



Colorado Department
of Public Health
and Environment

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Colorado Department of Public
Health and Environment
Health Statistics Section
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
(303)692-2160

Adolescent Health Indicators



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

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

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

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Indicator 1: Substance Use

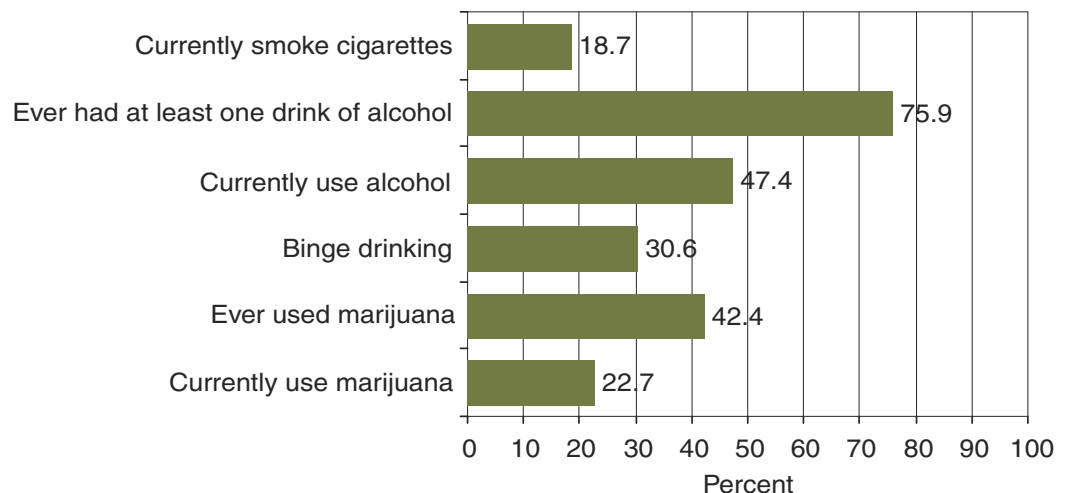
Healthy People 2010 Objective: 29 percent of high school seniors to have never tried alcoholic beverages; 0.7 percent of adolescents ages 12-17 reported using marijuana in last 30 days.

Significance of indicator: Substance use among youth is a major predictor of continued use or abuse as an adult, which can often lead to physical and/or mental health problems. Those adolescents who smoke are more likely to smoke as adults and to be at increased risk for cancer and heart disease, while the use of drugs and/or alcohol can lead to dangerous behaviors, including unprotected or unwanted sex, driving under the influence, and more serious criminal behaviors

Colorado measure: In 2005, nearly one-fifth (18.7%) of students surveyed currently smoke cigarettes. Nearly one-half (47.4%) of students surveyed use alcohol, and more than one-fifth (22.7%) currently use marijuana.

Colorado data source: Colorado Youth Risk Behavior Survey, Colorado Department of Education.

Tobacco, alcohol and marijuana use: Colorado students grades 9-12, 2005



Source: Youth Risk Behavior Survey, Colorado Department of Education.

Note: Binge drinking defined as 5 or more alcoholic drinks on one or more occasions during one or more days during the 30 days preceding the survey.



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Indicator 2: Teen Fertility Rates

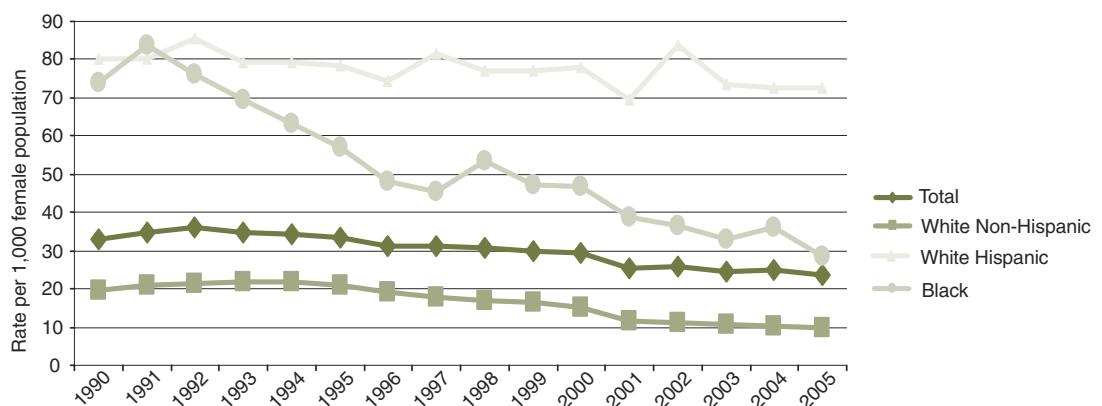
Significance of indicator: Births to teens are of concern because teen mothers are less likely to complete high school, and their children are at increased risk for a variety of negative health and educational outcomes. An age-specific fertility rate is the number of live births in an age group per 1,000 women in the population for that age group.

Colorado measure: In Colorado, the fertility rate for ages 15-17 has declined since 1990 to a new low of 23.8 in 2005. These rates vary by race/ethnicity but appear to be decreasing for all groups, with the largest decrease among Black teens and smaller decreases for White non-Hispanic and White Hispanic teens. Still, there were almost 2,300 births to 15-17-year-old Colorado residents in 2005.

Almost half of all hospitalizations for teens ages 15-19 are related to pregnancy or childbirth. The total charges for these hospitalizations were more than \$65 million in 2005.

Colorado data source: Colorado Vital Statistics, Health Statistics Section, CDPHE.

Teen fertility rates by race/ethnicity: Colorado female residents, ages 15-17, 1990-2005



Source: Colorado Vital Statistics, Colorado Department of Public Health and Environment



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Indicator 3: Abstinance and Sexual Behaviors

Healthy People 2010 Objective: 75 percent of 15- to 17-year-olds to remain abstinent.

Significance of indicator: “Promoting responsible adolescent sexual behavior targets three protective behaviors that reduce the risk of STDs (including HIV infection) and unintended pregnancy. These behaviors are especially relevant to young people who, as a group, experience a disproportionate share of STDs and unintended pregnancies when they engage in sexual intercourse.

“The protective behaviors of interest are completely abstaining from sexual intercourse during adolescence (primary abstinence), reverting to abstinence for long periods of time after having had intercourse in the past (secondary abstinence), and at least using condoms (a single method that offers protection against both pregnancy and some STDs) consistently and correctly if regular intercourse is occurring. Increasing and maintaining the proportion of youth who exhibit the above protective behaviors reduce the risks of HIV infection, other STDs, and unintended pregnancies for adolescents because the proportion of youth who are currently sexually active and do not use condoms will be reduced” (Healthy People 2010).

Colorado measure: An estimated 42 percent of teens in high school had ever had sex in 2001. This proportion dropped to 39.3 percent in 2005. This may be one of the factors associated with the decline in teen fertility rates. Although the question about responsible sexual behavior had not been asked in the survey prior to 2001, questions about contraceptive use were asked. The responses to these questions indicated that use of condoms is increasing. This may also be contributing to the decline in teen fertility rates in Colorado.

Also in 2005, 60.7 percent of teens in high school had remained abstinent, while 88.0 percent of teens in high school practiced responsible sexual behavior, which includes never having had sexual intercourse, having had intercourse but not in the three months preceding the survey, or had used a condom the last time they had intercourse during the three months leading up to the survey.

Colorado data source: Colorado Youth Risk Behavior Survey, Colorado Department of Education.



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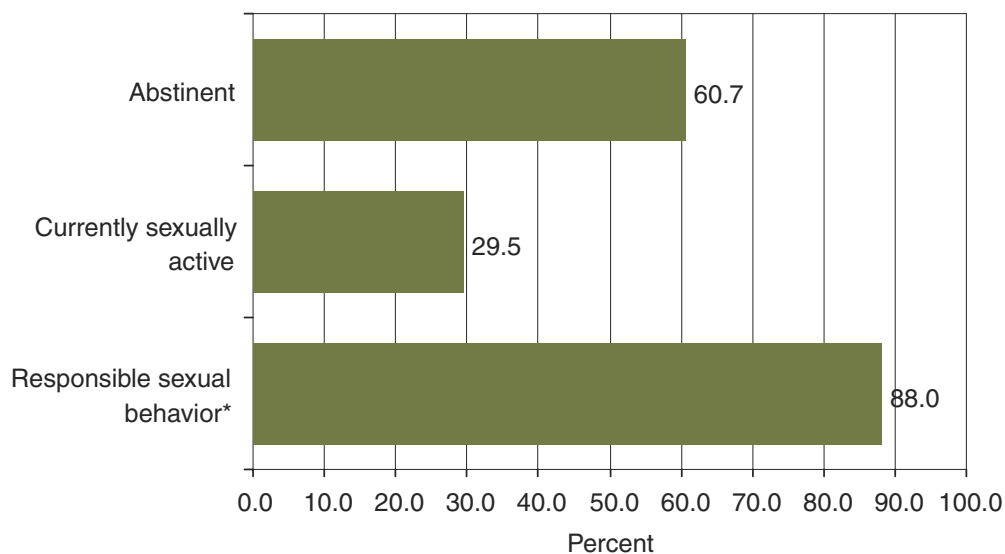
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Indicator 3: Abstinence and Sexual Behaviors

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Abstinence and sexual behaviors: Colorado students, grades 9-12, 2005



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

Source: Youth Risk Behavior Survey, Colorado Department of Education



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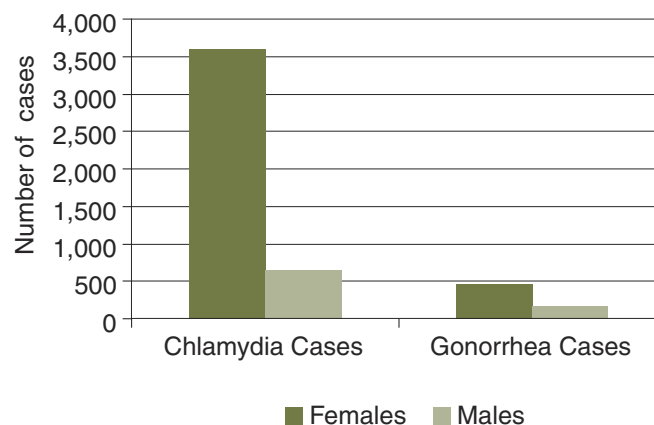
Indicator 4: Sexually Transmitted Disease

Significance of indicator: Sexually transmitted diseases (STDs) present a threat to the health of sexually active teens. The health consequences of untreated STDs include reproductive health problems, fetal and perinatal problems, and cancer. For biological reasons, females are more susceptible to STDs than males, and younger females are more susceptible than older females.

Colorado measure: The total number of cases of Chlamydia and Gonorrhea for females and males ages 15-19 in 2005 is shown below. It is clear that a large health disparity exists for females, especially with regard to cases of Chlamydia.

Colorado data source: Division of Disease Control and Environmental Epidemiology, Colorado Department of Public Health and Environment.

Number of cases of Chlamydia and Gonorrhea, Colorado teens, ages 15-19, 2005



Source: Division of Disease Control and Environmental Epidemiology, Colorado Department of Public Health and Environment.



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Indicator 5: Unintentional Injuries

Healthy People 2010 Objective: 92% of population to wear seat belts; 30% or fewer students riding with someone who has been drinking.

Significance of indicator: Seat belts, when worn correctly, are the most effective way for occupants to reduce the risk of death and serious injury in a motor vehicle crash; while reducing the number of adolescents who ride in a motor vehicle with another adolescent driver who has been drinking is an important step to decrease motor-vehicle related deaths and injuries.

Colorado measure: In 2005, unintentional injuries were the leading cause of death to Colorado residents ages 15-19 (43.8%), and motor vehicle-related injuries accounted for the majority of those deaths (33.9% of total deaths). Twenty-seven percent of adolescents surveyed rode with a driver who had been drinking alcohol, and 11 percent had driven after drinking alcohol

Unintentional injuries were also responsible for almost 1,200 Colorado hospitalizations for 15-19-year olds and resulted in more than \$45 million in total charges for inpatient hospital care.

Colorado data source: Colorado Youth Risk Behavior Survey, Colorado Department of Education.

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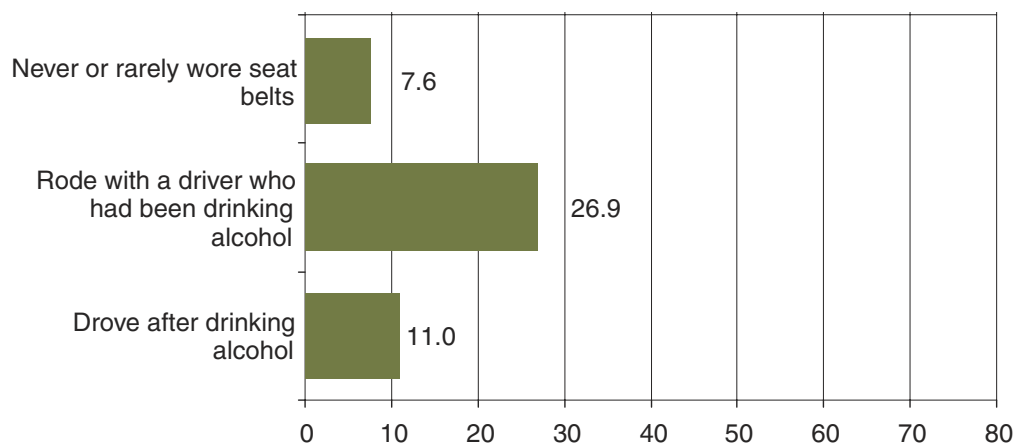
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Indicator 5: Unintentional Injuries

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Prevalence of behaviors that contribute to unintentional injuries: Colorado students, grades 9-12, 2005



Source: Youth Risk Behavior Survey, Colorado Department of Education



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Indicator 6: Suicide

Healthy People 2010 Objective: 1.0 percent or fewer suicide attempts by adolescents; 6.0 or lower suicide rate per 100,000 population ages 15-19.

Significance of indicator: “At least 90 percent of all people who kill themselves have a mental or substance abuse disorder, or a combination of disorders. However, most persons with a mental or substance abuse disorder do not kill themselves; thus other factors contribute to suicide risk. In addition to mental and substance abuse disorders, risk factors include prior suicide attempt, stressful life events, and access to lethal suicide methods. Suicide is difficult to predict; therefore, preventive interventions focus on risk factors. Thus, reduction in access to lethal methods and recognition and treatment of mental and substance abuse disorders are among the most promising approaches to suicide prevention. More targeted approaches should consider risk factors most salient and appropriate for select populations” (Healthy People 2010).

Colorado measure: In 2005, 25.0 percent of Colorado high school students reported feeling sad or hopeless, and 6.7 percent attempted suicide. Suicide rates in Colorado and the Rocky Mountain region are among the highest in the U.S. In 2005, there were 51 suicide deaths to Colorado residents ages 15-19 for an age-specific rate of 14.6 per 100,000 population. In 2005, there were 275 hospital discharges of patients 15-19 in Colorado with injuries resulting from intentional self-harm; there were 240 discharges with principal diagnoses related to mental disorders that were associated with intentional self-harm.

Colorado data source: Colorado Youth Risk Behavior Survey, Colorado Department of Education.

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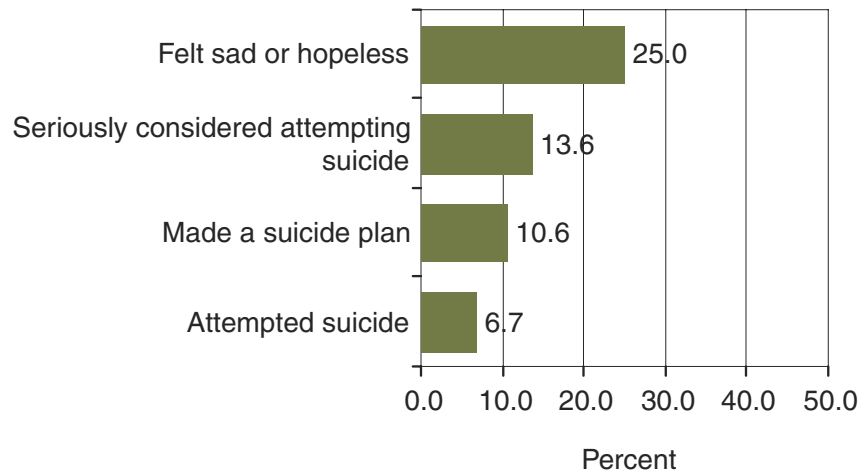
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Indicator 6: Suicide

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Sadness, suicide ideation, and attempts: Colorado students, grades 9-12, 2005



Source: Youth Risk Behavior Survey, Colorado Department of Education.



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Indicator 7: Overweight, Nutrition, and Physical Activity

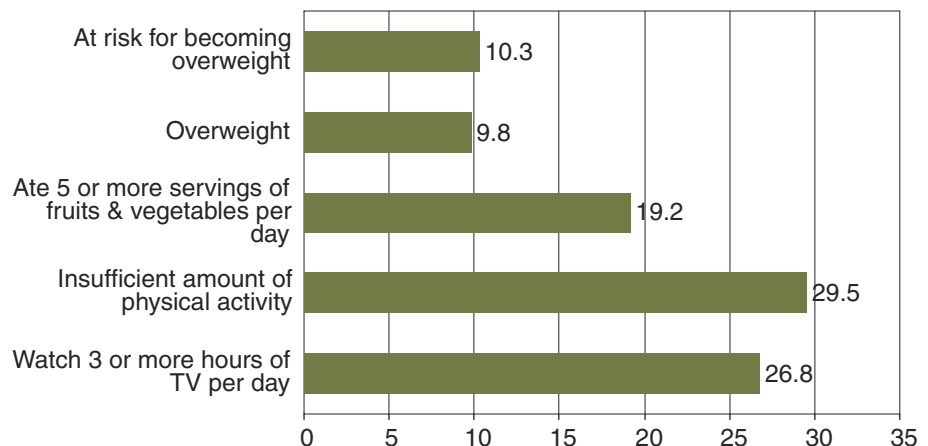
Healthy People 2010 Objective: 5 percent of adolescents are overweight or obese.

Significance of indicator: Diet and physical activity are critical parts a healthy lifestyle. Adequate nutrition and physical activity are important in maintaining appropriate body weight. Overweight and obesity are associated with many chronic diseases. Often nutritional and physical activity patterns established in childhood and adolescence carry over into adulthood.

Colorado measure: In 2005, 10.3 percent of students in grades 9-12 were at risk for overweight (weight for height was nearing overweight), and an additional 9.8 percent were overweight. Only 19.2 percent of students ate five or more servings of fruits and vegetables per day. Nearly one third (29.5%) of students did not get sufficient physical activity in the 7 days preceding the survey, and more than one-quarter (26.8%) watched three or more hours of TV per day.

Colorado data source: Colorado Youth Risk Behavior Survey, Colorado Department of Education.

Overweight, nutrition, and physical activity: Colorado residents, ages 9-12, 2005



Source: Youth Risk Behavior Survey, Colorado Department of Education.



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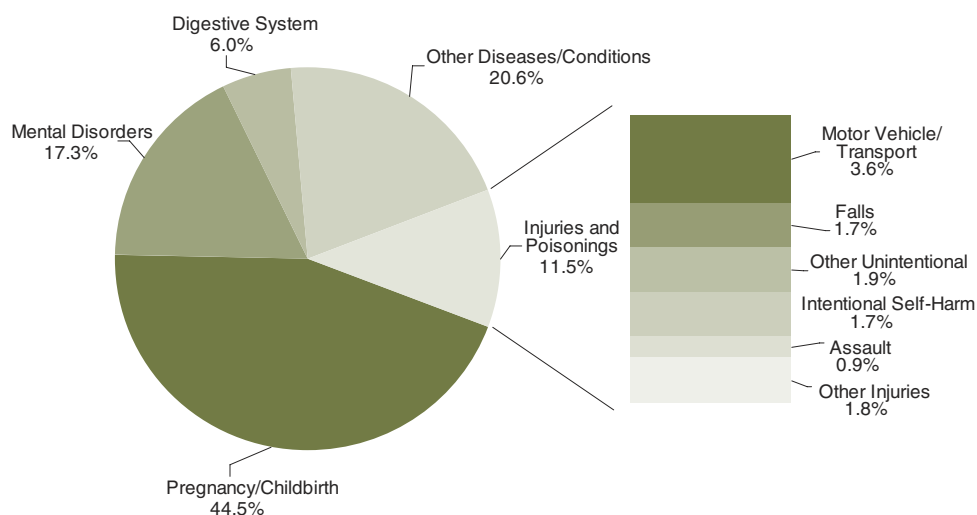
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Indicator 8: Hospitalization

Colorado measure: In 2005, nearly 45 percent of the more than 16,000 Colorado hospitalizations of patients ages 15-19 were related to pregnancy or childbirth. These accounted for more than 20 percent of the total charges of more than \$300 million that resulted from all hospitalizations for this age group. Diagnoses related to mental disorders accounted for an additional 17.3 percent of hospital discharges in this age group. Injuries and poisonings were the primary diagnoses for 11.5 percent of the hospital discharges for this age group but accounted for more than one-fifth of total charges.

Colorado data source: Hospital Discharge Records, Colorado Health and Hospital Association.

Percent of hospital discharges by principle diagnosis type for patients ages 15-19: Colorado occurrences, 2005



Source: Hospital Discharge Records, Colorado Health and Hospital Association.



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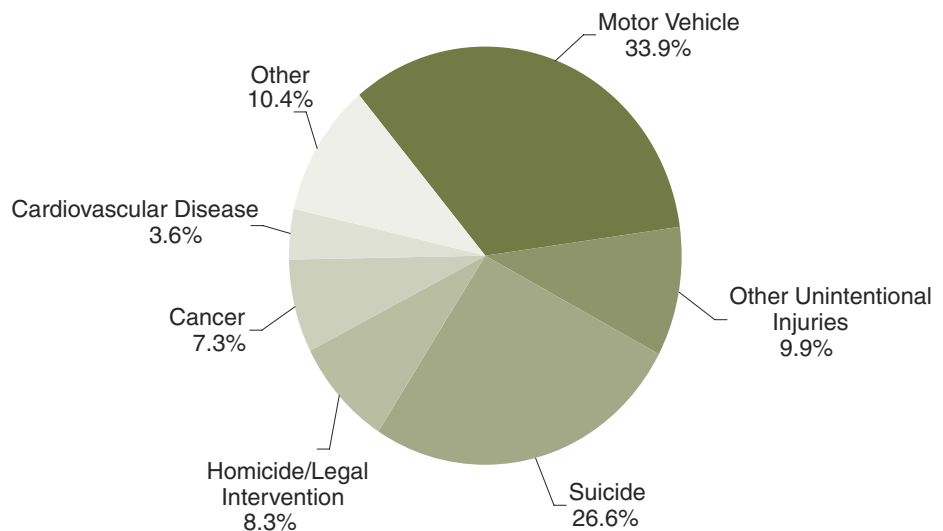
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Indicator 9: Mortality

Colorado measure: In 2005, there were 192 deaths to Colorado residents ages 15-19 resulting in an age-specific rate of 55.1 deaths per 100,000 population in this age group. More than 40 percent were due to unintentional injuries, with motor vehicles accounting for 33.9 percent of total deaths. Suicide and homicide/legal intervention contributed to an additional 35 percent (suicide 26.6% and homicide 8.3%) of the deaths in this age group. Overall, more than three-quarters of these deaths were injury-related

Colorado data source: Colorado Vital Statistics, Health Statistics Section, CDPHE.

Deaths by leading cause: Colorado residents ages 15-19, 2005



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