

4.9 CORONARY HEART DISEASE

HP 2010 Objective 12-1: Reduce coronary heart disease deaths to no more than 166 per 100,000 population.

Jefferson County Status: In 1998 – 2002 the coronary heart disease mortality rate was 130.3 per 100,000 population.

Coronary heart disease (CHD) is the most common type of heart disease. When there is diminished blood flow through the vessels supplying the heart, the muscles of the heart become damaged. Coronary artery blockages, or atherosclerosis, can be due to fat deposits or thickening of the vessel wall. If the blood supply is nearly or completely occluded, a heart attack results and the heart muscle begins to die.

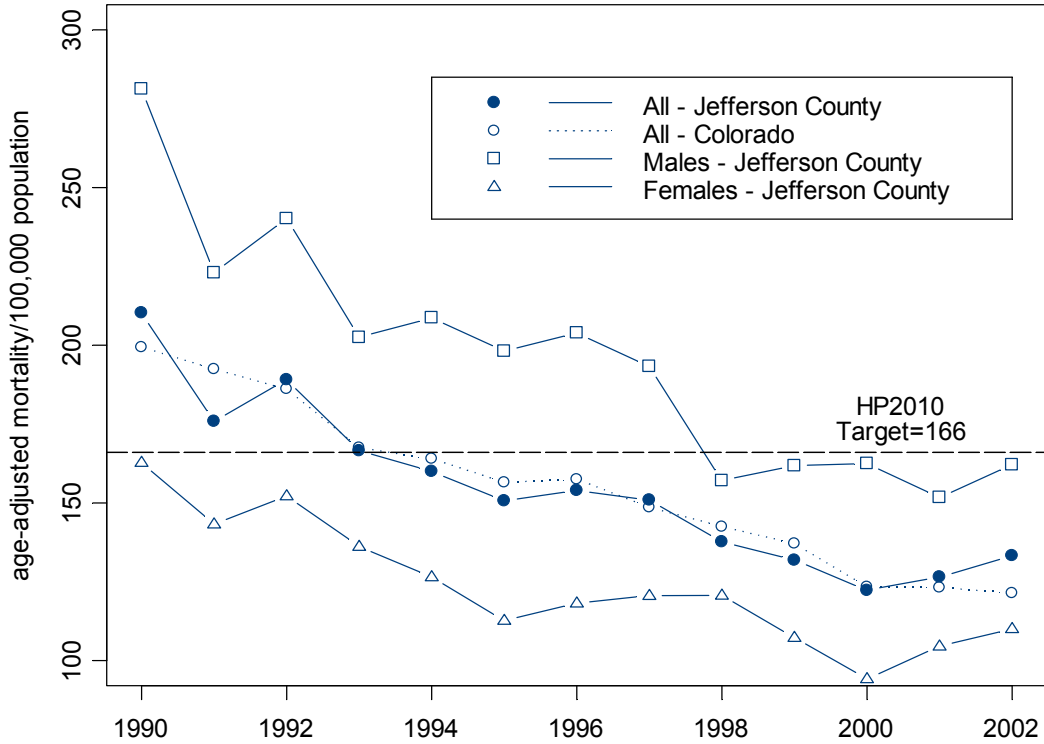
Angina is chest pain related to decreased blood supply to the heart. Angina may be mild to severe, and may expand to the arms or jaw. It is usually caused by atherosclerosis.

Across the U.S., the mortality rate from CHD is declining but it remains the single leading cause of death across all races and in both genders. Risk factors for developing CHD, as well as factors that cause CHD to progress, include older age, family history of early CHD, cigarette smoking, high blood cholesterol, high blood pressure, overweight and obesity, physical inactivity and diabetes. Most of these risk factors are considered modifiable.

Jefferson County Findings

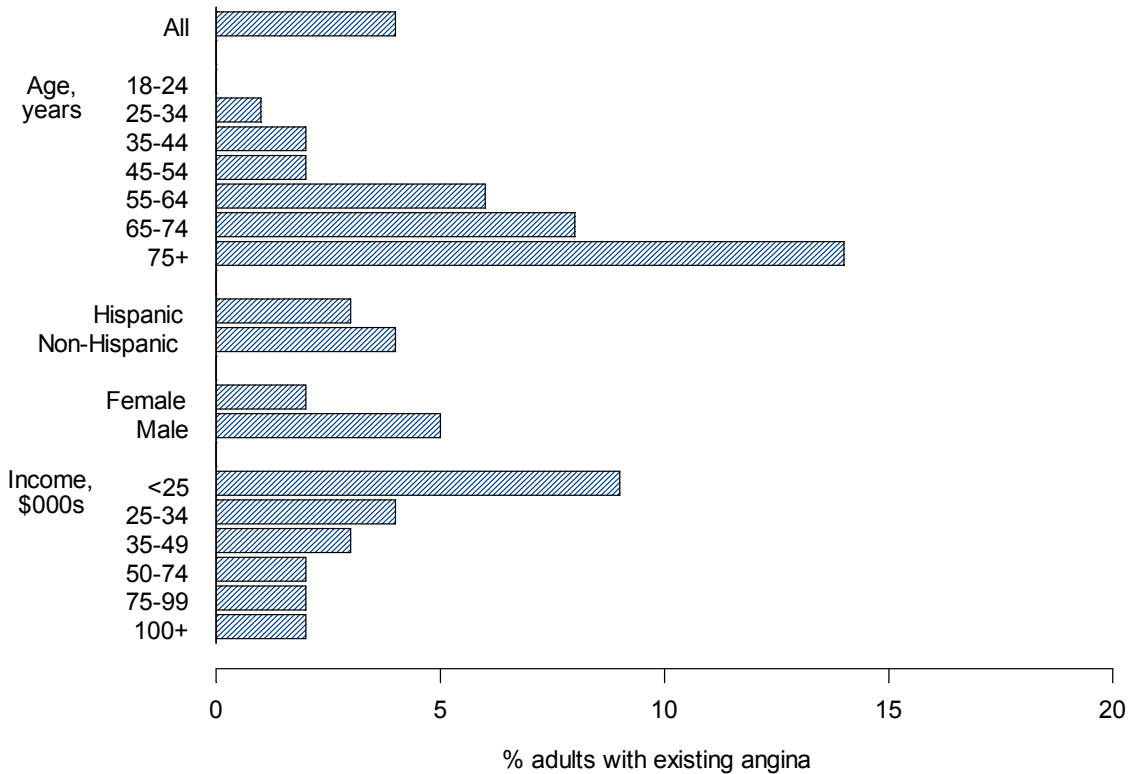
- The CHD mortality rate has decreased over the period 1990 – 2002 (Figure 4.24) for both the county and the state.
- The decline is notable for both genders, occurring at about the same rate. Jefferson County males and females have achieved the HP 2010 target for reduction in CHD mortality.
- Prevalence of angina varies by age, ethnicity, gender, and income (Figure 4.25). Although usually occurring among older adults, survey respondents as young as 30 years of age reported having a diagnosis of angina. It is most common among non-Hispanics, males and those with the lowest incomes.

Figure 4.24 Age-adjusted coronary heart disease mortality, Jefferson County, by gender and year, 1990 - 2002



Source: JCDHE Epidemiology and CDPHE-HSVRD

Figure 4.25 Adults in Jefferson County with existing angina, by age, ethnicity, gender and income, by percent, 2003



Source: JCDHE 2003 Community Health Survey

4.10 CONGESTIVE HEART FAILURE

HP 2010 Objectives 12-6a to 12-6c: Reduce hospitalizations of adults aged 65 – 74 years, 75 – 84 years and 85+ years with congestive heart failure as the principal diagnosis to 6.5, 13.5, and 26.5 per 1,000 population, respectively.

Jefferson County Status: Rates for residents aged 65 – 74, 75 – 84 and 85+ years were 5.6, 15.0, and 28.3 hospitalizations per 1,000 population, respectively.

In the 1980s and 1990s congestive heart failure (CHF) emerged as a major chronic disease for older adults. With CHF, there is ineffective pumping of the heart muscle, leading to pulmonary edema, or accumulation of fluid in the lungs. It is often the end stage of cardiac disease.

In the U.S., CHF disease rates are similar in men and women. It is twice as common among persons with high blood pressure and five times greater in people who have had a heart attack compared with those who have not.

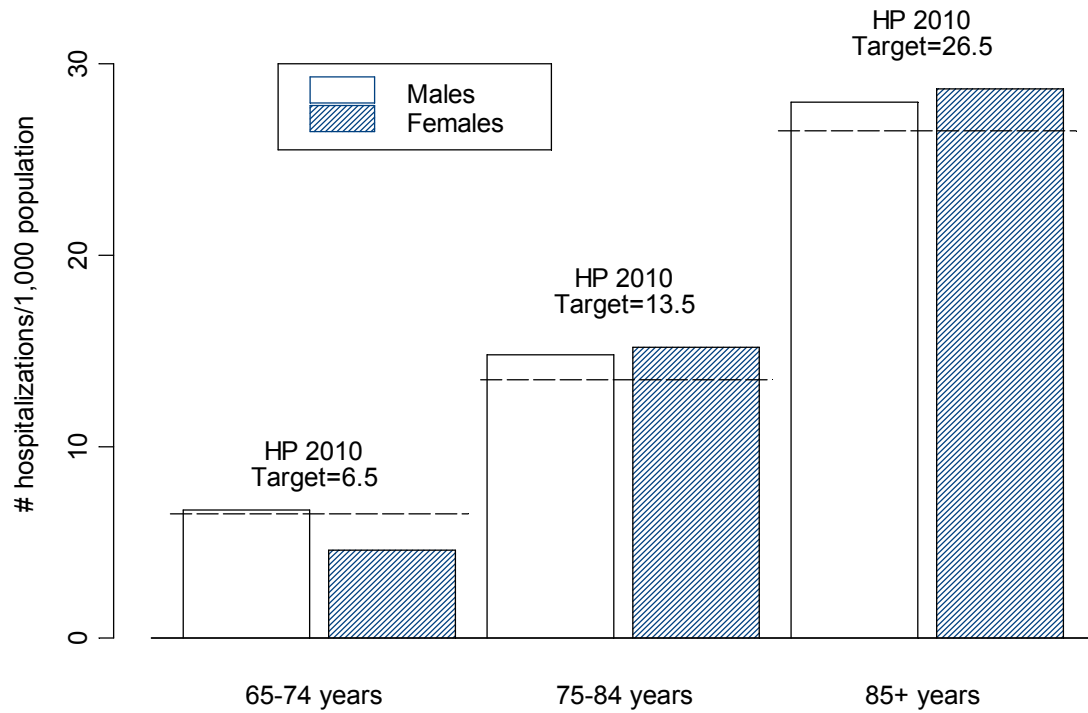
Survival following diagnosis of CHF is lower among men than women, but even in women, after a diagnosis, only about 20% survive longer than 12 years.

The rate of hospitalizations for CHF increased more than three-fold between 1970 and 1994. The problem is expected to worsen due to an increase in the number of cardiac patients who survive acute episodes of disease such as coronary heart disease and myocardial infarction, and due to the rise in the percentage of the population that is elderly.

Jefferson County Findings

- Among adults aged 65 – 74 years, CHF hospitalization rates for females are lower than the age-specific HP 2010 target. Rates among males are not significantly different than the target (Figure 4.26).
- Rates among adults aged 75 – 84 years and 85+ years are very close to the age-specific targets, and there is no rate difference between men and women.

Figure 4.26 Congestive heart failure hospitalizations among older adults, by age group and gender, Jefferson County, 1997 - 2001



Source: JCDHE Epidemiology and Colorado Hospital Association Hospital Discharge Dataset

4.11 STROKE

HP 2010 Objective 12 -7: Reduce the number of stroke deaths to no more than 48 deaths per 100,000 population.

Jefferson County Status: In 1998 – 2002, the number of stroke deaths was 51.0 per 100,000 population.

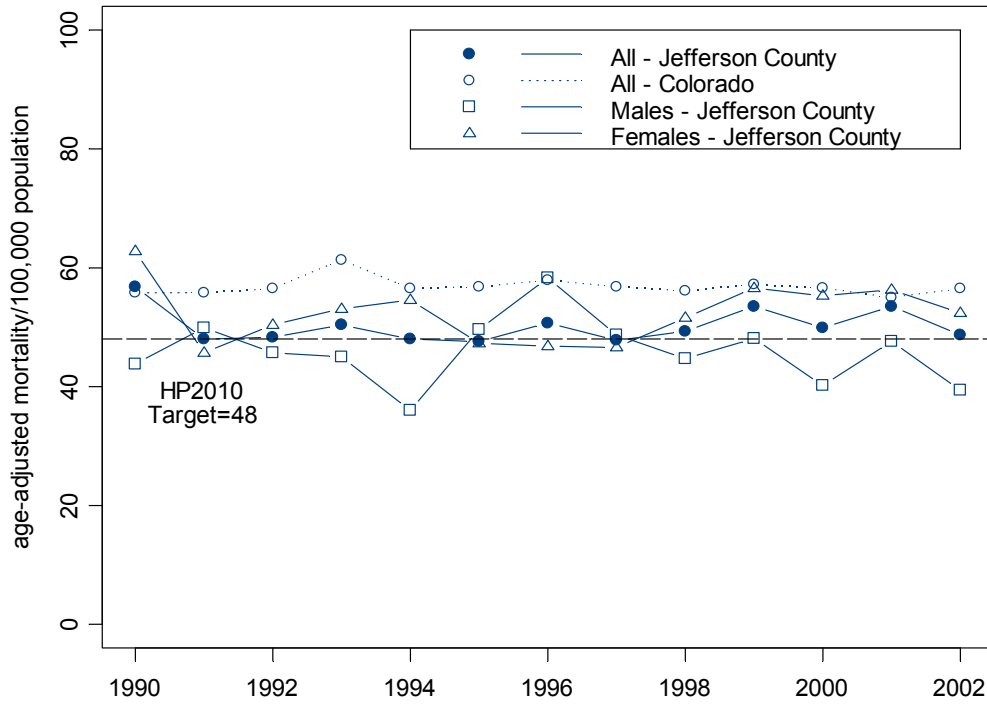
Stroke is a type of cardiovascular disease that occurs when a blood vessel is either blocked or ruptures, and diminishes the blood supply to a portion of the brain. Stroke ranks as the third leading cause of death and is a leading cause of long-term disability in the nation. Every 45 seconds, on average, someone in the U.S. has a stroke.

Some of the most important risk factors for stroke are modifiable, including high blood pressure, tobacco use and physical activity.

Jefferson County Findings

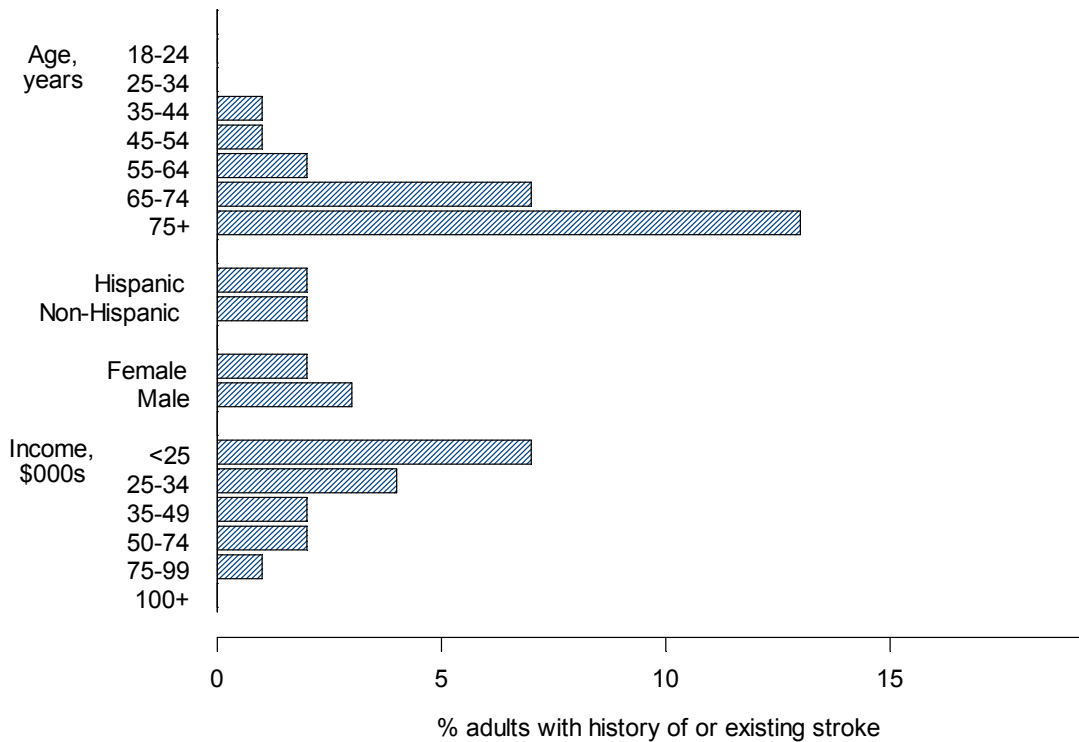
- Stroke mortality among residents has been variable (Figure 4.27), but remained close to the HP 2010 target for males and females combined. The county's rates tended to be lower than those for the state.
- Rates among females were higher than among males, and those among males have been better than the HP 2010 target.
- Among respondents to the 2003 Community Health Survey, males and persons in the older age and lowest income categories were the most likely to have a history of stroke (Figure 4.28).

Figure 4.27 Age-adjusted stroke mortality, by gender and year, Jefferson County, 1990 - 2002



Source: JCDHE Epidemiology and CDPHE-HSVRD

Figure 4.28 Adults with history of, or existing stroke, by age, ethnicity, gender and income, by percent, Jefferson County, 2003



Source: JCDHE 2003 Community Health Survey

4.12 HYPERTENSION AND HIGH CHOLESTEROL

HP 2010 Objectives

12-9: Reduce the proportion of adults with high blood pressure to 16%.

12-14: Reduce the proportion of adults with high total blood cholesterol levels to 17%.

Jefferson County Status: The prevalence of high blood pressure and high blood cholesterol levels were 25% and 29%, respectively, among 2003 Community Health Survey respondents.

High blood pressure and high blood cholesterol levels are strongly related to cardiovascular disease.

High blood pressure, or hypertension, is known as the “silent killer,” and remains a major risk factor for coronary heart disease (CHD), stroke and heart failure. High blood pressure is more common among older adults, and a large proportion of persons with hypertension are unaware that they have the disorder. Hypertension is nearly 40% higher in African-Americans than in whites – an estimated 6.4 million African-Americans have hypertension – and its effects are more frequent and severe in the African-American population. Lifestyle interventions that can help prevent high blood pressure include increasing the level of aerobic physical activity, maintaining a healthy weight, limiting the consumption of alcohol to moderate levels for those who drink, reducing salt and sodium intake, and eating a reduced-fat diet high in fruits, vegetables, and low-fat dairy products.

High blood cholesterol is a major modifiable risk factor for the hardening of the coronary arteries (atherosclerosis) that causes CHD. Lifestyle changes that can prevent or lower high blood cholesterol include eating a diet low in saturated fat, dietary cholesterol and total fat, increasing physical activity, and reducing excess weight.

In the U.S. in 1988 – 1994, an estimated 28% of adults had high blood pressure and 21% percent of adults had high blood cholesterol.

Jefferson County Findings

- Results of the 2003 Community Health Survey indicate a far greater prevalence of both high cholesterol and hypertension among the county’s population than the targets set by HP 2010 (Figures 4.29 and 4.30).
- The prevalence of high blood pressure was greatest among older adults and those with lower incomes (Figure 4.29).
- The prevalence of high blood cholesterol was most strongly correlated with increasing age and somewhat correlated with being male (Figure 4.30).
- Prevalence of high blood pressure and high blood cholesterol are greatest in two areas of the county (Figures 4.31 and 4.32). Only one area of the county, the central-western section, met the HP 2010 target for hypertension (Figure 4.31) and none of the areas measured met the target for blood cholesterol (Figure 4.32).

Figure 4.29 Adults with existing high blood pressure in Jefferson County, by age, ethnicity, gender and income, by percent, 2003

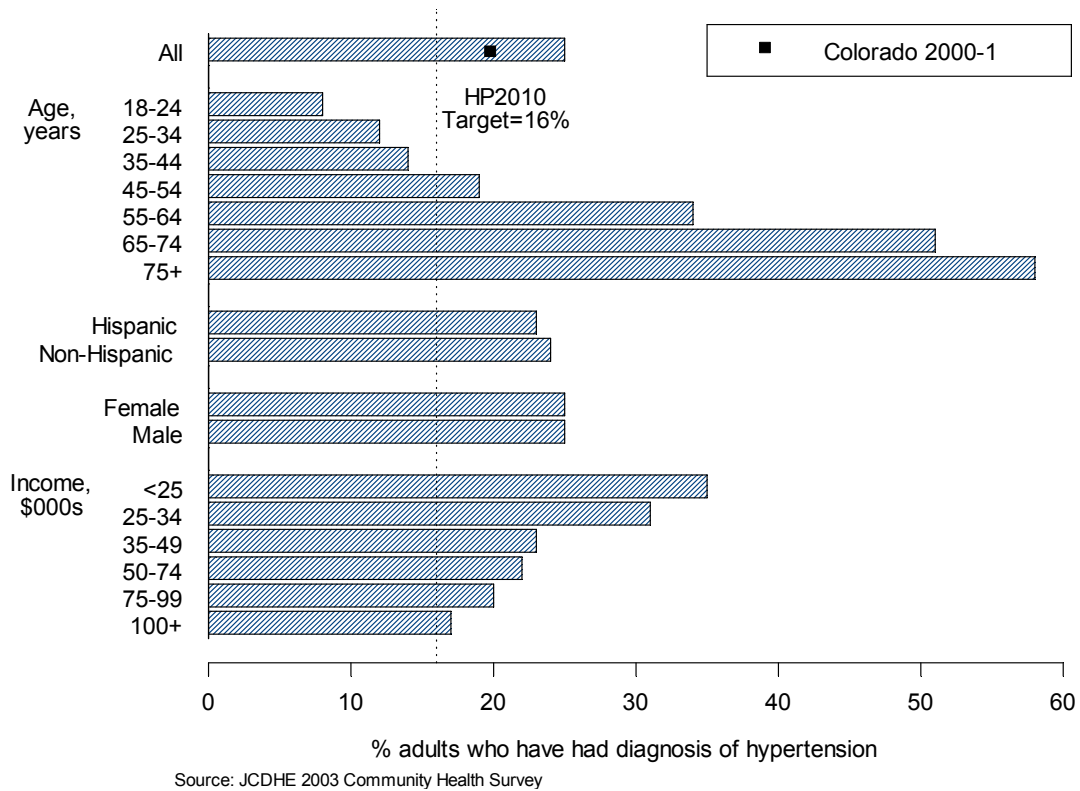


Figure 4.30 Adults with existing high blood cholesterol in Jefferson County, by age, ethnicity, gender and income, by percent, 2003

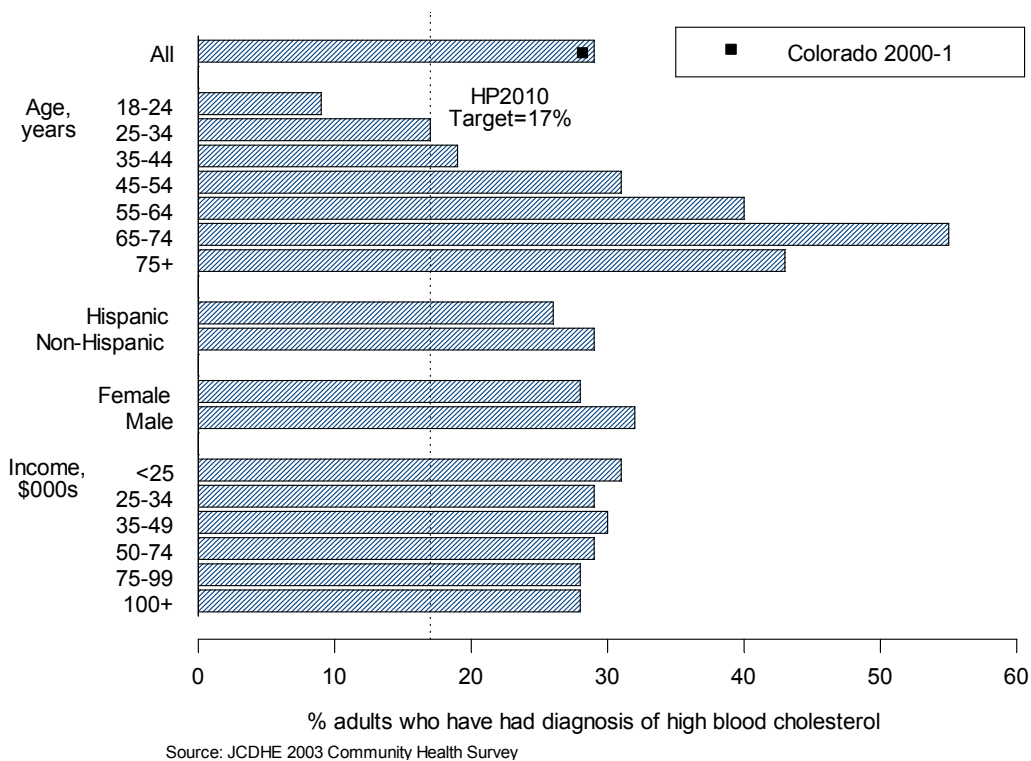


Figure 4.31. Percent of adults in Jefferson County who have had a diagnosis of high blood pressure.
 (Source: 2003 Community Health Survey.)

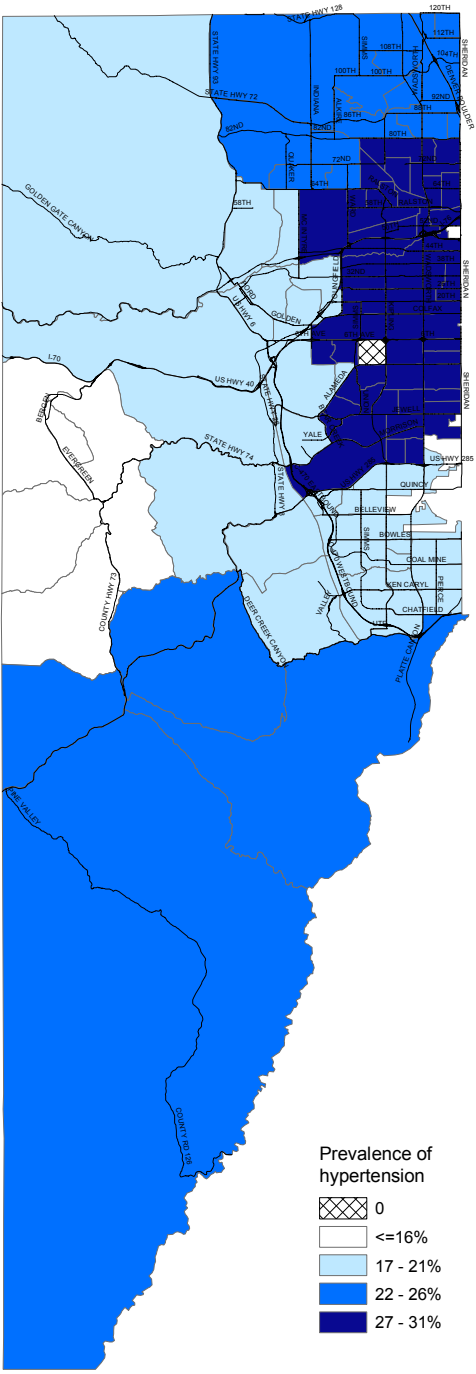
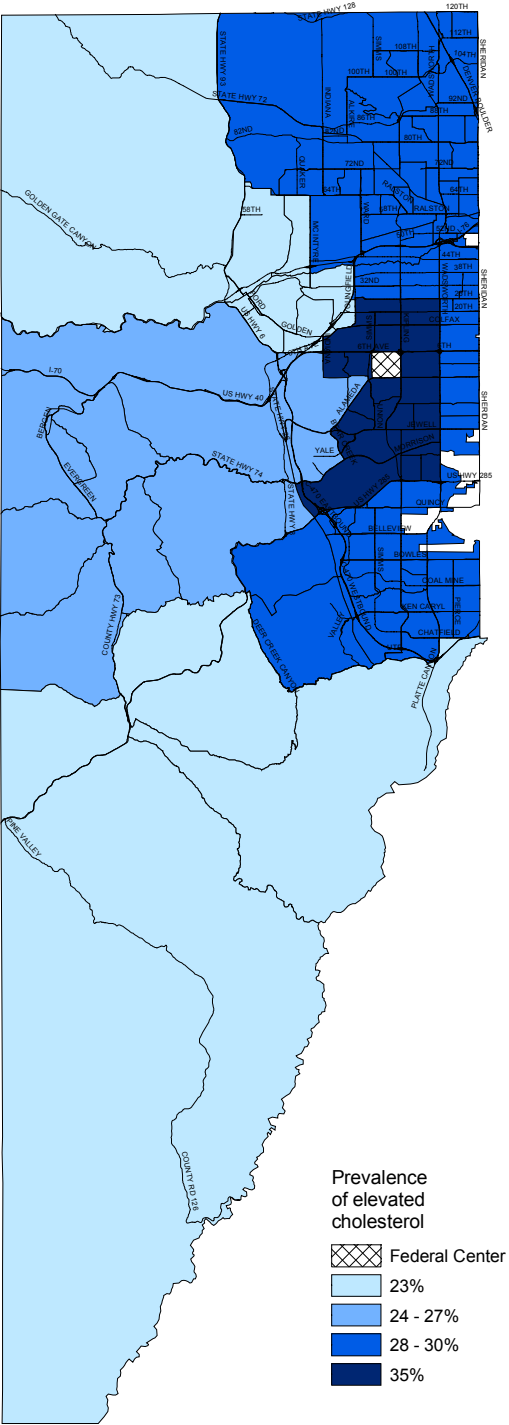


Figure 4.32. Percent of adults in Jefferson County who have had a diagnosis of high blood cholesterol. (Source: 2003 Community Health Survey.)



4.13 DIABETES

HP 2010 Objective 5-5: Reduce the diabetes death rate to 45 deaths per 100,000.

Jefferson County Status: In 1999 – 2002, the diabetes death rate was 48.7 deaths per 100,000 population.

Diabetes is a chronic condition in which the body does not produce or properly use insulin, thereby allowing abnormal blood sugar elevation and diminished entry of sugar into tissues. There are two major forms of diabetes. Type 1 occurs primarily in younger people (≤ 18 years of age) and results from failure to produce insulin. This type occurs in about 5-10% of diabetes cases. Type 2 usually occurs in adults 30 years of age and older and results from insulin resistance combined with relative insulin deficiency. Approximately 90-95% of Americans diagnosed with diabetes have Type 2.

Heart disease and stroke are the most life-threatening consequences of diabetes, and these occur in people with diabetes more than twice as often as in people without diabetes.

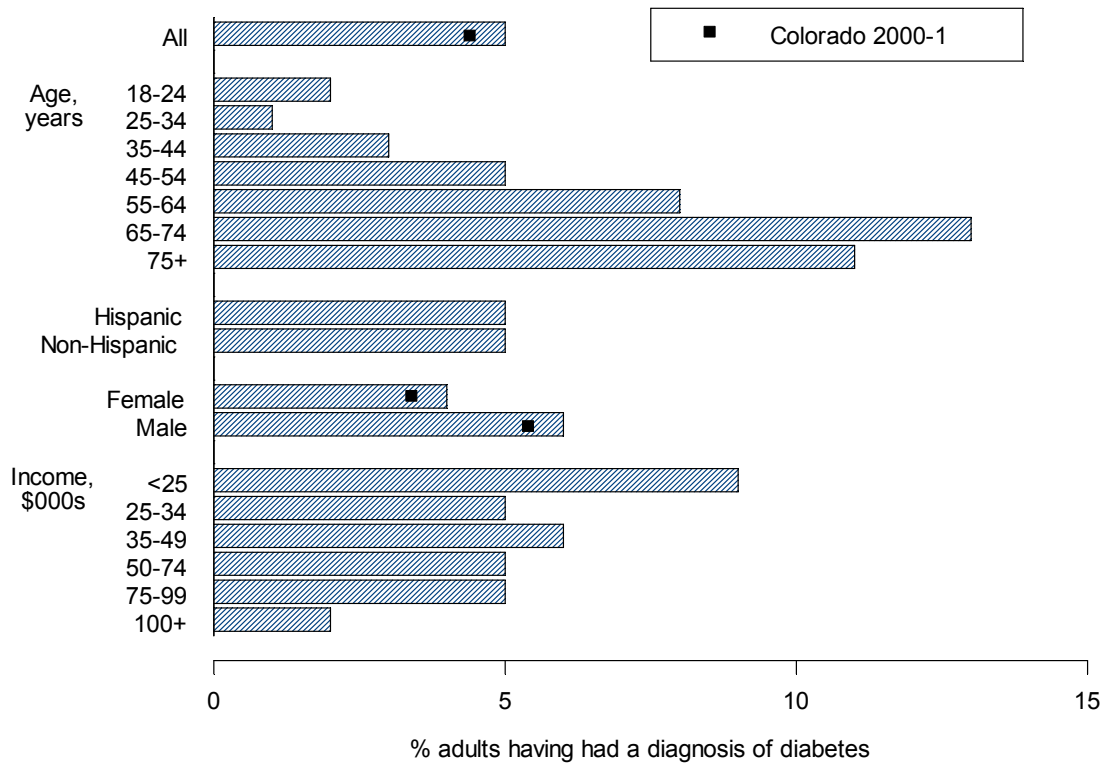
Risk factors for diabetes include diets high in fat and processed foods, obesity and lack of physical activity.

The HP 2010 Objective 5-5 target is computed with both major and contributing causes of deaths. The U.S. baseline for this objective in 1997 was 75 deaths per 100,000 population.

Jefferson County Findings

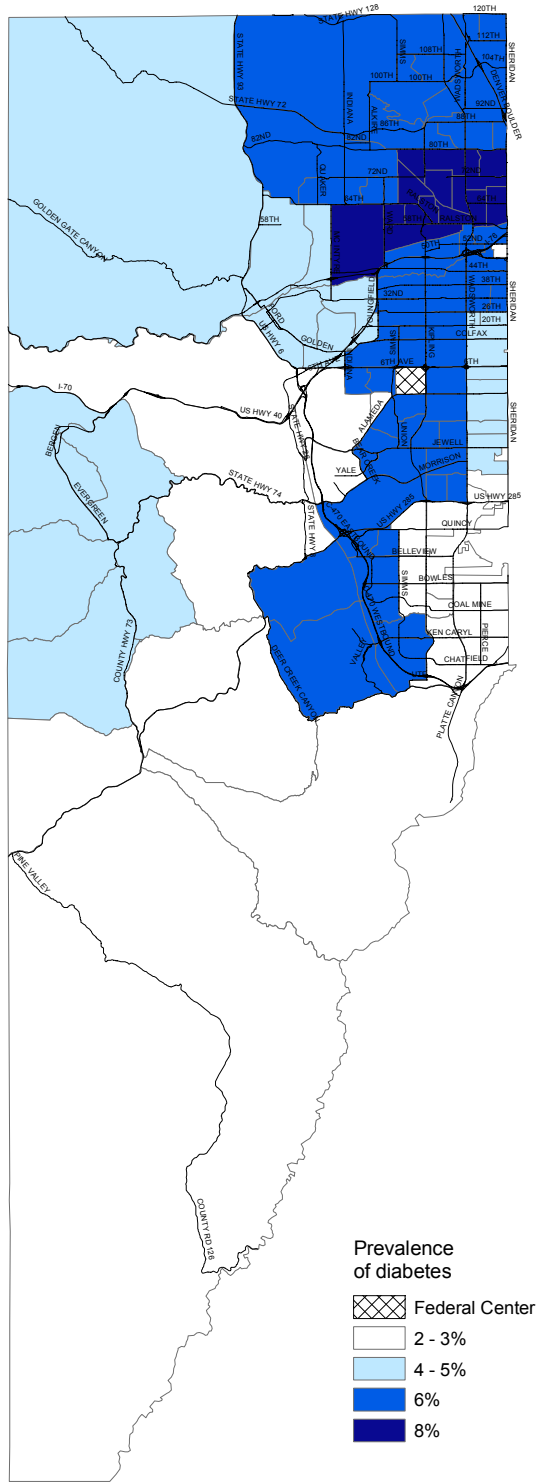
- Five percent of respondents to the 2003 Community Health Survey reported having had a diagnosis of diabetes (Figure 4.33). Males, older adults and those with the lowest income level were more likely to have diabetes.
- Diabetes prevalence is low throughout the county. The area with the highest prevalence, approximately eight (8) percent, is in Arvada (Figure 4.34).

Figure 4.33 Adults in Jefferson County with a diagnosis of diabetes, by age, ethnicity, gender and income, by percent, 2003



Source: JCDHE 2003 Community Health Survey

Figure 4.34. Percent of adults in Jefferson County who have had a diagnosis of diabetes.
 (Source: 2003 Community Health Survey.)



4.14 ARTHRITIS and RHEUMATISM

HP 2010 Objective 2-2: Reduce the proportion of adults with chronic joint symptoms who experience a limitation in activity due to arthritis to no more than 21%.

Jefferson County Status: According to the 2003 Community Health Survey, an estimated 23% of adults have arthritis or rheumatism.

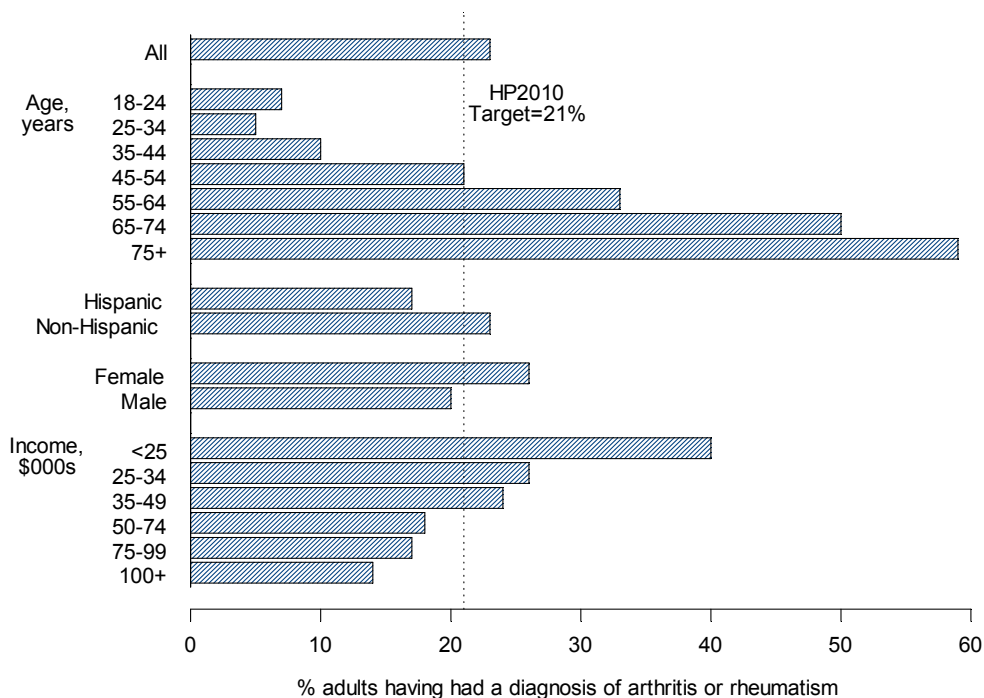
Arthritis is inflammation of joints. It can be infective, autoimmune or traumatic in origin. Rheumatism is a general inflammatory condition commonly causing arthritis and inflammation and pain in other sites, such as in muscles, the heart and other deeper organs. The various forms of arthritis affect more than 15% of the U.S. population, and are the leading cause of disability. Arthritis has a negative effect on a person’s mental health, and although death is not a frequent outcome of arthritis, persons with certain forms of it have higher death rates than the general population.

The prevalence of arthritis and chronic joint symptoms among Coloradans, 19%, is among the lowest in the nation.

Jefferson County Findings

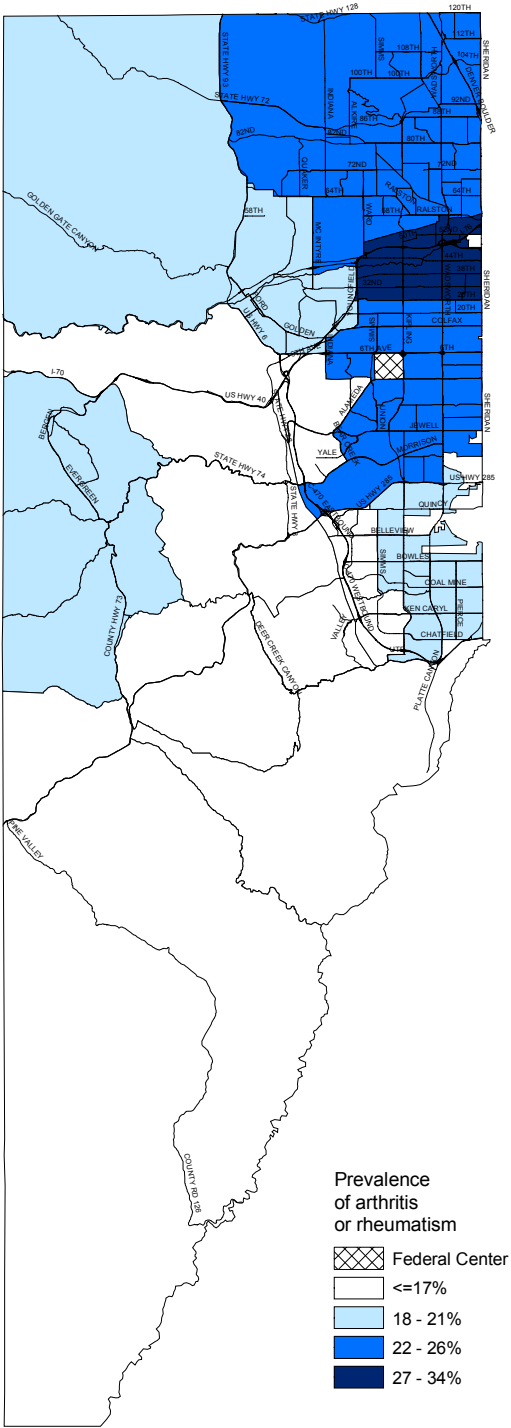
- According to the 2003 Community Health Survey, the prevalence of arthritis or rheumatism was approximately 23%, which was higher than that for Colorado, but was very close to the HP 2010 target (Figure 4.35).
- Survey respondents with existing arthritis were more likely to be female, non-Hispanic, older and have lower incomes.
- The area of the county with highest rates was in southern Arvada (Figure 4.36).

Figure 4.35 Adults in Jefferson County who have been diagnosed with arthritis or rheumatism, by age, ethnicity, gender and income, by percent, 2003



Source: JCDHE 2003 Community Health Survey

Figure 4.36. Percent of adults in Jefferson County with existing arthritis or rheumatism.
 (Source: 2003 Community Health Survey.)



4.15 ASTHMA

HP 2010 Objectives

24-1a to e: Reduce the asthma mortality rates for persons aged <5 years, 5 – 14 years, 15 – 34 years, 35 – 64 years, and 65 years and older to no more than 1.0, 1.0, 2.0, 9.0, and 60 per 1,000,000 population, respectively.

24-2a to c: Reduce hospitalizations for asthma for persons aged <5 years, 5 – 64 years, and 65 years and older to no more than 25, 7.7 and 11 per 10,000 population, respectively.

Jefferson County Status

- Asthma mortality rates were 13.0 and 56.7 deaths per 1,000,000 population for adults aged 35 – 64 and 65+ years, respectively.
- Asthma hospitalization rates were 33.1, 7.4, and 12.2 hospitalizations for residents aged <5, 5 – 64, and 65+ years per 100,000 population, respectively.

Asthma is a serious chronic respiratory disease requiring continuous care that is growing in prevalence in the nation. Although the asthma mortality rate has declined modestly, the prevalence of the disease has increased.

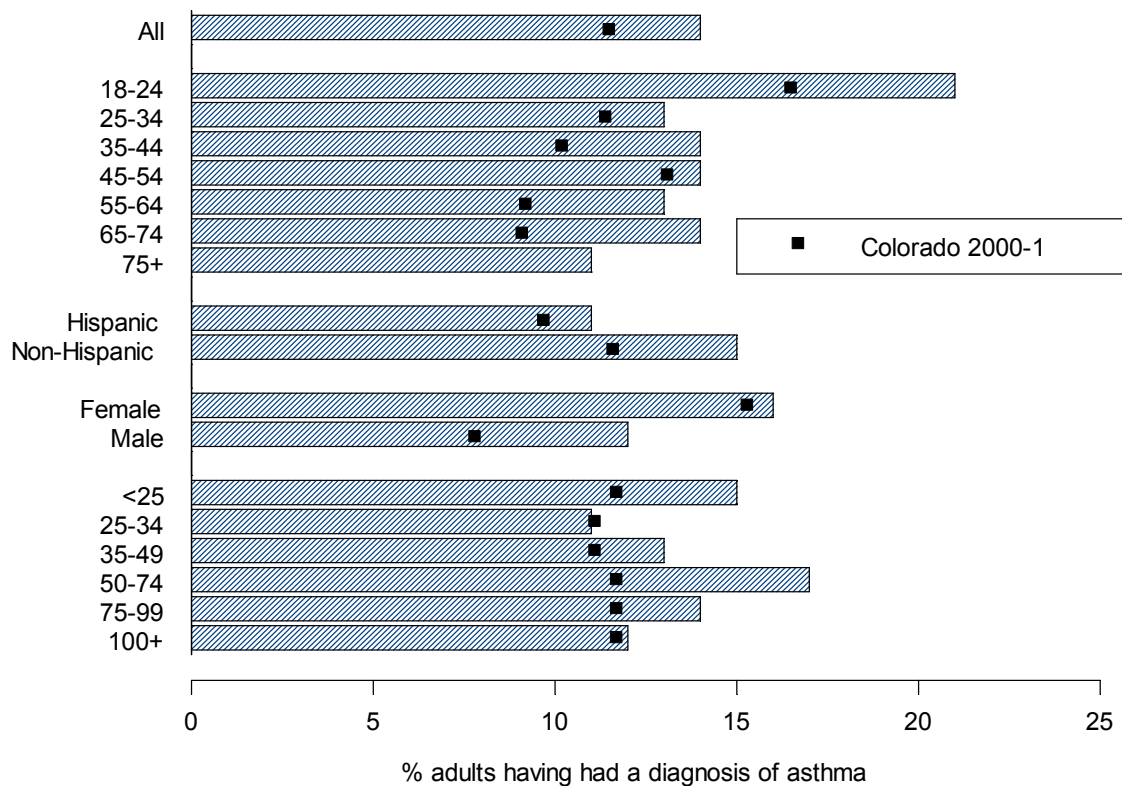
Asthma makes breathing difficult by causing inflammation, swelling and excess mucus in the respiratory tract with obstruction, and hyper-responsive muscle contraction in the respiratory airways. It can be exacerbated by environmental factors (“triggers”), such as rapid changes in temperature or humidity, allergies, upper respiratory infections, exercise or cigarette smoke. Effective management consists of controlling environmental exposures, medications, monitoring disease status and education for how patients can manage their own care.

Jefferson County Findings

- Fourteen percent of respondents to the 2003 Community Health Survey have had a diagnosis of asthma (Figure 4.37), which is nearly identical to the rate for Colorado, 13%, reported among respondents to the Behavioral Risk Factor Surveillance Survey (BRFSS).
- The highest prevalence rates, reaching 22%, were among the youngest respondents, non-Hispanics and females (Figure 4.37). Rates among respondents to the Community Health Survey were generally higher than the rates for Colorado in 2000 – 2001 reported in the BRFSS. (Age, income and race/ethnicity groups were slightly different between the two survey methods).
- Asthma mortality among the younger age groups was not calculable because there were fewer than three (3) deaths in each group (Figure 4.38). (Low numbers of deaths tend to cause mortality rates to be highly variable and are not considered reliable indicators.)

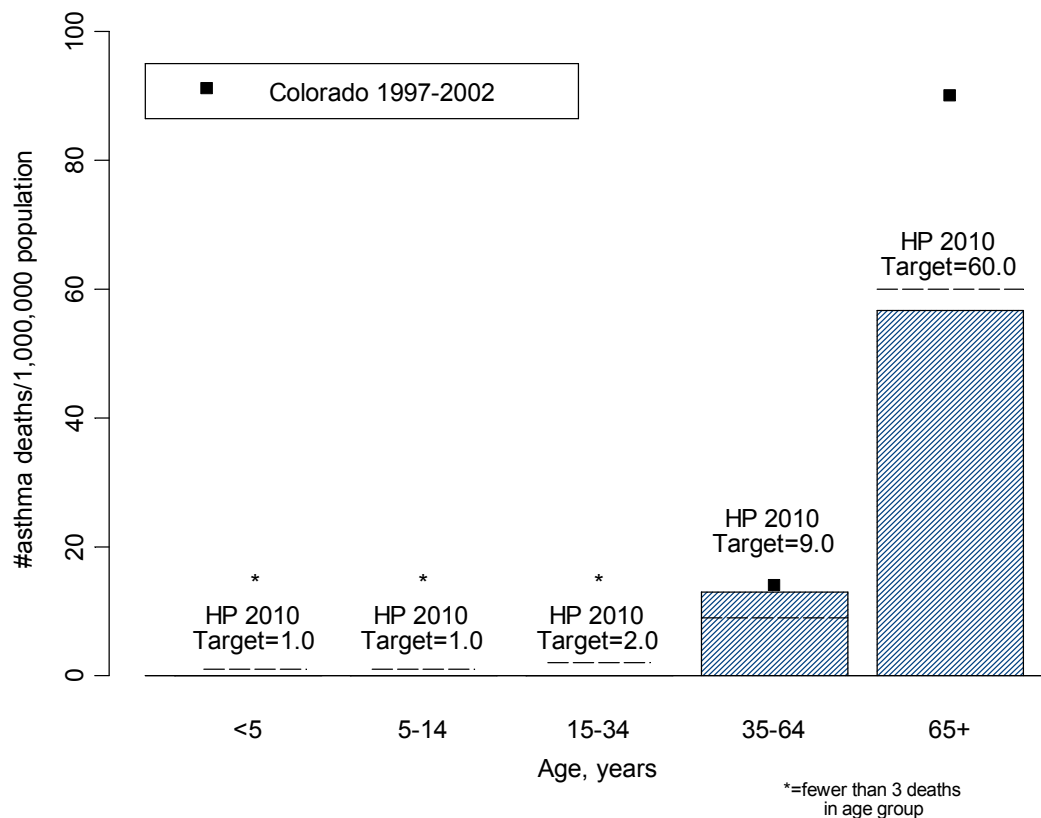
- Asthma mortality among adults aged 35 to 64 years (Figure 4.38) was higher than the 2010 target, and mortality among older adults was lower than the target, and significantly lower than that for the state.
- Hospitalization rates for asthma were highest in children younger than 5 years (Figure 4.39), and were substantially higher than the HP 2010 target.
- The area of the county with the highest percentage of adults having had a diagnosis of asthma was in the central-eastern region (Figure 4.40).

Figure 4.37 Adults in Jefferson County with a diagnosis of asthma, by age, ethnicity, gender and income, by percent, 2003



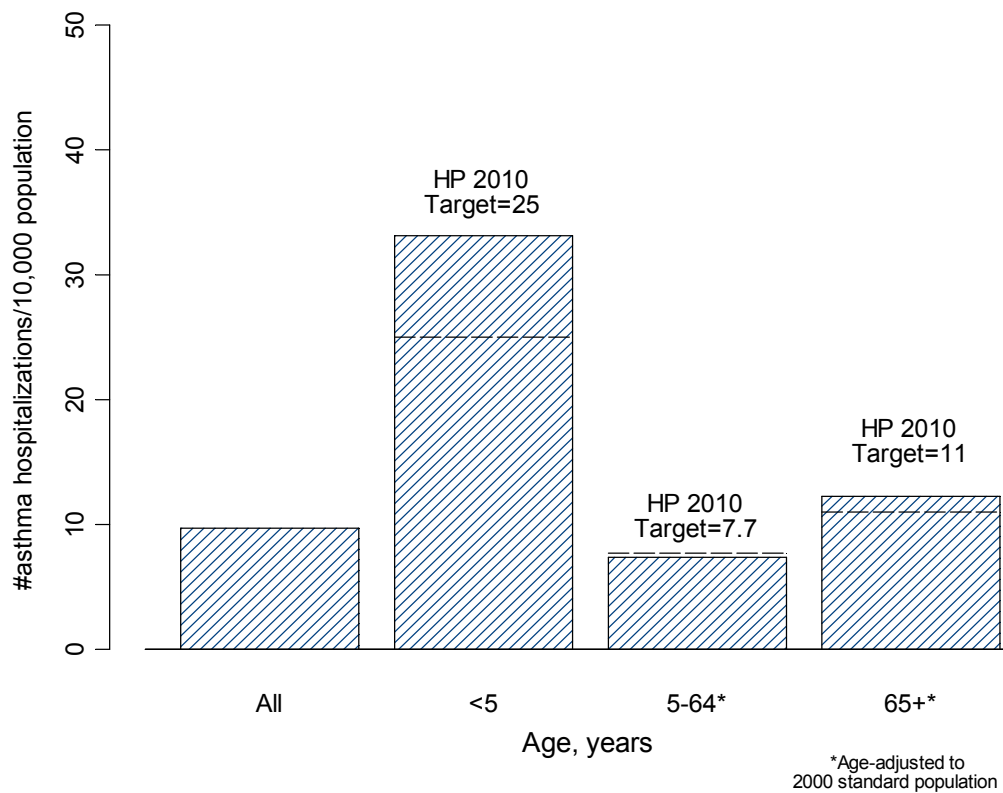
Source: JCDHE 2003 Community Health Survey and CDPHE-BRFSS

Figure 4.38 Asthma mortality in Jefferson County, by age group, 1997 - 2001



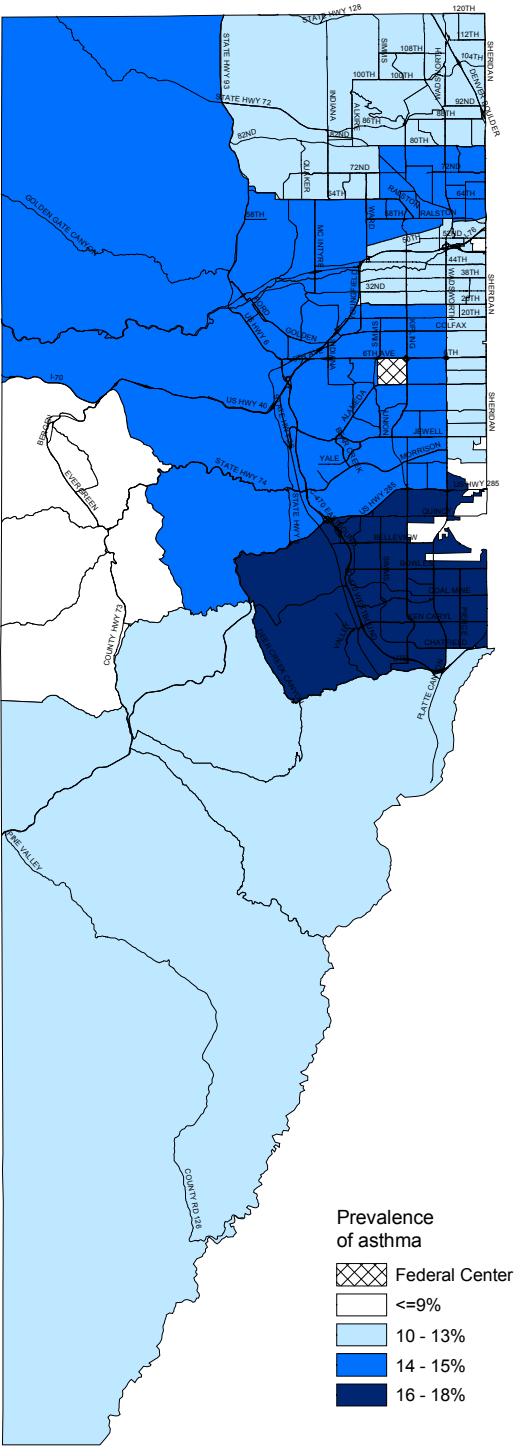
Source: JCDHE Epidemiology and CDPHE-HSVRD

Figure 4.39 Asthma hospitalizations, Jefferson County, by age group, 1997 - 2001



Source: JCDHE Epidemiology and CHA Hospital Discharge Dataset

Figure 4.40. Percent of adults in Jefferson County who have had a diagnosis of asthma, (Source: 2003 Community Health Survey.)



4.16 CHRONIC OBSTRUCTIVE PULMONARY DISEASE

HP 2010 Objective 24-10: Reduce the number of deaths from chronic obstructive pulmonary disease among adults aged 45 years and older to no more than 60 per 100,000 population.

Jefferson County Status: In 1998 – 2002, the number of deaths among adults aged 45 years and older was 154.8 per 100,000 population.

Chronic obstructive pulmonary disease (COPD) is a major cause of morbidity and mortality in the U.S. COPD includes chronic bronchitis and emphysema, and is characterized by irreversible airflow obstruction from the lungs and lower respiratory tract. COPD is the fourth leading cause of death in the U.S. The major risk factor for COPD is cigarette smoking.

The HP 2010 target for COPD was set for a 50% reduction in age-adjusted mortality among adults aged 45 years and older. The U.S. age-adjusted baseline for adults 45 years and older was 119.4 deaths per 100,000 so the target was established at 60 deaths per 100,000 population.

Jefferson County Findings

- Age-adjusted mortality for all ages is very similar to that for Colorado for the period 1990 – 2002 (Figure 4.41, bottom lines), and has averaged 56.2 deaths per 100,000 population. The average for Colorado for the period was 54.8 deaths per 100,000 population.
- For adults aged 45 years and over, the age-adjusted mortality rate (Figure 4.41, top line) averaged 155 deaths per 100,000 population. This is 30% higher than the U.S. age-adjusted baseline, 119.4, for this age group.
- About 5% of respondents to the 2003 Community Health Survey reported that they had a diagnosis of emphysema or chronic bronchitis. Rates were higher among women, non-Hispanics, older adults and those with lower incomes (Figure 4.42).
- Prevalence of emphysema or COPD varied geographically in the county (Figure 4.43). Health survey respondents in the central-eastern area of the county reported higher rates of COPD.

Figure 4.41 Age-adjusted COPD mortality for all ages and for adults 45+ years, Jefferson County and Colorado, by year, 1990 - 2002

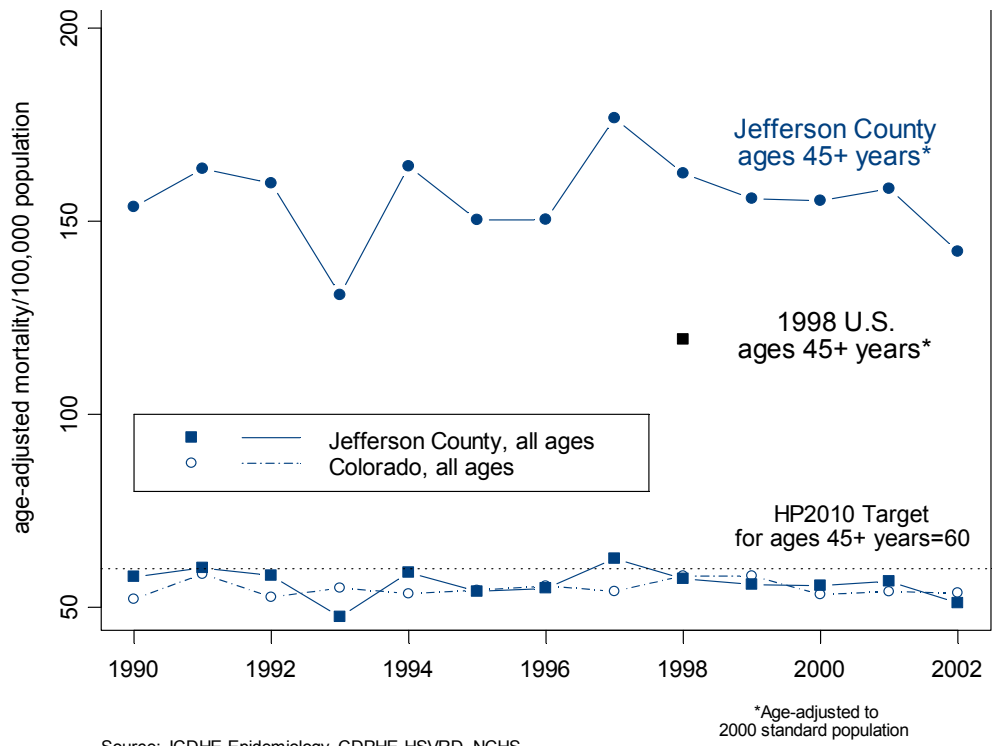


Figure 4.42 Adults in Jefferson County with emphysema and chronic bronchitis, by age, ethnicity, gender and income, by percent, 2003

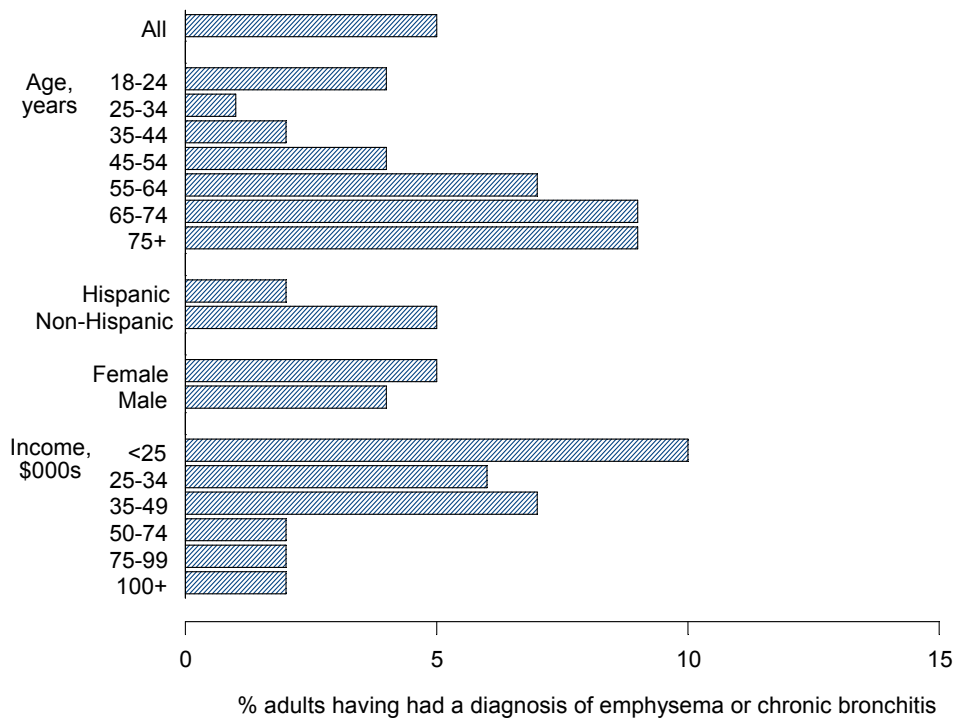


Figure 4.43. Percent of adults in Jefferson County who have had a diagnosis of emphysema or chronic obstructive pulmonary disease. (Source: 2003 Community Health Survey.)

