



Colorado Department
of Public Health
and Environment

Health Disparities and Cardiovascular Disease

Introduction

Cardiovascular disease is a broad term that includes heart disease (commonly known as heart attack), stroke, heart failure, hypertensive heart disease, and diseases of the arteries, veins, and circulatory system. On average, one Coloradan dies every hour due to cardiovascular disease. In 2003, there were 9,228 deaths caused by cardiovascular disease in Colorado, accounting for 31 percent of the total causes of death.

Cardiovascular disease is the leading cause of death among every racial or ethnic group. However, there is a disproportionate burden of death and disability from cardiovascular disease present in minority populations. Health disparities also exist in the prevalence of modifiable risk factors for cardiovascular disease.

Methodology

To determine the presence of racial and ethnic health disparities related to cardiovascular disease, three data sources were used: The Colorado Demography Section, Vital Statistics, and the Behavioral Risk Factor Surveillance System (BRFSS). Population characteristics are reported using data from the Colorado Demography Section. Vital Statistics provided the data on mortality rates for heart disease and stroke, the two major causes of death categorized as cardiovascular disease. The BRFSS data were analyzed to assess the prevalence of modifiable risk factors among adults in Colorado ages 18 and older.

The data from the aforementioned sources were organized using five standard categories to define racial and ethnic groups:

- White (including non-Hispanic White);
- Black (including non-Hispanic Black or African American);
- Hispanic (including Latino);
- Asian; and
- American Indian.

The BRFSS data uses “Other” composed of Asian, Native Hawaiian or Other Pacific Islander, American Indian, Alaska Native, and Other.

Population Distribution

According to the 2000 Census, Colorado’s population was over 4.3 million and nearly 25% were members of minority racial and ethnic groups (Figure 1).

Figure 1: Population by Race/Ethnicity, Colorado, 2000

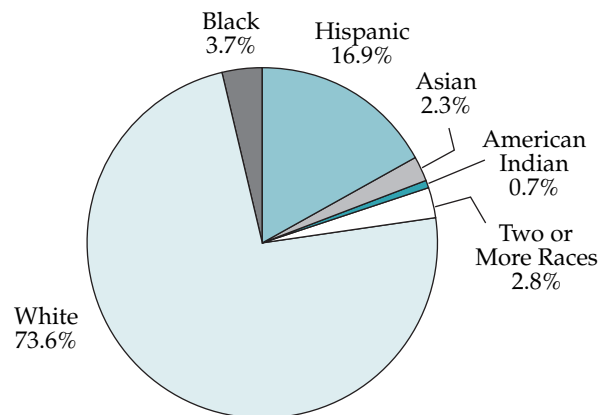
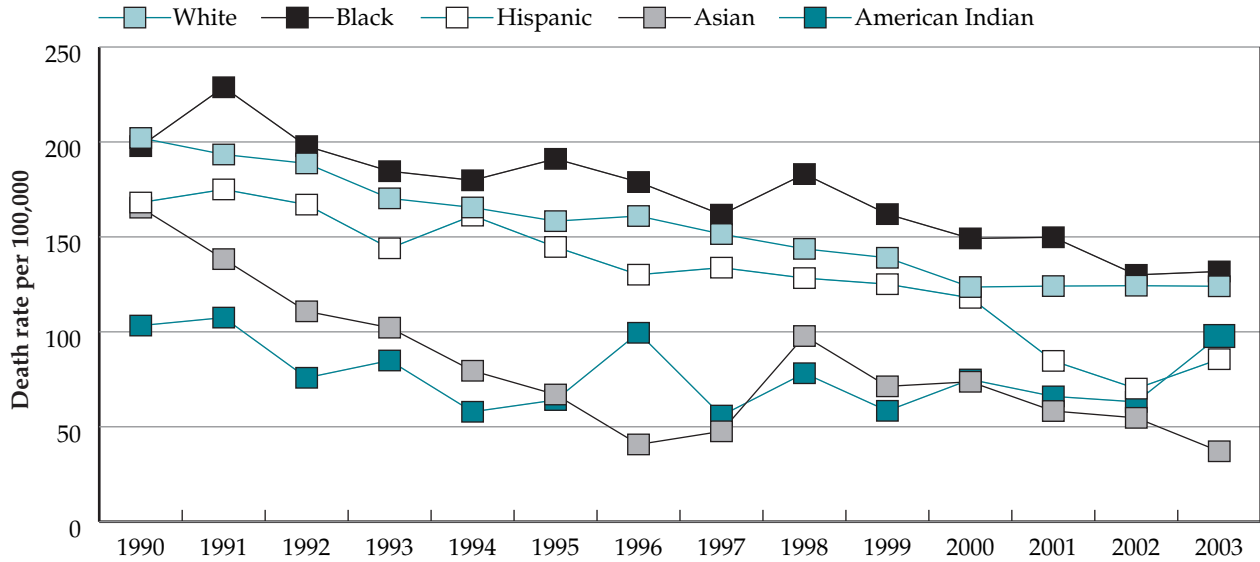


Figure 2: Trends in Heart Disease by Race/Ethnicity, Colorado, 1990–2003



Mortality

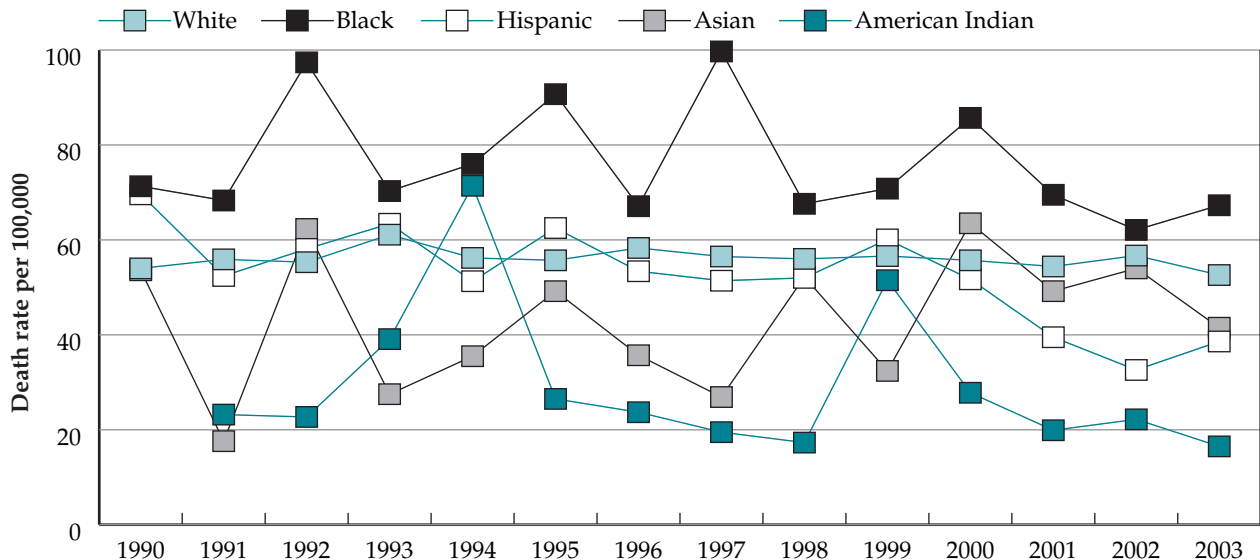
Cardiovascular disease remains the leading cause of death in Colorado even though there has been a 30 percent decrease in the death rate between 1990 and 2003. Heart disease and stroke are the first and third leading causes of death in Colorado and in the United States.

The age-adjusted death rates for heart disease by race and ethnicity from 1990 to 2003 are presented above (Figure 2). Blacks have consistently had higher death rates than other groups. The rates for Whites,

Blacks, and Hispanics have declined over the 13-year period. Rates for Asians and American Indians have been the lowest but show more fluctuation due to smaller numbers.

The age-adjusted death rates due to stroke by race and ethnicity from 1990 to 2003 are shown below (Figure 3). Blacks have consistently had higher death rates than other groups. Rates for Blacks, Asians, and American Indians show more fluctuation due to smaller numbers.

Figure 3: Trends in Stroke by Race/Ethnicity, Colorado, 1990–2003



Risk Factors

Risk factors for heart disease and stroke have been well established for many years. Non-modifiable risk factors include advancing age, family history, gender, and genetic determinants. The modifiable risk factors for cardiovascular disease are summarized below:

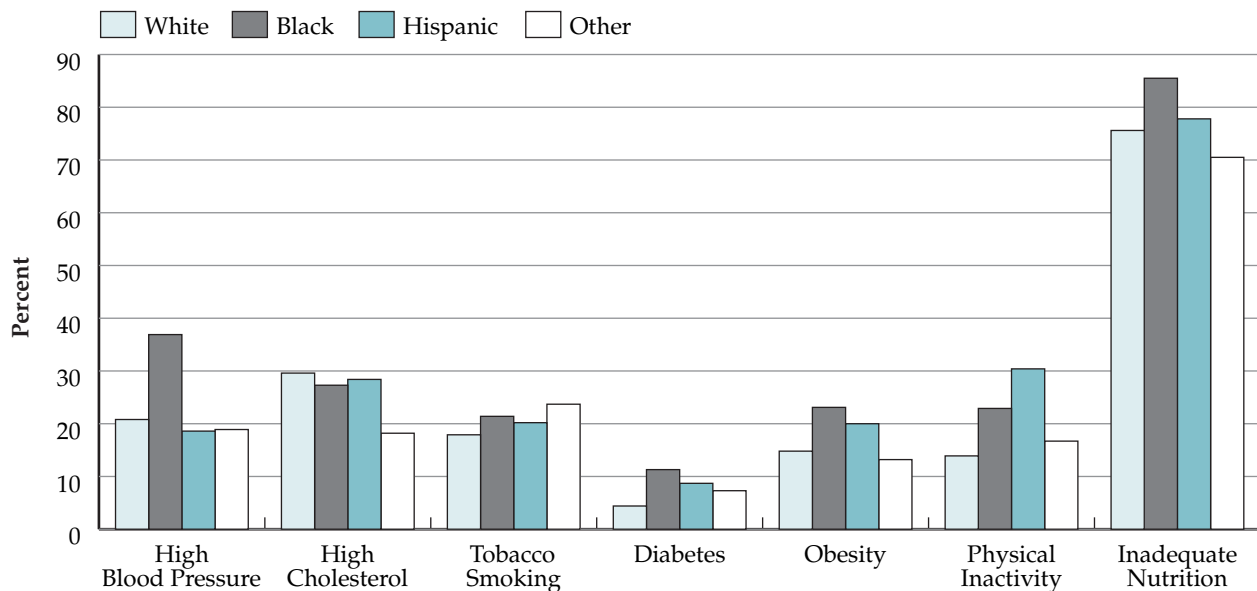
- High blood pressure is a major risk for heart attack and the most important risk factor for stroke.
- High blood cholesterol, high total cholesterol, high LDL cholesterol, high triglyceride levels, and low levels of HDL cholesterol increase risk of heart disease and stroke.
- Tobacco smoking increases risk of cardiovascular disease. Breathing second-hand smoke is an additional risk.
- Adults with diabetes are two to four times more likely to have a heart attack or suffer a stroke than adults who do not have diabetes.
- Adults who are obese are twice as likely to have high blood pressure. Obesity is also associated with elevated triglycerides and decreased HDL cholesterol.
- Physical inactivity—increases the risk of heart disease and stroke by 50 percent.



- Inadequate nutrition is a risk factor for cardiovascular disease. Eating five servings of fruits and vegetables every day lowers the risk of ischemic stroke by 30 percent.

A summary of the non-modifiable risk factors from the 2003 Behavior Risk Surveillance Survey (BRFSS) shows the disparities within different racial and ethnic groups (Figure 4). As seen in the chart below, Blacks had the highest prevalence of high blood pressure, diabetes, obesity, and inadequate nutrition. Hispanics had the highest prevalence of physical inactivity. Whites had the highest prevalence of high cholesterol. ‘Other’ had the highest prevalence of current smokers.

Figure 4: Age-Adjusted Prevalence of Risk Factors by Race/Ethnicity, Colorado, 2003



For the Future

Colorado's health disparities parallel the national picture. African Americans have the highest death rate due to cardiovascular disease and the shortest life expectancy. To increase the quality and length of life among cardiovascular disease survivors and the eliminate health disparities, greater efforts are needed to implement prevention and intervention activities among population groups, particularly African Americans.

Racial and ethnic health disparities are complex. Factors that explain health disparities include biology, socioeconomic factors, cultural issues, and bias in healthcare. Modifying risk factors offers the greatest potential for reducing cardiovascular disease morbidity, disability, and mortality.

In collaboration with organizations and health professionals throughout the state, the Colorado Department of Public Health and Environment established a Cardiovascular Disease and Stroke Prevention Coalition to implement strategies that will decrease mortality, morbidity, and risk factors associated with cardiovascular disease. The coalition identified objectives through a strategic planning process to develop Colorado's state plan to reduce cardiovascular disease. The elimination of health disparities is an overarching principle of Colorado's state plan to reduce cardiovascular disease.

Visit our website at www.cdphe.state.co.us/pp/cvd



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