

2014 Health of Denver Report Community Health Assessment

Be Healthy **Denver**

COMMUNITY HEALTH MATTERS

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February 1, 2015

Dear Neighbors,

Nothing is more important than our health, which is why it's so exciting to witness the significant strides being taken, both locally and nationally, toward improving health.

The 2014 Health of Denver Report provides an overview of the primary health concerns in our community. This includes the cultural, environmental, social and economic factors that play key roles in the daily decisions that affect the length and quality of life of our residents.

The report reminds us that community health goes far beyond medical care and treatment. It emphasizes the need to focus on prevention and well-being through an integrated approach that brings together public health, health care providers, city agencies, policymakers, businesses, schools and community organizations on both a local and a national level.

Respectfully,

Michael B. Hancock

MAYOR

Introduction

Be Healthy Denver focuses on improving the health of all Denver residents. Over the past year, nearly 100 community partners and subject matter experts met to determine the health priorities and health concerns in our community. After analyzing these issues, three underlying themes were identified:

- 1. Equity: Significant differences in health outcomes exist among some of the neighborhoods and demographic groups in Denver. These health disparities show where opportunities exist to collaborate and improve health in specific areas or populations.
- 2. Prevention: Many of Denver's leading causes of death, disease and injury are preventable. By focusing on prevention and what happens in the world outside the clinic or hospital, many diseases and injuries can be avoided.
- 3. Importance of place: Health is intricately linked to the places where people live, work, learn and play. Social and economic situations, environmental conditions, personal behaviors, and access to care all play key roles in the overall health of a community.

Data in action: Community Health Assessment's role in driving change in Denver

Conducting a Community Health Assessment (CHA) is the first step in developing a Community Health Improvement Plan (CHIP), which provides a structured approach to addressing public health issues in a community.

Denver's first CHIP was developed in 2013 with community input. The CHIP:

- Identified two priority areas that would benefit from citywide intervention:
 - 1) Healthy eating and active living, including the built environment.
 - 2) Access to care, including behavioral health.
- Outlined clear goals and detailed action plans to address these issues.

To continue the cycle, information in the 2014 Health of Denver Report will be used to help measure progress toward achieving CHIP goals. Find out more about Denver's CHIP at **BeHealthyDenver.org.**

An integral part of this effort includes conducting a Community Health Assessment (CHA) every three years to measure progress toward improving Denver's health. A comprehensive assessment of health identifies areas of concern, and helps guide local, city and state health organizations on where to focus resources and efforts in future years.

The information provided in this report is intended to inform and engage communities to work collectively to improve Denver's health. Changing health outcomes requires a collaborative effort from a diverse group of partners.



Making changes to improve health

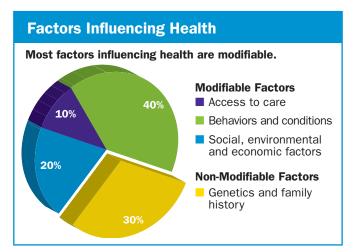
An estimated 70 percent of factors that influence health may be modified to improve the quality of life for Denver residents. These factors fall into three high-level categories: improving access to care, increasing healthy personal behaviors, and improving social, economic and environmental conditions. Developing programs and policies that make it easy for people to make healthy choices will encourage positive behavior changes, and thus improve the community's overall health.

Understanding the data

Information provided in this report describes diseases and injuries commonly seen among Denver residents. Data also presents information about accessing care, personal behaviors, and social and economic issues that contribute greatly to our health. Population characteristics, including health, disease and deaths are described by location or demographic group whenever possible to paint a portrait of Denver's health that accounts for the city's diverse population.

Figures (i.e., charts, graphs and maps) used throughout the report present an indicator in the form of counts, percentages or rates. Each indicator provides a different perspective, presented in a way that allows for comparison against other local or national data. Some indicators are also compared to the Healthy People 2020 goals, which provide science-based, 10-year national objectives for improving the health of all Americans.

In some instances rates are used to demonstrate change over time. For example, rates are used to describe the number of events (such as disease, death or other conditions) per a standard number



of residents (usually per 100,000 people) annually. These methods allow for comparison of different sized and diverse communities. Since disease and death vary depending on age of the residents, some rates are adjusted to account for differences in age distribution in specific groups or neighborhoods. Any age-adjusted rates presented in this report account for this difference in age distribution.

Nearly two dozen sources were used to compile this report. The full list of sources and additional information is available at **BeHealthyDenver.org.**

It's about more than just health care

Though easy to focus on medical care as the single factor in improving health, health is linked to a wide variety of influencers, including medical conditions, risky behaviors and place. A holistic approach focusing on encouraging positive changes in several of these areas can have a greater impact on an individual and a community's health. Here's an example of the many factors that impact a health outcome.

Health outcome

Cardiovascular disease (heart disease and strokes) is the number one cause of death in Denver.

Medical conditions that lead to heart disease and stroke
Uncontrolled high blood pressure
Diabetes
High cholesterol

Risky behaviors that influence development of medical conditions leading to heart disease and stroke

Tobacco use or exposure to secondhand smoke Poor nutrition Lack of exercise

Social, economic and environmental conditions that influence risk factors leading to heart disease and stroke

Lack of access to medical care

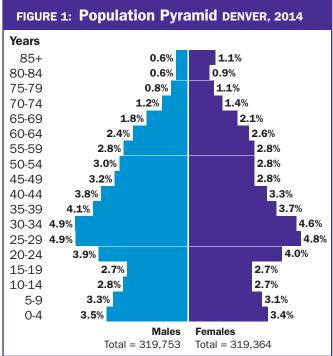
Lack of access to healthy affordable food and places to exercise

Low income and educational level

Overview of Denver

Denver is Colorado's state capital. A consolidated City and County, Denver is the second largest county in the state with a population of approximately 639,117 and a median age of approximately over 34 years. The distribution of ages across our Denver population (FIGURE 1) is similar to that of the United States.

Geographically, Denver consists of 78 official neighborhoods (a neighborhood map is included on the back cover of the report).



SOURCE: Esri Estimates



The average Denver household includes approximately two people. Denver's diverse population includes a variety of racial and ethnic groups (FIGURE 2), which tend to live in the same areas of the city (FIGURES 3, 4, 5, 6). The terms used to describe racial and ethnic groups in this report are consistent with those used in the 2010 U.S. Census, and are based on self-reports of race or ethnicity.

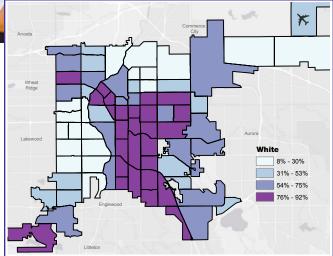
- "Black" refers to residents who are non-Hispanic and have origins in any of the Black racial groups of Africa. It includes residents who indicate their race as Black, African American or Negro.
- "White" refers to residents who are non-Hispanic and have origins in any of the original peoples of Europe, the Middle East or North Africa. It includes residents who indicate their race as White or Caucasian.
- "Hispanic" refers to residents of any race who are of Hispanic, Latino or Spanish origin.

Whites, Hispanics and Blacks make up the bulk of the city's population, followed by those of Asian descent. Additional races and ethnicities comprising of less than one percent of the city's population are identified as "Other."

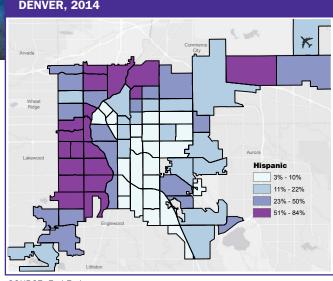
FIGURE 2: Race/Ethnicity DENVER, 2014		
Race/Ethnicity	Individuals	Percentage
White	338,272	52.9
Hispanic	200,394	31.4
Black	57,323	9.0
Asian	22,720	3.6
Native American/ American Indian	3,440	0.5
Native Hawaiian or Pacific Islander	717	0.1
Other Race	1,249	0.2
Multiple Races	15,002	2.3
Totals	639,117	100.0

SOURCE: Esri Estimates

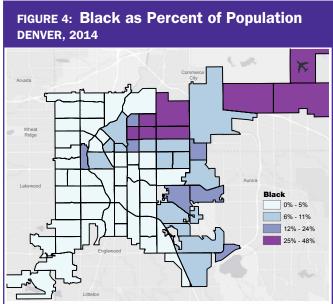




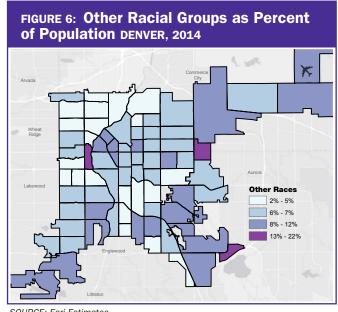
SOURCE: Esri Estimates



SOURCE: Esri Estimates



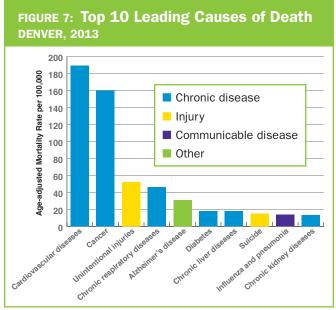
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SOURCE: Esri Estimates

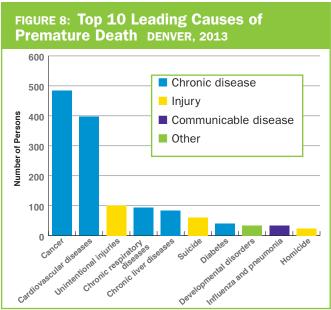
Focus on Prevention

There are approximately 4,000 deaths annually in Denver. Some causes of death are more common than others. Chronic diseases, communicable diseases and injuries are among Denver's top 10 leading causes of death (FIGURE 7).



SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

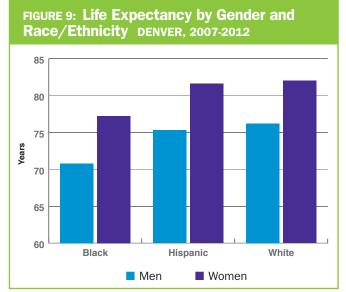
While understanding the leading causes of death is important, a more relevant measure is the number of premature or early deaths, as it demonstrates deaths which may have been preventable (FIGURE 8). In this analysis, a premature death is defined as death before age 75.



SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

The category order changes slightly when looking at the actual number of people with a premature death. Chronic diseases and injuries are the leading causes of potentially preventable, premature death.

In addition to focusing on prevention, data in this report also illustrates the importance of ensuring that everyone has access to the resources needed to be healthy. The relation between gender, race or ethnicity, and life expectancy demonstrates many health disparities in Denver (FIGURE 9). As a community, focusing on ways to eliminate these disparities should collectively improve everyone's health.



SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

Health Outcomes

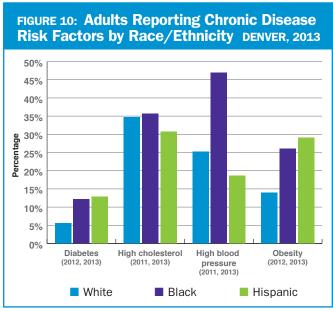
Many factors impact Denver's overall health. This section focuses on poor health outcomes, including diseases, conditions and injuries. Many adverse health outcomes can be prevented or their severity reduced with early detection and consistent treatment.

CHRONIC DISEASE

Six of the 10 leading causes of death in Denver are due to chronic diseases—cardiovascular disease, cancer, chronic lower respiratory disease, diabetes and chronic liver disease. These diseases and conditions often reduce the quality of life and life expectancy, lead to disability, and contribute to soaring health care costs to individuals and society¹.

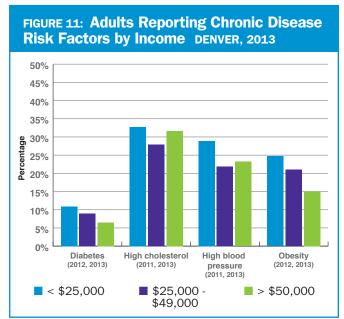
Many of these conditions are preventable by addressing common medical conditions and changing health behaviors. For example, changing behaviors to address obesity, tobacco use and/or exposure to secondhand tobacco smoke can reduce risk and improve health outcomes in many areas.

In Denver, data shows that risk factors for chronic disease differ by race/ethnicity. High blood pressure is more common among Blacks, while diabetes is more common among Blacks and Hispanics (FIGURE 10).



SOURCE: Behavioral Risk Factor Surveillance System

Additionally, household income shows disparities in risk for chronic disease. Typically, those with lower incomes are more likely to report chronic disease (FIGURE 11). Lack of access to medical care leads to delayed diagnosis and treatment of high blood pressure, diabetes and high cholesterol. While much progress has been made in addressing risk factors to reduce the impacts of chronic disease, many opportunities to reduce premature death and disability still exist.

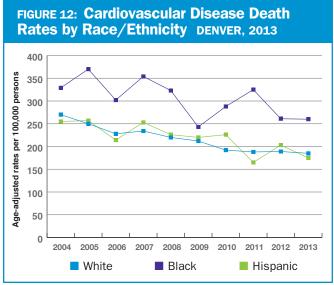


SOURCE: Behavioral Risk Factor Surveillance System

Cardiovascular Disease

Cardiovascular diseases include conditions that cause heart attacks and strokes. Modifiable risk factors for cardiovascular disease include addressing obesity, diabetes, high blood pressure and high cholesterol, and tobacco use.

Although deaths due to cardiovascular diseases have declined, cardiovascular diseases continue to be the leading causes of death in Denver. Blacks have the highest rates of death compared to Whites or Hispanics; however, all groups have seen a substantial decline in deaths over the last decade (FIGURE 12).

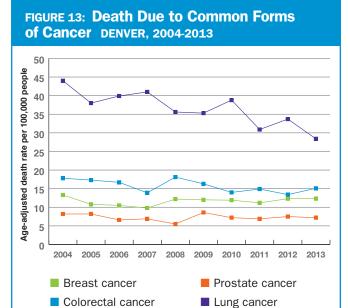


SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

Cancer

Cancer remains one of the leading causes of death and disability in Denver. There are many forms of cancer, and various prevention and treatment options exist depending on the type. For example, decreasing tobacco smoking and exposure to secondhand tobacco smoke decreases the risk of lung, throat, esophagus and bladder cancers. Also, testing and treatment that ensures diagnosis at an early state can improve the life expectancy of residents with some diseases like colon cancer.

In Denver, deaths from lung and colorectal cancer have generally decreased since 2003 while deaths from breast and prostate cancers have remained relatively level (FIGURE 13).

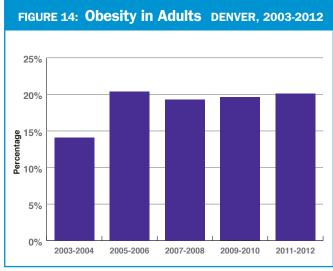


SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

Obesity

Body Mass Index (BMI) is a calculation that combines height and weight to determine if someone is at a healthy weight for their height. An adult with a BMI higher than 30 indicates obesity.

While Colorado has always been known as one of the nation's leanest states, nearly one in five adults is obese in Denver. Recent reports show that the number of obese residents in Denver has leveled off over the last decade (FIGURE 14).



SOURCE: Behavioral Risk Factor Surveillance System

Adult obesity can often be the result of poor eating and exercise habits learned in youth, thus pointing at childhood obesity rates as a strong indicator of the health of future adults. A major concern in Denver is that approximately one in six children in Denver is already obese before reaching adulthood. Obese children are at increased risk of developing high blood pressure, type 2 diabetes, asthma, as well as cancer and cardiovascular disease, as they enter adulthood.

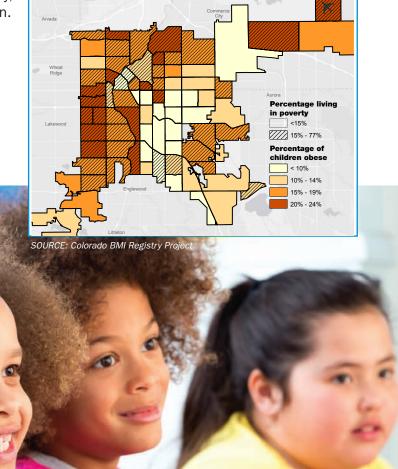
Childhood obesity has remained level in Denver over the past decade; however, Black and Hispanic school-aged children have alarmingly higher obesity rates than White children (FIGURE 15). Obesity can shorten life expectancy by as much as five years². The number of obese children varies by neighborhood in Denver. Similarly, many of these same communities have high poverty rates (FIGURE 16). For the first time in two centuries, the current generation of children in the U.S. may have shorter life expectancies than their parents. Focusing on early childhood practices is important to prevent obesity, and to ensure a healthy future for this generation.

FIGURE 15: Obesity in Children DENVER, 2013-2014 25% 20% 20% 5% 0% 0% 0/uerdi umie glack panc chief under group g

FIGURE 16: Childhood Obesity and Poverty

SOURCE: Denver Public Schools

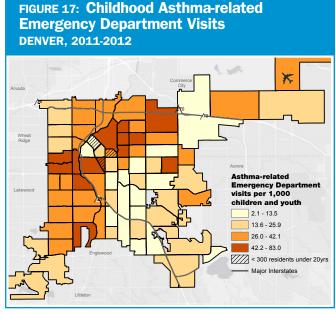
DENVER, 2009-2011



BeHealthyDenver.org

Childhood Asthma

Childhood asthma presents a significant concern for many children in Denver. The number of emergency room visits due to asthma varies by neighborhood (FIGURE 17). The highest number of asthma-related emergency department visits occurred in predominantly Hispanic, Black, and lower-income neighborhoods. This may be caused by differences in primary care access, disease management, and exposure to asthma triggers such as pet dander and dust, secondhand tobacco smoke and overall poor air quality.



SOURCE: Colorado Hospital Association

Decreasing Cardiovascular Risk

The Colorado Heart Healthy Solutions (CHHS) program is an example of a local effort working to decrease the risk of cardiovascular disease. CHHS uses patient navigators to screen, coach, educate, refer and rescreen community members. Patient navigators track key cardiovascular disease risk factors and provide tailored health messages to participants. Over the past year, CHHS patient navigators based at Denver Public Health have provided chronic disease education, health assessments and case management services to nearly 700 residents throughout Denver. As a result, participants saw reductions in cholesterol levels and BMI—all of which reduce global cardiovascular disease risk.



PREVENTING CHRONIC DISEASES

The key to preventing chronic disease progression is to control risk factors such as high blood pressure, high cholesterol, type 2 diabetes and obesity. By improving access to care, risks are detected and addressed; then early symptoms are treated before the disease worsens.

Additionally, tobacco cessation programs can reduce risks and limit exposure to secondhand tobacco smoke for everyone in the family. Reducing stress, minimizing alcohol and avoiding drug use, and promoting policies and environments where everyone can be physically active and eat healthy foods, all help prevent chronic disease.

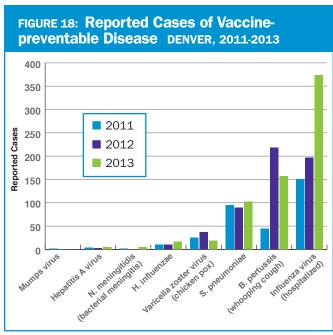
COMMUNICABLE DISEASE

Communicable diseases are transmitted or passed between people or animals through food, water, air, insects or sexual contact. Many communicable diseases can be prevented by vaccinations, practicing safe sex and adhering to good hygienic and food safety practices.

Vaccine-Preventable Diseases

Influenza, pertussis (whooping cough) and pneumonia are among the most common vaccine-preventable diseases in Denver.

The number of cases of certain vaccine-preventable diseases has increased over the past several years, including a significant resurgence of pertussis (FIGURE 18). In Denver, hundreds of residents are hospitalized each year for chicken pox, pertussis and influenza. Vaccines protect not only the person being vaccinated, but also the community as a whole, including infants, children, pregnant women and those with health problems.



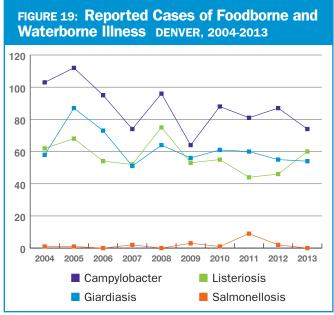
SOURCE: Colorado Electronic Disease Reporting System



Foodborne and Waterborne Illness

Campylobacter, giardia and salmonella are the most common bacterial and parasitic causes of foodborne or waterborne illness in Denver. Although reported cases have generally decreased over the last decade (FIGURE 19), it is difficult to determine exactly how many cases of foodborne illness occur in Denver each year because symptoms may be mild, resemble other illnesses and are often underreported.

Safe food handling is often the key to preventing foodborne illness. Poor hand-washing or hygiene practices, inadequate cooking or holding temperatures, and using food from unsafe sources are among the top contributing factors to foodborne illness.



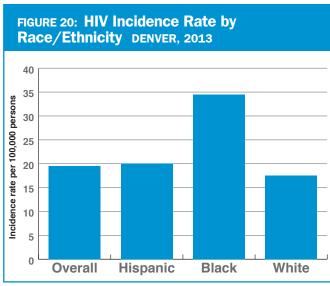
SOURCE: Colorado Electronic Disease Reporting System

Sexually Transmitted Infections

Some communicable diseases are transmitted through sexual contact and are largely preventable by practicing safe sex, such as using condoms and decreasing the number of sexual partners. Some sexually transmitted diseases are curable (gonorrhea and chlamydia), while others are treatable chronic conditions (Hepatitis C and Human Immunodeficiency Virus or HIV).

HIV's Impact in Denver

Despite significant progress, HIV remains a major health concern in Denver. If left untreated, HIV causes a chronic infection that leads to Acquired Immunodeficiency Syndrome (AIDS). Most of those living with HIV in Denver are men who have sex with men. In Denver, there were 111 new cases in 2013 (an all-time low), half as many new cases as 10 years ago. All racial and ethnic groups are affected, but Blacks disproportionately so (FIGURE 20). The good news is excellent testing and effective treatment of HIV is helping minimize transmission and allowing those infected to live long and productive lives.



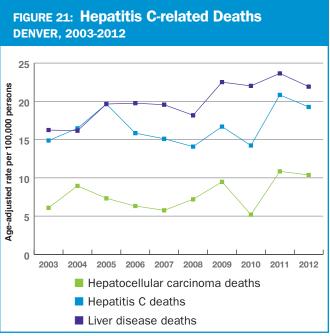
SOURCE: HIV/AIDS Reporting System

Hepatitis C: A Rising Concern

While Hepatitis C virus (HCV) can be transmitted sexually, it is primarily transmitted by exposure to blood (such as in injection drug use or a blood transfusion prior to 1989). HCV leads to liver disease, hepatocellular carcinoma (liver cancer) and other related severe issues.

Deaths related to HCV have increased sharply over the last 10 years (FIGURE 21). Additionally, many of those with HCV are now developing complications, despite it being a long time since they were exposed at a younger age; those 45 and older have the highest rates of infection.

Recently, more effective medications which cure Hepatitis C have become available, offering a unique opportunity to prevent of disability and premature death.



SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

Protecting Infants from Pertussis

In 2012, the Denver area experienced an outbreak of pertussis (whooping cough) due to a decrease in the effectiveness of the current pertussis vaccine and low immunization rates. In response, public health agencies and hospitals worked to collectively protect infants, as they were at highest risk for infection. First, steps were taken to ensure that all infants and children, as well as those who spend a lot of time with them, were vaccinated. Second, for every person diagnosed with pertussis, any close contacts were tested and treated for pertussis, if they had it. Last, an awareness campaign using mass media and print flyers helped the public identify pertussis symptoms and prevention strategies. While reported pertussis cases have decreased, work continues to prevent the spread of infection.

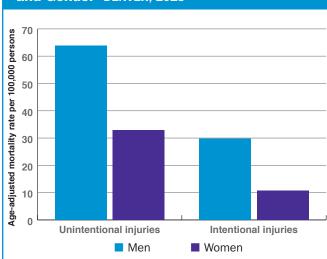
PREVENTING COMMUNICABLE DISEASE

Communicable diseases can be prevented by practicing behaviors such as regular hand-washing, ensuring good hygiene and safe food-handling habits, practicing safe sex, and by getting vaccinated. Vaccines are safe and can protect not only those who are vaccinated, but also the community as a whole. Access to health care also allows for early detection and treatment to effectively stop transmission to others.

INJURY

Injuries represent a broad group of events with serious health consequences in our community. All injuries are categorized into one of two types: unintentional injuries (e.g., traffic crashes, falls, burns, poisonings and drowning), and intentional injuries (e.g., homicides, rapes, suicides, abuse and assaults). In Denver, injury is the leading cause of death for those 44 years of age or younger³ and is more common among men compared to women (FIGURE 22).

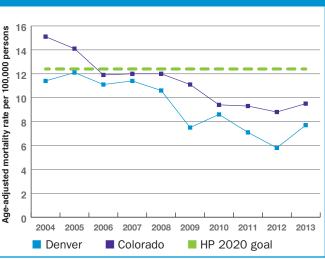




SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

In Denver, the number of motor vehicle deaths has decreased and stabilized over the last five years. While motor vehicle death rates have remained lower than the Colorado average and far below the Healthy People 2020 goal (FIGURE 23), there is more work to do. Motor vehicle injury-related deaths are the leading cause of death for those 44 years of age or younger. Additionally, recent data indicate that only 75 percent of Denver's teen drivers routinely use seat belts⁴.

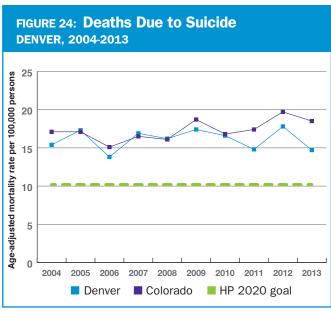
FIGURE 23: Motor Vehicle Deaths DENVER, 2004-2013



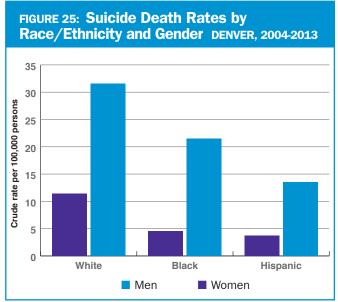
SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment



Growing concern has focused attention on suicide rates in Denver, which exceed the Healthy People 2020 goal (FIGURE 24). Over the last 10 years, men (particularly White men) had the highest risk of suicide. Black and Hispanic men show higher risk than women, regardless of race or ethnicity (FIGURE 25). As suicide is preventable, the upward trend supports a growing need for positive mental health promotion, increased access to behavioral health services, and additional substance abuse treatment programs.

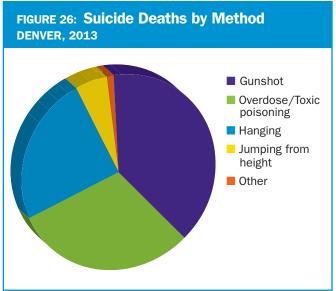


SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

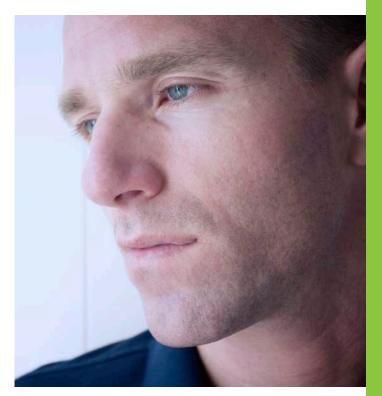


SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

The most common methods used in suicides were guns, drug overdose/poisoning and hanging (FIGURE 26). Knowledge of these causes or methods can help inform prevention efforts, such as reducing access to dangerous weapons, promoting access to potentially lifesaving antidotes for opioid drug overdoses, and increasing access to mental health treatment.



SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment





Helping Denver Youth Escape the Circle of Violence

Denver males ages 15-24 years-old have the highest homicide rates in Colorado. Nearly 80 percent of these cases involved a gun. According to coroner and law enforcement records, approximately 17 percent of Colorado's homicides were gang-related. Denver Health's hospital-based violence intervention program, At-Risk Intervention and Mentoring (AIM), serves at-risk youth and young adults who are brought to the emergency department with violent injuries. AIM's outreach workers begin one-on-one mentoring with bedside interventions that occur while the injured youth are recovering from their injuries, and have reason to reflect on the consequences of risky behaviors. Over the last five years, more than 9,000 intentionally injured youth were brought into Denver Health's emergency department. Forty percent of these youth were at high-risk of subsequent violent injury. AIM is working with these youth to help them escape the circle of violence.

PREVENTING INJURY

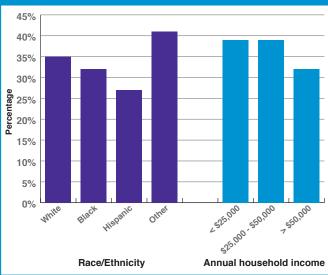
Injury prevention is key to reducing unnecessary death and disability, and decreasing the medical, societal and economic costs associated with lost productivity. Minimizing risky behaviors, and improving the safety of work, play and home environments all help to reduce risk where injuries most often occur.

MENTAL HEALTH

Maintaining positive mental or behavioral health is essential to ensuring overall good health. Integrated and comprehensive behavioral health treatment and prevention are critical to reducing illness, death and unnecessary medical costs.

In 2013, more than one in three members of our community reported having felt one or more days of poor mental health in the past 30 days. The highest portion of those reporting poor mental health are those earning less than \$50,000 per year as well as Other racial and ethnic populations (FIGURE 27).

FIGURE 27: Residents Reporting One or More Days of Poor Mental Health in Past 30 Days by Race/Ethnicity and Income DENVER, 2013



SOURCE: Behavioral Risk Factor Surveillance System

Improving Access to Health Care for Residents with Mental Illness

Integrated health care is a system of care that addresses physical and mental health needs in a coordinated manner. Research shows that people who have serious mental health conditions die up to 25 years earlier than people who do not due to untreated physical health conditions like cardiovascular disease or diabetes, and limited access to medical care. The Mental Health Center of Denver (MHCD) is improving access to high-quality health care for Denver residents with mental illness by embedding physical health care within their services. Everyone—regardless of insurance status or ability to pay—is eligible to receive integrated care at one of the three clinics. To date, MHCD has provided 934 adults with this much needed integrated physical and mental health care.



PREVENTING POOR MENTAL HEALTH

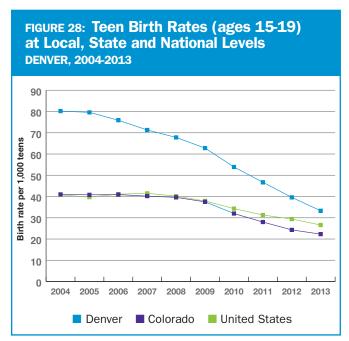
Improving mental health involves creating strategies that promote positive mental wellbeing for all. While many strategies effectively reduce the severity and delay onset of mental illness, they are largely based on the ability to access high-quality behavioral health care. Health care providers should be trained on early identification of mental illness and treatment of psychological trauma. Poor mental health has been linked to increased risk of injury and violence, while individuals with mental illness commonly have other health risks such as smoking, being overweight, and living in unsafe and unsupportive environments.

SEXUAL HEALTH

Sexual health is comprised of many factors: having the knowledge and skills to make informed decisions regarding safe relationships and when to have children, building self-acceptance and a positive identity, and communicating with health professionals, partners and families.

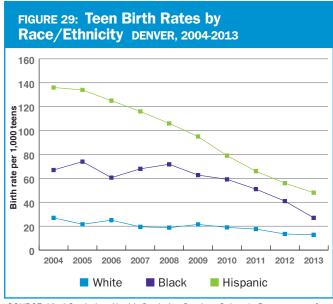
Teen births are one key health outcome used to measure sexual health. Preventing teen pregnancies can significantly reduce poverty, child abuse and neglect, father-absence, low birth weight, school failure and poor preparation for the workforce. Teen birth prevention also significantly reduces tax-payer funded health care costs⁵.

Denver's teen birth rate declined by 59 percent over the last 10 years—a remarkable accomplishment for Denver's youth (FIGURE 28).



SOURCES: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment; CDC/NCHS, National Vital Statistics System

The most significant change occurred among Hispanic youth with a 65 percent decline in birth rate (FIGURE 29). Denver's teen birth rate is now close to the Colorado and national averages.



SOURCE: Vital Statistics, Health Statistics Section, Colorado Department of Public Health and Environment

Increasing the number and availability of sexual health services is key to improving health. Since 2006, the number of publicly-funded Health Centers and School-Based Health Centers located in Denver has increased from 19 to 30 (FIGURE 30). By having more centers that provide effective low-cost contraception (including long-acting reversible contraception), teens have better access to contraception and support services to reduce the teen birth rate.

FIGURE 30: Publicly-funded Clinics Providing Reproductive Health Services DENVER, 2014 Arvada Publicly-funded clinics Established pre-2007 Established 2007 or later Aurora

SOURCE: Family Planning Program, Prevention Services Division, Colorado Department of Public Health and Environment

Family Planning Helps Women Succeed

Since 2009, the privately-funded Colorado Family Planning Initiative (CFPI) has helped reduce unintended pregnancy among low-income women in Denver by increasing the number of patients served through publicly-funded clinics, training providers, and making effective contraception more available. CFPI also helped increase use of the most effective contraceptive methods by removing cost barriers that previously prevented some young, low-income women from using them. Prior to CFPI, birth rates for low-income adolescents and young women had been generally stable. Birth rates declined significantly within just two years of CFPI's inception, likely due to the increased access to more affordable and effective methods of birth control. "This initiative has saved Colorado millions of dollars," said Governor Hickenlooper. "More importantly, it has helped thousands of young Colorado women continue their education, pursue their professional goals and postpone pregnancy until they are ready to start a family."

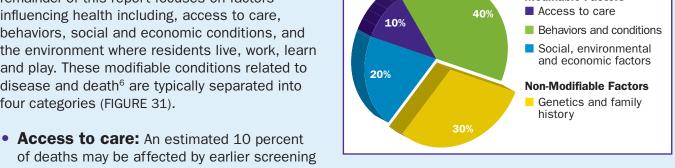


PREVENTING TEEN BIRTHS

While Denver has made progress in reducing teen birth rates, good communication is the key to continuing the downward trend. This includes ensuring an open environment at home, school or with a trusted medical provider to discuss sexual health to help support and encourage good decisions. Additionally, it is important to continue efforts to increase access to contraception and reduce risky sexual behaviors.

Factors Influencing Health

While Denver offers among the best medical care available, some residents are healthier than others because health depends on more than just medical care. Given this report's focus on prevention, the remainder of this report focuses on factors influencing health including, access to care, behaviors, social and economic conditions, and the environment where residents live, work, learn and play. These modifiable conditions related to disease and death⁶ are typically separated into four categories (FIGURE 31).



Factors Influencing Health

Most factors influencing health are modifiable.

Modifiable Factors

- of deaths may be affected by earlier screening and detection of disease, which can reduce disease severity and prevent recurrence of disease events. For this to occur, access to high-quality, timely and affordable care is essential.
- Behaviors and conditions: Daily choices and personal behaviors are incredibly important to health; an estimated 40 percent of deaths are dependent on these modifiable factors.
- Social, environmental and economic factors: An estimated 20 percent of deaths are affected by social, economic, built and natural environments.
- Genetics and family history: Certain dispositions to health and disease have been established prior to birth and are largely outside of a resident's control. It is estimated 30 percent of all deaths are due to genetics and family history.

Overall, an estimated 70 percent of factors that influence health care are individual or community decisions⁶. Strategies, programs and policies should encourage the healthy choice to be the easy choice.

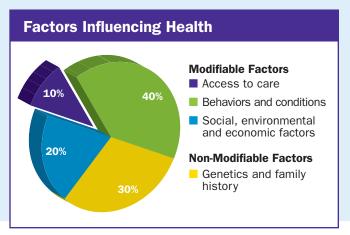
Modifiable Factors: Preventing Early Deaths

Residents in some parts of Denver have better health outcomes than in other areas. Some of the differences are due to individual, family or community conditions. Personal responsibility combined with the right environment to support healthy behavior is important for achieving good health outcomes. This includes seeking preventive services and care during illness or injury. The following sections describe how to promote healthy behaviors.



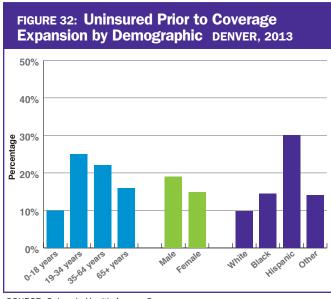
Access to Care

Approximately 10 percent of overall health may be attributed to the ability to access high quality, affordable and timely health care⁶. Better access to care prevents disease, allows for early treatment when illness occurs, and reduces the severity of future disease. This section discusses issues that impact the ability to receive this care.



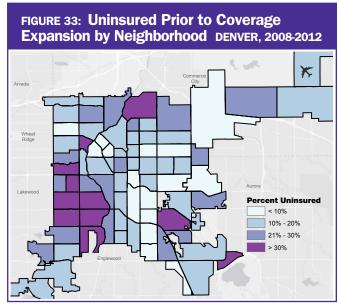
Insurance Coverage

The Patient Protection and Affordable Care Act (ACA) was designed to expand opportunities for obtaining health insurance. Prior to the expansion in 2014, more than 100,000 Denver residents lacked health insurance. A disproportionately high number of those uninsured were Hispanics, young adults and males (FIGURE 32).



SOURCE: Colorado Health Access Survey

Geographically, those living in west and north Denver were more likely to be uninsured than those in other parts of the city. While the average for Denver was about 17 percent, the number of uninsured exceeded 30 percent in some neighborhoods (FIGURE 33).



SOURCE: American Community Survey

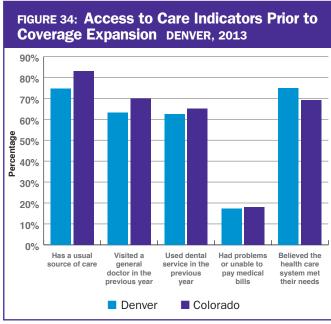
Thanks to the ACA, Denver saw a rapid and dramatic increase in health care coverage in 2014; nearly 65,000 Denver residents gained coverage through Medicaid and insurance plans at Connect for Health Colorado from January through October. With continued enrollment over the next few years, we predict that 95 percent of Denver residents will have health insurance by 2018.



Primary Care Access

While recent ACA enrollees have insurance coverage, many in Denver are still unable to find a clinic or hospital that offers coordinated medical, behavioral and dental care.

In 2013, 75 percent of Denver residents reported having a usual source of care, but this varied widely between different racial and ethnic groups. Whites, more often than Blacks and Hispanics, have a usual source of care and are more likely to report visiting a primary care provider during the past year. Nearly one in five Denver residents struggled or was unable to pay medical bills. Only three-quarters believed that the health care system was meeting the needs of their families (FIGURE 34).



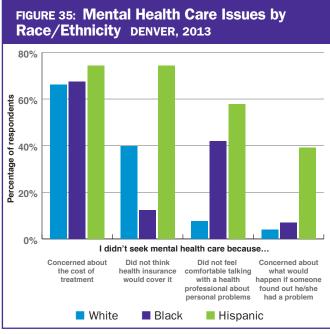
SOURCE: Colorado Health Access Survey

Behavioral Health Access

While most mental illnesses are treatable, the unfortunate reality is that most who suffer from mental illness do not receive the care they need.

In Denver, cost and stigma are identified as the primary reasons for not accessing mental health services, with Hispanics affected more than Whites and Blacks. While respondents from all three groups cited concerns about the high cost of mental health treatment as a major barrier to accessing care, Hispanics were far more likely to believe insurance would not cover such services. This suggests a lack of culturally-specific education about the benefits of accessing mental health services, especially for those who are newly insured.

Similarly, stigma is a much greater barrier to seeking mental health care for Hispanics than for other races/ethnicities. Hispanics, more so than Blacks, cited discomfort talking with mental health professionals as a primary reason for not accessing care. Far fewer Whites reported this discomfort (FIGURE 35).



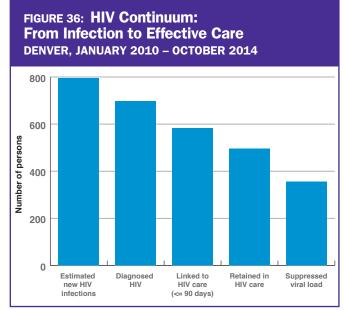
SOURCE: Colorado Health Access Survey

Specialty Care Access

There are few better examples that highlight the importance of having access to care than with HIV infection. More people than ever before are living healthy lives with HIV in Denver thanks to the effectiveness of treatment. It is helpful to think about HIV in Denver in terms of a sequence of events:

- Prevention, including practicing safe sexual behaviors and taking medications to prevent infection if individuals are at high risk of getting infection (pre-exposure prophylaxis);
- 2) Getting tested and being diagnosed;
- 3) Accessing medical care in order to be treated; and,
- 4) Being retained in that care, so that the HIV can be treated and the viral load of the infection becomes undetectable or fully suppressed.

When the HIV viral load becomes undetectable, HIV is unlikely to be transmitted to anyone else. Thus, treatment of people living with HIV has become a way to prevent transmission, as well as to control HIV in infected people. There is work to be done to improve engagement in care for persons with HIV in Denver (FIGURE 36).



SOURCE: HIV/AIDS Reporting System

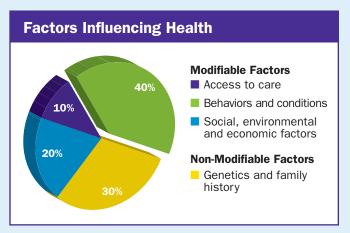
Insurance Helps Denver Residents Access Health Care

There are early indications that Denver residents are already using new insurance coverage to access care. For example, from January through September 2014, primary care visits to Denver Health increased by 12 percent, specialty care visits by 11 percent, and behavioral health care visits by 52 percent, whereas emergency and urgent care visits declined by two percent. Denver Health and other safety net providers reported increases in the number of patients with health care coverage. As a result, these providers have greater capacity to serve more patients.



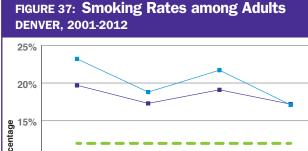
Behaviors and Conditions

Healthy behaviors are activities to prevent and protect from getting diseases, or to maintain or improve overall health and wellbeing. Individual healthy behaviors are estimated to affect 40 percent of health outcomes⁶. Practicing good behaviors enhances health, while harmful behaviors may lead to disease, injury or death.



Tobacco Use

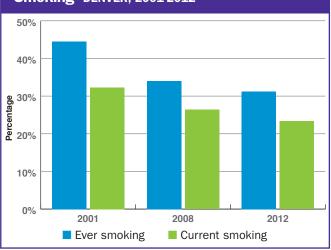
Tobacco use is the leading preventable cause of disease and premature death in Denver⁷. In the past several years, smoking rates among Denver adults (FIGURE 37) and young adults (FIGURE 38) decreased, with the greatest reductions achieved in young adults.



Percentage 10% 5% 0% 2001 2005 2008 2012 HP 2020 Goal Denver Colorado

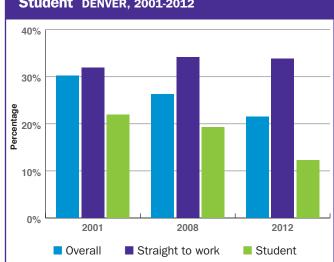
SOURCE: Colorado Tobacco Attitudes and Behaviors Survey





Young adults have the highest smoking rate of any age group, and recent data indicate that adults often initiate smoking as young adults8. Compared to young adults who attended college, those who went straight from high school to work were more than two and a half times more likely to smoke cigarettes. There has been little to no reduction in smoking rates for young adults who go straight to work from high school as compared to those who go to college (FIGURE 39).





SOURCE: Colorado Tobacco Attitudes and Behaviors Survey

Although most young adults begin using tobacco socially, 72 percent become tobacco-dependent adults⁹. Identifying and treating tobacco use and dependence early offers substantial benefits. Young adults who quit smoking by age 30 increase their life expectancy by 10 years and are expected to live as long as someone who has never smoked. While two-thirds of young adults who use tobacco want to quit, young adults are less likely

to seek health care provider advice and support, and are less likely to use cessation counseling or medications, compared to older tobacco users¹⁰.

Reducing Denver's smoking rates and the associated health care costs requires a focus on prevention and cessation resources geared specifically for the young adult population.

Exploring New Ways to Help Young Adults Quit Smoking

Young adults, those ages 18-24 years-old, have the highest smoking rate of any age group in Denver. This group is particularly vulnerable as they transition from high school into work settings, college, the military or other independent living situations. The Colorado State Tobacco Education and Prevention Partnership has identified three strategies to protect this vulnerable population: collaborate with employers to identify workplace conditions that contribute to tobacco initiation and use; increase cessation opportunities at worksites that mainly employ 18-24 year-olds; and expand smoke-free polices to protect 18-24 year-olds. Additionally, cessation aids that utilize popular technologies used by young adults are being explored. For example, Colorado Quit Mobile is a free text message tobacco cessation program specifically designed for 18-24 year-olds in Colorado. The text program provides instant support and coaching, and can help tobacco users prepare for quitting by providing specific hints to help with cravings.

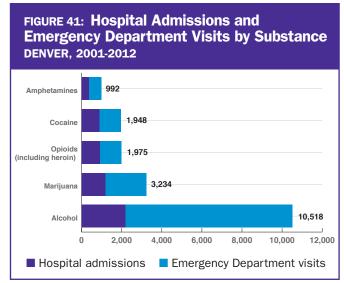


Mental Health and Substance Use

Comorbidity is when two diseases or unhealthy conditions coexist in the same person. For example, those who suffer from substance use disorders are twice as likely to suffer from mental illness like mood and anxiety disorders¹¹. Given that both substance use and mental disorders are often established during young people's developmental years, many Denver youth (ages 14-18 years-old) enrolled in mental health treatment programs also have substance use disorders (FIGURE 40).

FIGURE 40: Comorbid Substance Use and Mental Health Disorders among 14-18 year-olds in Treatment Programs DEN-VER, 2009-2013 90% disorder 70% nse 60% comorbid substance 50% 40% 30% with 20% Percentage 10% 0% ADHD Anxiety Oppositional Depression **Mental Health Disorders** Alcohol Cocaine Marijuana Opioid Amphetamines

Hospital admissions and emergency department visits indicate which substances people in Denver are using and who may have a substance disorder that needs to be treated. Alcohol continues to be the most used and destructive substance in Denver, while the abuse of marijuana, opioids, cocaine and amphetamines are also of concern (FIGURE 41).



SOURCE: Colorado Hospital Association

SOURCE: Center for Antisocial Drug Dependence Study, funded by the National Institute on Drug Abuse

ENCOMPASS is an evidence-based treatment program that integrates care for substance use disorders and mental health problems for adolescents and young adults. This integrated approach is critically important given that 80 percent of teens in substance treatment have co-occurring mental health problems, such as depression and anxiety. Based on nearly two decades of clinical research, ENCOMPASS consists of eight or 16 weekly individual cognitive behavioral therapy, using motivational enhancement approaches and abstinence-based incentives, implemented in high schools or community-based mental health or substance treatment settings. In Denver, ENCOMPASS is implemented at the Substance Abuse Treatment Education & Prevention Program at Denver Health. Substance abuse outcomes are comparable or superior to other evidence-based adolescent substance treatment interventions with significant improvement in mental health problems.

Vaccination

Vaccinations help protect against disease. One vaccine-preventable disease with higher rates in Denver compared with Colorado is cervical carcinoma, which is caused by the human papilloma virus (HPV). Improving the use of HPV vaccine in both males and females could significantly reduce this and other HPV-associated disease and cancers. Many 13-17 year-olds in Denver have yet to receive these vaccinations (FIGURE 42).

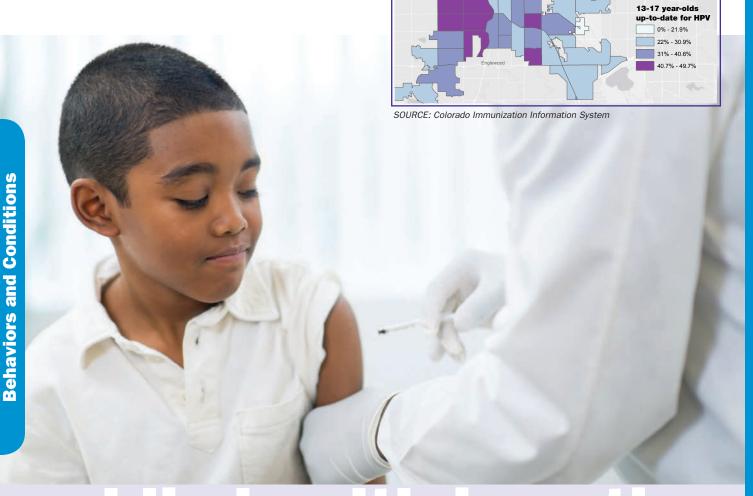


FIGURE 42: HPV Vaccination Rates

X

DENVER, 2014

Denver Focuses on Improving Vaccination Rates to Protect Community Health

While measles is rare in Denver, the disease still affects people all over the world. There have also been recent outbreaks in states surrounding Colorado. Measles spreads easily when a contagious person sneezes or coughs and another person inhales the droplets. Infants too young to be vaccinated, people with special health problems, and those unvaccinated are at higher risk. Fortunately, the measles vaccine (MMR) is very effective for those who are vaccinated. Healthy People 2020 set a goal that 90 percent of children receive one or more doses of MMR by 2 years of age. In 2013, at least 88 percent of Denver children met this goal. While Denver is nearing that goal; 12 percent represents a significant number of children who could spread the disease to vulnerable populations, including infants and the immune compromised.

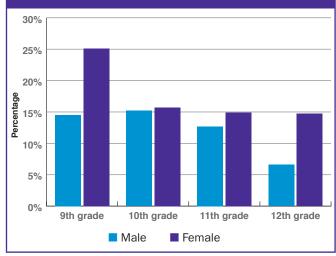
Injury

Bullying is when one youth or a group of youth enacts unwanted aggressive behavior on another youth. It causes harm and distress, and threatens young people's physical, emotional and academic wellbeing¹². In Denver, high school students report decreasing levels of being bullied as they move from 9th to 12th grade. Females also report higher incidence of bullying than males (FIGURE 43).

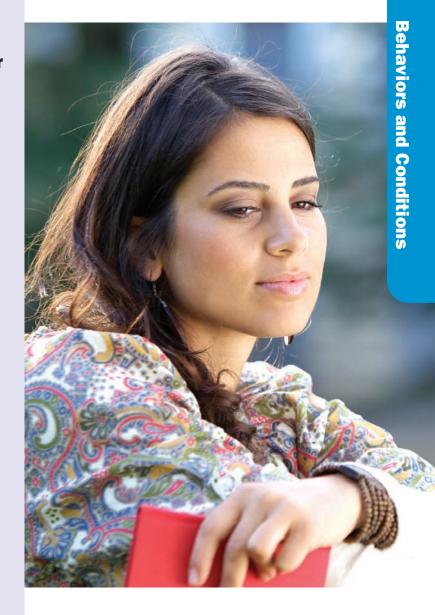
Ending Domestic Violence in Denver

The Center on Domestic Violence (CDV) at the University of Colorado Denver is an academic, research and service center working to reduce the number of young people facing interpersonal violence like being forced to have sex against their will or physical abuse from a girlfriend or boyfriend. Without intervention, children and youth exposed to interpersonal violence are at greater risk of anxiety and depression, substance abuse, engaging in violent behaviors, and poor academic performance. The CDV collaborates with three other service partners—Project **PAVE**, The Conflict Center, and the Denver Children's Advocacy Center—to carry out the Mile High Healthy Relationships Alliance. The Alliance provides a comprehensive system of response to domestic and dating violence, sexual assault and stalking that is schoolbased, youth-centered, and evidence-informed. In the coming year, the Alliance will provide intervention and prevention services in high-need Denver schools representing more than 1,800 children in preschool through 12th grade.

FIGURE 43: Students Who Were Bullied on **School Property During the Past 12 Months DENVER. 2013**

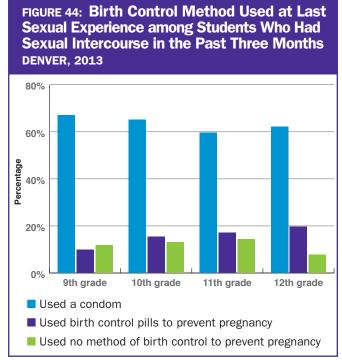


SOURCE: Healthy Kids Colorado Survey



Sexual Health

Denver high school students who are sexually active face important decisions—including how to prevent pregnancy or sexually transmitted infections. While older students are more likely to use birth control to prevent pregnancy, nearly one in 10 reported not using contraception during their most recent sexual experience. The use of birth control pills increases slightly as students get older, but remains at less than one in five by graduation. Condom use during last sexual experience, which protects against both pregnancy and sexually transmitted infections, remains consistent (about 60 percent) for youth throughout high school (FIGURE 44).



SOURCE: Health Kids Colorado Survey

Comprehensive Sexual Education Sets Denver Youth Up for Success

The Responsible Sex Education Institute of Planned Parenthood of the Rocky Mountains has been providing comprehensive sex education to the Denver community for more than 25 years. In 2014, more than 8,000 young people were part of tailored programs that meet the needs of Denver's diverse community. The Institute positively impacts lives by ensuring that community members are empowered to set sexual limits, have access to contraception, and understand the mechanics of their reproductive system. This medically accurate, developmentally appropriate, culturally relevant and inclusive education plays a critical role in reducing unplanned pregnancy and sexually transmitted infections by providing participants with knowledge and skills they will use their entire lives.

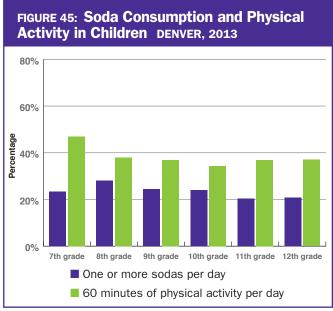


Healthy Eating and Active Living

Diet and exercise habits have a tremendous impact on health and wellbeing. This is especially important in children since it influences future health as an adult.

Beverages are an important source of calorie consumption for young children and adults. Sugar-loaded beverage (e.g., soda or other added sugar drinks) consumption has been identified as the factor most closely associated with the obesity epidemic¹³.

In Denver, soda consumption remained high but decreased as students moved from middle school to high school, with more than one in five high school students still consuming soda on a daily basis. Additionally, time spent getting at least 60 minutes of physical activity daily decreases as students moved from middle to high school (FIGURE 45). The combination of these behaviors contributes to increased weight gain as children age and contributes to childhood obesity in Denver.



SOURCE: Healthy Kids Colorado Survey

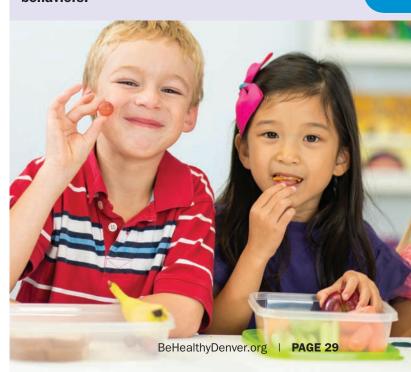
public health in

Developing a Culture of Wellness in Denver Preschools

The Culture of Wellness in Preschools (COWP) program is a comprehensive and collaborative early childhood obesity program being implemented in 21 of Denver's Great Kids Head Start sites in the Denver Metro area. The COWP aims to promote a culture of wellness in the preschool setting by increasing fruit and vegetable consumption and physical activity levels. COWP brings the following wellness services to participating preschool sites:

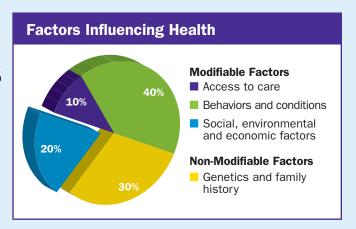
- 1) a strategic planning process to make site environment and policy changes;
- 2) a classroom-based nutrition education program;
- a preschool physical activity professional development program;
- 4) parent cooking and wellness courses; and,
- 5) a staff workplace wellness program.

This multi-strategy program focuses not only on the preschool children themselves, but also on their educators and parents as role models and decision-makers to encourage healthy behaviors.



Social, Environmental and Economic Factors

Social, environmental and economic factors are estimated to influence 20 percent of overall health outcomes⁶. By considering these conditions, root causes of a population's health outcomes and key influences on personal health behaviors can be identified and addressed.



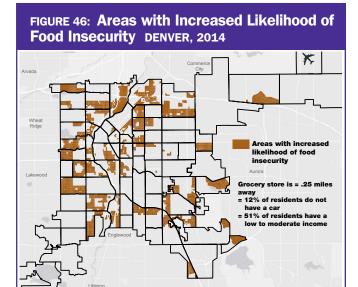
Built Environment

A built environment includes all human-made settings and surroundings, such as homes, workplaces, streets and parks. In recent years there has been a growing understanding of the connection between the built environment and a wide spectrum of health concerns such as diabetes, cardiovascular disease and obesity, which are related to the ability to be physically active.

A built environment that provides residents with choices to support healthy lifestyles, such as complete, connected pedestrian and bicycle networks, recreational amenities, and a variety of destinations and services within one's neighborhood, is critical to overall good health. Well-designed neighborhoods can improve health, and poorly-designed communities can harm health.

Access to Healthy Food

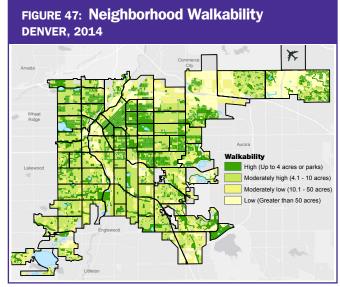
Some neighborhoods in Denver have barriers to accessing grocery stores (FIGURE 46). The map highlights Denver neighborhoods where more than half the residents in the area have a low to moderate income, more than 12 percent do not have a car, and where there is a grocery store that is not within safe walking distance (within one-quarter of a mile from their homes). People without easy access to healthy food, including fruits and vegetables, suffer from what is known as food insecurity. This increases the risk of health concerns, including obesity and chronic disease.



SOURCE: Denver Environmental Health

Walkability

The ability to be physically active often depends on the walkability of a neighborhood. One measure of walkability is block size. Smaller blocks provide more route choices and crosswalks for pedestrians and tend to slow traffic speeds; these neighborhoods in Denver offer quality areas to walk safely and efficiently (FIGURE 47).



SOURCE: Denver Community Planning and Development

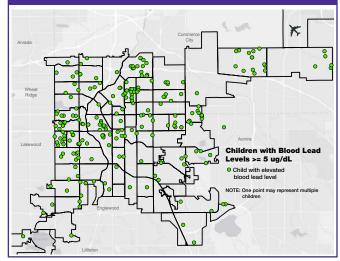
Housing

While the number of children who suffer from lead poisoning in the U.S. has been declining over the past several decades, many children still need protection from exposure. Lead affects a child's brain function, behavior and the ability to learn. There are no safe levels of lead.

Deteriorating lead-based paint and lead dust in homes are common sources of lead exposure for children in Denver. This is of particular concern for those who live in substandard or poorly maintained older housing units. Children from low-income and minority families are disproportionately affected by lead poisoning in the U.S.¹⁴.

In 2012, approximately 234 Denver children six years of age or younger had at least one blood lead result of five micrograms per deciliter (µg/dL) or higher, a reference level used by the Centers for Disease Control and Prevention to identify children with elevated levels of lead in blood (FIGURE 48).

FIGURE 48: Children with Elevated Blood Lead Levels DENVER, 2012



SOURCES: Colorado Department of Public Health and Environment, Denver Environmental Health

Denver's Road to Becoming the Country's Most Walkable City

WalkDenver is a grassroots advocacy organization dedicated to making Denver the most walkable city in the country. In 2012 and 2013, WalkDenver brought together hundreds of volunteers to organize "Better Block" events in Jefferson Park and Five Points. These events demonstrated the power of walkable public spaces through temporary demonstrations of pedestrian-friendly infrastructure mixed with art, culture, pop-up businesses and street life. WalkDenver also worked with the city to apply for Walk-Friendly community designation, a national program that recognizes communities working to improve walkability and pedestrian safety. Denver is one of just 13 cities to receive a Gold designation. WalkDenver is now working with the city to establish a Pedestrian Advisory Committee and develop a "Denver Moves Pedestrians" implementation plan as a companion to the bicycle-focused Denver Moves plan adopted in 2011, in hopes of achieving Platinum designation.



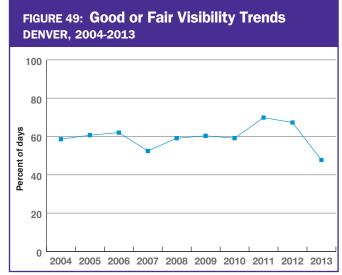
Environmental Quality

Our environment directly affects our health, burden of disease and quality of life. Environmental health efforts assess, correct, control and prevent environmental issues that may negatively affect the health of present and future generations. This section on air quality is just one environmental quality indicator; however, many other issues are concerning, such as global climate change and overall environmental sustainability.

Air Quality

How clear is the air? Visibility is one measure of air quality that measures fine particulate matter and aerosols suspended in the air.

Poor or very poor visibility days are noticeable to the human eye, and are typically referred to as Brown Cloud days. Some pollutants that contribute to poor visibility are also associated with respiratory illness. The long-term trend in the percentage of days with good or fair visibility in downtown Denver is positive, although large swings are possible in certain years due to unfavorable weather or wildfires (FIGURE 49).



SOURCE: Colorado Department of Public Health and Environment

Denver Takes Action to Address Climate Change

Over the past decade, climate change has become one of the most defining and global concerns of the 21st century. Denver has long been known as an environmental leader in efforts to measure and set goals for reducing climate-changing, greenhouse gas emissions. The city released its first Climate Action Plan in 2007 and in 2014, released its first Climate Adaptation Plan to help manage the current and future impacts of a changing planet.

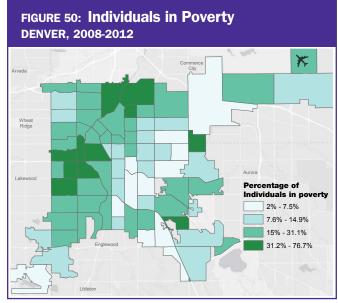
Examples of Climate Adaptation Plan strategies include increasing the use of recycled water for irrigation, changing landscaping in parks and public spaces to be more drought-tolerant, and designing infrastructure to reduce the "urban heat island effect" that results from heat radiating off urban, largely paved areas. Additionally, in 2015, Denver plans to release an updated Climate Action Plan.

Besides helping to offset the most significant impacts of climate change, these strategies will improve air quality, health, and support a long-term sustainable economy.



Income

Income impacts health in many ways. For example, children in low-income households are more likely to suffer from asthma and obesity. In Denver, some neighborhoods have high percentages of residents who live below the federal poverty level (FIGURE 50).

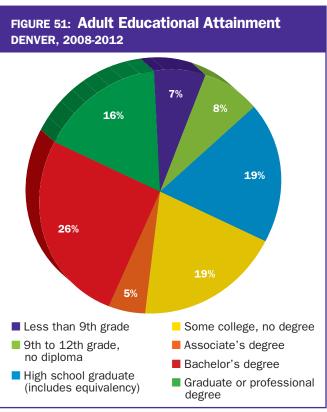


SOURCE: American Community Survey

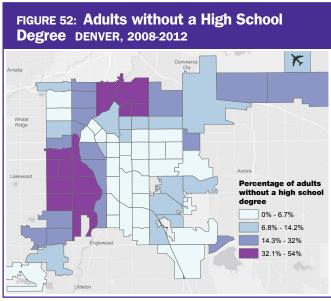


Education

Education directly influences health. On average, those with higher levels of education have better health outcomes and are less likely to die prematurely¹⁵. In Denver, approximately 15 percent of adults have not completed high school (FIGURE 51). Some neighborhoods have concentrated groups of adults who did not complete high school (FIGURE 52).



SOURCE: American Community Survey



SOURCE: American Community Survey

Encouraging Collaborative Action

Prevention is critical to improving Denver's health. Efforts to promote healthy behaviors have improved many of Denver's health problems over time:

- Cardiovascular disease rates are steadily declining, and gaps between Denver's racial and ethnic minorities are beginning to narrow.
- Teen birth rates have declined, and continue to do so. This decline will ensure young women and children have better future health outcomes and opportunities for education and economic success.
- Approximately nine out of 10 Denver residents now have health insurance, and are accessing preventive health services. This is a tremendous achievement for Denver and the nation as a whole.

While there are many successes to celebrate, there is still work to be done. Health care is the single largest cost to taxpayers and will continue to increase without an investment in prevention to reduce early death, disease and injury, and disparities across regions and demographic groups. As this report demonstrates, there are many factors that influence our overall health and wellbeing. Making the choice to improve the quality of the environment where we live, work, learn and play is a community-wide responsibility.

A diverse group of partners is needed to improve a community's health since addressing a broad array of underlying factors which affect resident's health is required. These partners include:



Government officials and policymakers can engage in planning, zoning, the built environment, incentives, investments and policies that positively impact the health of residents.



Health care systems and providers should be incentivized to focus on prevention of disease rather than only treatment.



Schools and early childhood agencies can focus on promoting positive youth development and instilling healthy behaviors so disease can be prevented.



Community organizations providing direct services to Denver residents can ensure the community's voice is heard, addressed and responded to in a way that meets neighborhood and demographic group needs.



Media outlets can support community members and assure the prevention message, crucial to improving Denver's health, is effectively shared.



Businesses as employers should strengthen wellness opportunities for employees and their family-friends, and work as investors and partners on improving the environment and community health.



Families and individuals can seek out information, resources and support groups to improve their health as well as advocate for neighborhood change.

A cross-sector, integrated approach that improves access to care, promotes healthy personal behaviors, and improves social, economic and environmental conditions will continue to make Denver a place where everyone has the opportunity to be healthy, happy, and live a long, full life.

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Many local, state and national data sources were also used to compile this report. The full list of sources and additional information is available at **BeHealthyDenver.org.**

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Be Healthy Denver reviews the health of Denver every three years. We invited members of government agencies, hospitals and clinics, non-profit community organizations, and universities to join teams to provide expertise and choose the most important information to include in this brief report. We thank these individuals and organizations for their contributions.

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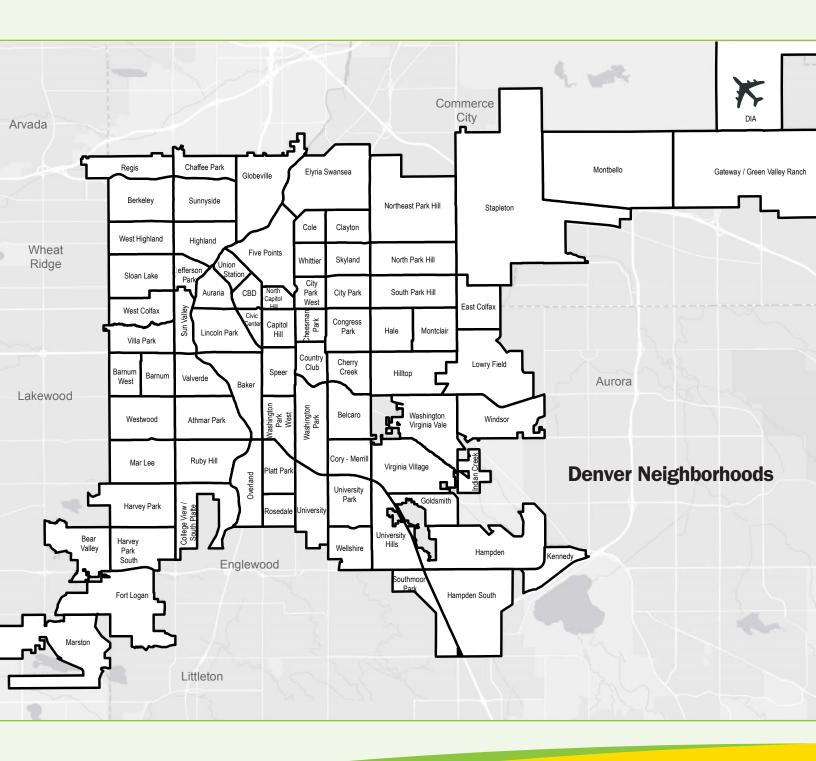
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