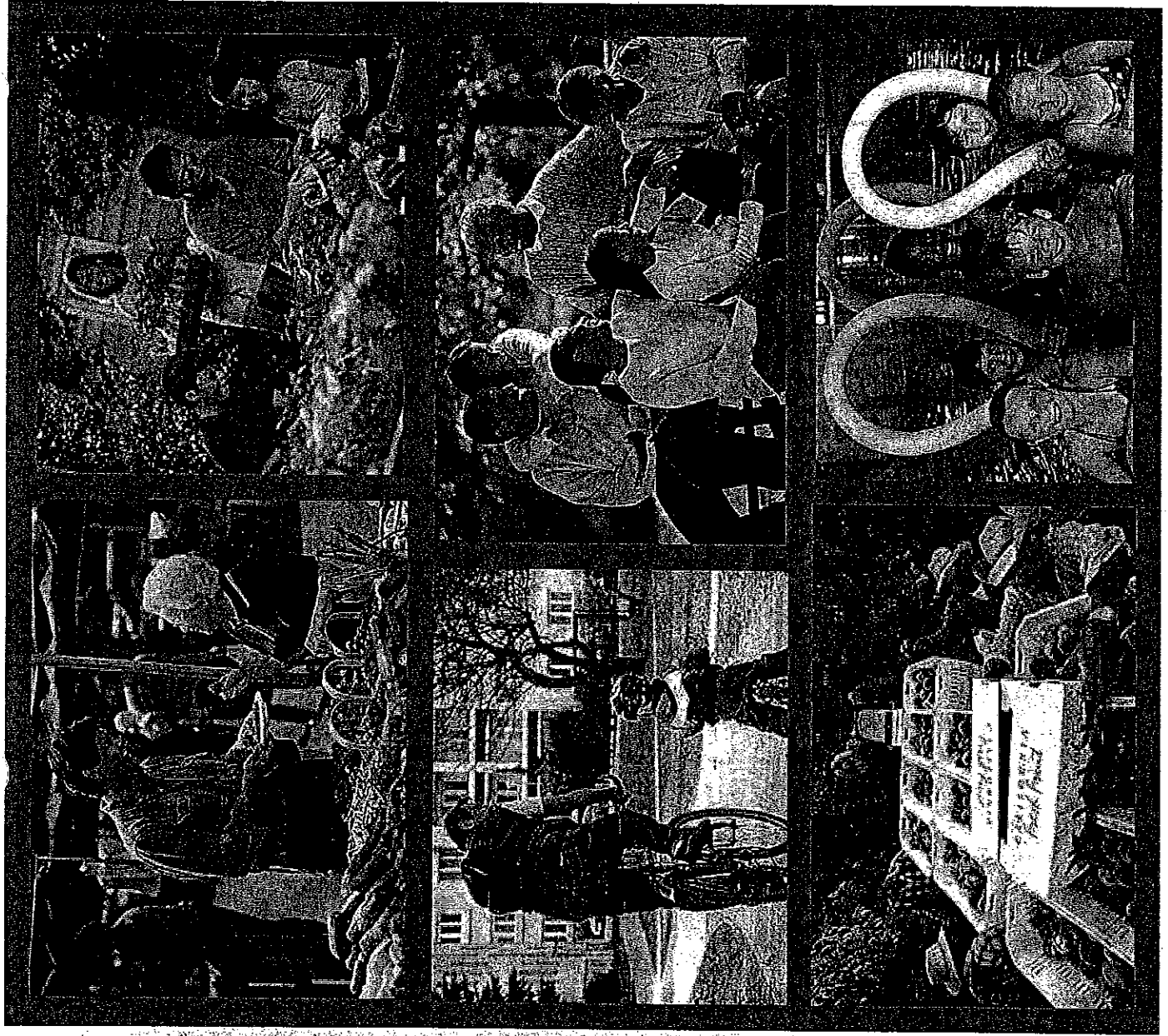


The Burden of Chronic Disease and Injury

California, 2013



I. AN INTRODUCTION TO CHRONIC DISEASE AND INJURY IN CALIFORNIA

Most Californians Die from Chronic Disease

Despite advances in treatment, death rates resulting from preventable chronic disease and injury have remained high.

- Heart disease and stroke are the first and third leading causes of death.
- Cancer is the second leading cause of death.

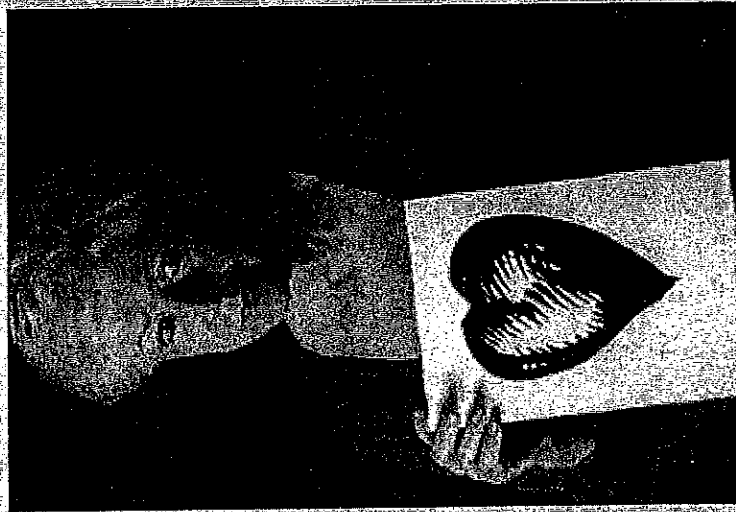
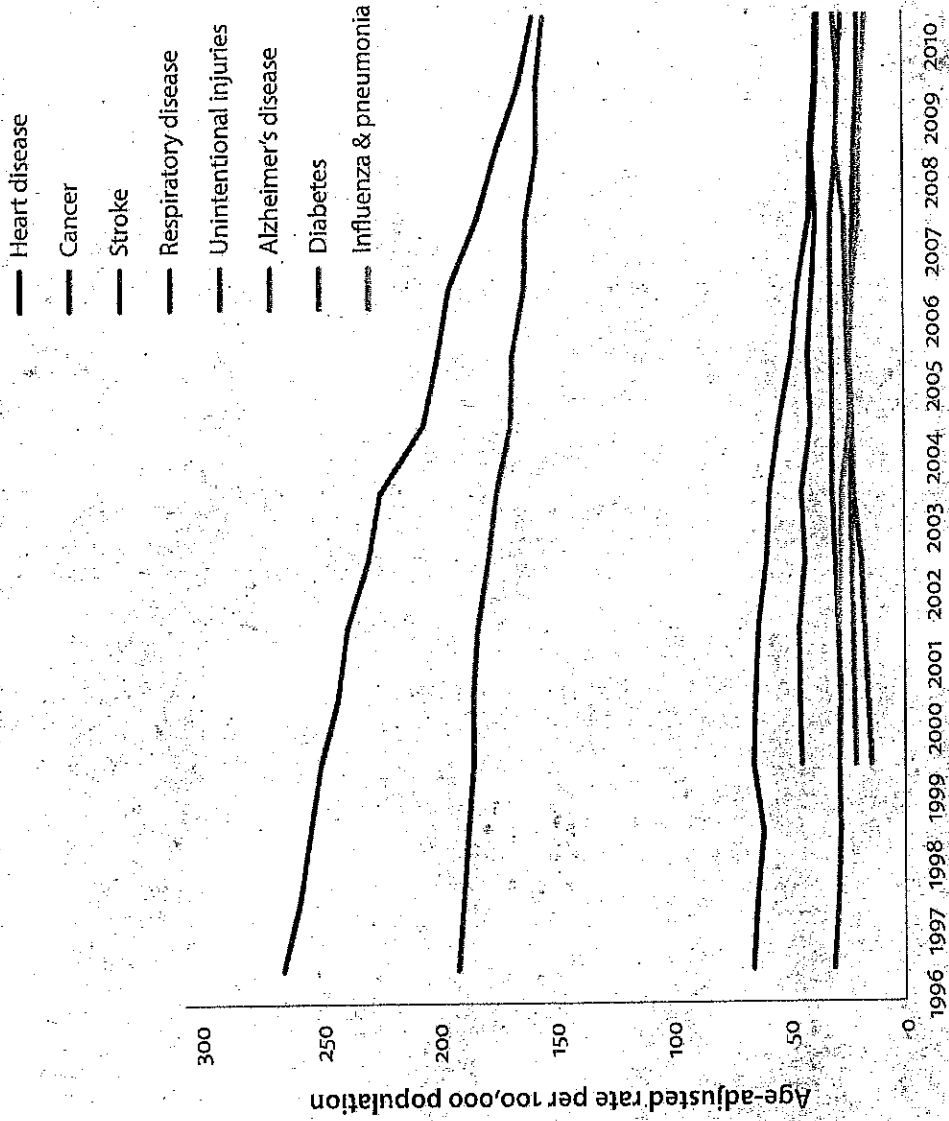


Figure 3. Leading causes of death, California, 1996-2010



Source: California Department of Public Health, Vital Records, 2012

I. AN INTRODUCTION TO CHRONIC DISEASE AND INJURY IN CALIFORNIA

Chronic Disease Lowers Workforce Productivity

Californians with chronic disease report more days of poor health. Poor health can affect a person's mental well-being and productivity in school or at work.

Both mental and physical poor health can lead to job loss, increased school dropout rates, and ultimately, economic hardship.

- Twenty-one percent of adults with both diabetes and arthritis experience major depression.
- Asthma, diabetes, heart disease, and arthritis are responsible for the most absenteeism and disruption

in daily activities.

- Twenty-three percent of children ages 0-17 with asthma reported missing at least 1 day of school in the previous 12 months due to an asthma flare.
- Ten percent of children ages 0-17 with asthma reported missing 5 or more days.

Figure 4a. Chronic disease and quality of life, 2005

Days when work or other activities were limited in the past month due to physical or mental health, by chronic disease, California

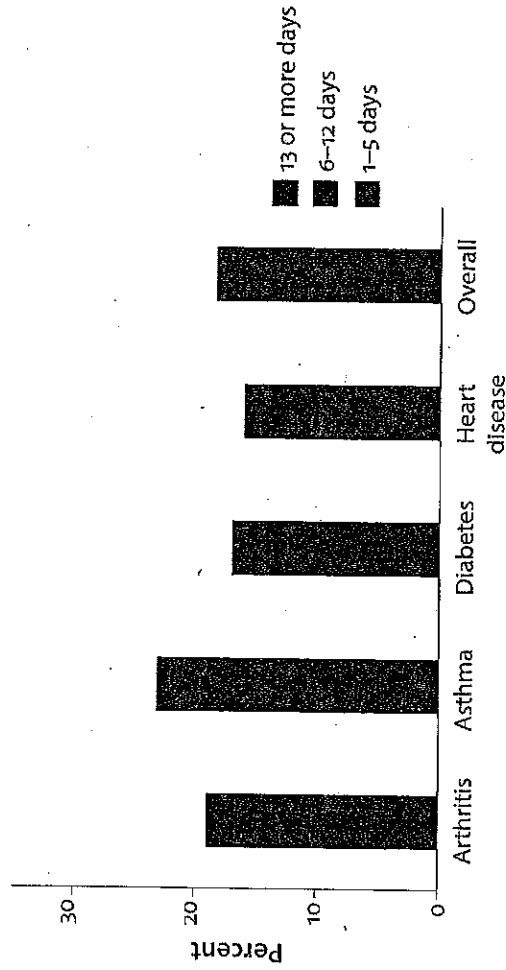
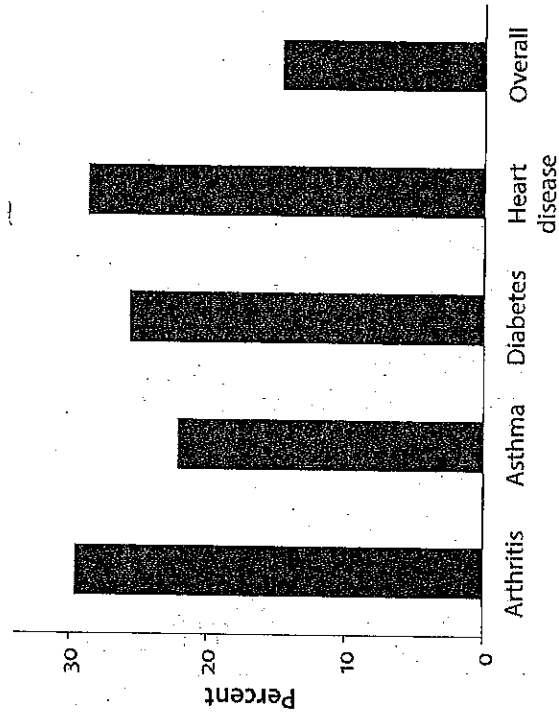


Figure 4b. Chronic disease and quality of life, 2005

Prevalence of 21 or more days in poor health in the past month, by chronic disease, California



Source: California Health Interview Survey, 2005

Public Health Challenge: Poor Diet and Physical Inactivity

People who do not engage in adequate amounts of physical activity or have a calorie-dense diet are at increased risk for type 2 diabetes, heart disease, stroke, some types of cancer, and other chronic diseases.

Too few Californians are physically active.

- One-third of California teens do not engage in the recommended level of physical activity (vigorous activity three or more times per week).
- Approximately 20 percent of children ages 2–11 report watching more than 2 hours of television or video games on a typical weekday.
- Nearly one in four California adults reports that they do not engage in any physical activity.

Many Californians are eating too much calorie-dense, nutrient-poor food.

- Less than half of California children ages 2–11 eat the recommended number of fruits and vegetables daily (five servings).
- 28 percent of California children ages 2–11 and 43 percent of teens and adults eat at least one fast food meal daily.
- 14 percent of children ages 2–11 and 30 percent of teens and adults drink two or more cans or glasses of sugar-sweetened beverages daily.
- On average, Americans now consume approximately 300 more calories daily than they did in 1985.



Place and Neighborhood Matter for Health

The communities in which people are born, go to school, live, work, worship, and age largely determine health status.

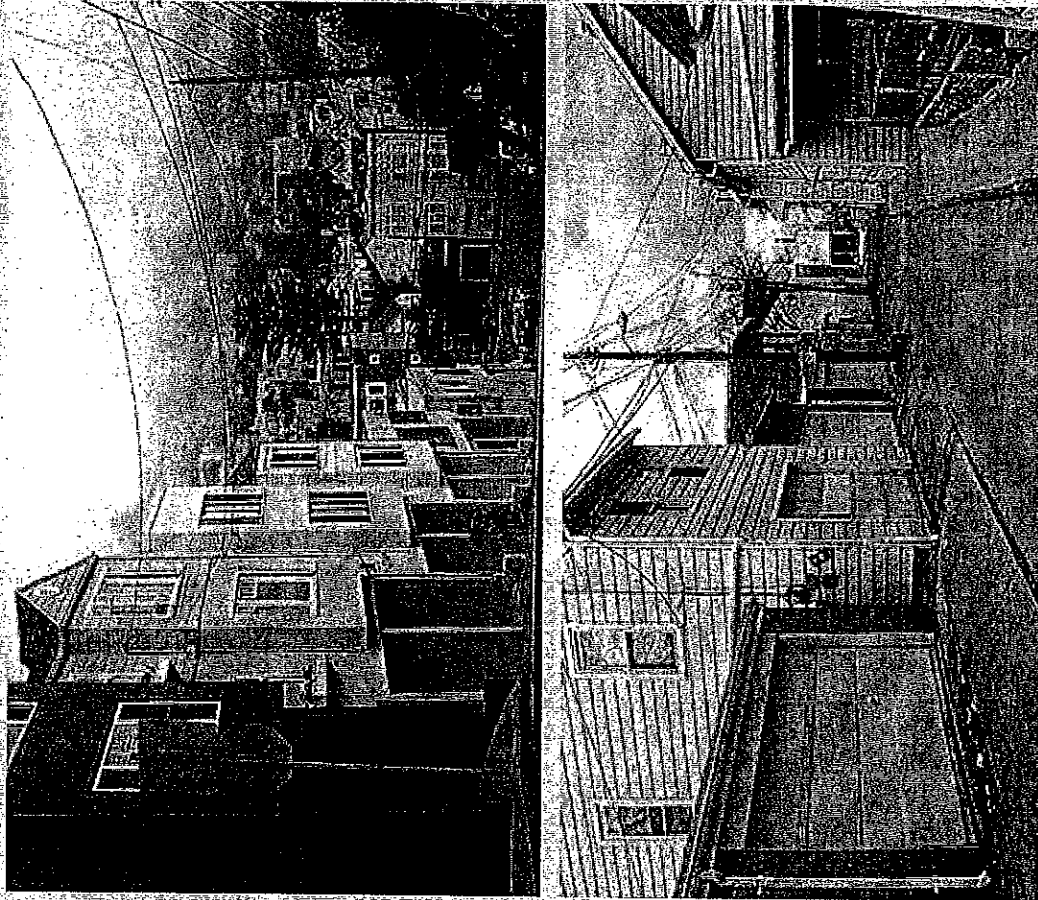
It is almost impossible to maintain good health in a neighborhood without:

- Safe streets and transportation, including safe intersections, traffic lights, crosswalks, sidewalks, and bike lanes;
- Opportunities for physical activity, including safe playgrounds, parks, and other walkable areas;
- Access to conveniently located, nutritious, affordable food;
- Quality schools;
- Safe and affordable housing; and
- Equitable employment opportunities.

Low-income and minority neighborhoods are less likely to have access to recreational facilities and full-service grocery stores and more likely to have higher concentrations of stores selling tobacco, alcohol, and fast food.

Adolescents who grow up in neighborhoods characterized by concentrated poverty are more likely to be victims of violence, use tobacco, alcohol, and other substances, and become obese.

As important as good health care is, most experts agree that health care contributes only about 10–15 percent to health outcomes and life span. Where you live is a larger determinant of your health than health care.



Heart Disease and Stroke

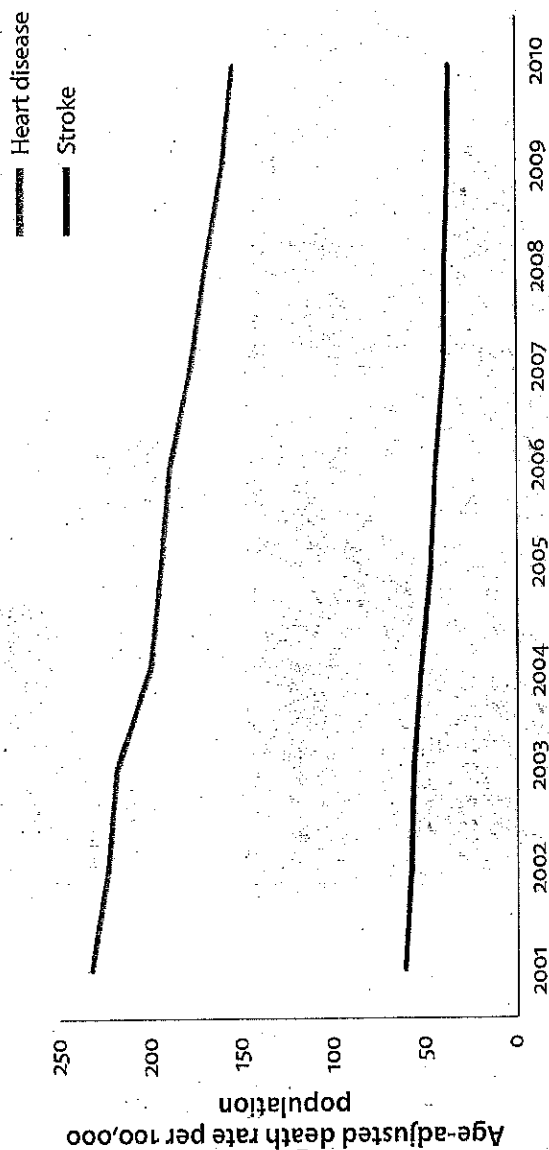
What are heart disease and stroke?

Heart disease refers to all diseases that involve the heart including congestive heart failure and heart attack. A stroke, or "brain attack," occurs when a blood clot blocks an artery or a blood vessel breaks, interrupting blood flow to an area of the brain.

Heart disease is the leading cause of death in California.

- In 2010, more than 78,000 Californians died of heart disease.
- From 2001 through 2010, the overall heart disease death rate declined 34 percent—from 232 to 154 per 100,000 population.
- From 2001 through 2010, the overall stroke death rate declined 41 percent—from 61 to 36 per 100,000 population.
- These reductions in cardiovascular deaths are due to tobacco-control efforts and to improvements in medical treatment. These gains are threatened by the rise in obesity, which increases the risk of dying from heart disease and stroke.

Figure 20. Heart disease and stroke death rates, California, 2001–2010



Source: California Department of Public Health, Heart Disease and Stroke Prevention Program, 2012

Heart Disease: Unequal Impacts

Socioeconomic status is an important predictor of heart disease in California.

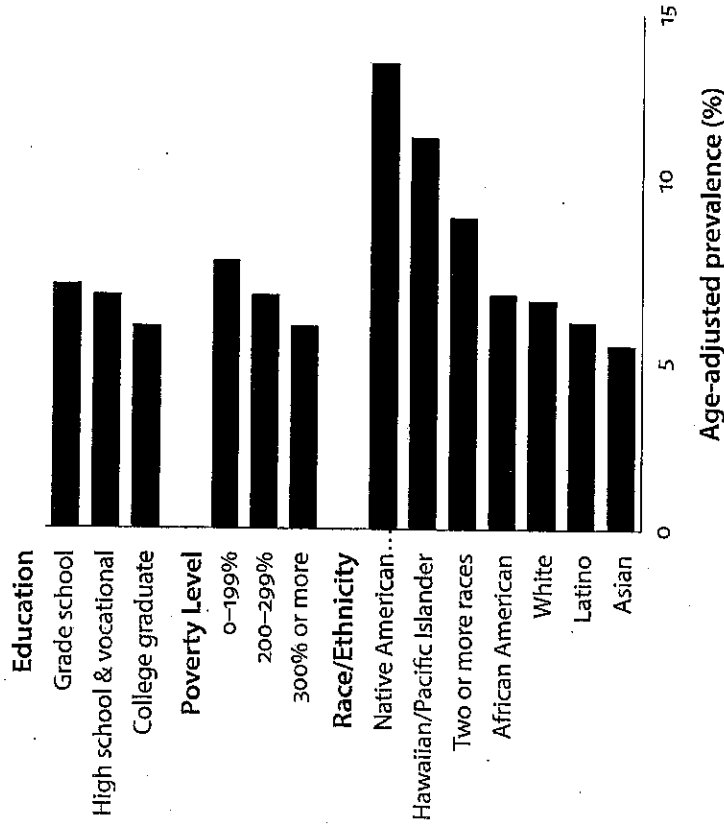
As education increases, the risk of heart disease falls. A similar relationship exists between income and heart disease.

Lower education and income impact heart disease by reducing access to health care, chronic stress from poverty and living in environments that are not conducive to a healthy diet and physical activity.

- Native Americans and Pacific Islanders have rates of heart disease that are two times higher than those of other ethnicities.



Figure 21. Social determinants influence the share of California adults who were ever told by a doctor that they have heart disease, 2007



Source: UCLA, California Health Interview Survey, 2007

Stroke: Unequal Impacts

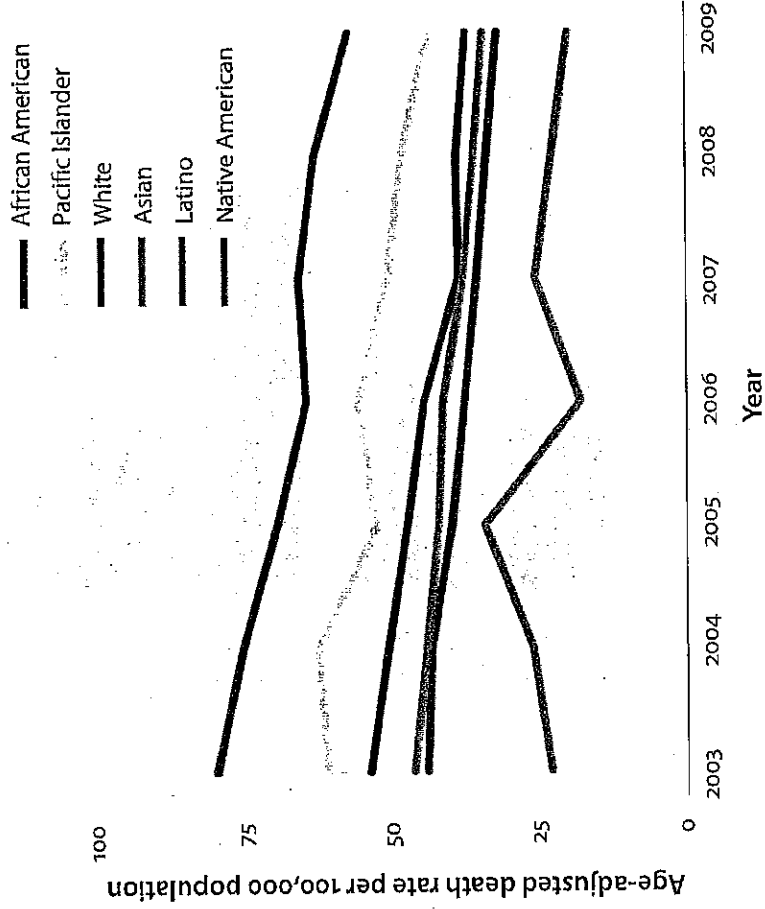
Death rates from stroke are declining in almost all racial/ethnic groups in California.

However, the rate in African Americans is still 50 percent higher than that of other ethnicities, and gaps between racial/ethnic groups are not narrowing.

Racial/ethnic disparities in stroke death mirror racial/ethnic differences in risks due to high blood pressure, diabetes, high cholesterol, tobacco use, and obesity, except in Native Americans.



Figure 22. Stroke death rates by race/ethnicity, California, 2003–2009



Source: California Department of Public Health, California Heart Disease and Stroke Prevention Program, 2012

Diabetes

What is diabetes?

Diabetes is a chronic condition, marked by high levels of blood glucose (sugar) resulting from defects in insulin production, insulin action, or both. It is the leading cause of blindness, amputations, and kidney failure, and is a major contributor to heart attacks and strokes.

Diabetes is rising quickly in California.

- The number of persons with diabetes has increased 32 percent over the past decade.
- 3.9 million people, or one in seven adults in California, have diabetes.
- Almost 11.4 million California adults have pre-diabetes.
- 7 percent of people with diabetes are unaware of their condition.
- Without intervention, about one in four people with pre-diabetes will develop type 2 diabetes within 3-5 years.

Figures 44a and 44b illustrate how quickly diabetes rates are increasing in California.

Figure 44a. Diabetes prevalence in California counties, 2004

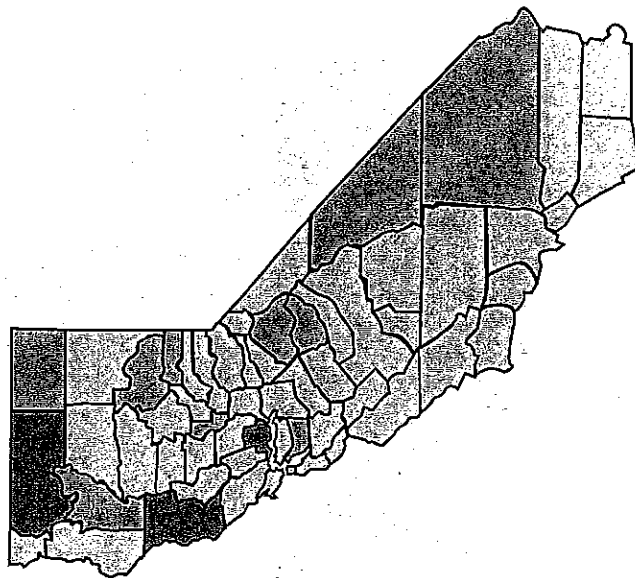
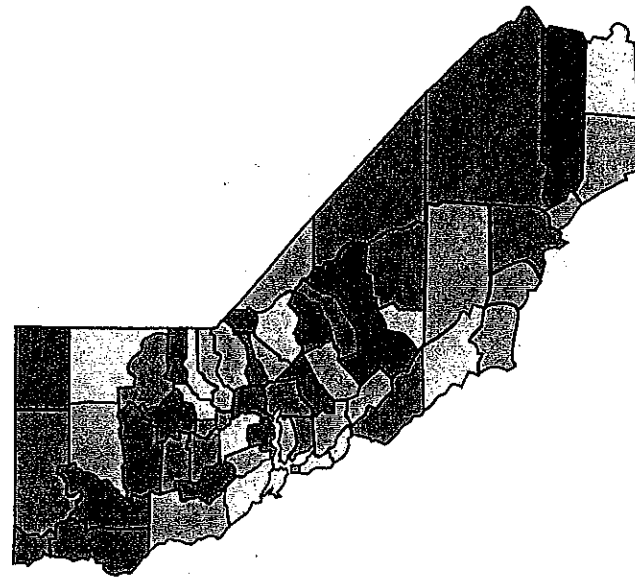
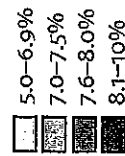


Figure 44b. Diabetes prevalence in California counties, 2008



Percent of residents with diabetes



II. PORTRAITS OF CHRONIC DISEASE AND INJURY IN CALIFORNIA

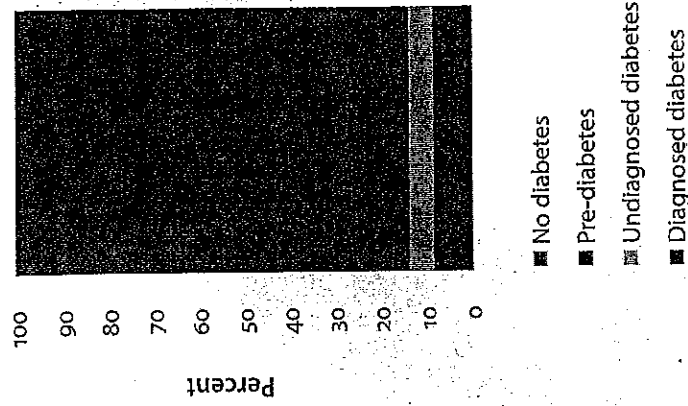
Diabetes, continued

- Among U.S. states, California has the greatest number of new persons with diabetes every year.
- Diabetes costs in California exceed \$24 billion each year. This is due to direct medical costs, such as hospitalizations and medical care, and indirect medical costs, such as disability, time lost from work, and premature death.
- Treatment costs can be reduced by managing diabetes and preventing complications.

Diabetes reduces life expectancy by 18 years if diagnosed at age 20, 14 years if diagnosed at age 40, and 10 years if diagnosed at age 60.



Figure 45. Adult diabetes prevalence, California, 2010



Source: Centers for Disease Control and Prevention; National Diabetes Surveillance System, 2012

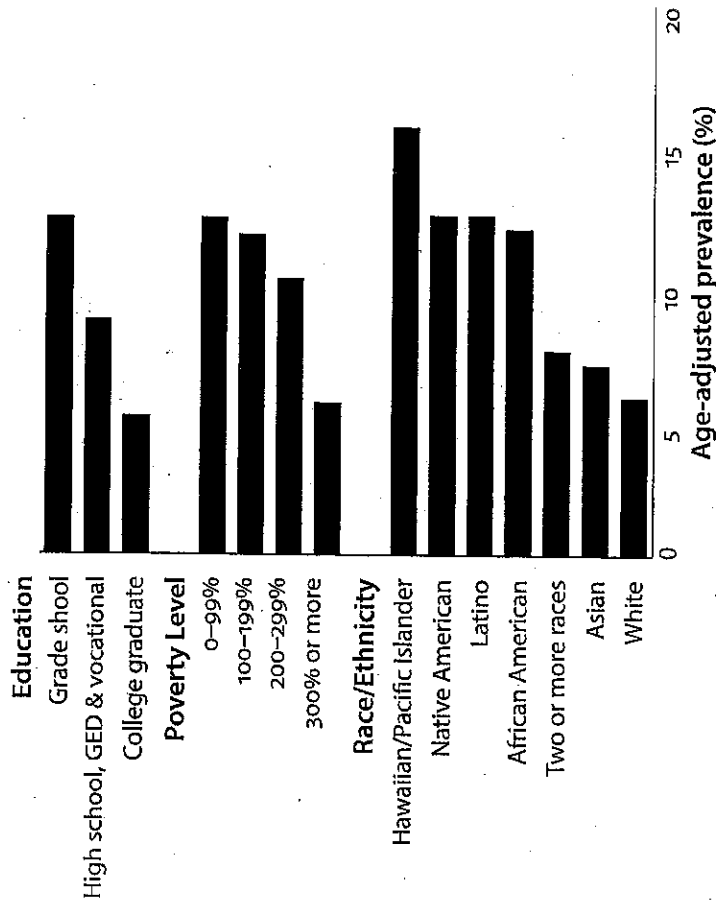
Diabetes: Unequal Impacts

Ethnic minorities and those who are poor or less advantaged have especially high rates of diabetes.

- One in 18 White adults have diabetes, yet one in seven Hawaiians/Pacific Islanders, one in eight Native Americans and Latinos, and one in nine African Americans have diabetes.
- The rate of diabetes among Californians without a high-school diploma is more than two times higher than the rate for Californians with a college degree.
- The percentage of adults with diabetes is more than two times higher in those with a family income below 200 percent of the federal poverty level as compared to those whose income is 300 percent above the poverty level.



Figure 46. Social determinants influence the share of California adults who were ever told by a doctor that they have diabetes, 2007



Source: UCLA, Center for Health Policy Research, 2007

Obesity

What is obesity?

For adults, overweight and obesity are determined by using weight and height to calculate a number called the "body mass index" (BMI). BMI is used because, in most people, it correlates with their amount of body fat.

- An adult who has a BMI between 25 and 29.9 is considered overweight.
- An adult who has a BMI of 30 or higher is considered obese.

Obesity is a chronic disease and increases risk for and aggravates cardiovascular disease, cancer, diabetes, and arthritis, among others.

Although there are a number of risk factors associated with obesity, ranging from genetics to individual behavior, the composition and structure of neighborhoods, levels of poverty, and other social factors impact a person's ability to maintain a healthy lifestyle and weight.

Figures 49a and 49b illustrate how quickly obesity rates are increasing in California.

Figure 49a. Obesity prevalence by body mass index, adults, 2004

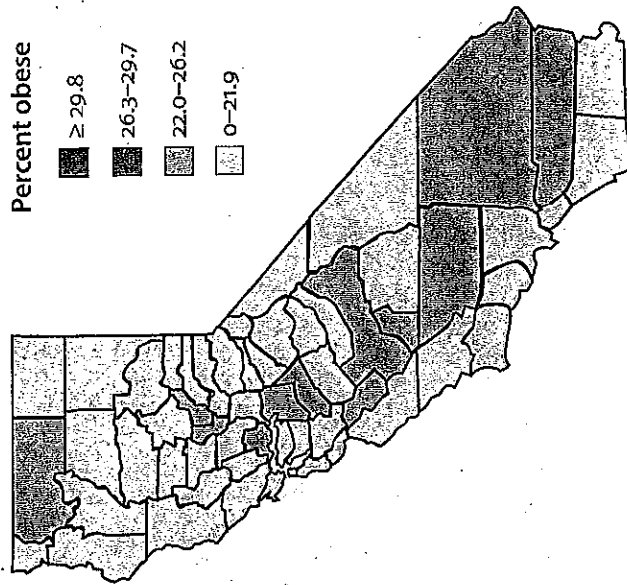
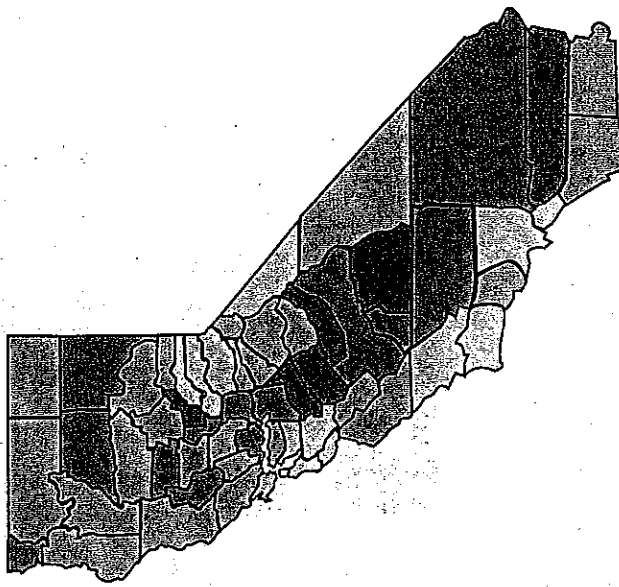


Figure 49b. Obesity prevalence by body mass index, adults, 2009



Source: Centers for Disease Control and Prevention: National Diabetes Surveillance System, 2012

Obesity, continued

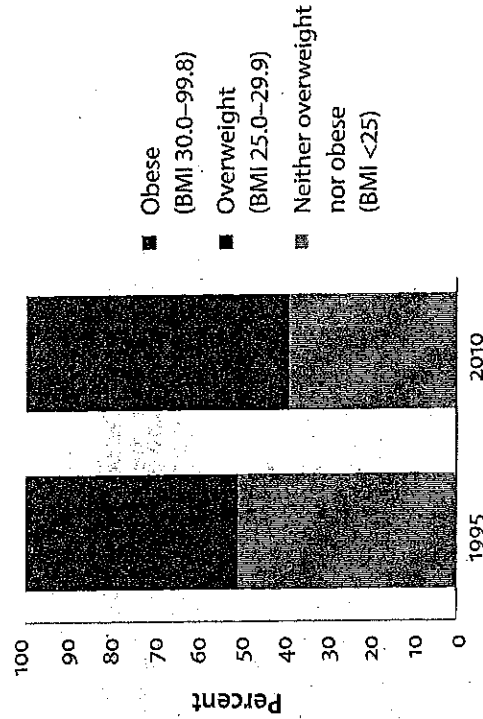
Obesity is rising in California and nationwide.

- In 1984, 40 percent of California adults were overweight or obese; in 1995, 50 percent were overweight or obese, and in 2010, almost 60 percent were overweight or obese.
- One in every nine California children, and one in three teens, are already overweight or obese.

According to the California Center for Public Health Advocacy, costs to California resulting from physical inactivity, obesity, and overweight were estimated at \$41.2 billion in 2006. A five-percent decrease in each of these risk factors could result in annual savings of nearly \$2.4 billion.



Figure 50. Prevalence of obesity/overweight in California adults, 1995, 2010



Source: Centers for Disease Control and Prevention, California Behavioral Risk Factor Survey, 2012



Obesity: Unequal Impacts

Obesity rates are highest among racial and ethnic minorities.

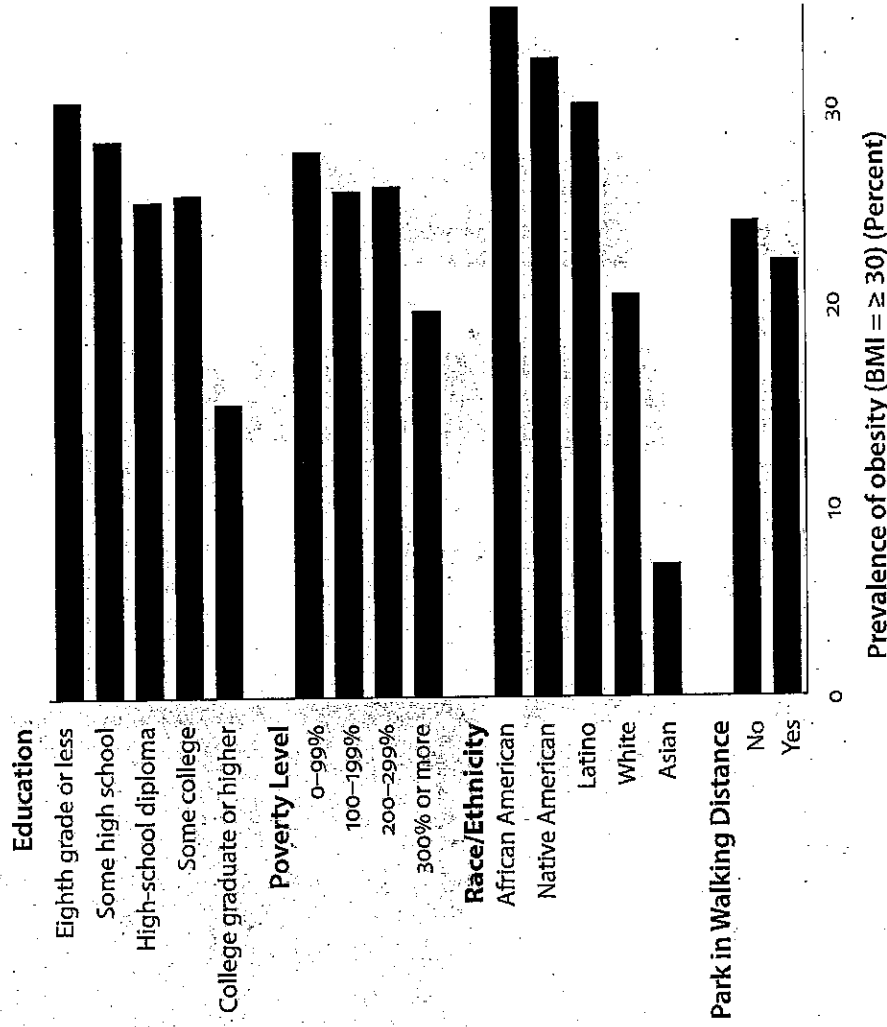
- African Americans have a rate that is over five times greater than that of Asians, the population with the lowest prevalence of obesity.
- 76 percent of Native Americans in California are overweight or obese.

Where people live, work, and play impacts obesity.

- In Imperial County, 73 percent of adults are overweight or obese (highest in the State), versus only 43 percent of San Francisco County adults.
- Within counties, residents of low-income neighborhoods have higher obesity rates.
- In West Los Angeles, approximately three in every ten adults are overweight or obese, versus more than seven in every ten adults in South Los Angeles.

Californians with less than a high-school diploma are twice as likely to be obese as college graduates.

Figure 51. Social and environmental determinants influence the share of California adults who are obese, 2007



Source: University of California, Los Angeles, California Health Interview Survey, 2007



Childhood Obesity

Overweight and obesity rates in California's youth tripled over the past 30 years but have been stable from 2005 to 2010.

- In 2010, 38 percent of public school children in grades 5, 7, and 9 had a body mass index (BMI) in the overweight or obese range.

The high overweight and obesity rates in children vary greatly by county, neighborhood, and race/ethnicity.

- Marin County has the lowest rate (2.5%).
- Imperial County has the highest rate (47%).
- The two cities with the highest and lowest rates are both in Los Angeles County: (Huntington Park [53%] and Manhattan Beach [11%]).

Breastfeeding provides reduced risk for obesity and obesity-related chronic diseases such as diabetes and asthma, but most California newborns are not exclusively breastfed after delivery.

- There is a 15–30 percent reduction in adolescent and adult obesity rates if any breastfeeding occurred in infancy, compared with no breastfeeding.
- In 2010, only 46 percent of California mothers were exclusively breastfeeding 1 month after delivery, and 32 percent were exclusively breastfeeding 3 months after delivery.
- Breastfeeding rates are lowest among Latina and African-American women.

As a direct result of the obesity epidemic, health care providers are seeing a significant rise in chronic diseases in children.

- Obese children are more than twice as likely to have type 2 diabetes as children of normal weight.
- If current obesity trends continue, experts warn that one of three American children born in 2000—and half of all children from ethnic/racially diverse populations—will develop type 2 diabetes during his/her lifetime.

Figure 52a. Prevalence of obesity among low-income children, ages 2–4, by race/ethnicity, California, 2009

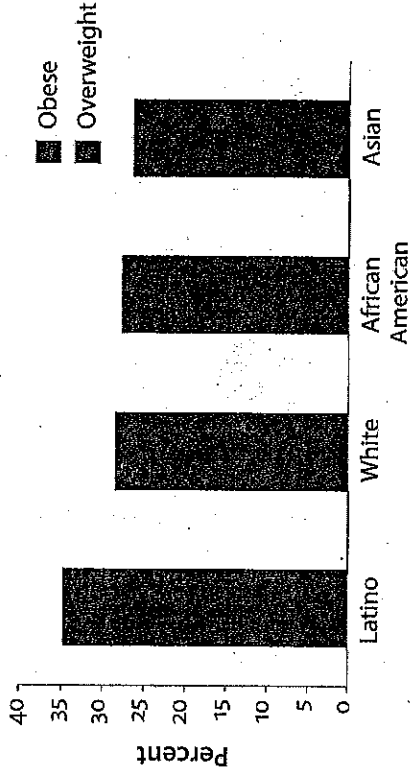
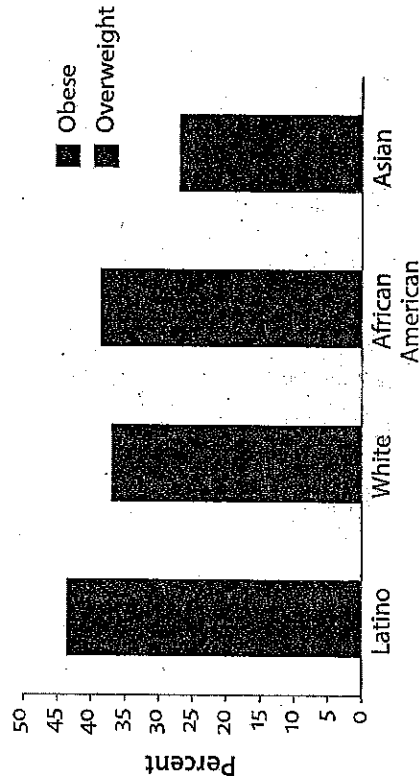


Figure 52b. Prevalence of obesity among low-income children, ages 5–19, by race/ethnicity, California, 2009



Source: California Department of Public Health, 2009 Pediatric Nutrition Surveillance System Data Tables

III. THE ROAD AHEAD

Preventing and controlling chronic disease and injury require more than providing people with information to make healthy choices.

Although an individual's knowledge and behavior change are crucial and should always be encouraged, it is imperative that we start thinking about individuals in the context of their family, their community, and their environment.

Consider a woman with diabetes and heart disease. The impacts of her diseases are not isolated. Her diseases affect her well-being, and through her, her family, community, employer, and the health care system. Conversely, her surroundings constantly affect her physical, mental, and emotional health. The safety and economic stability of her community and family, the air she breathes, the transportation she has access to, the parks and markets she can walk to, the amount of money she makes, and more, all affect her health every day.

Almost half of Californians with a chronic disease have more than one chronic disease, and the 7 million Californians who have one chronic disease are at greater risk for getting another during their lifetimes.

Having multiple chronic diseases tends to have a compound effect on an individual,

their family, their community, and society. For example, a woman with type 2 diabetes is also likely to be obese, have arthritis, and be at risk for having a stroke or heart attack. This combination could lead to disability from pain or other side effects, which affect employment, greater financial pressure from health care and medication costs, increased stress, or risk of mental illness.

Communities must reinforce and support health, and government partnerships must assure conditions in which people can be healthy. Health results from choices that people are able to make given the options from which they can choose.

Conditions in the social and physical environment determine the range of options that are available, their attractiveness, and their relative ease or difficulty of use.

This web of interdependence of the individual, community, and numerous sectors contributes to our individual health, as well as our community health, economic stability, and success as a state.

We will succeed in creating healthy environments when the air and water are clean and safe, when housing is safe and affordable, when transportation and community infrastructure provide people with the opportunity to be active and safe, when healthful food choices are made available to all, when people have access to safe

jobs with a living wage; and when each Californian has access to quality health care services.



Californians are already addressing the social, environmental, and chronic disease health disparities in their communities.

There is much work to be done, but many California communities are already working to make their communities healthier for all residents. The following two examples represent the broad spectrum of health innovation that is occurring in California to achieve health for all.

Kern County

Highlighted in the "Community In Focus" Section of this report, Kern County has responded to critical health concerns of its community. In September 2011, the county was awarded a five-year Community Transformation Grant (CTG) by CDC to support and promote active living and healthy eating, tobacco-free living, and clinical and other preventive services. The grant provides for a "Capacity Building Project to Engage Community" through a range of community strategies including:

- Coalition building and planning;
- Community health assessment;
- Capacity building;
- Strengthening the leadership team; and
- Promoting and educating stakeholders about CTG program activities and a common vision for community wellness and prevention.

Alameda County

Alameda County, also highlighted in a "Community in Focus" section, is addressing the health inequities in their county. In 2008, the Alameda County Health Department published *Life and Death from Unnatural Causes: Health and Social Inequity in Alameda County*. This seminal work, as well as the *Framework for Achieving Health Equity*, adapted from the *Bay Area Regional Health Inequities Initiative*, has guided their efforts. The Health Department is working to achieve health equity through several strategies:

- Transforming their own organization through institutional change;
- Working with residents on neighborhood initiatives and building partnerships to address the root causes of health inequities;
- Addressing local, state, and federal policies that impact social and health inequities;
- Supporting this innovative work with data and research; and
- Connecting health department programs and services to all of these areas.



Partnerships for a Healthy California

It is imperative that we all collaborate—governmental agencies and non-governmental organizations, foundations, local agencies, and community and faith-based organizations—to eliminate health disparities and make California a healthier place to live, work, learn, and play. These partnerships will strengthen the capacity for each of us to become more effective in our common goal of making California healthier for all.

Our work will be guided by the National Prevention Strategy, state initiatives addressing chronic disease, such as Let's Get Healthy California Taskforce, Healthier All Policies, and Healthy California 2020 Recommendations, as well as chronic disease prevention initiatives by partner organizations.

Final Thoughts

The problems discussed in this report are complex and multifactorial. Often, the solutions to lower the burden of chronic disease and eliminate health disparities are not simple or the responsibility of any one organization or government department. The answers are being developed and implemented collaboratively in many settings to make sustainable change and improve the health of communities. Good health is a fundamental component of quality of life, and a healthy population is a critical aspect of a thriving California economy.

This report provides a baseline snapshot of the current state of chronic disease in California, and highlights health disparities and the social and environmental disparities that contribute to them. We hope this empowers us collectively to work collaboratively and build capacity to create healthy and safe environments, improve clinical and community preventive services, and achieve health equity. We all benefit when everyone has the same opportunity to live a long, healthy, productive life.

