents about what it takes to help their children succeed. Activities such as community-based coalitions to improve housing conditions and assist families to access counseling, financial and legal services are integral to the program.

Children living in families with incomes below the federal poverty level[7]



Text

1. Institute of Medicine. "America's Children: Health Insurance and Access to Care"; 1998.
2. U.S. Census Bureau. Current Population Survey, CY 2008.
3. Population estimates in this sentence come from the Current Population Survey (2006–2008) and refer to children ages 0 to 12 years.
4. The Harlem Children's Zone.

Charts

5. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2000–2008.
6. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2006–2008.
7. **Source:** U.S. Census Bureau, Current Population Survey, 2006–2008.

Medical Home

Healthy Children

Most recent CO value (2007)	CO rank (2007)	CO value (2007)	Best state (2007)	Best state value (2007)	HP2010 target
59.3%	30/50	59.3%	New Hampshire	69.3%	97%

Indicator Definition

Children (ages 0–17 years) who have a medical home that is accessible, continuous, comprehensive, family-centered, coordinated and compassionate.

Indicator Significance

Children with a "medical home" have a place in which they can receive comprehensive, family-centered and coordinated health care. This promotes healthy development and allows minor problems to be identified and treated before they become serious. Especially important for children are age-appropriate screenings and immunizations. Without a regular source of primary health care, children are nine times more likely to be hospitalized for preventable problems. Uninsured children are 13 times more likely to lack a regular source of primary care.[1]

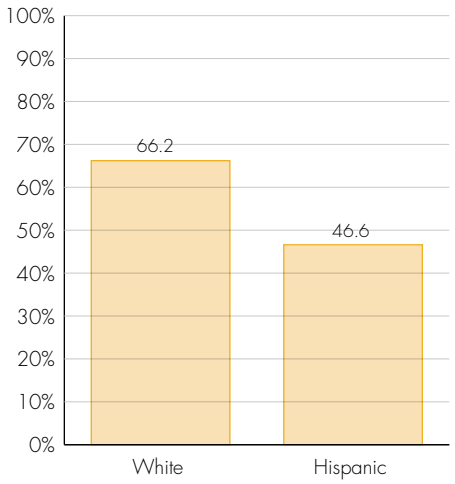
Colorado Specifics

Colorado ranks 30th among states for children with a reported medical home. White children are more likely to have a medical home compared to Hispanic children. Children who live in families with incomes at or above 400 percent of the federal poverty level are almost twice as likely to have a medical home than children in families below the federal poverty level ($20,650 for a family of four in 2007).

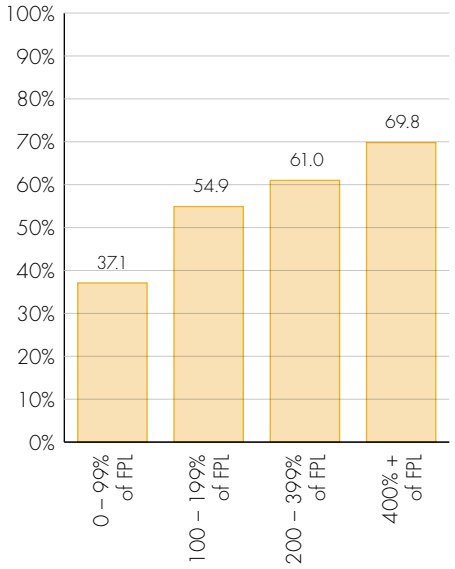
Promising Initiatives

Recognizing that a medical home is more than a relationship between a patient and a medical office, *Project HEALTH* exists as an exemplary medical home model for vulnerable families and children. Founded in the Boston Medical Center Pediatrics Department in 1996, *Project HEALTH* trains and relies upon undergraduate volunteers to improve the health of low-income children and their families by serving as navigators and facilitators between families and community-based resources. Over 600 trained volunteers serve at "family help desks" located in urban prenatal and pediatric clinics, newborn nurseries, emergency rooms and community health centers in several U.S. cities—Boston, Providence, New York, Baltimore, Washington, D.C. and Chicago. At these clinical sites, physicians "prescribe" food, housing, job training, GED classes and any other resources needed to meet a family's social and educational needs. The college volunteers work alongside families to "fill" the prescriptions by connecting them to the prescribed resources. Since 1996, *Project HEALTH*'s 16 family help desks have served over 14,500 children and adults. Approximately 4,000 families are served annually. [2]

Children with a medical home
by race/ethnicity in Colorado[3]

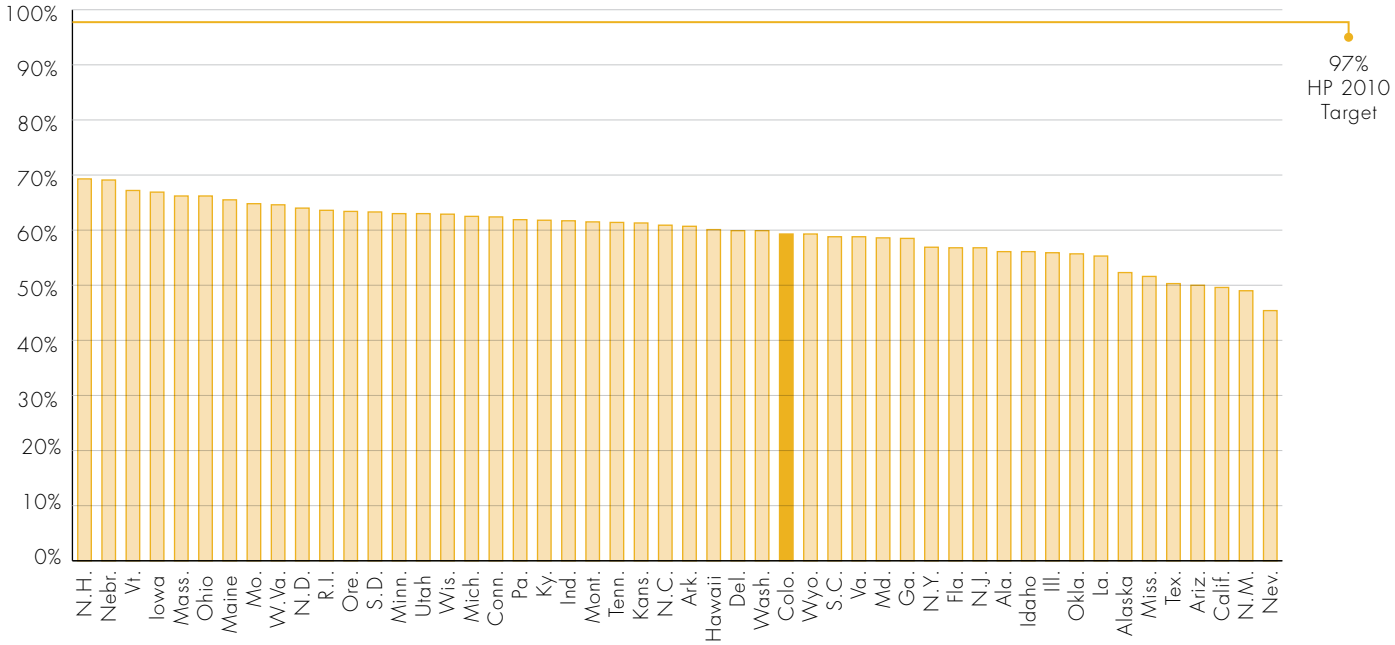


Children with a medical home
by income in Colorado[4]



Medical Home (continued)

Children with a regular source of primary health care[5]



Text

1. Campaign for Children's Health Care. "No Shelter from the Storm: America's Uninsured Children"; September 2006.
   Kaiser Family Foundation. "Children's Coverage and SCHIP Reauthorization"; May 2007.
2. *Project HEALTH.*

Charts

3. **Source:** National Survey of Children's Health, 2007, National Center for Health Statistics, Centers for Disease Control and Prevention.
4. **Source:** National Survey of Children's Health, 2007, National Center for Health Statistics, Centers for Disease Control and Prevention.
5. **Source:** National Survey of Children's Health, 2007, National Center for Health Statistics, Centers for Disease Control and Prevention.

Preventive Dental Care

Healthy Children

Most recent CO value (2007)	CO rank (2007)	CO value (2007)	Best state (2007)	Best state value (2007)	HP2010 target
77.0%	38/50	77.0%	Hawaii	86.9%	NA

Indicator Definition

Children (ages 1–17 years) reported by parents to have received all needed preventive dental care during the past 12 months.

Indicator Significance

Tooth decay is one of the most common diseases of childhood—five times as common as asthma and seven times as common as hay fever. More than half of children ages 5–9 have had at least one cavity or filling; 78 percent of 17-year-olds have experienced tooth decay. These problems often interfere with a child's ability to succeed in school. Data show that on average 51 million school hours a year are lost to dental-related illnesses in the United States.[1]

CDC recommends parents take their child for an oral health assessment between ages 1–2, and every six months thereafter.[2] A regular diet of nutritious foods low in sugar is highly effective in preventing tooth decay.

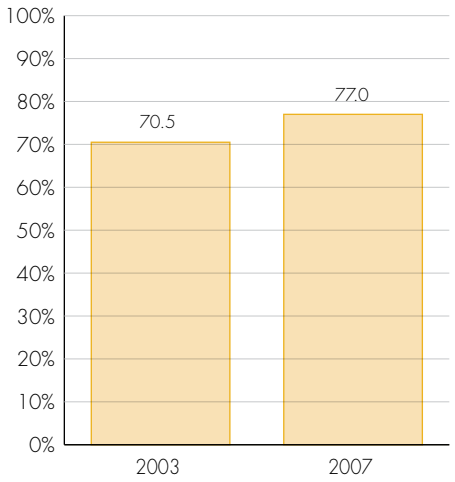
Colorado Specifics

In Colorado, oral disease is five times more common than asthma. Colorado ranks in the bottom tier of states (38 out of 50) for children reported to have received all preventive dental care needed in the past 12 months. Disparities exist for children living at various income levels. Only 55 percent of children living in households below the poverty level received preventive dental care in Colorado in 2007, while close to 90 percent of children living in higher income households (above 400 percent of FPL) received such care.[3]

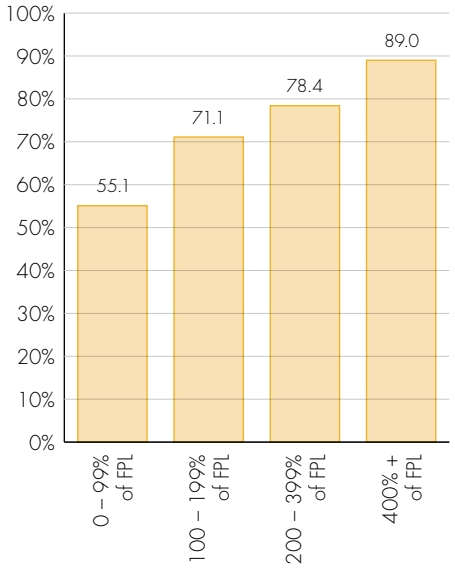
Promising Initiatives

Cavity Free at Three is a Colorado-based early childhood caries prevention program for low-income families that employs evidence-based strategies to prevent the transmission of bacteria between mothers and infants and provide early preventive oral hygiene experiences for infant's ages birth to 3 years. This statewide effort engages dentists, physicians, nurses, dental hygienists, public health practitioners and early childhood educators to increase access to oral disease prevention and early caries detection for low-income pregnant women and their children. The program provides free oral health materials to pregnant women and new mothers and technical assistance to a range of health care providers in the oral health screening of mothers and their newborns.[4]

Children receiving all routine preventive dental care in last 12 months *in Colorado*[5]



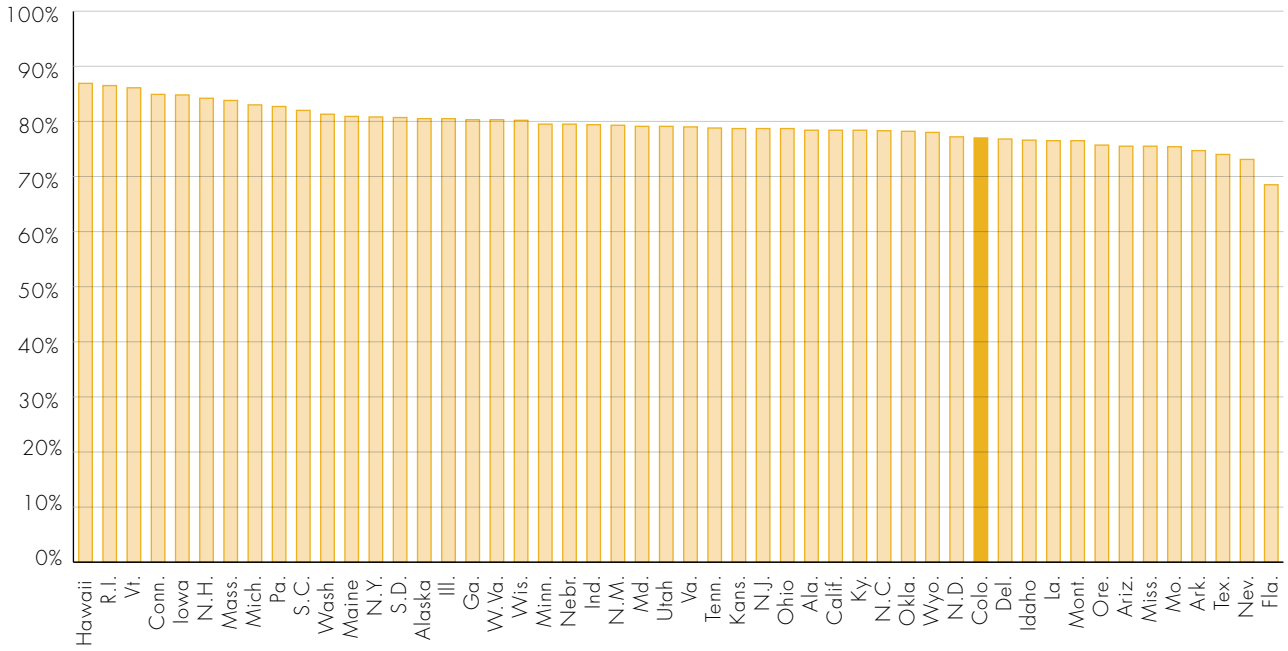
Children receiving all routine preventive dental care in last 12 months *by income in Colorado*[6]



Preventive Dental Care (continued)

Since the program began in 2006, 10 Colorado communities have received grants through the *Cavity Free at Three* program totaling $1.5 million over five years. The program is jointly funded by Caring for Colorado Foundation, the Colorado Health Foundation, The Colorado Trust, Delta Dental of Colorado Foundation, Kaiser Permanente and Rose Community Foundation. In its first year, more than 400 medical providers including dentists, dental hygienists, physicians and public health nurses were trained in the train-the-trainer model. More than 300 parents have been educated and their infants and toddlers screened and received fluoride varnishes. Plans are underway to expand the program to additional communities and thereby reach approximately 40,000 children throughout Colorado by 2011.

Children receiving all routine preventive dental care in last 12 months[7]



Text

1. "Children's Oral Health." National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention.
2. *Ibid.*
3. Colorado Department of Public Health and Environment. "Smart Mouths, Healthy Bodies: An Action Plan to Improve the Oral Health of Coloradans"; Fall 2005.
4. The Colorado Trust.

Charts

5. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2003 and 2007, Centers for Disease Control and Prevention.
6. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2007, Centers for Disease Control and Prevention.
7. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2007, Centers for Disease Control and Prevention.

Vigorous Exercise

Healthy Children

Most recent CO value (2007)	CO rank (2007)	CO value (2007)	Best state (2007)	Best state value (2007)	HP2010 target
64.1%	34/50	64.1%	Minnesota	72.8%	NA

Indicator Definition

Children (ages 6–17 years) who participate in at least 20 minutes of vigorous physical activity (i.e., physical activity that made them sweat and breathe hard for at least 20 minutes) at least four days per week.

Indicator Significance

As the number of children who are overweight and obese increases, so does the number of children who have low levels of physical activity. Inactive children are more likely to become inactive adults. A lack of physical exercise results in an increased risk for overweight, obesity and chronic disease. Participating in frequent vigorous physical activity is a protective factor for children that results in psychological and social well-being and reduces the risk of premature death as adults.[1]

Colorado Specifics

National data from the National Survey of Children's Health indicate Colorado's children rank 34 out of 50 states for reported vigorous physical activity. Although the percent of children engaging in vigorous physical activity rose from 57 percent to 64 percent between 2003 and 2007 in Colorado, many states have higher levels. Children living in families with incomes below the poverty level engage in much lower levels of physical activity compared to children in higher income families.

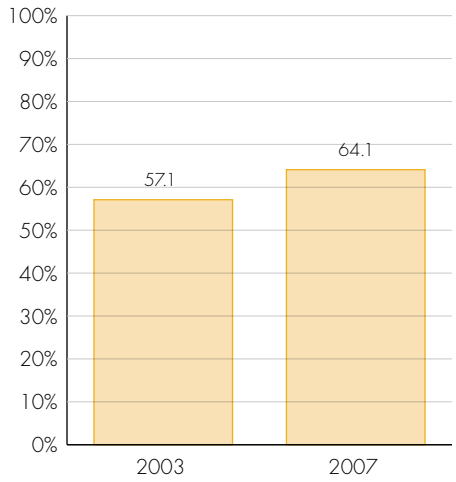
Promising Initiatives

Safe Routes to School (SRTS) is a national program that creates safe, convenient and fun opportunities for children to bicycle and walk to and from school by improving sidewalks and traffic safety. The national SRTS program is federally funded and the management and administration of the program is delegated to state departments of transportation.[2]

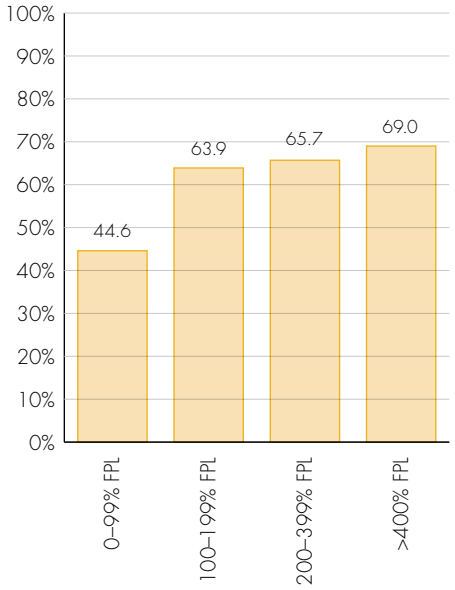
In Colorado, funds have been distributed to school districts, schools, cities, counties, state and tribal entities for projects that encourage physical activity opportunities for students in grades K-8 as they travel to and from school. Nonprofits are required to partner with a state subdivision to apply for funding.

One promising Colorado SRTS program is based in Boulder. In 2007, the City of Boulder received $193,000 from SRTS to improve sidewalks, paths and ramps, and Boulder Valley Schools received an additional $36,000 to promote physical activity

***Children who participated in vigorous physical activity** in Colorado[4]*



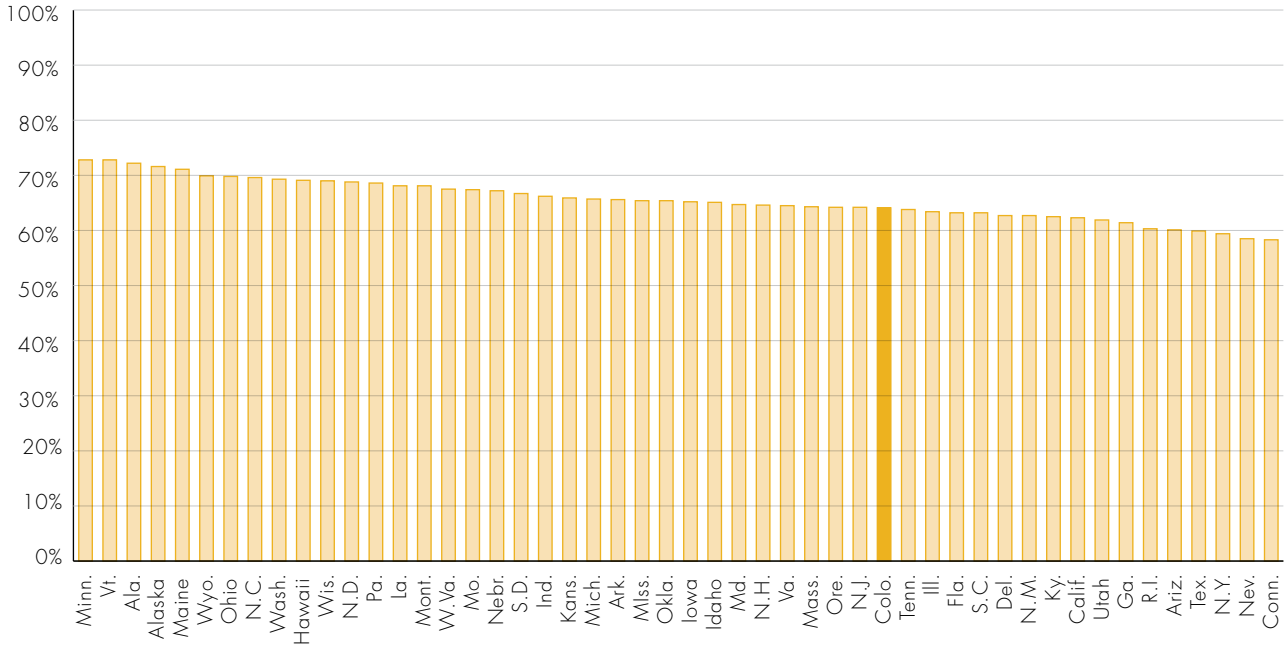
***Children who participated in vigorous physical activity** by income in Colorado[5]*



Vigorous Exercise (continued)

programs. Foothill Elementary in the Boulder school district used the grant to expand "Walk and Wheel Wednesdays," a program developed in 2005 designed to increase students' interest and participation in walking or biking to school. The school also made infrastructure improvements to increase pedestrian and bicycle safety on sidewalks and crosswalks. Between November and May of the 2006–2007 school year, the number of students walking and bicycling to school increased by 8 percent.[3]

Children who participated in vigorous physical activity[6]



Text

1. Centers for Disease Control and Prevention. "Healthy Youth."
2. National Center for Safe Routes to School.
3. Colorado Department of Transportation, *Safe Routes to School Program*.

Charts

4. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2003 and 2007, Centers for Disease Control and Prevention.
5. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2007, Centers for Disease Control and Prevention.
6. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2007, Centers for Disease Control and Prevention.

Obesity

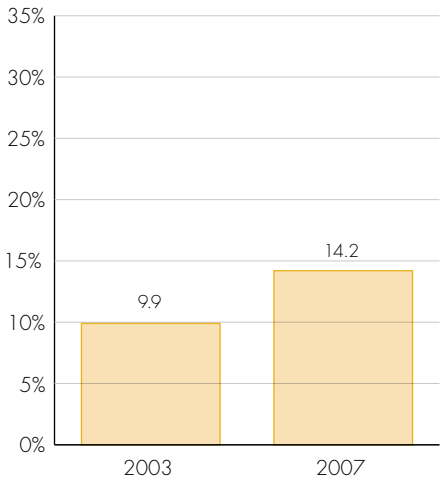
Healthy Children

Most recent CO value (2007)	CO rank (2007)	CO value (2007)	Best state (2007)	Best state value (2007)	HP2010 target
14.2%	23/50	14.2%	Oregon	9.6%	5%

Indicator Definition

Obesity for children (ages 10–17 years) is defined as having a Body Mass Index (BMI) at or above the 95th percentile on the Centers for Disease Control and Prevention's gender- and age-specific revised Growth Charts for the United States. The BMI for children and adolescents is a number calculated from a child's weight and height. BMI measurements for children and adolescents reflect normal differences in body fat between boys and girls while considering differences in body fat at various ages. It provides a reliable indicator of body fat and is used to screen for excessive weight gain that may lead to health problems. BMI-for-age calculated from the National Survey of Children's Health is based on parent-reported height and weight of children. Past comparisons with independent height and weight measurements of the same children in the survey reveal that children under 10 years of age generally had underreported height and overreported weight measurements by their parents. Therefore, BMI for children under 10 years of age has not been included as part of this indicator.

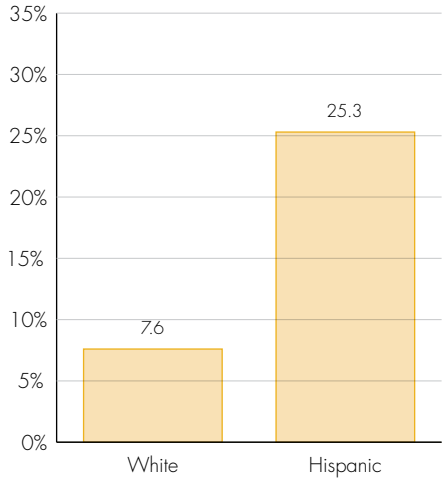
Obese children
in Colorado[5]



Indicator Significance

The proportion of children ages 6–11 in the United States who are obese increased from 7 percent during 1976–1980 to 17 percent during 2003–2006.[1] The growing proportion of children who are obese has been described as an epidemic requiring an immediate policy response. For the first time in history, children in the United States may have a lower life expectancy than their parents due to the increased incidence of obesity and related conditions such as diabetes, hypertension and heart disease. Using the *Healthy People 2010* guidelines, all states are far from achieving the goal of a childhood obesity rate of 5 percent or less.[2]

Obese children
by race/ethnicity in Colorado[6]



Colorado Specifics

Data from the National Survey of Children's Health indicate Colorado ranks 23rd compared to other states in the proportion of children who are obese. Between 2003 and 2007, the number of children between the ages of 10–17 years who are obese rose from 48,000 to 72,000 in Colorado. Hispanic children were three times more likely to be obese than white children.[3]

Promising Initiatives

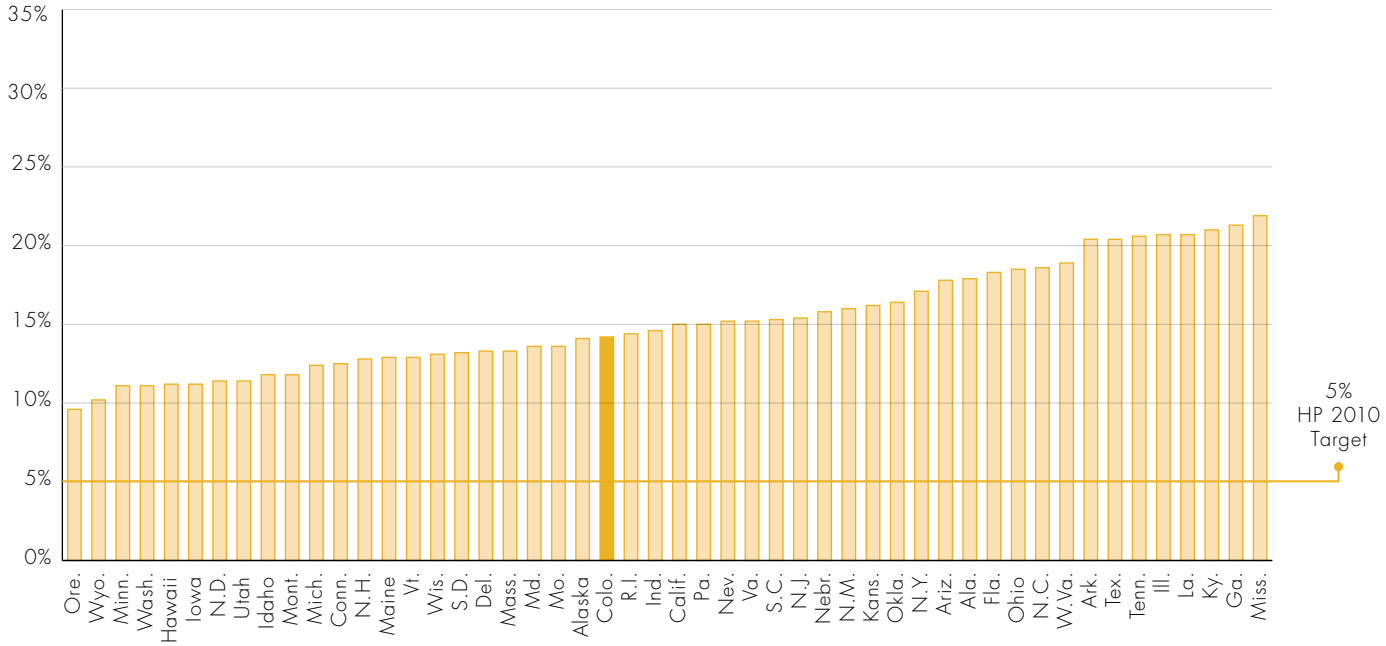
In 1998, the U.S. Department of Agriculture (USDA) launched a childhood obesity prevention initiative through the Women, Infants and Children Supplemental Nutrition Program (WIC) called *FIT WIC*. Five *FIT WIC* projects were funded over three years in California, Kentucky, Vermont, Virginia and the Inter Tribal Council of Arizona. Each project team developed tailored programs to increase healthy eating behaviors and physical activity levels among their WIC participants.[4]

Obesity (continued)

In Vermont the WIC program serves half of all pregnant women and infants in the state and about 35 percent of all children under the age of 5 years. The Vermont *FIT WIC* project developed the "FIT WIC Activity Kit" to increase active physical playtime and decrease sedentary time for 3- and 4-year-olds. WIC mothers were given an activity kit with information about the important relationship between cognitive and physical development, ideas for incorporating physical activity into everyday routines, specific skill-building activities designed to enhance physical development and learning among young children and information about active community resources for family outings.

Within two weeks of receiving the activity kit, almost three-fourths of WIC mothers reported using it at least four times throughout the week. WIC mothers also reported increased confidence in their ability to teach play skills to their children and increases in the time their child spent in active play throughout the day.

Obese children[7]



Text

1. Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.
2. Centers for Disease Control and Prevention. "Overweight Prevalence"; June 20, 2008.
   Arkansas Center for Health Improvement. "Tracking Progress: Third Annual Arkansas Assessment of Childhood and Adolescent Obesity"; August 2006.
3. Colorado Department of Public Health and Environment. Child Health Survey, 2008.
4. The Center for Weight and Health, *FIT WIC*.

Charts

5. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2003 and 2007, Centers for Disease Control and Prevention.
6. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2007, Centers for Disease Control and Prevention.
7. **Source:** National Center for Health Statistics, National Survey of Children's Health, 2007, Centers for Disease Control and Prevention.

Healthy Adolescents

The transitional years of adolescence pose special challenges for establishing good health habits. Compared to other states, Colorado's adolescents score relatively well on nutrition, weight, good mental health and avoiding risky sexual behaviors.

Too many, however, binge drink and smoke, and the number of births to teenage mothers, while lower than in the past, is still higher than in most states. Underlying all this is the same lack of health insurance—11 percent have none—found among younger children. Addressing these issues will enable Colorado's adolescents to enter adulthood with good health and good health habits.

Health Indicator	Rank among states
11.2 percent of adolescents are not covered by private or public health insurance	**31st**
10.5 percent of adolescents live in families with incomes below the federal poverty level	**13th**
19.2 percent of adolescents ate five or more servings per day of fruits and/or vegetables during the past seven days	**16th**
37.2 percent of adolescents participated in vigorous physical activity on five or more of the past seven days	**12th**
30.6 percent of adolescents had five or more drinks of alcohol in a row on one or more of the past 30 days	**41st**
18.7 percent of adolescents smoked cigarettes on one or more of the past 30 days	**18th**
25.0 percent of adolescents felt so sad or hopeless almost every day for two consecutive weeks during the past 12 months that they stopped doing some usual activities	**9th**
6.7 percent of adolescents attempted suicide one or more times during the past 12 months	**7th**
29.5 percent of adolescents were sexually active in the past three months	**6th**
Among students who had sexual intercourse during the past three months, **69.3 percent** reported using a condom during last sexual intercourse	**5th**
Teen fertility rate (**43.8 births to teen mothers per 1,000 teenage women**)	**31st**
Average Rank	**17.2**
Average Grade	**B-**

Policy Overview

Healthy Adolescents

How are we doing?

Colorado's adolescents earned a grade of B- on the 2009 Report Card. Among the indicators where Colorado teens' rankings are in the lower half of states are lack of health insurance coverage (31 of 50), binge drinking (41 of 50) and teen fertility (31 of 50). In general, Colorado teens report engaging in less recent sexual activity (30 percent) and have a higher rate of condom use (69 percent) than their peers in other states.

What is Colorado doing right?

In 2005, Colorado's teens ranked 5th and 6th respectively among the states for condom use and engaging in recent sexual activity. To promote a standardized science-based sex education curriculum, the Colorado General Assembly passed HB 07-1292 to require school districts, family resource centers and teen pregnancy prevention programs to offer science-based instruction in human sexuality. The bill encourages parental involvement with their teens, emphasizes abstinence, provides curriculum content about the health benefits and potential side effects of different forms of contraception, including information about emergency contraception and discusses the moral, ethical and religious values associated with human sexuality.

Colorado policymakers have taken steps to address the high teen fertility rate in the state. Between 1996 and 2005 a community-based pilot program for Medicaid eligible at-risk teens and teen parents was implemented to decrease high pregnancy rates. Supportive services consisted of intensive individual and group counseling, vocational and educational guidance, and provision of health services. Results from the pilot program found enrolled teens had a pregnancy rate of 1 percent compared to 23 percent for at-risk teens not enrolled.

Due to these findings and other evidence-based national research, HB 06-1351 was passed eliminating the pilot status of the program and expanding it across the state through Sept. 1, 2010. Program funding consists of 90 percent federal funds and 10 percent local matching funds.

Where can Colorado improve?

Colorado ranks 41st among the states for adolescents who binge drink (i.e. defined as consuming five or more drinks of alcohol in a row within a couple of hours on one or more of the past 30 days). Binge drinking among Colorado's teens is three times higher than the best performing state (Utah) suggesting there is room for improvement and best practices for getting there.

Studies have shown that an increased tax on alcohol products can reduce consumption of alcohol and reduce the prevalence of alcohol-related health problems in the population. In 2005, Utah ranked No.1 for the lowest rate of adolescent binge drinking. Utah has one of the highest beer taxes at $0.41 per gallon in the country. Hawaii, the state with the second lowest rate of adolescent binge drinking, has an even higher beer tax at $0.93 per gallon. In contrast, Colorado only has a $0.08 per gallon beer tax which is one of the lowest in the country. Similarly, Utah and Hawaii also tax wine and spirits at higher rates compared to other states, whereas Colorado's overall alcohol taxes are relatively low by comparison.

Uninsured

Healthy Adolescents

Most recent CO value (2006–2008)	CO rank (2006–2008)	CO value (2006–2008)	Best state (2006–2008)	Best state value (2006–2008)	HP2010 target
11.2%	31/50	11.2%	Hawaii	5.2%	0%

Indicator Definition

Adolescents (ages 13–17 years) are considered uninsured if they did not have a public or private source of health care coverage for the entire past calendar year.

Indicator Significance

Over the past decade, the percentage of adolescents covered by health insurance in the United States has increased for poor and near-poor families due to growth in public insurance programs such as Medicaid and the State Child Health Insurance Program (SCHIP), known in Colorado as Child Health Plan *Plus* (CHP+). Insurance coverage plays a critical role in ensuring access to health care services. Adolescents who have insurance coverage are more likely to have an ongoing relationship with a primary care physician. Since health status is linked to high school performance, having a continuous and reliable source of primary care is an important determinant of success.

Although poor and near-poor families make up one-third of the total population, they represent two-thirds of uninsured adolescents.[1]

Colorado Specifics

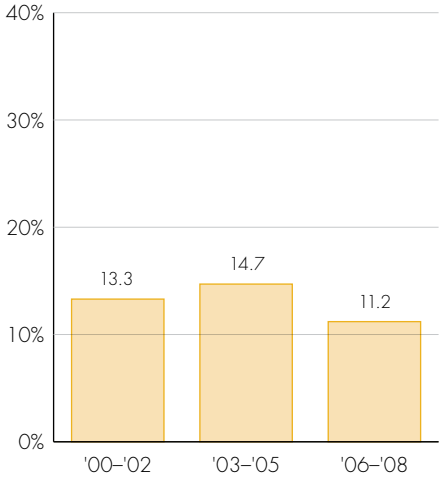
Colorado ranks 31st in insurance coverage for adolescents. According to the U.S. Census Bureau's Current Population Survey, uninsurance rates for Colorado adolescents declined from 13 percent during 2000–2002 to 11 percent during 2006–2008; however, an estimated 38,000 adolescents are still without health insurance.[2] Insurance coverage for adolescents is strongly associated with family income. Adolescents in families below the federal poverty level are roughly nine times more likely to be uninsured as those living in families at or above 400 percent of the federal poverty level.

Promising Initiatives

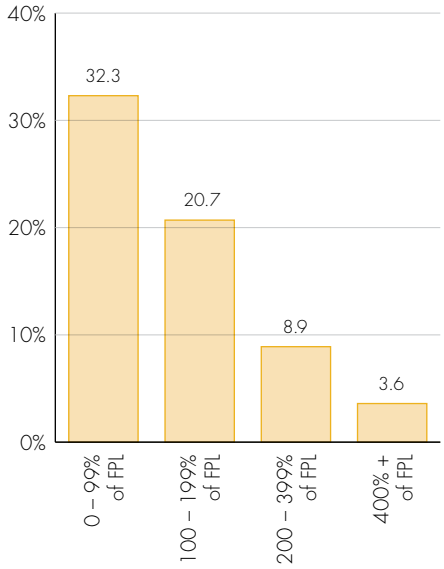
School-based health centers (SBHCs) are clinics located in schools or on school grounds designed to improve access to primary health care, reduce absenteeism, reduce emergency department utilization and improve age appropriate screening and immunizations for children up to the age of 18 years. SBHCs are staffed primarily by nurses who utilize a multi-disciplinary approach to primary care by coordinating with behavioral health specialists and oral health professionals when available.[3]

During the 2007–2008 academic year, 18 SBHC programs operated 44 clinic sites in schools across Colorado. Approximately 26,650 children and adolescents in Colorado were served, 50 percent of who were uninsured.

Adolescents without health insurance in Colorado[4]

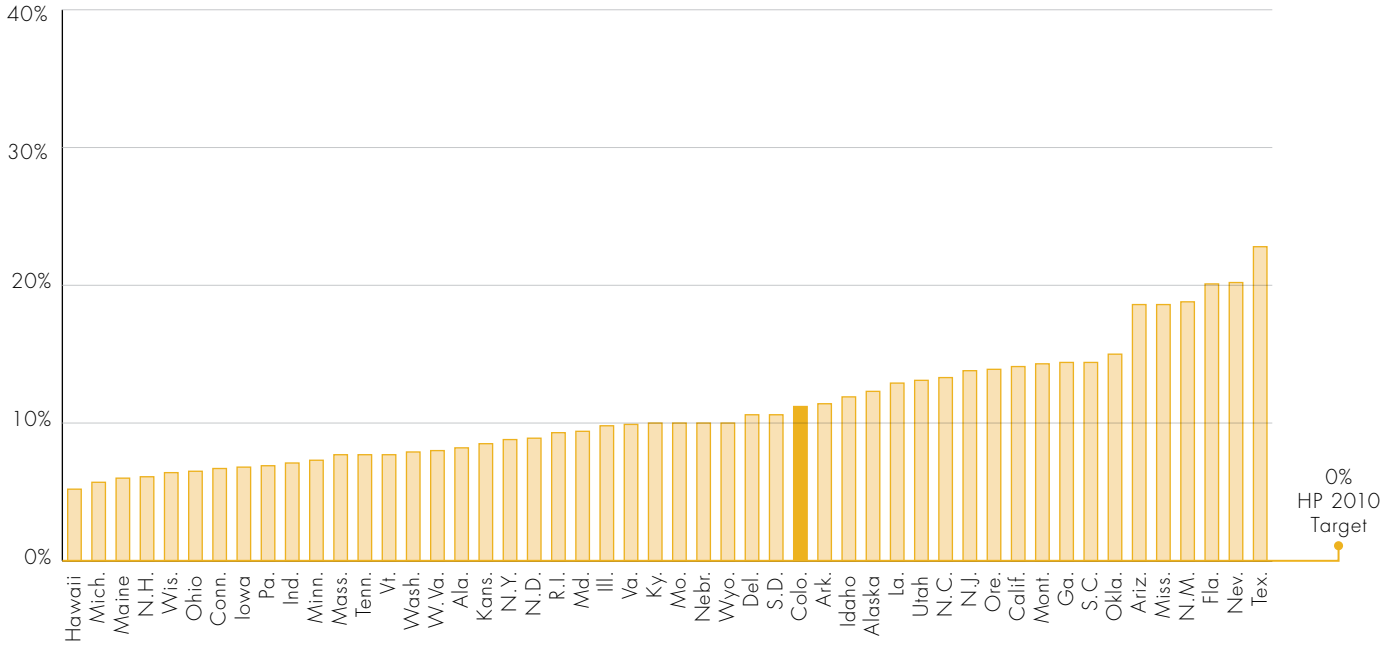


Adolescents without health insurance by income in Colorado[5]



Uninsured (continued)

Adolescents without health insurance[6]



Text

1. Newacheck, P.W., et al. "Trends in Public and Private Health Insurance for Adolescents." *Journal of the American Medical Association*; March 10, 2004.
2. Population estimates based on the Current Population Survey (2006–2008) and refer to adolescents ages 13 to 17 years.
3. Colorado Association for School-Based Health Care.

Charts

4. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2000–2008.
5. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2006–2008.
6. **Source:** U.S. Census Bureau, Current Population Survey, 2006–2008.

Poverty

Healthy Adolescents

Most recent CO value (2006–2008)	CO rank (2006–2008)	CO value (2006–2008)	Best state (2006–2008)	Best state value (2006–2008)	HP2010 target
10.5%	13/50	10.5%	New Hampshire	5.2%	NA

Indicator Definition

The percentage of teens (ages 13–17 years) who live in a family with an annual income below the federal poverty level, which in 2007 was $20,650 for a family of four.

Indicator Significance

Currently, one in every four Colorado students fails to graduate from high school. Educational attainment has been shown to have a significant impact on earning potential and health status in the United States. The U.S. Census Bureau estimates the annual income differential between working individuals with a high school diploma and those who did not complete high school was, on average, $8,454.[1]

Colorado Specifics

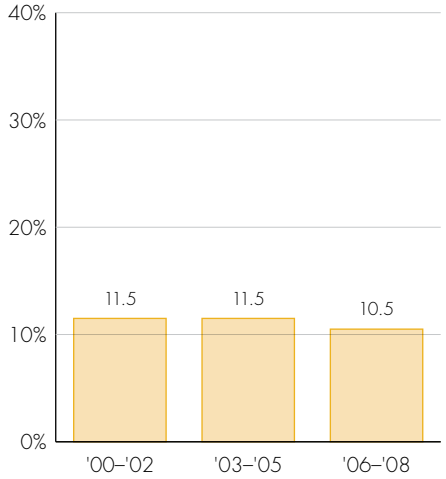
Colorado's 11 percent adolescent poverty rate is 13th lowest among the states. The rate has stayed relatively constant since 2000. Adolescents living in poverty are found in Colorado's urban and rural communities. Poverty disproportionately affects minority adolescents with both black and Hispanic adolescents much more likely to be living in poverty than their white peers. These large disparities in adolescent poverty rates help explain the ethnic disparities in other health indicators.

Promising Initiatives

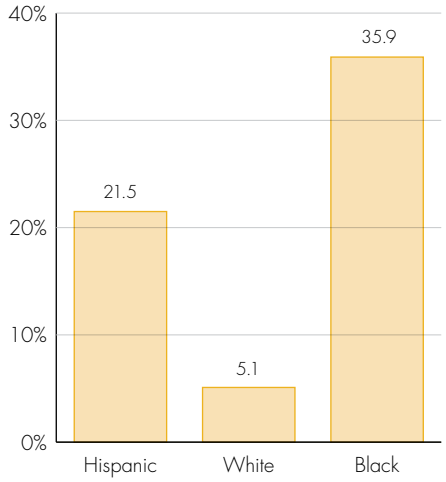
House Bill 09-1243 was signed into law in May 2009 for the purpose of supporting schools that implement evidence-based solutions to reduce high school dropout rates. The legislation creates an Office of Dropout Prevention and Student Re-engagement in the Colorado Department of Education which is responsible for identifying school districts with high dropout rates and providing them targeted assistance. The bill also establishes a grantmaking program to help school districts provide educational services to engage students at risk of dropping out.[2]

An example of one evidence-based dropout prevention program is the *Leadership and Resiliency Program* implemented in Fairfax, Virginia. This community-based program for high school students ages 14 to 17 focuses on reinforcing individual strengths while preventing opportunities for engaging in substance abuse and violence. Alternative activities include weekend outdoor expeditions, volunteer community service and after-school support groups.[3]

Adolescents living in families with incomes below the federal poverty level *in Colorado*[4]

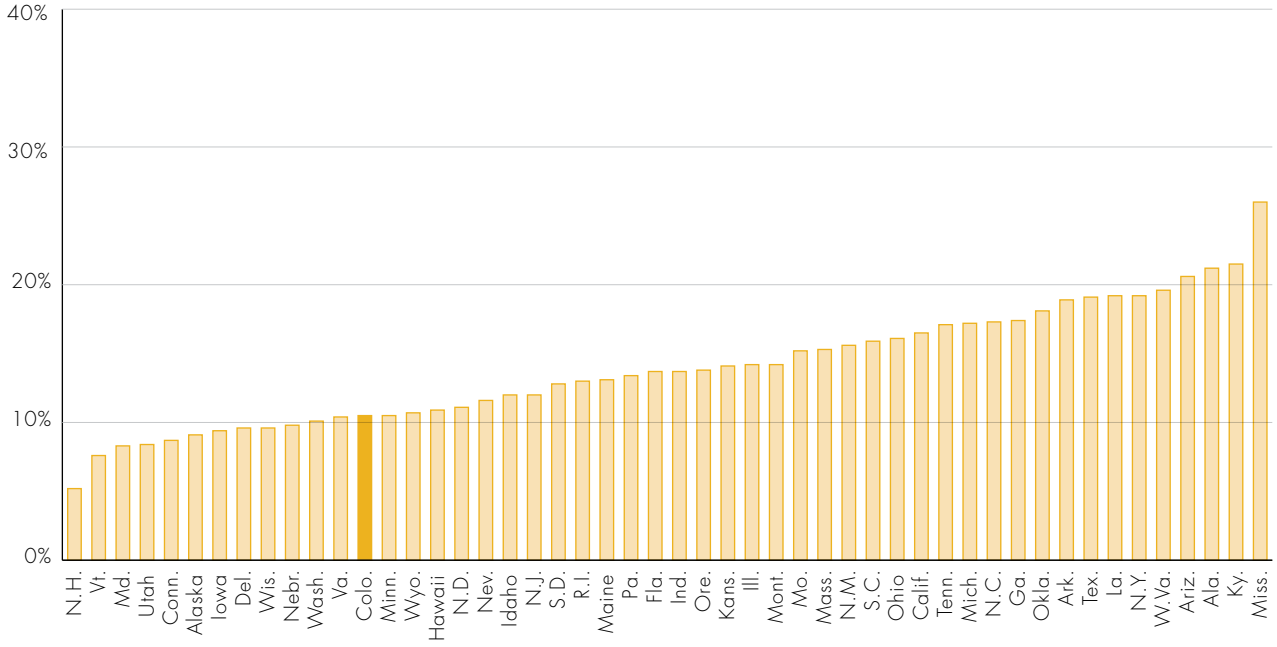


Adolescents living in families with incomes below the federal poverty level *by race/ethnicity in Colorado*[5]



Poverty (continued)

Adolescents living in families with incomes below the federal poverty level[6]



Text

1. U.S. Census Bureau. "U.S. Census Bureau Report on Educational Attainment in the United States, 2003."
2. Colorado House Bill 09-1243, Dropout Prevention and Student Re-engagement.
3. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.

Charts

4. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2000–2008.
5. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2006–2008.
6. **Source:** U.S. Census Bureau, Current Population Survey, 2006–2008.

Nutrition

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
19.2%	11/34 = 16/50	19.2%	Rhode Island	25.4%	75%

Indicator Definition

High school students who report eating five or more servings of fruits and vegetables every day for the past seven days.

Indicator Significance

According to results from the Youth Risk Behavior Survey, the state with the highest percentage of high school students reporting optimum consumption of fruits and vegetables is Rhode Island at 25 percent. During adolescence, there is a tendency for teens to engage in poorer eating habits than in childhood when their eating is more closely monitored by parents. Poor eating habits in adolescence can have serious health consequences in later life, including osteoporosis, obesity and immature adult stature. Eating disorders are most prevalent during this period of physical development. Nutritional surveys indicate that the highest prevalence of nutritional deficiencies occurs during adolescence.[1]

Colorado Specifics

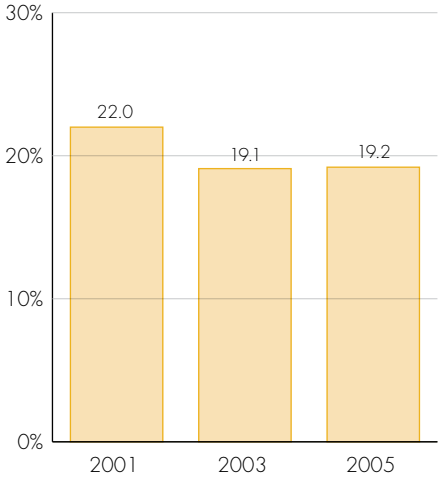
Colorado high school students report average fruit and vegetable consumption compared to teens in other reporting states. Since 2003, the number of high school students reporting an optimal consumption level of fruits and vegetables has slightly decreased. More boys report eating recommended amounts than do girls and white teens are more likely to eat recommended amounts of fruits and vegetables than are Hispanic teens.

Promising Initiatives

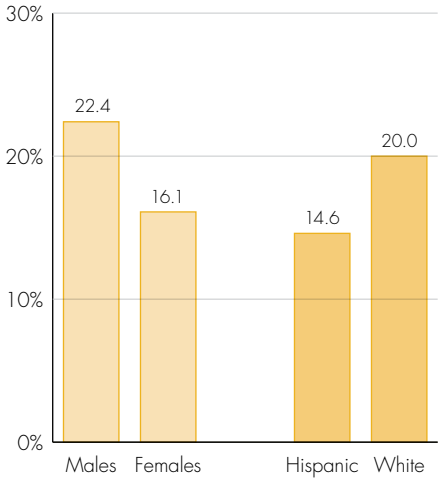
The *Farm to School* Initiative, led by Healthy Lifestyle La Plata, a LiveWell community, connects schools with local farms and ranches with the objective of serving healthy meals in school cafeterias and improving student nutrition and healthy eating habit education. The initiative began in 2005 when the Durango 9R School District started buying local produce for special events. The program has expanded to two other school districts in the county where 11 local food producers supply locally grown foods to the schools.[2] In an effort to make high-quality, fresh produce available to schools at a reasonable price, the district allocated an additional $500 per school from the existing food budget to purchase locally produced foods.

National evaluations of similar farm-to-school initiatives find that students' knowledge about healthy eating and locally grown foods increases significantly when fresh produce is available in the school cafeteria. In turn, healthy eating at school has a positive effect on the food purchasing behavior of parents who report a greater awareness of the nutritional value of fresh fruits and vegetables in the diet.[3]

High school students who ate five or more daily servings of fruits and vegetables in past seven days *in Colorado*[4]

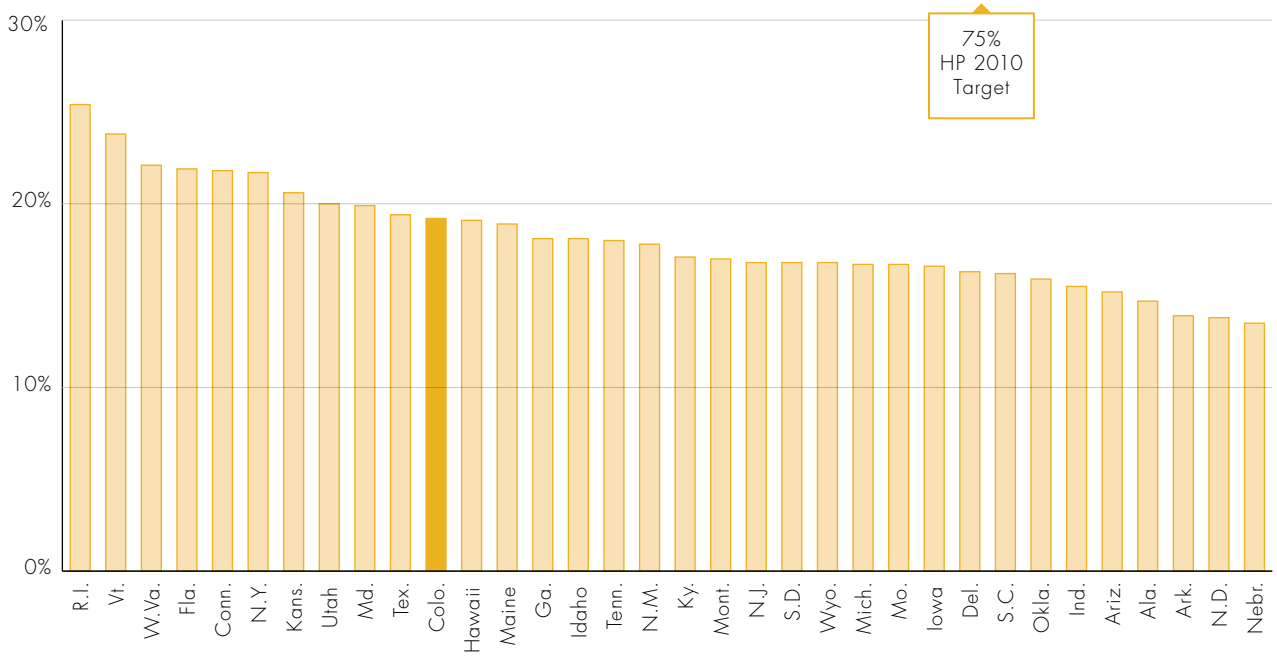


High school students who ate five or more daily servings of fruits and vegetables in past seven days *by gender and race/ethnicity in Colorado*[5]



Nutrition (continued)

High school students who ate five or more daily servings of fruits and vegetables in past seven days[6]



Text

1. University of Chicago Pritzker School of Medicine, "Adolescent Nutrition."
2. U.S. Department of Agriculture, Cooperative State Research, Education and Extension Service.
3. LiveWell Colorado.

Charts

4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.
5. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.
6. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Vigorous Exercise

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
37.2%	7/30 = 12/50	37.2%	North Carolina	45.9%	NA

Indicator Definition

Percentage of students who were physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on five or more of the 7 days before the survey.

Indicator Significance

The adolescent years are characterized as a time of seeking greater personal autonomy and choice and therefore lifestyle decisions made during adolescence will likely affect present, as well as future health status. Patterns of activity change during the teen years, with environmental and social factors often encouraging inactivity. Adolescents go from the active play of childhood to more sedentary activities that involve talking or "hanging out." Television, computers and video games increasingly serve as primary recreational outlets for teens. Prolonged periods of inactivity can lead to overweight and obesity, which in turn increase the risk for chronic diseases such as diabetes.[1]

Colorado Specifics

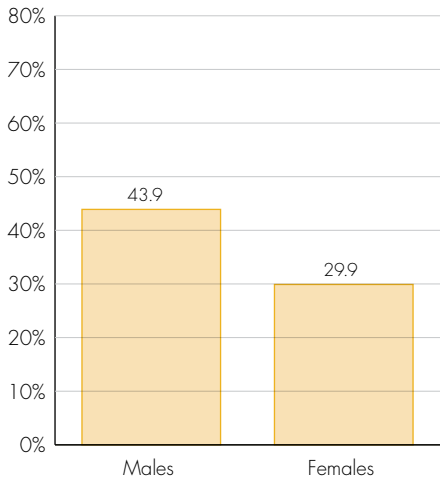
Colorado high school students fare decent in comparison to students in other states with regard to reported levels of physical activity, ranking seventh among 30 reporting states. Although Colorado ranks higher than most states, the most recent data show that only 37 percent of high school students meet recommended levels of physical activity. Mirroring national trends, minority youth and girls in Colorado are somewhat less likely to engage in vigorous physical activity than other groups.[2]

Promising Initiatives

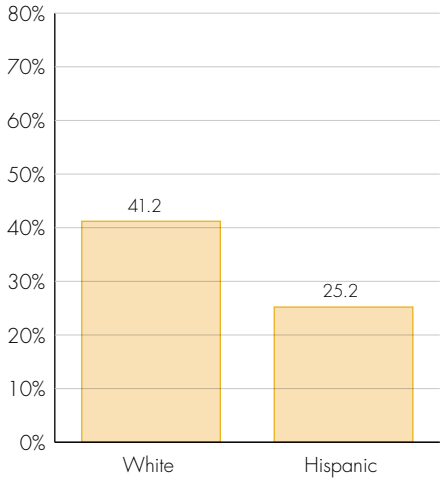
Sports4Kids was developed in Berkeley, California, in 1995 to engage children and adolescents in physical activities during and after school hours. The program now serves more than 65,000 students in 170 low-income public schools in Baltimore, Boston, New Orleans, the greater San Francisco Bay Area, St. Louis and Washington D.C. The Robert Wood Johnson Foundation recently teamed up with *Sports4Kids* to provide expansion funding to reach one million children and adolescents by 2010.

Sports4Kids addresses the whole child (physical, emotional and cognitive) through coordinated physical activity during lunchtime, recess and after school. It is offered in public schools with 50 percent or more students who are eligible for free or reduced-price lunches. A 2006 survey of school principals found that 94 percent believed their students were more physically active since *Sports4Kids* was

High school students who participated in vigorous physical activity 5 or more days in the past week by gender in Colorado[4]



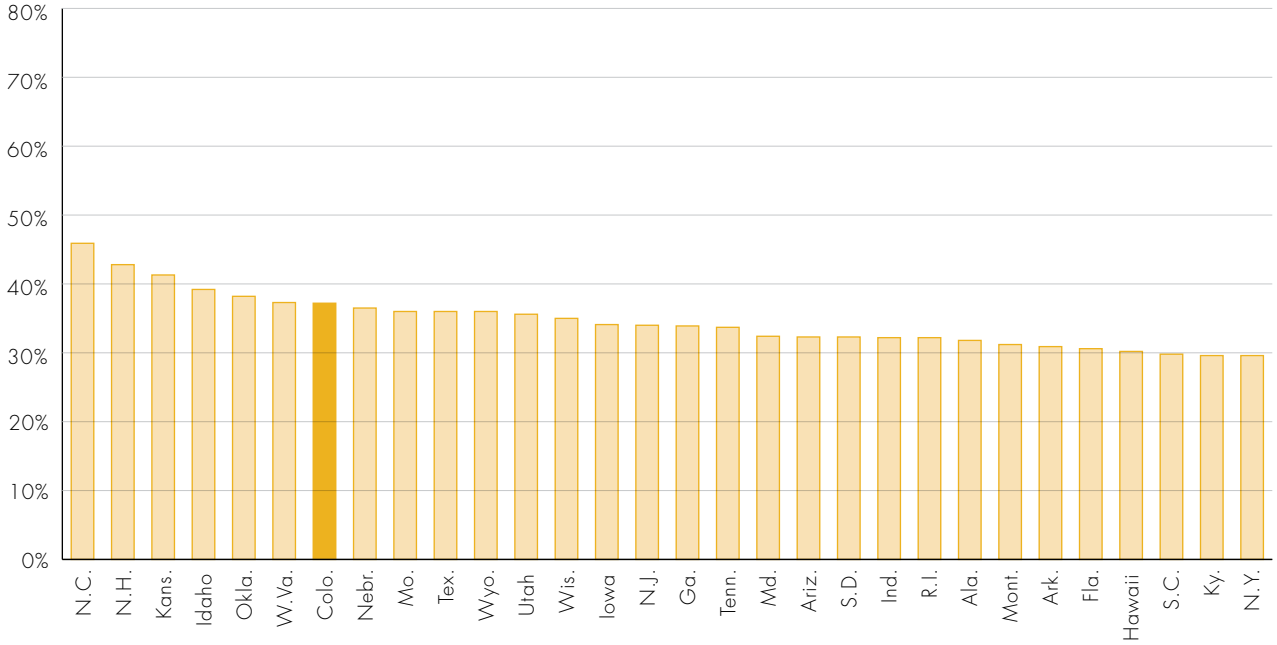
High school students who participated in vigorous physical activity five or more days in the past week by race/ethnicity in Colorado[5]



Vigorous Exercise (continued)

implemented in their school. Additionally, 70 percent reported that there were fewer playground fights than the previous year and 61 percent of teachers said students were more focused in the classroom.[3]

High school students who participated in vigorous physical activity five or more days in the past week[6]



Text

1. Hardy, L.L., et al. "Changes in sedentary behavior among adolescent girls: A 2.5-year prospective case study." *Journal of Adolescent Health*; February 2007. U.S. Department of Health and Human Services. "Improving the Health of Adolescents and Young Adults: A guide for states and communities"; 2004.
2. Colorado Connections for Healthy Schools. "Making the Connection Between Health and Learning"; 2005.
3. *Sports4Kids*.

Charts

4. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.
5. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.
6. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Binge Drinking

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
30.6%	33/40 = 41/50	30.6%	Utah	8.8%	2%

Indicator Definition

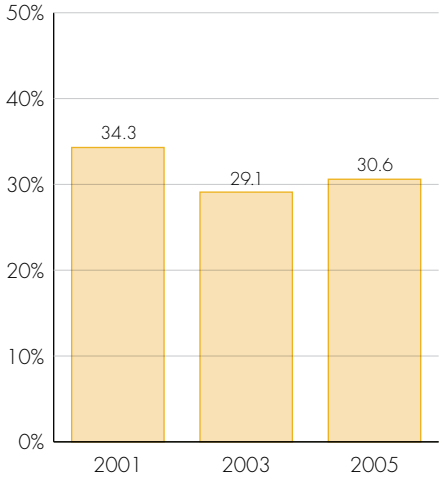
High school students who report having five or more drinks of alcohol within a couple of hours on one or more occasions over the past 30 days.

Indicator Significance

Teens who are binge drinkers during adolescence are more likely to be binge drinkers in early adulthood according to an analysis of National Longitudinal Survey of Youth data. Efforts to prevent and treat adolescent binge drinking are likely to have a positive impact on adult drinking patterns and therefore have an immediate, as well as a longer-term impact on population health.

On average, boys start drinking at age 11, girls at 13, and both are consuming regularly by age 16. Those who start drinking before age 15 are four times more likely to develop alcohol dependence. An estimated 3 million teenagers suffer from alcoholism. The leading causes of death in this age group are auto accidents, homicide and suicide, with alcohol a contributing factor in all three. In addition, depression, anxiety and anti-social personality disorders are all related to alcohol dependence in teens.[1]

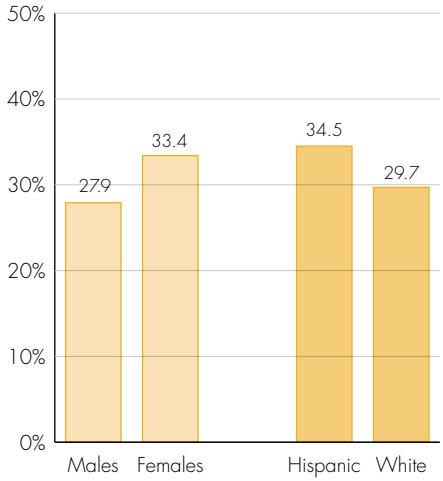
High school students who report binge drinking in Colorado[3]



Colorado Specifics

Colorado ranks 33rd out of 40 states reporting the percent of high school students who binge drink. This poor ranking is cause for concern as trends over the past six years do not show an appreciable change in this statistic. Girls and Hispanic high school students report slightly higher percentages of binge drinking (33 percent and 34 percent, respectively) than do boys (28 percent) and white students (30 percent).

High school students who report binge drinking by gender and race/ethnicity in Colorado[4]



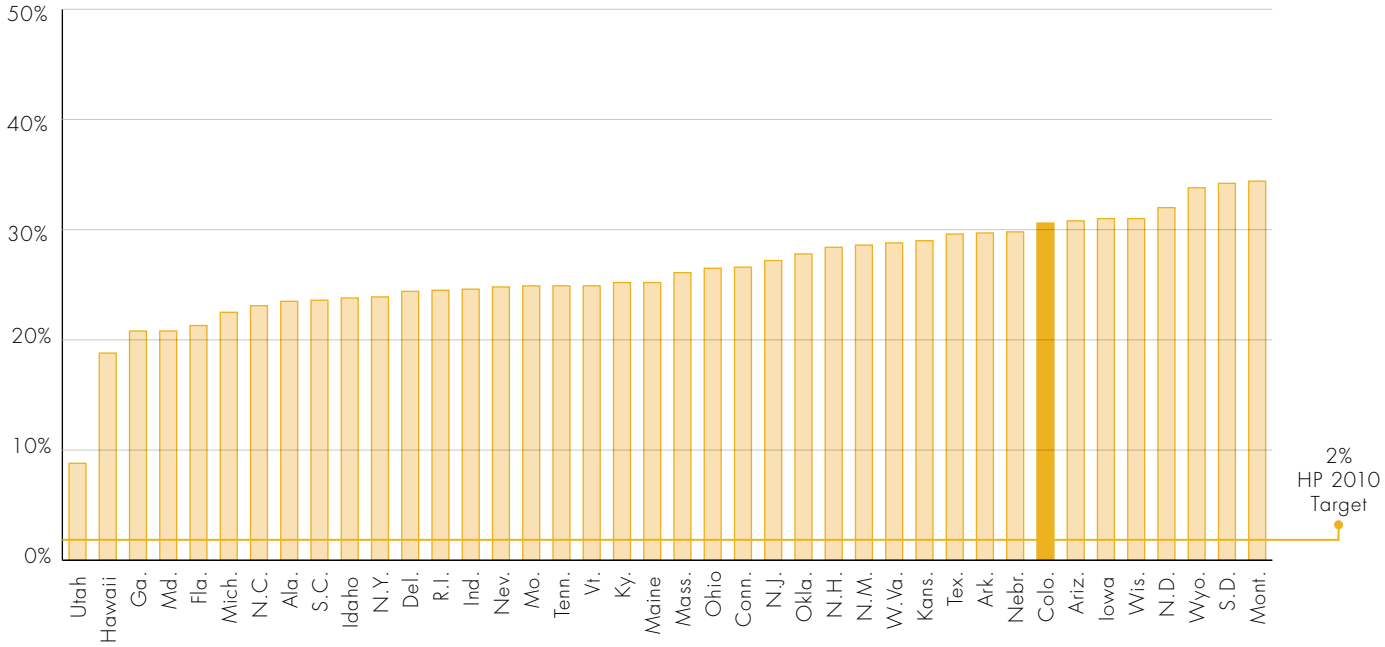
Promising Initiatives

Girls Circle, a structured support group for girls ages 9–18 years, provides skills training designed to increase positive social relationships and develop skills that promote self-esteem and competency across a range of life skills. Facilitators work with small groups of girls to build these competencies and counteract the negative forces that impede healthy growth and development. *Girls Circle* is recognized as a "promising approach" by the federal Office of Juvenile Justice and Delinquency Prevention. Plans are underway to implement this evidence-based program across several counties in Colorado at local health departments, mental health centers, high schools and juvenile justice districts.[2]

A 2006 evaluation study of 278 girls from 19 cities across the United States found statistically significant improvements in self-harming behaviors and alcohol use and increased attachment to school.

Binge Drinking (continued)

High school students who report binge drinking[5]



Text

1. Join Together. "Adolescent Binge Drinking Associated with Binge Drinking During Early Adulthood: Research Summary"; May 12, 2005. Focus Adolescent Services.
2. *Girls Circle.*

Charts

3. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.
4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.
5. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Smoking

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
18.7%	14/40 = 18/50	18.7%	Utah	7.4%	16%

Indicator Definition

Percentage of high school students who smoked cigarettes on one or more occasions during the past 30 days.

Indicator Significance

By the time they are 12th graders, one-quarter of adolescents have begun smoking cigarettes. Smoking can lead to decreased physical activity because of phlegm production and related respiratory problems. Lung development can also be retarded if cigarette smoking is started at an early age. Each day 6,000 children under age 18 start smoking, with 2,000 becoming regular smokers. If this trend continues, an estimated 6.4 million of today's adolescents will die prematurely from smoking-related illnesses. Most adolescents who have smoked 100 or more cigarettes report that they would like to quit but can't. Studies also link cigarette smoking to mental health problems such as depression.[1]

Colorado Specifics

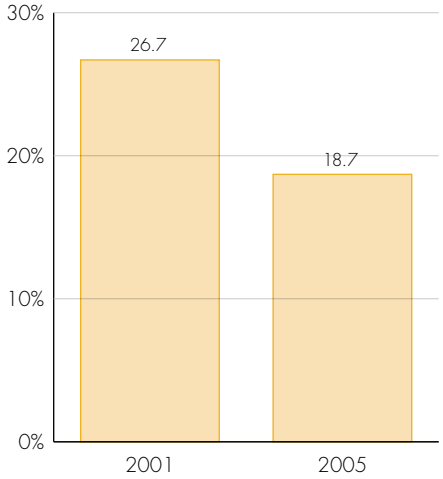
Colorado ranks 14th among the 40 states that collect data on adolescent smoking. While nearly one in five adolescents smoked in the past 30 days, Colorado's adolescent smoking rate has declined from 27 percent in 2001 to 19 percent in 2005. Hispanic adolescents are slightly less likely to smoke than white adolescents (16 percent vs. 19 percent).

Promising Initiatives

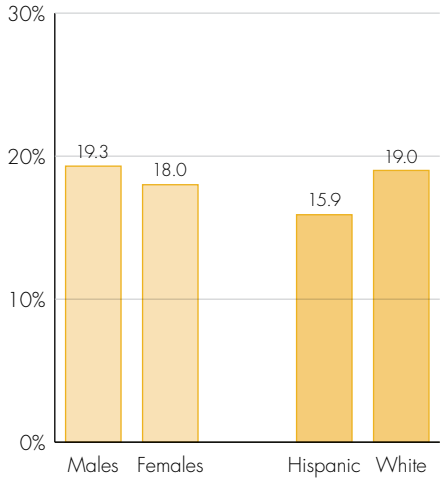
The *FixNixer* Web site was launched in Colorado in 2004 to help adolescents and adults find successful smoking cessation resources. The Web site assists users in developing a customized plan to quit smoking and set realistic goals, including a quit date; it is anonymous, free and includes an online community forum and QuitBlog.

FixNixer.com is sponsored by the Tobacco Education and Prevention Partnership of the Colorado Department of Public Health and Environment and is funded by the Amendment 35 tobacco excise tax.[2]

High school students who smoked cigarettes in past month *in Colorado*[3]

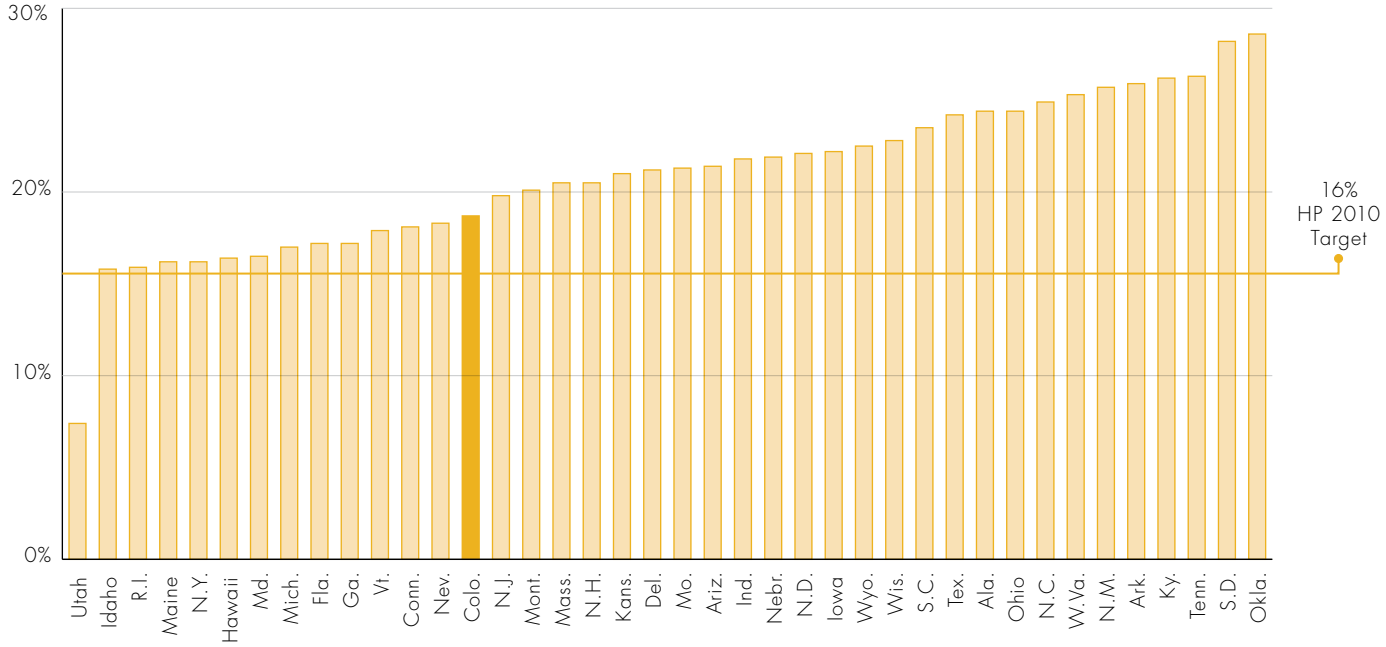


High school students who smoked cigarettes in past month *by gender and race/ethnicity in Colorado*[4]



Smoking (continued)

High school students who smoked cigarettes in past month[5]



Text

1. American Lung Association. "Adolescent Smoking Statistics"; November 2003.

   American Psychological Association. "Smoking increases teen depression." *Monitor on Psychology*; December 2000.

2. Colorado Department of Public Health and Environment.

Charts

3. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.

4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.

5. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Depression

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
25.0%	7/39 = 9/50	25.0%	North Dakota	20.3%	NA

Indicator Definition

High school students who report feeling sad or hopeless almost every day for two or more consecutive weeks during the past 12 months, and the feelings of sadness or hopelessness interfere with usual daily activities.

Indicator Significance

An estimated one in eight adolescents in the United States exhibits symptoms of depression. But because depression is also associated with other behavioral conditions such as anxiety and disruptive behavior, it is difficult to diagnose in adolescents. Because teens experience many hormonal changes that lead to relationship conflicts and other stresses associated with the normal maturation process, diagnosis is challenging. Mood shifts may last for several days but if negative behavior becomes long term with substance abuse and failing school performance, a more serious condition may be present. Teens experiencing depression are at higher risk for suicide and substance abuse.[1]

Colorado Specifics

Colorado appears to have fewer high school students reporting depressive symptoms compared to other states. However, over the past six years, the prevalence of students reporting depressive symptoms remains troublingly high—fluctuating between 25 and 31 percent. This high rate is cause for concern because depression can lead to suicide, alcohol and drug abuse, and school failure. Girls are almost three times more likely to suffer from depression than are boys, and Hispanic students report a higher percentage than their white peers (34 percent vs. 23 percent).

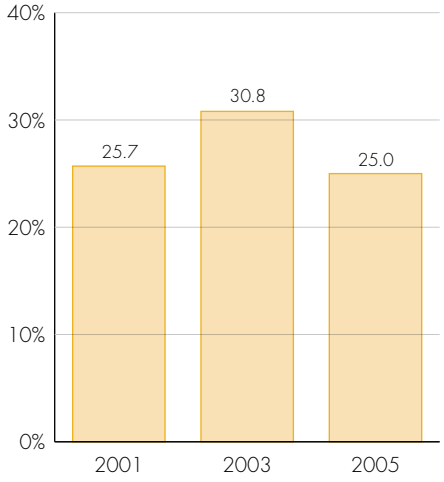
Promising Initiatives

Check Your Head, a program of Mental Health America of Colorado, uses hip hop as an intervention to address such issues as self-identity, peer pressure, depression and suicide among high school students. The program engages youth through a dedicated Web site, community events, and classroom and after-school clubs to educate youth about a range of mental health issues and linking them to accessible mental health resources.[2]

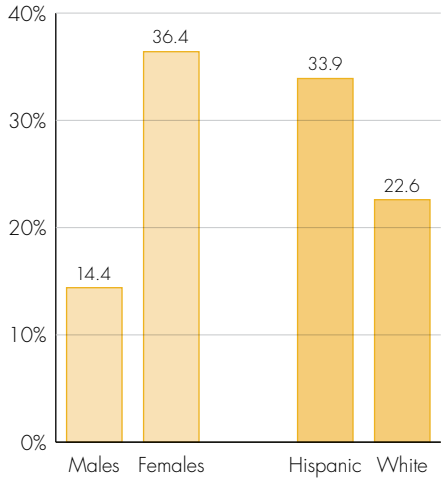
Check Your Head is currently being offered at East and Montebello High Schools in Denver. In 2009, 60 students at Montebello and 30 at East High School participated in the program.

Funding is provided through the Tony Grampsas Youth Services Program, a statutorily authorized program in the Child, Adolescent and School Health Unit of the Colorado Department of Public Health and Environment.

High school students who report being depressed *in Colorado*[3]

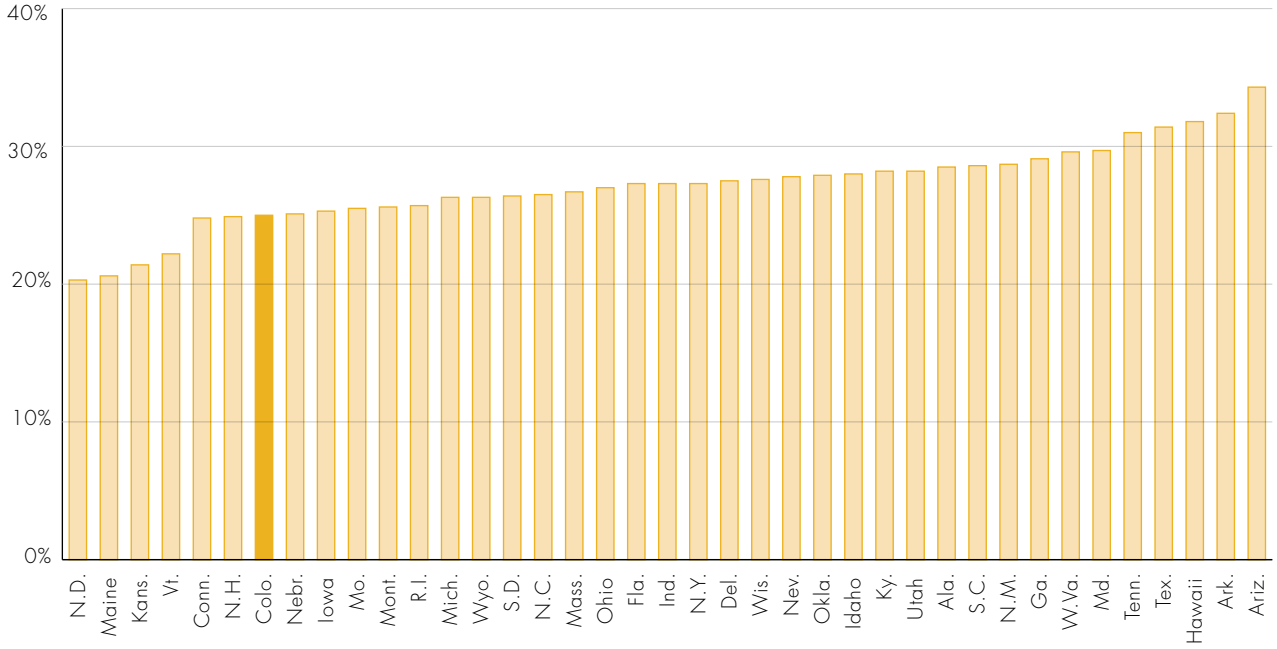


High school students who report being depressed *by gender and race/ethnicity in Colorado*[4]



Depression (continued)

High school students who report being depressed[5]



Text

1. MedlinePlus Medical Encyclopedia. "Adolescent Depression."
   National Institute of Mental Health. "Depression in Children and Adolescents"; August 2000.
2. Mental Health America of Colorado

Charts

3. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.
4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.
5. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Attempted Suicide

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
6.7%	6/40 = 7/50	6.7%	Vermont	6.2%	1%

Indicator Definition

High school students who report they have attempted suicide one or more times during the past 12 months.

Indicator Significance

Someone commits suicide every 17 minutes in the United States. Suicide peaks during mid-adolescence with approximately 2 million attempts each year. Although the overall suicide rate has decreased over time, it has nearly tripled for the 15–24 age group. Half of those who make one attempt are likely to make another. The best means to prevent suicide is education about how to recognize the warning signs often linked to mental illnesses such as chronic depression and bipolar disorder. Ninety percent of suicides are related to a history of mental illness rather than one singular event.[1]

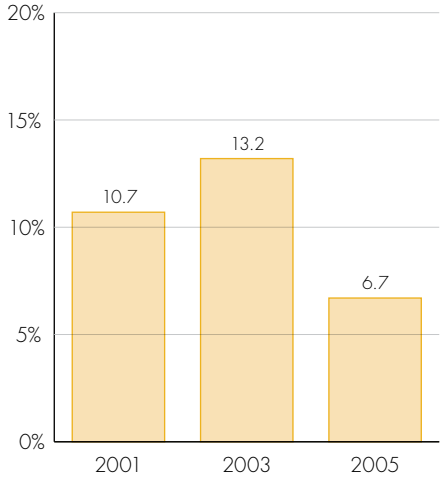
Colorado Specifics

The Rocky Mountain region has the highest suicide rate in the nation for all ages. Colorado loses approximately 48 teenagers each year to suicide, making it the second leading cause of death for those between the ages of 15–19. Yet compared to 40 other states, Colorado ranked sixth lowest in the percentage of high school students who attempted suicide in 2005. Suicide attempts among high school students have decreased in recent years, reaching 6.7 percent in 2005 compared to 13.2 percent in 2003. High school-aged girls are three times more likely to attempt suicide compared to boys, and percentages are higher among Hispanics than white high school students.[2]

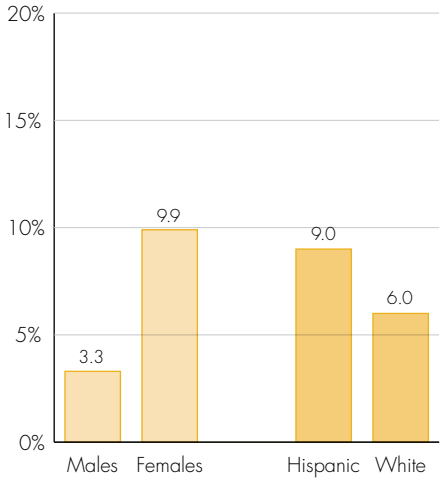
Promising Initiatives

A grassroots community effort in Jefferson County started in 2002 has grown into the *Second Wind Fund*. The program collaborates with schools to identify and get help for students at risk of suicide and helps connect them to mental health providers that provide free or reduced-fee counseling services. Currently, the *Second Wind Fund* has a network of more than 60 mental health providers who have agreed to be affiliated clinicians across the Denver Metro Area (Adams, Arapahoe, Broomfield, Denver, Jefferson and Park counties). Efforts are underway to expand the network to Douglas, El Paso, Mesa, Boulder and Teller counties. *Second Wind* affiliates have provided services to nearly 1,700 youth and project serving nearly 500 more in the 2009-10 school year.[3]

High school students who attempted suicide in past year *in Colorado*[4]

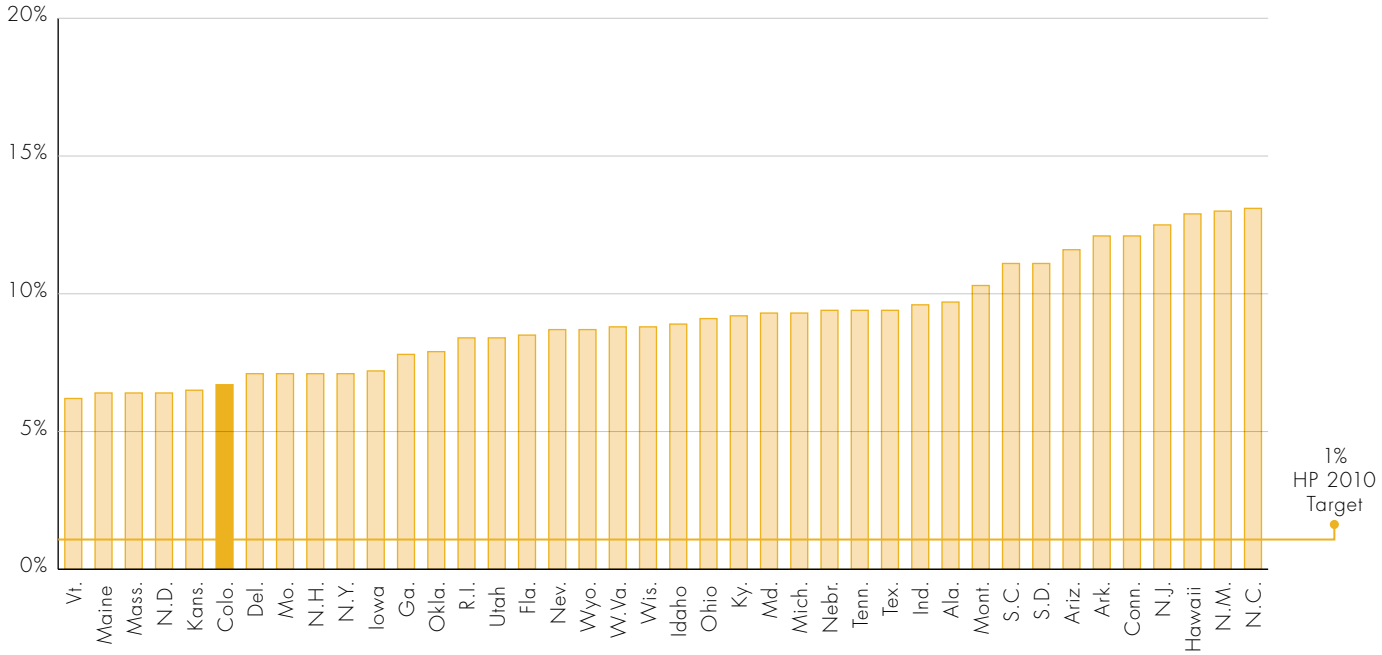


High school students who attempted suicide in past year *by gender and race/ethnicity in Colorado*[5]



Attempted Suicide (continued)

High school students who attempted suicide in past year[6]



Text

1. National Adolescent Health Information Center. "2006 Fact Sheet on Suicide."
   National Alliance on Mental Illness. "About Mental Illness: Suicide in Youth"; June 2003.
2. Colorado Connections for Healthy Schools. "Mental Health Among Colorado's Youth."
   Colorado State University Extension. "Youth and Suicide."
3. Desai, R., et al. "Mental health service delivery and suicide risk: The role of individual patient and facility factors." *American Journal of Psychiatry.* 162(2): 311-318; 2005.
   Second Wind Fund.

Charts

4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.
5. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.
6. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Sexually Active

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
29.5%	3/27 = 6/50	29.5%	New York	29.2%	NA

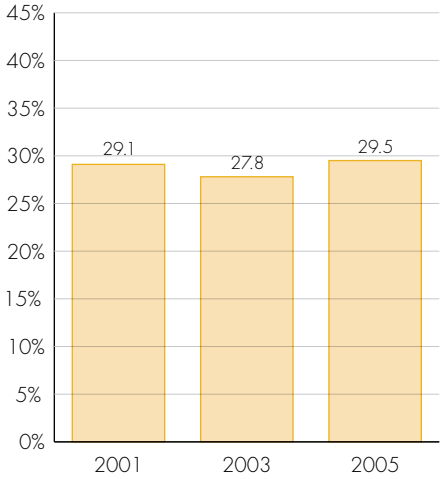
Indicator Definition

Percentage of high school students who had sexual intercourse with one or more people during the past three months.

Indicator Significance

Over the past decade, the incidence of sexual intercourse among students has decreased, even as contraceptive use has shown an overall increase. These combined factors have contributed to a decrease in teen pregnancy. However, sexually transmitted diseases (STDs) among adolescents have experienced a dramatic and consistent increase. An estimated 4 million teens in the United States have contracted an STD. Fewer than half of high school students report having sexual intercourse, with the percentage increasing by grade level. Boys and lower socioeconomic teens report higher rates of sexual activity. The younger the girl who becomes sexually active, the greater the typical age difference between her and her partner, and the more likely she will have an unintended pregnancy. Adolescents who have never had sexual intercourse say concerns about pregnancy, STDs, and HIV/AIDS influence their abstinence. Teens say they wish they had more information regarding sexual behavior and choice.[1]

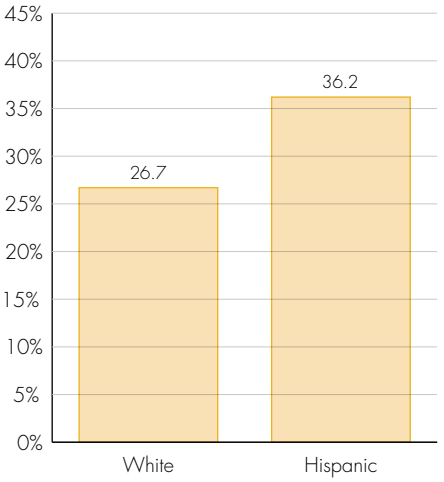
High school students who report being ***sexually active*** *in Colorado*[3]



Colorado Specifics

Colorado ranks third among the 27 states that collect data on adolescent sexual activity. Nevertheless, nearly one-third of Colorado adolescents reported having had sexual intercourse within the past three months, a rate that has changed little in the past five years. Hispanic teenagers are somewhat more likely to report being sexually active than white teenagers.

High school students who report being ***sexually active*** *by race/ethnicity in Colorado*[4]



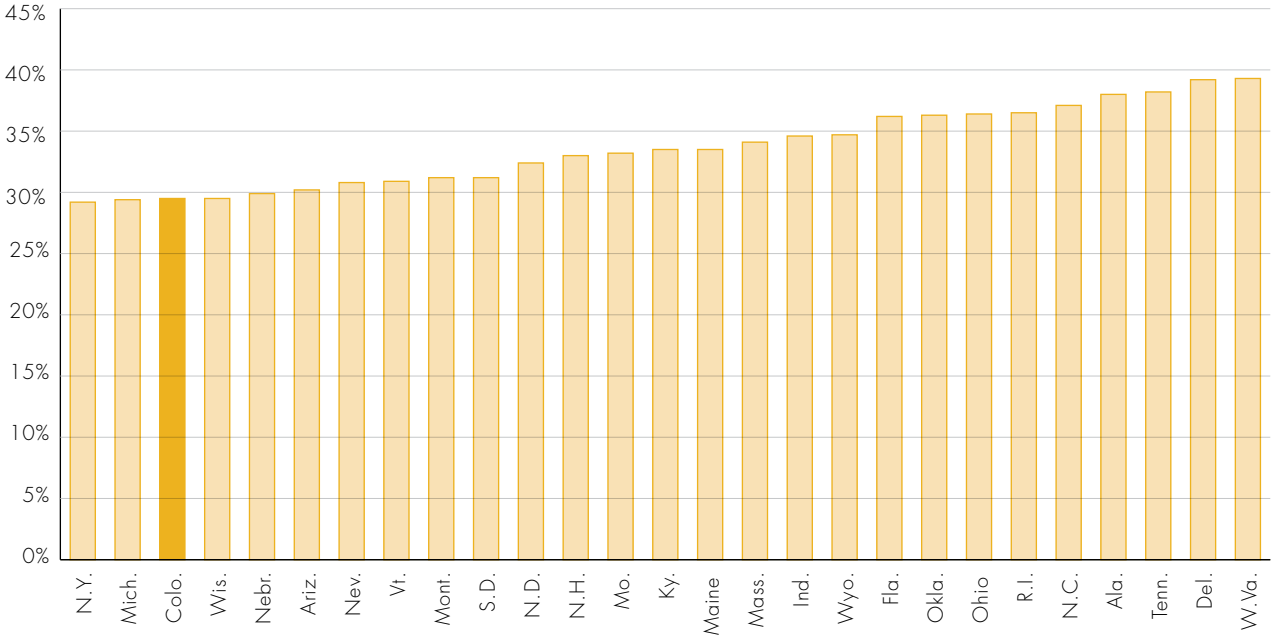
Promising Initiatives

¡Cuídate! (Take Care of Yourself) is a cultural-based intervention to reduce HIV risk among Hispanic youth. The intervention consists of six 60-minute modules delivered to small groups of teens. Through role playing, videos, music, interactive games and hands-on practice, *¡Cuídate!* teaches teens about HIV, identifies prevalent attitudes and misinformation about HIV, safe sex and teaches correct condom use while negotiating abstinence and safer sex practices. The program incorporates aspects of Hispanic culture and how cultural beliefs frame discussions about abstinence, condom use and prevention of sexually transmitted diseases.[2]

Denver Area Youth Services recently received funding from the Centers for Disease Control and Prevention to implement the *¡Cuídate!* curriculum at Lincoln High School and then to expand it to Bryant Street Academy in Denver.

Sexually Active (continued)

High school students who report being sexually active[5]



Text

1. "U.S. Teen Sexual Activity," Kaiser Family Foundation.
2. Centers for Disease Control and Prevention (CDC), Best Evidence, *¡Cuídate! (Take Care of Yourself)* Denver Area Youth Services

Charts

3. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.
4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.
5. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Condom Use

Healthy Adolescents

Most recent CO value (2005)	CO rank (2005)	CO value (2005)	Best state (2005)	Best state value (2005)	HP2010 target
69.3%	3/32 = 5/50	69.3%	New Jersey	71.2%	95%

Indicator Definition

Percent of high school students sexually active in the last month who reported using a condom.

Indicator Significance

One in four of the 15 million new cases of sexually transmitted diseases (STDs) each year occurs among teenagers. Although condom use has increased in the past decade, no significant increase in use occurred between 2003 and 2005. Unprotected intercourse increases both the risk of spreading STDs and unintended pregnancy. Condom use is highest among black teenagers and younger students (9th grade). Older students (12th grade) are likely to use other forms of contraception, which compromises the goal of decreasing STD transmission.[1]

Colorado Specifics

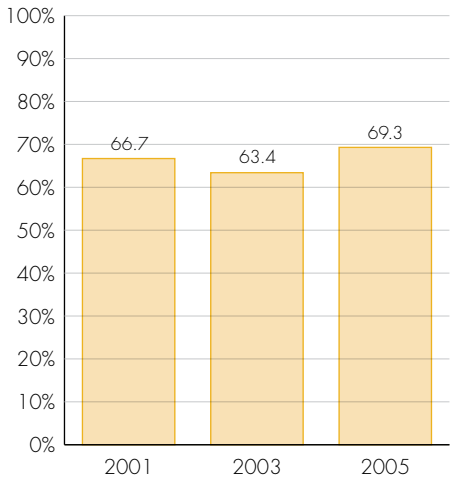
Colorado ranks third among the 32 states that monitor condom use among sexually active high school students. Nevertheless, only about two-thirds of all students who reported being sexually active in the past month also reported using a condom, a rate that has been stable since 2001.

Promising Initiatives

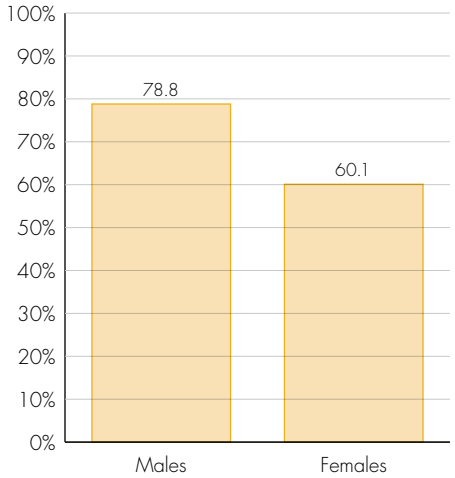
Safer Choices is a two-year, school-based, sexually transmitted disease and teen pregnancy prevention program that aims to educate adolescents about unprotected sex while encouraging abstinence and condom use among sexually active teens. The program includes a classroom curriculum coupled with school-based activities. It was recently identified as a "program that works" by the Centers for Disease Control and Prevention. This evidence-based program is currently being implemented in Colorado through Planned Parenthood of the Rocky Mountains.[2]

An evaluation conducted in 20 high schools in California and Texas found the program was effective at increasing contraceptive and condom use among students enrolled in the program. Sexually active teens were almost twice as likely to use birth control and condoms or condoms alone after completing the program. Further, Hispanic youth were significantly more likely to delay initiation of sexual activity compared to those not involved in the program.

High school students who were sexually active and used condoms *in Colorado*[3]

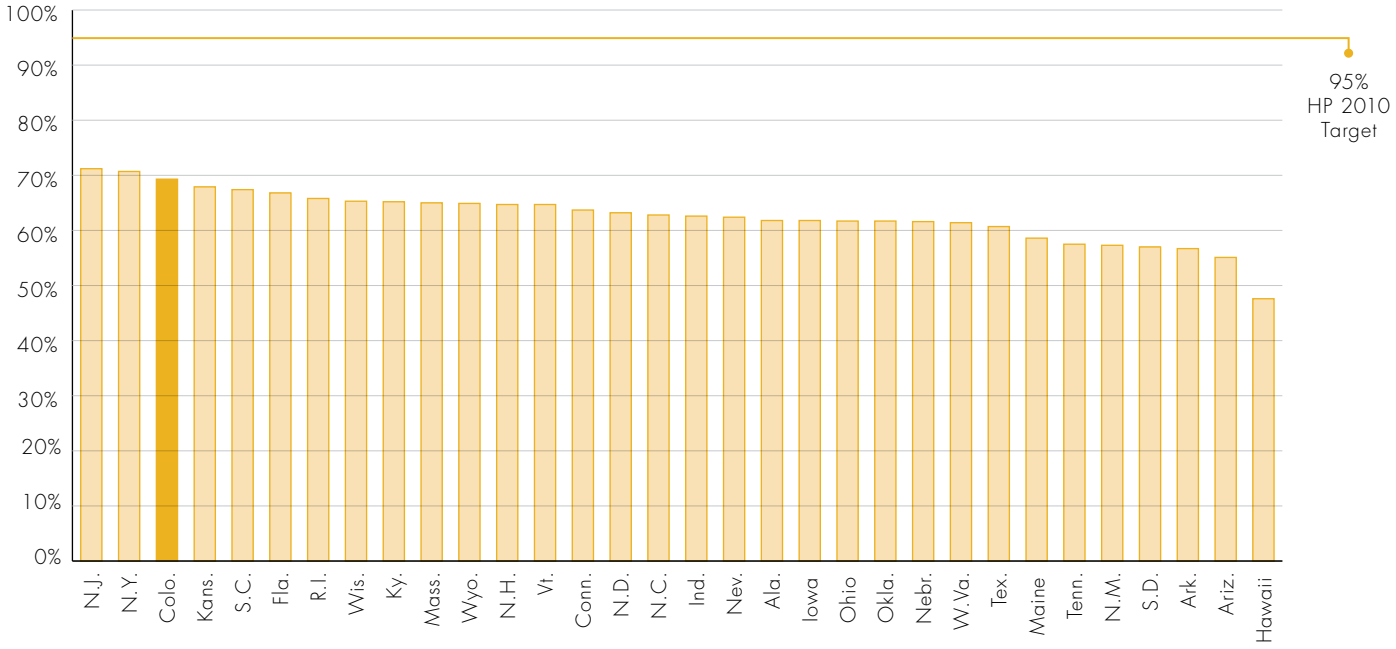


High school students who were sexually active and used condoms *by gender in Colorado*[4]



Condom Use (continued)

High school students who were sexually active and used condoms[5]



Text

1. Centers for Disease Control and Prevention's National Youth Risk Behavior Study, 1991–2005. "Teens and STDs: A New Message for a Healthy Millennium," Focus on the Family's *Focus on Your Child* program.
2. Coyle, K., et al. "Safer choices: Reducing teen pregnancy, HIV and STDs." *Public Health Reports.* 116: 82-93; 2001. Colorado Organization on Adolescent Pregnancy, Parenting and Prevention.

Charts

3. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2001–2005.
4. **Source:** Colorado Department of Public Health and Environment, Youth Risk Behavior Survey, 2005.
5. **Source:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Healthy Youth, 2005.

Teen Fertility

Healthy Adolescents

Most recent CO value (2007)	CO rank (2006)	CO value (2006)	Best state (2006)	Best state value (2006)	HP2010 target
38.2/1,000*	31/50	43.8/1,000*	New Hampshire	18.7/1,000	43/1,000

Indicator Definition

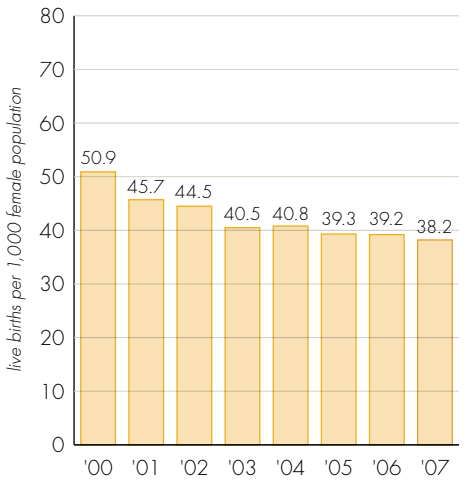
Births to teens (ages 15–19 years), per 1,000.

Indicator Significance

In the United States, birth rates among adolescents aged 15–19 years decreased annually from 1991–2005 but increased from 2005–2007. The rate rose from 40.5 live births per 1,000 adolescent females in 2005 to 42.5 in 2007. According to a national survey, the majority of pregnancies among adolescents are unintended (unwanted or mistimed) at conception. Among females aged 15–17 years, 88 percent of births during the preceding five years were the result of unintended pregnancies.[1]

Teenage childbearing presents a challenge to both teen mothers and their children. Only one-third of teen mothers complete high school. Women who give birth as teenagers face a significant disadvantage when competing in the job market and significantly increase the likelihood of raising their children in poverty. Children born to teen mothers also experience increased health risks including low birth weight and a range of developmental delays and disabilities. Teen pregnancy has been estimated to cost the United States $7 billion each year in excess health care costs.[2]

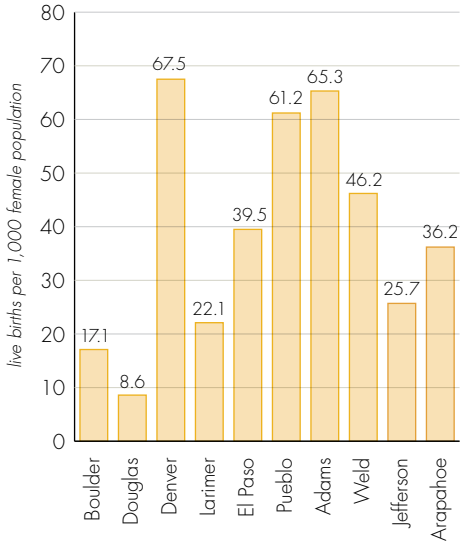
Teen fertility rate
*in Colorado[7]**



Colorado Specifics

Estimates indicate that a baby is born to a teen mother every four hours in Colorado. According to the National Campaign to Prevent Teen Pregnancy, teen pregnancy-related expenses cost Colorado taxpayers at least $167 million in 2004.[3] Teen pregnancy in Colorado disproportionately affects the Hispanic community with a rate of 107 births per 1,000 teens aged 15–19 in 2006. While the fertility rate has decreased for white, Asian and American Indian teens, it has changed little for Hispanic teens in recent years. Certain counties in Colorado have higher rates than others as well. For example, in the Metro Denver area, Denver and Adams counties have relatively high rates compared to Boulder and Douglas counties.[4]

Teen fertility rate
by select counties in Colorado[8]



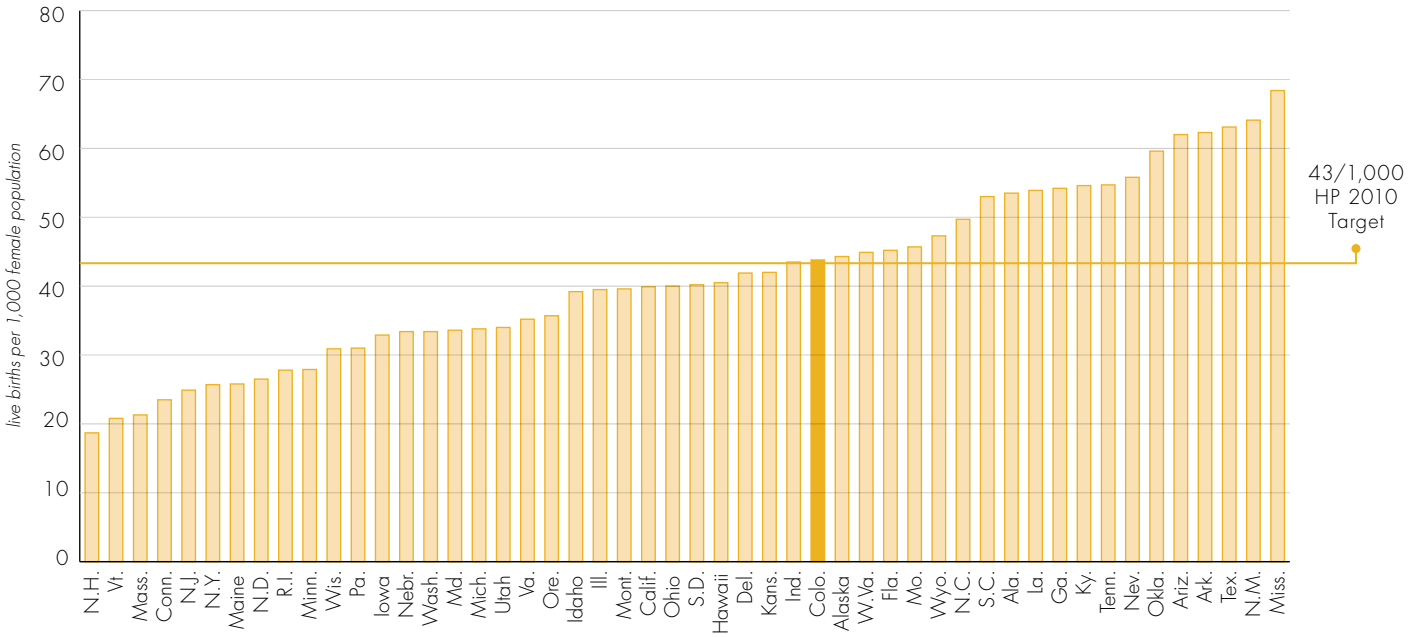
Promising Initiatives

Making Proud Choices! is an eight-module curriculum that empowers young adolescents to decrease pregnancy risk by developing skills to negotiate abstinence and safe sex practices such as condom use. Through the curriculum, teens are educated about practical ways they can reduce their risk of becoming infected with HIV and other STDs and also the risk of pregnancy. The program has been found to be especially effective with sexually active teens who were active when they started the course.[5]

Teen Fertility (continued)

The *Making Proud Choices!* curriculum is usually implemented with small groups ranging from 6-12 participants, but it can be adapted to larger groups. The Colorado Organization on Adolescent Pregnancy, Parenting and Prevention conducts trainings for teachers, health educators and other community members who plan to implement the program in various community settings including schools and youth services agencies. Durango School District recently went through the *Making Proud Choices!* training in August 2009 and plans are underway to implement the curriculum.[6]

Teen fertility rate[9]



Text

1. Centers for Disease Control and Prevention. "Sexual and Reproductive Health of Persons Aged 10-24 Years-United States, 2002–2007."
2. Centers for Disease Control and Prevention. "New Report Shows Teen Births Drop to Lowest Level Ever"; November 21, 2006.
3. National Campaign to Prevent Teen Pregnancy. "By the Numbers: The Public Costs of Teen Childbearing"; October 2006.
4. Colorado Organization on Adolescent Pregnancy, Parenting and Prevention. "The State of Adolescent Sexual Health in Colorado 2007." The National Campaign to Prevent Teen and Unplanned Pregnancy. "Colorado State Profile."
5. Resource Center for Adolescent Pregnancy Prevention, Evidence-based programs
6. Colorado Organization on Adolescent Pregnancy, Parenting, and Prevention.

Charts

7. **Source:** Colorado Department of Public Health and Environment, Vital Statistics, 2000–2007.

   *** Note:** Teen fertility rates from the Colorado Department of Public Health and Environment (CDPHE) differ slightly from rates that the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) uses to rank states. The numerator used by CDPHE includes births reported after data have been sent to NCHS. For the denominator, CDPHE uses population estimates from the Colorado State Demography Office; NCHS uses population estimates from the Census Bureau. The 2006 value for Colorado from NCHS was 43.8/1,000 compared with 39.2/1,000 from CDPHE.
8. **Source:** Colorado Organization on Adolescent Pregnancy, Parenting and Prevention, "State of Adolescent Health"; Table 1.
9. **Source:** National Vital Statistics System, 2006, Colorado Department of Public Health and Environment.

Healthy Adults

Colorado's working-age adults are healthier than their counterparts in most other states, according to measures in this Report Card. The state has the third-lowest incidence of hypertension and the sixth-lowest percentage of adults who report poor mental health. Colorado's adults are more likely to exercise, and Colorado has the lowest rate of adult obesity in the country. But the state does poorly in terms of insurance coverage: One in five working-age adults lacked health insurance in 2007. In addition, Colorado ranks in the bottom half of all states with respect to adults having a regular source of medical care and binge drinking, suggesting room for improvement.

The grade of B masks some troubling trends and disparities. The state's obesity rate has doubled in fewer than 20 years, and low-income Coloradans and racial and ethnic minorities lag behind on most indicators. Most ominously, Colorado's failure to do better by its children threatens future grades for healthy adults and Colorado's ability to maintain its reputation as a healthy and prosperous state.

Health Indicator	Rank among states
19.9 percent of working-age adults are not covered by private or public health insurance	**32nd**
77.2 percent of adults have one (or more) person(s) they think of as their personal doctor or health care provider	**31st**
25.1 percent of adults consumed five or more fruits and/or vegetables per day within the past week	**17th**
82.2 percent of adults participated in any physical activity within the past month	**3rd**
19.5 percent of adults are obese	**1st**
18.9 percent of adults currently smoke cigarettes	**14th**
18.1 percent of adults binge drank (males having five or more drinks on one occasion, females having four or more drinks on one occasion) in the past month	**28th**
12.2 percent of adults reported that their mental health was not good eight or more days in the past month	**6th**
4.5 percent of adults reported they were diagnosed with diabetes	**5th**
16.2 percent of adults reported they were diagnosed with high blood pressure	**3rd**

Average Rank	**14.0**
Average Grade	**B**

Policy Overview

Healthy Adults

How are we doing?

Overall, Colorado adults rank among the highest states for healthy lifestyles. Over the past three years Colorado's adults have earned a solid B on the Colorado Health Report Card. This grade is largely a result of scoring high on healthy living indicators such as higher participation rates for physical activity (82 percent) and lower rates of obesity (20 percent). However, Colorado ranks in the lower half of states in the percentage of adults without health insurance coverage (32 of 50) and without a personal physician (31 of 50)—findings that are consistent with children and adolescents.

What is Colorado doing right?

Colorado ranks number one among the states for its rate of adult obesity (20 percent), while 82 percent of Colorado adults report having participated in physical activity within the last month (3rd among the states). In addition, Colorado ranks in the top half of states for fruit and vegetable consumption (17th). Finally, the state ranks among the top five for adults being told they have high blood pressure (16 percent) or diabetes (5 percent).

Although Colorado's rankings remain high for many healthy living indicators, Colorado has not been immune to the growing incidence of adult obesity that has been termed a national epidemic. The adult obesity rate in Colorado has more than doubled since 1990 and is still 4 percent higher than the *Healthy People 2010* target. The percentage of Coloradans that participated in any physical activity over the last month, although high compared to other states, has not changed significantly over the past nine years.

To address these disturbing trends, LiveWell Colorado, a nonprofit organization dedicated to promoting health through the prevention and reduction of obesity, is supporting community coalitions in the adoption of local policies involving re-zoning in communities to promote more pedestrian-friendly physical activity venues, as well as expanded land use options. These re-zoning strategies include making it easier to designate unused land for community gardens and urban agriculture projects and adopting more mixed use residential, retail, office and public spaces that promote walking and cycling over streets dedicated exclusively to automobiles.

Where can Colorado improve?

Nearly 20 percent of Colorado's adults were uninsured during 2006–2008, earning the rank of 32nd among the states. Although Colorado historically has had a very lean Medicaid program for adults compared to other states, the passage of the "Colorado Health Care Affordability Act" in 2009 will expand Medicaid eligibility for all adults up to 100 percent of the federal poverty level (FPL) (about $11,000 for an individual and $22,000 for a family of four in 2009) with these expansions occurring incrementally through 2012.

Vermont, Massachusetts and Maine have been recognized for their health insurance expansions and state health reform efforts. All three states subsidize coverage for families with annual incomes up to 300 percent of FPL (approximately $66,000 for family of four in 2009). Medicaid funding has been used to fund subsidies for coverage expansions in these states.

With regard to adults having a personal physician or other health care provider, Minnesota has undertaken a number of policies in recent years to enhance access and coordination for adults that are noteworthy. For example, in 2008 the Minnesota legislature passed a health care reform package that included a focus on primary care. The bill re-structured payment systems to provide incentives to primary care clinicians that implement care coordination for patients with chronic and complex health conditions.

Uninsured

Healthy Adults

Most recent CO value (2006–2008)	CO rank (2006–2008)	CO value (2006–2008)	Best state (2006–2008)	Best state value (2006–2008)	HP2010 target
19.9%	32/50	19.9%	Massachusetts	9.3%	0%

Indicator Definition

Adults (ages 18–64 years) are considered uninsured if they did not have a public or private source of health care coverage for the entire past calendar year.

Indicator Significance

According to the U.S. Census Bureau's Current Population Survey, the number of uninsured working-age adults in the United States has grown from 30 million in 1999 to 38 million in 2008.[1] Today, roughly one in five working-age Americans is uninsured. Nearly three-quarters of the uninsured are employed, with more than half holding full-time jobs. Research shows that adults without health insurance are less likely to seek medical care when needed. The growing number of uninsured adults has attracted national attention, drawing proposals for reform from state and national policymakers.[2]

Colorado Specifics

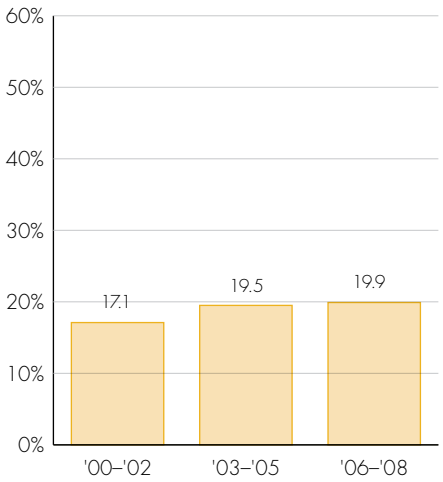
Colorado has consistently ranked in the lower half of states with regard to insurance coverage for working-age adults. Of the 789,000 uninsured Coloradans, 631,000 are of working age (18–64 years).[3] While uninsurance rates are higher for low-income adults, most uninsured adults are employed, many with full-time, year-round jobs. Uninsurance rates are higher for younger working-age adults and ethnic minorities.

Promising Initiatives

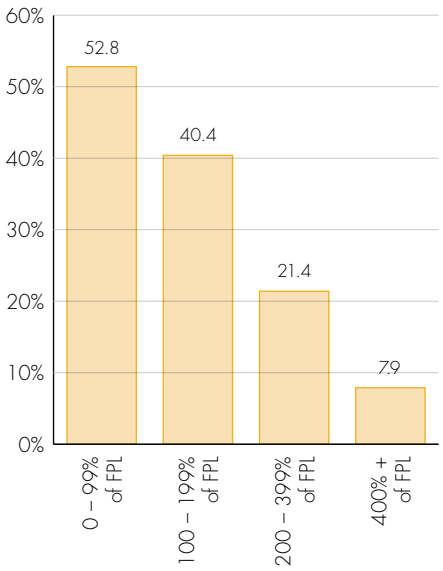
Access Health is a coverage program developed by the Muskegon Community Health Project in Michigan. It is a successful community-based approach to expanding health care coverage to uninsured workers that is based on a "three share" funding model between employers, employees and the community wherein each contributes roughly 30 percent toward cost of coverage. Workers only qualify if they are low income, uninsured and live and work in Muskegon County. Likewise, businesses qualify only if they are located in the county and have not provided health benefits for the past 12 months. Over 526 local businesses have participated in *Access Health* since the program began in 1999 and over 1,500 previously uninsured workers have received coverage.[4]

Health Access Pueblo (HAP), implemented in 2008, is modeled after *Access Health* through a partnership between Parkview Medical Center, St. Mary Corwin Medical Center, Pueblo Community Health Center, Pueblo County, participating health care providers and local businesses. HAP contracts with 200 local physicians and covers

Adults without health insurance
in Colorado[6]



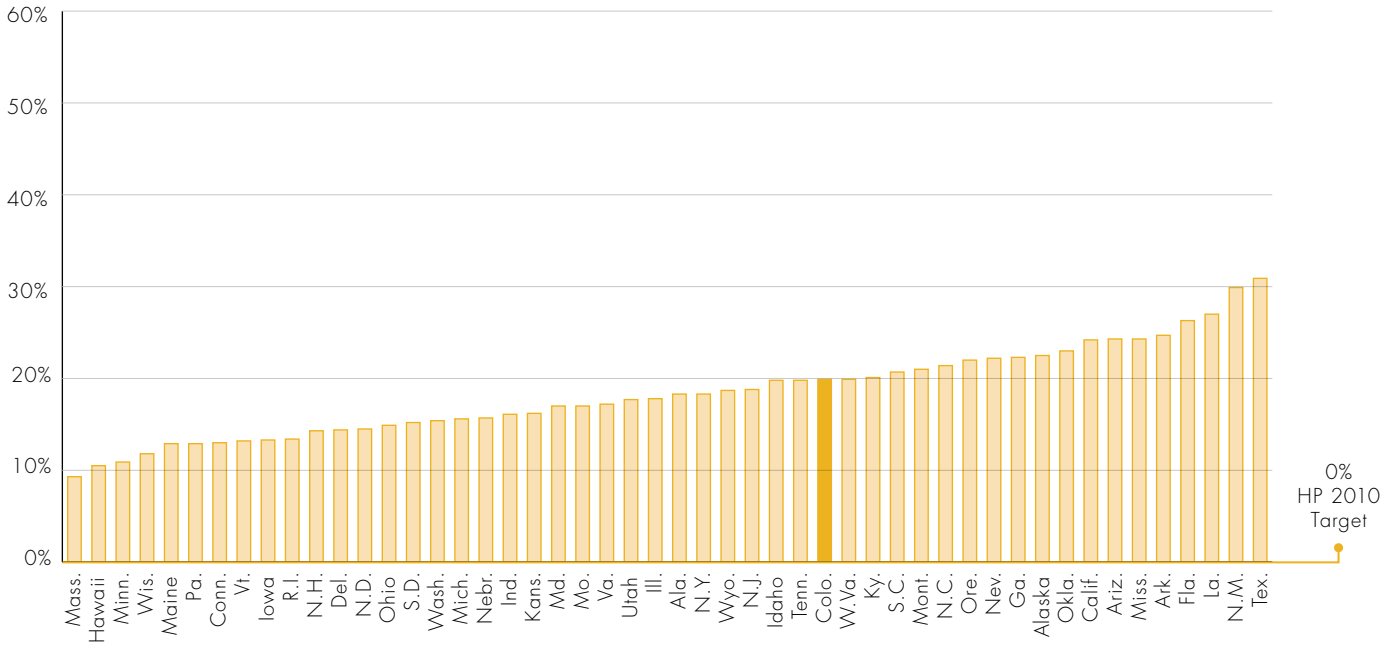
Adults without health insurance
by income in Colorado[7]



Uninsured (continued)

only workers in Pueblo. With a monthly premium of $120 per qualified employee, HAP is not insurance but rather a local coverage initiative. Enrollees have access to hospitalization benefits and no-cost or low-cost preventive care, diagnostic services and wellness counseling.[5]

Adults without health insurance[8]



Text

1. Population estimates from the Current Population Survey (2008) and refer to adults ages 18 to 64 years.
2. Commonwealth Fund. "Census Data on Growing Number of Uninsured Make Clear: National Health Care Strategy Is Needed"; August 28, 2007.
3. Population estimates from the Current Population Survey (2006–2008) and refer to adults ages 18 to 64 years.
4. Muskegon Community Health Project.
5. *Health Access* Pueblo.

Charts

6. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2000–2008.
7. **Source:** Colorado Health Institute analysis of the U.S. Census Bureau's Current Population Survey, 2006–2008.
8. **Source:** U.S. Census Bureau, Current Population Survey, 2006–2008.

Medical Home

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
77.2%	31/50	77.2%	Delaware	88.5%	96%

Indicator Definition

Adults (ages 18–64 years) who report having one or more individuals they think of as their personal doctor or health care provider.

Indicator Significance

An increasing number of uninsured Americans report not having a regular source of medical care because of their inability to pay for medical-related expenses. Adult preventive screenings such as mammograms and colonoscopies are twice as likely to occur if an individual has a regular source of medical care. Foregoing routine medical care and preventive screenings often leads to an increased incidence of preventable illnesses and costlier treatments. Recent research has shown that having "medical homes," particularly for vulnerable population groups, is a cost-effective means to reduce health disparities. Adults with access to a regular source of medical care also are better able to better manage chronic illnesses.[1]

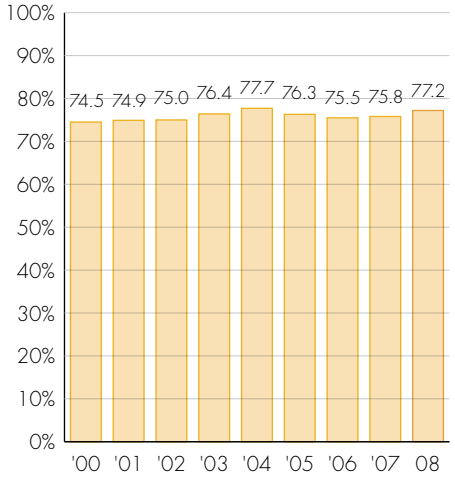
Colorado Specifics

Three-quarters of working-age adults in Colorado report having someone they think of as their regular health care provider. Most states do better than this, though no state has reached the *Healthy People 2010* target of 96 percent. Colorado's poor showing is partly explained by the relatively high proportion of uninsured working-age adults. Both the uninsurance rate and the proportion of adults lacking a regular source of care have remained stable for several years. People with higher incomes are more likely to report a regular source of medical care than those in lower income brackets.

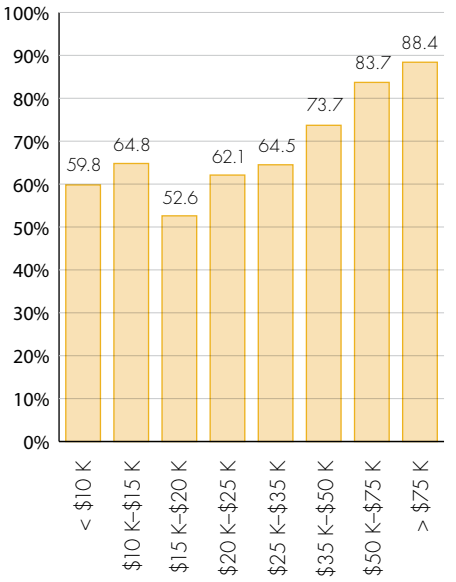
Promising Initiatives

The *Safety Net Medical Home Initiative* is a newly implemented program in Colorado that assists safety net clinics in implementing and sustaining patient-centered medical homes and reaching identified benchmarks for quality and efficiency. Over a period of four years, participating clinical sites will work on eight "change areas" that include linking patients to a consistent clinician and support team; putting quality improvement structures and quality improvement teams in place; providing care that is respectful, culturally sensitive and involves the patient in decision making; and using evidence-based care protocols such as clinical guidelines for specific chronic diseases. Patients will be linked to community resources and have 24-hour access to care. Care providers will share information and assist patients in obtaining health care coverage for which they are eligible.[2]

***Adults with a regular source of medical care** in Colorado[3]*



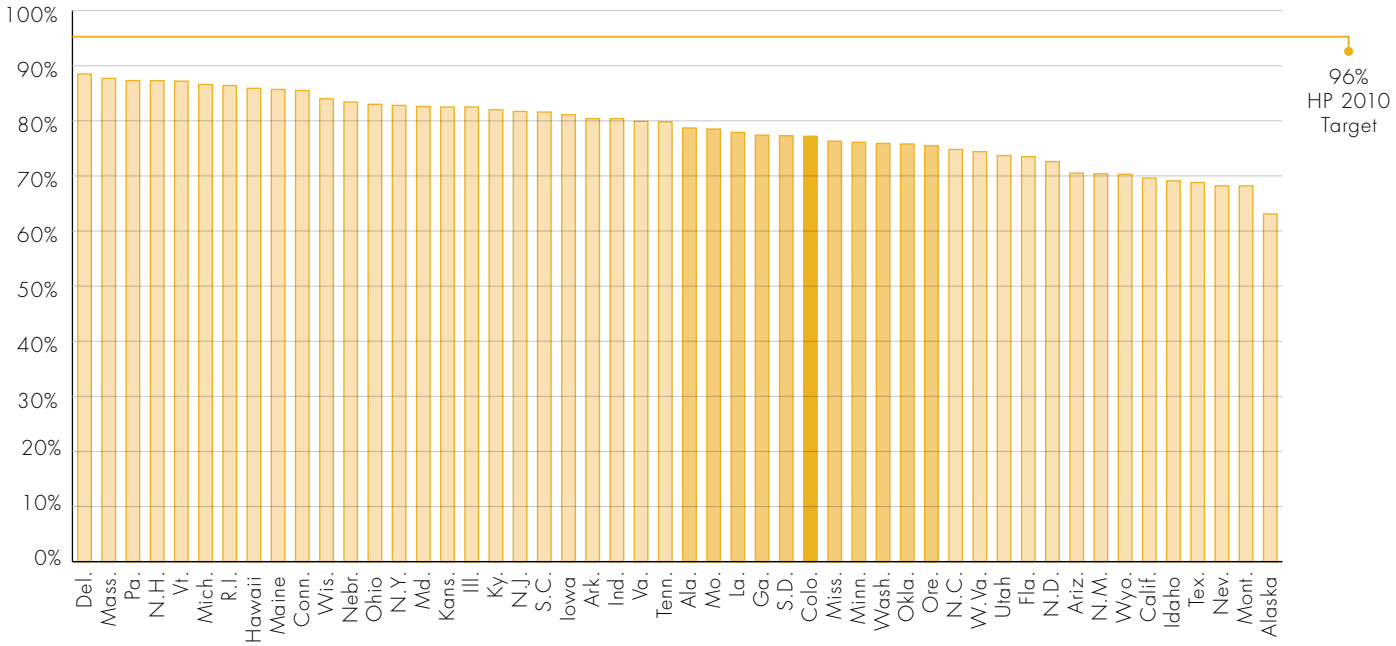
***Adults with a regular source of medical care** by income in Colorado[4]*



Medical Home (continued)

The initiative was launched by the Commonwealth Fund, Qualis Health and the MacColl Institute for Healthcare Innovation at the Group Health Research Institute. In Colorado, the Colorado Health Foundation provided funding to the Colorado Community Health Network which is managing the project and providing technical assistance to clinical sites. Participating Colorado sites include Clinica Family Health Services (Boulder, Pecos and Thornton clinics), Custer County Clinic, Denver Health (Eastside, La Casa/Quigg Newton and Sandos Westside clinics), High Plains Community Health Center, Inner City Health Center, Metro Community Provider Network (Jeffco Clinic), Mountain Family Health Centers (Glenwood Springs), Valley Wide Health Systems (Sierra Blanca and Alamosa Family Medical Centers) and the Yuma Rural Health Center.

Adults with a regular source of medical care[5]



Color coding: *Statistical tests were used to determine if the average for Colorado was significantly different than the averages for other states. States with a medium shade of orange had averages that were not statistically different from Colorado's average and states colored in a light shade of orange had averages that were statistically different from Colorado's average.*

Text

1. Program on Health Outcomes. "Quality of Health Care in the United States: A Chartbook"; April 2002.

   The Commonwealth Fund. "Disparities in Health Care Are Driven by Where Minority Patients Seek Care"; June 25, 2007.

2. Qualis Health. The Safety Net Medical Home Initiative.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2008.

4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Nutrition

Healthy Adults

Most recent CO value (2007)	CO rank (2007)	CO value (2007)	Best state (2007)	Best state value (2007)	HP2010 target
25.1%	17/50	25.1%	Vermont	29.1%	75%

Indicator Definition

Percent of adults (ages 18–64 years) who consumed five or more servings of fruits and vegetables per day in past seven days.

Indicator Significance

Adequate consumption of fruits and vegetables each day is linked to a decreased risk of some cancers, heart disease, diabetes and hypertension. As adolescents reach adulthood, metabolic rates begin to plateau and the body requires new sources and amounts of energy to maintain optimum health. Fruits and vegetables contain vitamins, minerals and fiber that are essential for good health. Rather than consuming these vitamins and minerals through supplements, physicians and dieticians agree that eating a variety of fruits and vegetables results in better absorption of the needed nutrients to optimize health. Although energy consumption levels vary based on physical activity, it is most common that food intake needs decrease as people age.[1]

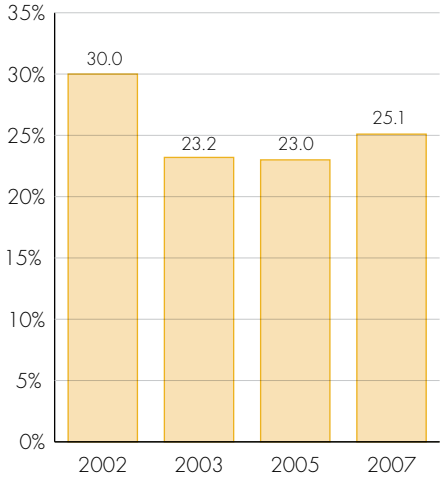
Colorado Specifics

Despite Colorado's reputation for healthy lifestyles, only one-quarter of Colorado adults consume the recommended five servings of fruits and vegetables a day. Few states do much better and some are markedly worse. The *Healthy People 2010* target for fruit and vegetable consumption is for 75 percent of the population to eat five or more fruits and vegetables daily. Adult fruit and vegetable consumption is not much better than that for high school students, a group known for less healthy eating behaviors. Despite growing awareness of the importance of a healthy diet, there has been no improvement in adult fruit and vegetable consumption in recent years. The latest data show that women are somewhat more likely than men to eat the recommended amount of fruits and vegetables.

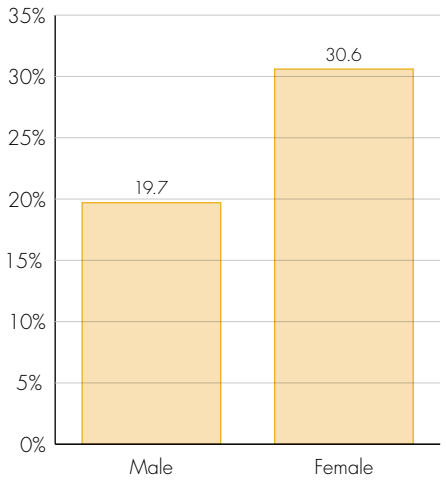
Promising Initiatives

The Centers for Disease Control and Prevention (CDC) instituted a *5 A Day for Better Health* initiative in 1991 to promote increased consumption of fruits and vegetables to 5–9 servings every day and to inform Americans of the health benefits of doing so. The initiative is a public awareness campaign that includes educational materials for communities and individual consumers. Since its inception, the CDC reports that the percentage of Americans who are aware of the recommended five or more servings of fruits and vegetables a day has increased nearly five-fold.[2]

*Adults who consumed five or more fruits and vegetables in past seven days in Colorado[4]**



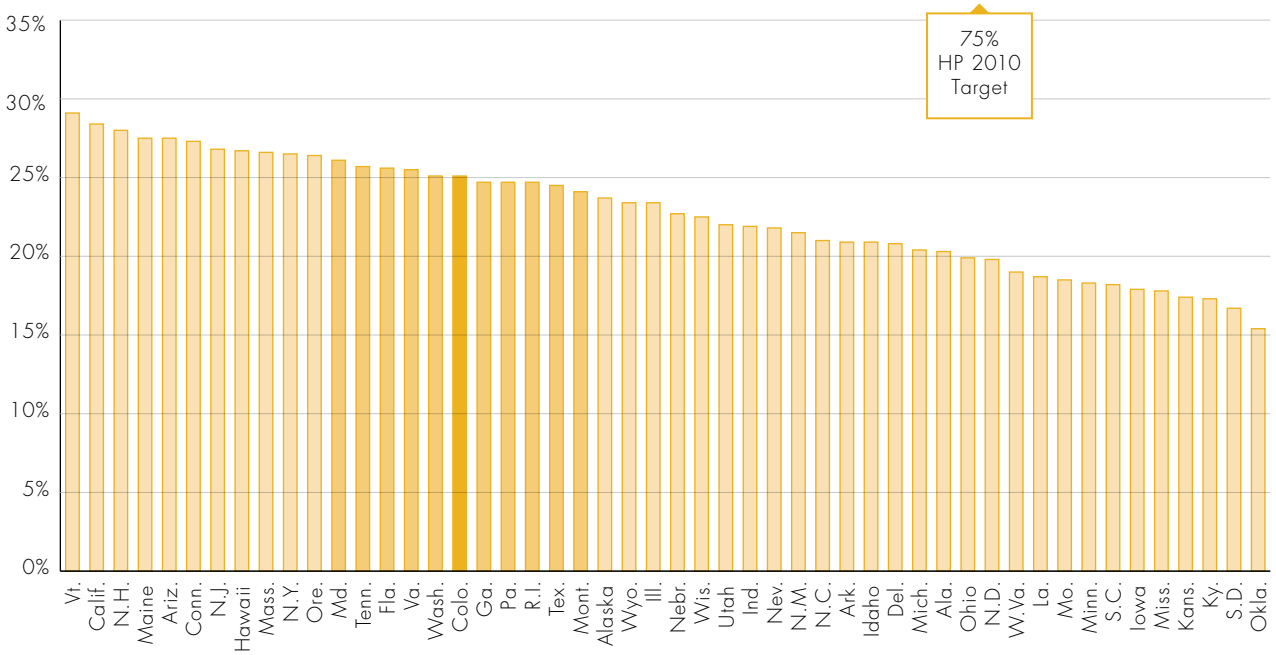
Adults who consumed five or more fruits and vegetables in past seven days by gender in Colorado[5]



Nutrition (continued)

In Colorado, a *5 A Day for Better Health* coalition was formed in 2004 with assistance from the Colorado Department of Public Health and Environment and is promoted in partnerships around the state through the Colorado Physical Activity and Nutrition Program. COPAN has helped develop a Produce Festival Tool Kit that is distributed to grocery stores and retailers, encouraging them to hold nutritional education events and health fairs. The fairs are designed to increase consumers' comfort level in the produce area of the grocery store, including sampling fruit and vegetable recipes, providing recipes and tips to working up to five servings of fruits and vegetables a day. Since 2004, more than 200 school and business-related health fairs have been held in Colorado to educate communities about important nutrition information.[3]

Adults who consumed five or more fruits and vegetables in past seven days[6]



Color coding: *Statistical tests were used to determine if the average for Colorado was significantly different than the averages for other states. States with a medium shade of orange had averages that were not statistically different from Colorado's average and states colored in a light shade of orange had averages that were statistically different from Colorado's average.*

Text

1. Colorado Department of Public Health and Environment. "Colorado Physical Activity and Nutrition State Plan 2010"; December 2004.
2. Centers for Disease Control and Prevention, Fruits and Veggies Matter.
3. Colorado Department of Public Health and Environment, *5 A Day for Better Health.*

Charts

4. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2007.

   * **Note:** Data are not available for 2004 and 2006 because the question used for this indicator was not included in the survey those years.

5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2007, Centers for Disease Control and Prevention.
6. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2007, Centers for Disease Control and Prevention.

Exercise

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
82.2%	3/50	82.2%	Minnesota	83.2%	80%

Indicator Definition

Percent of adults (ages 18–64 years) who participated in any leisure-time physical activity within the past month.

Indicator Significance

While most adults engage in some leisure-time physical activity, the majority of U.S. adults do not participate in the moderate level of physical activity recommended by the Centers for Disease Control and Prevention, a trend that has not changed since 2001. The CDC-recommended amount of physical activity for adults is more stringent than the indicator used in the Report Card; it includes at least 150 minutes of moderate-intensity physical activity every week and muscle-strengthening activities on two or more days per week that work all major muscle groups.[1] Physical activity is known to reduce the risk of certain chronic diseases and to increase overall health and well-being. Research has shown that as people age, their level of physical activity declines, particularly among women. Engaging in 30 minutes of exercise each day can reduce the risk of heart disease, stroke and feelings of anxiety. A regular exercise regimen is more important than the intensity of the activity.[2]

Colorado Specifics

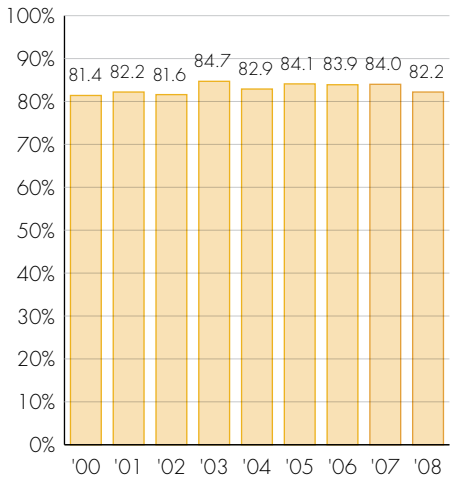
Colorado is one of the best-performing states on this indicator, with more than 80 percent of adults participating in some leisure-time physical activity in the past month. Despite a growing awareness of the health benefits of engaging in leisure-time physical activity, there has been no significant improvement in Colorado's performance on this indicator since 2000. Recent data show that low-income adults are less likely to engage in leisure-time physical activity than higher-income adults.

Promising Initiatives

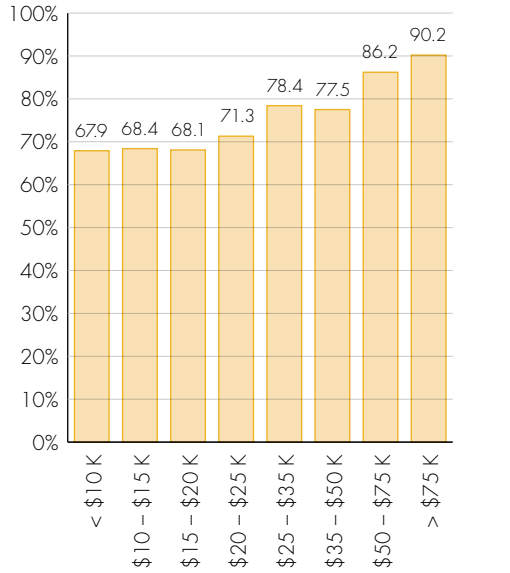
The Colorado Physical Activity and Nutrition Program developed a worksite resource kit that includes nutrition and physical activities designed to be carried out free or at little cost to employers. Strategies focus on health education, physical activity, healthy eating, the worksite environment and exercise-related factors that contribute to or exacerbate chronic disease.[3]

Since 2003, more than 500 worksite resource kits have been distributed and over 150 people currently participate in the Colorado Worksite Health Promotion listserv. Worksite wellness grantees have included Aims Community College in Greeley, Choice Hotels International in Grand Junction, Denver Department of Human Services, Denver Health & Hospital Authority and Mountain States Employers Council.

***Adults who participated in any physical activity in past month** in Colorado[4]*

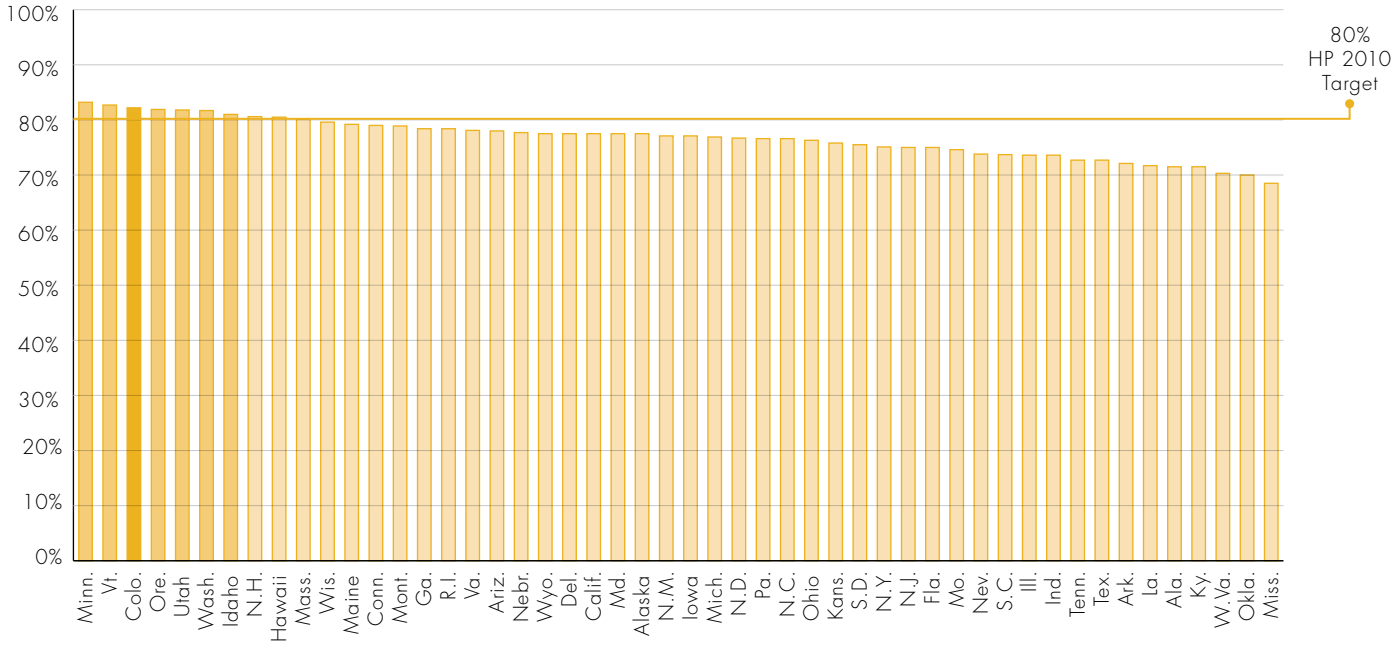


***Adults who participated in any physical activity in past month** by income in Colorado[5]*



Exercise (continued)

Adults who participated in any physical activity in past month[6]



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Text

1. Centers for Disease Control and Prevention. Physical Activity for Everyone
2. University of Colorado at Denver and Health Sciences Center, Colorado on the Move.
3. Colorado Department of Public Health and Environment, Colorado Physical Activity and Nutrition Program, Worksite Task Force Strategies

Charts

4. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2008.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
6. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Obesity

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
19.5%	1/50	19.5%	Colorado	19.5%	15%

Indicator Definition

Percent of adults (ages 18–64 years) who have a Body Mass Index greater than or equal to 30. BMI is a number based on a person's weight and height. For most adults, BMI correlates with body fat. BMI may overestimate body fat in athletes and others who are muscular and underestimate body fat in older persons or those who have lost muscle mass.

Indicator Significance

Since 1970, obesity rates have increased in the United States by more than 50 percent. Obesity is a serious public health problem. As the second leading cause of preventable death, obesity is a complex health condition that involves environmental, genetic, physiological, metabolic, behavioral and psychological aspects. In the United States, more than one-third of adults—more than 72 million people—and 16 percent of children are obese.[1] Rates of obesity have increased for all adult age groups and across all regions of the United States, with blacks and Hispanics particularly at risk.[2] According to a study of national costs attributed to both overweight and obesity, related medical expenses accounted for 9 percent of total U.S. medical expenditures in 1998.[3]

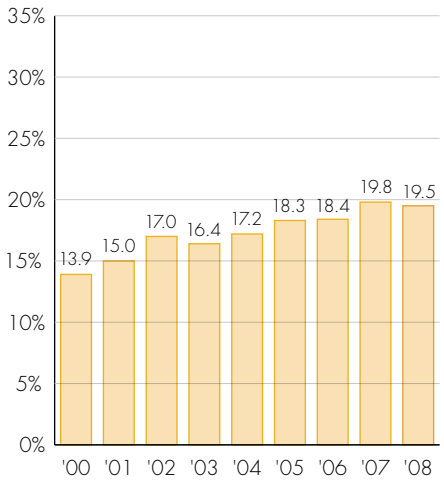
Colorado Specifics

Colorado is the leanest state in the country, but adult obesity rates are climbing here at a faster rate than in the country as a whole. The adult obesity rate has more than doubled in Colorado since 1990 and now, like all other states, exceeds the *Healthy People 2010* target of 15 percent. While obesity rates are higher for low-income Coloradans, even those in higher-income brackets who can most afford a healthy lifestyle exceed the *Healthy People 2010* target.

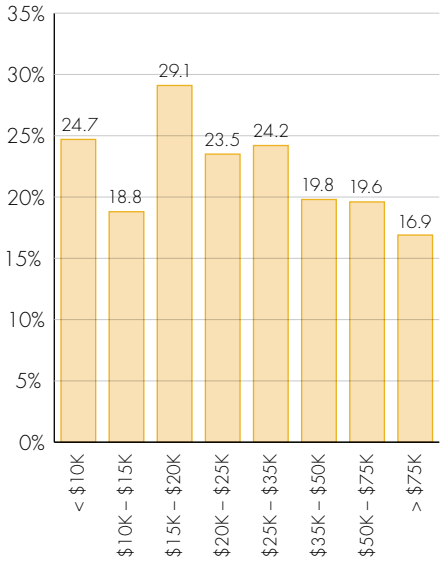
Promising Initiatives

In addition to its work on nutrition, the Colorado Physical Activity and Nutrition Program supports the *Active Community Environment (ACE) Task Force* that focuses on the built environment and its effect on engaging residents in healthy behaviors. ACE represents government, public health, transportation officials, and local planners and designers. Members support local planning efforts to modify existing environments in ways that make it easy for people to integrate physical activity into their daily routines.[4]

Adult obesity
in Colorado[5]



Adult obesity
by income in Colorado[6]

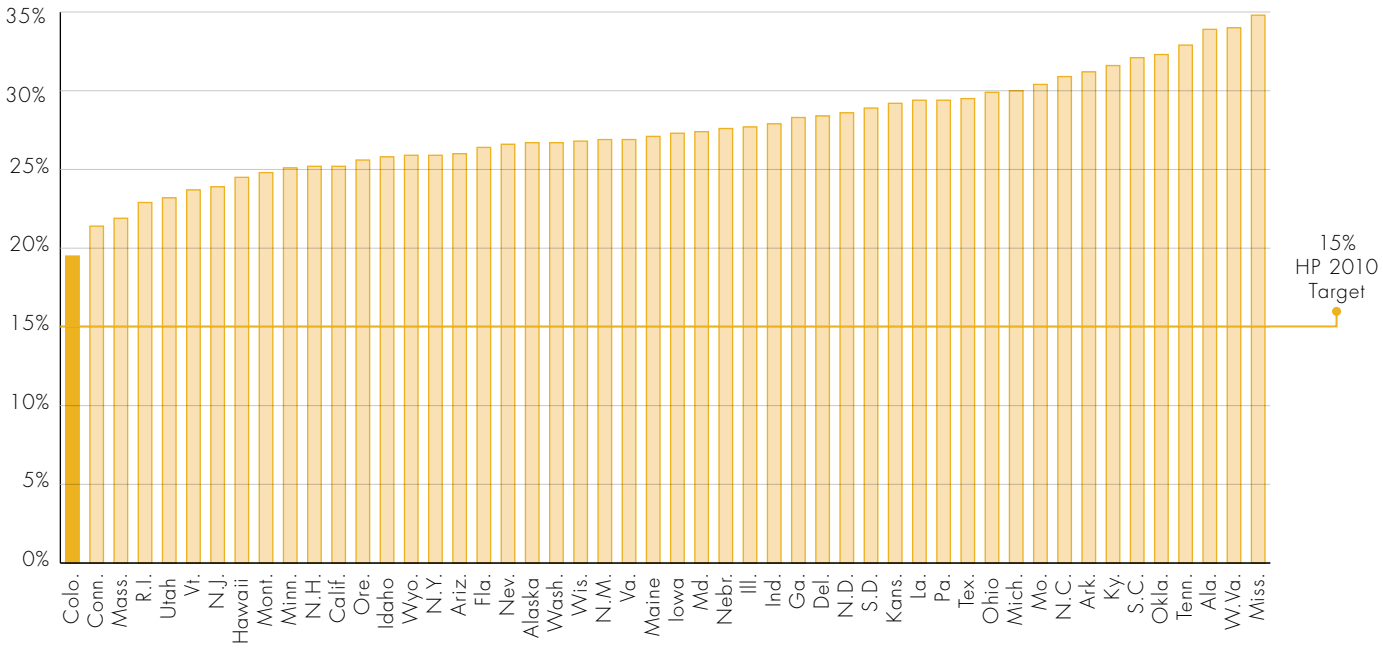


Obesity (continued)

Strategies to achieve change include assessing, modifying and improving community planning and design efforts to support increased physical activity; land-use planning to integrate "smart growth" principles; developing school sites that promote active community living; developing integrated parks and open space with recreation facilities near neighborhoods and employment centers; and developing a balanced transportation system that includes transit, walking, bicycling and motor vehicles.

ACE activities include sponsoring regional workshops for key stakeholders and an annual conference of active living leaders in Colorado. In addition, the task force provides materials to organizations to help facilitate the inclusion of public health principles in transportation and land-use master plans.

Adult obesity[7]



Text

1. Centers for Disease Control and Prevention. National Center for the Chronic Disease Prevention and Health Promotion. "Obesity: Halting the Epidemic by Making Health Easier", 2009.
2. Centers for Disease Control and Prevention. "Differences in Prevalence of Obesity Among Black, White and Hispanic Adults"; 2006–2008.
3. Centers for Disease Control and Prevention. "Overweight and Obesity: Economic Consequences."
4. Colorado Department of Public Health and Environment, Colorado Physical Activity and Nutrition Program. Active Community Environments.

Charts

5. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2008.
6. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
7. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Current Smokers

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
18.9%	14/50	18.9%	Utah	10.1%	12%

Indicator Definition

Percent of adults (ages 18–64 years) who smoke cigarettes.

Indicator Significance

Cigarette smoking is the No. 1 preventable cause of death, disease and disability in the United States. In this country, it is responsible for an estimated 443,000 deaths each year as a result of lung cancer, pulmonary disease and ischemic heart disease. Smoking not only affects the smoker, but environmental tobacco smoke (secondhand smoke) also poses immediate risks to individuals exposed at work, home and other public spaces. Secondhand smoke has been associated with increased asthma-related conditions in children as well as harm to the cardiovascular system.[1]

Colorado Specifics

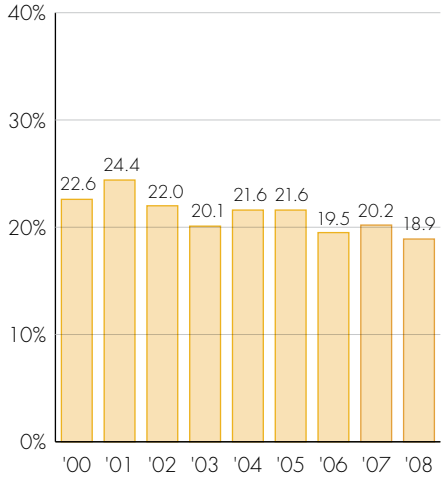
More than 40 years after the Surgeon General's landmark report linking cigarette smoking to lung cancer, close to one in five Colorado adults currently smokes cigarettes. With the rate of cigarette smoking among high school students similar to that of adults, a new generation of cigarette smokers has already been established. Males are more likely than females to smoke in Colorado (21 percent vs. 17 percent).

Promising Initiatives

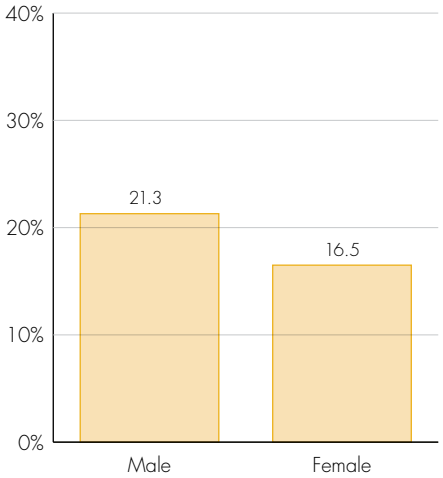
The *Colorado QuitLine* provides a variety of services to Colorado residents age 15 and older who want to stop using tobacco. Included in the free online service are support from a team of coaches, research-based information and connecting people who are trying to quit smoking. Coaches assist *QuitLine* members with overcoming common obstacles such as stress, tobacco cravings, irritability and weight gain. In addition to the online resources, Colorado residents can call a toll-free number to speak with a coach and receive free nicotine patches if eligible (at least 18 years old).[2]

Every month, the *QuitLine* serves approximately 3,800 people. The service and other prevention and intervention programs aimed at reducing smoking are supported through Amendment 35 funds.

Adults who smoke cigarettes
in Colorado[3]

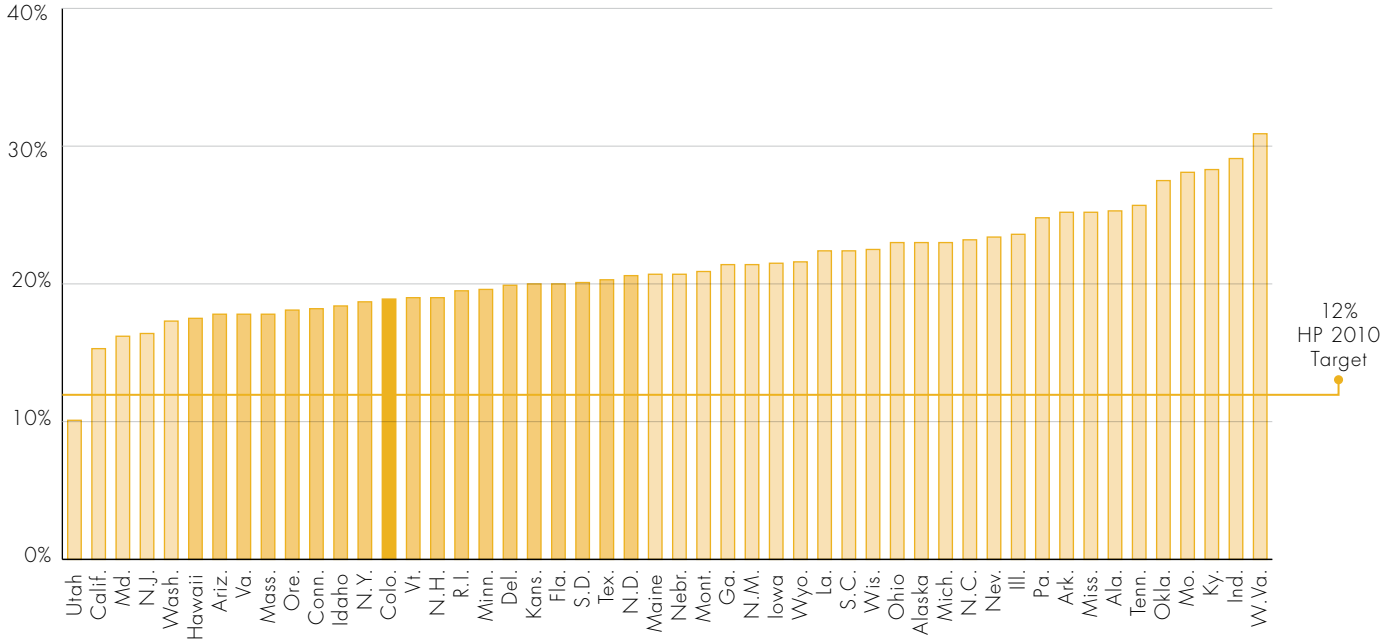


Adults who smoke cigarettes
by gender in Colorado[4]



Current Smokers (continued)

Adults who smoke cigarettes[5]



Color coding: *Statistical tests were used to determine if the average for Colorado was significantly different than the averages for other states. States with a medium shade of orange had averages that were not statistically different from Colorado's average and states colored in a light shade of orange had averages that were statistically different from Colorado's average.*

Text

1. Centers for Disease Control and Prevention, National Center for Chronic Disease and Health Promotion, "Tobacco Use: Targeting the Nation's Leading Killer", 2009.
2. Colorado Department of Public Health and Environment, *Colorado QuitLine*.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2008.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Binge Drinking

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
18.1%	28/50	18.1%	Utah	9.1%	6%

Indicator Definition

Percent of adults (ages 18–64 years) who binge drank (men having five or more drinks on one occasion, women having four or more) in the past month.

Indicator Significance

Approximately 79,000 Americans die annually from alcohol abuse. It is the third-leading preventable cause of death in the United States. Binge drinking is linked to numerous tragic side effects, including unintentional injuries, motor vehicle crashes, suicide, alcohol poisoning and liver failure. In addition, binge drinking has high economic and social costs, including violent behavior, child neglect and lost productivity in the workplace.[1]

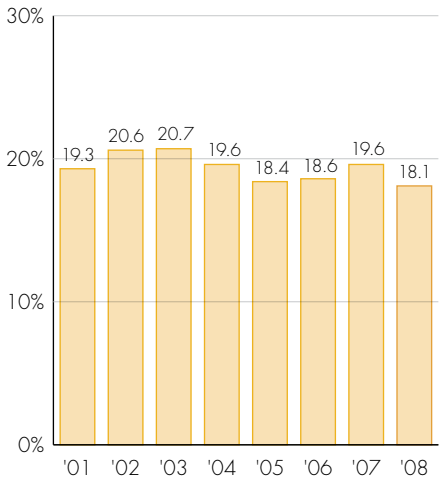
Colorado Specifics

Close to one in five Coloradans ages 18–64 years reports having engaged in binge drinking at least once in the past month. This is higher than the national average and places Colorado 28th among states. Similar to national data, in Colorado the adult binge drinking rate is twice as high for men as for women. The binge drinking rate in Colorado has changed little since 2001, reflecting national trends.

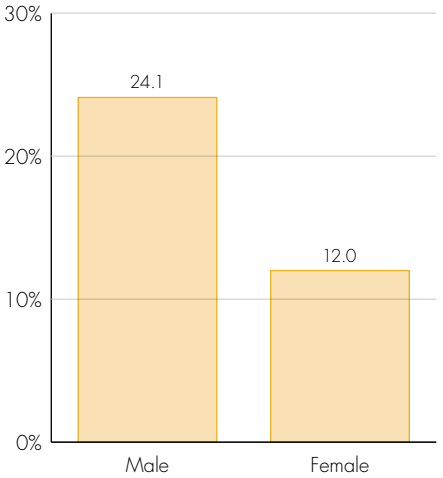
Promising Initiatives

Healthy Workplace is a program designed to reach at-risk employees before they become dependent on or abuse alcohol or drugs. There are five separate but related *Healthy Workplace* interventions that target unsafe drinking, illegal drug use, abusing or misusing prescription drugs and promotion of healthy lifestyle practices. Intervention materials are designed to raise awareness of the hazards of substance use and the benefits of healthy behaviors and to provide workers with techniques to combat substance abuse. Provided in a de-stigmatizing atmosphere, the intervention is delivered in small-group sessions using videos and print materials. This program has been replicated across many sites and is included in the Substance Abuse and Mental Health Services Administration registry of evidence-based programs.[2]

Adults who binge drink
in Colorado[3]

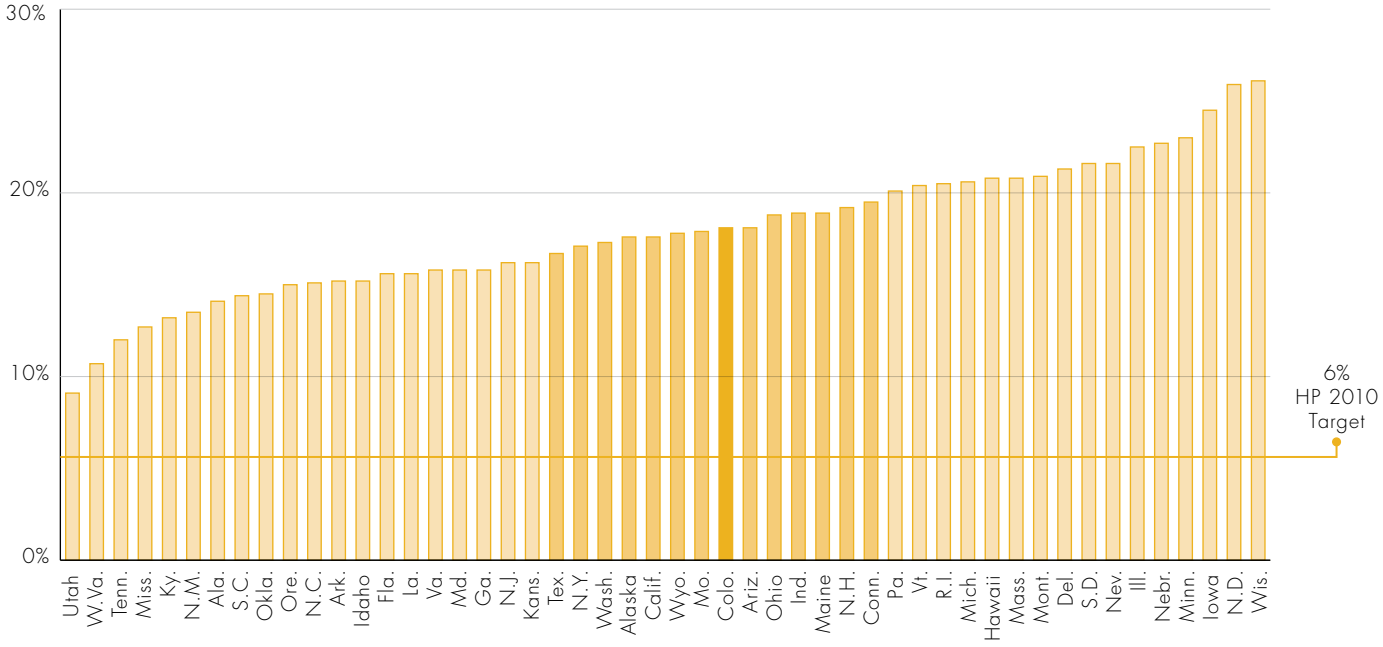


Adults who binge drink
by gender in Colorado[4]



Binge Drinking (continued)

Adults who binge drink[5]



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Text

1. Centers for Disease Control and Prevention, Alcohol, "Quick Stats General Information on Alcohol Use and Health."
2. Substance Abuse and Mental Health Services Administration (SAMHSA), National Registry of Evidence-based Programs and Practices.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2001–2008.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Poor Mental Health

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
12.2%	6/50	12.2%	North Dakota	9.6%	NA

Indicator Definition

Percent of adults (ages 18–64 years) who reported mental health difficulties such as feelings of stress, depression or problems with emotions, for eight or more days in the past month.

Indicator Significance

In any given year, about 5 to 7 percent of adults report having a serious mental illness, according to several national studies. Approximately 22 percent of the U.S. population suffer from a mental disorder diagnosis, either mild or severe. Of these emotional problems, depression is the most commonly reported, although more often than not it is either missed or ignored in primary care settings. Depression is one of the most prevalent yet one of the most treatable emotional problems. Without treatment, symptoms can last for months or years. Depression is more common among women, and adults living in poverty are at least twice as likely to feel sad, hopeless, worthless or that everything is an effort at least some of the time compared to individuals with higher incomes. Mental health problems can disrupt every aspect of a person's life including work, the ability to learn and function in a family.[1]

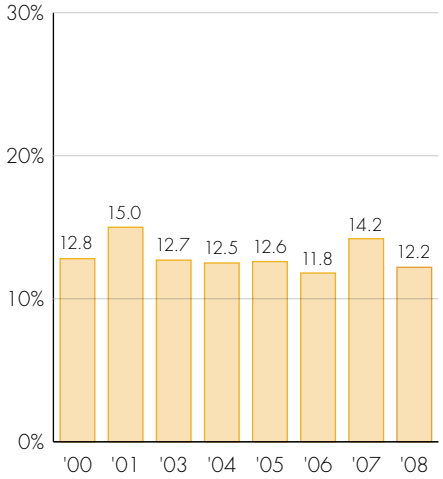
Colorado Specifics

Twelve percent of working-age Coloradans report eight or more days of poor mental health in the past month, placing Colorado sixth lowest among states in the proportion of the a population suffering from poor mental health. This indicator reflects the pervasiveness of mental health problems, which can detract from one's quality of life. Poor mental health is much more prevalent among low-income adults, with close to 30 percent of the lowest income bracket reporting poor mental health.

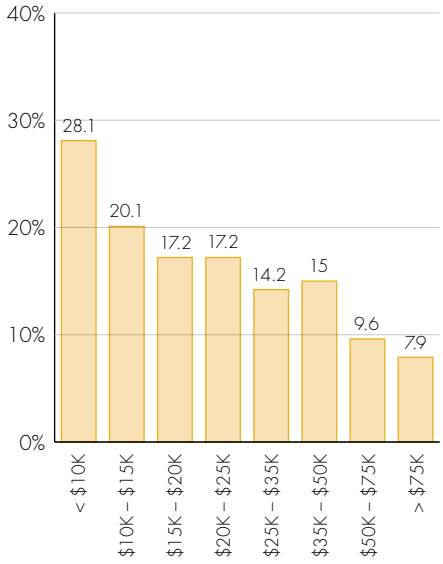
Promising Initiatives

The *Community Mental Health and Substance Abuse Partnership* in Larimer County was established in 1999 with the goal of re-designing and improving the evaluation and treatment of individuals with mental health problems and addictive behaviors in Larimer County. A historically fragmented delivery system is now a model of successful integration in which 34 organizational providers and many individual providers—among them governmental agencies, nonprofit organizations, hospitals, private practitioners, police officers, school teachers, school counselors, clergy and mental health advocates—collaborate with one another to improve access to mental health and substance abuse services for an estimated 60,000 residents in the county.[2]

Adults who report poor mental health eight days or more during the past month *in Colorado*[3]*



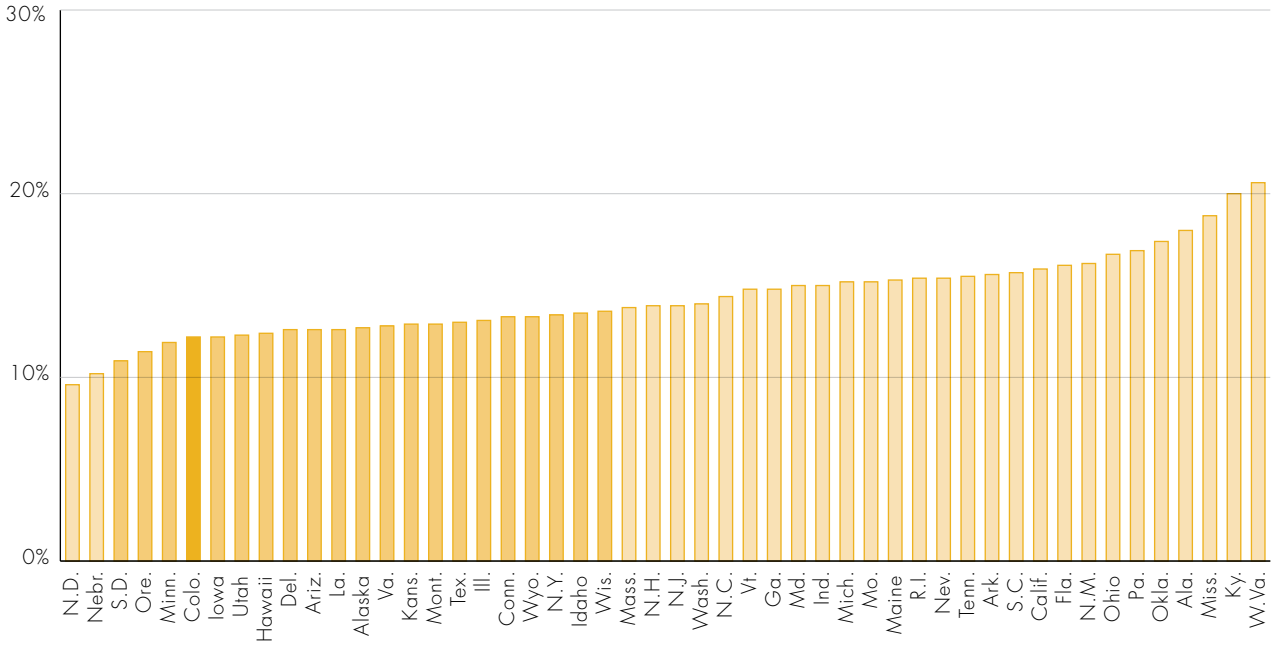
Adults who report poor mental health eight days or more during the past month *by income in Colorado*[4]



Poor Mental Health (continued)

The partnership was developed under a grant from the Local Initiative Funding Partners program, a collaborative effort of the Robert Wood Johnson Foundation and Colorado-based foundations. Additional funding has been made available through the County Health District, 14 community partners and eight local matching funders. Through these funding commitments, residents now have access to comprehensive crisis intervention and after-hours care as well as primary care at safety net clinics.

Adults who report poor mental health eight days or more during the past month[5]



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Text

1. Substance Abuse and Mental Health Services Administration (SAMHSA). "Clinical Preventive Services in Substance Abuse and Mental Health Update: From Science to Services."
   Office of the Surgeon General. "Mental Health: A Report of the Surgeon General"; 2001.
2. Health District of Northern Larimer County.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2008.

   * **Note:** Data are not available for 2002 because this question was not asked in that survey year.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Diabetes

Healthy Adults

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
4.5%	5/50	4.5%	Minnesota	4.1%	2.5%

Indicator Definition

Percent of adults (ages 18–64 years, excluding pregnant women) who have ever been told by a doctor that they have diabetes.

Indicator Significance

In 2007 an estimated 23.5 million people, or 10.7 percent of the population ages 20 years or older, had diabetes in the United States. Approximately 1.6 million new cases of diabetes were diagnosed in this same age group in 2007. Diabetes was the seventh-leading cause of death in 2006, carrying with it a long list of potential health complications including obesity, high blood pressure, heart disease, blindness and damage to the central nervous system. The average medical expenditures among people with diagnosed diabetes were 2.3 times higher than what expenditures would be in the absence of diabetes, accounting for approximately $116 billion in direct medical costs and $58 billion in indirect costs. Many racial, ethnic and age groups are at elevated risk of developing diabetes, including blacks, Hispanics, American Indians and Asian Americans/Pacific Islanders. As people age, they are also at increased risk of developing Type 2 diabetes.[1]

Colorado Specifics

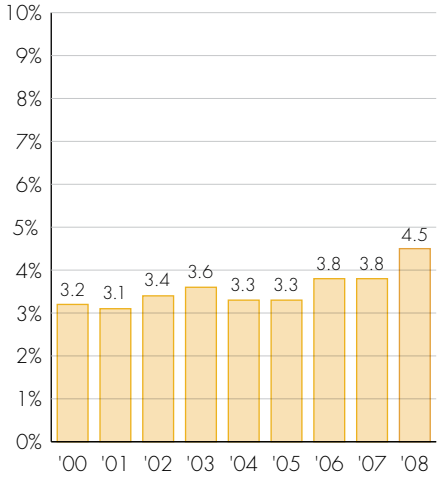
Colorado has one of the lowest rates of diabetes in the country, with 4.5 percent of working-age adults diagnosed with the disease. This statistic, however, can be misleading because an estimated 93,000 Coloradans of all ages have the disease but have not yet been diagnosed. The recent trend among adults in Colorado remained relatively stable from 2000–2007 but increased in 2008. Adults who report an annual income of $20,000 or more have lower rates of diabetes than adults with lower incomes. The relatively low incidence of diabetes in Colorado is reflective of the relatively low rate of adult obesity, as the two are closely linked.[2]

Promising Initiatives

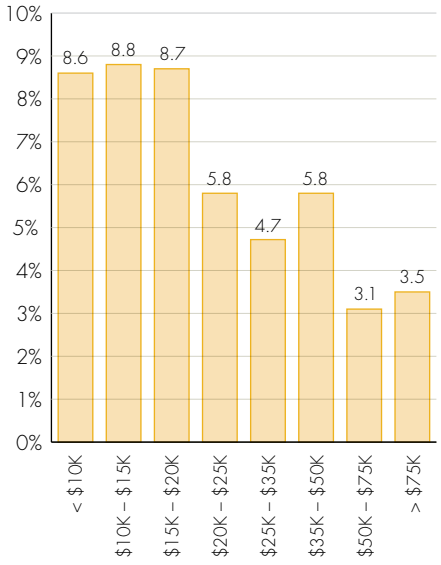
Por Tu Familia (For Your Family) is a program sponsored by the American Diabetes Association (ADA)-Colorado to increase awareness about the risks associated with cardiovascular disease and diabetes and to promote healthy lifestyles. Special emphasis is placed on serving low-income, uninsured Hispanics.[3]

Through *Por Tu Familia*, the ADA provides diabetes information in English and Spanish to a community disproportionately affected by diabetes. Informational exhibits deliver explicit, culturally relevant messages to the Hispanic community in such venues as health fairs, festivals, parades and other Hispanic celebrations around Colorado.

Adults with diabetes
in Colorado[4]



Adults with diabetes
by income in Colorado[5]

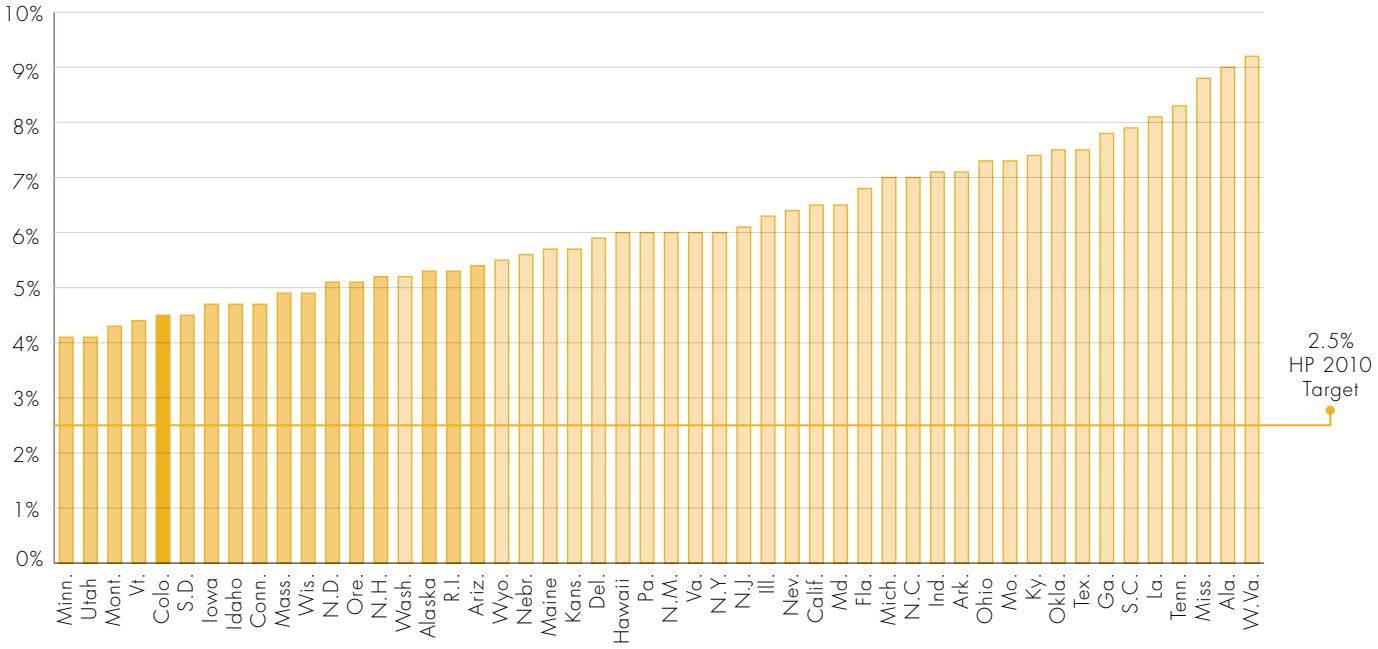


Diabetes (continued)

Registered dieticians, nurses, nutritionists, certified diabetes educators and other health care professionals conduct lifestyle change classes in 26 Colorado counties at 41 medical clinics (mainly community health centers) through the *Por Tu Familia* program.

Evidence-based research has demonstrated that the program improves heart healthy behaviors, promotes referrals and screenings and enhances information sharing beyond families into the community. More than 4,000 Hispanics attended a Diabetes Expo in Colorado in 2009.

Adults with diabetes[6]



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Text

1. Centers for Disease Control and Prevention. National Center for Chronic Disease and Health Promotion. "National Diabetes Fact Sheet"; 2007.
2. Colorado Diabetes Prevention and Control Program.
3. American Diabetes Association, Featured Projects.

Charts

4. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2000–2008.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
6. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

High Blood Pressure

Healthy Adults

Most recent CO value (2007)	CO rank (2007)	CO value (2007)	Best state (2007)	Best state value (2007)	HP2010 target
16.2%	3/50	16.2%	Utah	14.7%	16%

Indicator Definition

Percent of adults (ages 18–64 years) who have been told by a doctor, nurse or other health professional they have high blood pressure (excludes gestational hypertension).

Indicator Significance

Hypertension or high-blood pressure affects one in four Americans over age 18. Hypertension is a gateway to other life-threatening diseases such as heart disease, stroke, kidney disease and renal failure. It is the main factor in kidney distress and is a leading cause of complications during pregnancy and childbirth. Obesity and diabetes increase the risk of hypertension, which is preventable by maintaining a healthy weight, staying active and refraining from tobacco products. For some individuals, medication may be necessary to lower hypertension and should be taken in accordance with a doctor's advice.[1]

Colorado Specifics

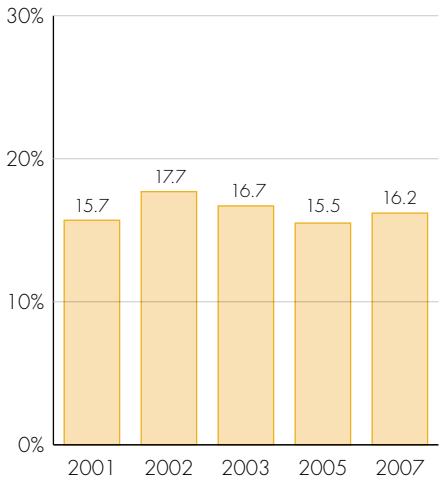
Compared to other states, Colorado fares well in the self-reported incidence of hypertension among working-age adults, ranking third after Utah and Minnesota. Colorado's rate for adults is 16 percent, which is equal to the *Healthy People 2010* target for persons age 20 and older. Because the incidence of hypertension increases with age, the rate for older Coloradans probably exceeds the *Healthy People 2010* target. The small changes in the reported incidence of hypertension in recent years are not statistically significant. Working-age men have a higher rate of hypertension than do working-age women (19 percent vs. 14 percent).

Promising Initiatives

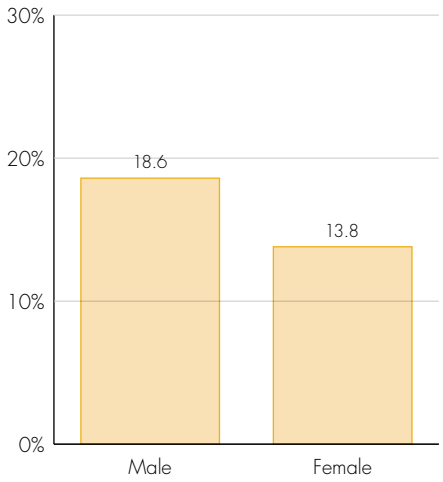
LiveWell Weld County is a broad-based coalition funded by LiveWell Colorado. The intervention is a five-year project focused on healthy eating, physical activity and smoking cessation to positively affect high blood pressure and overall cardiovascular health. *LiveWell Weld County* focuses on cardiovascular health through the *Heart of Weld Project* which seeks to reduce risk factors for cardiovascular disease among low-income women ages 40 to 64 years who are under- or uninsured.[2]

Regular screenings include height, weight and blood pressure measurements and cholesterol and glucose monitoring. Women identified as moderate-to-high risk for developing heart disease are encouraged to enroll in a lifestyle intervention program. All screenings and the lifestyle intervention program are provided to eligible women without cost.

Adults with hypertension
*in Colorado[3]**

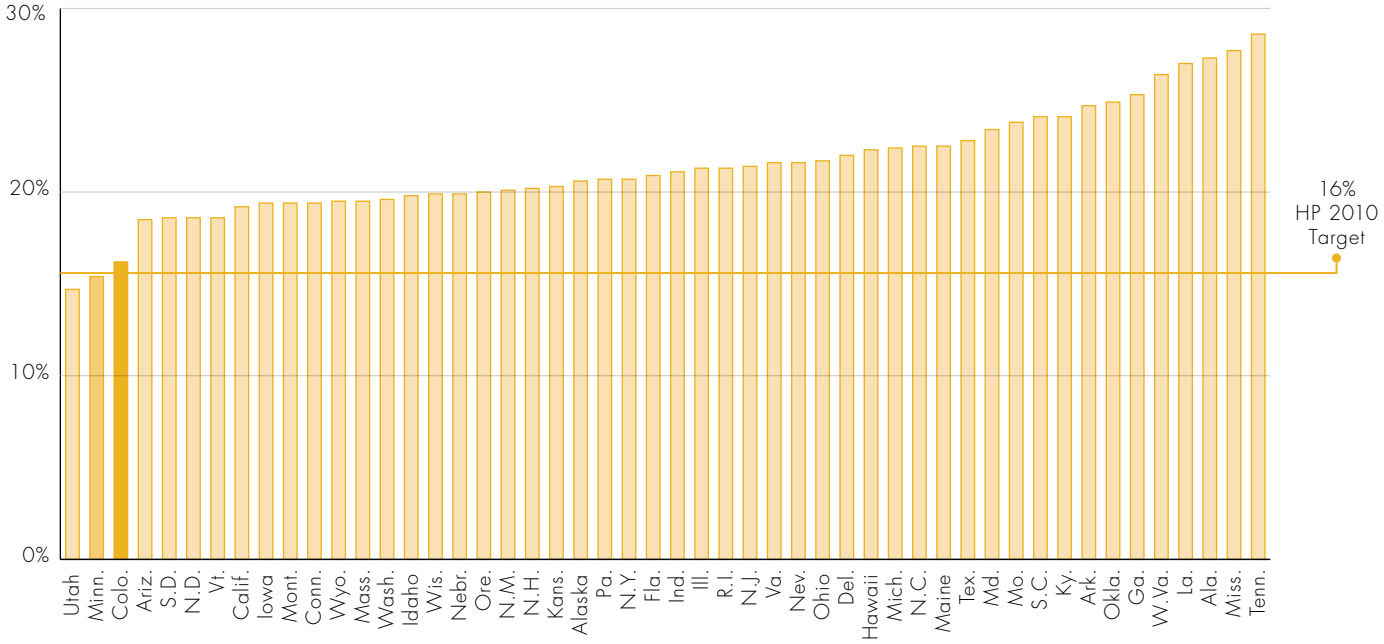


Adults with hypertension
by gender in Colorado[4]



High Blood Pressure (continued)

Adults with hypertension[5]



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Text

1. National High Blood Pressure Education Program. "Prevent and Control High Blood Pressure: Mission Possible."
2. LiveWell Weld County.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2001–2007.

   * **Note:** Data not available for 2004 and 2006 because the question used for this indicator was not included in the survey for those years.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2007, Centers for Disease Control and Prevention.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2007, Centers for Disease Control and Prevention.

Healthy Aging

Colorado's older adults do relatively well according to the measures used in this Report Card and compared to their peers in other states. Colorado scores in the top 10 on three of the six Healthy Aging indicators. Following national trends, Colorado's older adults are living longer and healthier lives. They are more likely to engage in physical activity and have the highest rate of flu and pneumonia vaccinations compared to older adults in other states.

Based on this fairly good performance, Colorado gets a B+ for Healthy Aging, still leaving room for improvement. More than one in five older adults report that poor physical or mental health kept them from doing their usual activities on eight or more days in the last month. Even though Colorado is ranked first for flu and pneumonia vaccinations, only 62 percent of older adults have actually been vaccinated.

Health Indicator	Rank among states
95.8 percent of older adults have one (or more) person(s) they think of as their personal doctor or health care provider	**12th**
61.7 percent of older adults have had a flu shot during the past 12 months and have had a pneumonia vaccination	**1st**
73.9 percent of older adults participated in any physical activity in the past 30 days	**5th**
19.7 percent of older adults report that their **physical** health was not good eight or more days in the past month	**17th**
7.0 percent of older adults report that their **mental** health was not good eight or more days in the past month	**8th**
22.2 percent of older adults reported eight or more days of limited activity in the past month due to poor physical or mental health	**21st**

Average Rank	**10.7**
Average Grade	**B+**

Policy Overview

Healthy Aging

How are we doing?

Colorado received a grade of B+ for healthy older adults, which is the state's highest grade for any life stage. Ranking in the top half of states for all health indicators, Colorado's older adults receive especially exemplary grades for rates of flu shots, pneumonia vaccinations and regular physical activity—first among the states for having had a pneumonia vaccination and flu shot within the past 12 months. The lowest rank (21st) was for older adults who were limited in their daily activities because of poor physical or mental health.

What is Colorado doing right?

Colorado leads the other states in the rate of adult immunizations. Although no one policy intervention can fully explain this success, Colorado does have a strong statewide coalition dedicated to making sure older Coloradans are educated about the importance of having a flu shot each year. The Colorado Adult Immunization Coalition (CAIC), housed within the Colorado Department of Public Health and Environment (CDPHE), partners with a wide range of organizations, providers in private practice, community health centers, local health departments and local health fairs to disseminate educational information about the importance of an annual flu shot. CAIC recently received federal stimulus dollars to extent its current efforts.

In general, older adults in Colorado are physically active and lead healthy lifestyles compared to adults in other states. LiveWell Colorado community coalitions across the state have developed initiatives to promote a variety of programs to engage older adults in daily physical activity. One LiveWell community has been working to pass a mixed-use re-zoning ordinance that will encourage neighborhoods to be more pedestrian-friendly in their design.

Where can Colorado improve?

Colorado's lowest ranking among the states is for older adults with daily activity limitations because of poor mental or physical health. A number of states have developed successful patient-centered medical home initiatives that are targeted at older adults with chronic illnesses. Chronic illness often results in both physical and mental activity limitations, both of which impact quality of life in significant ways.

Vermont has developed a comprehensive state plan, the *Blueprint for Health* that addresses both the mental and physical health needs of older adults. The *Blueprint* objectives are to provide private medical practices with the resources needed to build capacity. It then creates financial incentives for them to function as patient-centered medical homes, with a special focus on adults with chronic health conditions. Payment reform includes both private and public insurers who jointly pay for community care teams that include nurses, social workers, dieticians, community health workers and care coordinators. An underpinning of the coordinated health system using community care teams is health information technology, including a web-based clinical tracking system.

In North Carolina, the *Community Care* program has had more than 10 years experience in managing the primary care needs of Medicaid enrollees. Community Care establishes medical homes, provides technical assistance about managing chronic Illness and directly hires nurse care managers for enrollees with highest risk, including those with multiple chronic illnesses. Evaluations of the North Carolina program have found a 40 percent reduction in hospitalizations for asthma, 16 percent reduction in emergency department visits and a $400 million Medicaid savings for its aged, blind and disabled populations over a 10 year period.

Medical Home

Healthy Aging

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
95.8%	12/50	95.8%	Pennsylvania	97.3%	96%

Indicator Definition

Adults (ages 65 and older) who report having one or more individuals they think of as their personal doctor or health care provider.

Indicator Significance

An estimated 80 percent of older Americans live with a single chronic health condition and 50 percent live with two or more. With the graying of the population, health care spending is likely to increase by 25 percent by 2030. Medical care for older adults costs three to five times more than that provided to those under age 65. Having a regular source of medical care is especially critical for older adults because they so often must manage chronic health problems. Regular contact with a primary physician can ensure that older adults are regularly screened for common age-related diseases and that health conditions that occur during the aging process are properly managed.[1]

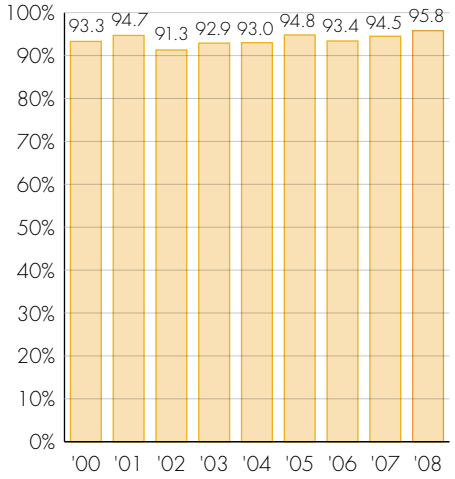
Colorado Specifics

Approximately 96 percent of older Coloradans report that they have a regular source of health care, a number that has remained fairly stable since 2000. Yet even higher proportions of older adults in 11 other states report having a regular source of care. Older adults with higher incomes are only slightly more likely to have a regular source of care than those with lower incomes. Access to a regular source of care for older adults is superior to that for working-age adults (77 percent) and especially so for children (59 percent). Income is much more strongly related to children and working-age adults having a regular source of care than among older adults. The near universal enrollment of older adults in Medicare is the likely explanation for this difference. Nevertheless, concern is growing that low-income older adults will have increasing difficulty securing a regular source of care as more physicians refuse to accept Medicare reimbursement rates.

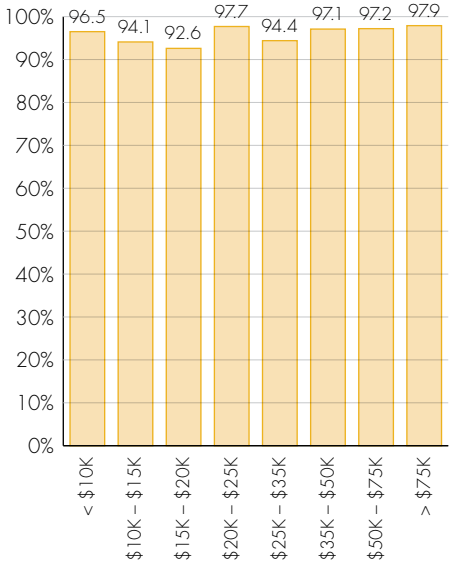
Promising Initiatives

The Colorado *Multi-Payer, Multi-State Patient-Centered Medical Home* (PCMH) project was launched in 2009 in 16 medical practices across Colorado's Front Range. The primary goal of this two-year pilot program is to test the provision of comprehensive, coordinated care for adults and seniors through formal partnerships between patients and their personal health care team.[2]

***Older adults who report a regular source of medical care** in Colorado[3]*



***Older adults who report a regular source of medical care** by income in Colorado[4]*

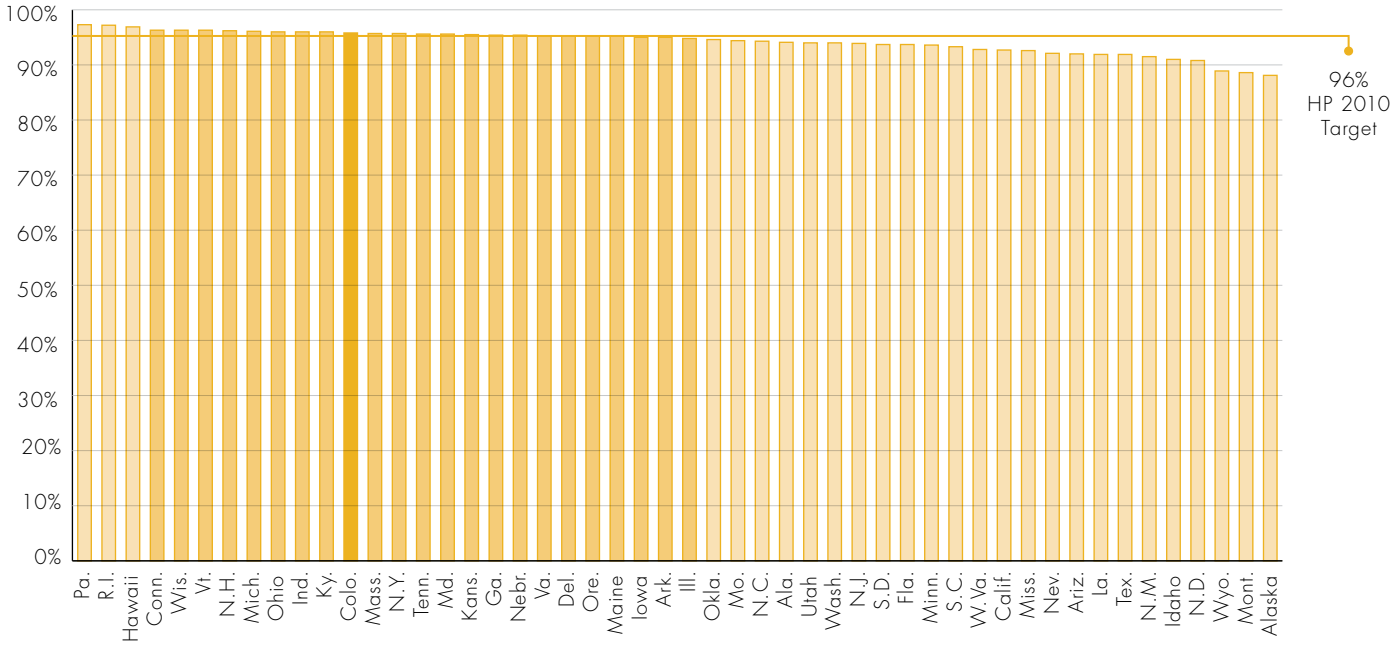


Medical Home (continued)

To enable medical practices to create an "integrated medical neighborhood," the PCMH project will rely on a payment model that includes a monthly care management fee to the health care team and a bonus for meeting or exceeding specified quality outcomes. The pilot will shift the focus away from illness care toward comprehensive prevention and early intervention-oriented care.

The pilot began in spring 2009 and anticipates enrolling up to 30,000 patients covered by Anthem Wellpoint, United Healthcare, Humana, Aetna, CIGNA, Colorado Medicaid and Colorado Access. Funding has been provided by the Commonwealth Fund and The Colorado Trust. The Colorado Clinical Guidelines Collaborative will provide technical assistance and serve as the convening organization for the pilot. An evaluation will determine the effects on quality, cost and satisfaction levels of both patients and providers.

Older adults who report a regular source of medical care[5]



Color coding: *Statistical tests were used to determine if the average for Colorado was significantly different than the averages for other states. States with a medium shade of orange had averages that were not statistically different from Colorado's average and states colored in a light shade of orange had averages that were statistically different from Colorado's average.*

Text

1. Centers for Disease Control and Prevention. "The State of Aging and Health in America 2007."
2. Colorado Clinical Guidelines Collaborative. The Colorado Multi-Payer, Multi-State Patient-Centered Medical Home Pilot Overview

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2000–2008, Centers for Disease Control and Prevention.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Immunizations

Healthy Aging

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
61.7%	1/50	61.7%	Colorado and New Hampshire	61.7%	90%

Indicator Definition

Adults (ages 65 and older) who had a flu shot within the past year and had a pneumonia vaccine at some point.

Indicator Significance

Older adults are more susceptible to infections and often experience more severe symptoms from infections and other illnesses as they age. Complications from influenza and pneumonia are the sixth leading cause of death among older adults. More than 60,000 adults 65 and older die each year from such complications, many of which are preventable through recommended immunizations. Older adults are at a greater risk of dying from infection-related illnesses than from a fatal car accident. Since flu and pneumonia spread from person to person, being vaccinated for both also protects friends and family with whom one has close contact. Physicians recommend an annual flu shot after the age of 50 and a single dose of pneumonia vaccine at age 65.[1]

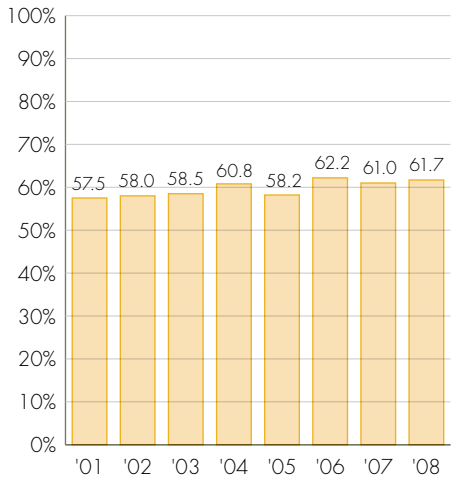
Colorado Specifics

Colorado and New Hampshire share the number one spot in the proportion of older adults who report having had a flu shot within the past year and having been vaccinated for pneumonia. Despite this ranking, Colorado's older adult vaccination rate of 62 percent is still far below the *Healthy People 2010* target of 90 percent and has changed little in the past five years. Females tend to have slightly higher rates (64 percent) than males (59 percent).

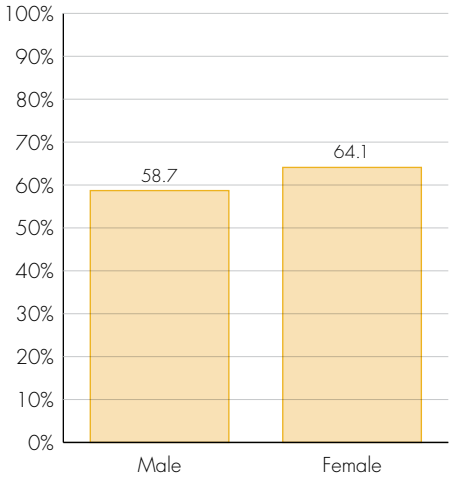
Promising Initiatives

Minnesota's *Mark of Excellence* program was launched in 2006 to increase public confidence in flu vaccinations administered in nonmedical settings such as grocery stores, pharmacies and workplaces. The state Department of Health provides education and instructions for how to store, handle and transport vaccines safely and how to properly give and document vaccines to these non-clinic-based sites. Those that successfully complete the training receive a *Mark of Excellence* seal to publicly display. Consumers can check a "Find a Flu Shot Clinic" Web site to find locations with the *Mark of Excellence* seal of approval.[2]

*Older adults with appropriate **immunizations** in Colorado*[3]

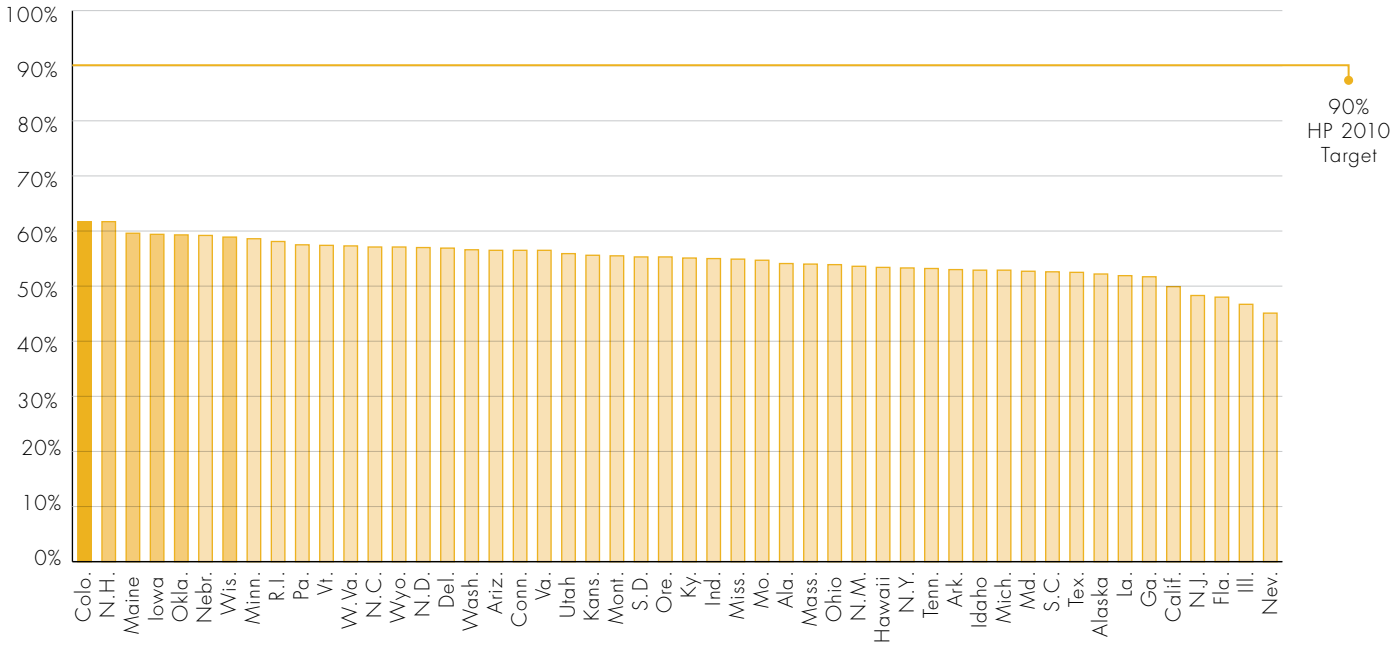


*Older adults with appropriate **immunizations** by gender in Colorado*[4]



Immunizations (continued)

Older adults with appropriate immunizations[5]



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Text

1. 100% Immunization Campaign.
2. Minnesota Department of Health Mark of Excellence.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2000–2008, Centers for Disease Control and Prevention.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Exercise

Healthy Aging

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
73.9%	5/50	73.9%	Hawaii	80.6%	80%

Indicator Definition

Adults (ages 65 and older) who participated in any physical activity within the past 30 days.

Indicator Significance

By the age of 75, one in every two women and one in every three men will get no physical exercise. Lacking any meaningful physical activity, their ability to perform basic and normal movement is lost as muscle and bone mass are depleted due to lack of use. An estimated 88 percent of adults 65 and older will have acquired at least one chronic illness that results in some loss of ability to engage in normal physical activities. Physical and social environmental factors, including lack of public transportation, often limit older adults' access to age-appropriate exercise programs. Physicians' lack of awareness of appropriate fitness routines for older adults may also serve as an impediment, particularly for those with one or more chronic illnesses. With the projected growth in the older adult population, the number of older adults with chronic conditions resulting from inactivity is likely to increase.[1]

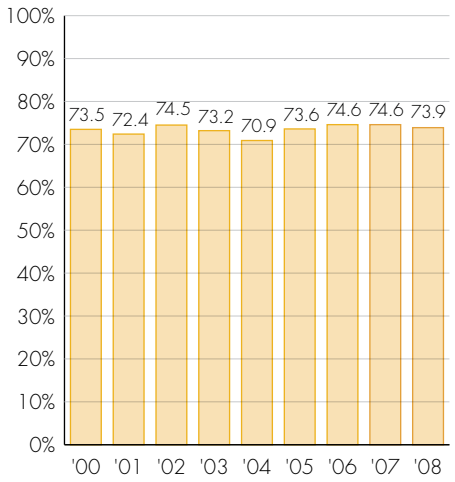
Colorado Specifics

Colorado ranks an impressive fifth in the proportion of older adults who participated in at least some physical activity in the last month. Nevertheless, there has been no discernible improvement in this indicator since 2000 and the state is below the *Healthy People 2010* target of 80 percent. As with physical activity indicators for other age groups, older men are more likely to participate in physical activity than women (77 percent vs. 72 percent in 2008). Also, older adults in the higher-income groups are more likely to participate in physical activity than lower-income older adults. While higher income makes favorite Colorado activities such as golf and skiing more accessible, there is no "entrance fee" to taking a few long walks each week.

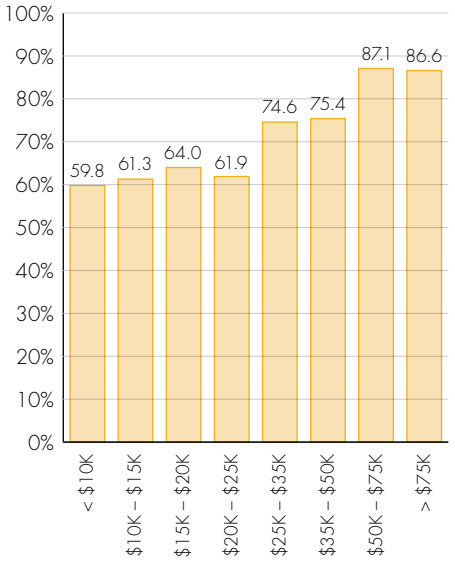
Promising Initiatives

The Colorado Department of Public Health and Environment (CDPHE) partnered with the University of Colorado Health Sciences Center in 2001 to create a statewide physical activity and nutrition program to prevent obesity called *Colorado on the Move*. The program promotes community-based programs that encourage small behavioral changes over time to achieve long-term healthy results. Participants are encouraged to walk 2,000 steps a day, using pedometers or step counters to measure their progress. Each site is asked to develop a 14-week program with incentives for its participants. Depending on the individual site, pedometers may be provided either free of charge or at a reduced cost.[2]

Older adults who participated in any physical activity within past month in Colorado[3]



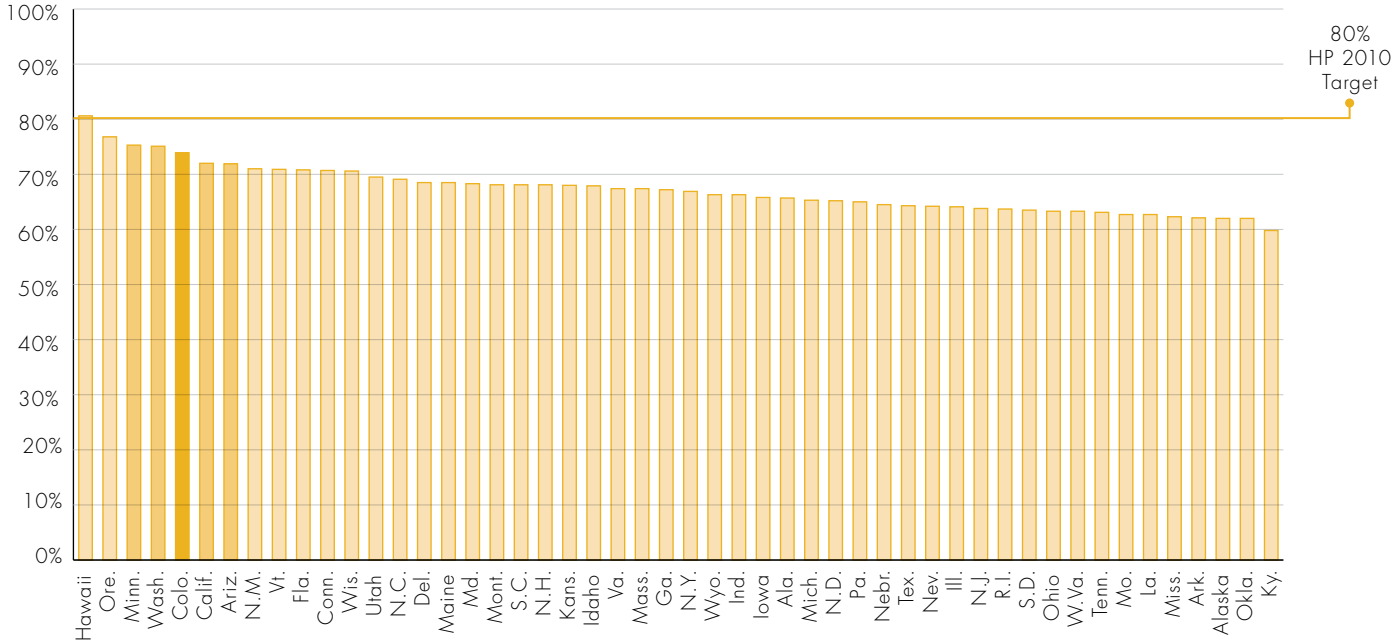
Older adults who participated in any physical activity within past month by income in Colorado[4]



Exercise (continued)

The program was initially implemented in two communities—a rural site and the Denver Metro Black Church Initiative, a faith-based community of 20 churches. This walking program has been expanded to more than 50 work sites and 12 communities across Colorado, and is part of the state plan to address obesity. It also served as the pilot site for *America on the Move*, a national version of the program.

Older adults who participated in any physical activity within past month[5]



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Text

1. American Society on Aging. "Physical Activity for Older Adults: Exercise for Life!"
2. *America on the Move*

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2000–2008, Centers for Disease Control and Prevention.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Poor Physical Health

Healthy Aging

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
19.7%	17/50	19.7%	Minnesota	16.2%	NA

Indicator Definition

Adults (ages 65 and older) who reported that their physical health "was not good" eight or more days during the past month.

Indicator Significance

Physical health is a key indicator of overall well-being as people age. Lifestyle choices—such as inactivity, smoking, poor diet and social isolation—can affect an individual's perception of physical health. Likewise, physical health is strongly associated with mental health. People who suffer from one or more chronic illnesses are more likely to report poor mental health, whereas those who have a chronic mental illness often have a secondary or primary physical condition. Physical symptoms such as stomach problems and low energy in older adults often suggest underlying mental health concerns such as depression. For this reason, depressed older adults spend three times as much on medical care as non-depressed older adults.[1]

Colorado Specifics

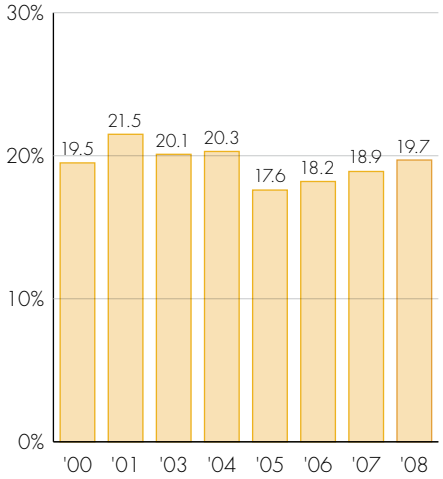
Colorado performs fair compared to other states in the proportion of older adults reporting poor physical health, ranking 17th. There has been little change since 2000 in the proportion of older Coloradans reporting poor physical health. People in lower income brackets are much more likely to report poor physical health than those with higher incomes. Improvements in physical activity and preventive health care could boost Colorado's performance on this important health indicator.

Promising Initiatives

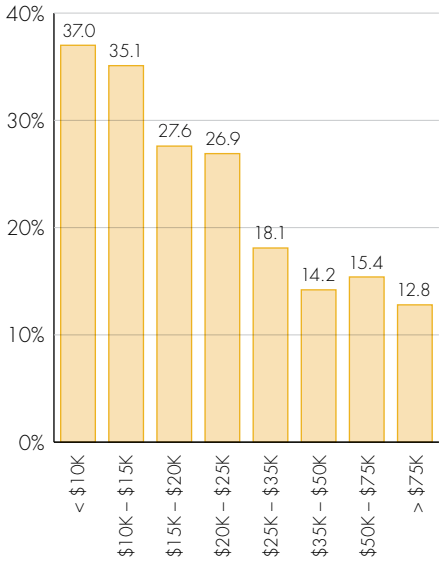
LiveWell Wheat Ridge staff and the Jefferson County extension nutrition educator have developed the *Bridge on the Bus* program to combat health issues related to poor nutrition in older adults. The program assists participants in gaining access to healthy foods at nearby grocery stores and discusses healthy eating habits. Once a week during the fall and winter months, LiveWell Wheat Ridge staff accompanies participants to local grocery stores and provide education on a variety of nutrition and food resource management topics.[2]

Participants report saving money on their weekly grocery bills and increased awareness of what to look for in the ingredients listed on nutrition labels.

*Older adults who report poor physical health eight or more days within past month in Colorado[3]**

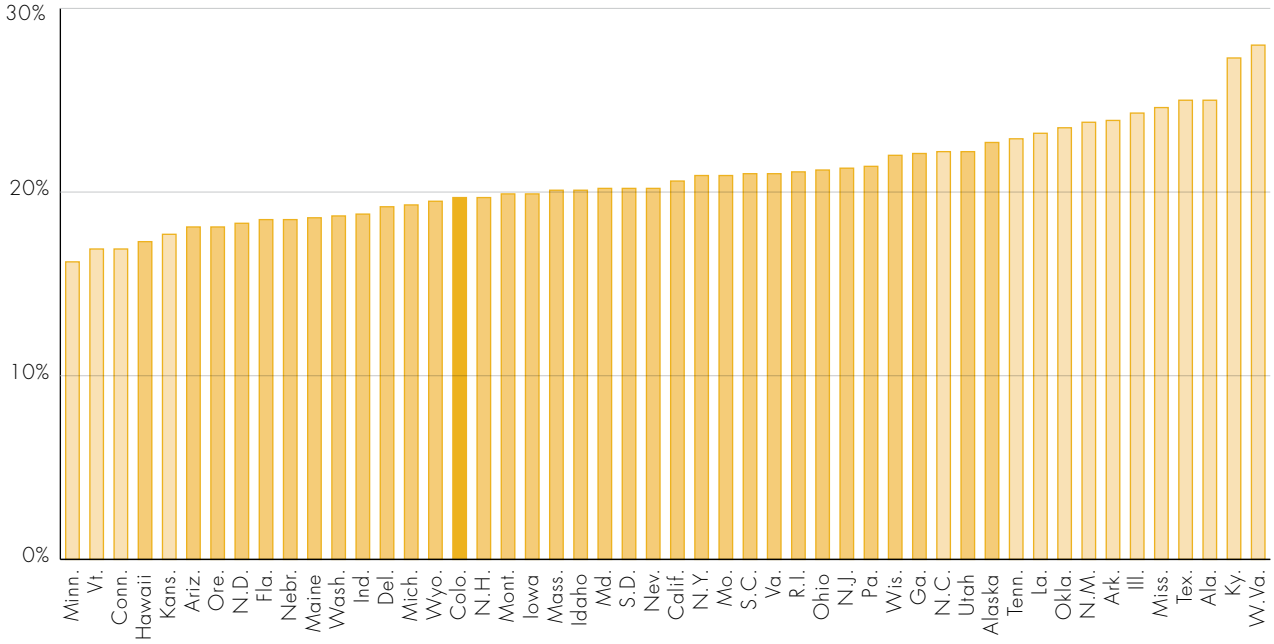


Older adults who report poor physical health eight or more days within past month by income in Colorado[4]



Poor Physical Health (continued)

Older adults who report poor physical health eight or more days within past month[5]



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Text

1. Hawkins, B.A. "Aging Well: Toward a way of life for all people," *Preventing Chronic Disease*; July 2005.
2. LiveWell Colorado.

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2000–2008, Centers for Disease Control and Prevention.

   * **Note:** Data for 2002 are not available because the question for this indicator was not included in the survey that year.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** National Center for Chronic Disease Prevention and Health Promotion, Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Poor Mental Health

Healthy Aging

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
7.0%	8/50	7.0%	Minnesota	5.0%	NA

Indicator Definition

Percent of adults (ages 65 and older) who reported their mental health "was not good" (feelings of stress, depression and problems with emotions) for eight or more days during the past month.

Indicator Significance

Depression is not a normal part of aging, yet the National Institute of Mental Health reports that depression is widely under-recognized and untreated among older adults. Depression often accompanies chronic illness and therefore goes unrecognized as a separate and treatable health problem. The majority of older adults cope appropriately with physical limitations, cognitive changes and other losses that accompany aging. But many—almost 20 percent—experience mental health problems that are not a normal part of aging. Older adults have the highest rate of suicide of any age group. Medicare does not adequately cover mental health care costs, so many lower-income older adults go without treatment. Loneliness and social isolation exacerbate poor mental health among adults as they age, and older adults are the least likely group to seek help for depression and related mental problems. Drug interactions pose another dilemma for this age group. Because so many older adults take medications for physical health conditions, as many as 40 percent who are also taking antidepressants quit or repeatedly miss doses because of side effects, memory problems or difficulty keeping track of their drug regimens.[1]

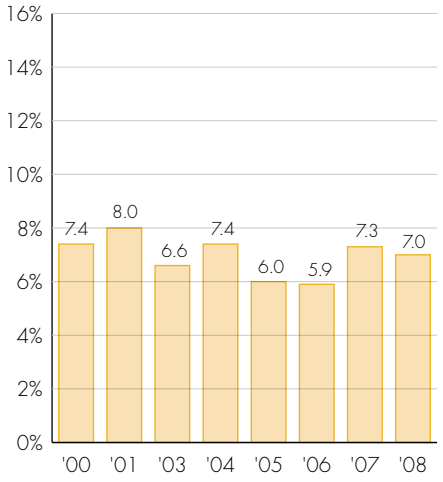
Colorado Specifics

Only 7 percent of older Coloradans report eight or more days with poor mental health in the past month. The incidence of poor mental health among older adults has remained fairly constant since 2000. Older females have a slightly higher prevalence of poor mental health compared to older males (9 percent compared to 5 percent). As with many other indicators, a higher percentage of low-income older adults report experiencing poor mental health in the past month compared to higher-income older adults.

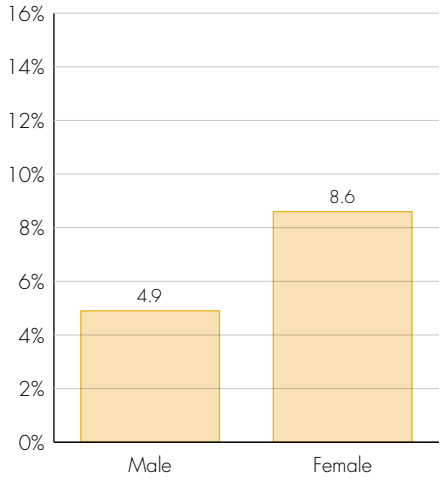
Promising Initiatives

The University of Washington's Health Promotion Research Center has developed the *Program to Encourage Active, Rewarding Lives for Seniors (PEARLS)* with funding from the Centers for Disease Control and Prevention. This evidence-based program is currently being implemented in Colorado Springs through the community mental health center and clinicians in private practice. *PEARLS* was designed for adults ages 60 and older who have chronic minor depression and who receive home-based social services from community agencies to reduce symptoms of depression and improve their quality of life.[2]

*Older adults who report poor mental health eight or more days within past month in Colorado[3]**



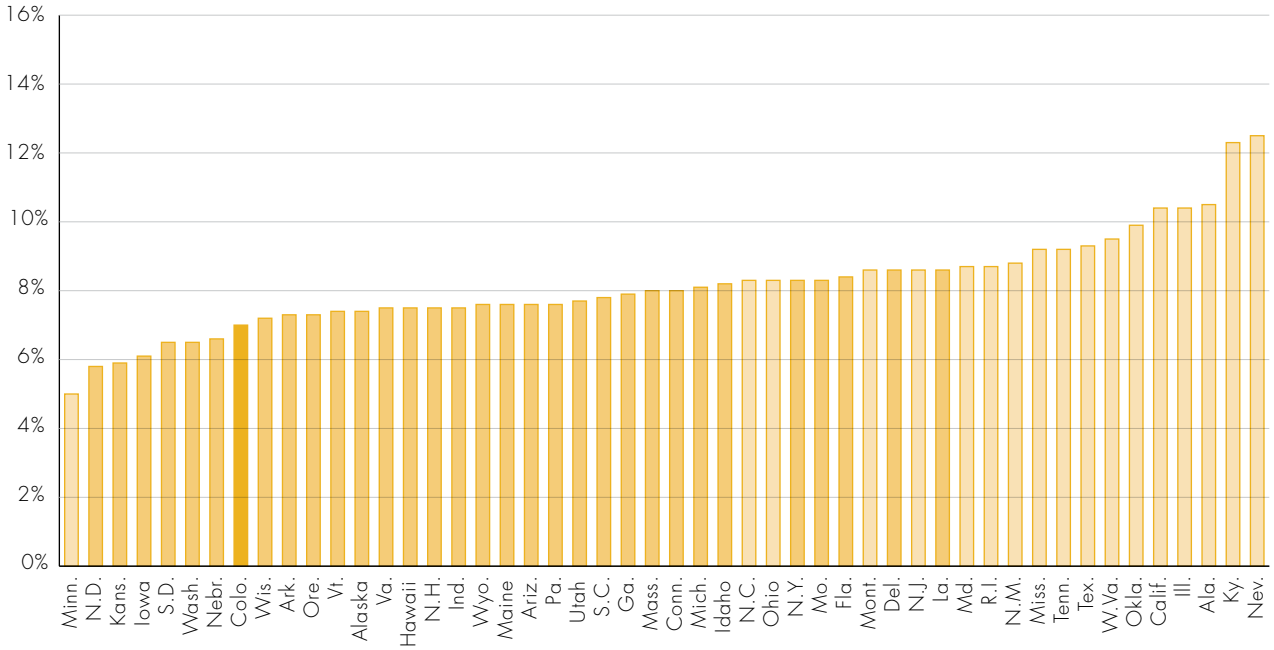
Older adults who report poor mental health eight or more days within past month by gender in Colorado[4]



Poor Mental Health (continued)

Trained social service workers provide *PEARLS* participants with eight 50-minute sessions over a 6-month period. Sessions take place in the participants' homes and focus on three primary depression management techniques: 1) problem-solving in which clients are taught to recognize depressive symptoms, define problems that may contribute to the symptoms and then devise steps to resolve them; 2) planning for social and physical activities; and 3) participating in social events.

Older adults who report poor mental health eight or more days within past month[6]



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Text

1. National Institute of Mental Health. "Older Adults: Depression and Suicide Facts"; April 2007.
   Office of the Surgeon General. "Mental Health: A Report of the Surgeon General"; 2001.
2. Centers for Disease Control and Prevention, Prevention Research Centers

Charts

3. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2000–2008, Centers for Disease Control and Prevention.
   * **Note:** Data for 2002 are not available because the question for this indicator was not included in the survey that year.
4. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

Limited Activity

Healthy Aging

Most recent CO value (2008)	CO rank (2008)	CO value (2008)	Best state (2008)	Best state value (2008)	HP2010 target
22.2%	21/50	22.2%	Hawaii	15.9%	NA

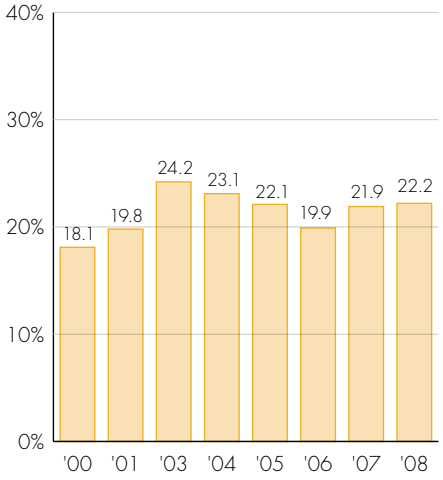
Indicator Definition

Adults (ages 65 and older) who report that poor mental or physical health kept them from doing usual activities such as self-care, work or recreation eight or more days in the past month.

Indicator Significance

Chronic diseases often limit physical activity because of the functional limitations that accompany them.[1] Arthritis—a term that encompasses more than 100 different diseases and conditions—is the leading cause of disability and functional limitation in the United States. As the population ages, it is estimated that arthritis will affect 67 million adults by 2030 and more than one-third will limit their activity as a result. The 2003–2005 National Health Interview Survey estimates that nearly 22 percent of the adult U.S. population is limited in some way by arthritis. In addition, arthritis affects more than half of adults with diabetes and heart disease. Each year, arthritis-related conditions lead to more than 75,000 hospitalizations. Direct medical costs were $81 billion in 2003. Effective ways to prevent arthritis and lessen its symptoms include weight control, injury prevention, early diagnosis and symptom management and physical activity.[2]

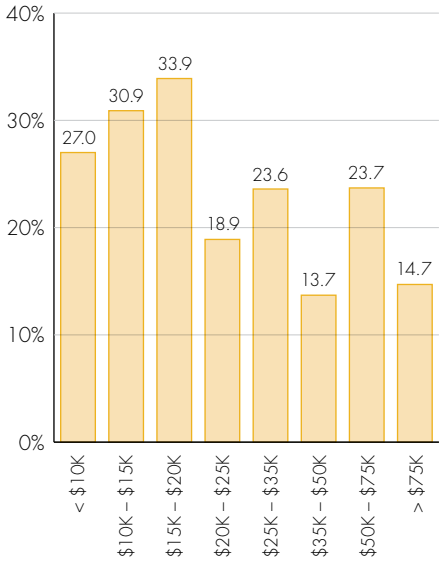
*Older adults who report limited physical activity eight or more days within past month in Colorado[4]**



Colorado Specifics

More than one in five older adults in Colorado reports being unable to engage in such usual activities as self-care, work or recreation because of deficient physical or mental health. Emerging national evidence suggests the rate of disability among older Americans is declining. This may be true in Colorado as well. Improved public awareness of the factors that contribute to healthy aging such as exercise, diet and community involvement, along with better management of chronic conditions, will contribute to this positive change over time. There does not seem to be a clear difference between income groups related to limited activity levels among older adults.

Older adults who report limited physical activity eight or more days within past month by income in Colorado[5]



Promising Initiatives

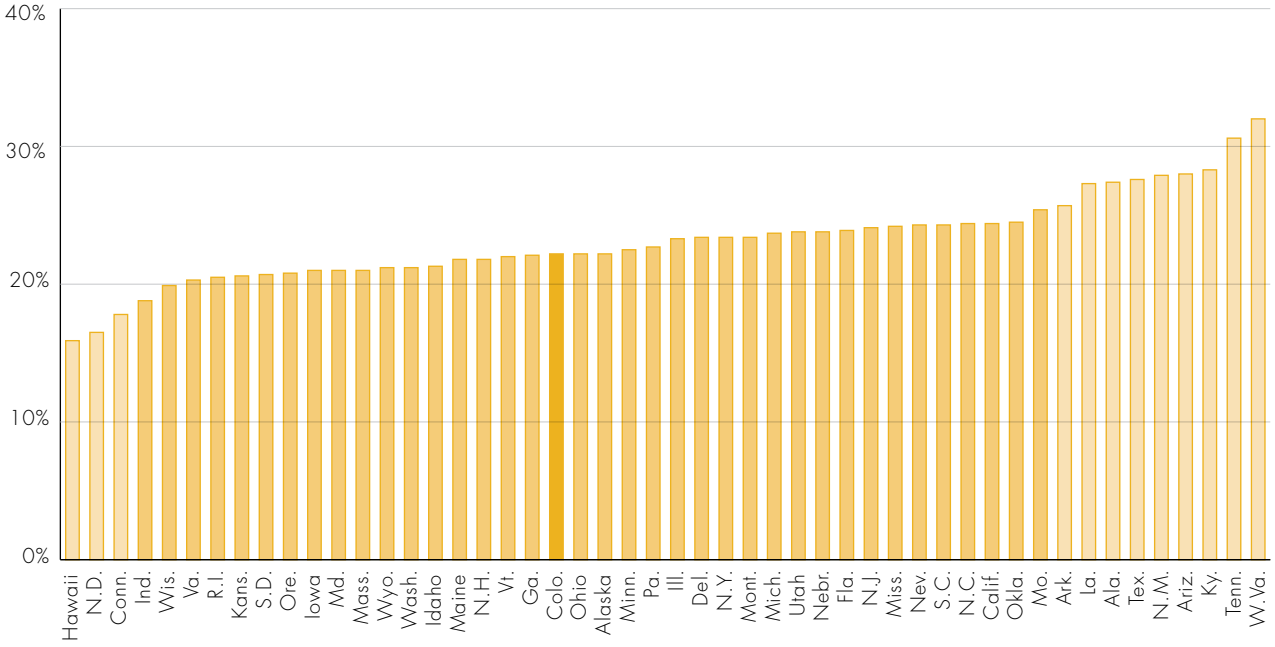
The *Senior Fall Prevention Program* in Broomfield provides free comprehensive injury prevention assessments that focus on general health, nutrition, physical activity and environmental risks for residents living in senior housing complexes. Broomfield Greens, a senior living center, utilizes a local resident to lead two exercise classes each week that combine balance, relaxation and strength training. These classes have proven to engage formerly sedentary 70–90+ year-old seniors living in the complex. LiveWell Broomfield has been working to expand these types of classes to other sites

Limited Activity (continued)

by supporting "internal champs" who can then lead peers in healthy living activities, thus creating small changes to the environment that encourage physical activity.

Since beginning the fall prevention program in 2002, Broomfield Health and Human Services in partnership with Home First, Inc. and Senior Services has provided over 275 risk assessments to residents 65 years and older.[3]

Older adults who report limited physical activity eight or more days within past month[6]



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Text

1. Centers for Disease Control and Prevention. "Targeting Arthritis: Improving Quality of Life for More Than 46 Million Americans"; July 29, 2008.
2. Centers for Disease Control and Prevention. "Chronic Disease Prevention and Health Promotion: Arthritis Meeting the Challenge."
3. LiveWell Colorado.

Charts

4. **Source:** Colorado Department of Public Health and Environment and Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2000–2008, Centers for Disease Control and Prevention.

   * **Note:** Data for 2002 are not available because the question for this indicator was not included in the survey that year.
5. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.
6. **Source:** Colorado Health Institute analysis of Behavioral Risk Factor Surveillance System, 2008, Centers for Disease Control and Prevention.

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Report Card summary

Life Stage	Grade & Avg. Rank
Healthy Beginnings	C 24.7
Healthy Children	D+ 30.5
Healthy Adolescents	B- 17.2
Healthy Adults	B 14.0
Healthy Aging	B+ 10.7

RANK
1 = Best
50 = Worst

GRADING SCALE
A (1–10) Excellent
B (11–20) Good
C (21–30) Average
D (31–40) Poor
F (41–50) Unacceptable

Appendix I: Indicator summary table

Life Cycle Phase	Indicator	Age range	Data Source*
HEALTHY BEGINNINGS	Prenatal care later than the first trimester or not at all	women of childbearing ages	Vital Stats
	Smoking during pregnancy	women of childbearing ages	PRAMS
	Low birth weight	births occurred in 2006	Vital Stats
	Infant mortality rate (infant deaths per 1,000 live births)	less than 1 yr	Vital Stats
	All recommended early childhood immunizations	children born between July 2004 and December 2007	NIS
HEALTHY CHILDREN	Children not covered by private or public health insurance	0–12 yrs	CPS
	Children living in families with income below the federal poverty level	0–12 yrs	CPS
	Children with a medical home	0–17 yrs	NSCH
	Children receiving preventive dental care in last 12 months	1–17 yrs	NSCH
	Children who participate in vigorous physical activity	6–17 yrs	NSCH
	Obese children	10–17 yrs	NSCH
HEALTHY ADOLESCENTS	Adolescents not covered by private or public health insurance	13–17 yrs	CPS
	Adolescents living in families with income below the federal poverty level	13–17 yrs	CPS
	Adolescent fruit and vegetable consumption	high school students	YRBS
	Adolescents who participate in vigorous physical activity	high school students	YRBS
	Adolescent binge drinking	high school students	YRBS
	Adolescent smoking	high school students	YRBS
	Adolescent depression	high school students	YRBS
	Adolescents who attempted suicide	high school students	YRBS
	Adolescent sexual activity	high school students	YRBS
	Adolescent condom use	high school students	YRBS
	Teen fertility rate (births to mothers 15–19 per 100,000 population)	15–19 yrs	Vital Stats

	RANKING							
CO rank	CO ranked value	Best state	Best state value	Year for ranked values	Number of states ranked	CO most recent value	Most recent year for CO	HP 2010 target (age group)
39	19.9%	New York	9.0%	2006	33	21.9%	2007	NA
13	89.4%	Utah	96.1%	2000–2003	19	89.3%	2007	99% abstain
36	8.9%	Alaska	5.9%	2006	50	9.0%	2007	5%
18	6.4/1,000	Utah	4.5/1,000	2005	50	6.2/1,000	2007	4.5/1,000
17	81.2%	New Jersey	88.1%	2007–2008	50	81.2%	2007–2008	90%
45	13.8%	Massachusetts	3.0%	2006–2008	50	13.8%	2006–2008	0%
13	14.6%	New Hampshire	7.7%	2006–2008	50	14.6%	2006–2008	NA
30	59.3%	New Hampshire	69.3%	2007	50	59.3%	2007	97% (age 0–17)
38	77.0%	Hawaii	86.9%	2007	50	77.0%	2007	NA
34	64.1%	Minnesota	72.8%	2007	50	64.1%	2007	NA
23	14.2%	Oregon	9.6%	2007	50	14.2%	2007	5%
31	11.2%	Hawaii	5.2%	2006–2008	50	11.2%	2006–2008	0%
13	10.5%	New Hampshire	5.2%	2006–2008	50	10.5%	2006–2008	NA
16	19.2%	Rhode Island	25.4%	2005	34	19.2%	2005	75% (all ages)
12	37.2%	North Carolina	45.9%	2005	30	37.2%	2005	NA
41	30.6%	Utah	8.8%	2005	40	30.6%	2005	2%
18	18.7%	Utah	7.4%	2005	40	18.7%	2005	16%
9	25.0%	North Dakota	20.3%	2005	39	25.0%	2005	NA
7	6.7%	Vermont	6.2%	2005	40	6.7%	2005	1%
6	29.5%	New York	29.2%	2005	27	29.5%	2005	NA
5	69.3%	New Jersey	71.2%	2005	32	69.3%	2005	NA
31	43.8/1,000	New Hampshire	18.7/1,000	2006	50	38.2/1,000	2007	43/1,000

Appendix I: Indicator summary table (continued)

Life Cycle Phase	Indicator	Age range	Data Source*
HEALTHY ADULTS	Adults not covered by private or public health insurance	18–64 yrs	CPS
	Adults who have a regular source of medical care	18–64 yrs	BRFSS
	Adult fruit and vegetable consumption	18–64 yrs	BRFSS
	Adult physical activity	18–64 yrs	BRFSS
	Adult obesity	18–64 yrs	BRFSS
	Adult smoking	18–64 yrs	BRFSS
	Adult binge drinking	18–64 yrs	BRFSS
	Adults with poor mental health	18–64 yrs	BRFSS
	Adults with diabetes	18–64 yrs	BRFSS
	Adults with hypertension	18–64 yrs	BRFSS
HEALTHY AGING	Older adults with a regular source of medical care	65+ years	BRFSS
	Older adults with recommended immunizations	65+ years	BRFSS
	Older adults who participate in physical activity	65+ years	BRFSS
	Older adults who report poor physical health	65+ years	BRFSS
	Older adults who report poor mental health	65+ years	BRFSS
	Older adults reporting limited activity due to poor physical or mental health	65+ years	BRFSS

RANKING								
CO rank	CO ranked value	Best state	Best state value	Year for ranked values	Number of states ranked	CO most recent value	Most recent year for CO	HP 2010 target (age group)
32	19.9%	Massachusetts	9.3%	2006–2008	50	19.9%	2006–2008	0%
31	77.2%	Delaware	88.5%	2008	50	77.2%	2008	96% (18 and over)
17	25.1%	Vermont	29.1%	2007	50	25.1%	2007	75% (all ages)
3	82.2%	Minnesota	83.2%	2008	50	82.2%	2008	80% (18 and over)
1	19.5%	Colorado	19.5%	2008	50	19.5%	2008	15% (20 and over)
14	18.9%	Utah	10.1%	2008	50	18.9%	2008	12% (18 and over)
28	18.1%	Utah	9.1%	2008	50	18.1%	2008	6% (18 and over)
6	12.2%	North Dakota	9.6%	2008	50	12.2%	2008	NA
5	4.5%	Minnesota	4.1%	2008	50	4.5%	2008	2.5% (all ages)
3	16.2%	Utah	14.7%	2007	50	16.2%	2007	16% (20 and over)
12	95.8%	Pennsylvania	97.3%	2008	50	95.8%	2008	96% (18 and over)
1	61.7%	Colorado and New Hampshire	61.7%	2008	50	61.7%	2008	90% (65 and over)
5	73.9%	Hawaii	80.6%	2008	50	73.9%	2008	80% (18 and over)
17	19.7%	Minnesota	16.2%	2008	50	19.7%	2008	NA
8	7.0%	Minnesota	5.0%	2008	50	7.0%	2008	NA
21	22.2%	Hawaii	15.9%	2008	50	22.2%	2008	NA

* Data Sources:

PRAMS: Pregnancy Risk Assessment Monitoring System

NIS: National Immunization Survey

Vital Stats: Vital Statistics System

NSCH: National Survey of Children's Health

YRBS: Youth Risk Behavior Survey

CPS: Current Population Survey

BRFSS: Behavior Risk Factor Surveillance System

Appendix II: Data source descriptions

Behavior Risk Factor Surveillance System Survey

The Behavior Risk Factor Surveillance System (BRFSS) is a state-based health survey that has been conducted since 1984. By 1994, all states, the District of Columbia, and three territories were participating in the BRFSS. It is a cross-sectional, monthly telephone survey conducted by state health departments. Home telephone numbers are obtained through random-digit dialing and adults 18 years or older are asked to take part in the survey. BRFSS interviewers ask questions related to behaviors that are associated with preventable chronic diseases, injuries, and infectious diseases. The content of the BRFSS questionnaire is determined by the state BRFSS coordinators and the federal Centers for Disease Control and Prevention (CDC). BRFSS data are weighted for the probability of selection of a telephone number, the number of adults in a household and the number of telephones in a household. A final post-stratification adjustment is made for nonresponse and noncoverage of households without telephones. The weights for each relevant factor are multiplied together to get a final weight. Since 2002, in Colorado, over 4,000 interviews have been conducted annually in English and Spanish.[1]

Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) is one component of the Youth Risk Behavior Surveillance System developed by CDC in collaboration with representatives from multiple federal, state, and local departments of education and health. The national sampling frame includes both public and private high schools, though only public high schools are surveyed in Colorado. High schools are randomly selected in proportion to enrollment size. To enable a separate analysis of data for black and Hispanic students, certain schools were over-sampled. Individual classrooms are randomly selected within each sampled school and all students in sampled classrooms are surveyed. In the 2005 national sample 13,953 questionnaires were completed in 159 schools with an overall response rate of 67 percent. The 2005 Colorado sample yielded 1,498 responses from students in 29 public high schools with an overall response rate of 60 percent. Forty states participated in the 2005 YRBS.

The YRBS is a self-administered, anonymous questionnaire covering behaviors related to injuries and violence; tobacco, alcohol and drug use; sexual behaviors that result in HIV infection, other sexually transmitted diseases and unintended pregnancies; dietary behaviors and physical activity. Local school parental permission procedures are followed before survey administration.[2]

The National Survey Of Children's Health

The National Survey of Children's Health is a national survey conducted by the CDC's National Center for Health Statistics. This telephone-based survey was first conducted in English and Spanish during 2003-2004 and for a second time in 2007-2008. The survey provides a broad range of information about children's health and well-being. Some of the topics covered in the survey are child and family demographics, children's physical and mental health status, health insurance status and type of coverage, access and use of health care services and whether or not the child has a medical home.

Information from the survey is collected in a manner that allows for comparisons between states and at the national level. Telephone numbers are called at random to identify households with one or more children under 18 years old. In each household, one child was randomly selected to be the subject of the interview. The survey results are weighted to represent the population of non-institutionalized children 0-17 nationally, and in each state.

Current Population Survey

The Current Population Survey (CPS) is conducted by the U.S. Census Bureau annually. Respondents are drawn from the civilian non-institutionalized population and from military personnel who live in households with at least one other civilian adult. In March of each year, CPS asks respondents about their insurance status and their income for the entire past calendar year. To obtain this information, the interviewer visits the sample address to determine if the sample unit exists, if it is occupied and if a responsible adult will provide the requested information. If someone at the sample unit agrees to the interview, a telephone survey is conducted at a scheduled time. Interviewers will complete an in-person interview with households that do not have a telephone or who have poor English language skills.

The specific questions to be asked appear on a computer screen, and the interviewer has been trained to ask each question exactly as it is worded. Based upon the response entered by the interviewer, the computerized questionnaire determines the next question to be asked. Completed interviews are electronically transmitted to a central processor where the responses are edited for consistency, imputations are made for missing data, and various codes are added. Based on the probability of selection, a weight is added to each responding household and person record so that estimates of the population match the population projections made by the Census Bureau. Statistical considerations require that averages be calculated from multiple years of data to produce stable estimates. In general, statewide data are reported as two-year averages.[4]

Appendix II: Data source descriptions (continued)

Vital Statistics System

The data included in the Vital Statistics System are provided through contracts between CDC's National Center For Health Statistics (NCHS) and vital registration systems operated in the various jurisdictions for events such as births, deaths, marriages, divorces and fetal deaths. In the United States, legal authority for the registration of these events resides individually with the 50 states, two cities (Washington, DC, and New York City), and five territories (Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands). These jurisdictions are responsible for maintaining registries of vital events and for issuing copies of birth, marriage, divorce and death certificates.

Standard forms for the collection of the data and model procedures for the uniform registration of the events are developed and recommended for nationwide use through cooperative agreements between state jurisdictions and NCHS. Data related to births and causes of death for Colorado can be found at the Colorado Department of Public Health and Environment's Web site.[5]

National Immunization Survey

The National Immunization Survey (NIS) is sponsored by CDC's National Immunization Program (NIP) and conducted jointly by NIP and CDC's National Center for Health Statistics (NCHS). The NIS is a list-assisted random-digit-dialing telephone survey followed by a mailed survey to children's immunization providers that began data collection in April 1994 to monitor childhood immunization coverage.

The target population for the NIS is children between the ages of 19 and 35 months living in the United States at the time of the interview. Data from the NIS are used to produce timely estimates of vaccination coverage rates for all childhood vaccinations recommended by the Advisory Committee on Immunization Practices (ACIP). Estimates are produced for the nation and for each of 78 Immunization Action Plan (IAP) areas, consisting of the 50 states, the District of Columbia, and 27 large urban areas. The official estimates of vaccination coverage rates from the NIS are rates of being up-to-date with respect to the ACIP recommended numbers of doses of vaccines. Vaccinations included in the survey are: diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP); poliovirus vaccine (polio); measles-containing vaccine (MCV); Haemophilus influenzae type b vaccine (Hib); hepatitis B vaccine (Hep B); varicella zoster vaccine, pneumococcal conjugate vaccine (PCV), hepatitis A vaccine (Hep A), and influenza vaccine (FLU).[6]

Pregnancy Risk Assessment Monitoring System

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a state-specific, population-based telephone and mail survey that collects data on maternal attitudes and experiences before, during and immediately following pregnancy. Findings from the PRAMS survey are used to develop and assess perinatal health programs in public and private health care settings. In September of 1996, the Colorado Department of Public Health and Environment was awarded a grant from CDC to establish PRAMS in Colorado, and data collection began in the spring of 1997. Currently, there are 23 states participating in the PRAMS project. While each state's project is slightly different, data collection procedures and instruments are standardized to permit comparisons of data among the PRAMS states. PRAMS uses a combination of two data collection approaches: statewide mailings of the surveys and telephone follow-up with women who do not return the survey by mail. Birth certificate data is also included for CDC reporting. The written questionnaires and telephone interviews can both be completed in Spanish when necessary. Approximately 240 women in Colorado will receive the survey each month, with an expected response rate of at least 70 percent. Data collected from women who gave birth in a given year are generally available for analysis and dissemination by late summer of the following year. The data are weighted annually for each state to adjust for nonresponse, noncoverage, and sampling fractions. The annual weighted data sets contain data from all three sources.[7]

1. Colorado Department of Public Health and Environment, Behavior Risk Factor Surveillance System, <www.cdphe.state.co.us/hs/brfss/index.html>
2. Colorado Department of Public Health and Environment, Health Watch, July 2006 No. 60, <www.cdphe.state.co.us/hs/pubs/yrbs2006final.pdf>

   Centers for Disease Control and Prevention, Youth Risk Behavior Survey, <www.cdc.gov/HealthyYouth/yrbs/index.htm>
3. National Center for Health Statistics, National Survey of Children's Health, Centers for Disease Control and Prevention, <www.cdc.gov/nchs/about/major/slaits/nsch.htm>
4. U.S. Census Bureau, Current Population Survey, <www.bls.census.gov/cps/cpsmain.htm>
5. Colorado Department of Public Health and Environment, Vital Statistics System, <www.cdphe.state.co.us/hs/vs/>
6. Centers for Disease Control and Prevention, National Immunization Survey, <www.cdc.gov/nis/>
7. Colorado Department of Public Health and Environment, Pregnancy Risk Assessment Monitoring System, <www.cdphe.state.co.us/hs/prams/>

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501 South Cherry Street, Suite 1100 ◦ Denver, Colorado 80246 -1325 ◦ www.ColoradoHealth.org ◦ **TEL:** 303.953.3600 ◦ **FREE:** 877.225.0839

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Colorado Health Institute

303 E. 17th Ave, Suite 930 ◦ Denver, Colorado 80203 ◦ **TEL:** 303.831.4200