

Healthy Denver 2010 – What We Know

A Report of the City and County of Denver Department of Environmental Health

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Introduction

Mayor Webb stated in the year 2000 State of The City Address that he wants Denver to be the healthiest city in America. In order to advance this goal, shared by the community, the Denver Department of Environmental Health, the Board of Environmental Health, and Councilwoman Debbie Ortega, chair of the City Council's health committee, have launched a Denver Healthy People 2010 Initiative (Denver HP2010). (See the Denver HP2010 Initiative web site at: www.denvergov.org/hp2010.)

The national Healthy People 2010 (HP2010) planning process is dedicated to promoting health and preventing illness, disability, and premature death. Every ten years this process sets the health promotion and disease prevention agenda for the nation by providing health promotion goals, objectives and benchmarks, as well as some guidance in how to achieve them. Six hundred national organizations and health agencies joined all the major federal health protection and promotion agencies to develop HP2010. Its framework can be used to map Denver's progress towards promoting health, and to compare the city's status to communities across the country. This paper reviews and summarizes some of the current literature relevant to the City and County of Denver for use by the Denver HP2010 Initiative planning group and others dedicated to promoting the health of Denver residents.

The two goals of the national initiative reflect changing demographics in the U.S.—a population that is growing older and more diverse.(see Attachment A)

Goal One: help individuals of all ages increase life expectancy *and* improve quality of life;

Goal Two: eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation.(1)

Healthy People objectives aim to close these gaps in quality of life and health disparities by the year 2010. HP2010 recognizes that communities will need to take a multidisciplinary approach to achieving health equity—an approach that involves collaborative efforts for improving health, and addresses a broader range of conditions that impact health such as education, housing, labor, social justice and the environment. (1)

An underlying premise of HP2010 is that the health of the individual is almost inseparable from the health of the larger community. The factors that determine health include not only the choices of individuals, but also the social and physical environment. Thus, the greatest opportunities for reducing disparities lie in empowering individuals to make informed health care decisions, and in promoting community-wide safety, education, healthy social as well as physical environments, and access to health care. (1)

In the winter of 2002, a draft of this report, as well as a separate brief summary, were published on the Denver City web site for public comment and review. In addition, formal report reviewers were recruited from a broad spectrum of community leaders and residents. The results of this feedback have been integrated into this final version (54)

Summary

Introduction

Healthy People 2010 (HP2010) is a national plan that aims to promote health, and prevent sickness, disability, and early death. Its goals are to improve the length and quality of life for all residents, and to get rid of health inequalities in part by identifying and acting on ways in which the well-being of each person is tied into his or her social and physical surroundings. HP2010 will be used to measure how Denver residents are doing in terms of health improvement, and to compare our city's health with other places across the United States.

Promoting Health and Preventing Disease

The Healthy People 2000 Initiative taught that improvements in the nation's health could be made even within short time frames – namely, it showed that *health promotion works*. There is an old story about a man who sees someone drowning in a stream and jumps in to save him. As soon he does this, he notices even more people in danger coming down the water, and the helper dives in again. Soon he is exhausted from rescuing everyone, and begins to wonder what is happening upstream to get people into trouble, and what can be done to keep them out of it. Coming up with ways to prevent or solve problems “upstream” is health promotion, and the main aim of HP2010.

The factors that lead to good or poor health are often related and act like “domino chains.” For example, social or environmental factors, such as poverty and stress, may lead to mental health problems that in turn may lead to violence or injury. Research shows that environmental factors can be more important to improving health than individual behavior change or better medical care. In fact, differences in rates of risky health behaviors account for only 10% to 25% of health differences that exist between low and higher income groups. Other factors related to poverty account for most of the remainder of these health differences. In order to prevent disease and early death, health promoters have to better identify and understand these “chains” of underlying social and environmental factors that impact health, and work to address them with their local partners and the community. The earlier actions are taken in this chain, the greater the chance for keeping people healthy.

Health of Denver Residents

Unfortunately, no single source currently compiles data on comprehensive health indicators for Denver. Much of the health data available on the state or national level is not available at the county level, and even less data are available by neighborhood or by other groupings such as race. In an attempt to start tracking local data, however, DEH and its board have just put together the first *Annual Report on the Health of Denver's People and Environment*. The *Annual Report* provides a brief overview of select health data for Denver, Colorado, and the U.S., using indicator areas and objectives recommended by the national HP2010 framework. These priority areas and the data are discussed in more detail here in *Healthy Denver 2010 – What We Know*.

In general, Colorado is a healthy state and the seven-county Denver Metro area (includes Denver, Adams, Arapahoe, Boulder, Broomfield, Douglas, and Jefferson counties) is a healthy region - often more so than the overall U.S. population. However, the City and County of Denver by itself has many more health problems than the U.S., Colorado, or the larger Metro area. Compared to other large cities across the country, Denver rates better in things such as overall deaths, cancer deaths, and heart disease deaths; but worse in things such as suicide, car crash deaths, prenatal care, and low-birthweight babies. Also, there are huge health differences between lower versus higher-income neighborhoods within Denver.

While there has been some improvement in the health of Colorado and Denver residents over recent years, there are still many areas that need a lot of work. Among these are: suicide, accidental injury, motor vehicle crashes, low-birthweight babies, lack of prenatal care, asthma, child vaccinations, child poverty, child abuse, diabetes, heart disease, cirrhosis, alcoholism, poor nutrition, overweight, smoking, mental illness, unemployment, and health care access.

Many of the health issues and causes of poor health are essentially the same for the U.S., Colorado, and Denver. Some interesting trends for Colorado include: an increase in the percentage of overweight adults from 16% to 34% in the last ten years; recent rising rates of teen and adult smoking; reduced cancer death rates; and for the nation: an increase in child abuse; a rise in rates for diabetes, lung disease, and asthma; and dropping teen pregnancy rates. Although data is not available for Denver on all of these trends, from what we do know, we can likely deduce that where we fall short as a nation or as a state, we also tend to fall short as a city.

Overall, the U.S. population is getting older and more ethnically diverse, and this trend has important health implications. The demographics of Colorado and Denver are also changing significantly. According to the 2000 Census reports, Denver has reached a population of 554,636, an all time high for the City. White non-Hispanics make up 51.9% of the population, Blacks 10.8%, Asians 2.7%, and American Indians 0.7%. Almost 32% of Denver residents are Hispanic. Denver had 22.0% of its population under age 18 in 2000 (compared to 26.6% nationally and 25.6% in Colorado). The city's diversity and age distribution bring particular health advantages as well as needs.

Economic trends are also very important to health. While the number of jobs grew recently in Denver (+8.41% from 1990-96), the total number of jobs in poorer neighborhoods dropped (6.1% from 1990-96). Interesting changes occurred in the city's poverty rates, which according to the latest Census estimates, appear to have dropped dramatically. The overall poverty rate for Denver residents decreased from 17.1% in 1990 to an estimated 10.6% in 2000. The poverty rate for Denver children showed a similar pattern, dropping from 27.4% in 1990 to an estimated 15.1% in 2000.

Most of the underlying reasons for health inequalities - things such as poverty and income differences, poor housing, lack of education, unemployment, discrimination, and unsafe living and working environments - have often been seen as beyond the control and responsibility of public health. Now, however, HP2010 stresses that those working in public health must become advocates for social justice and change in order to improve these conditions that have such a great impact on health.

Needs and Resources

When shown lists of health issues, residents from some of Denver's low-income neighborhoods ranked drugs, unmarried and teen mothers, gangs, crime, and firearms deaths as among the top priorities for action. Next in importance to residents were murder, alcoholism, diabetes deaths, violence in the home and deaths from car crashes. Denver residents identified youth and elderly as under-used resources for health promotion at a community level.

Overall, there is a great need in Denver to deal with the social and environmental causes of poor health (such as poverty and discrimination), to increase health promotion, provide better access to health services and programs, and improve the cultural sensitivity of health programs and providers. There is also a need to collect more specific information about the health of smaller communities (e.g., neighborhoods, ethnic groups, etc.) within Denver. Finally, there is a need to improve communication about health, so that those who are doing health promotion have a better

understanding of what each is doing, and can learn about and use better methods and technology to help Denver residents to improve their own well-being.

Summary Recommendations

Here are some recommendations made by the Denver HP2010 Initiative based on an assessment of public and expert feedback:

COLLABORATION:

- Improve communication, collaboration and synergy between those working to improve the health of Denver, including traditional and nontraditional partners, especially community members.

FINANCIAL RESOURCES

- Increase financial resources dedicated to health promotion and disease prevention.

ROOT CAUSES

- Address the root issues of poor health, including social, physical, psychological and environmental issues.

SURVEILLANCE

- Build better data systems to capture all of Denver's health data from public and private sources.

MULTI-DIMENSIONAL APPROACHES

- Use multi-dimensional health promotion approaches that address economic, social and physical environments as well as behavior change.

EDUCATION

- Raise awareness among leaders and the public about ways to improve health.

ACCESS TO HEALTH CARE

- Make access to health care, health promotion and disease prevention available and affordable to all.

STRATEGIC ACTION PLANNING

- Engage in a strategic action planning process to identify concrete next steps to build a healthier Denver.

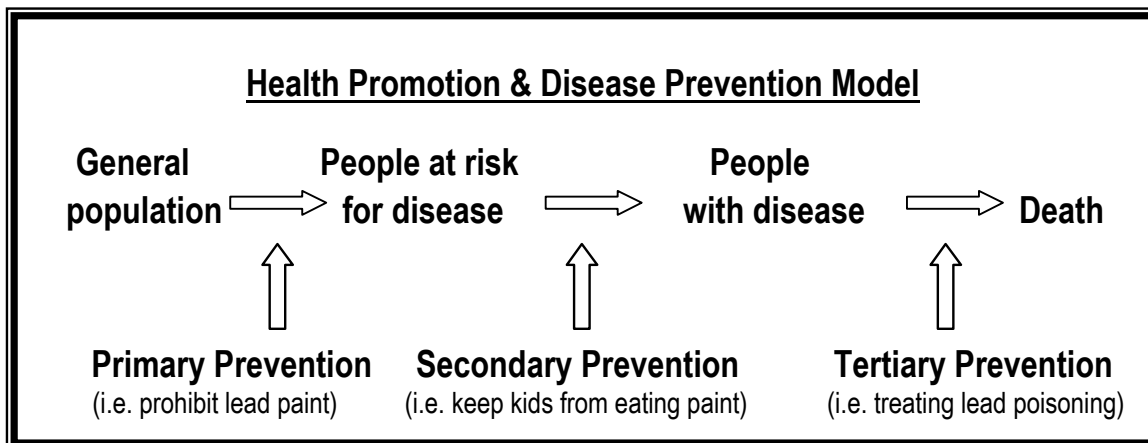
Promoting Health and Preventing Disease

Healthy People 2010 is the nation's health promotion agenda. What exactly is health promotion?

A continuation of the old public health story about the man saving drowning people explains the different levels of disease prevention: When the man moves up the river and sees people jumping into the water he tells them, "Don't swim there, you'll get swept down and drown". Some got out, but many stayed in. "It's too hot", they said, "We have to cool down." So the man organized them to build a pool where they could safely swim. Working 'upstream' is health promotion.

The factors that lead to good or poor health are often interrelated and can be strung into "domino chains" of cause and effect relationships. For example, poverty and stress may lead to mental health problems that in turn may lead to smoking or drinking, or to violence or heart disease. Factors may also be interrelated as in a spider's web---obesity cannot be addressed without attention to exercise, availability of healthy food, etc. Designing effective health promotion interventions means understanding these chains and how they play out in groups and individuals, as well as identifying their underlying and critical causes.

A standard health promotion and disease prevention model defines three basic levels of intervention: primary, secondary and tertiary. Primary prevention includes activities that keep people in a general population from becoming at risk for a disease. Secondary prevention addresses those who already have risk factors, and tertiary prevention addresses the needs of those with disease. A simple example for the three levels of intervention applied to diabetes: healthy food is expensive and unavailable in low income neighborhoods (interventions on this general environment would be primary prevention); this causes many people who live there to eat high fat/low vegetable diets (actions to help those at risk are secondary prevention); many diabetic residents do not have access to health care and do not receive treatment (providing screening or health care access are examples of tertiary prevention).



While all levels of prevention are needed for a healthy community, effective primary interventions have particular potential for substantial impact---it is generally more expensive and difficult to reverse risk factors or treat disease than it is to prevent the development of risk factors and disease in the first place. For example, more was done to reduce tuberculosis in the U.S. during the twentieth century through environmental changes such as improved housing, clean water, and nutrition than by medical interventions aimed at already infected individuals.(2) The twentieth century saw steep drops in the country's death rate. Researchers attribute this primarily to improvements in the physical and social environment such as sanitation measures, improved housing, and nutrition, rather than to

medical interventions such as immunizations, which were developed decades after the death rates had already significantly plunged.(3)

Research indicates that the social environment is more critical to improving health than behavior change or enhanced medical care. Indeed, socioeconomic status is overwhelmingly the most significant risk factor for health.

Medical care itself will not change the numbers of people who get sick, no matter how good the care becomes. The treatment approach is increasingly costly. Approaches to reversing risk factors are also problematic: these will not change the actual percentage of people in the population with risks; and people find it difficult to change established risky behaviors such as exercise or diet. The most promising approach, therefore, is to identify

and maximize the social and physical factors in the environment that encourage healthy behaviors or eliminate risks. (4) Recent research indicates that the social environment is more critical to improving health than behavior change or enhanced medical care.(3) Indeed, socioeconomic status (including income, education level, and occupation) is overwhelmingly the most significant risk factor for health.(4)

Intervention early in life is also a critical step as factors such as low-birthweight or inadequate infant stimulation will have negative health consequences no matter what is done in later years. Childhood socioeconomic status deeply influences development and education, as well as later life employment, income and health.(3) Providing the supports for maternal, infant, and child well-being is critical to promoting health in a community.

The Healthy People 2000 initiative taught that improvements in the nation's health can be made in short time frames. We know more about what succeeds and what does not than we did ten or twenty years ago. During the past decade, there have been significant reductions in infant mortality, national rates of childhood vaccinations are the highest they have ever been, and teen pregnancy has dropped. Substance abuse levels have stabilized, heart disease and stroke death rates have dropped, while cancer is increasingly treatable, and unintentional injuries are better prevented.(1) *Health promotion works.*

The Healthy People 2000 initiative taught that improvements in the nation's health can be made in short time frames...health promotion works.

The Healthy People 2010 model itself has gaps in issues related to keeping people healthy. Some of these are because the data or the science is not yet available. For example, things such as lack of sleep and too much stress are known to be factors that keep people from staying healthy, yet they are not mentioned in HP2010. Hospital care and specialty services are also not included in Healthy People 2010, as they are considered treatment instead of prevention by nature. (1)

RESOURCES FOR HEALTH PROMOTION

The National Association of City and County Health Officials points out that the American public has little understanding of the critical role of the public health system in protecting the population from disease, or developing policies and programs that promote healthy living conditions. Such lack of understanding leads to poor funding

support for activities to improve the public's health. Currently, only 1% of current health expenditures in the U.S. are spent on community and public health activities. The rest is dedicated to disease treatment. Yet, the Surgeon General's report on health promotion concludes that health care only accounts for 10% of the major contributors to health. This is primarily because the medical system comes into play usually only after people are already sick, and does not significantly prevent illness or risk behaviors. (8,36)

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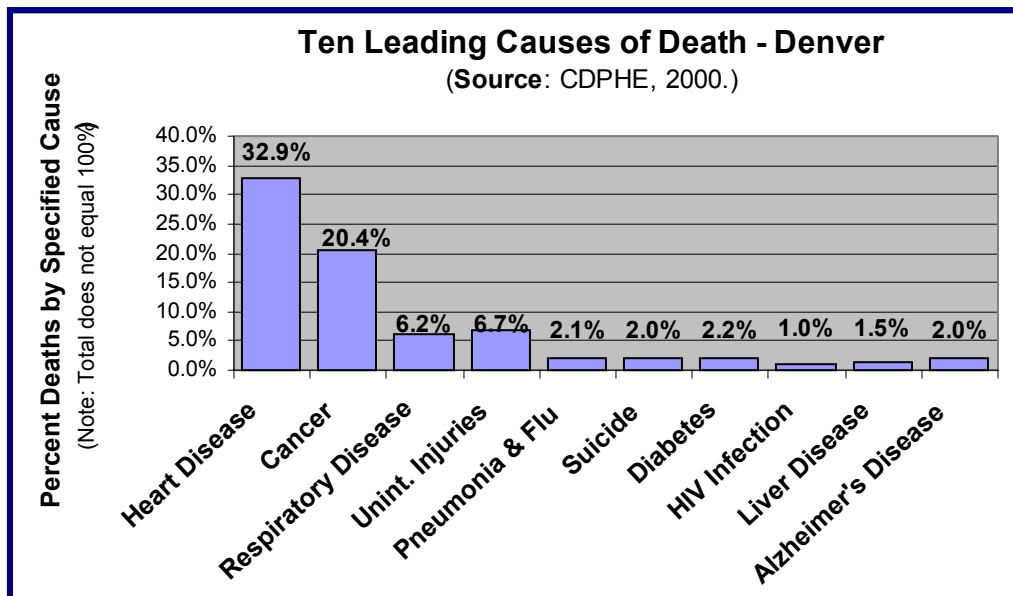
Like the nation, there is also limited investment in public health activities at both the state and local levels, and Colorado residents have voted for tax and spending limitations that have resulted in fewer resources for new and ongoing health promotion programs. The recent economic downturn has reduced public budgets further. In short, public health in Colorado is lacking the resources to adequately address major causes of mortality and morbidity. (10)

At present, there is no clear picture of who is doing what in terms of health promotion for Denver, especially in its broadest sense as presented in this report. There is a need for a comprehensive assessment of the health promotion resources and assets for Denver in order proceed with identifying key needs and opportunities, as well as developing the collaboration necessary to improve the health status of Denver's people.

Denver's Health: Improving Quality and Length of Life

HP2010 compiles national data on all its key indicators and focus areas (see Appendix A), yet no single source currently compiles data on the HP2010 focus areas and key indicators for Denver. Because of this, some data presented in this report may seem conflicting as they have been gathered from different sources and studies, in which different subpopulations have been surveyed at different points in time using different research methods. In addition, much of the health data available on the state or national level is not available at the county level, and even fewer data are available by neighborhood or by other county level groupings such as race.

In an attempt to start consistent tracking of reliable local data, however, DEH and its board have put together an *Annual Report on the Health of Denver's People and Environment*. The *Annual Report*



provides a brief overview of select health data for Denver, Colorado, and the U.S., using indicator areas and objectives recommended by the national HP2010 framework. From what we do know, many of the health issues and causes of poor health are essentially the same for the U.S., Colorado, and Denver. Therefore, where we fall short as a nation or state, we generally fall short as a city.

FACTORS LEADING TO HEALTH

Healthy People 2010 states that people's *biology* and *behaviors* act together with the individual's *social* and *physical environment* to shape health. Health can be improved by targeting factors related to individuals and their environments with *policies* and *interventions*. These, together with access to health care, profoundly affect health and must be evaluated as a first step towards developing any strategy to improve health. (1)

The social environment includes all of the family, community, cultural practices, policies, and conditions that affect health for better or worse. These, as well as the physical environment, have profound, direct effects on health, and additionally shape poor health habits.(1) Together, risky behaviors and poor environmental factors lead to about 70% of premature deaths in the nation.(1) Their interaction and impact on health are described in more detail in the following sections.

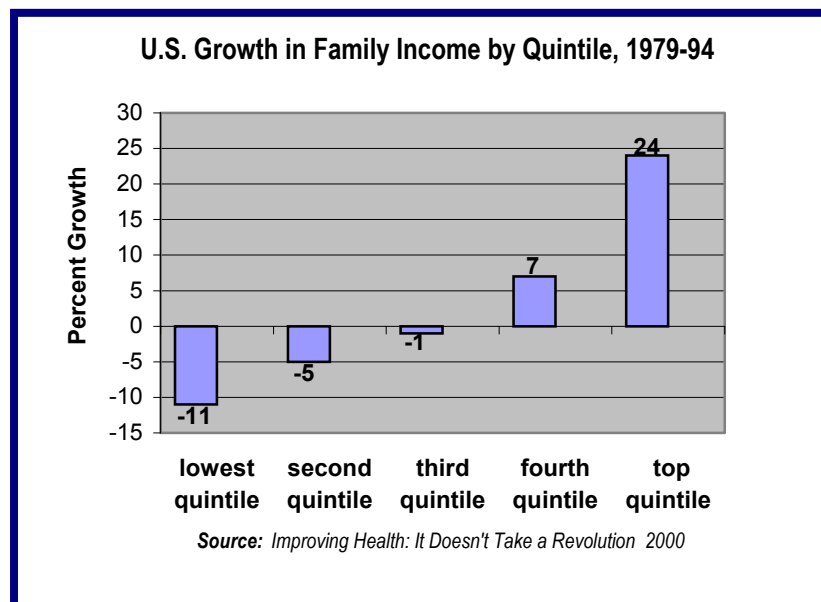
The Relationship Between Income & Health

As mentioned earlier, research has established a strong link between income and health. However, the assumption that a continued rise in average income results in rising health status seems to apply only up to a certain level of economic development. In the developed world, it is income inequality rather than average income that corresponds to health status. In other words, the more equally income is distributed in a society, the better the health outcomes for the whole population, and vice versa. (3)

Not only do the poor suffer, but in societies where there are large income gaps between the haves and the have-nots, middle-income groups generally have worse health than comparable groups or even lower-income groups in societies with less of an income spread.

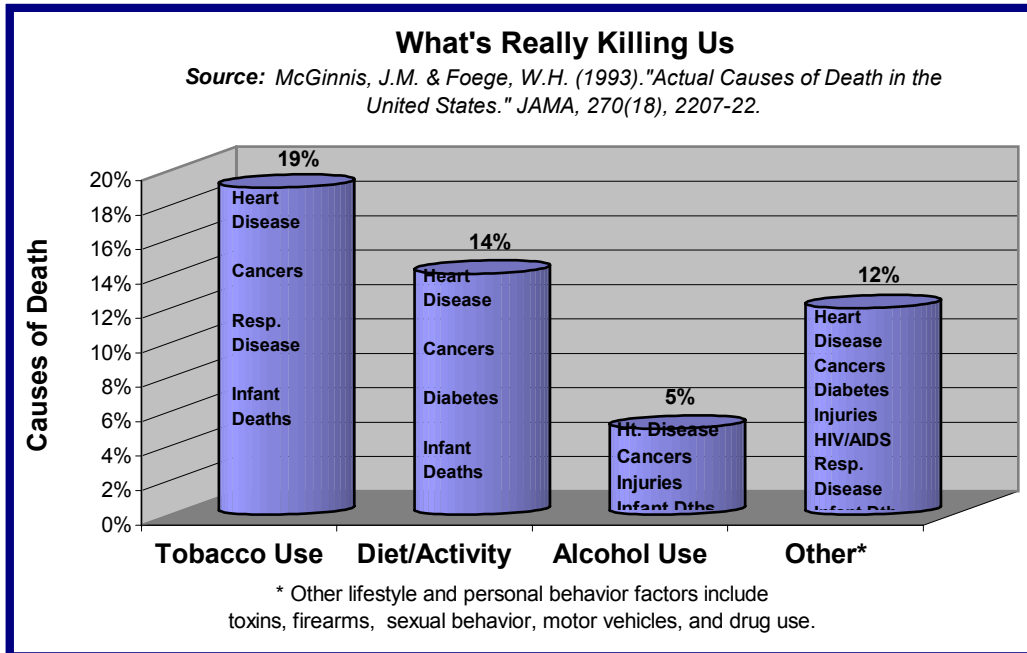
Thus, not only do the poor suffer, but in societies where there are large income gaps between the “haves and have-nots”, middle-income groups generally have worse health than comparable groups or even lower-income groups in societies with less of an income spread. Countries in which income gaps are not as large, such as Canada, Japan, Greece, and Spain, outperform the U.S. on many health indicators. (5) One theory for why this is so is that trust levels and social cohesion break down as the income gap grows.

The gap between the rich and the poor in the U.S., began to get worse in 1968 and continued until 1992 when it began to stabilize.(6) Family income has not grown equally since 1980; between 1979 and 1994, wealth increased for families in the top 40th percentile by income, but decreased for families in lower income categories.(3)



Risky Behaviors & Death

Another lens for looking at factors that contribute to poor health is the extent of deaths resulting from risky health behaviors. As depicted in the graph below, thirty-eight percent (38%) of premature deaths nationwide can be ascribed to tobacco use, diet/activity, and alcohol use. Another 12% is attributable to other lifestyle and personal behavior risk factors (i.e. sexual behavior, motor vehicle use, etc.).(7)



However, the poor do not have bad health profiles primarily from risky health behaviors. Behaviors such as excessive drinking, smoking, and weight problems account for only 10% to 25% of health disparities by income and education.

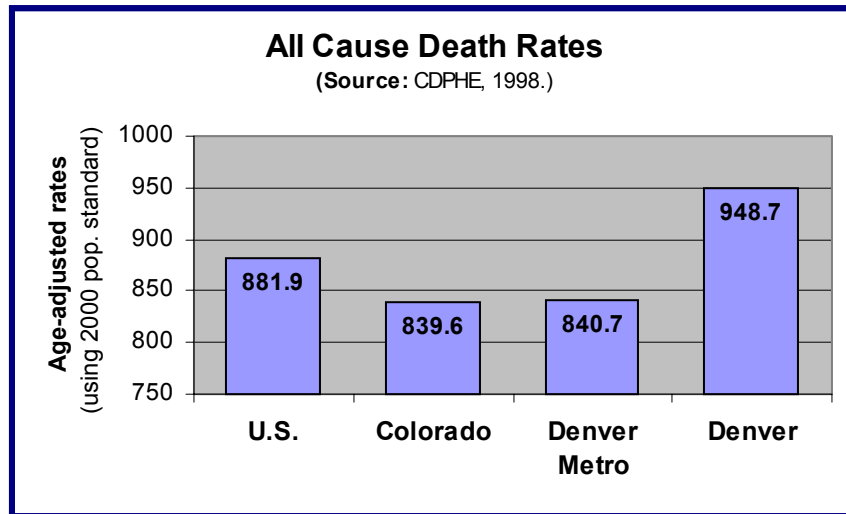
Contrary to popular myth, however, the poor do not have bad health profiles primarily from risky health behaviors. Recent studies have shown that risky health behaviors such as excessive drinking, smoking, and weight problems account for only 10% to 25% of the health differences that exist between

low and higher income groups and between groups with different levels of education. In fact, these studies show that income and education make the most significant contributions to resulting well-being, while individual health behaviors make a relatively minor impact on income-related health differences.(43)

DENVER HEALTH STATUS OVERVIEW

National and state policies and health performance have an effect on our local status, and so are important to monitor. Among nations around the world, the U.S. is not ranked in the top 10 for protecting and promoting its people's health. It ranked 24th in 1999 (down from 19th in 1989) among industrialized nations in infant mortality, the single most commonly used health indicator in the world.(8) Although the U.S. spends far more on medical care than other nations, 75% of other developed countries (e.g., Ireland, France and Australia) perform better on health status indicators.(3)

In general, Colorado is a healthy state and the seven-county Denver Metropolitan area¹ is a healthy region. (10,11) Both have lower death rates than the U.S.(11) Colorado either did better than the



U.S. or came close to meeting its Healthy People 2000 goals on many items including: mammograms and pap smears for women over 50, cholesterol screening, adolescent smoking rates, physical activity rate (although only slightly higher than the U.S.) (11), seat belt use, sexually transmitted diseases, teen births, and infant deaths. A number of positive environmental impacts have also been realized.(10) The state, however, has higher rates of suicide (12), low-birthweight babies (19% higher)(13), and drug related deaths (26% higher) than the U.S. does.(11)

By almost every measure of death, disability and quality of life, Denver Metro area residents experience fewer adverse health outcomes and engage in fewer risky health behaviors than the nation as a whole. The Denver Metro area has a 12 % lower total death rate and a 21% lower death rate for adolescents and young adults than the U.S. The overall health profile of the seven-county Denver Metropolitan area also resembles Colorado's more than the City and County of Denver does. (11)

Denver's health profile generally follows the pattern of other U.S. urban areas. The City and County of Denver experiences significantly more health risks and problems than the nation, the state, or the Metro area.(11) There are clear health discrepancies between the City and County of Denver and the Denver Metro area, as well as extreme health disparities between the low and high-income neighborhoods in Denver.(14)

The City and County of Denver has rates of disease and injury that are 20% to 175% higher than those of the Denver Metro area, reporting significantly higher rates of mortality (27% higher) and health risk behaviors, shorter life expectancy, higher mortality rates for infants and adolescents (60% higher), higher mortality rates from chronic diseases, and higher rates of health risk behaviors such as smoking and overweight. These may be partly due to a larger proportion of minority and low-income populations in Denver than in the overall Metro area (see report section on Health Disparities). (11) As shown on the chart on the next page, Denver has better overall death rates than 70% of other large U.S. cities.² Furthermore, the city improved its standing with other big cities in many areas between 1994 and 1998, particularly with suicide and car crash deaths (15,16).

¹ Includes: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas and Jefferson counties.

² Forty-eight U.S. cities with populations of 350,000 and above in 1990

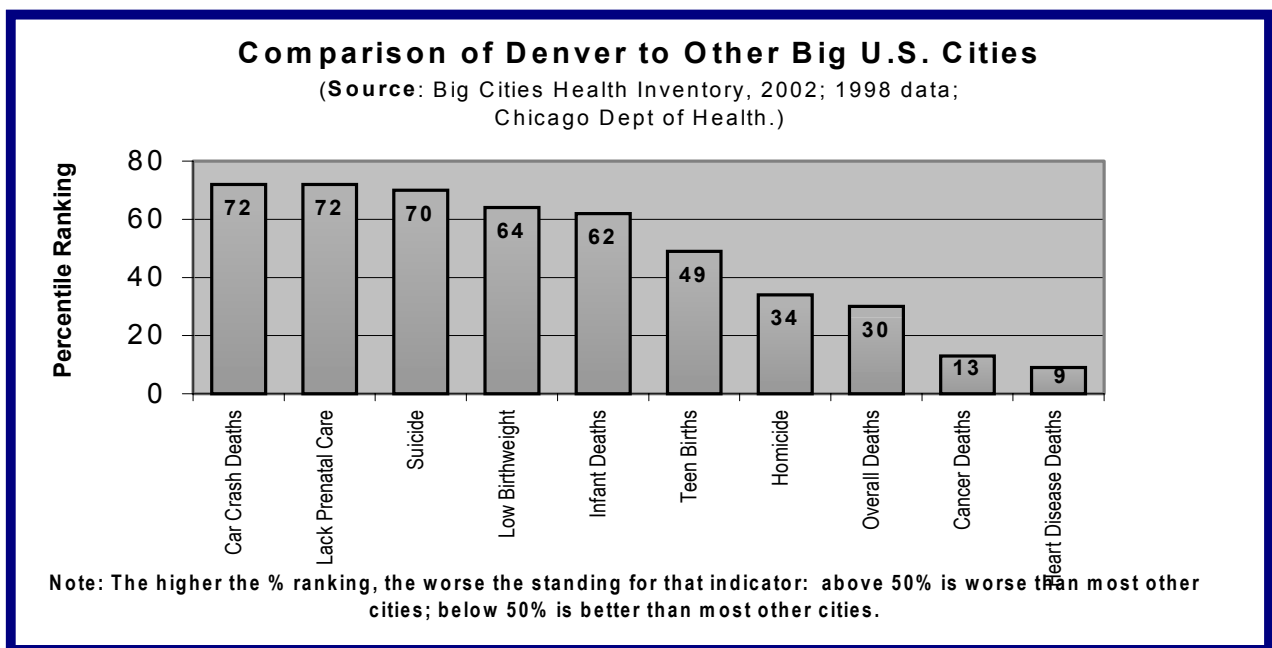
Denver is also favorable when compared to these cities in other areas, including: (16)

- heart disease (in the lowest 9% of cities),
- cancer deaths (in the lowest 13% of cities),
- overall deaths (in the lowest 32% of cities),
- homicide (in the lowest 34%).

Denver compares unfavorably to those same cities in: (16)

- motor vehicle injuries (higher rate than 72% of cities),
- adequate prenatal care (worse care than 72% of cities)
- suicide (higher rate than 70% of cities) ,
- low-birthweight (higher rate than 64% of cities)
- infant deaths (higher rate than 62% of cities),

Denver is in the middle of the pack of those same cities for teen births (49% have a better rate). (16)



HP2010 HEALTH INDICATOR & KEY FOCUS AREAS FOR DENVER

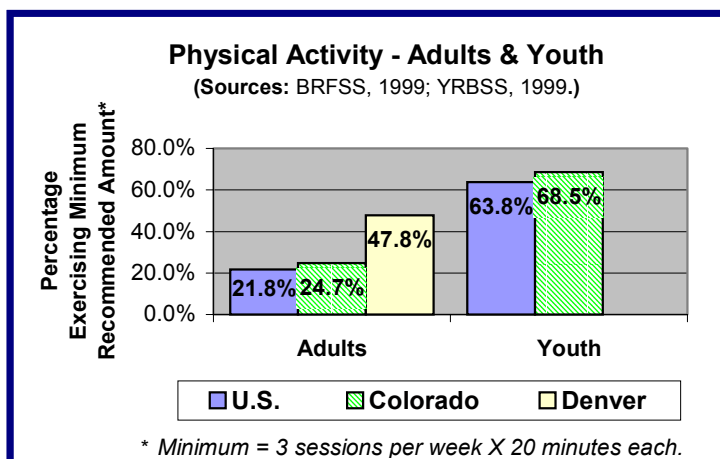
A number of Healthy People 2010 health indicator and key focus areas are important to look at in detail due to the high rates or trends in these areas and their relevance to future health profiles for Denver. Some of these areas and sample objectives are examined in the next several pages. These represent only a small portion of the complete list of objectives recommended by HP2010 and local experts, and may not be the only appropriate measures for monitoring local progress in each area. However, they do help provide a baseline snapshot of health in Denver, and may serve to highlight priority areas for further data collection, analysis, and prevention work.

Whenever possible, data for each indicator is given comparing the City and County of Denver, the Denver Metropolitan Area, Colorado, and the United States as a whole. Currently, there are many gaps in data, especially at the city level. The report also aims to draw attention to these data gaps, and point to areas that could use more intensive surveillance or sharing of information. As Denver's own Healthy People 2010 coalition continues to expand and involve the broader community, additional priority areas, objectives, and goals may be determined for Denver, and related measures added to future report updates.

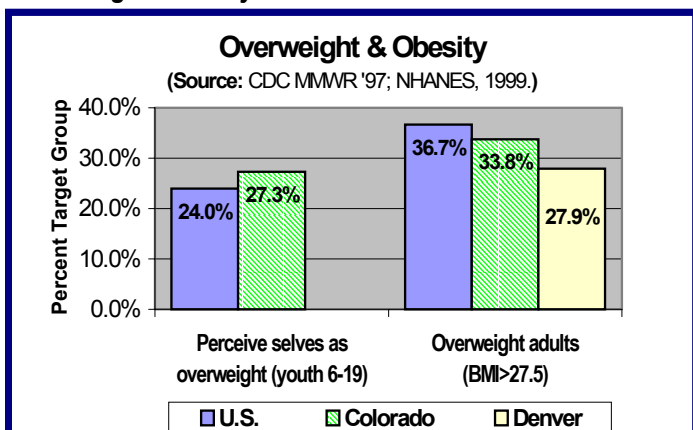
Physical Activity

Regular physical activity throughout life is important for maintaining a healthy body, enhancing psychological well-being, and preventing premature death. Exercise decreases the risk of death from heart disease, lowers the risk of developing diabetes, and is associated with a decreased risk of colon cancer. It also helps prevent

high blood pressure, increases muscle and bone strength, and decreases body fat. (1) Forty percent (40%) of U.S. adults engage in no leisure time physical activity. (1) In 1999, only 21.8% of adults across the nation, 24.7% of adults in Colorado, and 47.8% of those in Denver were getting the recommended amount of exercise per week. (17) During the same year, 63.8% of U.S. adolescents and 68.5% of youth in Colorado participated in a physical activity at least 3 times per week for 20 minutes per occasion. (18) Data on physical activity levels of Denver youth are not currently available.



Overweight/Obesity



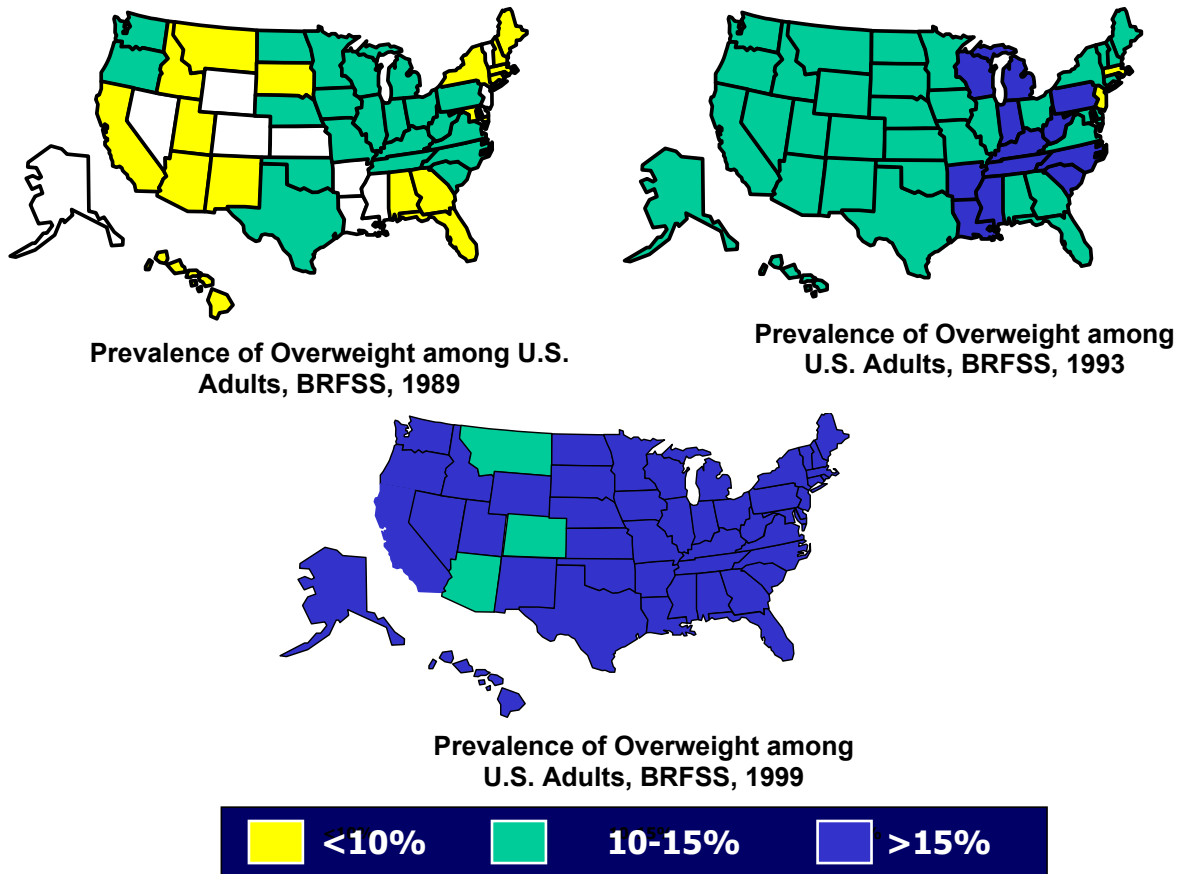
may suffer from social stigmatization, discrimination, and lowered self-esteem.

Overweight and obesity are major contributors to many preventable causes of death. On average, higher body weights are associated with higher death rates, and greatly raise the risk of illness from high blood pressure, high cholesterol, type 2 diabetes, heart disease and stroke, gallbladder disease, arthritis, sleep disturbances and problems breathing, and certain types of cancers. In addition, overweight and obese individuals also

The prevalence of overweight adults has increased at an alarming rate over the last 25 years, so that more than one-third of Americans are considered overweight. Obesity in adults has increased 50% over the past two decades. In Colorado, the prevalence of overweight in adults has increased in the last ten years from 16% to 34%.⁽¹¹⁾ The percentage of overweight children and adolescents has also increased dramatically. Once established in youth, obesity can become a lifelong problem.⁽¹⁾

In 1999, 24.0% of U.S. adolescents perceived themselves as overweight, as did 27.3% of those in Colorado.⁽¹⁹⁾ State and local data are not available for the percentage of adolescents who were overweight by CDC standards.³ During that same year, 36.7% of adults aged 20 years and older in the United States were considered overweight. Approximately thirty-four percent (33.8%) of Colorado adults, and 27.9% of adults in the City and County of Denver were considered overweight by CDC standards in 1999.⁽²⁰⁾ In addition, 75.9% of Colorado's population is sedentary and 74% eat few fruits and vegetables.⁽¹¹⁾ Interestingly, the Denver Metro area consumes 33% less fruits and vegetables than the nation, but has a 31% lower incidence of overweight than the U.S.⁽¹¹⁾

U.S. Obesity Trends

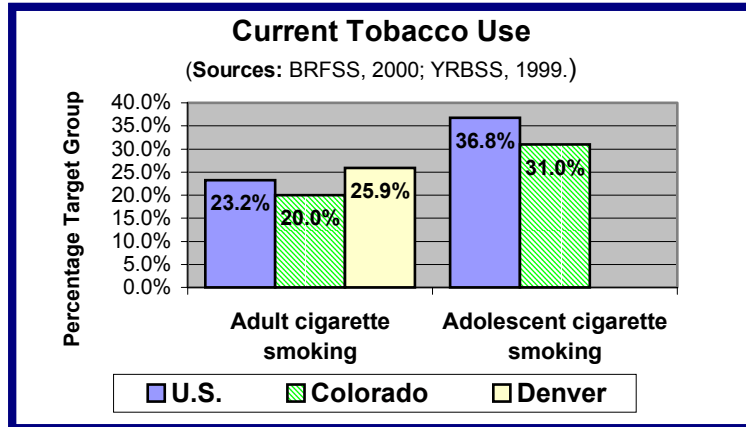


³ For youth, overweight is defined as at or above the sex- and age-specific 95th percentile of Body Mass Index (BMI) based on CDC Growth Charts for the United States; for adults, overweight is a BMI (kg/m²) of 25 or more.

Tobacco Use

Cigarette smoking is the single most preventable cause of disease and death in the United States. Smoking results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires *combined*. Smoking is a major risk factor for heart disease, stroke, lung cancer, and chronic lung diseases—all leading causes of death. Smoking during pregnancy can result in miscarriages, premature delivery, and sudden infant death syndrome. Other health effects of smoking result from injuries and environmental damage caused by fires.(1)

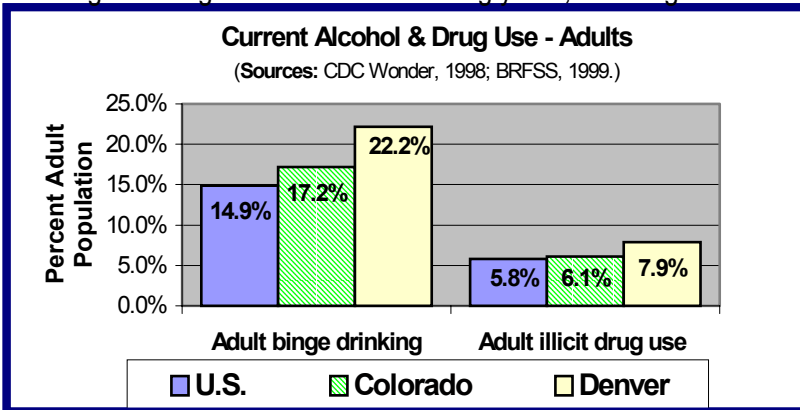
During the past decade, the percentage of adult smokers in the nation has declined and then leveled out, while the percentage of adolescent smokers has risen.(1) In Colorado, the percentage of both adult and adolescent smokers has increased. The Denver Metro area has lower rates of smoking than the U.S. (adults 16% lower and adolescents 21% lower), (11) and the City and County of Denver has a



19% higher rate of smoking than the Denver Metro area. (11) In 1999, 36.8% of adolescents in the United States were current cigarette smokers. Thirty-one percent (31%) of Colorado teens were current cigarette smokers in 1999.(18) Denver data for this measure are not currently available. In 2000, 23.2% of U.S. adults, 20.0% of Colorado adults, and 25.9% of adults in Denver reported being current cigarette smokers.(17)

Substance Abuse

Alcohol and illicit drug use are associated with many of the nation’s most serious problems, including violence, injury, and HIV infection. They can also result in substantial disruptions in family, work, and personal life. Alcohol abuse alone is associated with motor vehicle crashes, homicides, suicides, and drowning—leading causes of death among youth, and long-term heavy drinking can lead to heart



disease, cancer, alcohol-related liver disease, and pancreatitis. In addition, alcohol use during pregnancy is known to cause fetal alcohol syndrome, a leading cause of preventable mental retardation.(1) Heavy, continued alcohol drinking is the leading cause of cirrhosis. Denver has a

cirrhosis death rate more than 150% times higher than the U.S. or Colorado rates, and a 65% higher cirrhosis death rate than the Denver Metro area.(11) For the years 1994-98, 27.8% of the deaths in Colorado that were due explicitly to alcohol occurred in Denver (i.e., alcohol as the cause of death, including causes such as alcohol poisoning and cirrhosis, but not accidents or violence).

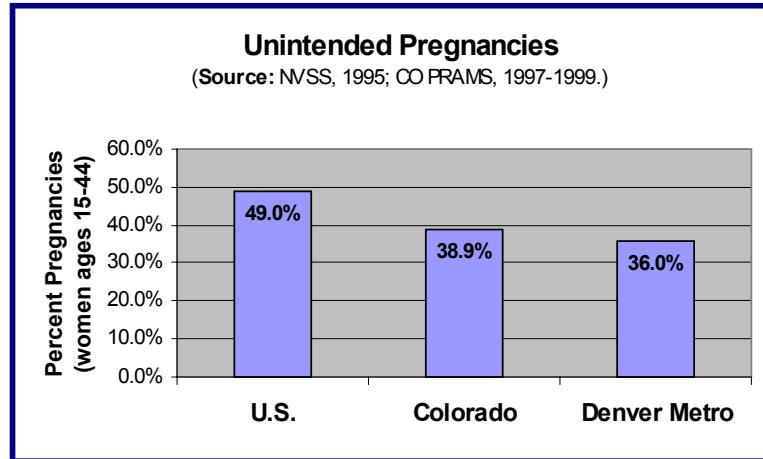
For 1990-99, adult men in Denver consistently had twice the rate of binge drinking as adult Denver women.(22) In a 1999 survey, 14.9% of adults reported binge drinking (five or more drinks on one occasion within the past month).(17) For Colorado and Denver, 1999 rates of adult binge drinking

were 17.2% and 22.2%, respectively.(17) In 1998, 5.8% of U.S. adults, 6.1% of Colorado adults, and 7.9% of Denver adults reported current use of illicit drugs, that is, drug use within the past month.(23) In 1997, an estimated 50.8% of adolescents grades 9 through 12 in the U.S. were current alcohol users, as were 54.0% of those in Colorado.(19) Denver data and current drug use data for adolescents are not currently available.

Responsible Sexual Behavior

Unintended pregnancies and sexually transmitted diseases (STDs), including infection with the human immunodeficiency virus that causes AIDS, can result from unprotected sexual behaviors. Abstinence is the only method of complete protection. Condoms, if used correctly and consistently, can help prevent both unintended pregnancy and STDs.(1)

While the rate of unintended pregnancies has declined in the United States, it is still a serious and costly health issue--almost half (49.0%) of all pregnancies in the U.S. are still unintended. Other industrialized nations report far fewer unintended pregnancies (1). In the U.S., about half of unintended pregnancies result in abortion, and those that are brought to full term are



associated with many poor maternal and child health outcomes.(1) From 1997-99, 38.9% of Colorado pregnancies, and 36.0% of Denver Metro Area pregnancies were unintended.(24) Also, the City and County of Denver has over twice the teen fertility rate of Colorado(25), but an average rate of teen births compared to other large cities (15, 16)

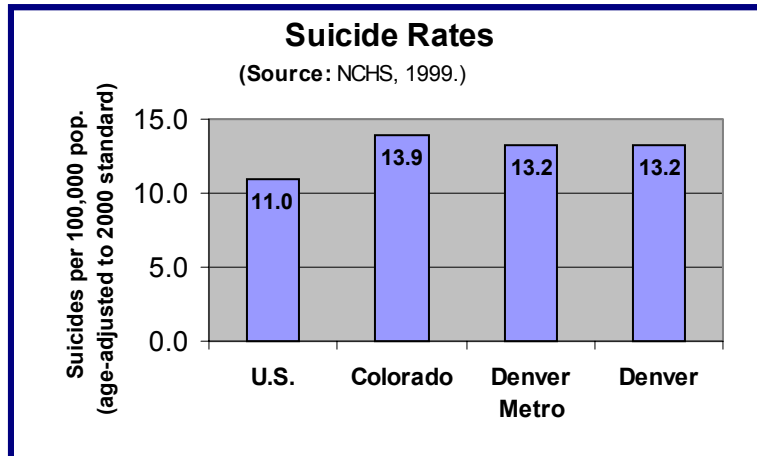
Sexually transmitted diseases (STDs) are common in the United States, with an estimated 15 million new cases of STDs reported each year, including HIV. Nearly 700,000 cases of AIDS have been reported in the United States since the HIV/AIDS epidemic began in the 1980s, and it is estimated that 800,000 to 900,000 people in the United States are actually infected. About one-half of all new HIV infections in the United States are among people under age 25 years, and the majority are infected through sexual behavior.(1) In 1999, there were 16.9 new cases of AIDS per 100,000 population in the United States among people age 13 and older.(26) In 2000, the incidence rates for Colorado and Denver residents (ages 13 and over) were 7.3 and 10.9 cases per 100,000 population, respectively.(27)

The Denver Metro area has lower rates than the nation for gonorrhea (91% lower) and syphilis (53% lower). (11) The City and County of Denver has a 175% higher HIV death rate than the Metro area, but this is probably because services for HIV are located in Denver.(11,28)The Mayor’s Office of HIV Resources in Denver has begun tracking data on clients with HIV served by its programs that may illuminate the issue further.(28)

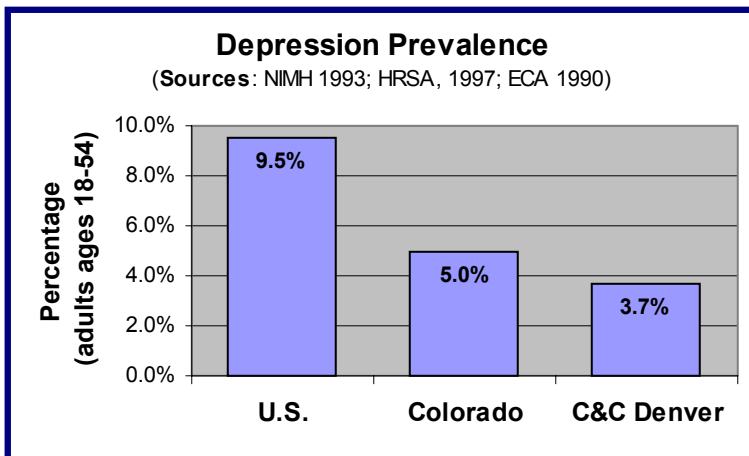
Mental Health

Suicide can be prevented in many cases by early recognition and treatment of mental health problems. (1) Suicidal behavior among youth nationwide increased from 1980-95.(1)

History of physical or sexual abuse is a strong risk factor for suicide in both men and women. Women attempt suicide more often, but men's risk of completed suicide is 4.5 times higher. Almost all people who take their own lives have a diagnosable mental illness or substance abuse disorder. (11)



Suicide is the seventh leading cause of death in the Denver Metro area and the second leading cause of death for those aged 10-34 years. The Denver Metro area has a 27% higher suicide rate than the U.S. Colorado's rate is higher than the Metro area and Denver's rate is higher than the Colorado rate.(11) In 1994, 93% of large U.S. cities had lower suicide rates than Denver, but by 1998, Denver had improved its standing considerably to where 70% of these cities had lower rates. (15,15a) In 1999, 11.0 suicides per 100,000 population occurred in the United States. Suicide rates during the same year were 13.9 per 100,000 population for Colorado, 13.2 per 100,000 population for the Denver Metro Area, and 13.2 again for the City and County of Denver.(29) As suicide is particularly high for Colorado and Denver, its determinants need to be analyzed and addressed.



In the U.S., 20% of youth age 9-17 have a diagnosable mental health disorder and 23.9% of adults experience a mental disorder in any one year.(1) These mental disorders often are not diagnosed or treated. Depression is the most common such ailment. About 6.5% of women and 3.3% of men have major depression each year.(1) Approximately 10% of U.S adults under age 54, 5% of the same group in Colorado, and

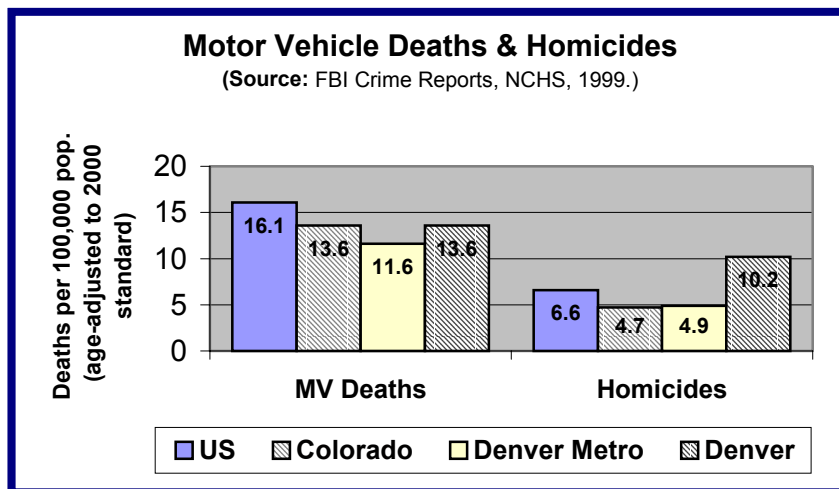
4% of those in Denver, suffered from major depression in the 1990s.(30) People with mental disorders tend to have higher than normal rates of substance abuse problems, and substance abusers in turn have higher rates of mental disorders than the general population.(1)

Injury and Violence

Most people suffer a significant injury at some time in their lives. Nationwide, intentional and unintentional injuries cause more than 40% of deaths in children aged 1 through 4 years and are the leading cause of deaths for Americans ages 5 through 44. For ages 15 to 24 years, injuries are the cause of nearly 80% of deaths. For those over age 44, the actual death rate from injuries is even higher than in younger groups; however, because other causes of death increase with age, injury is not the leading cause of death for those over 44 years old.(1,11)

Motor vehicle crashes account for approximately half the deaths from unintentional injuries, and are the most common cause of serious injury in the United States.(1) Death rates associated with motor vehicle-traffic injuries are highest among those ages 15 to 24 years, and also for those 75 years and older.(1) In 1999, there were 16.1 deaths from motor vehicle crashes per 100,000 persons in the United States. Colorado motor vehicle deaths in 1999 numbered 13.6 per 100,000; Denver Metro area 11.6 per 100,000; and Denver City and County, 13.6 motor vehicle deaths per 100,000 population.(29) Denver has a significantly higher rate of motor vehicle crash deaths than other large cities in the U.S..(15,16) Denver also has a 44% higher death rate from unintentional injury in general than does the Denver Metro area.(11)

We live with unacceptable levels of violence and abusive behavior. The United States compares poorly to other countries for homicide: the rate among males aged 15 to 24 years in the U.S. is 10 times higher than in Canada, 15 times higher than in Australia, and 28 times higher than in



France or Germany. Homicide rates are dropping for all groups in the U.S., but the decreases are not as dramatic among youth, who already exhibit the highest rates. (1) In Denver, homicides dropped by almost half from 1999 to 2000,(31) and compared favorably to other big cities.(15,16) Denver has a lower homicide rate than 70% of other large U.S. cities; (15,16) still, the teen homicide rate for the City and County of Denver is more than 3 times that of the state.(25) As shown below, the 1999 murder rate in the United States was 6.6 homicides per 100,000 persons. Homicide rates for the same year were 4.7 in Colorado, 4.9 for the Denver Metro Area, and 10.2 for City and County of Denver.(29)

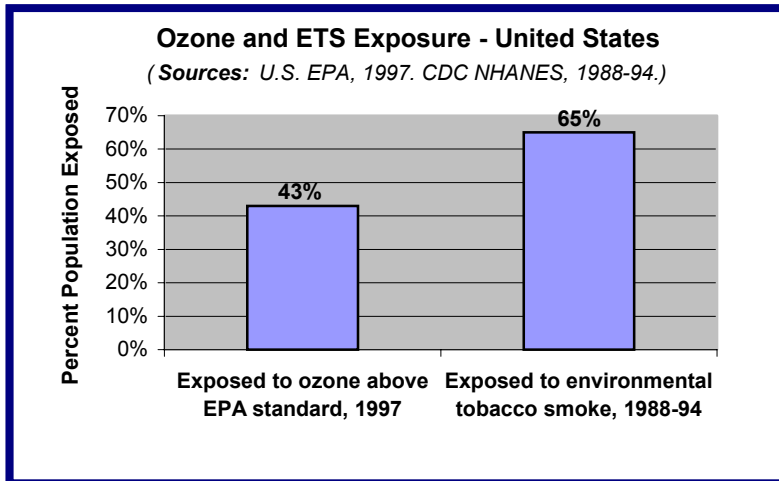
Although there has been a decline in the homicide of intimate partners and family members over the past decade, this problem remains significant. In 1998, there were 4.4 domestic violence assaults and 8 rapes or attempted rapes per 1000 people ages 12 and older in the U.S. (1) In 1997, homicide was the third leading cause of death for children aged 5 to 14 years: reflecting an upward trend in violent child deaths. Nationally, child abuse is rising significantly.(6) In 1996, more than 80% of infant homicides in the U.S. were considered to be fatal child abuse.(1) The number of children reported to be abused or neglect has risen from 10.1 per 1,000 children in the population in 1976 to 47.0 per 1,000 in 1996. Experts consider this to reflect a true increase in mistreatment of children and not just increased reporting.(6)

Many factors that contribute to injuries also are closely associated with violent and abusive behavior, such as low income, discrimination, lack of education, and lack of employment opportunities.(1) It is imperative to integrate strategies to address these while fighting the violence epidemic. Efforts must include reaching children and youth to prevent violent beliefs and behaviors from being embraced.(1) Substance abuse also must be considered as alcohol abuse is high in Denver, and is associated with unintentional injury, motor vehicle accidents, and homicide.(11) Males are most often the victims and the perpetrators of homicides.(1) Children, women and the elderly are particularly likely to be victims of physical and sexual assaults, often by people they know. (1)

Environmental Quality

An estimated 25% of preventable illnesses worldwide can be credited to poor environmental quality. Physical and social environments play major roles in the health of individuals and communities. HP2010 encompasses six physical environmental areas: outdoor air quality, water quality, toxics and waste, healthy homes and healthy communities, infrastructure and surveillance, and global environmental health issues.(1)

One of the major risk factors for chronic obstructive pulmonary disease is air pollution. In the United States, air pollution alone is estimated to be associated with 50,000 premature deaths and an



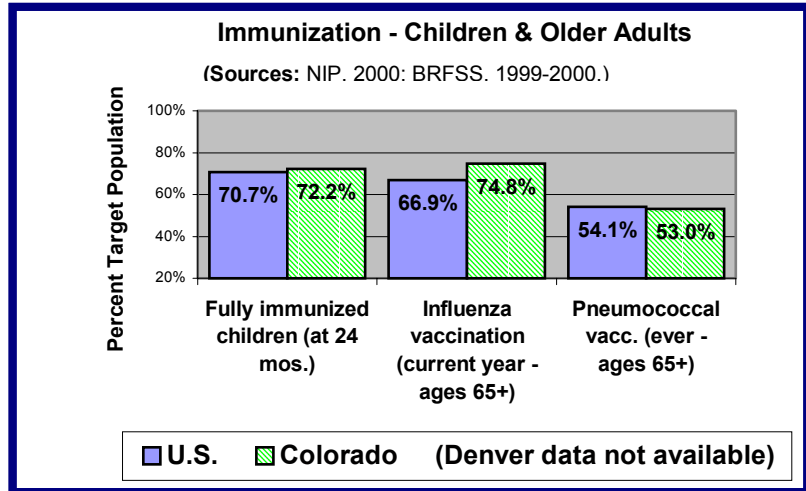
estimated \$40 billion to \$50 billion in health-related costs annually. Poor air quality contributes to respiratory illness, cardiovascular disease, and cancer.(1) Two key indicators of air quality identified by HP2010 are ozone and environmental tobacco smoke (ETS). (1) In 1997, approximately 43 percent of the U.S. population lived in areas that did not meet federal air quality

standards for ozone.(55) State and local estimates for ozone exposure are not currently available; however, the City and County of Denver did meet three national air quality standards in 1998.(28)

Secondhand or environmental tobacco smoke (ETS) is a mixture of the smoke given off by the burning end of a cigarette, pipe, or cigar and the smoke exhaled from the lungs of smokers. ETS increases the risk of heart disease and significant lung conditions, especially asthma and bronchitis in children, and is responsible for an estimated 3,000 lung cancer deaths each year among adult nonsmokers.(1) During the years 1988 to 1994, 65% of nonsmokers across the U.S. were exposed to ETS.(56) State and local estimates of ETS exposure are not currently available. Denver's environmental tobacco smoke regulations are more stringent than many other communities, but not as stringent as others.(17)

Immunization

Vaccines are among the most important public health achievements of the last century. They can prevent disability and death from infectious diseases and can help control the spread of infections within communities. Immunization rates have increased steadily for children and adults in the U.S.(1)

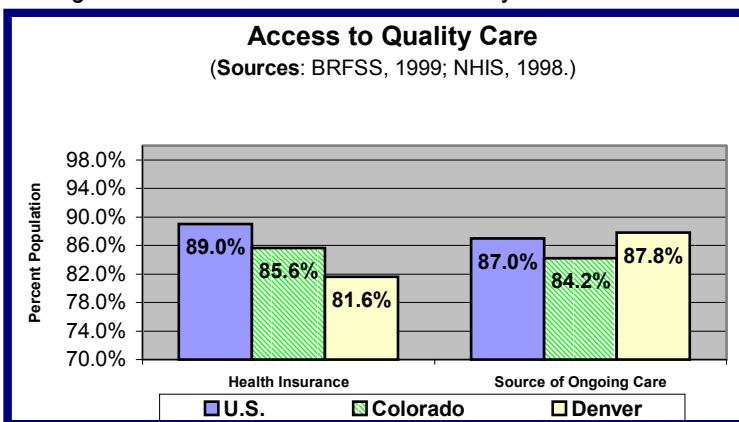


Children born in the United States should be receiving 12 to 16 doses of vaccine by age 2 years to be protected against vaccine-preventable childhood diseases. These include: four or more doses of diphtheriatetanus/ acellular pertussis (DTaP) vaccine, three or more doses of polio vaccine, one or more doses of measles/mumps/rubella (MMR) vaccine, three or more doses of *Haemophilus influenzae* type b (Hib) vaccine, and three or more doses of hepatitis B vaccine.(1) In Colorado, the immunization rate for two year olds is declining, placing Colorado 42nd in the nation.(10) In 2000, 70.7% of children in the United States and 72.2% of those in Colorado received all vaccines recommended for universal administration.(34,35). Denver data for this measure are not currently available.

Recommended immunizations for adults aged 65 years and older include a yearly immunization against influenza (the “flu shot”) and a one-time immunization against pneumococcal disease. Pneumonia and influenza deaths together constitute the sixth leading cause of death in the United States.(1) In 1999, influenza immunization rates across the U.S. were 66.9% in adults aged 65 years and older; only 54.1% of people in the same age group had ever received a pneumococcal vaccine.(35) In Colorado, 74.8% in adults aged 65 years and older received a flu vaccination, and 53.0% of people in the same age group had ever received a pneumococcal vaccine (17) Denver data for these measures are not currently available.

Access to Health Care

Although health care alone accounts for only about 10% of health improvements in the United States,



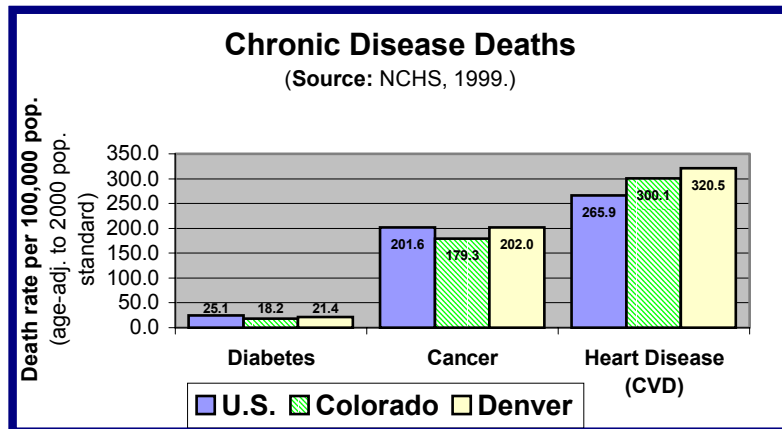
it is still a critical component of our public health system, and a key way in which people can both prevent and treat health problems.(36) While the majority of Americans have some sort of health care, disparities still exist in terms of cost, quality, and the regularity of care they get.(1) The U.S. saw declines in the proportion of people with health insurance from the 1980s until

1998. Since then, at least 85% of the population has reported having some sort of coverage. There are still significant gaps in health care insurance for low-income people and non-U.S. citizens, however.(1) In 1999, 89% of all people in the United States had health insurance of some kind. During the same year, 85.6% of Coloradans, and 81.6% of Denver residents were covered.(17)

People who have a source of ongoing care generally have a better chance of getting preventive care, as well as treatment if it is needed. More than 40 million Americans do not have a particular doctor's office, clinic, or health center where they go to seek health care or related advice. Even many of those with private insurance lack a usual source of care or report difficulty in getting care due to cost or insurance restrictions.(1) As shown in the chart above, 87% of people in the United States, 84.2% of those in Colorado, and 87.8% of Denver residents had a usual source of health care in 1998.(52)

Chronic Diseases

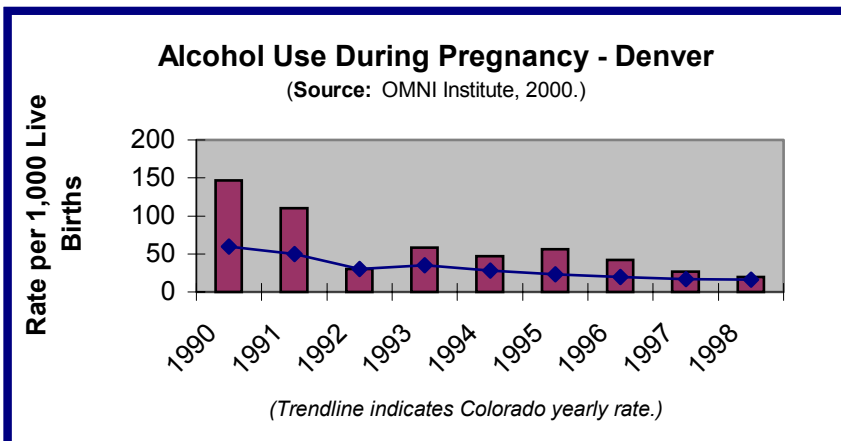
Rates of diabetes are rising rapidly in the nation for children and adults (1) In Colorado 4.6% of the population has diabetes.(11) Denver has higher rates of diabetes than the U.S. and has a 58% higher diabetes death rate than the Denver Metro area (though slightly lower death rates).(11) The rate of diabetes is expected to continue to rise steeply because of the trends in obesity and inactivity.



Cancer is the second leading cause of death in the nation. Cancer death rates decreased an average of 0.6% per year from 1990 to 1996(1) The Denver Metro area has 21% lower cancer rates than the country. Denver is also doing well as it has lower cancer death rates than 87% of other large U.S. cities.(15,16) Cancer rates may rise if the obesity epidemic is not reversed, and tobacco use rates not addressed.

The Denver Metro area has an 11% lower rate of heart disease and a 15% lower rate for stroke than the U.S., and as such it compares quite favorably.(11) Denver itself has a 21% higher heart disease mortality rate than the nation.(11) However, it has a lower rate of heart disease deaths than 91% of other large U.S. cities.(15,16) These statistics are not surprising as urban areas generally have higher rates of disease than the national average and suburban areas. Physical inactivity is at least twice as prevalent in Colorado than other cardiovascular disease risk factors such as tobacco use, high blood pressure, and high cholesterol.(11)

Maternal & Child Health



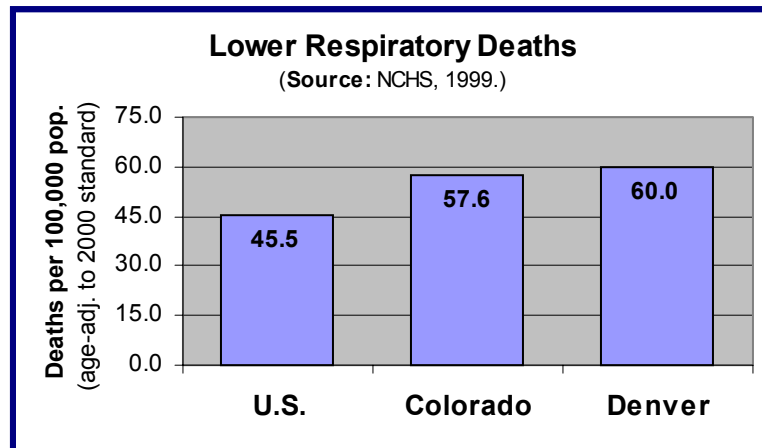
Denver, the seven-county Metro area, and Colorado all have higher low-birthweight rates than the U.S.(14) The City and County of Denver has a higher rate of low-birthweight babies than 64% of the other large U.S. cities (15,16), and Denver's Enterprise

Community⁴ has a higher rate than the rest of Denver, Colorado, or the nation. Rates of primary risk factors of low-birthweight---e.g., preterm birth, use of alcohol and cigarettes during pregnancy---are lower here than the national average, indicating that other risk factors, such as maternal weight gain, may account for the high Denver rates.(11)

Denver has a higher rate of infant deaths than 62% of other large U.S. cities, whereas the Denver Metro area has an infant death rate 15% better than the U.S.(11) Also, 72% of other large U.S. cities have better rates of prenatal care. (15,16)

Respiratory Diseases

Chronic obstructive pulmonary disease is rising rapidly in the Nation.(1) The overall U.S. death rate from asthma increased 57% between 1980 and 1993, and for children it increased 67%.(1) A disproportionate number of women, children, and African Americans are affected. Poverty is an important risk factor. (11) If indoor allergens were eliminated there would be a 39% reduction in asthma among children under age six.(38) The rate of chronic respiratory disease in the Denver Metro area is 27% higher than the nation.(11)



In 1999, death rates for lower respiratory illness were 45.5 per 100,000 population for the Nation, 57.6 for Colorado, and 60.0 for Denver.(29)

Infectious Diseases

The national tuberculosis rate increased from the mid 1980s to 1992. Virulent and resistant strains appeared, but cases have gone back down since. In Denver, the number of reported shigella cases was higher than expected and E. coli cases were lower for the years 1996-1998.(7) Both of these sources of bacterial infection are often spread by water or food.

⁴ The Denver Enterprise Community (EC) is made up of select low-income neighborhoods in the City and County of Denver that recently participated in a U.S. Department of Health and Human Services pilot health improvement project:

Eliminating Health Disparities

In addition to racial, ethnic, and economic disparities, Healthy People 2010 is also placing new emphases on disparities by gender, sexual orientation, disability, and geographic location (since this is a discussion of disparities that exist in an urban area, this topic will not be covered in this report).(1)

DENVER DEMOGRAPHICS

Overall, the U.S. population is getting older and more ethnically diverse, and this trend has important health implications.(1) The demographics of Colorado and Denver are also changing significantly.(45) The city's diversity and age distribution bring particular health advantages as well as needs.

According to the 2000 Census reports, Denver has reached a population of 554,636, an all time high for the City.(26) White non-Hispanics make up 51.9% of the population, Blacks 10.8%, Asians 2.7%, and American Indians 0.7%. Almost 32% of Denver residents are Hispanic.(26,40) Denver had 22.0% of its population under age 18 in 2000 (compared to 26.6% nationally and 25.6% in Colorado).(39) The ethnic makeup of poorer neighborhoods in Denver is increasingly Latino.(41) This Latino influx is a young population, which is placing a strain on services and public programs for children (i.e. schools). Many Latino immigrants are undocumented and not eligible for publicly funded prenatal care, leading to poor health outcomes for mothers and children.(40)

HEALTH PROMOTION AND HEALTH DISPARITIES

Most of the underlying causes of health inequalities have traditionally been seen as external to the role of public health. These factors include poverty and income disparities, discrepancies in social and economic status, poor housing quality, lack of education, turbulent labor markets, systemic discrimination, and unsafe living and working environments. (1,42) The National Association of County and City Health Officials (NACCHO) and Healthy People 2010 stress that public health advocates must become advocates for social change related to improving social conditions. (1,42)

As noted earlier in this report, the poor are not sicker than others primarily due to risky health behaviors.

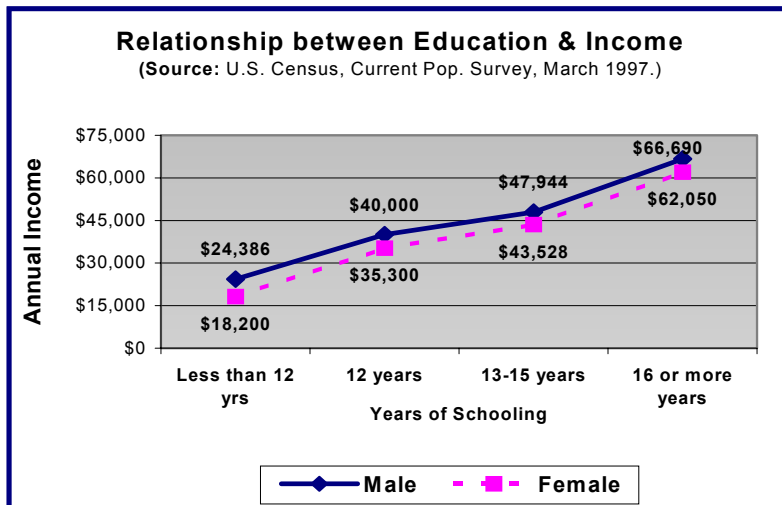
A 1998 study found that even when demographics (age, etc.) as well as individual behaviors (e.g., smoking, drinking, obesity) were taken into account, the risk of dying for those with annual incomes less than \$10,000 was 2.77 times higher than for those whose income was over \$30,000. Differences in health status between racial groups have been shown to be overwhelmingly, but not completely, related to income. Perceived discrimination and stress related to race also play a role. (44)

Most researchers agree on the kinds of interventions needed to address the health effects of low and unequal incomes---investment in social supports such as supports for early childhood development, quality education for all, access to quality health care, and income supports that assist the poor (i.e. rental vouchers). (3) Thus, the current health promotion emphasis on behavior change may reflect interventions we find easier to do rather than those that will have a lasting impact, such as efforts around social justice and improved environments.(44)

GENDER

Men have a shorter life expectancy than women and higher death rates for all the leading causes of death. Women are at greater risk of Alzheimer's disease. They also have twice the rate of depression and three or four times the rate of anxiety disorders. Women are more likely to be the victims of sexual assault and domestic violence.(1)

INCOME & EDUCATION DISPARITIES

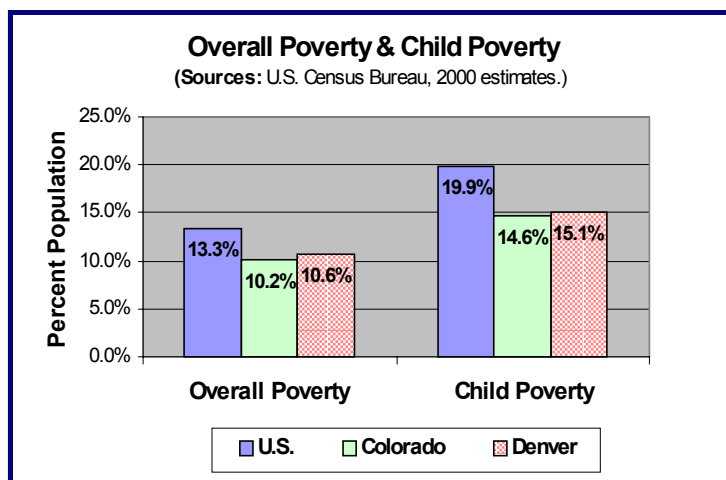


There is a direct relationship between education and income, both of which are the strongest predictors of health.(1) In 1999, 14.0% of American adults, 20.0% of those in Colorado, 19.7% of those in the Denver Metro area, and 36.3% of Denver city adults had not achieved a high school education.(29)

Economic trends are also very important to health. Interesting

changes occurred recently in Denver's poverty rates: they have dropped dramatically according to the latest Census estimates. The overall poverty rate for Denver residents decreased from 17.1% in 1990 to an estimated 10.6% in 2000. In addition, the poverty rate for Denver children dropped from 27.4% in 1990 to an estimated 15.1% in 2000.⁵ (26) However, a recent study by the U.S. Conference of Mayors found that over the past year both homelessness and hunger have increased significantly in 27 major cities, including Denver.(47) This seeming contradiction is believed to reflect a recent influx of higher-income residents to Denver, along with a simultaneous displacement of lower- and middle-income families. (55) Ten years ago, 75% of the homeless in the Denver Metro Area were single individuals, but families with children now make up more than 50% of the homeless population. Close to 40% of the homeless in the area are working.(46)

The Denver Enterprise Community (EC), a group of twelve low income Denver neighborhoods, participated in a U.S. Department of Health and Human Services pilot health improvement project called The Health Benchmarking Project, led by the Denver's Housing and Neighborhood Development Services Agency and the Denver Health Medical Center. In comparison to people living in the rest of Denver, individuals living in the EC were more likely to be younger and people of color (especially Hispanic).

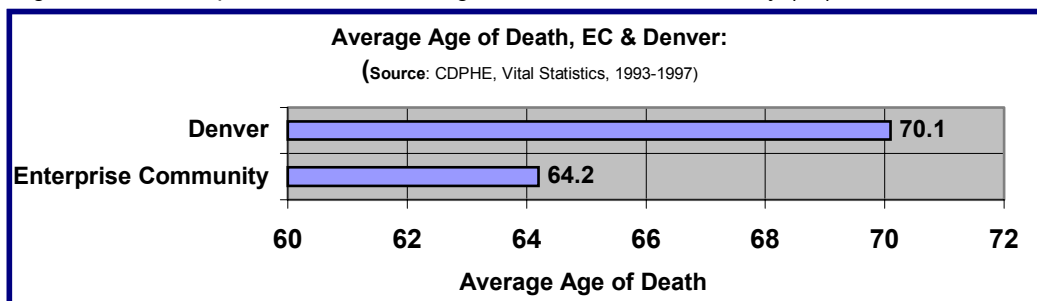


⁵ Official rates for Denver from the 2000 Census should be released in Summer 2002.

Although 12% of the city's residents lived in the EC, 33% of Denver's children and adults on TANF (Temporary Assistance for Needy Families) were EC residents.(14) While jobs expanded in Denver from 1990 to 1996 (there was an 8.41% positive change in total jobs), total jobs in the EC neighborhoods dropped (-6.1% change in total jobs).(14) Child care is increasingly hard to find,(41) while the cost of living in Metro Denver has shot up.(46)

The EC neighborhoods have a higher overall mortality rate than the rest of Denver, and experience a higher percentage of deaths from homicide, infant mortality, liver disease, child mortality, diabetes, unintentional injuries, and firearms. Obesity is more common in minority and low-income populations; the proportion of adolescents from poor households who are overweight is almost twice that of those from middle and high-income households. (11) Conversely, the EC neighborhoods have a lower percentage of their deaths due to heart disease, stroke, suicide and HIV than was true for the rest of Denver.(14)

EC residents do not live as long on average as compared to other Denver or Colorado residents, having an average age of death of 64.2 years compared to 70.1 years for the remaining Denver residents. They also have a greater percentage of their births associated with health issues than do residents of other Denver neighborhoods, including births to teens and to unmarried women, low-birthweight babies, late prenatal care, and higher rates of infant mortality.(13)



RACE & ETHNIC DISPARITIES

In Colorado, communities of color consistently have higher morbidity and mortality rates than whites.(10) However, as previously noted, income and education are overwhelmingly the predominant factors driving differences in racial and ethnic health disparities. Research indicates discrimination also plays a role.(44)

Blacks

Poorer outcomes in the City and County of Denver may be partly attributable to the poorer outcomes of African Americans in Colorado, including:

- The highest overall death rate and shortest life expectancy
- The highest infant mortality death rate—three times the Caucasian rate
- Twice the Caucasian death rate from diabetes
- The highest homicide rate at almost 6.5 times the rate of Caucasians
- The highest death rates from heart disease, cancer, and stroke (37)

In Colorado, African Americans have the highest mortality rates for heart disease, stroke, HIV, Alzheimer's, homicide/legal interventions, and cancer (including lung, breast and prostate).(10,37) Nationally, low-income and African American women are especially likely to become pregnant unintentionally.(11) African American women in Denver are particularly likely to have low- babies: In 1998, 15.3% of births to black women in Denver resulted in low-birthweight babies compared to 8.2% of births to white and Hispanic women.(14)

In the City and County of Denver, homicide rates for those aged 15-24 showed the greatest ethnic disparity among leading causes of death for any age group, with African Americans the most at risk.(7) African American and Hispanic youth are also particularly at risk to be homicide victims (1). Suicide rates have shown a greater increase for black youth than for other groups.(1)

One in every 19 adult African American men in Colorado was in prison in the year 2000. This is higher than the national average of one in 23 African American men, twice the Colorado rate for Hispanic men, and ten times the rate for white men in Colorado.(30) However, Black Coloradans have the lowest motor vehicle death rate and have had a substantial drop in their teen fertility rate over the 1990s.(37)

Hispanics

In Colorado, compared to other racial or ethnic groups, Hispanics have the higher rates of:

- diabetes (death rate 2.5 times higher than Caucasians)
- unintentional injury (1.7 times the death rate of Caucasians)
- car crash deaths (1.7 times the rate of Caucasians)
- homicide (3.5 times the rate of Caucasians)
- teen fertility (6 times the rate of Caucasians) (37)

Colorado Hispanics also have high rates of chronic liver disease, and sexually transmitted diseases. They tend to have relatively low death rates from chronic diseases such as stroke, heart disease and cancer.

American Indians

In Colorado, compared to other racial or ethnic groups, American Indians have the higher rates of:

- chronic liver disease, highest of any group, (3.4 times the rate of Caucasians)
- car crash deaths, highest of any group, (1.7 times the rate of Caucasians)
- diabetes (death rate 1.7 times higher than Caucasians)
- homicide (3.5 times the rate of Caucasians) (37)

American Indians in Colorado have comparatively low rates of stroke, heart disease and cancer. Nationally, violent crime against Native Americans is high and increasing, whereas it is going down for other groups.(18)

Asian/Pacific Islanders

This group is very diverse and hard to categorize---subgroups can have strikingly different health profiles. For example, Native Hawaiians have health profiles more similar to American Indians than to Japanese Americans. In general, this group has many positive health indicators. However, hepatitis B and tuberculosis are higher in this group than in others, especially for recent immigrants.(37)

DISABILITY

Almost 20% of the U.S. population currently live with disabilities, and the overall rate is increasing due to rate increases in the youth through age 44 group. While the rate of disability has decreased among the elderly, the actual number of disabled elderly nationwide is growing due to their population increase.

People with disabilities have higher rates of obesity and lower physical activity than the average. They also have more anxiety, pain, sleeplessness, depression and less vitality than do those without

disabilities. In addition, they often do not have access to the medical care they need. Arthritis is the leading cause of disability in the nation affecting 20% of the adult population, one half of them working age.(1)

Little local data exists to describe the impact of chronic disabling conditions such as arthritis, osteoporosis, asthma, and depression, and few resources have been committed to understanding or addressing these outcomes in the Denver area. National data shows these to have a significant impact on the quality of life.(11)

While many disabilities can be prevented by increased health promotion efforts (i.e. injury from many car crashes), many cannot. Additionally, those with disabilities often lack access to quality health care, face the stresses of low income and social discrimination, and lack the social or physical environments they need to support their continued well-being.

SEXUAL ORIENTATION DISPARITIES

Little research has been done on lesbian, gay, bisexual or transgender people (GLBT) making health issues and needs difficult to assess or prioritize.(48) From what we do know, major issues for gay men across the U.S. are STDs (including HIV), substance abuse, depression, and suicide. Lesbians in the U.S. have higher rates of smoking, overweight, alcohol abuse, and stress than the rest of the population.(1)

There are strong feelings in American culture about sexual orientation---some believe it is a result of morally wrong behavior. Discrimination is a fact of life for the GLBT populations, and very probably leads to poorer health outcomes. Indeed, stereotypical responses by health care providers can stifle open communication with GLBT populations, inhibiting their access to quality care. (28, 48) More research is needed to determine the determinants of health in this population. (1)

Priorities of Health Leaders and Residents

The motives and interests of those involved in furthering HP2010 goals---community members and leaders, organizations and community sectors---are key for developing health improvement initiatives. Experience has shown that initiatives *must* involve these people in planning and implementing efforts to improve health in order to be successful, and also must build on the motives of those who will need to make changes in order to improve their own health or that of their community. Opportunities for progress must be based on data, but *also* need to tap the interests of people. The following chapter summarizes some recent findings concerning community perspectives on health and related issues.

ORGANIZATION REPRESENTATIVES AND COMMUNITY LEADERS

Health Leaders:

Several recurring themes have surfaced in interviews with Denver health leaders who are interested in the **Denver Healthy People 2010 Initiative** (Denver HP2010). In their responses to the initial draft of this report, local health experts identified the following as issues of importance for the wellbeing of Denver's residents: (54)

- **ACCESS TO HEALTH CARE:** Provide low cost health care to low-income families. This included access to health promotion programs, health prevention, mental health, dental health, low cost health insurance, and subsidized programs for smoking cessation and alcohol/drug treatment.
- **EDUCATION:** Increase education and community awareness around disease prevention and health issues such as how to live healthier lives, why exercise is important, why nutrition is important, and how to reduce stress. Respondents also cited the need for more education on disease prevention such as the need for public service announcements on preventing disease or illness.
- **HEALTH PROMOTION:** Put resources in activities that promote health and address the root causes of poor health, including social, physical, psychological and environmental issues. A number of respondents commented on the need to realign the expenditures in the health field based on the assumption that more resources spent on health promotion would result in fewer resources needed for medical care. There was also emphasis on the need to use more multi -dimensional approaches that address economic, social and physical environments as well as behavioral change.
- **COLLABORATION & INFRASTRUCTURE:** Improve collaboration, communication, and synergy between those working to improve the health of Denver, including traditional and non-traditional health providers.
- **SURVEILLANCE:** Build better data systems to capture all Denver's health data from public and private sources. This need included systems that could be shared by different providers and more studies on neighborhoods so that better comparisons could be made across the city.

The **Turning Point Initiative**, a state level planning process similar to the Denver HP2010 Initiative, decided to focus its efforts on people---populations, groups and individuals---rather than certain diseases or risk factors. (28) Theories in health promotion also illuminate the need to look at whole person when developing interventions, instead of 'parts'. Key strategies identified by the Turning Point steering committee to improve health status in Colorado include:

- Increasing the capacity of public health and environmental agencies
- Increasing the capacity to conduct population-based health status assessment
- Assuring access to insurance coverage

- Eliminating health disparities
- Promoting leadership development within the public health field and community partners.(53)

The **Health Benchmarking Project** interviewed local, state, and federal representatives, as well as community leaders from a range of relevant sectors about health issues in the Denver Enterprise Community (several low-income neighborhoods in Denver). These interviews identified specific health care needs, issues about access to health care, and issues about the health care system in Denver in particular, including: (14)

Health Care Needs

- early prenatal care for teens and undocumented women;
- asthma;
- diabetes;
- dental care;
- nutrition and hunger;
- alcohol abuse;
- high blood pressure;
- health promotion

Health Care System Issues:

- not enough bilingual providers;
- screening rates;
- poor rates of immunization;
- lack of public health presence that is prevention/education-oriented as opposed to enforcement/sanitation-oriented;
- few sliding-scale payment rates for primary care, special services, and hospitalization;
- lack of forecasting mechanisms for emerging health issues, e.g., tuberculosis;
- little sharing of data b/t agencies.

Access Needs:

- high cost of insurance and inadequate insurance
- not enough providers, especially pediatric, dental, and other specialists who will see Medicaid-eligible clients or undocumented persons;
- geographic barriers, compounded by transportation issues, hours of operation, etc.(14)

Denver Enterprise Community (EC) Zone Community Leaders:

The Health Benchmarking Project also interviewed leaders of EC neighborhoods. These are some of the issues they identified when asked what made their neighborhoods vulnerable to poor health:

- single parent households
- lack of institutionalized health prevention programs;
- poverty;
- violence;
- low educational levels;
- poor housing;
- environmental hazards (e.g., air quality , lead poisoning);
- lack of accessible health care for undocumented persons;
- insufficient number of health care personnel to service low-income persons; (14)

RESIDENTS

In 2001, the Denver Benchmarks Project summarized the results of a multitude of studies gathering input from Denver's residents on quality of life issues, including health concerns. They found strong themes around substance abuse, pregnancy, crime, access to health care, and pollution. They also found themes concerning the environment (i.e., traffic, pollution, growth, neighborhood appearance); education, including early childhood education and day care, safety, the economy, housing and other issues. (55) Likewise, resident reviewers of this Denver HP2010 report identified the following as priority health concerns: poverty and unemployment, limited education, substance abuse (both alcohol and drugs), child abuse, overweight, lack of prenatal care, and health care access. (54) The following explores in more detail some other key resident studies concerning health.

People of Color:

The New Millennium Scan gathered input from African American and Native American Denver residents, including youths and seniors, through group and individual interviews. Hispanic residents were similarly included in Costilla County and many of their issues matched those identified by Denver residents.(45) Common threads that surfaced in all communities included: access to health care, the need for communication and collaboration, and concern about substance abuse. Denver participants also identified lack of affordable housing, and unique issues for people of color, seniors, and youth. (45)

The Denver participants reported there was little affordable health insurance or mental health care. They also emphasized a lack of health education and screening, especially for diseases such as diabetes and hypertension that are prevalent in their communities. They were concerned about the need for more family support resources. Participants of color identified a lack of cultural awareness among health care providers, and a scarcity of appropriate communication about health care resources.(45) . Participants related Substance abuse, including alcohol ,to other problems such as family stress and the breakdown of family structure; economic issues; lack of law enforcement; not enough meaningful activities for youth and poor accountability by parents for their children.(45)

Participants wanted increased communication and community building, both within neighborhoods and across the income based geographic 'divided city' lines.

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Feelings about community collaboration and conflict surfaced, including conflict over resource imbalances, and a need for increased awareness about and better coordination of services. Resources within Denver County were not seen as evenly divided. Participants felt that different neighborhoods of the County were insensitive to each other's "issues". They felt that the resource-poor areas were more likely to collaborate because they needed to, while the resource-rich portions of the county didn't see a need. Participants wanted increased for communication and community building, both within neighborhoods and across the income based geographic 'divided city' lines.(45)

The lack of safe and affordable housing was an issue for all, with Native American and African American participants relating it to other community issues such as discrimination in gaining access to capital and economic development, and to local community redevelopment. They identified institutionalized racism and economic development as issues that affect many areas of their lives. African Americans clearly felt that in order to improve the health or quality of life of the individual, other interrelated factors must be addressed. They emphasized social justice, especially in the criminal justice system. African Americans also identified infant mortality and immunization

needs, the emergency response system and education.(45) Similar themes arose with Hispanic groups. Native Americans stressed the same social justice issues and added concerns about substance abuse including alcohol abuse, grandparents raising grandchildren, and lack of emergency support services. (45)

Participants felt seniors needed more transportation, respite and day care, assisted living, home health care, gerontological health care specialists, and health education. Critical issues cited for the elderly were poverty, abuse, and grandparents raising grandchildren without essential resources or support. In communities of color, seniors experienced the cumulative results of a life lived with few assets, including illiteracy, lack of information and cultural mistrust of institutions.(45)

Youth experience a lack of recreational, cultural, educational opportunities and meaningful activities. Interviewees said youth lacked sufficient job opportunities, and were not well integrated into community decision-making. These issues were named as contributing factors in substance abuse among youth. Youth were also concerned about the lack of support for parents raising children; the need for sex education; the rate of teen pregnancy; and a lack of affordable child care. (45)

Low-Income Residents

The Benchmarking Project (14) interviewed residents of the Enterprise Community (EC) at busy places in the EC neighborhoods on health issues in the summer of 1999. Forty-two percent of EC residents rated their health as “very good” or “excellent,” compared to 63% of Colorado residents. When asked whether cost was a barrier to seeking medical care, 22% of EC residents agreed, compared to only 9% of Colorado residents. Far fewer (43%) EC residents than Colorado residents (79.5%) had employer-sponsored insurance, while a higher percentage of EC residents either had publicly financed care (38%) or no means to pay for health care at all (9%). (14)

EC residents were shown a list of health problems that had been identified by EC community leaders. They were also shown a list of information on births and specific causes of death that vital statistics records showed occur disproportionately in the EC community. From these lists, the residents ranked drugs, unmarried and teen mothers, gangs, crime, and firearms deaths as among the top three priorities for action. Next they ranked murder, alcoholism, diabetes deaths, violence in the home and deaths from car crashes as priorities.(14)

EC RESIDENTS RANKING OF HEALTH CONCERNS

<u>Health concerns identified by Enterprise Community leaders or vital statistics</u>	<u>Percent of Respondents who rank the problem first, second or third in importance for intervention</u>
Drugs	69.1
Births to Unmarried Women	66.5
Births to Girls less than 19 years old	63.5
Gangs	49.1
Crime	48.0
Firearm Deaths	41.1
Homicide Deaths- Murder	36.0
Alcoholism	28.0
Death from Diabetes	25.4
Violence in the Home	24.6
Motor Vehicle Deaths	23.9

Source: Neighborhood Health Survey, Center for Human Investment Policy, University of Colorado at Denver.

Gay, Lesbian, Bisexual and Transgender (GLBT)

In the **Health & Focus Group Series** by the Gay, Lesbian, Bisexual Community Services Center of Colorado, Colorado GLBT residents want providers who are “gay friendly” and they see a big need for increased mental health services. They report that most locations for socializing are bars or clubs and that this leads to increased risk for alcohol and tobacco abuse, and identify a need for healthier places to socialize such as book clubs, etc.(49)

Recommendations For An Ideal Denver Health Promotion System

INTRODUCTION

Healthy People 2010, along with its network of expertise and partners, can be used to help identify an 'ideal' intervention system which can be held up to Denver's current level of intervention assets to illuminate strengths and weaknesses. Additional research into 'best practices' and model interventions for various Healthy People 2010 goals and objectives can illuminate potential strategies.

Participants of the draft review of this report endorsed the recommendations made for developing a coherent, coordinated intervention system while emphasizing certain key themes. Specifically, they called for a system that encompasses not only traditional health care and public health services, but also efforts to build the social and physical environments needed to promote health. (54) The following revised recommendations reflect the input of the draft report reviewers.

COLLABORATION

- **Improve communication, collaboration and synergy between those working to improve the health of Denver, including traditional and nontraditional partners, especially community members.**

Overall, although there are many resources, programs, and efforts directed towards improving the health of Denver's residents, a complete picture of 'who is doing what' and how well all of it addresses Healthy People 2010 goals is not currently available at a local level. In order to develop an ideal health promotion system, there first needs to be increased dialogue between those working to advance HP2010 goals, increased understanding of what others are doing as well as how activities mesh to improve Denver's health, and increased knowledge about 'state of the art' health promotion interventions.(28)

Community partnerships, particularly those that include nontraditional partners, can be among the most effective methods for improving health in communities.(1) Indeed, community health promotion efforts are significantly more effective when those closest to the issues and concerns are intimately involved in crafting solutions. (1, 42)

FINANCIAL RESOURCES

- **Increase financial resources dedicated to health promotion and disease prevention.**

Committing resources to health promotion now has the potential to dramatically reduce future resources needed for health care. For example, studies on cigarette smoking in the U.S. have shown that investment in comprehensive tobacco-control programs could dramatically reduce the estimated \$7 in current health care costs and productivity losses per pack sold. (56)

A recent study from the University of California at San Francisco reports that smoking rates could be brought down to the HP2010 goals and surpassed if aggressive tobacco control programs are implemented that focus on exposing the dangers of secondhand smoke and nicotine addiction. (21) According to the study, such efforts could save money immediately in reduced heart attacks and low-birthweight babies, while medically mediated smoking cessation programs are too expensive to achieve results on such a mass basis. Additionally, reviews of worksite wellness programs have found that health promotion programs are associated with reduced absenteeism

and health care costs and should be considered a viable and effective method of helping employers reduce employee-related expenses. (57)

ROOT CAUSES

- **Address the root issues of poor health, including social, physical, psychological and environmental issues.**

Report reviewers expressed that a better job needed to be done in understanding the root causes in order to address them. Part of that understanding would come from data gathering that clarifies these links. (54) As mentioned earlier, education and income are the strongest predictors of health and as such need to be addressed. Approaches for mitigating the effects of low income include: investing in young children; providing services and opportunities for the neediest (i.e. housing, nutrition, education); improving work opportunities for the neediest; improving the work environment for all; strengthening communities through policies that encourage things such as building social networks and civic participation; and promoting policies that reduce the income gap or ease its effects.(3)

The earlier the intervention in the life cycle or in the evolution of risk factors to disease, the more impact it will have. Early childhood is a crucial time to provide supportive physical and social environments as these have a tremendous impact on health in later life. Successful interventions will often focus on building protective factors and community strengths, thereby developing communities that establish healthy social and physical environments, and support healthy lifestyles.(1,3)

SURVEILLANCE

- **Build better data systems to capture all of Denver's health data from public and private sources.**

Reviewers of the draft of this report pointed out that this need included systems that could be shared by different providers, and more studies on individual communities (e.g., GLBT) and neighborhoods so that better comparisons could be made across the city. Leaders report that residents want data from their own neighborhoods out of interest in local action. (54, 55)

In order to build the desired health promotion system for Denver, there first needs to be a clear picture of who is currently doing what - the assets in place. Other assets to explore are the factors in Denver's social and physical environments that help people stay healthy. For example, safe and convenient places for walking, and community sources of social support such as churches.

MULTI-DIMENSIONAL APPROACHES

- **Use multi-dimensional health promotion approaches that address economic, social and physical environments as well as behavior change.**

Issue by issue, categorical as well as uncoordinated funding streams have contributed significantly to fragmentation in service delivery. In order to address the fundamental causes of poor health we must break out of this 'disease of the month club' mentality.(8)

Healthy People 2010 gives guidance on effective approaches for promoting health. In particular, it counsels the use of broad-based collaboration, and community participation in the development and implementation of multi-dimensional interventions. The most effective community based health promotion efforts work on multi-fronts, addressing the many causes of a health problem with a number of combined tactics such as policy advocacy, public education, and environmental protection. They utilize many venues such as education, housing, labor, justice, transportation, and the environment, in addition to traditional health and data collection avenues.(1)

Behavior change is an important component of health promotion and current efforts need to be supported and expanded. However, approaches to address the underlying social and physical environments have been sorely lacking.

The goals and objectives of Healthy People 2010 emphasize a systematic approach to health improvement that addresses the causes of good or poor health---the so-called “determinants of health”. These include the impact of individual and community physical and social environments, as well as the policies and interventions that promote health, prevent disease, and guarantee access to quality health care. Healthy People 2010 sets out a broad general framework for reaching higher health status by encouraging all to address these determinants effectively, thus making a measurable impact on the health status of the population.(1)

HP2010 emphasizes a need for adequate infrastructure and resources in order to carry out the collaborative, multi-sector and comprehensive health promotion initiatives it recommends.(1) Capacity needs to be developed at the state and local Denver level to gather various needed assessment data, facilitate assessment, planning and resource development, and to provide leadership for the health promotion processes.

EDUCATION

- **Raise awareness among leaders and the public about ways to improve health.**

Because of a lack of general support for health promotion, it critical to raise awareness among the public and community leaders about the value of public health and of the potential for cost effective increases in wellness from utilizing effective health promotion strategies.(8)

Respondents to the draft report indicated the need for more education in the area of health promotion and disease prevention such as how to live healthier lives, why exercise is important, why nutrition is important, and how to reduce stress. Respondents also cited the need for more public service announcements on preventing disease or illness, and the need to provide health care advocates in schools. There was also a consistent theme that suggested people needed to have a better understanding of the root causes of poor health in order to make changes for improving their lives. Respondents also indicated the need for the community to be educated about health care options such as insurance, health care facilities, resources, and programs. (54)

HP2010 places a new emphasis on educational and community-based efforts, and on health communications.(1) The HP2010 key focus area on community-based health education proposes increased health promotion in four key settings: schools, worksites, health care settings and in the community. (1)

The HP2010 health communications key focus area advocates for well-planned, sophisticated public communications interventions that are integrated with other efforts, and includes standard health promotion techniques such as social marketing and emergent factors such as the Internet. A new approach to health communications is the shift toward promoting community-centered prevention—that is, moving the focus from individuals and their behavior toward empowering groups of people and communities in effecting change on many levels (i.e. policy advocacy). Success in such comprehensive programs requires careful attention to planning, implementation, and evaluation, as well as assuring enough resources. Collaborations can rally necessary resources as well as help minimize ‘message clutter’. Public-private efforts can take on challenges neither could address alone.(1)

It has become increasingly clear that single-thrust approaches to health promotion, such as isolated mass media campaigns, are inadequate at creating substantial change. Successful health promotion often weave an array of interventions tailored to diverse audiences with communication incorporated throughout, and include nontraditional approaches such as community-based programs or policy change initiatives. Research shows that communication methods promote health best when a number of communication modes are employed to bring useful and appropriate messages to various unique audiences. (1)

ACCESS TO HEALTH CARE

- **Make access to health care, health promotion and disease prevention available and affordable to all.**

Draft report reviewers talked about access to health care. By access respondents suggested that health care be available and affordable. Health care access included health promotion, mental health, dental health, etc. Respondents identified additional access needs such as low cost health insurance; and subsidized programs for smoking cessation and alcohol/drug treatment programs. (54)

Development of a culturally competent workforce and culturally appropriate services and programs are also critical for real access. Indeed, cultural competence is needed not only for improved health promotion and disease prevention among those of various ethnic backgrounds, but also for people with disabilities and the GLBT population. (1)

STRATEGIC ACTION PLANNING

- **Engage in a strategic action planning process to identify concrete next steps to build a healthier Denver.**

This step is necessary to move the general themes and big picture needs uncovered by the Denver HP2010 report and review process into the most effective actions for building a healthier Denver. Selecting critical health issues and approaches is best done by looking for intersections of the data, resident’s concerns, and leader’s interests — where the motivation and numbers can create momentum. These should be looked at in light of the underused assets or resources (such as youth), as well as what efforts are already working to address these concerns.

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APPENDIX

Healthy People 2010 Goals & Indicator Areas

*Denver Benchmarking Community Priorities
by Geographic/Demographic Groups*

*Denver Benchmarking Citywide Priorities
by Issue Area*

HEALTHY PEOPLE 2010

Healthy People 2010 is designed to achieve two overarching goals:

- ***Increase quality and years of healthy life.***
- ***Eliminate health disparities.***

These two goals are supported by 10 leading health indicators and specific objectives in 28 focus areas. The leading health indicators are:

- ***Physical activity***
- ***Overweight and obesity***
- ***Tobacco use***
- ***Substance abuse***
- ***Responsible sexual behavior***
- ***Mental health***
- ***Injury and violence***
- ***Environmental quality***
- ***Immunization***
- ***Access to health care***

The 28 focus areas are:

- ***Access to Quality Health Services***
- ***Arthritis, Osteoporosis, and Chronic Back Conditions***
- ***Cancer***
- ***Chronic Kidney Disease***
- ***Diabetes***
- ***Disability and Secondary Conditions***
- ***Educational and Community-Based Programs***
- ***Environmental Health***
- ***Family Planning***
- ***Food Safety***
- ***Health Communication***
- ***Heart Disease and Stroke***
- ***HIV***
- ***Immunization & Infectious Diseases***
- ***Injury and Violence Prevention***
- ***Maternal, Infant, and Child Health***
- ***Medical Product Safety***
- ***Mental Health and Mental Disorders***
- ***Nutrition and Overweight***
- ***Occupational Safety and Health***
- ***Oral Health***
- ***Physical Activity and Fitness***
- ***Public Health Infrastructure***
- ***Respiratory Diseases***
- ***Sexually Transmitted Diseases***
- ***Substance Abuse***
- ***Tobacco Use***
- ***Vision and Hearing***