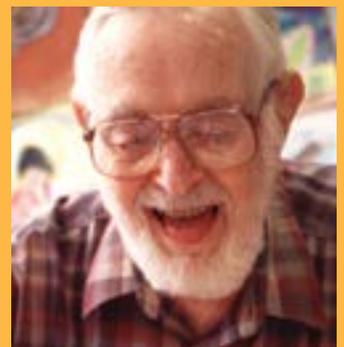
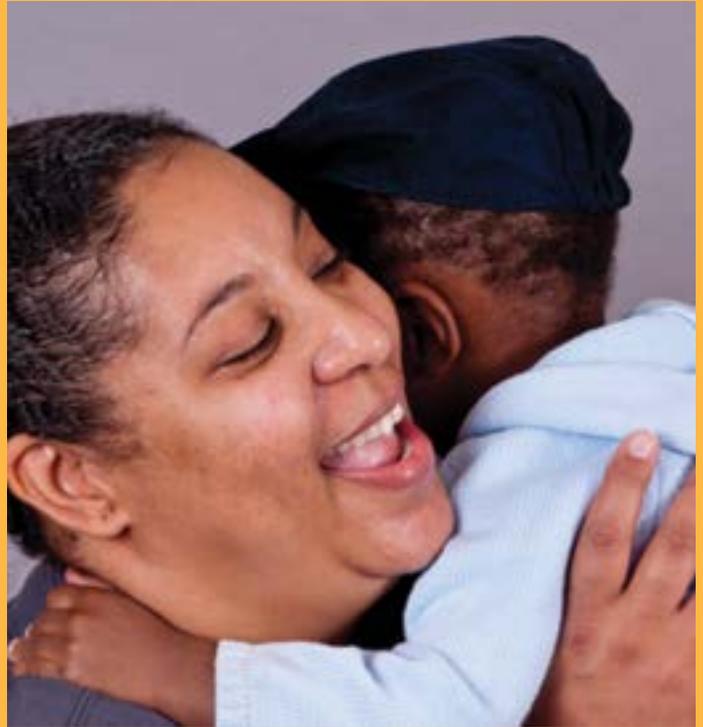
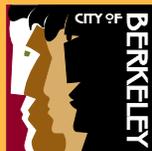


City of Berkeley

Health Status Report 2013



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Berkeley Unified School District

PUBLIC HEALTH VISION AND MISSION

Vision: *Healthy people in healthy communities.*

Mission: To achieve and maintain optimal health and well-being for all people in Berkeley. We do this by working in partnership with our diverse communities to: promote healthy behaviors and environments, prevent illness and injury, protect against disease and other emerging health threats, eliminate health inequities, and advocate for social and environmental justice.

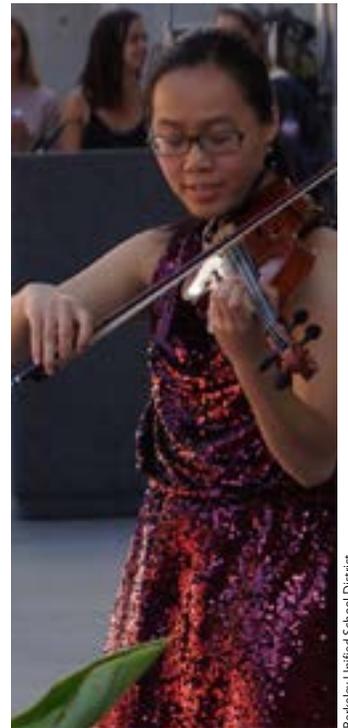
DEPARTMENT OF HEALTH, HOUSING, & COMMUNITY SERVICES MISSION AND VISION

Vision: *A vibrant and healthy Berkeley for all*

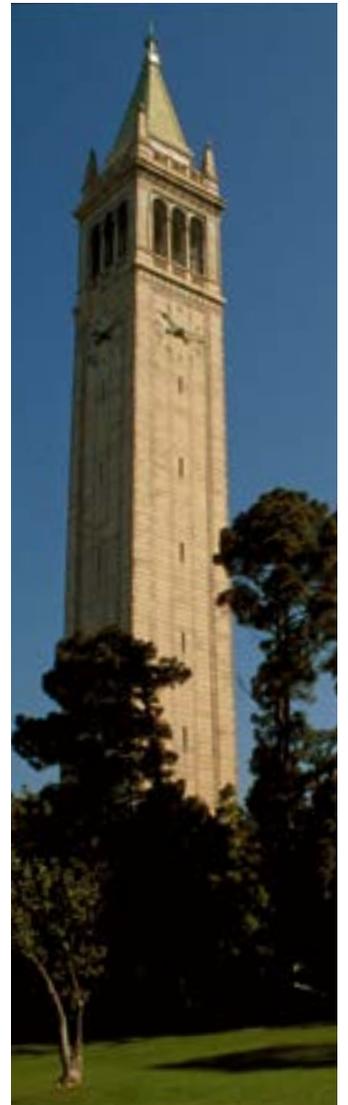
Mission: The Department of Health, Housing, & Community Services' mission is to enhance community life and support health and wellness for all. We are committed to social and environmental justice and to promoting equity in health, housing, and economic opportunity. We collaborate with community partners to build a vibrant and healthy Berkeley.

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EXECUTIVE SUMMARY

Berkeley is one of three California cities with its own Public Health division.* This report fulfills one of the essential functions of public health: monitoring the health of the community. It includes information about successes, on-going efforts, and future directions of Public Health work in Berkeley. The report begins with a description of Berkeley’s demographics, and follows the health of the community throughout the life course from pregnancy and birth through childhood, adolescence, adulthood, and death.

Berkeley is considered a healthy community overall: residents generally live long and live well; they eat well, exercise regularly, are well educated, and enjoy a high standard of living. A closer look at our community, however, reveals significant health inequities: differences in health that are predictable by race/ethnicity and by factors such as income, housing, and education. The presence of marked and persistent health inequities in Berkeley means that our community as a whole is not as healthy as it should be.

Health inequities are defined as “differences in health which are not only unnecessary and avoidable but, in addition, are unfair and unjust.”¹ Health inequities in Berkeley occur in consistent patterns by geography, race/ethnicity, and income and edu-

cation. For example, African American residents in South and West Berkeley have higher rates of adverse pregnancy outcomes, childhood asthma hospitalizations, heart disease, high blood pressure, stroke, and diabetes.

These health inequities affect our entire community. Poor health diminishes the quality and the quantity of life for an individual, and robs our community of years of full participation, enrichment, and contribution. Berkeley’s health inequities are neither new nor unique to Berkeley—nevertheless, they are unacceptable. Berkeley has made significant progress in improving many measures of health, including decreasing the magnitude of some health inequities—and much work remains to be done.

The Public Health Division and the Health, Housing and Community Services (HHCS) Department recognize health inequities as a priority. Public Health defines health broadly, to include personal and community well-being. Health through this lens is influenced by much more than health care. While the full breadth and depth of the underlying social determinants of health are beyond the control of any single program or agency, the City is committed to addressing and eliminating health inequities. This can only be accomplished with the concerted attention and partnership of the community as a whole.

HEALTH INEQUITIES IN BERKELEY

Berkeley’s health inequities disproportionately affect African American residents in South and West Berkeley neighborhoods. These health inequities are evident at every stage of life.

Compared to a White resident, an African American living in Berkeley is:

Demographics	Pregnancy & Birth	Child & Adolescent Health	Adult Health	Mortality
3 times less likely to have a college degree	20 times more likely to be a teen parent	7 times more likely to live in poverty	4 times more likely to have been diagnosed with diabetes and 14 times more likely to be hospitalized for diabetes	2 times more likely to die in a given year from any condition
2 times more likely to live in poverty	2.5 times more likely to be born too small	9 times more likely to be hospitalized for asthma (<5 years old)	12 times more likely to be hospitalized due to hypertensive heart disease	2.5 times more likely to die of cardiovascular disease

* The other two city health jurisdictions are Long Beach and Pasadena.

HEALTH THROUGHOUT THE LIFE COURSE

1 THE BERKELEY COMMUNITY: NEIGHBORS AND NEIGHBORHOODS

This chapter describes Berkeley's people—who we are, how and where we live, work, and learn, and some of the challenges we face. When we know who lives in Berkeley, where they live, and the health and environmental challenges they face, we can target resources more effectively.

Berkeley is a diverse city of 112,000 people. The City's demographics are influenced by the large university student population. In general, residents of Berkeley enjoy high levels of health, education, employment, and income. Berkeley has, however, substantial racial/ethnic disparities, affecting disproportionately those who reside in South and West Berkeley neighborhoods.

Key Findings

- **Population**
 - Berkeley's population increased by 10% in the last decade.
 - African Americans were the only group to experience a decrease during this time.
 - The biggest increases were in youth 15–24 years of age, and in those over 55.
- **Language**
 - In more than one-quarter of Berkeley households, English is not the primary language spoken.
- **Income and Wealth**
 - One of every 3 African American and one of every 5 Latino children lives in poverty.
 - For every dollar earned by White residents, African Americans and Latinos earn 40¢.
 - White's make up 55% of Berkeley residents and account for 75% of the homeowners.
- **Education**
 - 85% of adult Berkeley residents have attended at least some college.
 - African Americans are the least likely to have a bachelor's degree or higher.
 - Latinos are the least likely to have graduated from high school.
- **Access to Health Care**
 - Nine percent of Berkeley residents lack health insurance.
 - African Americans have the highest rates of being uninsured: 18%.
- **Transportation**
 - Forty percent of Berkeley residents use active transportation methods to get to work.

2 CHAPTER 2: PREGNANCY AND BIRTH

In this chapter we report on maternal and infant health related to pregnancy and childbirth. The conditions of pregnancy, birth, and early infancy have a profound impact on health and well-being throughout life.

Berkeley has excellent overall health indicators related to pregnancy, birth, and breast-feeding. Inequities persist among African American mothers and infants, despite significant improvements over the last decade.

Key Findings

- **Healthy People 2020³**
 - Berkeley overall *meets* HP2020 goals for:
 - Prenatal care
 - Low Birth Weight
 - Prematurity
 - Breastfeeding from birth to 6 months of age
 - Berkeley *does not meet* HP2020 goals for:
 - Prenatal care and birth weight among teen mothers
 - Prematurity among African American infants
 - Breastfeeding among African American infants at 3 and 6 months of age
- **Mothers**
 - 90% of Berkeley pregnant women receive prenatal care in the first trimester.
- **Teens**
 - Berkeley has the lowest overall teen birth rate of California health jurisdictions.
 - African Americans teens have a birth rate 20 times higher than that of White teens and 5 times that of Latina teens. The birth rate in this population is higher than in Alameda County as a whole.
- **Infants**
 - The risk of an African American mother having a Low Birth Weight (LBW) baby has fallen to 2.5 times higher than that of her White counterpart.
 - African American babies are twice as likely to be born prematurely as White, Latino, or Asian babies.
- **Breastfeeding**
 - Berkeley does not have a certified “Baby-Friendly” hospital.

3

CHAPTER 3: CHILD AND ADOLESCENT HEALTH

This chapter describes the health of Berkeley's children and youth through age 18. Educational foundations are established during this time, setting the course for lifetime learning and employment opportunities. Personal habits of activity, diet, and social connections take form. This is a period of great opportunity and of experimentation.

This chapter contains some sobering information about Berkeley's children and youth. They experience health inequities in asthma, fitness, poverty, and educational attainment, which follow similar racial/ethnic and geographic patterns as inequities across the life course.

Key Findings

- **Healthy People 2020**

- o Berkeley overall *meets* HP2020 goals for:
 - Youth suicide attempts
- o Berkeley overall *does not meet* HP2020 goals for:
 - High School graduation
 - Asthma hospitalizations for children under 5

- **Poverty**

- o Over one third of Berkeley's African American children live in poverty.
- o Poverty among African American youth is nearly 7 times the rate among White children
- o Twenty percent of Berkeley Latino children live in poverty. This is 4 times the rate among White children.

- **Education**

- o African American, Latino, and low-income children in Berkeley do less well in BUSD schools than White, Asian, and higher income students.
- o By 11th grade only 45% of BUSD students read proficiently.
- o Approximately 1 in 5 Latino and African American students do not graduate from high school.
- o The achievement gap between African American and White BUSD students is greater than that gap in Alameda County or the State.

- **Physical Activity and Obesity**

- o In 2011, only 20% of Berkeley 9th graders passed national aerobic fitness testing.
- o Twenty-nine percent of BUSD students overall, and over 40% of 9th graders, are overweight or obese.

- **Asthma**

- o African American children under 5 years of age are hospitalized for asthma at rates that far exceed any other group.
- o Asthma hospitalization rates for African American and Latino children through age 15 are higher than for other groups.

- **Alcohol, Tobacco, and Marijuana use**

- o Approximately 45% of 11th graders report alcohol use in the last 30 days.
- o Approximately 35% of 11th graders report marijuana use in the last 30 days.
- o The percentage of students reporting that they use alcohol, cigarettes, and marijuana decreased at all grade levels.
- o Marijuana use far exceeds cigarette smoking at all grade levels
- o Alcohol is the mostly commonly used substance among BUSD students.

- **Mental Health, Violence, and Bullying**

- o Mental Health services are available to Berkeley youth through school- and community-based services.
- o Harassment and bullying related to race/ethnicity affects youth in Berkeley's middle and high schools.

- **Injuries**

- o There were 24 assault-related hospitalizations of Berkeley youth in the most recent 3-year period for which we have data. Half of these involved firearms, and the vast majority were of African American youth.

- **Communicable Diseases: Sexually Transmitted Infections**

- o Chlamydia infections are highest among 15-19 year old African American young women.

- **Immunizations**

- o Berkeley's kindergarteners are less fully immunized than their counterparts in Alameda County and the state and have higher rates of personal belief exemptions.

- **Lead Poisoning**

- o Cases of lead poisoning are rare in Berkeley, although residents are at risk for lead exposure due to Berkeley's large number of pre-1978 houses.

4 CHAPTER 4: ADULT HEALTH

This chapter examines the health status of Berkeley's adults, from early adulthood through old age. This is the stage of life when chronic diseases, including cancer, are most likely to develop and take their toll on well-being. This is the period of life in which one is most likely to work, to accumulate wealth, to have partners and responsibilities for other family members.

Berkeley adults, on average, enjoy excellent health. However, there are marked health inequities by race/ethnicity and income

Key Findings

• Healthy People 2020

- Berkeley as a whole *meets* HP2020 goals for:
 - Healthy weight
 - Physical Activity
 - Tobacco smoking
 - Hypertension
 - Asthma hospitalizations
 - New cases of syphilis in women
 - New cases of AIDS
- Berkeley as a whole *does not meet* HP2020 goals for:
 - Screening mammograms
 - New cases of tuberculosis
 - New cases of syphilis in men

• Chronic Diseases

- African Americans and those with less than a high school education are most likely to be overweight or obese.
- Men, African Americans, individuals with less than a high school education, and those 25-44 years of age have the highest rates of cigarette smoking.
- Chronic disease rates have been decreasing in all racial/ethnic groups.
- Berkeley's African American population experiences inequitably high rates of all major chronic diseases: diabetes and its complications; hypertension (high blood pressure); heart disease; stroke; and asthma hospitalizations.
- Asians have the second highest rate of diabetes among Berkeley's racial/ethnic groups.
- Latinos have the lowest rate of hypertension-related hospitalizations.
- Asthma rates are highest among African American and White Berkeley residents, and among those with higher levels of education.
- White women have higher rates of breast cancer than do other racial/ethnic groups.

- Only Asian and Latina women meet the HP2020 goal for screening mammograms.
- Prostate and lung cancer rates are highest among African Americans.

• Mental Health

- Hospitalization rates for mental health disorders are highest among African Americans.
- Asians and Latinos have the lowest rates of mental health hospitalizations in Berkeley.

• Injuries

- Hospitalization rates for injuries have risen steadily in the last decade except among Latinos, for whom the rate has steadily fallen. The rate for African Americans is double that for Whites, and the gap is widening.
- Accidental falls in adults over age 65 are a significant cause of hospitalization and are most common in North Berkeley.
- Motor vehicle injuries have dropped by more than 50% in the past decade. Bicycle injuries have increased.
- On average, Berkeley police receive 140 domestic violence calls annually.

- **Disability** from physical, emotional, or mental conditions affects 26% of Berkeley residents. This rate is the same as that reported for the State. Women, the elderly, African American and Latino residents are more likely to experience disability.

• Communicable Diseases

- Public Health receives nearly 900 communicable disease reports annually.
- Vaccine-preventable diseases and tuberculosis remain important causes of illness in Berkeley.
- Chlamydia and Gonorrhea rates are highest among African American women and men.
- Syphilis rates are highest among African American men.
- New HIV infections occur at disproportionately high rates among Latinos and African Americans.

5

CHAPTER 5: MORTALITY

This chapter presents information about the end of life: the ages at which people die, the immediate and underlying causes of death, and the demographic patterns of death in the City. Patterns of death help us understand health status and health inequities in Berkeley. Changes in these patterns can inform us about the City's progress in reducing unnecessary deaths.

Key Findings

- **Healthy People 2020**

- o Berkeley as a whole *meets* HP2020 goals for:
 - Coronary heart disease death rate
 - Cancer death rate
 - Lung cancer death rate
 - And very nearly meets the goal for stroke death rate
- o African Americans in Berkeley *do not meet* HP2020 goals for:
 - Coronary heart disease death rate
 - Cancer death rate
 - Stroke death rate
- o Berkeley as a whole *does not meet* HP2020 goals for:
 - Breast cancer death rate
 - Prostate cancer death rate

- **Life Expectancy**

- o Life expectancy for Berkeley women is 86 years and for men is 82 years.
- o The death rate for African Americans in Berkeley is twice the death rate of Whites, and the gap appears to be widening.
- o Latinos have the lowest death rate of Berkeley's racial/ethnic groups.

- **Causes of Death**

- o "Actual" causes of death are risk factors such as tobacco use, physical inactivity, poor diet, and alcohol and drug use. One third of Berkeley deaths are attributable to these risk factors.
- o Cancer and heart disease are the leading "underlying" causes of death (as recorded on death certificates) in Berkeley. They account for half of all deaths.
- o Cancer is the leading cause of death for all racial/ethnic groups except African Americans. Among African Americans, heart disease is the leading cause of death.
- o Cardiovascular disease deaths have decreased over the last decade, but the gap between death rates of African American and other groups has remained constant.

Berkeley residents in general enjoy long lives, and life expectancy has increased steadily over the last several decades. Health inequities by race/ethnicity exist for all causes of death, death rates, and years of potential life lost. Shortened lives and premature mortality are the cumulative result of health inequities that span the life course from conception to old age.

- o The death rate from cardiovascular disease among Latinos is half that of the population as a whole, and the lowest of any group.
 - o The stroke death rate among African Americans is more than double that of any other group.
 - o Latina women have the lowest death rates from breast cancer in Berkeley, and are the only group to meet the HP2020 goal for breast cancer deaths.
- **Years of Potential Life Lost (YPLL)**
 - o African Americans account for a disproportionate number of YPLL in Berkeley. Although comprising less than 10% of Berkeley's population, they account for more than a third of YPLL. African Americans in Berkeley die younger than other racial/ethnic groups.
 - o Cancer accounts for the most YPLL in Berkeley as a whole.

CONCLUSION AND NEXT STEPS

Berkeley's community health is characterized by overall excellent health status and by striking health inequities. These patterns of health inequities are neither new nor unique to Berkeley. The underlying causes and their solutions lie in the environments and neighborhoods in which people live, work, learn and raise their families.

Public Health's charge is to create the conditions in which everyone has access to the conditions which support a full and healthy life. Truly addressing the root causes of health inequities requires focused, consistent, comprehensive, and sustained effort on many fronts.

This Report is a starting point from which Public Health, HHCS, and the City can develop priorities and strategic interventions to improve community health. We look forward to discussing this report with Berkeley residents and community partners to shape our work going forward. You may contact us at publichealth@cityofberkeley.info.

Information about community meetings, City Council meetings and reports, and Community Health Commission meetings is available at <http://www.ci.berkeley.ca.us>.

You are an essential part of ensuring a vibrant and healthy Berkeley for all.

INTRODUCTION

Berkeley is one of three California cities with its own Public Health division.* Berkeley's Public Health Division is a resource and a responsibility. This report fulfills one of the essential responsibilities of public health: monitoring the health of the community, in order to identify and address community health needs. Periodic community health status reports are the equivalent of periodic physicals with your doctor, or well baby check-ups with a child's pediatrician. By identifying strengths, challenges, opportunities, and risks to the health of the City, this report provides a foundation for future planning and priority-setting.

The report begins with a description of Berkeley's demographics, and follows the health of the community throughout the life course from pregnancy and birth through childhood, adolescence, adulthood, and death. Each chapter begins with a summary and a list of key findings. Along the way are highlights, describing programs and activities which address identified health needs.

In health as in other realms, Berkeley residents hold themselves to a high standard. The City's Public Health, Mental Health, and Environmental Health Divisions—functions more commonly assumed by Counties—demonstrate the City's strong commitment to health.

Berkeley is considered a healthy community overall: residents generally live long and live well; they eat well, exercise regularly, are well educated, and enjoy a high standard of living. A closer look at our community, however, reveals significant health inequities: differences in health that are predictable by race/ethnicity and by factors such as income, housing, and education. The presence of marked and persistent health inequities in Berkeley means that our community as a whole is not as healthy as it should be.

Health inequities are defined as “differences in health which are not only unnecessary and avoidable but, in addition, are considered unfair and unjust.”¹ Health inequities in Berkeley occur in consistent patterns by geography, race/ethnicity, and income and education. For example, African American residents in

* The other two city health jurisdictions are Long Beach and Pasadena.

Periodic community health status reports are the equivalent of periodic physicals with your doctor, or well baby check-ups with a child's pediatrician.

South and West Berkeley have higher rates of adverse pregnancy outcomes, childhood asthma hospitalizations, heart disease, high blood pressure, stroke, and diabetes.

The patterns of health and social inequities demonstrated in this report are longstanding in our country, state, and region, as well as in Berkeley. These health inequities affect our entire community. Poor health diminishes the quality and the quantity of life for an individual, and robs our community of years of full participation, enrichment, and contribution. Berkeley's health inequities are neither new nor unique to Berkeley—nevertheless, they are unacceptable. Berkeley has made significant progress in improving many measures of health, including decreasing the magnitude of some health inequities—and much work remains to be done to achieve health equity.

The Public Health Division and the Health, Housing & Community Services (HHCS) Department recognize health inequities as a priority. Public Health defines health broadly, to



... the City is committed to addressing and eliminating health inequities. This can only be accomplished with the concerted attention and partnership of the community as a whole.

include personal and community well-being. Health through this lens happens first outside of the hospital or doctor's office. Health begins with healthy communities, jobs, schools, and homes. The places where we live, work, learn, play, and raise our families significantly influence our opportunities and behaviors. For example, children living in safe neighborhoods with parks and playgrounds are more likely to be physically active than children living in areas with crime and few or no welcoming open spaces. While individuals must choose to be physically active, the environment influences that choice.

The physical and social conditions that influence our well-being are called "social determinants of health" (SDOH). Chronic diseases such as obesity and diabetes are rising at alarming rates, despite efforts aimed at promoting individual behavior change. Public health and health care agencies recognize the need for a broader approach: an approach that addresses the social determinants of health and creates healthy community environments. In order to improve health and well-being, we must understand and change the things that make us sick.² *Healthy People 2020* is a national ten-year framework for improving the health of all people in the United States. It aims to improve the health of Americans by creating "social and physical environments that promote good health for all."³

While the full breadth and depth of the underlying social determinants of health are beyond the control of any single program or agency, the City is committed to addressing and eliminating health inequities. This can only be accomplished

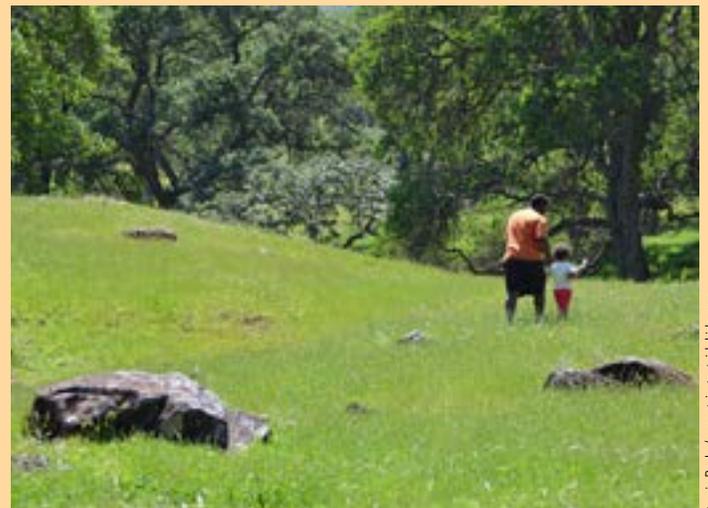
with the concerted attention and partnership of the community as a whole. The work of the Health, Housing & Community Services Department influences many of the underlying causes of health inequities in Berkeley. The Department is committed to working with partners to provide every Berkeley resident the opportunity to live long and live well. This includes opportunities to:

- Be well nourished (have access to the right amount of varied, affordable, healthful food)
- Be securely housed (in a home that is safe, free of hazards, structurally sound, and affordable)
- Be effectively educated (prepared for college, for further training, or for a career)
- Be employed at a living wage (for our community)
- Be safe in one's neighborhood
- Be protected from preventable chronic and communicable diseases
- Be included in City disaster preparedness planning and response
- Have access to safe and affordable active transportation—including walking, biking, and public transit
- Have access to health care including preventive, primary care which is culturally and linguistically appropriate

In short, the Department is committed to building a vibrant and healthy Berkeley for all.



Berkeley Unified School District



Annie Burke/www.goingoutsidetokids.com



Annie Burke



Robin Kempster

10 ESSENTIAL SERVICES OF PUBLIC HEALTH

In 1994 a national body of public health leaders developed the 10 Essential Services of Public Health as a framework for delineating the breadth and scope of Public Health responsibilities. This report is a major component of Essential Service #1. At the end of this report, a chart provides examples of how Berkeley's Public Health division meets these service obligations. The essential services are:

1. **MONITOR** health status to identify and solve community health problems.
2. **DIAGNOSE** and **INVESTIGATE** health problems and health hazards in the community.
3. **INFORM, EDUCATE,** and **EMPOWER** people about health issues.
4. **MOBILIZE** community partnerships and action to identify and solve health problems.
5. **DEVELOP** policies and plans that support individual and community health efforts.
6. **ENFORCE** laws and regulations that protect health and ensure safety.
7. **LINK** people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. **ASSURE** competent public and personal health care workforce.
9. **EVALUATE** effectiveness, accessibility, and quality of personal and population-based health services.
10. **RESEARCH** for new insights and innovative solutions to health problems.

HISTORY OF PUBLIC HEALTH IN BERKELEY

The area now known as the City of Berkeley was once part of the territory of the Chochenyo/Huchiun group of the Ohlone Native American tribe. The first non-Native settlers arrived with the Spanish sponsored De Anza Expedition in 1776. What is now Alameda County was created in 1853 and by 1878 the people of “Oakland Township” incorporated themselves as the “Town of Berkeley.”

Berkeley has made public health a priority since its earliest days. The Public Health Department was established in 1880, for the purpose of controlling communicable diseases. The department’s main focus was guarding homes quarantined for smallpox, cholera and yellow fever. Dr. Frank Payne (pictured) was the City’s first chief Health Officer, and he, aided by two police officers, enforced these activities. In 1882 the first Board of Health was appointed. The responsibilities and authority of the Health Officer and of the newly established Board of Health included the control of communicable diseases and “sanitary nuisances.”

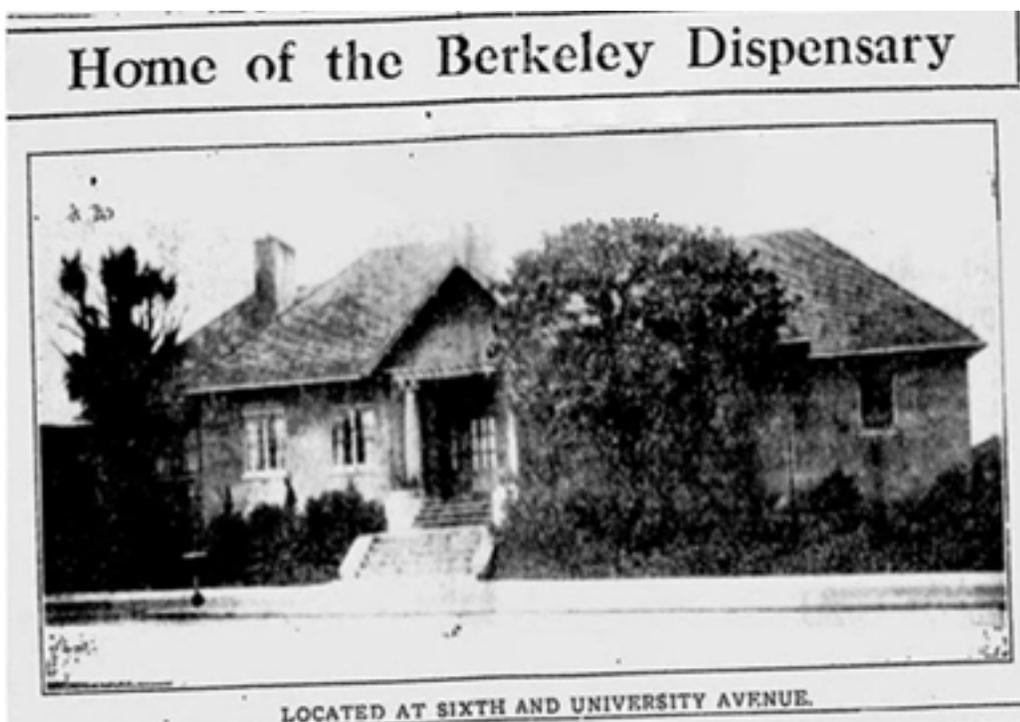


In 1895, the Town of Berkeley adopted a new charter giving the Board of Trustees the official power to establish a Board of Health to prescribe rules and regulations to promote the

public’s health and comfort and to track births and deaths. Newly adopted health ordinances spanned the spectrum of public health: from the incineration within 24 hours after death of any person with diphtheria, scarlet fever, or smallpox, to the prohibition of expectoration on the floors of public buildings. Duties of the Health Officer included monitoring the town’s milk supply, ensuring that sewer drainage would always be under water, monitoring cases of tuberculosis, and registering and maintaining vital records. The division continues to house original vital records dating back to 1895!

In 1906 the population of the Town of Berkeley skyrocketed as a result of the earthquake and fires that devastated San Francisco. The large number of refugees from across the Bay, combined with the lack of community medical or nursing services, prompted the Town to establish the Berkeley Health Center. In 1915, the clinic moved to a newly built location where it remains today, at University Avenue and Sixth Street.

The world-wide influenza (flu) epidemic of 1918 brought a new set of responsibilities to the Public Health Department. The City Health Department and the Visiting Nurse Association (VNA, est. 1908) collaborated to open a temporary emergency hospital at Edison Jr. High School formerly located on Russell Street. The flu hospital was largely staffed by volunteers and demonstrated



Berkeley’s Public Health Department was established in 1880.

In 1915, the clinic moved to a newly built location where it remains today, at University Avenue and Sixth Street.



that the City of Berkeley was prepared to handle a large scale communicable disease outbreak. This was the dawn of public health emergency preparedness in Berkeley.

In 1923 City health department services and Berkeley school district health services collaborated to appoint six school nurses to the health department. This marked the beginning of an on-going coordination between the school district and City public health.

The 1957 Short-Doyle Act 1957 provided financial assistance for community mental health programs. As a result, the City developed an expanded Mental Health program, which continues as the current Mental Health Division.

The 1960s brought a host of innovations in Berkeley Public Health, including the establishment of a family planning clinic; health education activities for immunizations; activities to support maternal and infant care; an intensive tuberculosis control program; and “Operation Head Start”—the planning for health services out of neighborhood centers developed in target areas.

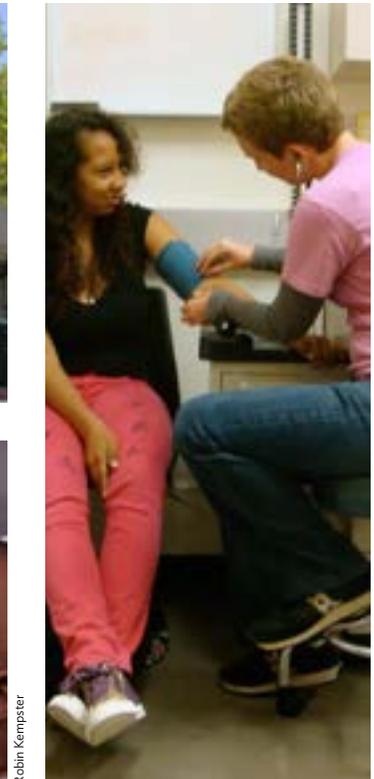
During the 1970s and 1980s the Berkeley Public Health Department engaged in a wide array of community services. Community health workers did outreach at the Welfare Department. Mini health screenings were done at senior centers and senior housing developments. One public health nurse (PHN) was assigned to each public school and one PHN was responsible for private schools. The venereal disease clinic saw close to 190 clients per week. Teams of public health nurses divided the City into quarters, with each team responsible for servicing one quarter. They worked with families who were being evicted, engaged in tuberculosis treatment follow up, assisted with

The world-wide influenza (flu) epidemic of 1918 brought about a new set of issues for the Public Health Department.

child abuse and neglect cases, and managed a host of other child and adult health issues.

The foundation for today’s Public Health Division had been fully laid: a clinic offering direct services to address community needs; a well-established history of TB and communicable disease control practice; outreach workers and public health nurses actively engaged with families, individuals, and partners in the City; partnerships with educational organizations; environmental and mental health services; and the ability to adapt to changing community needs and changing resources. Public Health was already working broadly in the community to address the social determinants of health and to eliminate health inequities in Berkeley—well before these terms were coined.

The current Public Health Division acknowledges the exceptional work done by those who preceded us. We are both proud and humble to be the current carriers of the mantle of protecting and promoting the health of Berkeley.



Robin Kempster



Robin Kempster



Berkeley Unified School District



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HOW TO READ THIS REPORT

ORGANIZATION: This report is organized along the life course, from conception through death. Health throughout the stages of life is influenced by an individual’s environment, health and experience in the prior stage. The report begins with a description of Berkeley’s population. Subsequent chapters give information about health in Berkeley during the major life stages: pregnancy and birth; childhood and adolescence; adulthood; and finally the end of life.

Each chapter starts with a description of the significance of that life stage and a list of key findings.

COMPARISONS: One way to evaluate the health of our City is to compare ourselves to others. Whenever Berkeley data address one of the Healthy People 2020 (HP2020)³ goals, that goal is reported, so we can see how Berkeley is doing relative to national health goals. We also compare Berkeley with Alameda County and with the State. We report how different groups of Berkeley residents compare with each other: by age, gender, income, race/ethnicity, education, and place of residence. Finally, we show how health indicators in Berkeley have changed over time. Such comparisons allow us to assess how Berkeley is faring relative to national goals, our past, and our neighbors.

PROGRAM HIGHLIGHTS: The City’s Public Health Division works with partners to improve health in Berkeley. Each chapter contains program highlights, describing how the City is addressing issues raised by the data in that chapter. More information about these programs is available on the City’s website (<http://www.ci.berkeley.ca.us/Home.aspx>) or by calling the HHCS Department at 510-981-5300.

DATA: This report contains data: quantitative information about the health of the Berkeley community. These data are as objective as possible, but are not perfect— they may be biased by reporting errors or incompleteness or limited by small samples. In our effort to understand what the data tell us about health in Berkeley, we look at correlations: what characteristics go along with better health or worse health? Public health programs and interventions are designed to address the likely “causal pathways” of adverse health outcomes, and are based on available evidence and best practices

TECHNICAL NOTES: Data Sources and Definition of Key Terms: this information is provided at the end of the report. Those interested in additional technical details are invited to contact the Public Health Division Epidemiologist at publichealth@cityofberkeley.info.

1

CHAPTER 1: THE BERKELEY COMMUNITY: NEIGHBORS AND NEIGHBORHOODS

What is this?

This chapter describes Berkeley's demographics: information about the population. It tells us about Berkeley's people—who we are, how and where we live, work, and learn, and some of the challenges we face.

Why is this important?

Knowledge of a population's size, characteristics, and changes in fertility, mortality and migration are essential to meeting the health and healthcare needs of a community.² When we know who lives in Berkeley, where they live, and the health, economic, and environmental challenges they face, we can target resources more effectively. These environmental and social factors which influence health status are considered Social Determinants of Health (SDOH).

What is Berkeley's status?

Berkeley is a diverse city of 112,000 people. The 2010 census showed some significant changes in the population. The City's demographics are influenced by the large university student population. On average, residents of Berkeley have high levels of health, education, employment, and income. Berkeley has, however, substantial racial/ethnic disparities in all of these areas. Those affected by these disparities reside disproportionately in South and West Berkeley neighborhoods.



Berkeley Unified School District

Key Findings

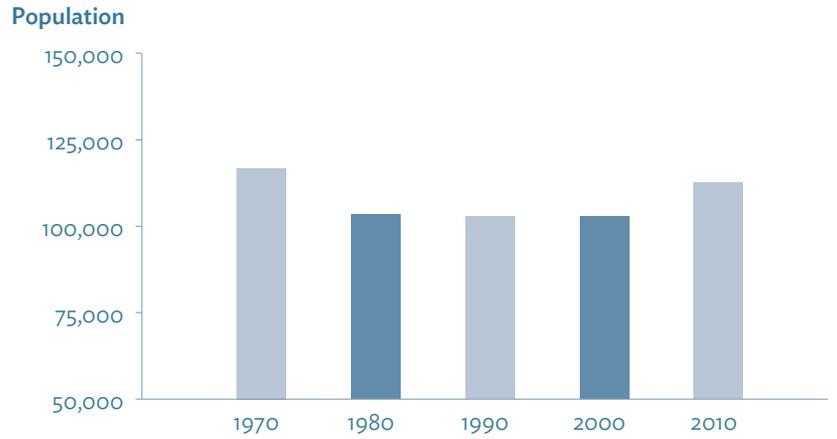
- **Population**
 - Berkeley's population increased by 10% in the last decade.
 - African Americans were the only racial/ethnic group to experience a population decrease during this time: a decrease of nearly 3,000 people.
 - The biggest increases were in youth 15-24 years of age, and in those over 55.
- **Language**
 - In more than one-quarter of Berkeley households, English is not the primary language spoken.
- **Income and Wealth**
 - One of every 3 African American children in Berkeley lives in poverty.
 - One of every 5 Latino children in Berkeley lives in poverty.
 - For every dollar earned by White residents, African Americans and Latinos earn 40¢.
 - White's make up 55% of Berkeley residents and account for 75% of the homeowners.
- **Education**
 - 85% of adult Berkeley residents have attended at least some college.
 - African Americans are the least likely to have a bachelor's degree or higher.
 - Latinos are the least likely to have graduated from high school.
- **Access to Health Care**
 - Nine percent of Berkeley residents lack health insurance.
 - African Americans have the highest rates of being uninsured: 18%.
- **Transportation**
 - Forty percent of Berkeley residents use active transportation methods to get to work.

Berkeley Demographics

Population

The 2010 US Census counted 112,580 people living in Berkeley. This is an increase of 10% compared to 2000.

Figure 1.1 POPULATION Berkeley, 1970–2010



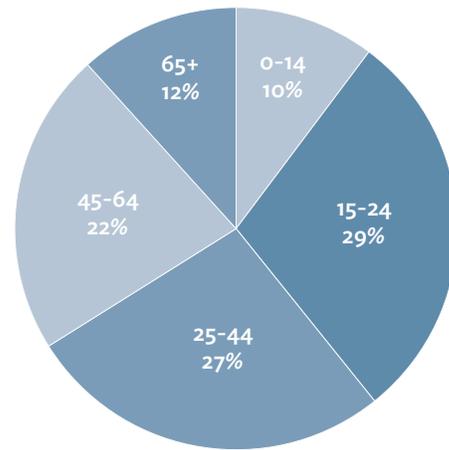
Source: 1970, 1980, 1990, 2000, 2010 US Census Population Counts

Age & Gender

The age distribution in Berkeley is highly influenced by the university student population.⁵ Nearly 30% of Berkeley’s population is 15–24 years of age. In Alameda County and California as a whole, only 14–15% of the population falls in this age range.⁶

Another way of looking at age distribution is the median age of the population. In Berkeley, the median age is 31 years, compared with 36 years in Alameda County and 35 years in California.

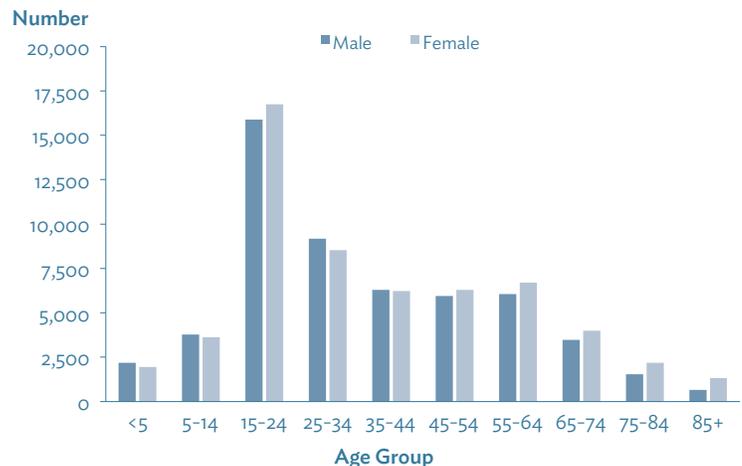
Figure 1.2 POPULATION DISTRIBUTION BY AGE GROUP Berkeley, 2010



Source: US Census 2010

In older age groups, there are greater numbers of females than males, as is true nationwide. This reflects the fact that women, on average, live longer than men. Nationally the life expectancy for men is 76.2 years versus 81 years for women.⁷

Figure 1.3 POPULATION BY AGE AND GENDER Berkeley, 2010

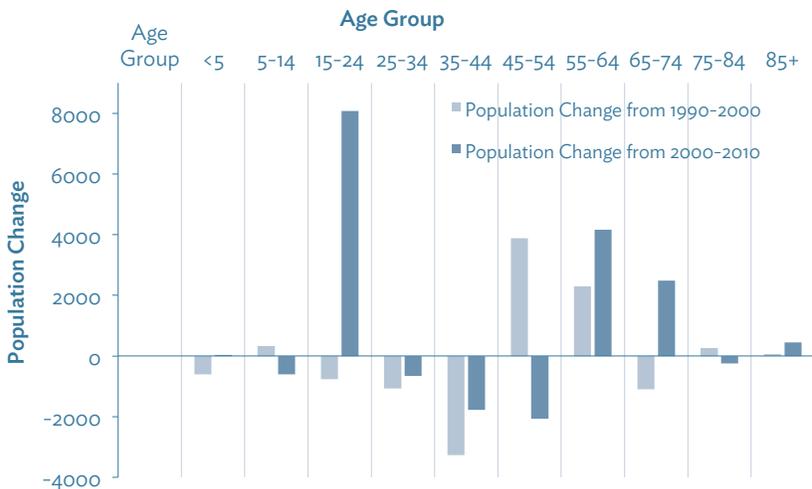


Source: US Census 2010

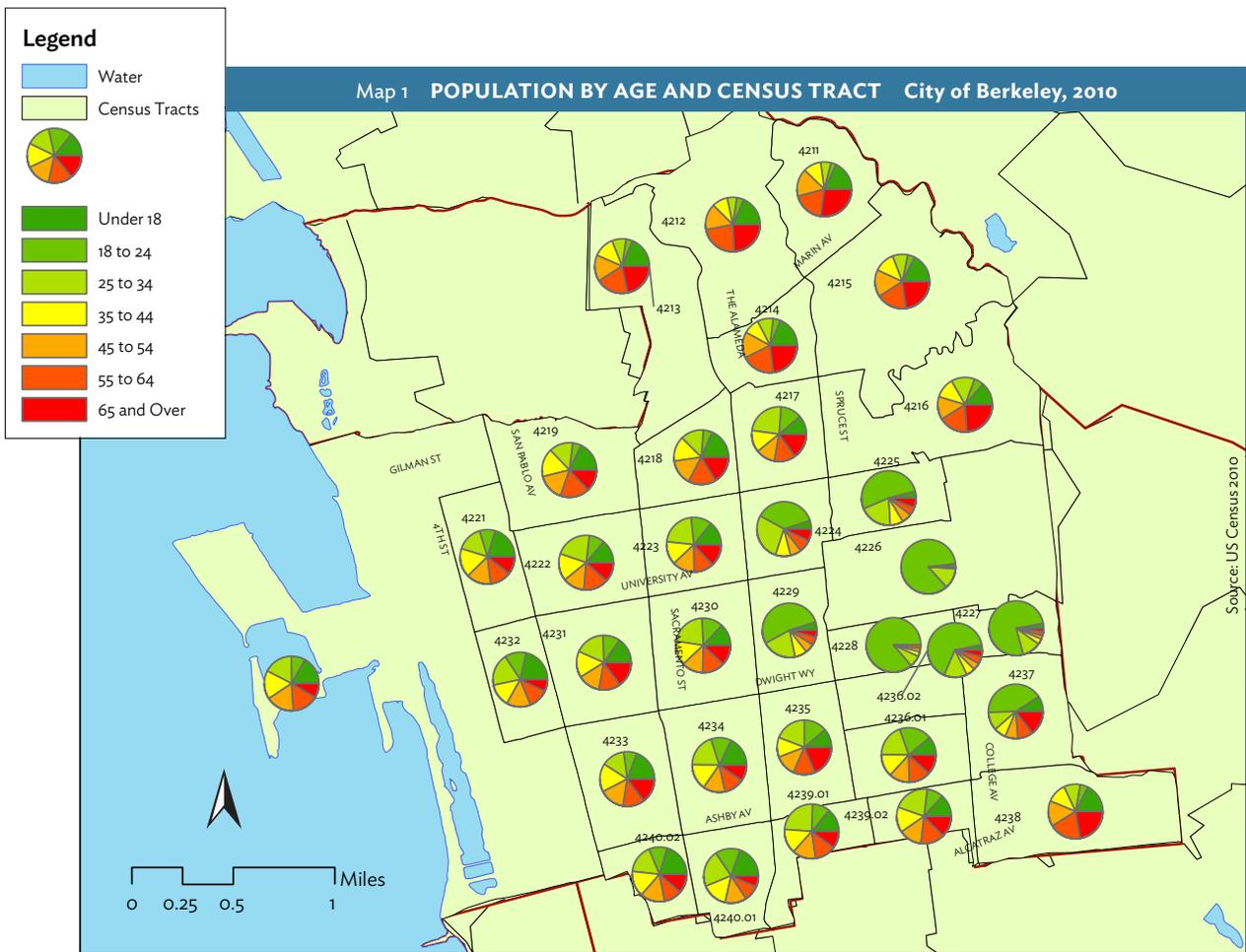
Age & Gender continued

From 2000 to 2010 there was a 10% gain in the number of Berkeley residents. The largest increase was in the 15-24 year age group. Berkeley's older population grew as well, with substantial increases in the 55-74 year old age groups.

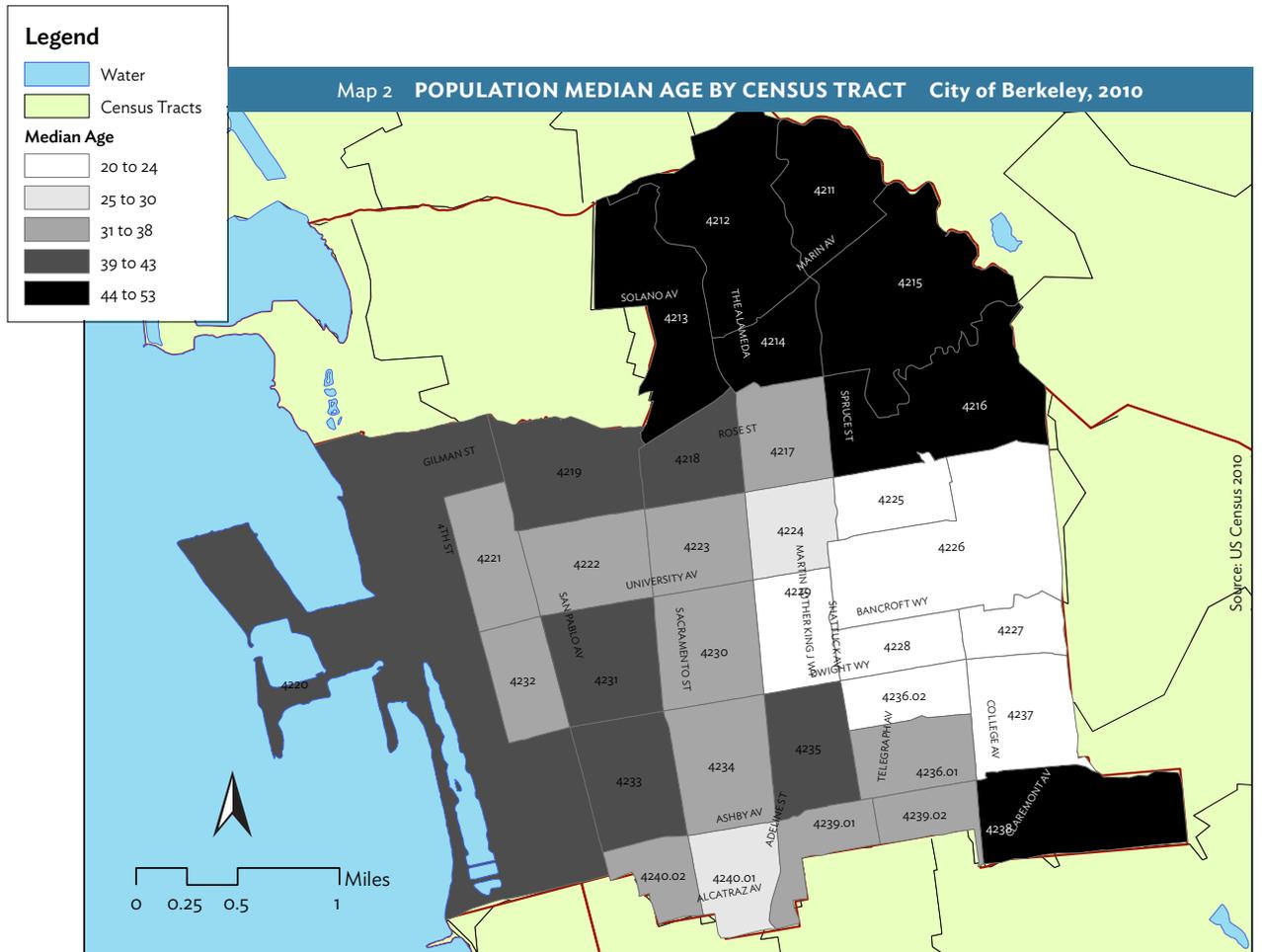
Figure 1.4 POPULATION GAINS/LOSSES IN 1990-2000 AND 2000-2010, BASELINE BY AGE Berkeley, 2010



Source: U.S. Census 2000, 2010



This map shows the age distribution of the Berkeley population by census tract. Eighteen to 24 year olds predominate in the census tracts surrounding the university campus, where we would expect to find the student population.

Age & Gender
continued

This map uses median age by census tract to show us similar information. The median age of people living nearer to the university is younger, while the median age is highest among those living in the north and the hills.

HIGHLIGHT: Public Health Emergency Preparedness

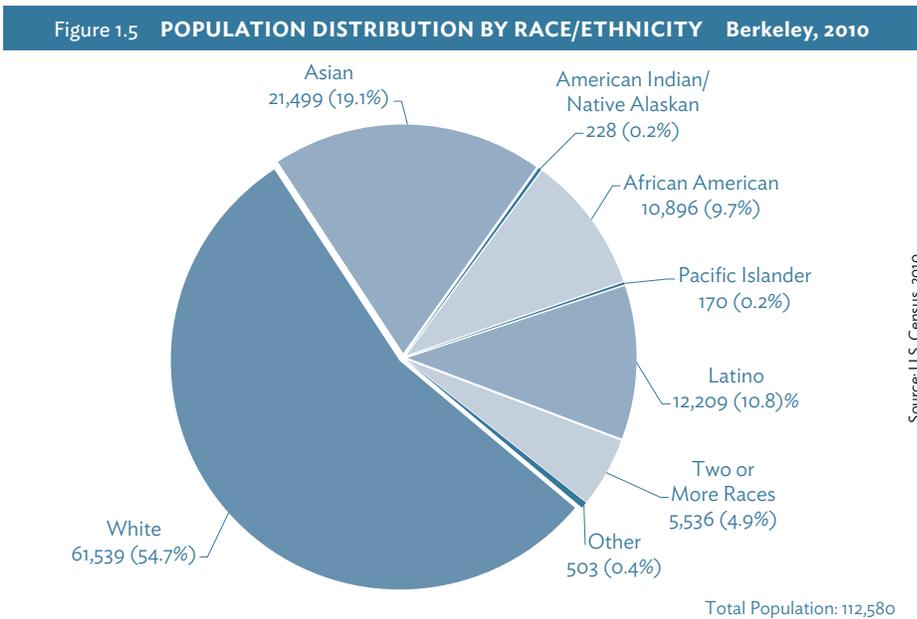
The Public Health Emergency Preparedness (PHEP) Program develops and exercises plans for large public health emergencies such as bioterrorism or pandemic influenza, as well as for the public health aspects of natural disasters such as an earthquake, fire, or flood. PHEP ensures public health coordination with health care providers, clinics and hospitals on issues such as emergency surge capacity to accommodate increased need for health services.

The PHEP Program coordinates its response to public health emergencies by activating the Public Health Departmental Operations Center (PH DOC), a group of Health Housing and Community Services staff members specially trained for emergency response. Recently, PHEP has focused on updated plans for the distribution and dispensing of medical materials (such as medication or immunizations) during a public health emergency and has begun planning for two new dispensing sites. The PHEP team collaborates with the Office of Emergency Services in providing disaster preparedness training, education and resources to all Berkeley residents, particularly in South and West Berkeley.

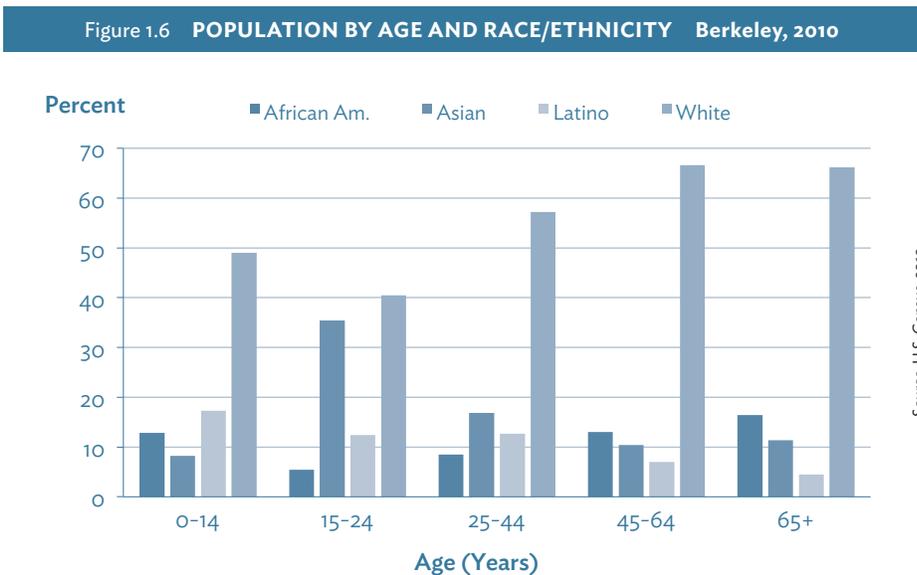
Race/Ethnicity

Whites make up 55% of Berkeley’s population. Asians are the next biggest group at 19%. African Americans and Latinos each make up approximately 10% of the population.

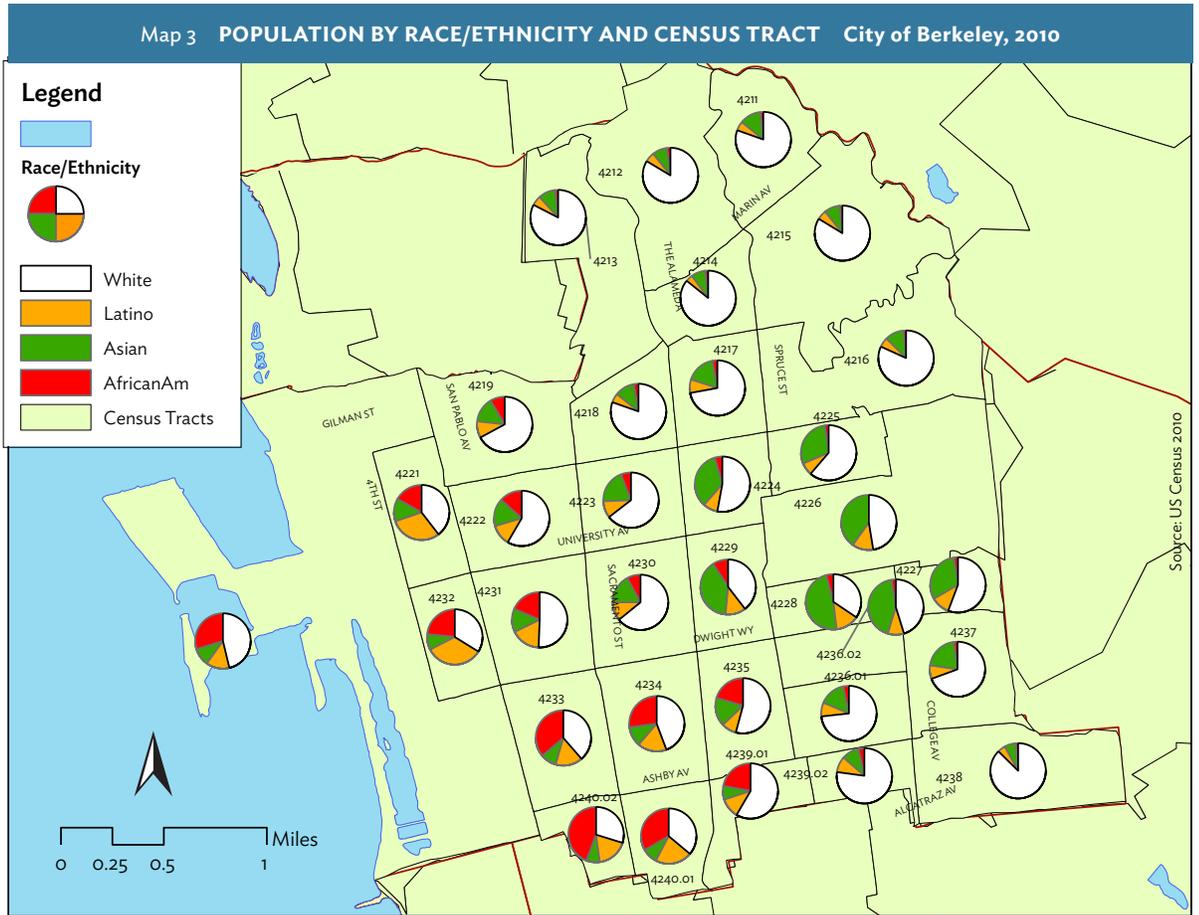
Compared with the 2000 census, the Asian population has increased (from approximately 16 to 19% of the population), and the African American population has decreased (from approximately 13% to 10% of the population). Other racial/ethnic groups have remained quite stable as a percentage of the total population.



Across all age groups, Whites are the predominant racial/ethnic group. In the 15-24 year old age group, Asians make up nearly as large a percentage of the population as whites. This reflects the influence of UC’s undergraduate population. The average age of UC Berkeley undergraduates is 21 years of age, and Asian Pacific Islanders make up 43% of the total undergraduate student body.⁵



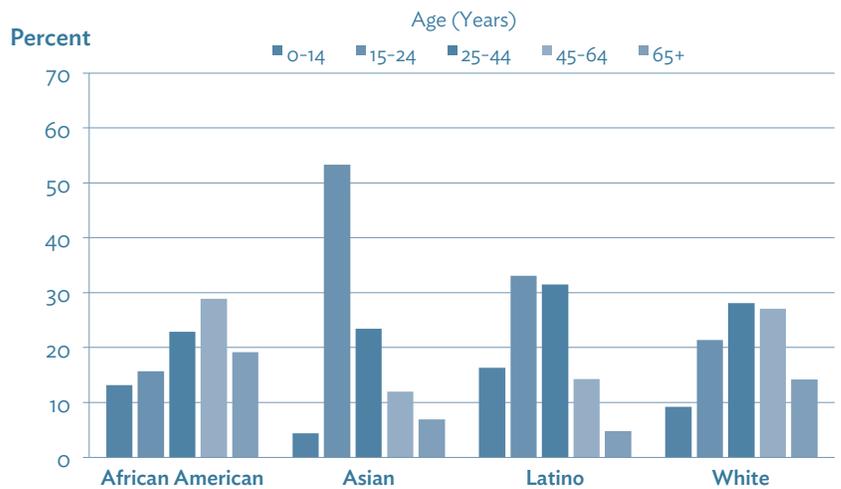
Race/Ethnicity
continued



Berkeley’s racial/ethnic groups are not evenly distributed throughout the City. This map demonstrates that the African American and Latino populations are concentrated in the south and west parts of the City; the Asian population is largest near the University; and the White population predominates in the east and northern hill regions of the City.

Age distribution varies by race/ethnicity. Young children comprise a larger percentage of the African American and Latino groups than of the White and Asian groups. Over half of the Asian population is in the 15-24 year age group—a much higher proportion than for other racial/ethnic groups. The undergraduate Asian student population at UC contributes to this, as noted above. The elderly (65+) make up a larger percentage of the African American and White groups compared with the Asian and Latino groups. The Latino population has the highest percentage of children under 14.

Figure 1.7 POPULATION BY AGE AND RACE/ETHNICITY Berkeley, 2010

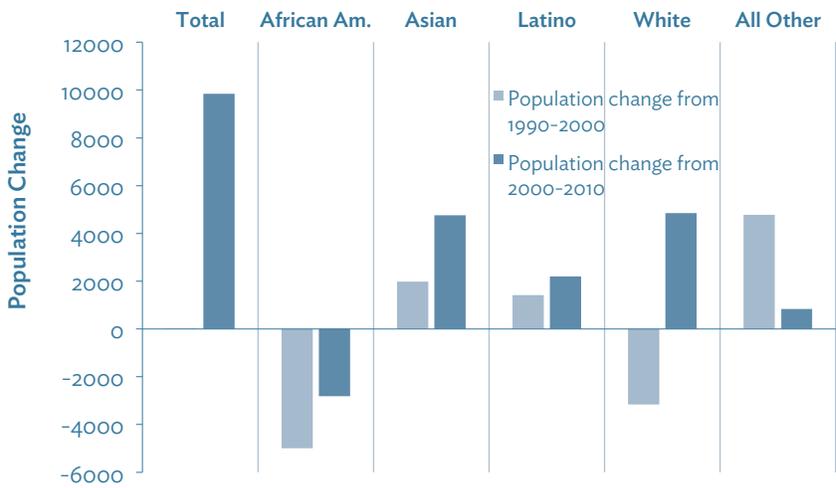


Race/Ethnicity continued

African Americans are the only group that experienced a population loss between 2000 and 2010. For all other race/ethnicity groups, there was a population gain. Whites and Asians showed the largest increases.

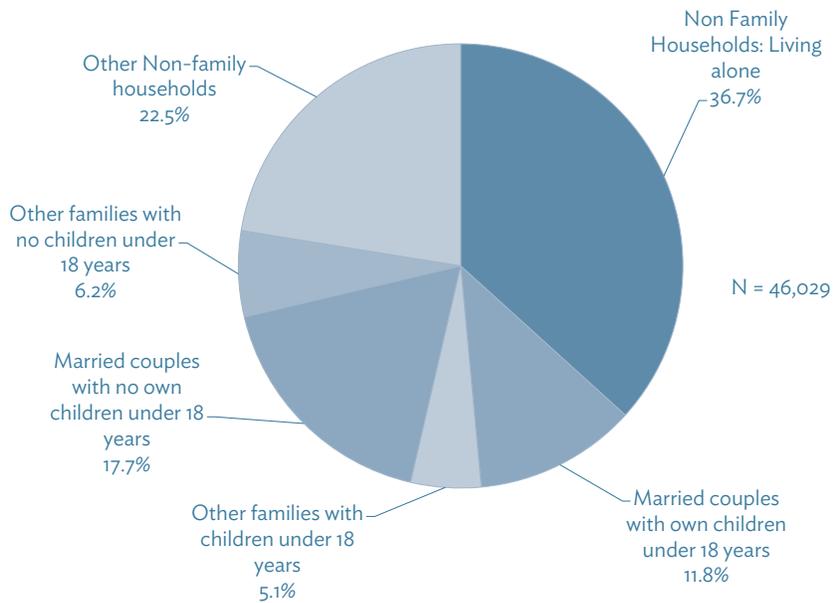
The census, from which these data are taken, does not address the reasons for population shifts. These shifts may be related to cost of living, proximity to employment, or other social/demographic factors.

Figure 1.8 POPULATION GAINS/LOSSES IN 1990-2000 AND 2000-2010, BASELINE BY RACE/ETHNICITY Berkeley, 2010



Source: U.S. Census 2000, 2010

Figure 1.9 HOUSEHOLD TYPE AND PRESENCE OF CHILDREN Berkeley, 2010



Source: U.S. Census, 2010

Household Type

Berkeley is home to approximately 46,000 households. Berkeley residents are less likely to live in family households than are Alameda County residents: 41% of Berkeley households are families, compared to 65% in Alameda County.⁶ Approximately 17% of households include children less than 18 years of age.

According to the US Census Bureau, about 57% are renter-occupied housing units and 43% are owner-occupied housing.⁶

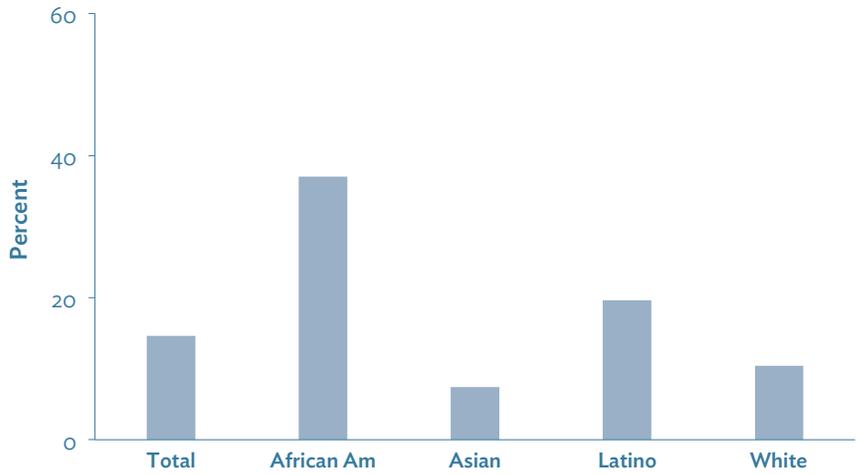
Among family households in Berkeley, 15% are single parents with children

Household Type continued

under 18 years of age. This rate is 37% among African American family households.

Note: The US census defines “single householder families” as an adult living with related children and without a spouse. Thus unmarried couples of any gender are considered “single” in these data. “Related children” includes children related by birth or adoption only. Thus foster children are not included. These definitions limit the utility of these data, given the broad diversity of family households in Berkeley.

Figure 1.10 PERCENT OF SINGLE HOUSEHOLDER WITH RELATED CHILDREN UNDER 18 YEARS OF AGE BY RACE/ETHNICITY OF PARENT Berkeley, 2010

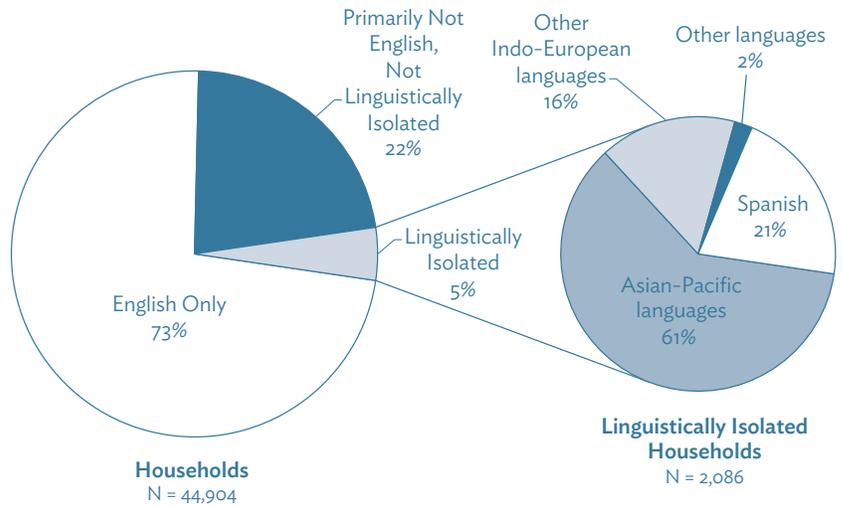


Source: US Census Bureau, 2010

Linguistic Isolation

The primary language spoken in one quarter of Berkeley households is a language other than English. Five percent of Berkeley residents are linguistically isolated, meaning they live in a household where no one over the age of 14 speaks English fluently.

Figure 1.11 LANGUAGE SPOKEN AT HOME AND LINGUISTICALLY ISOLATED HOUSEHOLDS FOR POPULATION 14 YEARS AND OLDER Berkeley, 2007–2011



Source: American Community Survey, 2007–2011

Income and Wealth

Households with a White head of household are more likely to be high income, and those headed by African Americans are more likely to be low income.

Households with a White head of household earned over twice as much as other households. For every dollar earned by a White head of household in 2010, African American and Latino heads of household, on average, earned approximately 40¢.

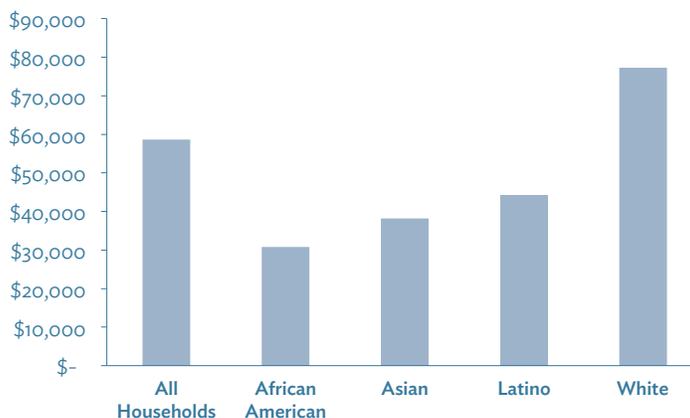
Household income includes income from all adults living in one household, regardless of the size of the household or the number of working adults. Larger families with the same income are poorer, because their income must support more people. Households with multiple working adults, or adults who work multiple part-time jobs, experience different stresses than households in which all income is earned by a single adult with one job.

Home ownership is an indicator of wealth, as distinguished from income. Home ownership influences the sense of belonging and control over one’s place of residence. Housing quality and accessibility are important determinants of health status.

74% of owner-occupied housing units in Berkeley belong to Whites. In comparison, only 5% of owner-occupied units belong to Hispanics. This means that Whites have a higher level of wealth than other Berkeley residents.

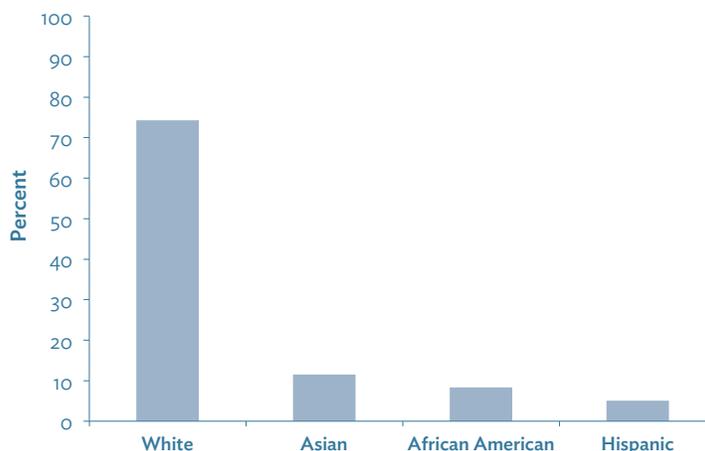
Between 2009 and 2011, low-income households increased dramatically among African Americans and Whites, while low-income Latino households decreased. High-income households increased in all racial/ethnic groups, but much more so among Whites than other groups.

Figure 1.12 MEDIAN HOUSEHOLD INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION-ADJUSTED DOLLARS) BY RACE/ETHNICITY Berkeley, 2006–2010



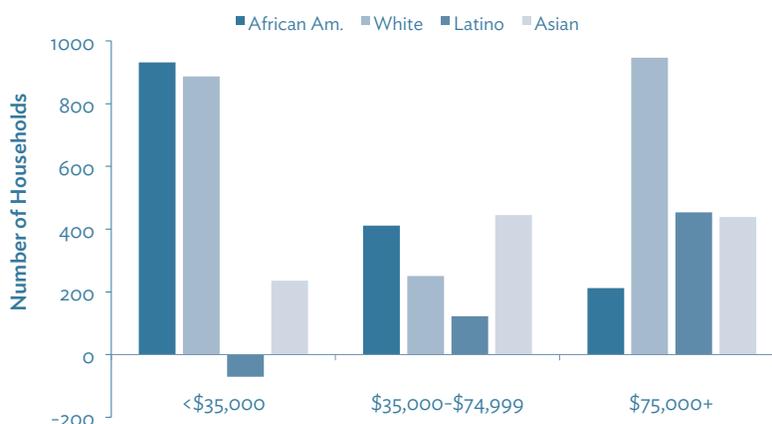
Source: American Community Survey, 2006–2010

Figure 1.13 PERCENT OF OWNER-OCCUPIED HOUSING UNITS BY RACE/ETHNICITY Berkeley, 2006–2010



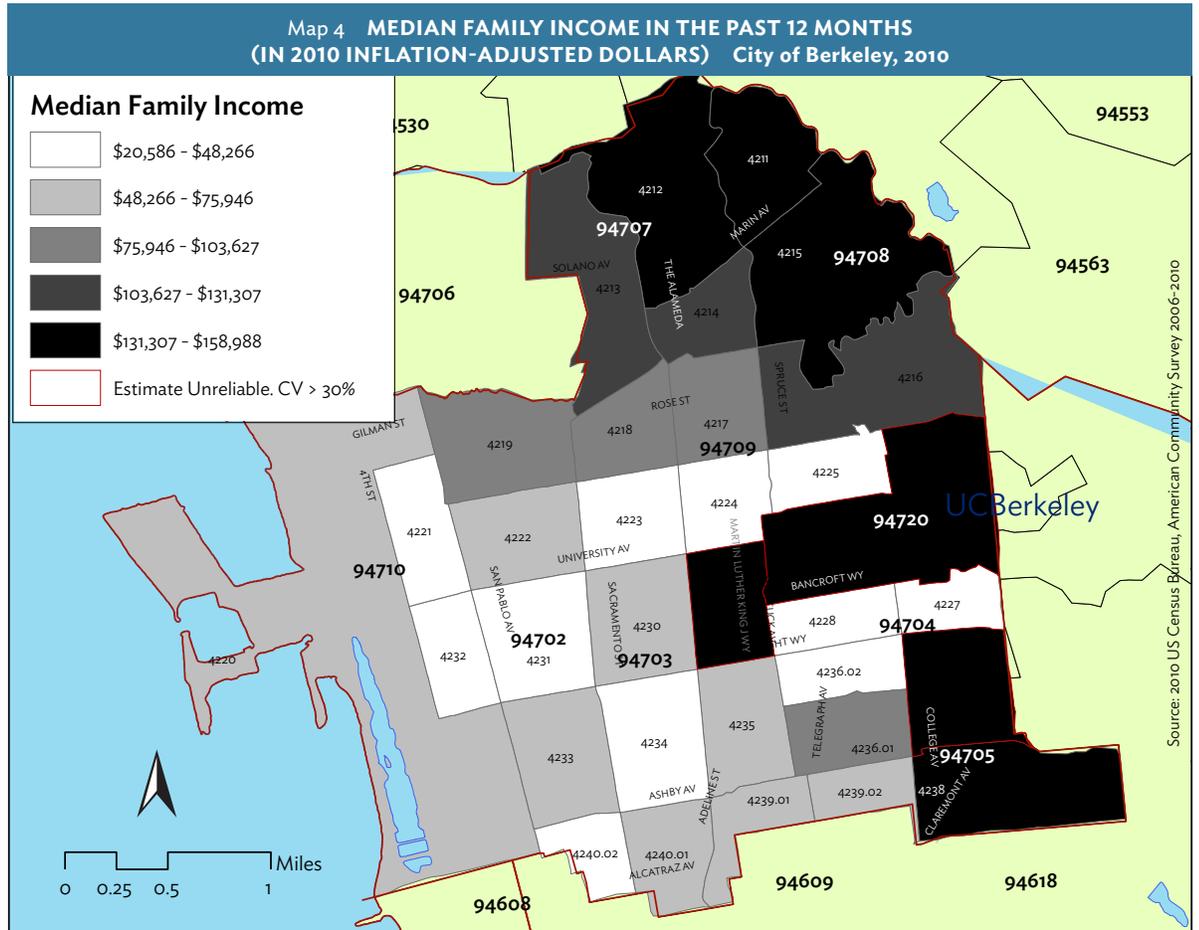
Source: American Community Survey, 2006–2010

Figure 1.14 GAINS OF HOUSEHOLDS IN 2007–2009 FROM 2009–2011, BASELINE BY HOUSEHOLD INCOME AND RACE/ETHNICITY OF HOUSEHOLDER Berkeley



Source: American Community Survey, 2007–09, 2009–11

Income and Wealth continued



Berkeley’s wealthiest residents live in the northern and eastern hills of the City. Low income households are a mixture of those close to the university and those in south and west Berkeley.

The low income population near the University is comprised largely of students. These students, in general, did not grow up in poverty, and are not expected to retain their low income status after they leave school. They can be described as temporarily poor. Low income residents elsewhere in Berkeley are comprised of a greater range of ages and family structures, and are more likely to experience the stresses of low income throughout their life course.

Housing policy is health policy. Educational policy is health policy. Antiviolence policy is health policy. Neighborhood improvement policies are health policies. Everything that we can do to improve the quality of life of individuals in our society has an impact on their health and is a health policy.

— Dr. David Williams, Harvard School of Public Health

Income and Wealth continued

Approximately 18% of Berkeley residents overall live in poverty. Poverty rates vary strikingly by race/ethnicity and age.

One third of African American children live in poverty. This is nearly seven times the rate of poverty among White children, and more than double the rate in any other group of children.

Twenty percent of Latino children live in poverty, which is 4 times the rate of White children living in poverty.

The highest overall poverty rate is in the Asian population. As discussed above, Berkeley’s Asian population is strongly influenced by the large student population. Although college students commonly have very low income during their limited student years, they are less likely to live in poverty throughout their adult lives than are those who do not attend college.

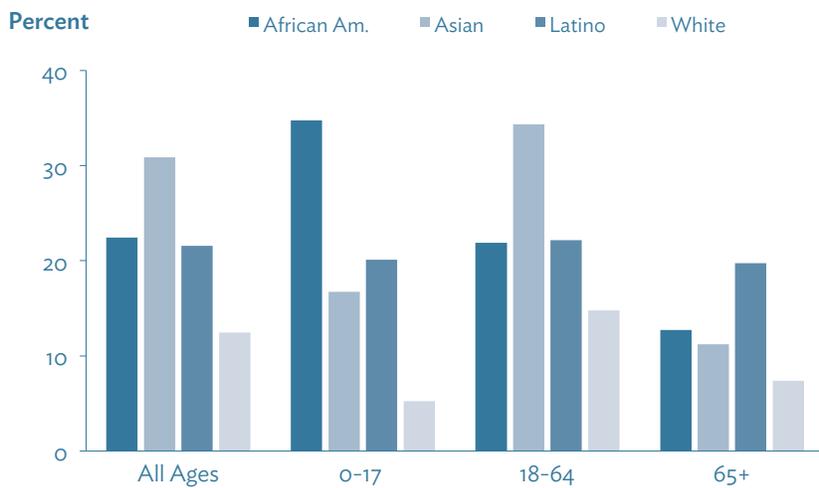
Poverty is defined as living below the Federal Poverty Level (FPL).

Most adult Berkeley residents are middle- or high-income.

However, nearly one in 3 Latino adults lives in poverty, as does one in 5 African American adults.

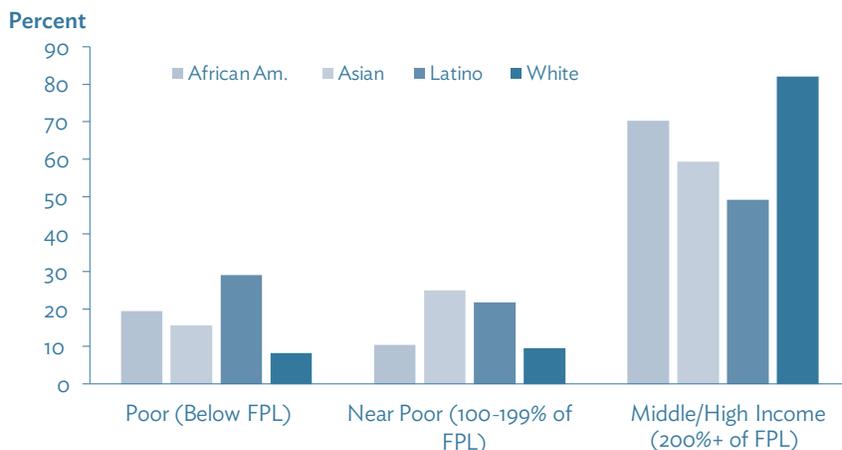
Of those who are near poor, Asians make up the largest percentage followed by Latinos.

Figure 1.15 PERCENT OF POPULATION BELOW THE POVERTY LEVEL IN 2011 BY AGE AND RACE/ETHNICITY Berkeley, 2007–2011



Source: American Community Survey, 2007–2011

Figure 1.16 POVERTY STATUS BY RACE/ETHNICITY FOR THE POPULATION AGED 18 AND GREATER City of Berkeley, 2005–2007–2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

HIGHLIGHT: **Child Health and Disability Prevention (CHDP) Program**

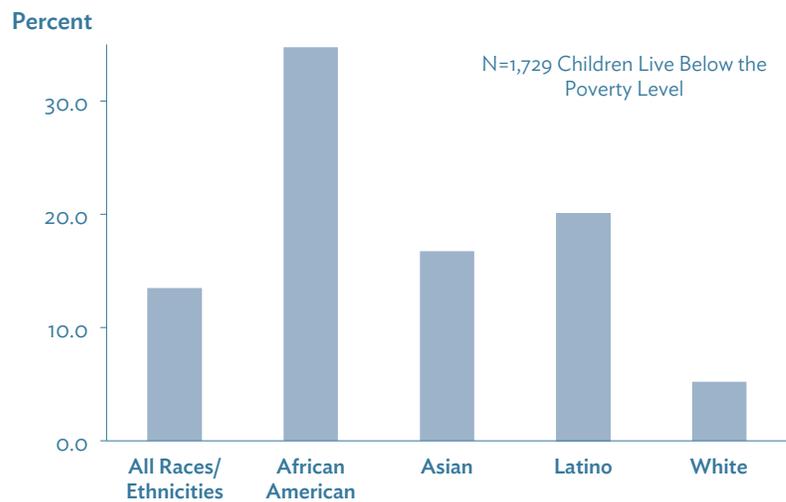
CHDP improves health care access for Medi-Cal and low-income children in Berkeley by providing outreach and education regarding available services. CHDP pediatricians and dentists provide well-child check-ups which include immunizations, developmental and dental assessments, vision and hearing screening, health education and appropriate lab test for infants, children and teens with Medi-Cal.

Children in Poverty

Just over 1,700 children under the age of 18 in Berkeley live in poverty. The poverty rate among African American children is 6 times higher than among White children, and nearly 3 times higher than children of all races/ethnicities.

Programs that serve Berkeley children living in poverty include those in the Childhood Health Unit, as well as 2020 Vision-related programs and other programs of Parks, Waterfront & Recreation Department, Mental Health, and BUSD.

Figure 1.17 **PERCENT OF CHILDREN 17 AND UNDER BELOW THE POVERTY LEVEL BY RACE/ETHNICITY** Berkeley, 2007–2011

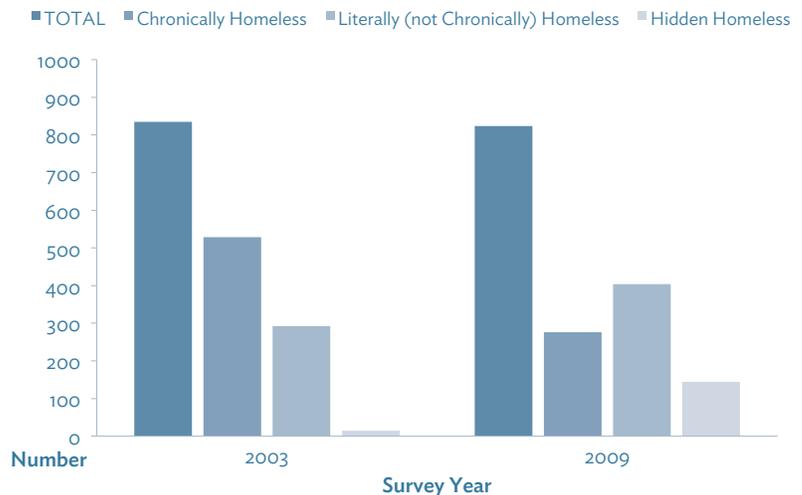


Homeless Population

Eleven percent of Alameda County's homeless population is in Berkeley, while Berkeley has 7% of the County's overall population.⁶ The definitions of homelessness used in the Alameda County Homeless Counts were established by the U.S. Department of Housing and Urban Development.

Between 2003 and 2009, Berkeley's total homeless population was stable, but the composition changed. The number of chronically homeless people decreased by almost half, while the number of hidden homeless increased ten-fold.

Figure 1.18 **HOMELESS POPULATION** City of Berkeley, 2003 and 2009

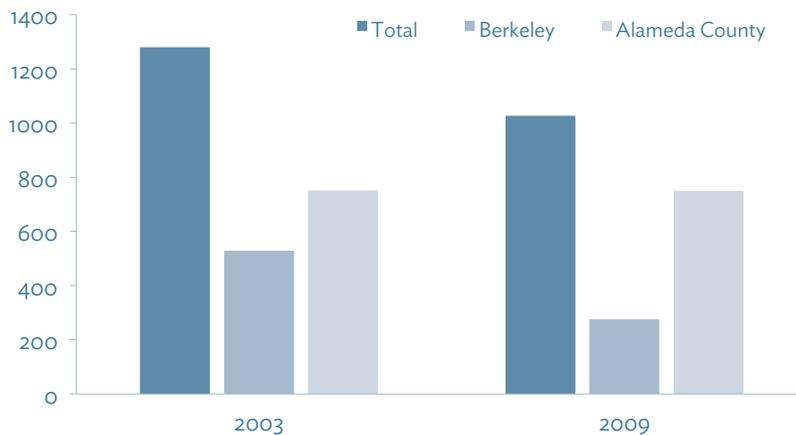


Homeless Population continued

In Berkeley, the hidden homeless constitute a much smaller proportion of all homeless (17%) than countywide (41%). The recession most likely fueled the increase in hidden homelessness. This number may improve as the economy and particularly unemployment turn around.

The number of chronically homeless adults countywide decreased by 20% from 2003 to 2009. Berkeley's share of the countywide chronically homeless population decreased from 41% to 27% in this period.⁸

Figure 1.19 CHRONICALLY HOMELESS COUNT BY REGION
Berkeley and Alameda County, 2003–2009



Source: Alameda Countywide Homeless Count & Survey Report, 2003 and 2009.

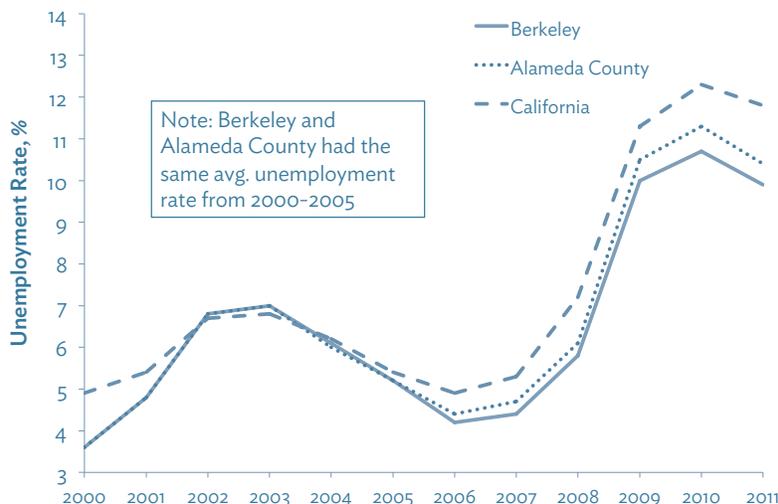
HIGHLIGHT: Shelter Plus Care

One of the most effective interventions for ending chronic homelessness is the combination of affordable permanent housing and supportive services. The City has worked to increase the local U.S. Department of Housing and Urban Development (HUD) funding for affordable housing subsidies for people who are homeless and disabled. This funding supports the Shelter Plus Care program. The City now administers six grants providing permanent housing subsidies for more than 240 households. The program is a partnership with 11 community-based homeless service organizations which provide essential supportive services that help people become and stay housed.

Employment

In 2011, about 58,800 Berkeley residents were in the labor force, and 5,800, or 9.9%, were unemployed. This is the first annual single-digit unemployment rate in Berkeley since 2008. Alameda County and California followed a similar pattern, with decreased unemployment rates in 2011.

Figure 1.20 UNEMPLOYMENT RATE
Berkeley, Alameda County, and California, 2000–2011

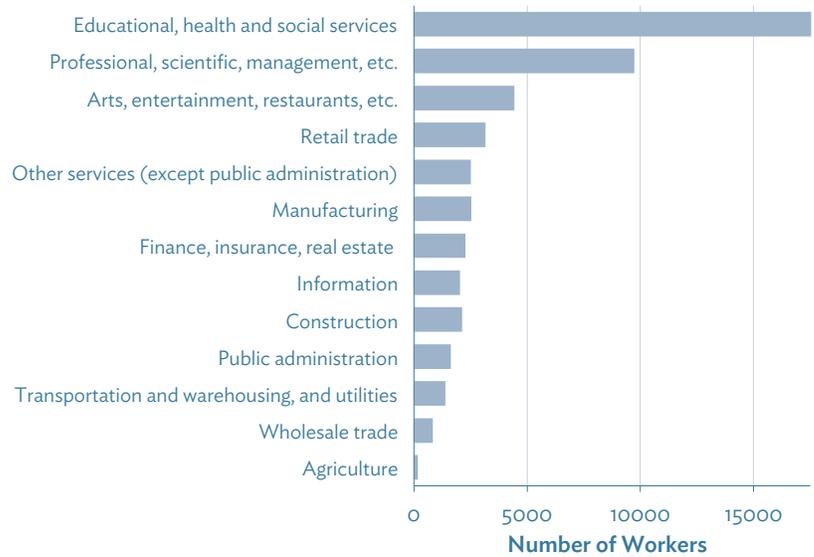


Source: Cal. Employment Development Department

Employment continued

Jobs in education, health, social services, and professional, scientific, and arts and entertainment industries account for the majority of employment among Berkeley residents. Few jobs are available in traditional “blue-collar” industries such as manufacturing and construction.

Figure 1.21 **INDUSTRY OF EMPLOYED POPULATION, AGED 16 YEARS AND OVER**
Berkeley, 2007–2011



Source: American Community Survey, 2007–2011

HIGHLIGHT: Career Development Opportunities

The Health, Housing & Community Services Department offers extensive opportunities for youth, students, and community members. Students from BUSD schools, Berkeley City College, UC Berkeley, and health professions schools join the department to assist in projects, program evaluation, service provision, and community-based work. The City’s YouthWorks program provides paid summer and year-round employment experience for Berkeley youth ages 14-25. AmeriCorps members are placed at BSHSC every year, receiving practical employment experience in the Public sector.

The purpose of the Department’s Intern and Volunteer program is to deepen community understanding of HHCS services while providing service, educational, and professional development opportunities for community members. A wide variety of HHCS programs involve students and community members from all walks of life in programs that serve the Berkeley community. The Intern and Volunteer Program provides opportunities for giving back to the community, enhancing job skills, and strengthening the connection between the HHCS department and the residents it serves. Students, volunteers and interns are an integral part of HHCS’s commitment to building a vibrant and healthy Berkeley.

Evidence suggests that more equitable social policies, secure living-wage jobs, affordable housing, racial justice, good schools, community empowerment, and family supports are health issues just as critical as diet, tobacco use, and exercise. As a society, we have a choice: invest in the conditions for health now, or pay to repair our bodies later.

— www.unnaturalcauses.org

Education

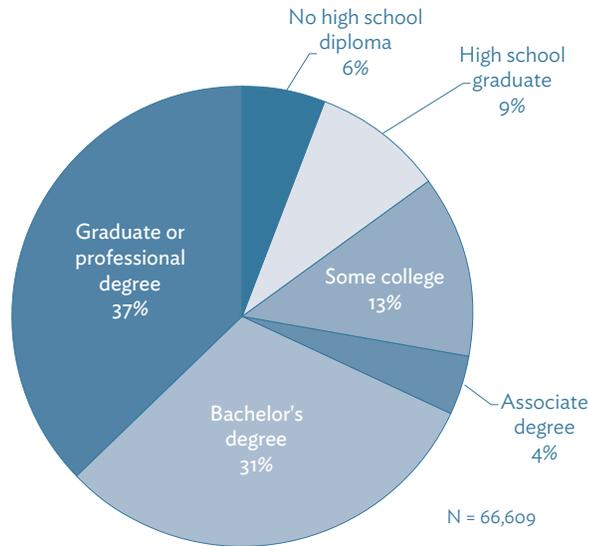
Approximately 85% of Berkeley residents ages 25 and over attended at least some college.

Over 65% of residents have a bachelor's, graduate, or professional degree, compared with 40% in Alameda County and 30% in California.⁹

HIGHLIGHT: Measure GG Community Outreach/ Youth Engagement for Emergency Preparedness

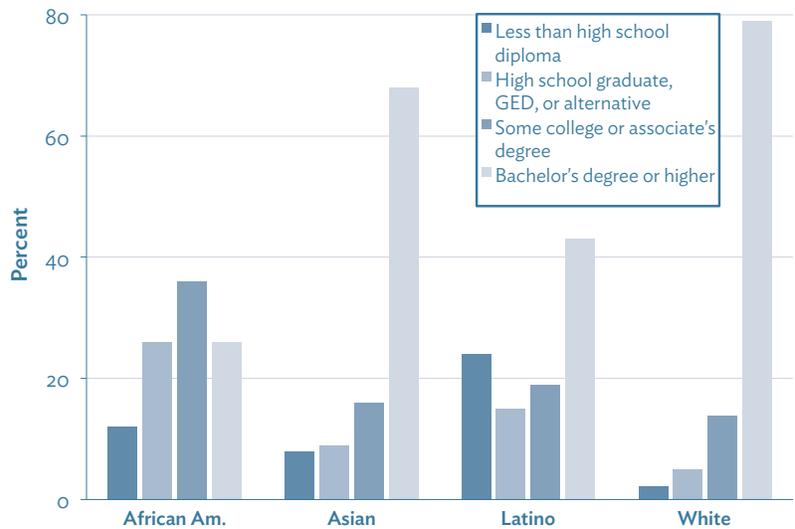
Measure GG funding is being used to develop and implement a Public Health Preparedness program dedicated specifically to disaster preparedness in vulnerable and underserved populations of the City, with emphasis on South and West Berkeley. This program will leverage existing Public Health networks and community groups, in order to expand on the Fire Department's established networks, to increase disaster preparedness in these communities. This program's primary focus will include engaging and training community leaders, with a focus on youth development and leadership initiatives to improve community capacity to respond in an emergency. This is a dedicated effort to working with community members in South and West Berkeley.

Figure 1.22 EDUCATIONAL ATTAINMENT OF POPULATION AGED 25 AND OLDER
Berkeley, 2006–2010



Source: American Community Survey, 2006–2010

Figure 1.23 EDUCATIONAL ATTAINMENT OF POPULATION AGED 25 YEARS AND OLDER BY RACE/ETHNICITY
Berkeley, 2006–2010

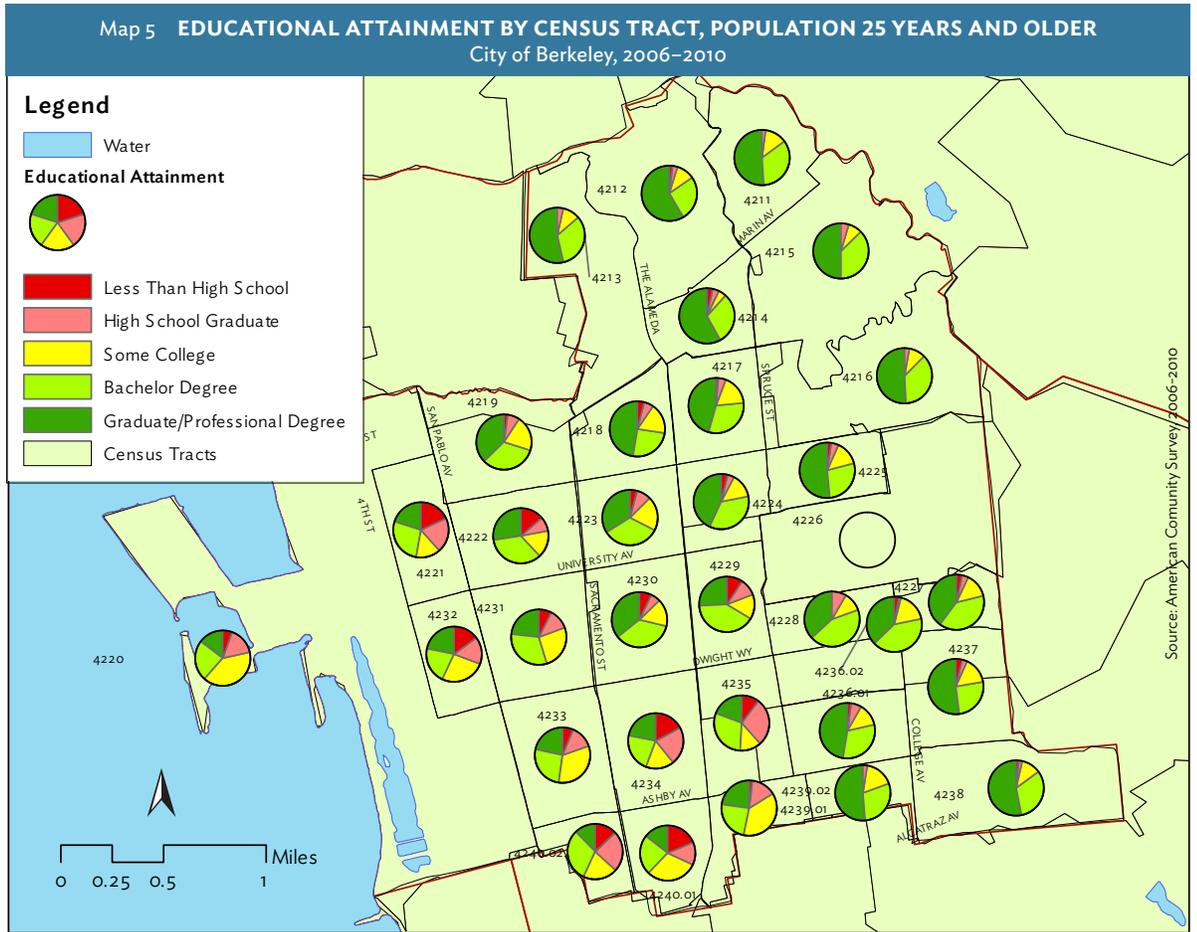


Source: American Community Survey, 2006–2010

Berkeley's educational advantages are not evenly distributed. Whites have the highest rates of college and professional degrees, followed closely by Asians. African Americans have the lowest rate of higher education, and Latinos are the least likely to have graduated from high school.

Nearly 80% of Whites in Berkeley have a bachelor's degree or higher compared to 50% of Whites in Alameda County, and 39% of Whites in California.⁹

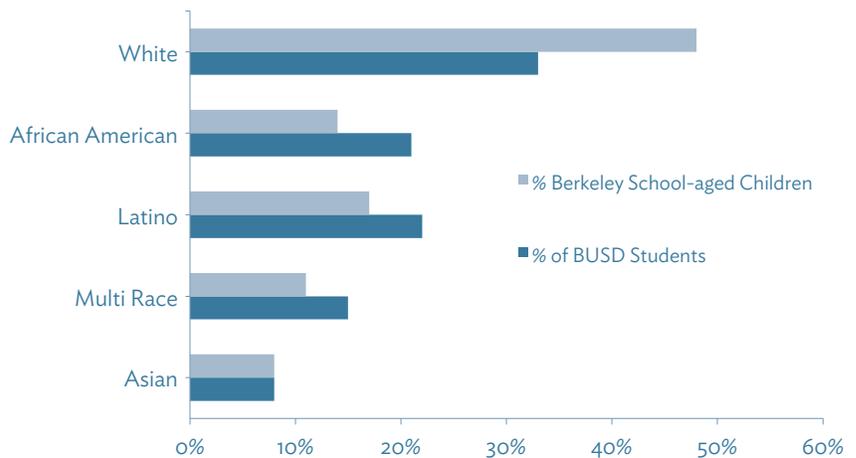
Education continued



Education is not equally distributed geographically. Higher levels of educational attainment are seen in the north and east parts of the City, with lower levels of educational attainment in the south and west City census tracts.

Almost 10,000 students are enrolled in Berkeley Unified School District (BUSD) schools. The racial/ethnic make-up of BUSD students differs from that of the City's population of school-aged children. African American and Latino students comprise a larger proportion of the BUSD population than of the City population. White students make up a smaller portion of those enrolled in BUSD than in the population. Asian students are proportionately represented at BUSD when compared to the population.

Figure 1.24 STUDENTS ENROLLED IN K-12 GRADES AND PERCENT OF BERKELEY SCHOOL-AGED CHILDREN Berkeley Unified School District, 2011-2012

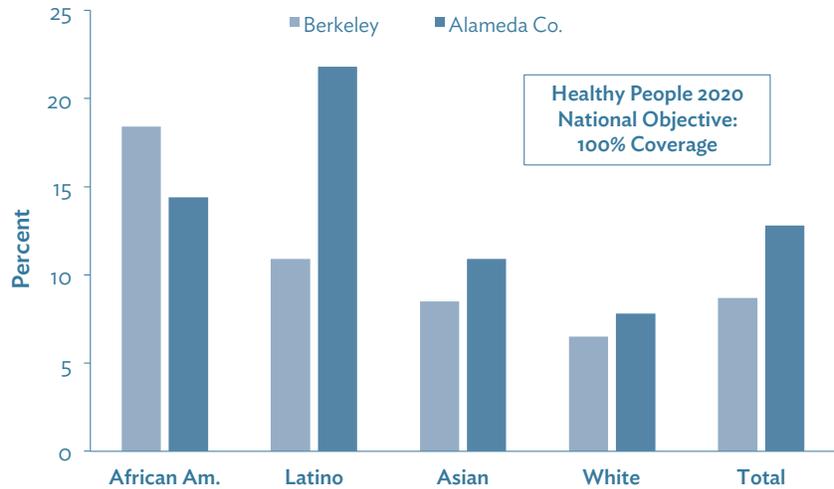


Source: Berkeley Public Health Division, California Department of Education, 2010 US Census

Access to Health Care

Nine percent of Berkeley residents lack health insurance, compared to 13% in Alameda County. This rate varies by race/ethnicity, as well as by age and education. The percentage of uninsured in Berkeley is lower than in Alameda County, except for African Americans.

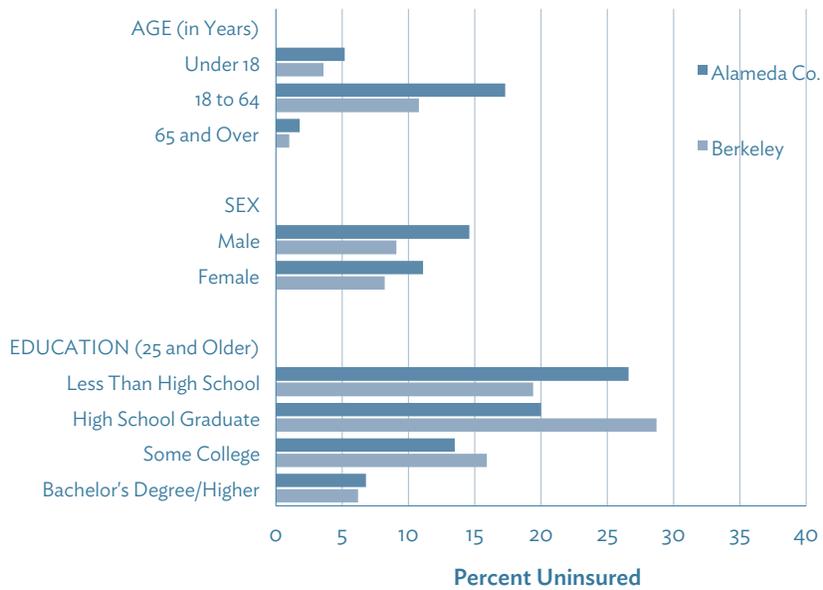
Figure 1.25 HEALTH INSURANCE COVERAGE STATUS: PERCENT UNINSURED BY RACE/ETHNICITY City of Berkeley and Alameda County 2009–2011



Source: US Census Bureau, American Community Survey, 2009–2011

Health Care Reform will greatly expand the availability of health insurance in 2014. Medi-Cal (California’s Medicaid program) will be available to a wider range of people, including low-income childless adults. However, insurance gaps will remain. Those who are not citizens or legal residents will not be eligible for coverage, and some who are eligible will remain uninsured either by choice or because premiums are not affordable.

Figure 1.26 HEALTH INSURANCE COVERAGE STATUS: UNINSURED BY AGE, SEX AND EDUCATIONAL ATTAINMENT City of Berkeley and Alameda County 2009–2011



Source: US Census Bureau, American Community Survey, 2009–2011

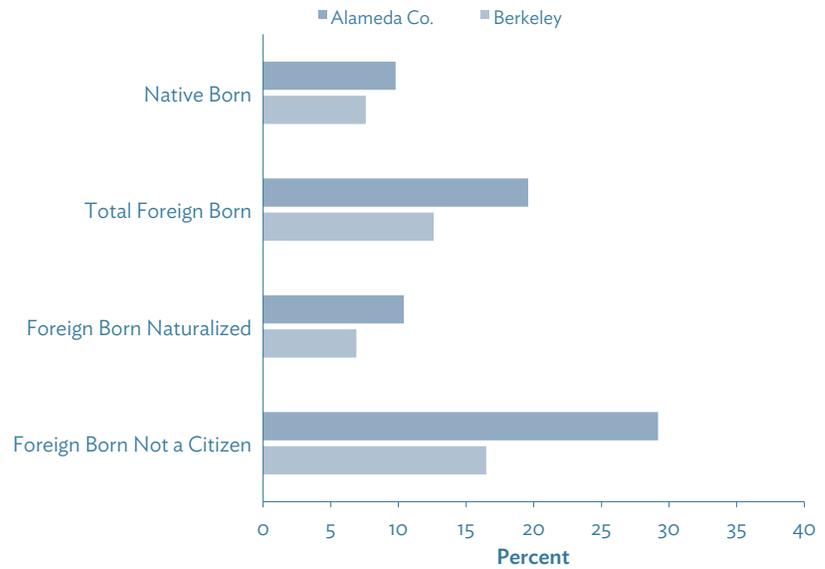
Access to Health Care *continued*

Individuals living in Berkeley who are not US citizens are more likely to be uninsured than those who are citizens.

Fewer than 10% of Native born and foreign born naturalized citizens in Berkeley are uninsured.

In contrast, more than 15% of those who are foreign born and not US citizens are uninsured.

Figure 1.27 PERCENT UNINSURED BY PLACE OF BIRTH AND US CITIZENSHIP
City of Berkeley and Alameda County 2009–2011



Source: US Census Bureau, American Community Survey, 2009–2011

HIGHLIGHT: Access to Health Care

Public Health programs linking residents to health care services help improve overall health and well-being of the community. Berkeley’s Public Health Division facilitates access in several ways:

El Centro El Centro improves access to medical care for the Berkeley community by providing free information and assistance with Medi-Cal, Healthy Families, and Kaiser Child Health Plan applications, and referral services to all. As Health Care Reform rolls out in 2014, the function of linking to eligibility assessment, enrollment, and retention will be key to ensuring that Berkeley residents take full advantage of the opportunities presented by Health Care Reform, and make the smoothest transition possible into the new system.

Public Health Nursing Field Services Public Health Nurses (PHNs) provide quality, confidential, community-based case management services for families and individuals, primarily during home visits. The focus of the program is on Berkeley residents at highest risk for poor health outcomes,

often those with special needs or limited access to care. These include pregnant women, new parents and their infants, school-aged mothers, children, elders, disabled, low-income, and people who are homeless.

Case management services include nursing assessments of health status and need for medical care and other services; counseling on diverse health related topics and supporting healthy lifestyle choices; advocating for better use of health care systems while linking families to health and social services; assisting with enrollment in low cost medical and dental plans; and helping families support children’s growth and development.

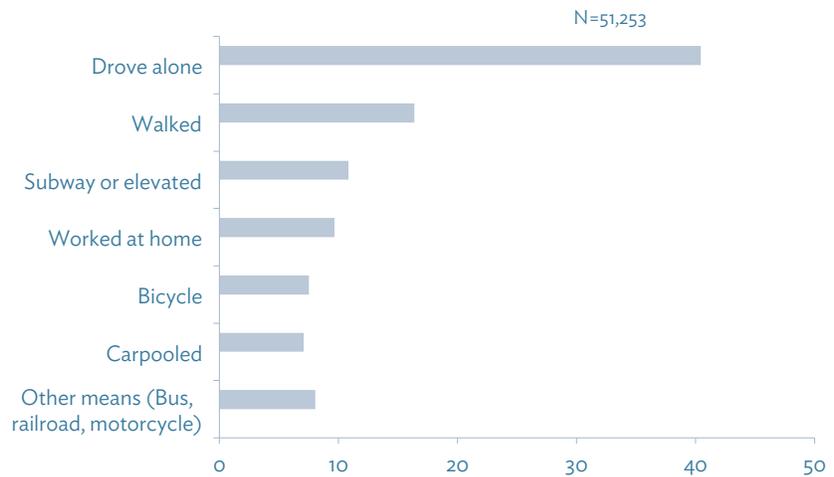
Nurse of the Day PHNs provide telephone assistance via the Nurse of the Day (NOD) health information line. This service refers community members to health care and other services and provides general health information. This is another important source of information for Berkeley residents about Health Care Reform and its impact on their health care access.

Transportation

Almost half of Berkeley residents drive to work, either alone or in a carpool.

Forty percent of residents walk, ride bikes, or use public transportation to get to work. These are active methods of transportation and have health advantages over driving.

Figure 1.28 MEANS OF TRANSPORTATION TO WORK, RESIDENTS 16 YEARS AND OLDER Berkeley, 2006–2010



Source: American Community Survey, 2006–2010

HIGHLIGHT: Active Transportation

Active transportation means getting around by walking, biking, or taking public transit. Using active transportation benefits the individual's health directly, and is a primary strategy for reducing greenhouse gases and improving local air quality. Incorporating physical activity into daily routines reduces the risk of heart disease, overweight and obesity, and high blood pressure, and improves mental health. Improved air quality lessens rates of diseases such as asthma and heart attacks. These are considered health “co-benefits” of increasing active transportation to address climate change.¹⁰ In other words, active transportation is a “win/win” approach to community health.

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2

CHAPTER 2: PREGNANCY AND BIRTH

What is this?

Pregnancy and childbirth mark the beginning of a new individual's journey along the life course. In this chapter we report on maternal and infant health related to pregnancy and childbirth.

Why is it important?

The conditions of pregnancy, birth, and early infancy have a profound impact on health and well-being throughout life. Public Health focuses attention on this critical life stage when assessing the health of the community.

What is Berkeley's Status?

Berkeley has excellent overall health indicators related to pregnancy, birth, and breast-feeding and meets most HP2020 goals in these areas. Berkeley has shown significant successes in health outcomes related to pregnancy and birth. The most striking areas are low birth weight (LBW) rates and prenatal care. Although health inequities persist, African American mothers and infants now meet HP2020 goals for LBW and prenatal care. The teen birth rate among African American young women is many times the rate among other racial/ethnic groups. Improving the reach and effectiveness of programs, partnerships, and outreach to better meet the needs of at-risk youth is a priority for public health.



Robin Kempster

Key Findings

- **Healthy People 2020**

- Berkeley overall *meets* HP2020 goals for:
 - Prenatal care
 - Low Birth Weight
 - Prematurity
 - Breastfeeding from birth to 6 months of age
- Berkeley *does not meet* HP2020 goals for:
 - Prenatal care and birth weight among teen mothers
 - Prematurity among African American infants
 - Breastfeeding among African American infants at 3 and 6 months of age

- **Mothers**

- 90% of Berkeley pregnant women receive prenatal care in the first trimester.

- **Teens**

- Berkeley has the lowest overall teen birth rate of California health jurisdictions.
- African American teens have a birth rate 20 times higher than that of White teens and 5 times that of Latina teens. The birth rate in this population is higher than in Alameda County as a whole.

- **Infants**

- In 1991, an African American woman in Berkeley was 4 times as likely as a White woman to have a low birth weight (LBW) infant. In 2011, the risk of an African American mother having a LBW baby has fallen to 2.5 times higher than that of her White counterpart.
- All racial/ethnic groups in Berkeley meet the HP2020 goal for LBW.
- African American babies are twice as likely to be born prematurely as White, Latino, or Asian babies.

- **Breastfeeding**

- Breastfeeding rates for Berkeley's newborns meet Healthy People 2020 goals in the immediate newborn period for all racial ethnic groups, and at 3 and 6 months for all groups except African Americans.
- Berkeley does not have a certified "Baby-Friendly" hospital.

Prenatal Care

What is this?

Prenatal care is health care received during a woman's pregnancy and includes education, monitoring, and screening throughout pregnancy. Prenatal care is considered adequate when it begins in the first trimester of pregnancy and continues at regular intervals throughout the pregnancy.¹

Why is this important?

Early and consistent prenatal care correlates closely with birth outcomes: improved birth weights and lower risk of preterm delivery. Inadequate prenatal care carries increased risks of poor health

outcomes, including newborn and infant mortality, and maternal mortality.¹ Studies suggest that the beneficial effects of prenatal care are strongest among socially disadvantaged women.²

What is Berkeley's status?

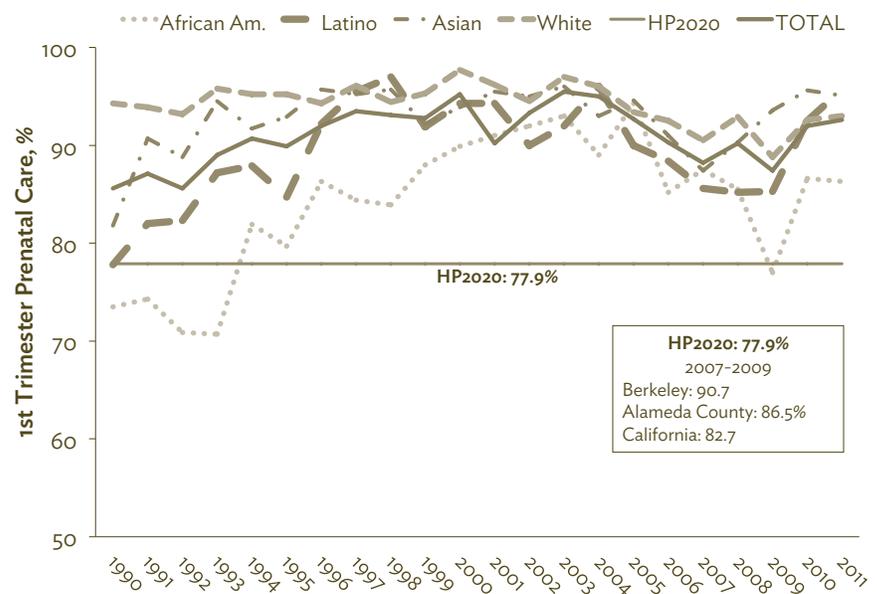
Berkeley mothers access prenatal care early in their pregnancies. Ninety percent of Berkeley's pregnant women receive prenatal care in the first trimester, far exceeding the HP2020 goal.

African American women are less likely than others to receive first trimester prenatal care. All racial/ethnic groups exceed the HP2020 goal for prenatal care.

HIGHLIGHT: Pre-Conception Care

A woman's health before she becomes pregnant has a large impact on her health in future pregnancies and on the health of her future children. Public health and health care providers now include "pre-conception" health as part of women's health care and health assessment. Pre-conception health considers a woman's overall health before and between pregnancies: her nutrition; activity; tobacco, alcohol, and drug use; and chronic or communicable diseases. The CDC considers pre-conception health care important for men as well. Optimal health of both parents before pregnancy gives the mother and infant the best chances of a healthy pregnancy and birth.³

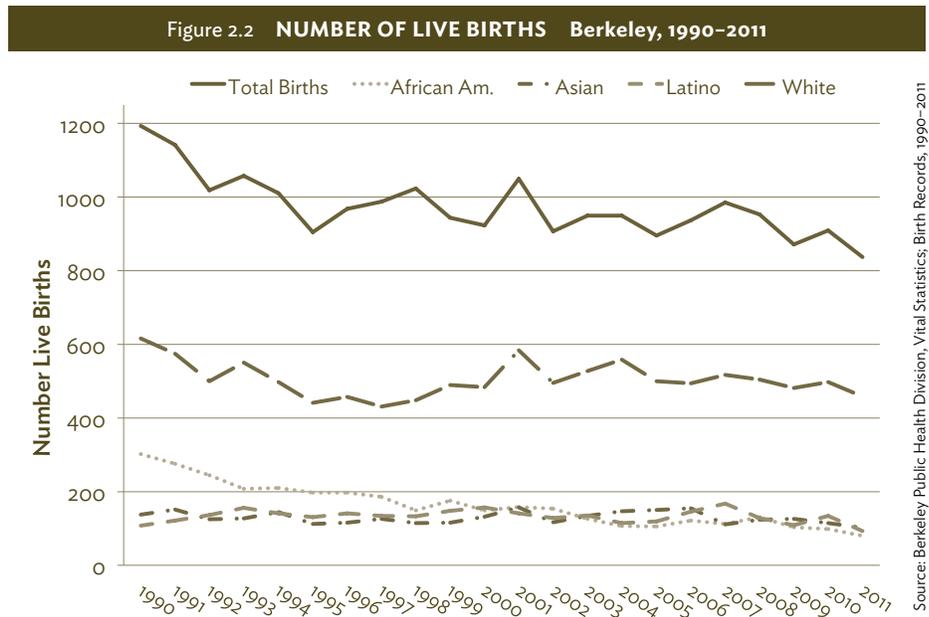
Figure 2.1 PERCENT OF PREGNANT MOTHERS RECEIVING PRENATAL CARE IN 1ST TRIMESTER Berkeley, 1990–2011



Source: Berkeley Public Health Division; Birth Records, 1990–2011

Births

The annual number of live births in Berkeley is lower than it was two decades ago in all racial/ethnic groups.



HIGHLIGHT: City of Berkeley Vital Statistics Office

The City’s Vital Statistics unit registers every infant born in Berkeley, and receives information about infants born outside of the City, to Berkeley residents. The Vital Records Office maintains documentation of births and deaths that occurred within Berkeley City limits since 1895, and plays an important role in the analysis of birth and death records and in surveillance of potential disease outbreaks.

The California State Office of Vital Records has acknowledged the excellence of Berkeley’s Vital Statistics performance in timeliness and accuracy with annual awards since 2005. These awards reflect Berkeley’s high performance in following State standards for maintaining data on Berkeley residents.

Teen Births

What is this?

Teen births are births to young women under 18 years of age. In general, these young women have not yet finished their high school education, remain dependent on their family for support, and are themselves still maturing into adulthood. Only teen births are reported here. We do not have data about total numbers or rates of teen pregnancies, miscarriages, or terminations.

Why is it important?

The health and socioeconomic consequences of teenage pregnancy and childbearing are significant. Teen mothers are more likely than adult women to receive late and inadequate prena-

tal care and to experience complications of pregnancy. Babies born to teenage mothers are at higher risk of low birth weight and preterm birth.⁴ Compared to their peers who do not have children, teen mothers have lower high school graduation rates, decreased earning potential, and are more likely to live in poverty.⁵

What is Berkeley’s status?

Berkeley has one of the lowest teen birth rates in the state: well below that of Alameda County or the State as a whole. The number of infants born to teen mothers is small, but these mothers and infants do not meet the HP2020 goals for prenatal care and birth weight. African American young women have teen birth rates far exceeding those of their peers of other racial/ethnic groups.

Teen Births *continued*

Berkeley's teen birth rate is much lower than the rates in Alameda County and California.

The birth rate among African American young women, however, exceeds that in Alameda County as a whole. The rate in this population is 5 times the rate for Latina young women and 20 times the rate for Whites.

HIGHLIGHT: Vera Casey Collaborative for Pregnant and Parenting Teens

This partnership with the YMCA Early Childhood Services Head Start program and Berkeley Unified School District provides the support and resources necessary to help pregnant and parenting teens stay in school and graduate. The program includes a full-service child care center and child development services; weekly parenting class and social support groups for teen moms and dads; vital linkages to physical, mental, and educational health services; and public health nursing case management referrals.

Figure 2.3 BIRTH RATES IN FEMALE 15 TO 19 YEARS OLD Berkeley (2009–2011), Alameda County and California (2008–2010)

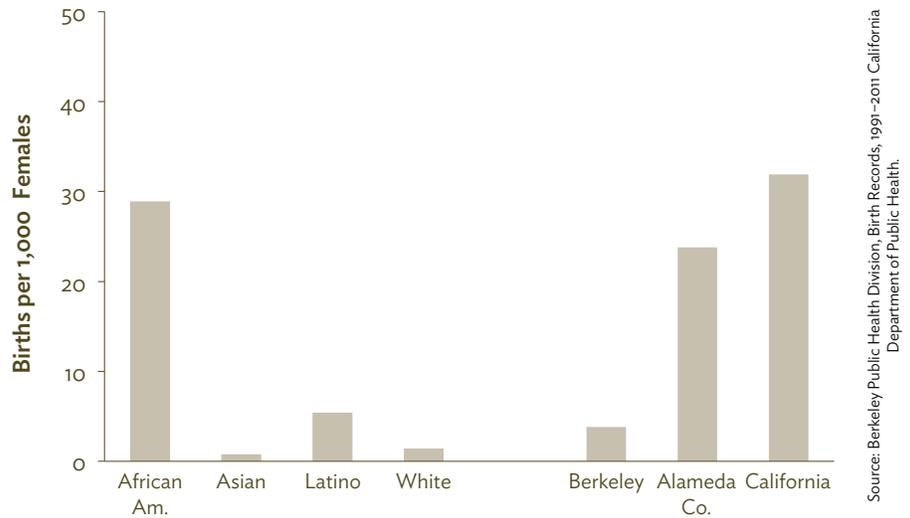
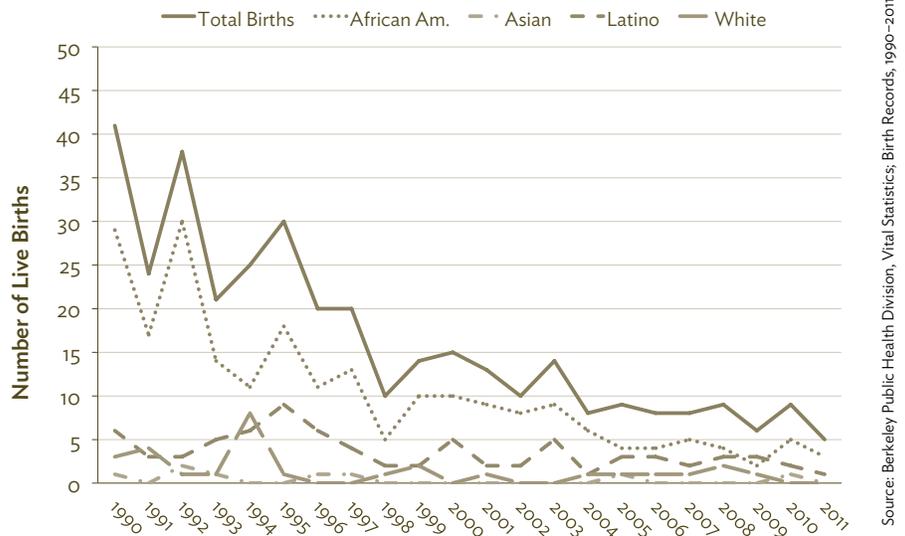


Figure 2.4 NUMBER OF LIVE BIRTHS IN FEMALE YOUNGER THAN 18 YEARS OLD Berkeley, 1990–2011



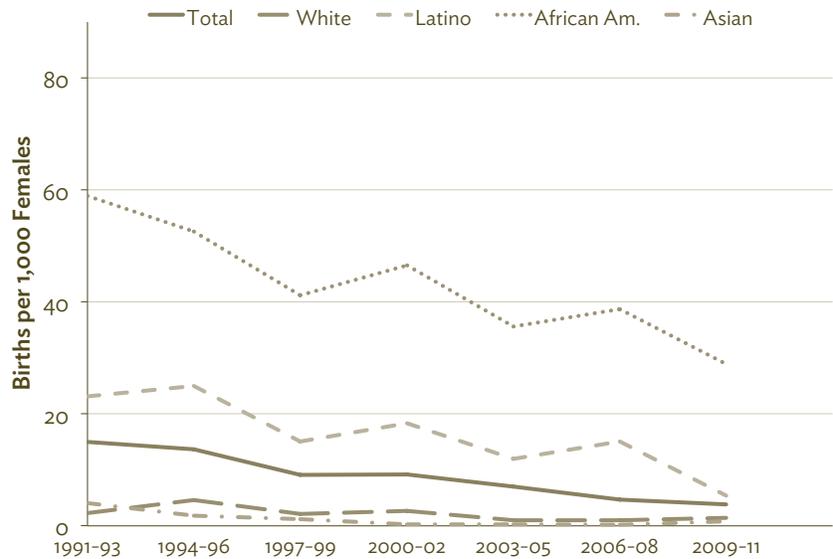
The absolute number of annual births among adolescents in Berkeley has declined significantly and steadily over the past two decades: from a total of 41 in 1990 to 5 in 2011. Among African American adolescents, the annual number of births has fallen from a high of 30 to 3 in 2011.

Teen Births continued

Birth rates (the number of births per 1,000 young women) among adolescents have declined as well. However, because the population of African American young women in Berkeley is small, even a small number of births means a high rate of births in that population.

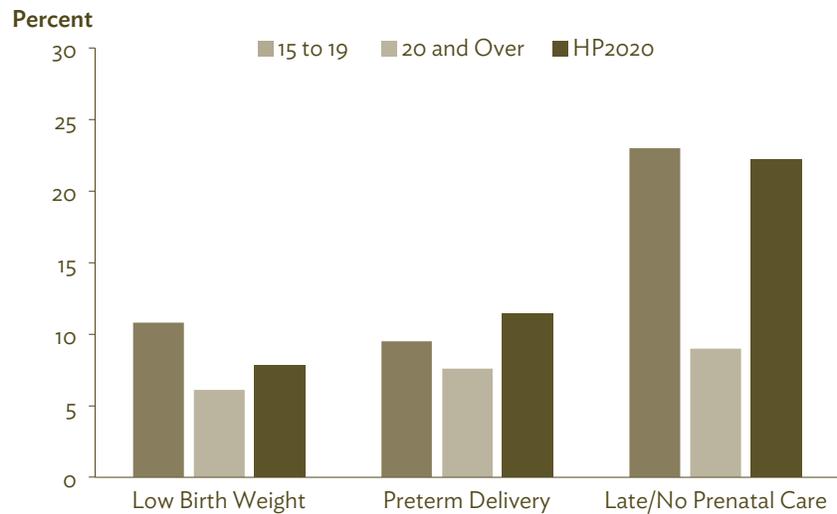
From 2005 to 2010, there were 169 babies born in Berkeley to teenagers 19 and under. These mothers are more likely than non-teen mothers to have had late or no prenatal care. Their babies are more likely to be low birth weight or preterm. In contrast to Berkeley’s mothers 20 years of age and older, these young women and their infants do not meet HP2020 goals for prenatal care or birth weight.

Figure 2.5 BIRTH RATES IN FEMALES 15 TO 19 YEARS OLD BY RACE/ETHNICITY Berkeley, 1991-2011



Source: Berkeley Public Health Division; Birth Records, 1991-2011.

Figure 2.6 HEALTH OUTCOMES FOR BABIES BORN TO FEMALES 15 TO 19 YEARS OLD City of Berkeley, 2009-2011



Source: Berkeley Public Health Division; Birth Records, 1990-2011

HIGHLIGHT: High School Health Centers

The Berkeley High School Health Center and Berkeley Technology Academy Health Centers provide free, safe, and convenient places for students to receive medical and mental health services and referrals. These services include health education and counseling on the prevention of pregnancy and direct provision of contraceptive methods and pregnancy testing.

Low Birth Weight

What is this?

Low birth weight (LBW) is a birth weight of less than 5 lb 8 oz (2,500 grams). LBW infants have higher rates of infant morbidity and mortality than normal-weight infants and are at increased risk of cerebral palsy, developmental delay, and seizures; respiratory infections; and long-term disability.^{6,7}

Why is it important?

Women who are teenagers, smoke cigarettes, are African American, or receive inadequate prenatal care are more likely than others to have LBW infants. This contributes to health inequities and has an impact on the long-term health of the infants throughout their life course.⁸

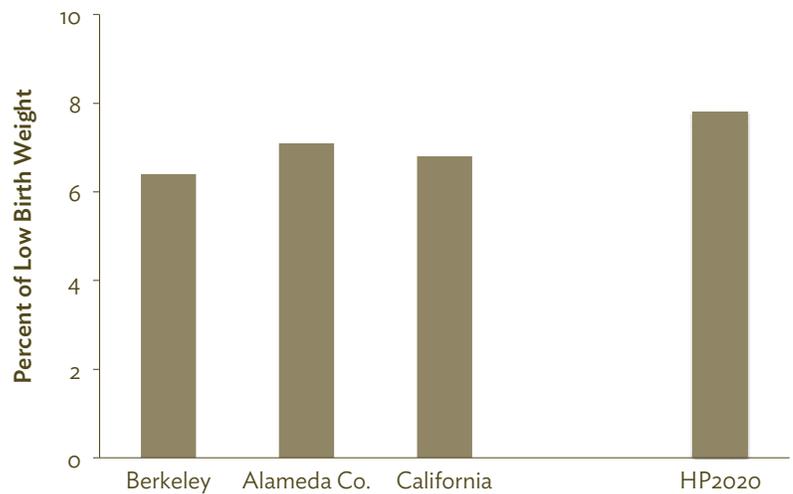
What is Berkeley's status?

Berkeley has shown substantial improvement in LBW rates, but continues to have marked disparities by race/ethnicity. African American infants are at greater risk of LBW than other infants. Conditions and factors associated with LBW include: smoking during pregnancy, premature birth, teen pregnancy, and stress—including stress associated with poverty and racism.⁸

HIGHLIGHT: Black Infant Health (BIH) Program

Housed in the South Berkeley neighborhood, BIH provides a welcoming environment for African American mothers and their babies, with the goal of improving health and birth outcomes. It focuses on reducing health disparities by empowering pregnant and mothering African American women to make healthy choices for themselves, their families, and their communities. BIH clients participate in prenatal and post-partum groups designed to encourage and support a healthy pregnancy and women's health, build parenting and life skills, increase social support, and provide community/family education about current health issues. Participants build skills in navigating social service systems to improve health care access, goal setting, and self-improvement techniques. In addition to weekly education and social support groups, case management and resource linkages ensure that clients are connected with the appropriate community and social services to meet their needs.

Figure 2.7 **LOW BIRTH WEIGHT (ALL BIRTHS) Berkeley (2009-2011), Alameda County, California 2008-2010, and Healthy People 2020 (HP2020) Goal**



Source: Berkeley Public Health Division, Birth Records, 2009-2011, California Department of Public Health.

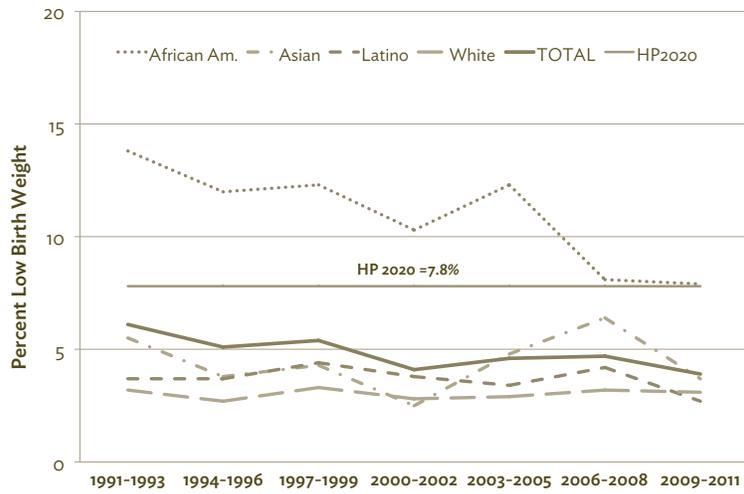
The overall proportion of LBW babies (including multiple births) in Berkeley is lower than Alameda County and the State of California and meets the HP2020 goal.

Low Birth Weight continued

Infants born to African American women are less likely to be low birth weight now than they were two decades ago. In 1991-1993, an African American woman in Berkeley was 4 times as likely as a White woman to have a LBW infant.

Despite a significant decrease, large racial and ethnic disparities persist in low birth weight: the risk of an African American mother having a low birth weight baby remains 2.5 times higher than that of her White counterpart—a disparity that is seen nationwide as well.⁷

Figure 2.8 LOW BIRTH WEIGHT (EXCLUDING MULTIPLE BIRTHS) BY RACE/ETHNICITY Berkeley, 1991-2011 (3-year intervals)



Source: Berkeley Public Health Division, Vital Statistics; Birth Records

The LBW rate among African American women is 7.9%, essentially meeting the HP2020 goal of 7.8%.

Premature Births

What is this?

Premature or preterm delivery is the birth of an infant before 37 weeks of gestation.

Why is it important?

Preterm delivery is one of the leading causes of low birth weight and infant mortality in the United States. Risk factors for prematurity include use of alcohol, tobacco, or other drugs during pregnancy, low weight gain during pregnancy, vaginal infections

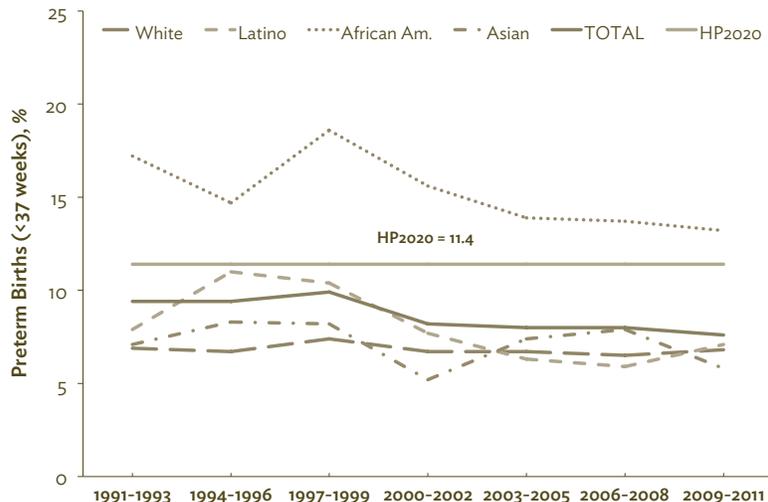
during pregnancy, and domestic violence. Like LBW infants, infants born prematurely are more likely to experience cerebral palsy, developmental delay, and seizures; respiratory infections; and long-term disability.⁷

What is Berkeley's status?

Premature births to Berkeley mothers have decreased during the last decade, including for African American mothers. African American babies, however, remain approximately twice as likely to be born prematurely as White, Latino, or Asian babies.

The overall proportion of premature births in Berkeley already meets the HP2020 goal of no more than 11.4% preterm births. However, the rate in the African American population fails to meet the HP2020 objective.

Figure 2.9 PRETERM BIRTHS BY RACE/ETHNICITY AND YEAR OF BIRTH Berkeley, 1991-2011



Source: Berkeley Public Health Division Vital Statistics; Birth Records, 1991-2011

Breastfeeding

What is this?

Mothers' breast milk is uniquely constituted to provide nourishment for newborns and infants. It provides immunologic protection from disease and it adapts to meet growing infants' changing nutritional needs.⁹

Why is it important?

Breast-fed infants have fewer respiratory and ear infections than do formula-fed babies. They are less likely to die of Sudden Infant Death Syndrome (SIDS), and they are less likely to develop obesity or diabetes over the course of their lives. They tend to require fewer doctor visits, hospitalizations, and prescription medications. The American Academy of Pediatrics recommends

that mothers breastfeed babies exclusively for the first 6 months of life and continue breastfeeding for at least 1 year.⁹

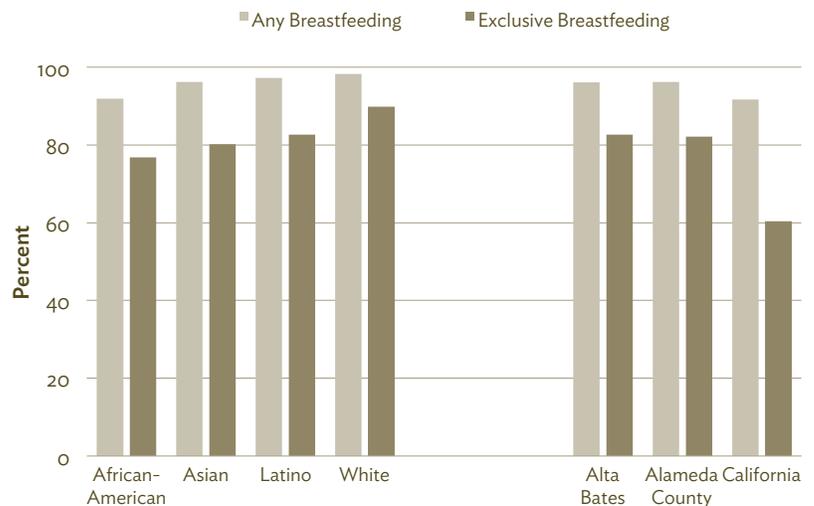
What is Berkeley's status?

Information about breastfeeding in Berkeley comes from two sources. Alta Bates hospital provides information about breastfeeding in the immediate newborn period, for all infants born at Alta Bates. The WIC program provides information about breastfeeding from 2 to 12 months of age for infants in low-income families receiving WIC services in Berkeley. Neither of these sources is restricted solely to Berkeley residents, but both include Berkeley residents. Approximately 61% of Berkeley resident babies are born in Alta Bates.

HIGHLIGHT: Baby-Friendly Hospitals

The Baby-Friendly Hospital Initiative is a worldwide effort to promote breastfeeding. It was started by the World Health Organization (WHO) and UNICEF in 1991.¹⁰ Hospitals in the US can be certified as Baby-Friendly through an accreditation process. Nationwide, only 6% of infants are born at Baby-Friendly hospitals.¹¹ Berkeley does not have a Baby-Friendly certified hospital. California Senate Bill 402, currently in process, would require all hospitals that have a perinatal unit to adopt, by January 1, 2025, the "Ten Steps to Successful Breastfeeding" of the Baby-Friendly Hospital Initiative, or an alternate equivalent process.

Figure 2.10 IN-HOSPITAL ANY AND EXCLUSIVE BREAST-FEEDING RATES AT ALTA BATES/SUMMIT HOSPITAL Berkeley, 2010



Source: California Department of Public Health, Newborn Screening Program

At Alta Bates, breast-feeding rates are highest among White mothers, and lowest among African Americans. Hospital data reflect breast-feeding at the time of newborn screening: generally at 24 hours of age. Alta Bates exceeds the HP2020 goal of 81.9% of infants ever breast-feeding, for all racial/ethnic groups.

Breastfeeding continued

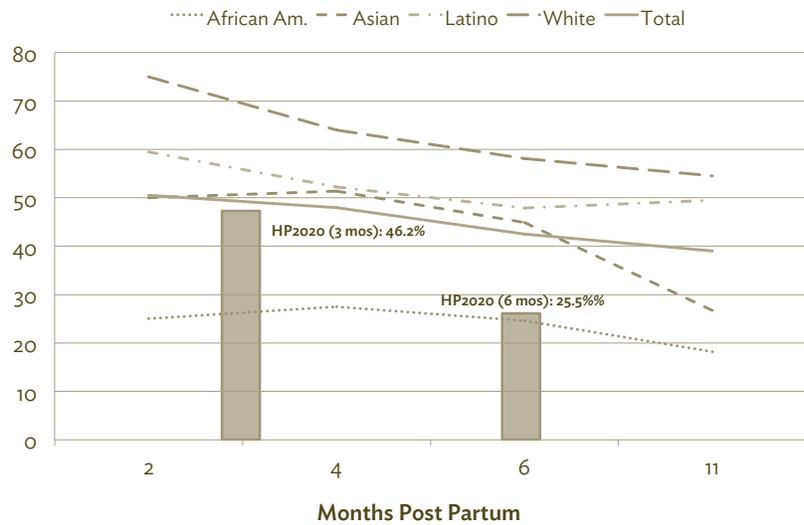
Berkeley’s Women, Infants, and Children (WIC) program serves low-income women and their children. Infants are followed for breast-feeding over the first year of life. The variation in breast-feeding by racial/ethnic group during the first year of life is similar to that at Alta Bates in the first days of life, with Whites and Latinos having the higher breast-feeding rates than African Americans and Asians.

HP2020 goals related to breast-feeding are to increase the proportion of infants:

- Breastfed exclusively through 3 months to 46.2%
- Breastfed exclusively through 6 months to 25.5%

Berkeley’s WIC population meets the 3 and 6 month goals for each racial/ethnic group except African Americans.

Figure 2.11 EXCLUSIVELY BREASTFED INFANTS IN WIC BY RACE/ETHNICITY AND MONTHS POST PARTUM, Berkeley, 2010



Source: City of Berkeley Public Health Division, WIC Program, 2010.

HIGHLIGHT: Breast-feeding Support in Berkeley

Breast-feeding support is available to Berkeley mothers and their infants from their health care providers, hospital, and a number of public health programs. The WIC program actively encourages breast-feeding among its clients, and all WIC staff receives specialized training in this area. One of the City’s PHNs is a certified lactation consultant, providing services as needed to WIC and Nursing case management clients. Through the Comprehensive Perinatal Services and Child Health and Disability Prevention (CHDP) programs, PHNs work with health care providers to meet standards of practice, including encouragement of breast-feeding. Mothers participating in the Vera Casey pregnant and parenting teen program or in the Black Infant Health program receive education, information, and support for breast-feeding their infants.

HIGHLIGHT:**Women, Infants and Children (WIC) Program**

WIC is a federally-funded health and nutrition program for low-income women, infants, and children. WIC helps families by providing nutrition education and help finding healthcare and other community services. WIC gives families checks for buying healthy foods from WIC-authorized vendors—including fruits and vegetables from Berkeley farmers' markets. The WIC program encourages breastfeeding through counseling, education, and referrals to relevant resources, such as lactation specialist public health nurses, assistance, and classes. WIC further supports breastfeeding by offering electric pump loans and working to eliminate formula distribution in hospitals.



Annie Burke

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3 CHAPTER 3: CHILD AND ADOLESCENT HEALTH

What is this?

This chapter follows Berkeley residents on the life course, and describes the health of Berkeley's children and youth from infancy through age 18.

Why is it important?

Childhood and adolescence are formative times in the life course. Educational foundations are established during this time, setting the course for lifetime learning and employment opportunities. Personal habits of activity, diet, and social connections take form. This is a period of great opportunity and of experimentation.

What is Berkeley's Status?

Berkeley's population has a smaller proportion of children than does Alameda County or the State (12% vs. 24%). This chapter contains some sobering information about Berkeley's children and youth: 20% of Latino children and over 30% of African American children in Berkeley live in poverty. Asthma, overweight, low levels of physical fitness, and immunizations are major health concerns for Berkeley's children, and disproportionately affect our community's African American and Latino children. Alcohol and marijuana use are common among youth. Disparities in educational attainment follow similar racial/ethnic patterns as health inequities.



Annie Burke/www.goingoutsidewithkids.com

Key Findings

• Healthy People 2020

- Berkeley overall *meets* HP2020 goals for:
 - Youth suicide attempts
- Berkeley overall *does not meet* HP2020 goals for:
 - High School graduation
 - Asthma hospitalizations for children under 5

• Poverty

- Over one third of Berkeley's African American children live in poverty. Children living in poverty are concentrated in South and West Berkeley.
- Poverty among African American youth is more than double the rate among all Berkeley youth and nearly 7 times the rate among White children.
- Twenty percent of Berkeley Latino children live in poverty. This is 4 times the rate among White children.

• Education

- There is a marked educational achievement gap, with African American, Latino, and low-income children in Berkeley doing less well than White, Asian, and higher income students.
- The achievement gap among BUSD students parallels health inequities in Berkeley.
- By 11th grade only 45% of BUSD students read proficiently.
- Berkeley's African American and Asian students score strikingly less well than their peers in Alameda County and across California.
- Approximately 1 in 5 Latino and African American students do not graduate from high school. The BUSD high school drop-out rate does not meet HP2020 goals for any of its racial/ethnic groups.
- The achievement gap between African American and White BUSD students is greater than that gap in Alameda County or the State.

continues

Key Findings *continued*

- **Education** *continued*
 - African American BUSD high school graduates are less likely to be eligible for University of California (UC) or California State University (CSU) than graduates of other racial/ethnic groups.
- **Physical Activity and Obesity**
 - In 2011, only 20% of Berkeley 9th graders passed national aerobic fitness testing. BUSD students lag significantly behind students in Alameda County and California in aerobic fitness.
 - Twenty-nine percent of BUSD students are overweight or obese. This percentage is higher in African American and Latino children than in other racial/ethnic groups. Among BUSD 9th graders, over 40% are overweight.
- **Asthma**
 - African American children under 5 years of age are hospitalized for asthma at rates that far exceed any other group.
 - Asthma hospitalization rates for African American and Latino children through age 15 are higher than for other groups, putting them at increased risk for school absenteeism and poor school performance.
- **Alcohol, Tobacco, and Marijuana use**
 - Approximately 45% of 11th graders report alcohol use in the last 30 days.
 - Approximately 35% of 11th graders report marijuana use in the last 30 days.
 - The percentage of students reporting that they use alcohol, cigarettes, and marijuana decreased at all grade levels in 2012 compared to 2008.
 - Marijuana use far exceeds cigarette smoking at all grade levels. Compared with their peers in the state, BUSD students are less likely to smoke cigarettes and more likely to smoke marijuana.
 - Alcohol is the most commonly used substance among BUSD students, followed by marijuana. Among B-Tech students, marijuana use exceeds alcohol use.
- **Mental Health, Violence, and Bullying**
 - Mental Health services are available to Berkeley youth through school- and community-based services.
 - Harassment related to race/ethnicity, including bullying and cyber-bullying, affects youth in Berkeley's middle and high schools, with 20% or more reporting being subject to harassment on these grounds.
 - Physical fighting decreases from 7th through 11th grades.
- **Injuries**
 - There were 24 assault-related hospitalizations of Berkeley youth in the most recent 3-year period for which we have data. Half of these involved firearms, and the vast majority were of African American youth.
- **Communicable Diseases: Sexually Transmitted Infections**
 - Chlamydia infections peak at ages 15-19 and are highest among African American young women.
- **Immunizations**
 - Berkeley's kindergarteners are less fully immunized (78%) than their counterparts in Alameda County and the state (90%).
 - BUSD students have higher rates of "personal belief exemptions" than students in Alameda County and the State. This increases the likelihood of vaccine-preventable disease outbreaks.
- **Lead Poisoning**
 - Cases of lead poisoning are rare in Berkeley, although residents are at risk for lead exposure due to Berkeley's large number of pre-1978 houses.

Demographics of Berkeley Children and Youth

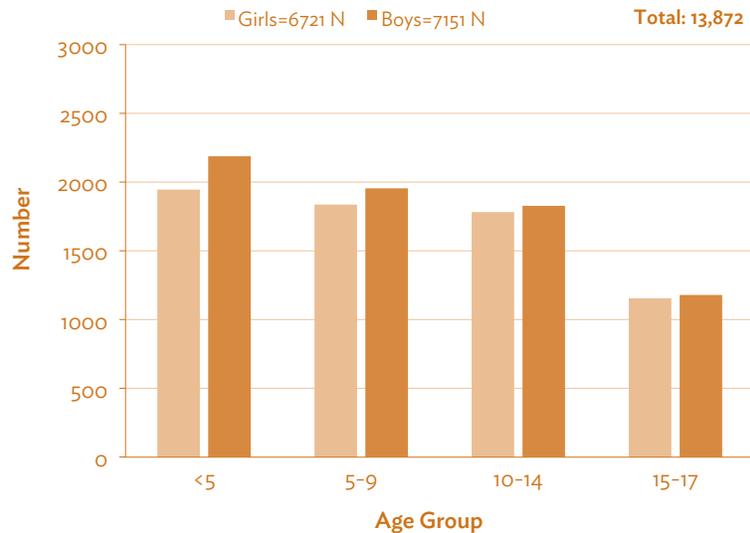
The 2010 census counted nearly 14,000 children living in Berkeley. Children make up 12% of the City's total population. Of these children, 30% are under 5 years of age, and 17% are high school age.

Nationwide, children make up 24% of the U.S. population.¹ In California, children made up 24.8% of the total population.²

Half of Berkeley children belong to non-White racial and ethnic groups. Latinos comprise the largest proportion of non-White children, and that proportion has been stable in the past decade. African-American children make up 13% of the child population. This is a marked decrease from the 2000 census, when 21% of Berkeley's children were African American.

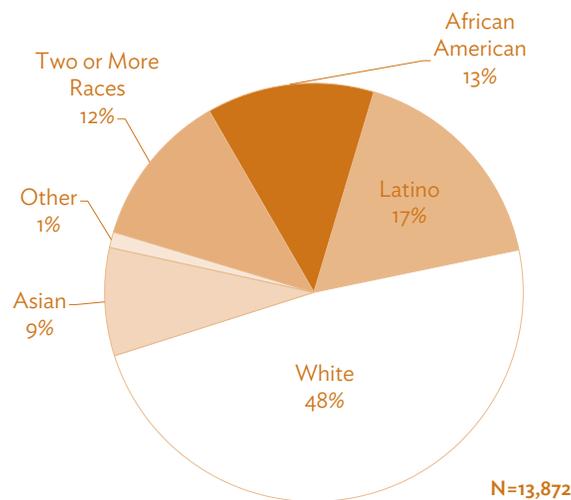
As is true for the total population, the census does not include information about the causes of population change. The decrease in African American children accompanies a decrease in Berkeley's overall African American population.

Figure 3.1 NUMBER OF CHILDREN 17 YEARS OF AGE AND YOUNGER BY SEX Berkeley, 2010

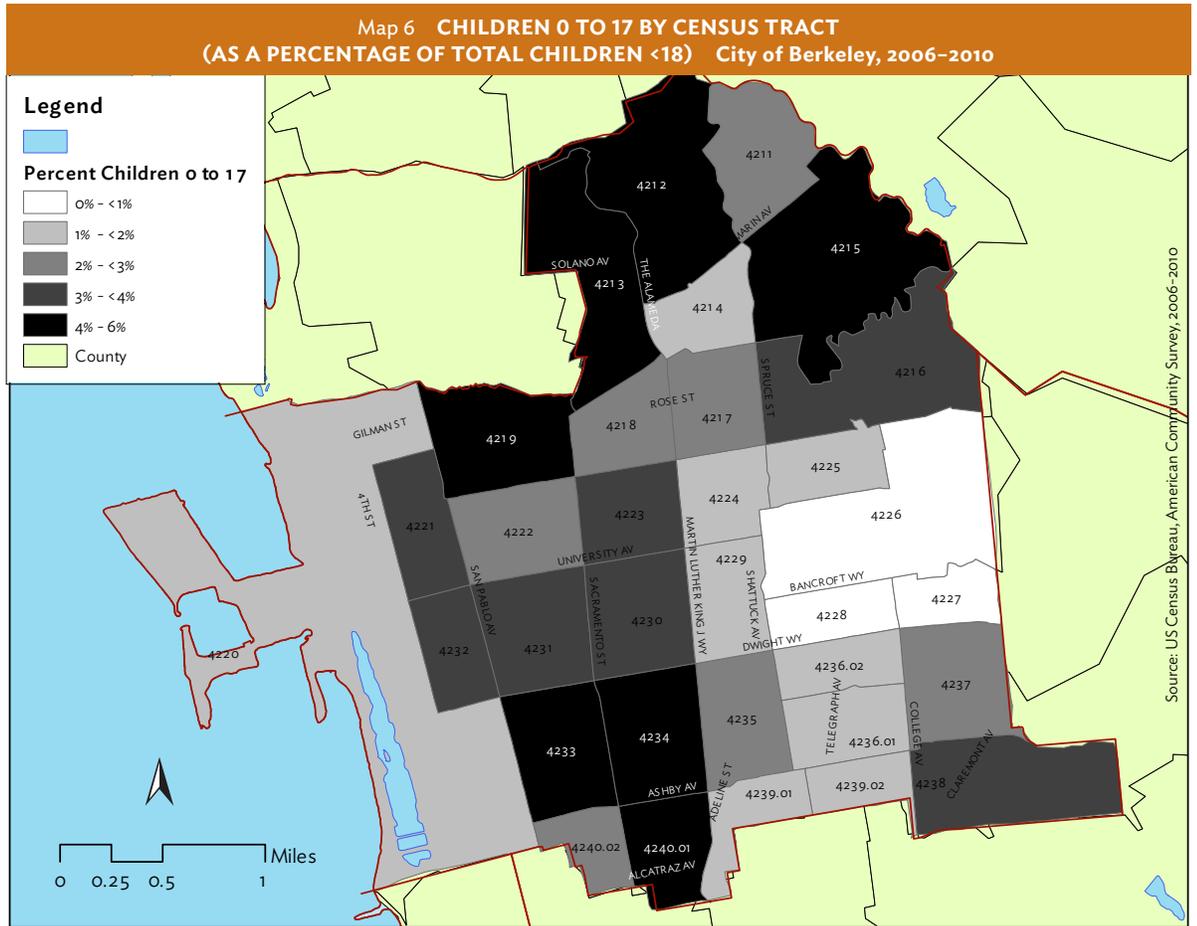


Source: US Census, 2010

Figure 3.2 CHILDREN 17 YEARS OF AGE AND YOUNGER BY RACE/ETHNICITY Berkeley, 2010



Source: US Census, 2010

Demographics
continued

Fewer Berkeley children live in the census tracts surrounding the University; most children live in the north, south, and west parts of the City.

Childhood Poverty*What is this?*

Poverty is defined as a household income below a federally defined poverty level. In 2010, the federal poverty level (FPL) for a family of 4 was \$22,050/year.³ Many families earning more than the federal poverty level—150% or 200% of the FPL—also struggle to make ends meet, especially in the Bay Area where living costs are relatively high.

Why is it important?

Poverty is one of the social determinants of health. Families and children growing up in poverty face challenges in meeting basic needs of nutrition and housing, experience high levels of stress

on a day-to-day basis, have less access to preventive and primary health care services, and experience higher levels of violence and crime in their neighborhoods than more affluent residents.⁴ These challenges have an impact on health and life expectancy.

What is Berkeley's status?

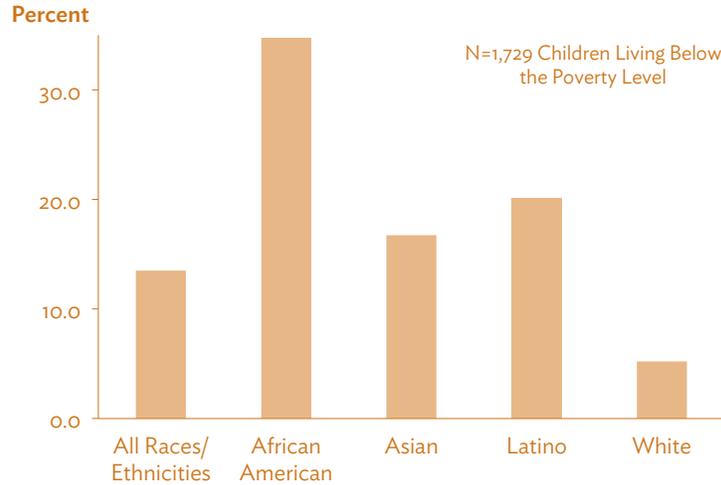
Fourteen percent of Berkeley's children live in poverty, compared to 15% in 2000. African American children are disproportionately represented among youth in poverty.

Childhood Poverty continued

Thirty five percent of African American children live in poverty. This percentage is unchanged from a decade ago.⁵ The number of African American children in Berkeley has decreased during this time, but African American children remain the most affected by poverty.

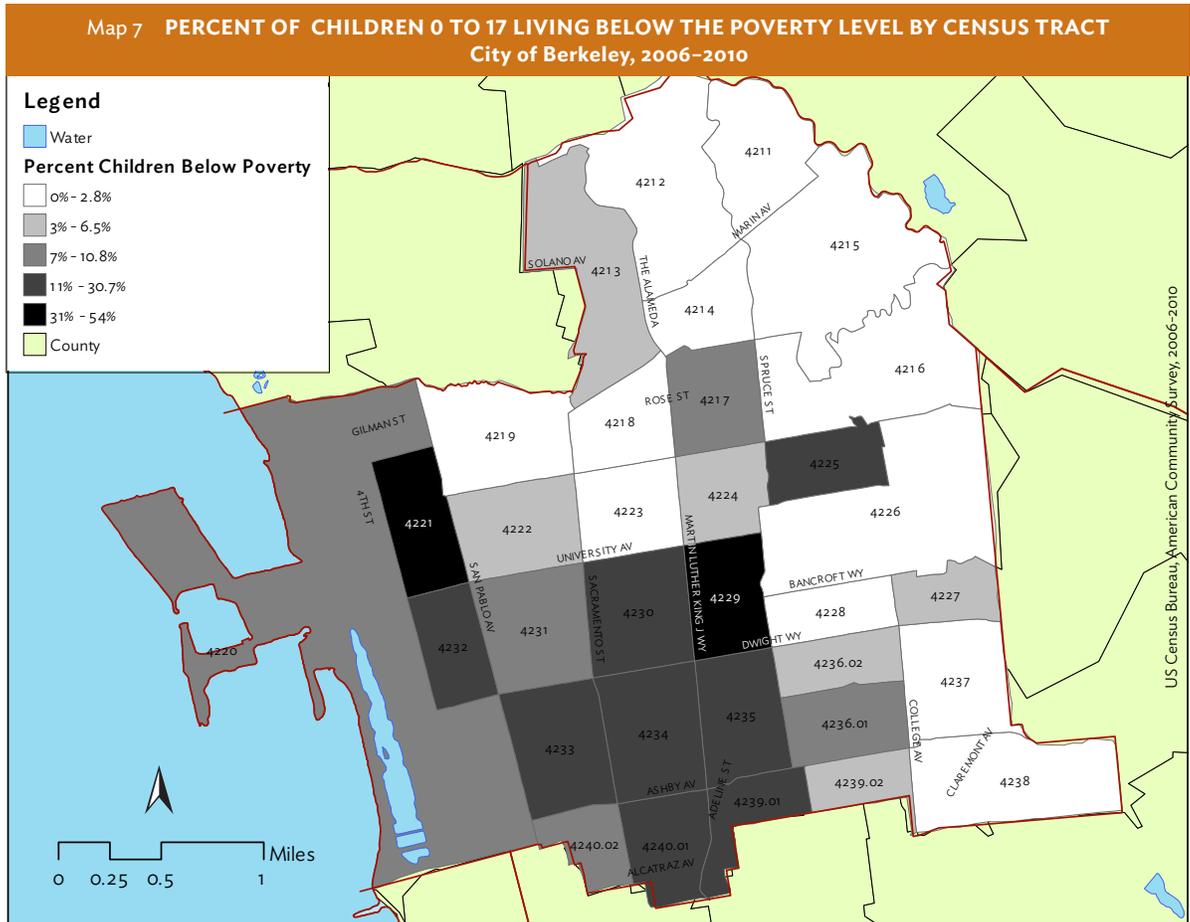
Twenty percent of Latino children live in poverty. This is four times the rate among White children.

Figure 3.3 PERCENT OF CHILDREN 17 YEARS AND YOUNGER LIVING BELOW THE POVERTY LEVEL BY RACE/ETHNICITY Berkeley, 2007-2011



Source: American Community Survey, 2007-2011

Map 7 PERCENT OF CHILDREN 0 TO 17 LIVING BELOW THE POVERTY LEVEL BY CENSUS TRACT City of Berkeley, 2006-2010



US Census Bureau, American Community Survey, 2006-2010

This map shows the geographic distribution of Berkeley children who live in poverty. Children in poverty are concentrated in the south and west parts of the City.

Education

What is this?

Educational attainment refers to how students perform across the entire spectrum of education, from preschool through elementary and high school and on to college and beyond. In this section we look at patterns of educational attainment among Berkeley Unified School District (BUSD) students.

Why is this important?

Health and education are intimately linked: healthier students attend school more regularly and learn better in school, and students who are successful in school have healthier lives throughout the adult years of their life course.

English Language Arts Proficiency

California Standard Tests (CSTs) are administered in California public schools. They measure students' progress towards achieving academic standards in a range of subjects.

Berkeley students perform better than students statewide and in Alameda County in reading proficiency through 9th grade. In 10th and 11th grades, Berkeley students' English-Language Arts (ELA) proficiency falls below Alameda County and the state.

By 11th grade, only 45% of students read proficiently.

English Language Arts Proficiency and Race/Ethnicity

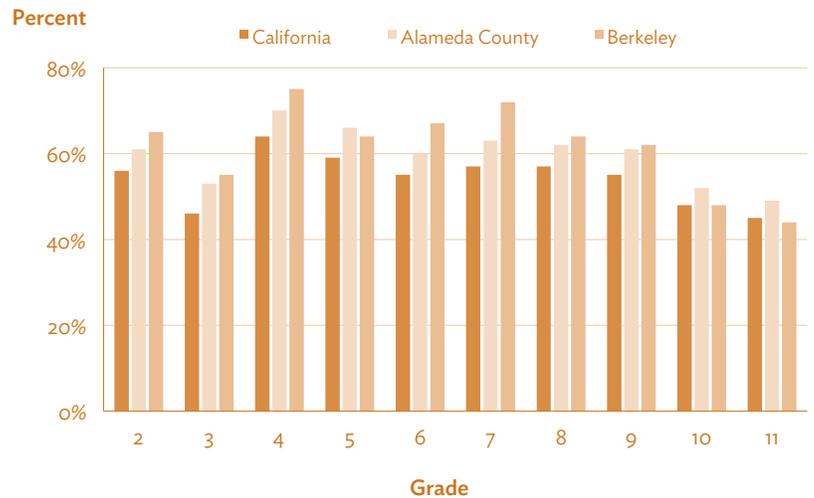
African American and Latino children in Berkeley score lower on ELA skills than White and Asian children. Berkeley's Asian and African American BUSD students do strikingly less well than their peers in Alameda County and across California.

In contrast, White and Latino BUSD students have higher ELA proficiency than their peers in Alameda County and the State.

What is Berkeley's Status?

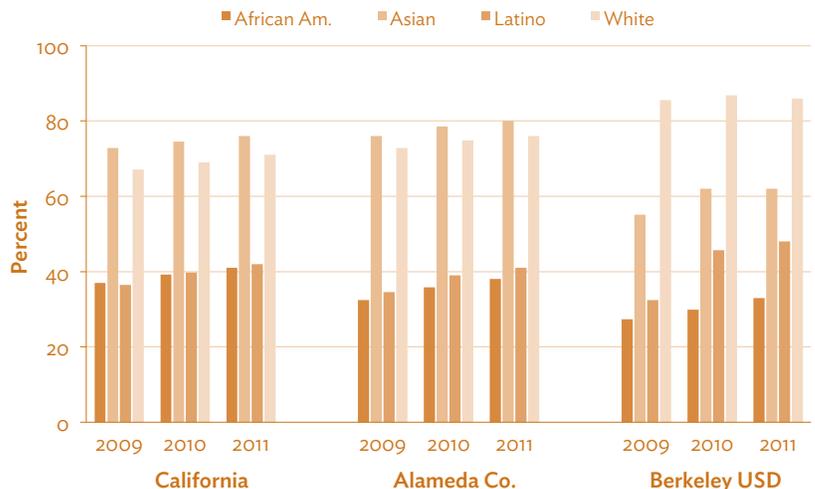
The achievement gap among BUSD students parallels health inequities in Berkeley. African American, Latino, and low-income children in Berkeley do not do as well on measures of educational attainment as White and Asian children or those with higher incomes. BUSD's high school drop-out rate overall does not meet the HP2020 goal. Approximately 1 in 5 Latino and African American students does not graduate from high school. The achievement gap between African American and White BUSD students is greater than that gap in Alameda County or the State.

Figure 3.4 STUDENTS SCORING PROFICIENT OR ABOVE ON CALIFORNIA STANDARDIZED TEST FOR ENGLISH-LANGUAGE ARTS Berkeley Unified School District, Alameda County, and California, 2011-12



Source: California Dept. of Education, CST English Language Arts

Figure 3.5 PERCENT PROFICIENT OR ABOVE IN ENGLISH LANGUAGE ARTS BY RACE/ETHNICITY Berkeley Unified School District, Alameda County, and California, 2009-11



California Dept. of Education, CST English Language Arts, 2nd-11th grades combined

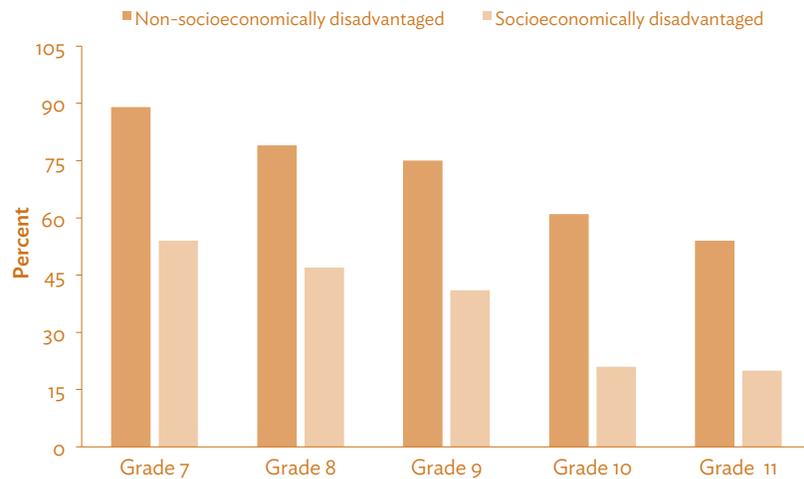
Education continued

The gap in ELA proficiency between White and African American students in Berkeley exceeds the gap in Alameda County or in California as a whole.

English Language Arts Proficiency by Socioeconomic Status

Socioeconomically disadvantaged BUSD students from 7th through 11th grade are much less proficient in ELA than non-disadvantaged students.

Figure 3.6 **PERCENT PROFICIENT OR ABOVE IN ENGLISH LANGUAGE ARTS BY POVERTY LEVEL** Berkeley Unified School District, 2011–12



“Socioeconomically disadvantaged” is defined as a student neither of whose parents have received a high school diploma OR a student who is eligible for the free or reduced-price lunch program, also known as the National School Lunch Program (NSLP).

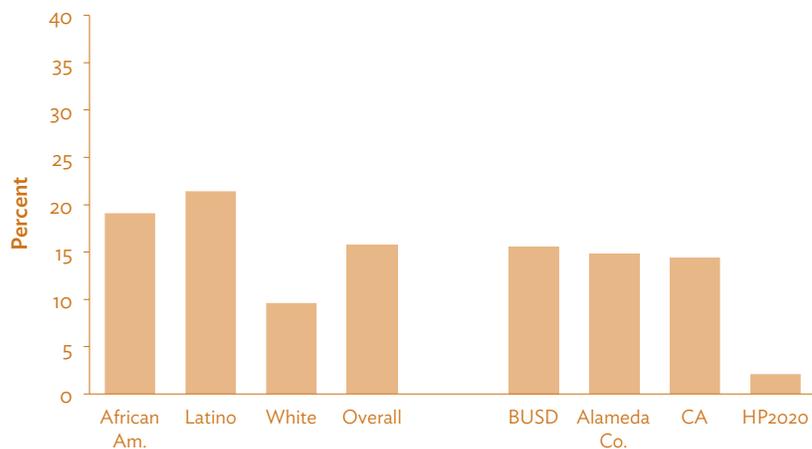
Source: California Dept. of Education, CST English Language Arts

High School Drop-Out Rates

BUSD high school data include students at Berkeley High School, Berkeley Technology Academy, and Berkeley Independent Study. In 2010–2011, the BUSD high school “4-year drop-out rate”, or rate of students not graduating, was 16%. This is similar to the County and statewide drop-out rates.

Approximately 1 in 5 Latino and African American students did not graduate from high school. The Healthy People 2020 target rate for students complet-

Figure 3.7 **DROP OUT RATES BY RACE/ETHNICITY** Berkeley Unified School District, Alameda County, and California, 2010–2011



Source: California Dept. of Education

HIGHLIGHT: School-Linked Health Services (SLHS) Program

SLHS works to support the health and educational success of students in Berkeley Unified School District (BUSD) through collaboration between Public Health and BUSD programs. This includes: reducing barriers to learning and optimizing health as a path to educational equity; continued capacity building for BUSD to address unmet student health and safety needs; seeking opportunities for parent education and engagement; health consultations and referrals; policy recommendations; and strengthening coordination of Public Health Division programs working in schools. While SLHS primarily serves elementary-school aged students, SLHS’ scope of services includes BUSD K–8 youth and their families, as well as BUSD preschools.

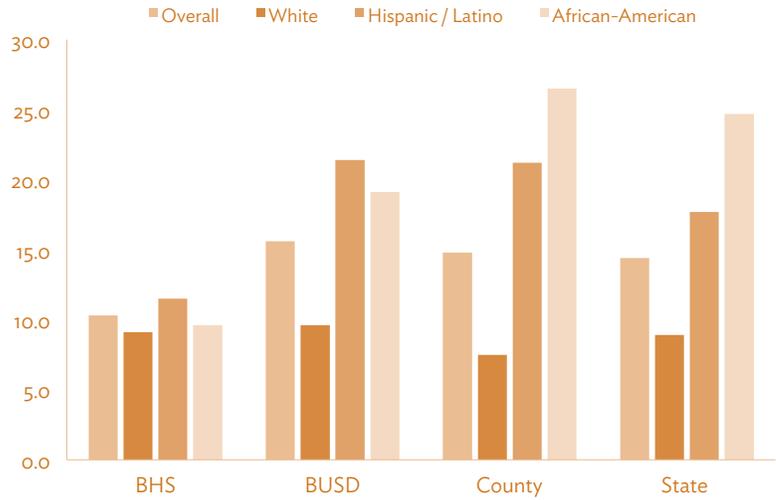
Education continued

ing high school education is 97.9%. No racial/ethnic groups in BUSD meet the HP2020 goal.

The drop-out rate for African American high school students in BUSD is lower than for African American students in Alameda County and California. Rates for other racial/ethnic groups in Berkeley are similar to state and county rates.

BHS has lower drop-out rates than BUSD high school students as a whole, but does not meet the HP2020 goal.

Figure 3.8 DROP OUT RATE BY RACE/ETHNICITY Berkeley High School, Berkeley Unified School District, Alameda County, and California, 2010–2011



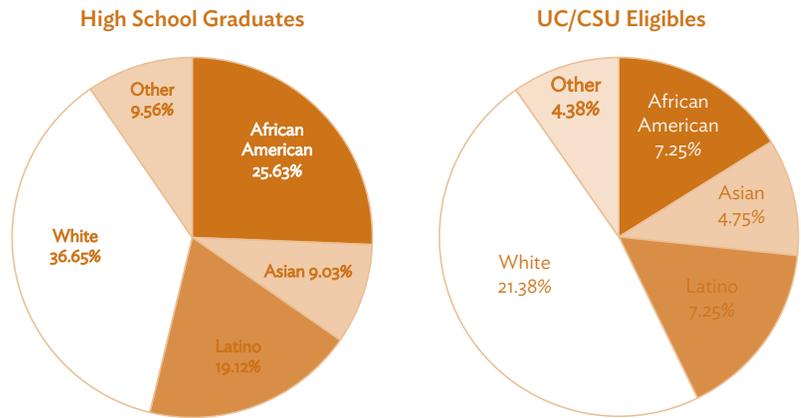
Source: California Dept. of Education

College Eligibility

African American BUSD high school graduates are less likely to be eligible for University of California (UC) or California State University (CSU) than graduates of other racial/ethnic groups. Although African Americans make up 27% of high school graduates, they make up only 18% of the graduates prepared to enter UC or CSU.

In contrast, White students make up 37% of graduates, but 48% of those eligible for UC or CSU.

Figure 3.9 UC/CSU ELIGIBILITY OF GRADUATES BY RACE/ETHNICITY Berkeley Unified School District, Alameda County, and California, 2010–2011



Source: California Dept. of Education

HIGHLIGHT: 2020 Vision

2020 Vision is a citywide initiative to ensure academic success and well-being for all children and youth growing up in Berkeley. The 2020 Vision goal is to close the achievement gap in Berkeley’s public schools by the year 2020 by working with the schools, city departments, community organizations and families.

Key indicators have been selected to measure progress toward closing the achievement gap. The first three priority indicators are: Kindergarten Readiness, Proficiency in Reading by the Third Grade, and Improved Attendance. Two additional priorities have been added: College and Career Readiness, and Successful Completion of Algebra or Integrated Math 2 by the Ninth Grade.⁶

HIGHLIGHT: Berkeley High School & Berkeley Technology Academy Health Centers

The Berkeley High School Health Center and B-Tech Health Centers provide free, safe, and convenient places for students to receive the medical and mental health care and referrals they need to succeed in school and become active members of their community. Clinic staff works together to provide a variety of services to address physical, emotional, and social health needs.

Medical Services include first aid; vision/hearing screening; Child Health and Disability Prevention (CHDP) exams; immunizations; and sexual health services, including the provision of contraceptive methods and sexually transmitted infection (STI) testing, diagnosis and treatment.

Health Education Services include individual counseling for the prevention of pregnancy, STIs, and HIV; campus-wide outreach and education; and a peer education program based on youth development principles.

Mental Health Services include individual short-term counseling, crisis intervention and support groups. Referrals to community resources are made for students whose medical and/or mental health needs cannot be met by onsite services. Every effort is made to include parents in optimizing student well-being.

Physical Activity, Nutrition and Obesity**What is this?**

What we eat, how active we are, and whether we are overweight or obese influence our health and well-being. In California schools students are tested for aerobic fitness in 5th, 7th, and 9th grades. These tests give us information about students' physical fitness levels and their associated health risks.

Why is it important?

Activity, diet, and weight influence our health and well-being throughout life. The rise in obesity is correlated with increased calorie consumption and decreased physical activity. Obese or overweight children are less healthy than their peers of normal

weight, and tend to remain overweight as adults. This sets the stage for chronic disease and poorer health throughout their lives.⁷ Understanding patterns of childhood nutrition, physical activity, and obesity allows us to intervene early to create healthy habits and healthy environments for children.

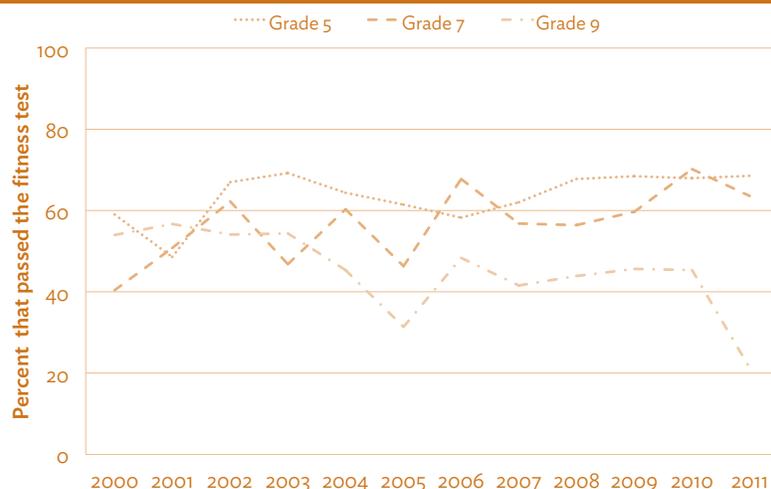
What is Berkeley's status?

BUSD students become less physically fit as they progress through school from 5th to 9th grades. Nearly 30% of BUSD students are overweight or obese. Rates of overweight and obesity are higher among non-White students and become higher as students progress through school.

Physical Fitness in Berkeley's Children

BUSD 5th graders are the most aerobically fit, with over 60% passing the aerobic fitness test. By 9th grade, this declined to 40% in recent years, and to just over 20% in 2011.

Figure 3.10 **AEROBIC FITNESS 5TH, 7TH, AND 9TH GRADERS**
Berkeley Unified School District, 2000–2011

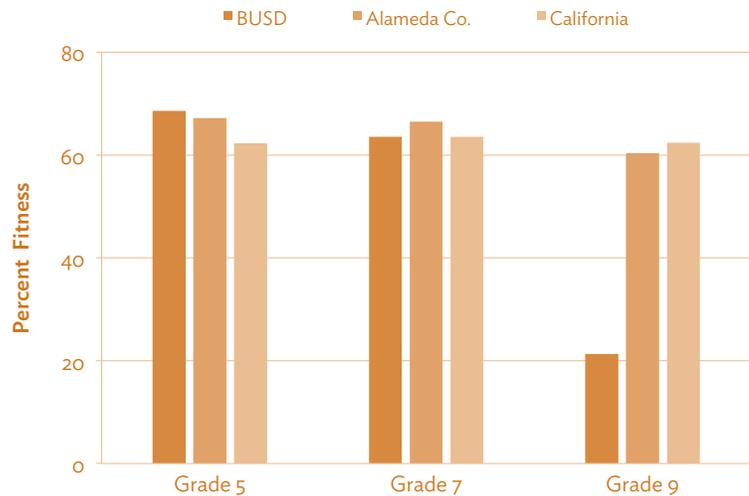


* Ability to briskly walk 1 mile (e.g. < 10 min. for 16 year old girls; < 8.5 min for 16 year old boys).

Physical Activity, Nutrition and Obesity continued

Berkeley's 5th graders perform at the same level as their peers in Alameda County and the state, but BUSD students' aerobic fitness falls off rapidly. By 9th grade, BUSD students lag significantly behind students in Alameda County and California in aerobic fitness.

Figure 3.11 AEROBIC FITNESS 5TH, 7TH, AND 9TH GRADERS
Berkeley Unified School District, Alameda County, and California, 2009



Source: California Dept. of Education

Nutrition in Berkeley's Children

HIGHLIGHT: Nutrition & Physical Activity Promotion

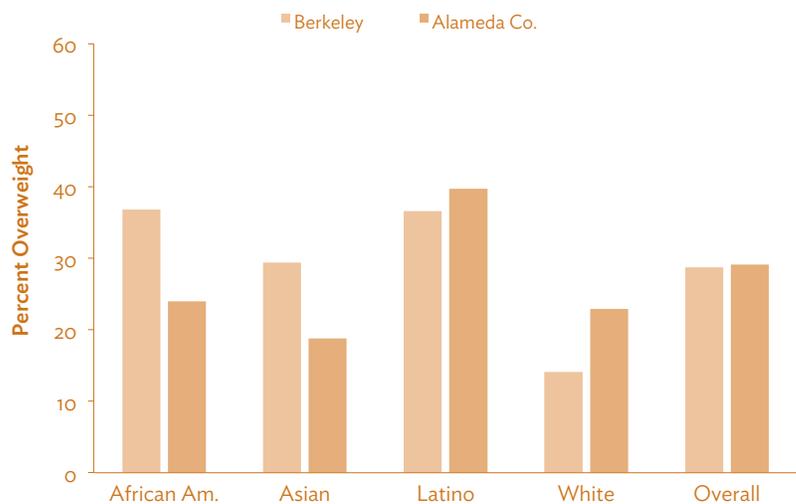
Public Health's Nutrition and Physical Activity program works collaboratively to empower and engage low-income Berkeley residents in choosing healthy foods and beverages and increasing physical activity. Activities include nutrition education, social marketing, and environmental supports in partnership with schools, Head Start programs, City of Berkeley departments (such as Parks, Waterfront and Recreation), community members, and local businesses. The program collaborates with Spiral Gardens, a community food security project and the Ecology Center's Farm Fresh Choice Program to provide nutrition education and increase fresh produce availability for low-income residents through neighborhood produce stands.

Obesity in Berkeley's Children

Berkeley children overall are just as likely to be overweight as are other children in Alameda County. However, rates of obesity vary significantly by race/ethnicity. Latino and African American children have the highest rates of overweight, and White children have the lowest.

Compared to their racial/ethnic peers in Alameda County, African American and Asian children in Berkeley have higher rates of overweight, while Latino and White children have lower rates.

Figure 3.12 PERCENTAGE OVERWEIGHT CHILDREN BY RACE/ETHNICITY
City of Berkeley and Alameda County Unified School District, 2008–2009

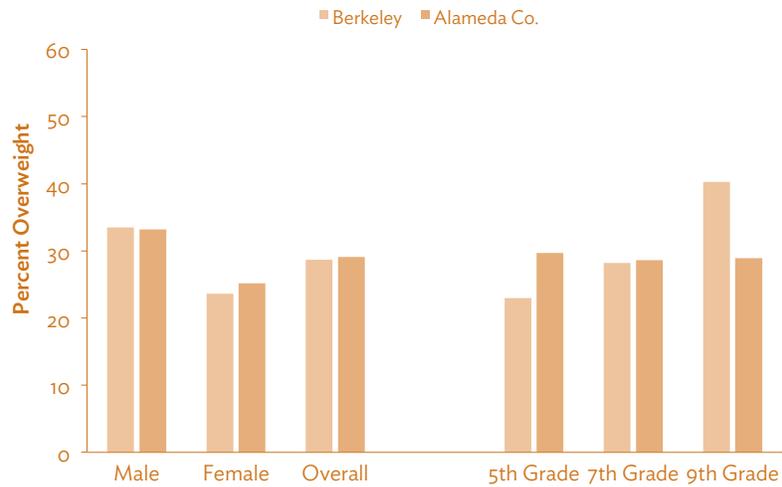


Source: California Fitness Gram; California Department of Education, 2008–09; The Health of Alameda County Cities and Places, 2010; Alameda County Public Health Department.

Physical Activity, Nutrition, and Obesity
continued

Male children in Berkeley are more likely than female children to be overweight. As children grow and progress from 5th grade to 9th grade, the likelihood that they will be overweight increases. In 2008–2009, over 40% of Berkeley 9th graders were overweight.

Figure 3.13 PERCENTAGE OVERWEIGHT CHILDREN BY GENDER AND GRADE
City of Berkeley and Alameda County Unified School District, 2008–2009



Source: California Fitness Gram, California Department of Education, 2008–09; The Health of Alameda County/CICes and Places, 2010; Alameda County Public Health Department.

Asthma in Berkeley's Children and Youth

What is this?

Asthma is a chronic disease of the lungs. The breathing problems of asthma are reversible, and the disease can be managed with attention to the environment and use of appropriate medication. Asthma rates among children nationwide have increased in recent decades.⁸

Why is it important?

Asthma attacks can range in severity from mild to life threatening. Regular, effective, preventive treatment can prevent symptoms and asthma attacks, prevent unnecessary

hospitalizations, and enable individuals who have asthma to lead active lives. Children who don't receive the care they need for their asthma are likely to miss more school and to be less physically active than other children.⁹

What is Berkeley's status?

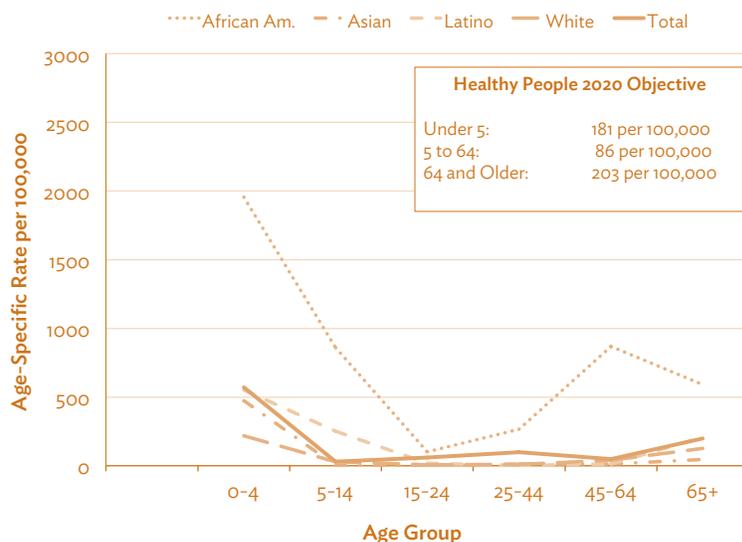
African American children under 5 years of age in Berkeley are hospitalized at rates far exceeding other children, and continue to have the highest asthma hospitalization rates throughout their school-age years. Berkeley does not meet the HP2020 goal for asthma hospitalizations among children under 5.

Asthma Hospitalizations

Asthma hospitalization rates for children under 5 are much higher than the HP 2020 goals for all racial/ethnic groups. For African American children, the rate is more than 10 times the goal.

Asthma hospitalization rates remain higher for African American and Latino children than for others up to age 15—putting them at increased risk for school absenteeism. Poor attendance is a significant risk factor for poor school performance.

Figure 3.14 ASTHMA HOSPITALIZATION RATE BY AGE AND RACE/ETHNICITY
Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 2008–2010

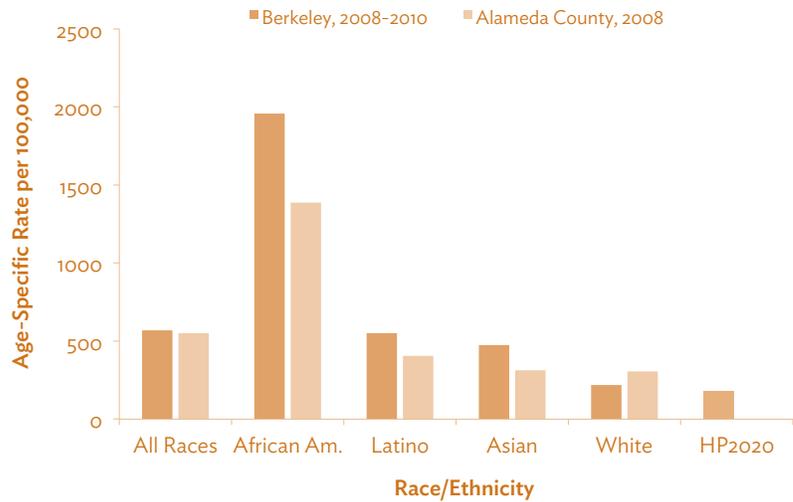
Asthma in Berkeley's Children and Youth
continued

Berkeley children under 5 are hospitalized for asthma at rates similar to Alameda County children. However, Berkeley's children of color are more likely than their Alameda County peers to be hospitalized, while White Berkeley children enjoy lower rates of asthma hospitalization.

Asthma inequities for children under 5 in Berkeley are greater than in Alameda County as a whole. All groups fail to meet the HP2020 goal.

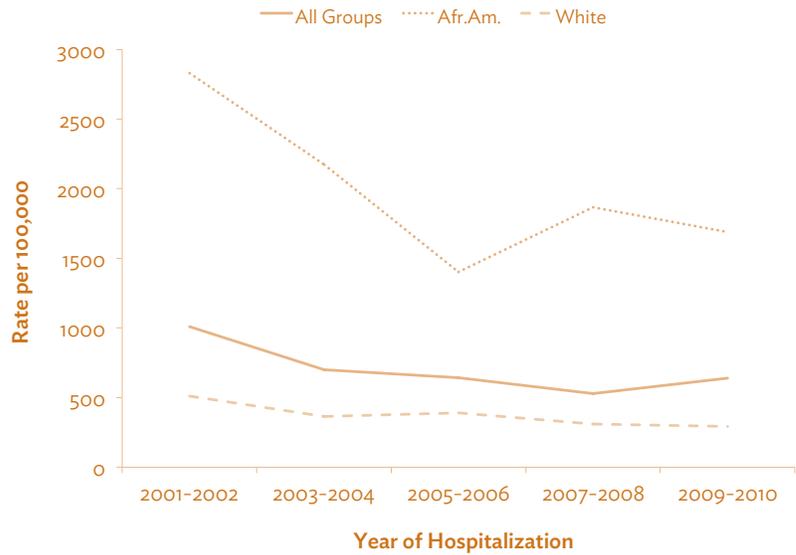
From 2000 to 2010, asthma hospitalization rates decreased significantly for African American children. However, the inequity by race/ethnicity remains virtually unchanged: in 2000 the African American asthma hospitalization rate was 3 times higher than all racial/ethnic groups combined; in 2010 it remained approximately 3 times higher.

Figure 3.15 ASTHMA HOSPITALIZATION RATE OF CHILDREN < 5 YEARS OF AGE BY RACE/ETHNICITY Alameda County (2008) and Berkeley (2008-2010)



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 2008-2010

Figure 3.16 ASTHMA HOSPITALIZATION RATE OF CHILDREN < 5 YEARS OF AGE BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2010

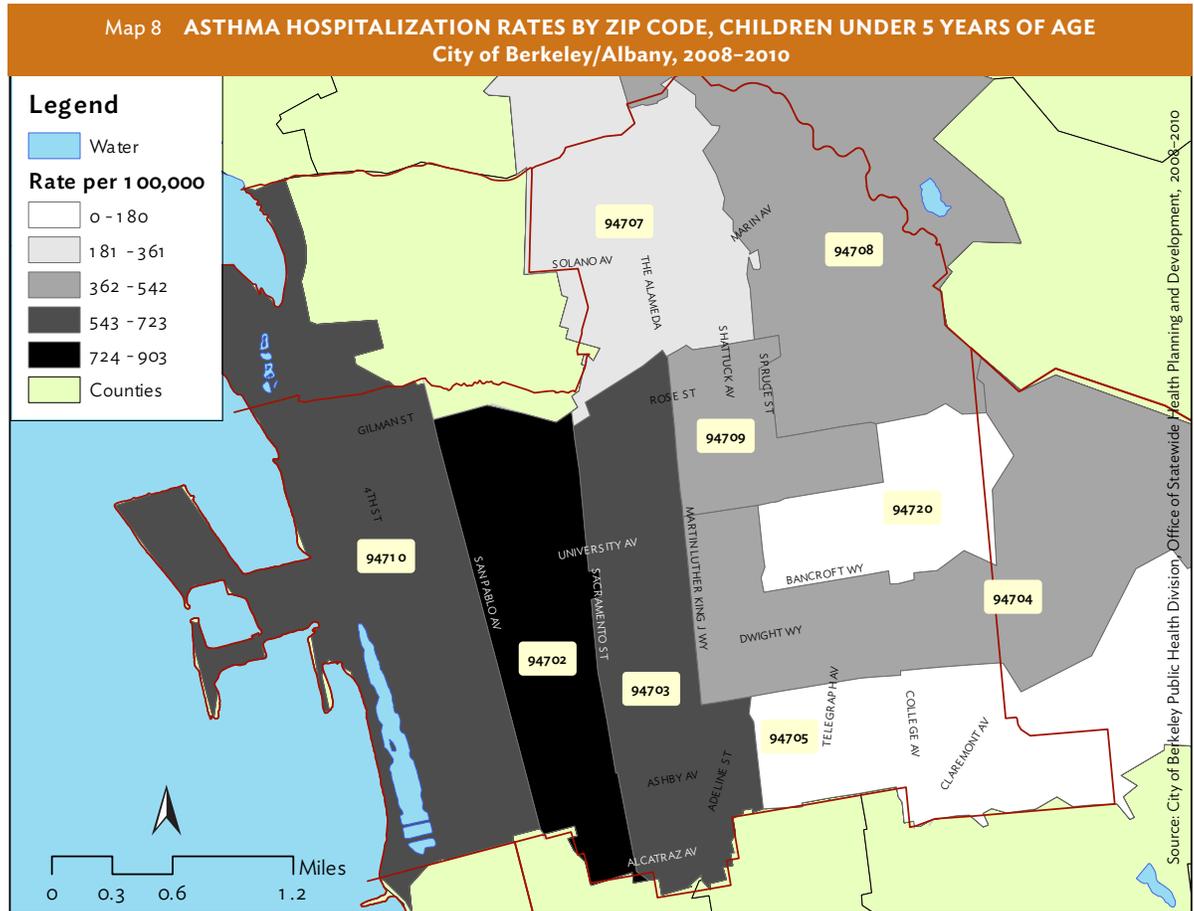


Source: Office of Statewide Health Planning and Development

HIGHLIGHT: Breathmobile

The Breathmobile, a project of the Prescott-Joseph Center for Community Excellence (PJCCE), is partnering with Berkeley Unified School District and the City of Berkeley Public Health Division to bring asthma care to BUSD students. This free mobile asthma clinic provides diagnosis, education, and treatment for children with asthma. For the first year of this partnership, two BUSD elementary schools (Malcolm X and Rosa Parks) and one preschool (King Child Development Center) were selected based on the high asthma prevalence at these sites. PJCCE and school staff works closely with the City of Berkeley Public Health Division to identify students with asthma who could benefit from this community resource. The partnership is an example of community agencies working together to address health inequities and the achievement gap. Improving childhood asthma management improves health and improves educational success.

Asthma in Berkeley's Children and Youth continued



Asthma hospitalizations of children under 5 years of age are most common in west Berkeley.

Alcohol, Tobacco, and Other Drugs

What is this?

Use of alcohol, tobacco, and other drugs such as marijuana among children typically begins in middle- and high-school. Information in this section comes from statewide anonymous surveys of students about their experiences with substance use.

Why is it important?

Cigarette smoking is the single most preventable cause of disease and death in the United States. Teenagers who smoke are more likely to develop a stronger habit as adults.¹⁰ Today's youth grow up in an environment that encourages multiple forms of substance use and abuse, both legal and illegal. Underage alcohol and drug use are associated with risk-taking

behavior, homicide, suicide, serious injury, crime, mental health disorders, and high risk sexual behaviors.¹¹ Substance use and abuse impair school performance and attendance.

What is Berkeley's status?

Alcohol is the mostly commonly used substance among BUSD students, followed by marijuana. Marijuana use far exceeds cigarette smoking at all grade levels. Approximately 45% of 11th graders report alcohol use in the last 30 days, and approximately 35% report marijuana use in the last 30 days. The percentage of students reporting that they use alcohol, cigarettes, and marijuana decreased at all grade levels in 2012 compared to 2008.

Alcohol, Tobacco, and Other Drugs
continued

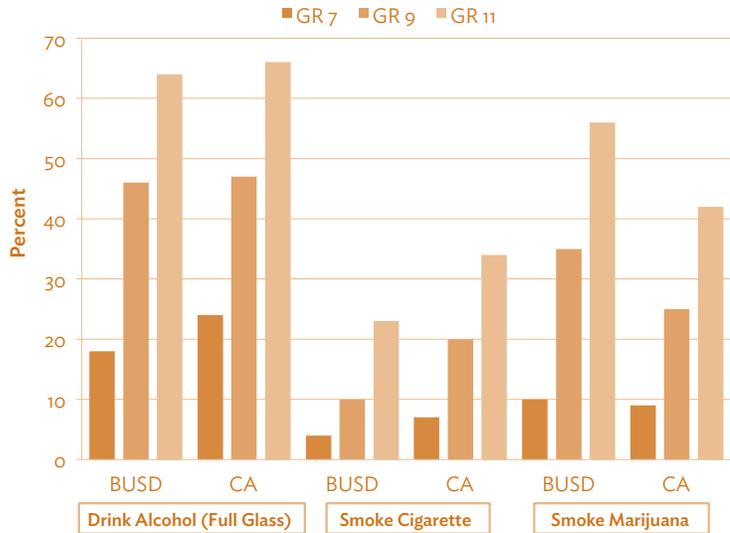
Alcohol, Tobacco and Marijuana Use in Berkeley's Youth

The percent of BUSD students who report that they drink alcohol, smoke cigarettes, or use marijuana increases from 7th through 11th grade. BUSD high school students smoke marijuana more commonly than students in statewide in California, and smoke cigarettes less commonly. Alcohol use among students in Berkeley is similar to that in California as a whole.

HIGHLIGHT: Berkeley Technology Academy

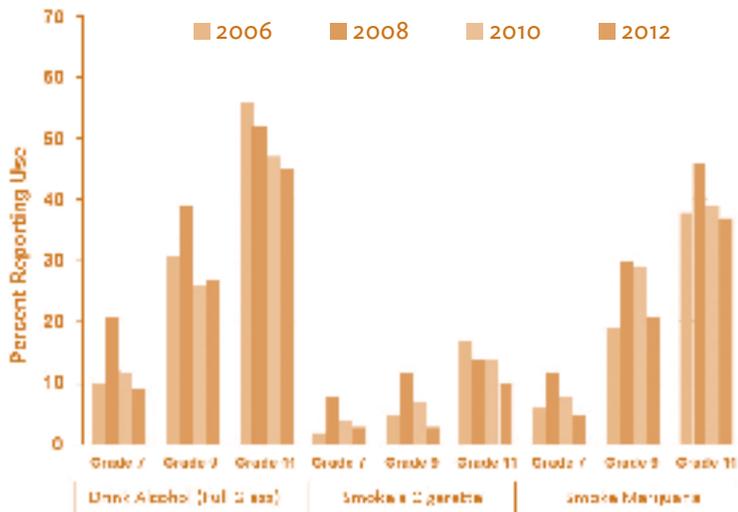
Berkeley Technology Academy (B-Tech) is a continuation high school diploma program designed to meet the needs of students deemed at risk of not completing their education. The school provides an uncompromising, rigorous education for all students and aims to reverse underachievement in students performing below their potential. "Rather than categorizing students as troublemakers or low-achievers, B-Tech recognizes that students who have difficulty achieving in a traditional school environment are generally the most demanding, creative, and intellectually apt pupils."¹²

Figure 3.17 CIGARETTE, ALCOHOL, AND MARIJUANA USE AT LEAST ONCE IN THEIR LIFE: 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District (BUSD), 2012 vs. California Student Survey, 2007



Source: California Healthy Kids Survey, 2012

Figure 3.18 ALCOHOL, CIGARETTE, AND MARIJUANA USE IN PAST 30 DAYS IN 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District, 2006–2012



Source: California Healthy Kids Survey, 2012

Alcohol is the most commonly used substance among BUSD students, followed by marijuana. Marijuana use exceeds cigarette use at all grade levels. In 11th grade, approximately 65% of BUSD students report drinking alcohol at least once in their life, and nearly 60% report smoking marijuana. Only 22% report cigarette smoking at least once in their life.

The reported use of alcohol, cigarette and marijuana in the past 30 days increases steadily from 7th through 11th grades. Marijuana use far exceeds cigarette-smoking, by 2 to 3 times at all grade levels.

Reported use of alcohol, cigarettes, and marijuana is lower at all grade levels in 2012 than it was in 2008.

HIGHLIGHT: Tobacco Prevention Program – Youth and Policy

The tobacco program focuses prevention activities on youth who are most likely to be influenced by media and marketing to start smoking. Activities include workshops led by youth in their early 20's to high school and middle school students and after school programs.

The Tobacco Prevention Program worked with youth to conduct survey research that led to local policy change. Surveys of youth tobacco purchases were conducted in 1996, 1998 and 2002, and it was found that 36–38% of Berkeley tobacco merchants sold tobacco to minors. Following passage of the Berkeley Tobacco Retail Licensure Law in fall 2002, the rate fell to 14% in 2004 and 5.6% in 2006. In 2012 for the first time no merchants were found selling tobacco to minors. The law implemented an annual fee combined with penalties that prohibit merchants from selling tobacco following a violation.

This is an excellent outcome from a program that involves Berkeley youth, Berkeley Police Department, Public Health staff, and Berkeley merchants.

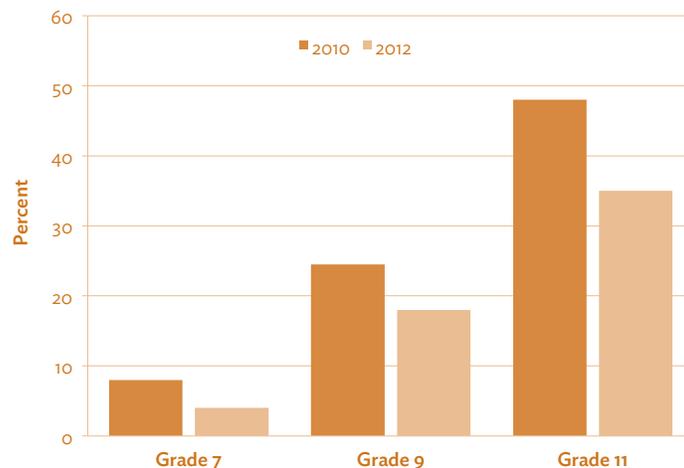
Alcohol, Tobacco, and Other Drugs continued

BUSD students are more likely to report having been under the influence of alcohol or drugs on school property as they progress from middle school to 11th grade.

In 2010 nearly half of BUSD 11th graders reported having been “drunk or high” on school property. In 2012 that proportion had dropped to 35% in 11th grade, and had decreased at all grade levels.

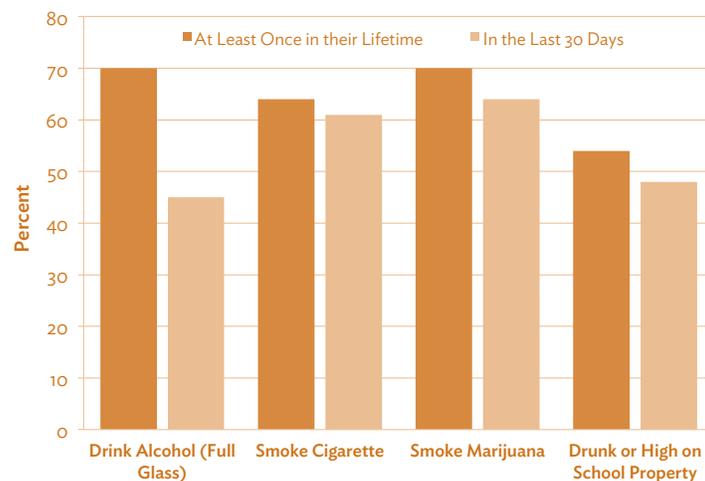
Data on drug, alcohol, and tobacco use for B-Tech are reported separately from other BUSD schools, due to small numbers of students. Rates of alcohol use in 11th grade are similar to those at Berkeley High School (BHS), while cigarette and marijuana smoking rates are higher at B-Tech.

Figure 3.19 DRUNK OR HIGH ON SCHOOL PROPERTY SNAPSHOT
COMPARISON Berkeley, California Health Kids Survey (CHKS) 2010 & 2012



Source: California Healthy Kids Survey, 2012

Figure 3.20 PERCENTAGE OF STUDENTS WHO USED ALCOHOL, TOBACCO
OR MARIJUANA Berkeley Technology Academy, 2012



Source: California Healthy Kids Survey, 2012

Mental Health in Children and Youth

What is this?

Nationally, approximately 20% of adolescents have a diagnosable mental health disorder. Many mental health disorders present themselves first in adolescence.¹³

Why is this important?

Mental health problems can lead to poor school performance, school dropout, strained relationships, substance abuse,

and engagement in risky sexual behaviors. Identifying mental health problems early in their course maximizes the opportunities for prevention and early intervention.¹³

What is Berkeley's status?

Children and youth in Berkeley have access to a variety of public and private sources of mental health services. The information in this section includes data about outpatient mental health services for low income/Medi-Cal clients, and mental health hospitalization data for all Berkeley children and youth.

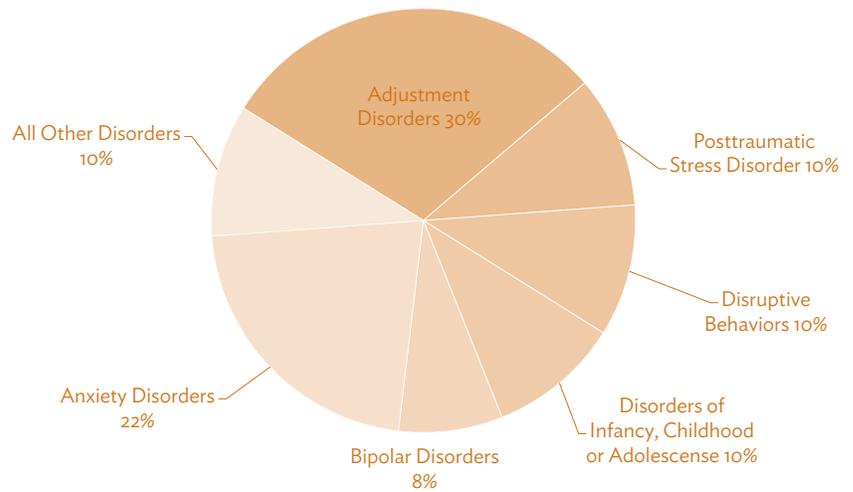
Mental Health Disorders

At Berkeley Mental Health, the leading child and youth diagnoses are adjustment and anxiety disorders, Post Traumatic Stress Disorder (PTSD), disruptive behaviors, bipolar disorders, and disorders of infancy, childhood, or adolescence.

Youth mental health hospitalizations are uncommon, and occur for a broad range of mental health conditions.

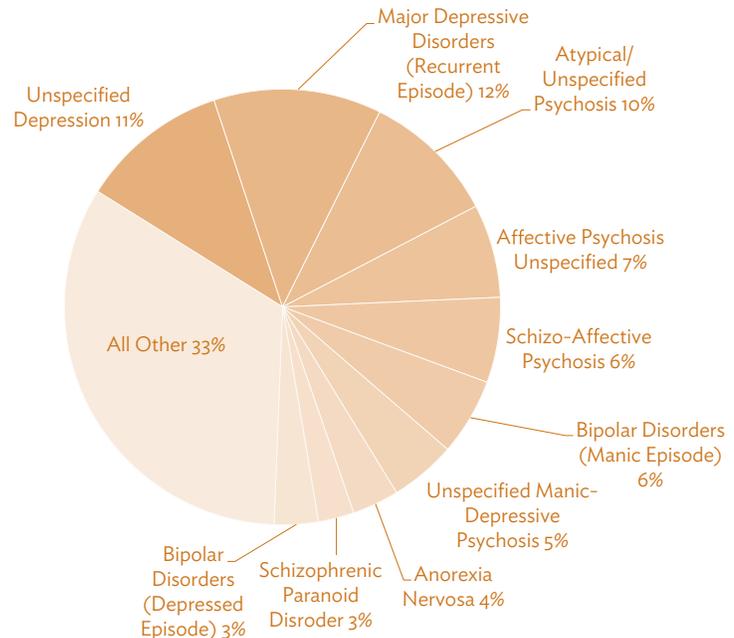
There were a total of 490 child and youth mental health hospitalizations over 3 years.

Figure 3.21 LEADING DIAGNOSIS IN CLIENTS LESS THAN 18 YEARS OF AGE
City of Berkeley Mental Health Division, July 2007 to June 2012



Source: City of Berkeley Mental Health Division

Figure 3.22 LEADING MENTAL HEALTH DISORDERS HOSPITALIZATIONS, YOUTH UNDER 25 YEARS OF AGE
City of Berkeley, 2008-2010



Source: Office of Statewide Health Planning and Development, 2008-2010

HIGHLIGHT:**Mental Health Services for Children and Youth**

The City provides Mental Health services to Berkeley's children and youth through the Mental Health Division's Family, Youth, and Children's services; the Public Health Division's Berkeley High School Health Center; and through Berkeley Youth Alternatives.

Family, Youth & Children's Services (FYC) FYC offers mental health services to Berkeley and Albany's school-aged children who have Medi-Cal or are uninsured. Services include clinical assessment, individual/family therapy, case management, and medications and are offered at the FYC clinic, in schools, and in community settings.

FYC offers intensive therapeutic services to young adults between the age of 16 and 25 who suffer from severe mental illness. Many of these transitional age youth have histories of homelessness or involvement with the juvenile justice or foster care systems.

Berkeley High School Health Center (BHSHC) Mental Health Services The Health Center provides crisis intervention for all students; short-term therapy for students who qualify for care; and assessment and referral services for those students desiring counseling who do not qualify for on-going therapy at the Health Center. A variety of student-related issues are addressed by counseling staff, including family issues, substance use, grief and loss, depression and anxiety. Health Center mental health staff members work closely with BHS administration in the case of a school-wide or community crisis, helping students and staff address issues that arise in relation to crisis events.

Berkeley Youth Alternatives (BYA) Mental Health Services BYA serves over 100 youth and their families each year. The center targets runaways, chronic truants, children referred from police and probation departments, and others who are beyond the control of their parents. The center also runs drug awareness and anger management groups and a teen forum to provide alternative sources of support for youth.

Violence and Bullying**What is this?**

Violence takes many forms: physical fights including use of weapons among youth; domestic violence; intimate partner violence; child abuse and neglect; bullying and cyber-bullying. Youth violence refers to harmful behaviors that begin at an early age and can continue into adulthood.¹⁴

Why is this important?

Violence is widespread in the United States and is the second leading cause of death among youth ages 15 to 24.¹⁵ Violence-related injuries account for death, injury, and potentially lifelong

disability. Violence in all of its manifestations can increase stress, not only for those toward whom violence is directed, but also for those observing or fearing violence.

What is Berkeley's status?

Harassment related to race/ethnicity, including bullying and cyber-bullying, affects youth in Berkeley's middle and high schools, with 20% or more reporting being subject to harassment. Physical fighting is more common among middle-school students than in high school.

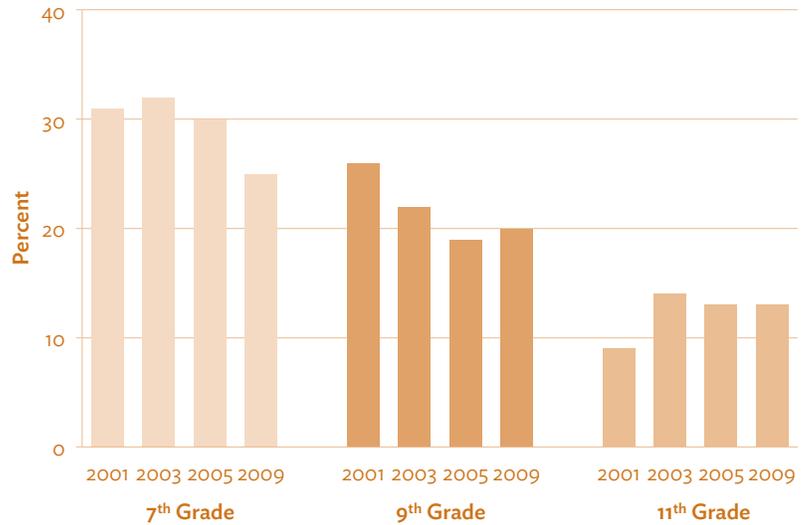
Violence and Bullying *continued*

Fighting

One quarter of BUSD 7th graders surveyed in 2009 reported having been in a physical fight within the past 12 months. As students get older, self-reported fighting decreases.

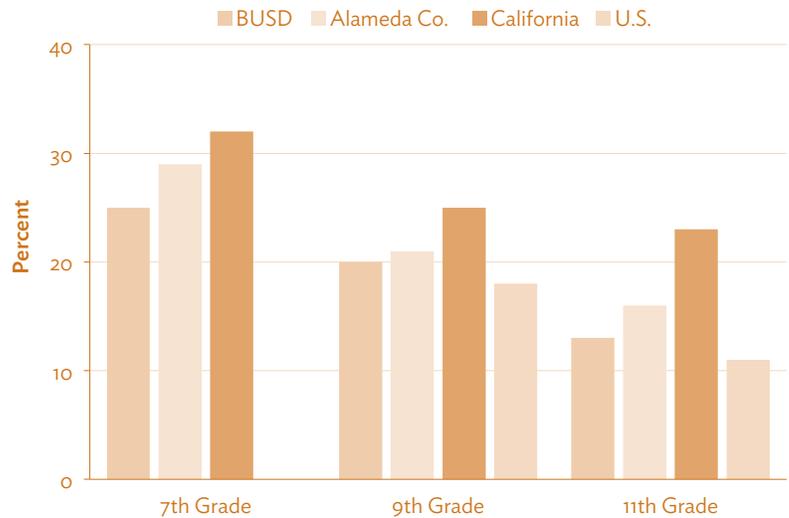
BUSD 9th and 11th graders surveyed were less likely to report having been in a physical fight than their Alameda County or California counterparts, but more likely to have done so than teens nationwide.

Figure 3.23 “BEEN IN A PHYSICAL FIGHT” IN LAST 12 MONTHS, 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District, 2001, 2003, 2005, 2009



Source: California Healthy Kids Survey, 2001–2009

Figure 3.24 “BEEN IN A PHYSICAL FIGHT” IN LAST 12 MONTHS, 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District, Alameda County, California, 2009 and Youth Risk Behavioral Surveillance (YRBS), 2007



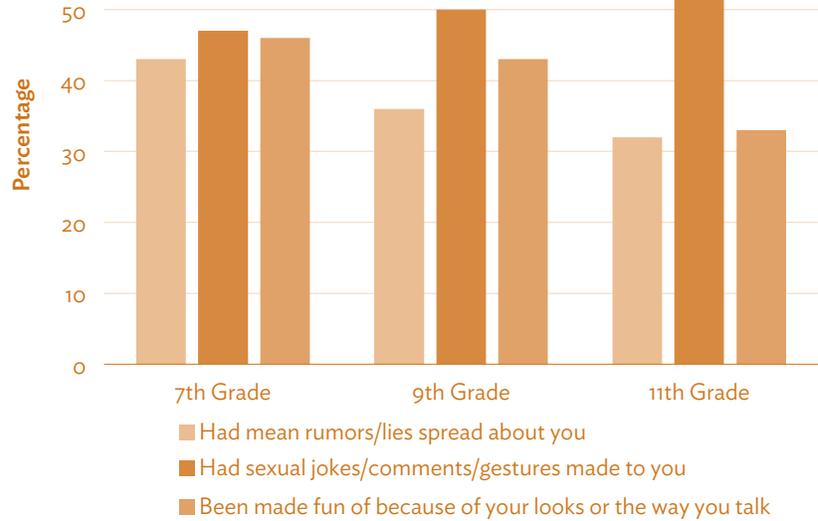
Source: California Healthy Kids Survey, 2009

Violence and Bullying continued

Bullying and School Climate

Verbal harassment of many types is a common experience for BUSD students in middle school and high school.

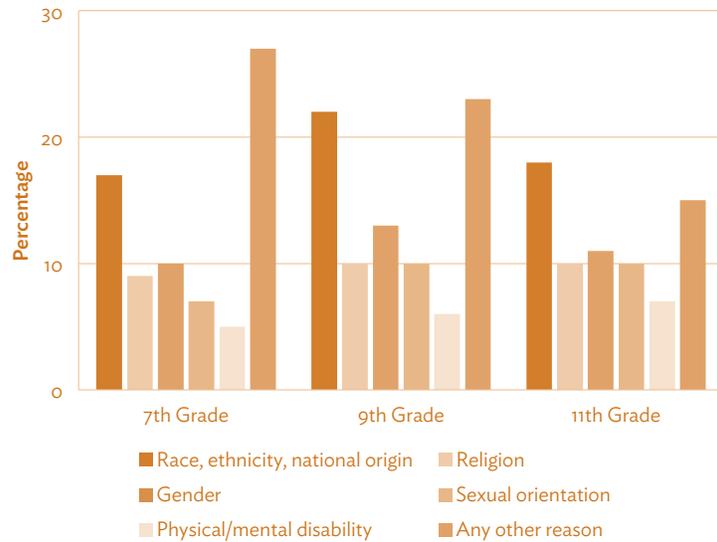
Figure 3.25 EXPERIENCED VERBAL HARASSMENT ON SCHOOL PROPERTY IN PAST 12 MONTHS Berkeley Unified School District, 2009



Source: Healthy Kids Survey, 2009–2010

The single most common specific reason given for harassment is race, ethnicity, or national origin, but harassment targets a wide variety of characteristics.

Figure 3.26 REASONS FOR HARASSMENT ON SCHOOL PROPERTY IN PAST 12 MONTHS Berkeley Unified School District, 2009



Source: Healthy Kids Survey, 2009–2010

Violence and Bullying continued

BUSD students report somewhat higher rates of harassment in their high school years than do students statewide.

Figure 3.27 HARASSMENT ON SCHOOL PROPERTY IN PAST 12 MONTHS DUE TO RACE/ETHNICITY, RELIGION, GENDER, SEXUAL ORIENTATION, OR DISABILITY Berkeley Unified School District (BUSD), 2009 compared to 2007 California Student Survey (CSS)



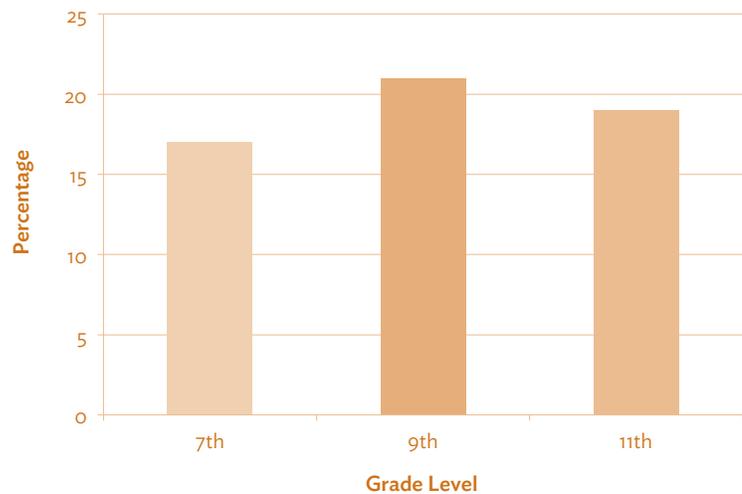
Source: Healthy Kids Survey, 2009-2010

Cyber-bullying occurs through the internet or other forms of social media.¹⁶

It is less common than verbal harassment, but is reported by 15-20% of middle and high school students.

Figure 3.28 EXPERIENCED "CYBER BULLYING" IN PAST 12 MONTHS Berkeley Unified School District, 2009

Question: During the past 12 months, how many times did other students spread mean rumors or lies about you on the internet (i.e. Facebook™, MySpace™, email, instant message)?



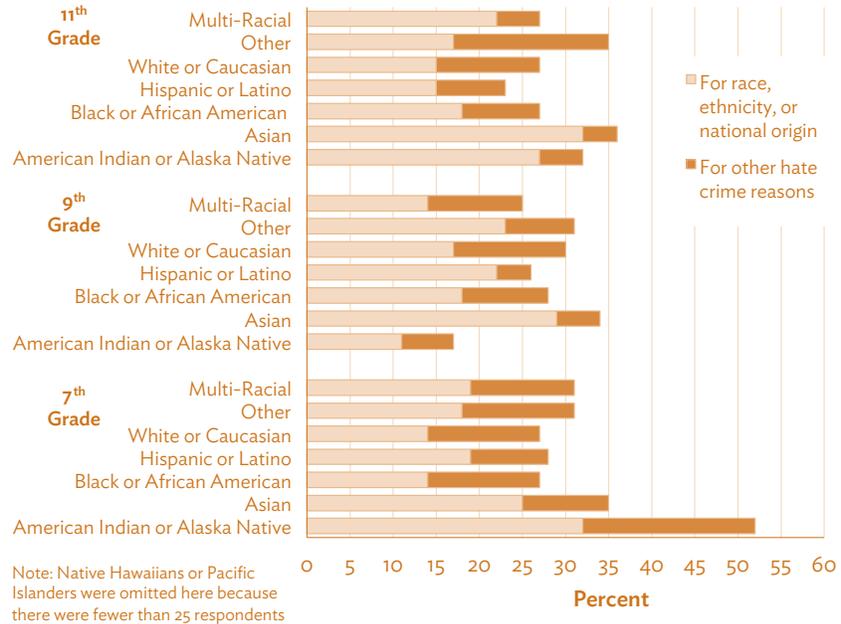
Source: Healthy Kids Survey, 2009-2010

Violence and Bullying continued

Hate crimes involve violence based on race, ethnicity, national origin, religious, sexual orientation, or disability.¹⁷

Harassment in these categories is reported by students of all race/ethnicity groups in BUSD middle and high schools. Among the hate crime categories, race/ethnicity and national origin are the most common focus of harassment.

Figure 3.29 HARASSMENT FOR HATE CRIME REASONS (RACE, ETHNICITY OR NATIONAL ORIGIN; RELIGION; GENDER; SEXUAL ORIENTATION; PHYSICAL OR MENTAL DISABILITY) IN PAST 12 MONTHS BY RACE/ETHNICITY
Berkeley Unified School District, 2009



Source: Healthy Kids Survey, 2009-2010

Childhood and Youth Injuries*What is this?*

Injuries are a significant cause of morbidity and mortality in children, youth, and young adults. Injury hospitalizations include suicide attempts, poisonings and overdoses, motor vehicle accidents, assaults, and others.¹⁸

Why is it important?

While this stage of life is generally a healthy one, rates of injury are high. Injuries in adolescents are associated with risk-taking behaviors, alcohol and drug use, and stresses associated with maturation into adulthood. In young children, injuries can be associated with failure to consistently use preventive measures

such as car seats, bicycle helmets, or swimming pool fences. Many of these injuries are preventable, and public health focuses on improving the ease and implementation of effective prevention measures.

What is Berkeley's status?

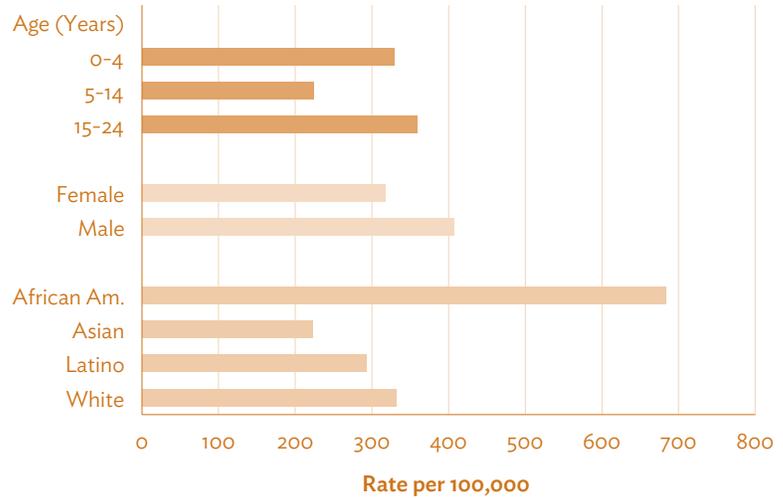
Overall hospitalization rates for injuries are highest among African American youth. Causes of injury-related hospitalizations differ by gender, with girls/young women having higher rates of suicide attempts and drug-related injuries and boys/young men having higher rates of assaults and falls.

Childhood and Youth Injuries continued

Injury rates are highest among 15-24 year olds, and nearly as high among children under five.

Males have higher injury rates than females. African American injury rates are higher than other ethnic groups.

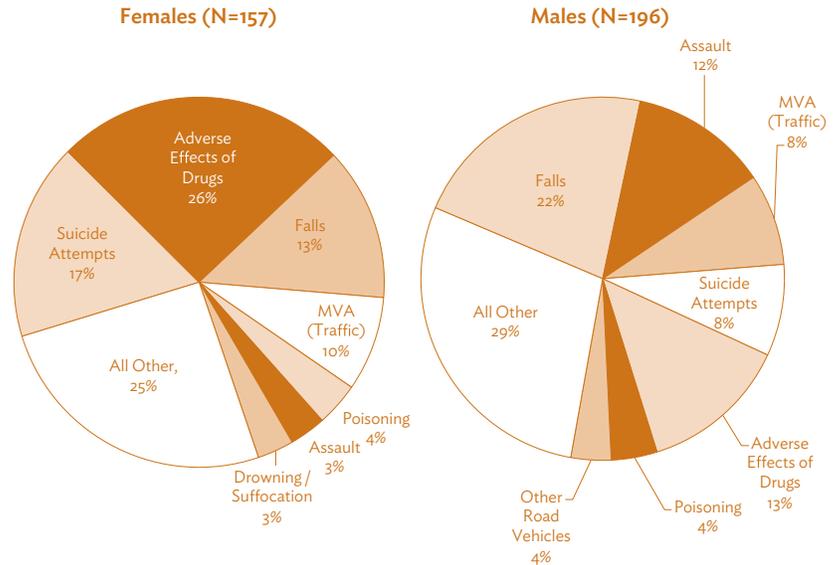
Figure 3.30 INJURY HOSPITALIZATION RATES IN YOUTH UNDER 25 YEARS BY AGE, SEX, AND RACE/ETHNICITY Berkeley, 2008-2010



Source: Office of Statewide Health Planning and Development

Injuries resulting in hospitalization are different for female and male youth. Males have higher rates of assault and falls. Females have higher rates of suicide attempts and drug-related hospitalizations.

Figure 3.31 LEADING CAUSES OF INJURY HOSPITALIZATION IN YOUTH UNDER 25 YEARS OF AGE BY SEX Berkeley, 2008-2010



Source: Office of Statewide Health Planning and Development

Childhood and Youth Injuries continued

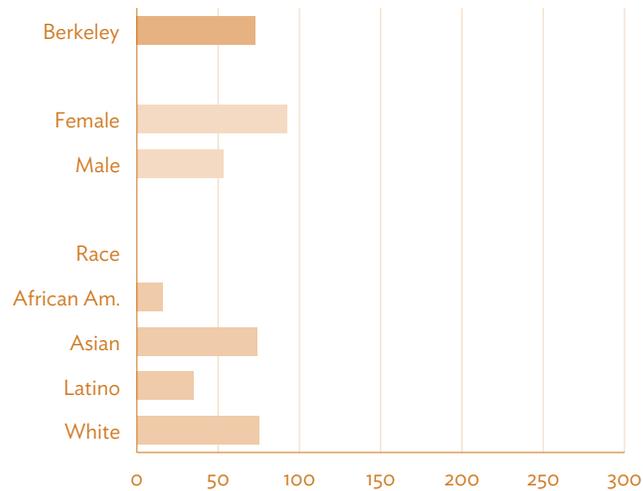
HIGHLIGHT: Violence is a Public Health Issue

Violence jeopardizes the health and safety of the public. It is a leading cause of injury, disability, and premature death; a significant disparity, disproportionately affecting young people and people of color; and it increases the risk of other poor health outcomes. A public health approach to violence means preventing violence before it occurs. This approach requires comprehensive and multidisciplinary efforts to address the complex underlying contributors to violence. It relies on identifying and strengthening the assets in youth, families, and communities.¹⁹ Violence is an important social determinant of health.

Youth hospitalizations for assault are rare in Berkeley. They overwhelmingly occur among African American males. This population rate of assaults among African American youth translates to an absolute number of 24 assault-related hospitalizations during the 3 year period of 2008–2010. Half (52%) of these assaults were by firearms.

Assault hospitalizations in other ethnic groups were too few to yield statistically meaningful population rates.

Figure 3.32 SELF-INFLICTED INJURY HOSPITALIZATION RATES IN YOUTH 15-24 YEARS BY AGE, SEX, AND RACE/ETHNICITY Berkeley, 2008–2010

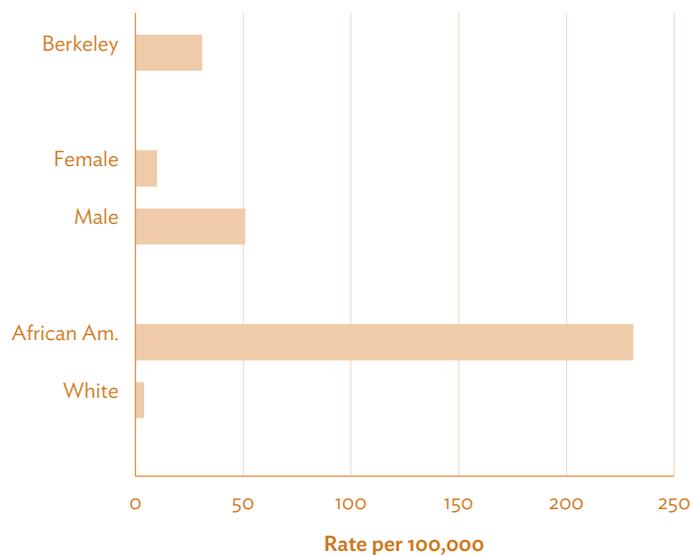


Source: Office of Statewide Health Planning and Development

Self-inflicted injuries in youth are usually suicide attempts or gestures. Suicide attempts are more common in young women than young men. White and Asian youth have higher rates of self-inflicted injury hospitalizations than African American or Latino youth.

The HP 2020 goal is to reduce adolescent suicide attempts requiring medical attention to 1.7 attempts per 100 population. Berkeley's rates appear well below this goal, although these rates do not include suicide attempts which are managed with outpatient medical attention only.

Figure 3.33 ASSAULT HOSPITALIZATION RATES IN YOUTH < 25 YEARS BY AGE, SEX, AND RACE/ETHNICITY Berkeley, 2008–2010



Source: Office of Statewide Health Planning and Development

Communicable Diseases: Sexually Transmitted Infections

What is this?

Sexually transmitted infections (STIs) include chlamydia, gonorrhea, and syphilis as well as HIV/AIDS. These are reportable diseases, tracked regularly by local health departments and at the state and national level.

Why is this important?

Emerging sexuality, sexual relationships, and sexual experimentation put adolescents at risk for STIs. Adolescent women with STIs can experience pelvic inflammatory disease, dangerous

ectopic (“tubal”) pregnancy, and lifelong infertility.²⁰ STIs in both sexes are an indicator of high-risk sexual activity and increase the risk for HIV infection.

What is Berkeley’s status?

Chlamydia is the most common STI among Berkeley youth. Young women ages 15-19 have the highest rates of chlamydia and of all STIs combined. African American young women have the highest rate of chlamydia infection. The STI rate in young men is lower at ages 15-19, and peaks at ages 25-29.

STIs Among Youth

Taking all STIs together, young women have higher rates of STIs and the rates are highest at ages 15-19.

The maximum STI rate among young men is half that of women, and peaks at ages 25-29.

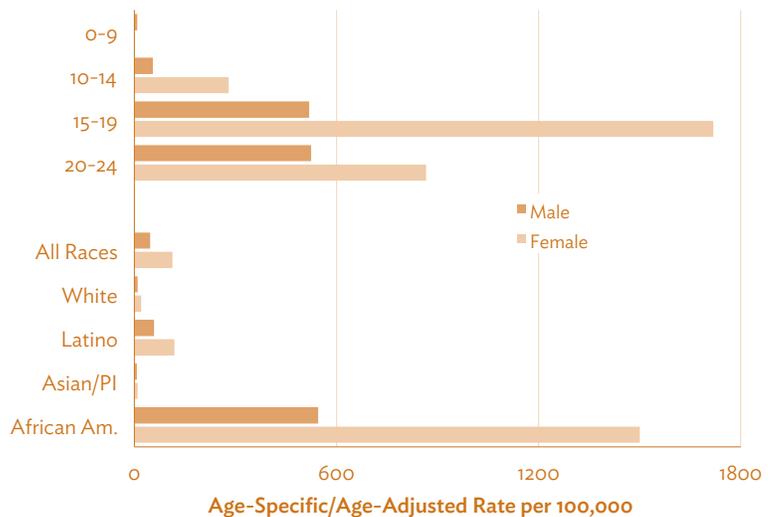
Chlamydia is primarily a disease of adolescents and young adults. It is especially common among African American young women ages 15-19.

Figure 3.34 CHLAMYDIA, GONORRHEA, AND PRIMARY AND SECONDARY SYPHILIS INFECTIONS BY AGE AND SEX Berkeley, 2009–2011



Source: Berkeley Public Health Division

Figure 3.35 CHLAMYDIA RATES BY GENDER, AGE GROUP, AND RACE/ETHNICITY FOR CHILDREN AND ADOLESCENTS YOUNGER THAN 25 YEARS OF AGE City of Berkeley, 2009–2011

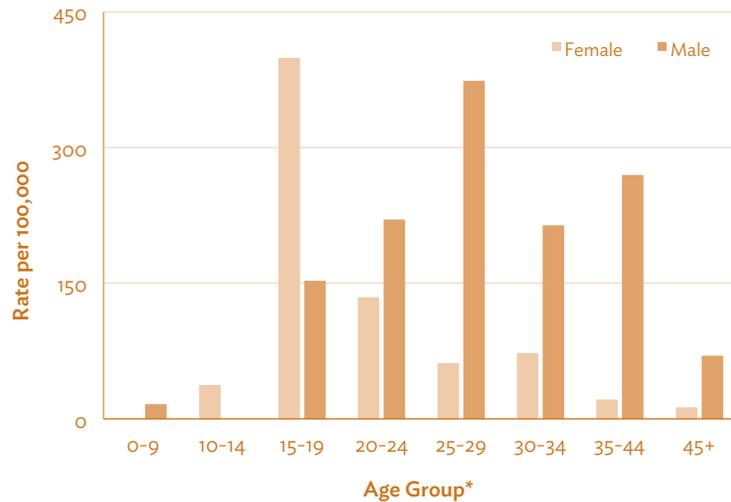


Source: Public Health Division, CMR Reports

Communicable Diseases: Sexually Transmitted Infections continued

Like chlamydia, gonorrhea has a markedly different age distribution for women and for men. In women, gonorrhea infections peak during the adolescent years, 15-17. For men, the peak comes much later at ages 25-34 and remains high through age 54.

Figure 3.36 GONORRHEA CASE RATES BY AGE AND SEX Berkeley, 2009-2011



*Unspecified gender ranged from 0% to 0.1% of cases in any given year.

Source: Berkeley Public Health Division

HIGHLIGHT: High School Health Centers

The Berkeley High School and B-Tech Health Centers provide free, safe, and convenient places for students to receive medical and mental health care and referrals. Sexual health services include health education and counseling on preventing STIs and HIV, as well as STI and HIV testing, diagnosis and treatment.

Immunization of Berkeley's Children

What is this?

Childhood immunizations are recommended for a growing array of diseases. Immunizations begin shortly after birth and continue through adolescence (and adulthood). Some immunizations are required for school entry in California, but many recommended vaccines are not.

Why is this important?

Immunizations are one of the most significant public health achievements of the 20th century. Diseases that were once common causes of illness, death, and disability—like polio, tetanus, measles, meningitis, and others—are now unusual because of widespread immunization. Immunization prevents disease and death and saves health care costs. The control of these diseases, however, is dependent on maintaining high levels of vaccination in the community. Un- and under-

immunized children are at risk of acquiring illness and of spreading it to others; they endanger not only themselves but their family members, playmates, and classmates.²¹

What is Berkeley's status?

Berkeley's childhood immunization rate for diphtheria, tetanus, pertussis (whooping cough), polio, measles, mumps, and rubella has remained stable for the last 5 years. Berkeley's rate is lower than that of Alameda County and California. Vaccine-preventable diseases occur in Berkeley with regularity, and are reported to the Public Health Division. Reports in recent years included measles, mumps, and pertussis. Each of these occurrences necessitates investigation and control measures, such as isolation or exclusion from school, to prevent further spread.

Immunization of Berkeley's Children continued

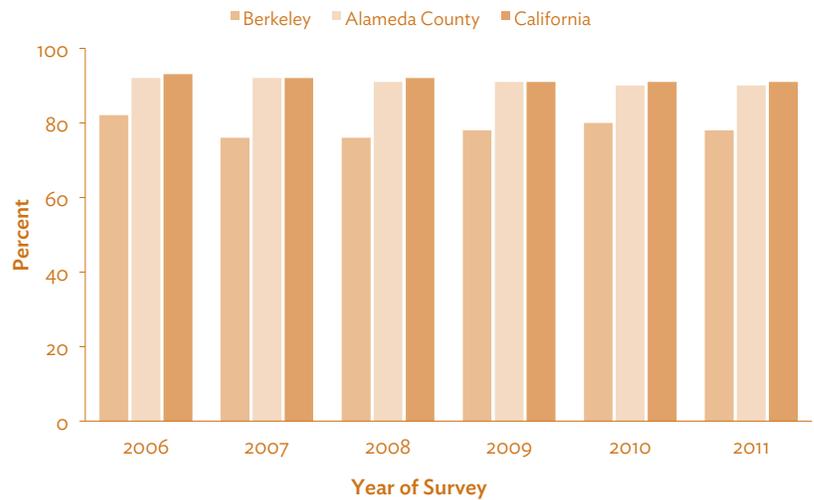
About 80% of Berkeley kindergarteners are fully immunized, compared with 90% or more of kindergarteners in the County and State.

Personal belief exemptions (PBEs) allow students to enter school without required immunizations. Berkeley schools have significantly higher rates of PBEs at kindergarten entry than do Alameda County or California schools overall. This increases the likelihood that vaccine-preventable diseases can occur and spread among Berkeley school children.

HIGHLIGHT: Personal Belief Exemptions

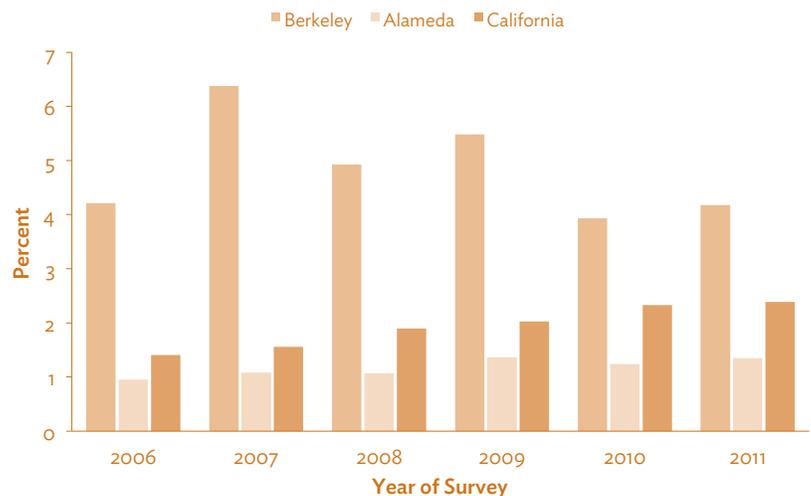
In 2012 California passed AB 2109 which requires that parents or guardians seeking PBEs be counseled by a licensed health care practitioner. They must present a document in which the practitioner attests that the parent or guardian has been informed of the benefits and risks of the immunization, as well as the health risks of the diseases that a child could contract if not immunized. This legislation goes into effect in January 2014.

Figure 3.37 PERCENT OF KINDERGARTEN CHILDREN IMMUNIZED AGAINST 7 CHILDHOOD DISEASES Berkeley, Alameda County, and California, 2006 to 2011



Source: California Department of Public Health, Immunization Branch

Figure 3.38 PERCENT OF KINDERGARTEN CHILDREN WITH PERSONAL BELIEF EXEMPTIONS (PBE) Berkeley, Alameda County, and California, 2006 to 2011



Source: California Department of Public Health, Immunization Branch

HIGHLIGHT: Immunization Program

The Public Health Immunization Program strives to increase immunization rates for all Berkeley residents across the life span. Special efforts are directed toward African American and Latino children less than two years of age by collaborating with WIC; public and private preschools; licensed family childcare homes; medical providers; and through community outreach, education and encouraging participation in the immunization registry among medical providers. Immunization services are provided to the community in several venues including at the Public Health Clinic. The program also focuses on pertussis vaccination for teens and adults and seasonal influenza vaccine for all ages.

Childhood Lead Poisoning

What is this?

Lead poisoning is a serious problem among young children that can go undetected because it typically has no obvious symptoms.²² All children should be screened for lead poisoning, either by assessing their risk of exposure by means of taking a detailed history from their parent or guardian, or by a blood test.

The most common source of lead poisoning is lead-based paint and lead-contaminated dust in older houses (pre-1978). Other sources of lead are contaminated air, water and soil. Adults who work with batteries, home renovations or in auto repair shops may be exposed to lead and bring lead home on their clothing.

There is no clear safe level of lead exposure. On an annual basis, approximately five children in Berkeley are identified with a blood lead level >10mcg/dl, which until 2012 was considered the threshold for concern.

In 2012, the Centers for Disease Control and Prevention (CDC) lowered the level of concern to 5mcg/dl, increasing the number of children identified with elevated lead levels.²²

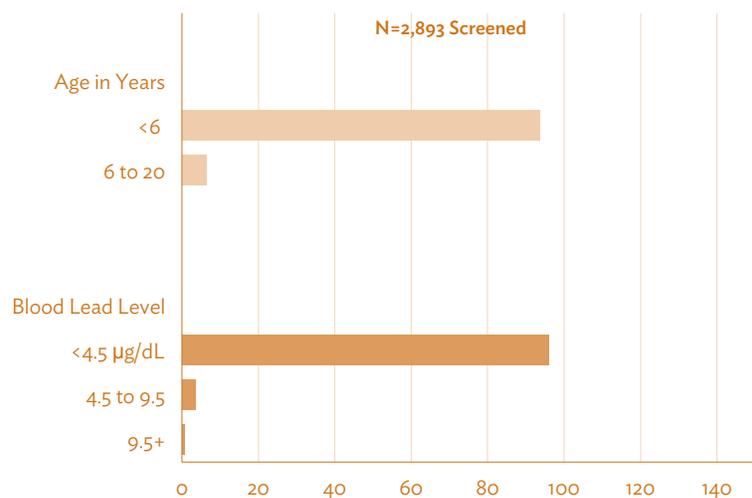
Why is this important?

Lead poisoning can severely impair both mental and physical development, and in high doses can even be fatal. Children under age 6 and those who are poor are particularly susceptible to lead exposure. Lead poisoning is preventable if precautions are taken, including hand-washing, cleaning, and identifying and removing sources of lead in young children's environments. Using lead-safe practices when renovating older homes is essential to preventing lead poisoning.²³

What is Berkeley's status?

Cases of lead poisoning are rare in Berkeley, although residents are at risk for lead exposure due to Berkeley's housing stock. About 90% of Berkeley's housing units were built before 1978, when lead was removed from house paint.²⁴

Figure 3.39 CHILDREN WITH LABORATORY-REPORTED BLOOD LEAD TESTS
Berkeley, 2008–2010



Source: California Department of Public Health, Childhood Lead Poisoning Prevention Program

HIGHLIGHT: Childhood Lead Poisoning Prevention (CLPP) Program

The City's CLPP program provides nursing case management for families of children with elevated blood lead levels (defined by the State as two levels over 14.5, or one level over 20), education and technical assistance to medical providers, and increases awareness of the hazards of lead poisoning from painting and remodeling pre-1978 housing, as well as other sources of lead (i.e. consumer products, etc.). Program staff works closely with counterparts at the County to connect Berkeley property owners to resources, such as in-home consultations, and connect painters and contractors to resources, such as lead certification classes.

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4

CHAPTER 4: ADULT HEALTH

What is this?

This chapter examines the health status of Berkeley's adults, from early adulthood through old age. This is the stage of life when chronic diseases, including cancer, are most likely to develop and take their toll on well-being. Communicable diseases, mental health issues, injuries and accidents continue to have major roles as well.

Why is it important?

This is the period of life in which one is most likely to work, to accumulate wealth, to have partners and responsibilities for other family members. Health is essential to the quality of adult life—not only for the individual, but for those around him or her. Ill health interferes with the productivity of this stage of life.

What is Berkeley's status?

Berkeley adults, on average, enjoy excellent health. They are physically active, have healthy behaviors, and low rates of chronic disease and illnesses of all sorts. However, there are striking differences in health by race/ethnicity, income, and geography. African Americans living in Berkeley's South and West neighborhoods have high rates of chronic diseases and risk factors for chronic disease: often many times higher than other racial/ethnic groups. This is a major manifestation of health inequities in Berkeley. Chronic disease and related health inequities – specifically heart disease and hypertension (high blood pressure)—are a primary focus of public health work.



Robin Kempster

Key Findings

- **Healthy People 2020**

- o Berkeley as a whole *meets* HP2020 goals for:
 - Healthy weight
 - Physical Activity
 - Tobacco smoking
 - Hypertension
 - Asthma hospitalizations
 - New cases of syphilis in women
 - New cases of AIDS
- o Berkeley as a whole *does not meet* HP2020 goals for:
 - Screening mammograms
 - New cases of tuberculosis
 - New cases of syphilis in men
- o Note that even when the population as a whole meets a HP2020 goal, some Berkeley sub-populations by age, race/ethnicity, income, etc. may fail to meet the goal.

- **Chronic Diseases**

- o African Americans and those with less than a high school education are most likely to be overweight or obese.
- o Men, African Americans, individuals with less than a high school education, and those 25–44 years of age have the highest rates of cigarette smoking.
- o Alcohol retail outlets are concentrated near the University and in West Berkeley.
- o Chronic disease rates have been decreasing in all racial/ethnic groups. The disparities between African American and other groups have narrowed for some conditions, but remain striking across the population.
- o Berkeley's African American population experiences inequitably high rates of all major chronic diseases: diabetes and its complications; hypertension (high blood pressure); heart disease; stroke; and asthma.
- o Asians have the second highest rate of diabetes among Berkeley's racial/ethnic groups, but have very low rates of diabetes-related hospitalizations.

continues

Key Findings *continued*

- Latinos have the lowest rate of hypertension-related hospitalizations of all racial/ethnic groups.
- Asthma rates are highest among African American and White Berkeley residents, and among those with higher levels of education. Asthma hospitalization rates, however, are disproportionately high among African Americans.
- White women have higher rates of breast cancer than do other racial/ethnic groups.
- Asian and Latina women meet the HP2020 goal for screening mammograms; other racial/ethnic groups do not.
- Prostate and lung cancer rates are highest among African Americans.
- **Mental Health**
 - Hospitalization rates for mental health disorders are much higher among African Americans than other racial/ethnic groups.
 - Mental Health hospitalization rates have been stable in Berkeley over the past decade.
 - Asians and Latinos have the lowest rates of mental health hospitalizations in Berkeley
- **Injuries**
 - Hospitalization rates for injuries have risen steadily in the last decade among all groups except Latinos, for whom the rate has steadily fallen. The rate for African Americans is double that for Whites, and the gap is widening.
 - Accidental falls in adults over age 65 are a significant cause of hospitalization across all racial/ethnic groups. They are most common in North Berkeley.
 - The number of motor vehicle injuries has dropped by more than 50% in the past decade. Traffic injuries are most common among those 15-24 years of age. Bicycle injuries have increased.
 - On average, Berkeley police receive 140 domestic violence calls annually.
- **Disability** from physical, emotional, or mental conditions affects 26% of Berkeley residents. This rate is the same as that reported for the State. Women, the elderly, African American and Latino residents are more likely to experience disability.
- **Communicable Diseases**
 - Public Health receives nearly 900 communicable disease reports annually.
 - Tuberculosis control involves extensive contact investigations, sometimes involving 100's of individuals.
 - Vaccine-preventable diseases such as pertussis (whooping cough) remain an important cause of illness in Berkeley.
 - Chlamydia and Gonorrhea rates are much higher among African American women and men than among other racial/ethnic groups of either sex.
 - Syphilis rates are highest among African American men.
 - New HIV infections occur at disproportionately high rates among Latinos and African Americans.

Chronic Disease/Chronic Conditions

What is this?

Chronic diseases are illnesses of long duration and generally slow progression. These diseases – such as heart disease, stroke, diabetes, and cancer – are among the most common, costly, and preventable of all health problems in the U.S.¹

Why is this important?

Heart disease, cancer and stroke account for more than 50% of all deaths each year.² These conditions impact the well-being and quality of life of those who have them.

Chronic diseases share many underlying causes: obesity and unhealthy diets, low levels of physical activity, and use of tobacco and alcohol. Changing the environments and behaviors that perpetuate these risk factors can prevent chronic diseases. Prevention of chronic diseases improves the quality of life, decreases health care costs, and prolongs life.

Prevention is more cost-effective, and provides greater benefit to individual health and well-being, than treating chronic disease after it is well established. Primary prevention of this sort is the work of public health.

What is Berkeley's status?

In Berkeley, chronic diseases have a disproportionately large impact on relatively small populations within the community: the African American population in South and West Berkeley bears a far heavier burden of chronic disease than any other segment of the Berkeley community. Health inequities are apparent in the distribution of chronic illness. The pattern of illness, across racial/ethnic lines and in geographic distribution, is virtually the same for each of the chronic diseases reviewed in this section.

HIGHLIGHT: Chronic Disease Framework

Chronic Disease is the leading cause of premature morbidity and mortality in Berkeley as well as all in California. As part of our efforts to reduce chronic disease, the City has adopted the state's Chronic Disease Prevention Framework developed by the California Conference of Local Health Officers and the County Health Executives Association of California. This Framework provides a vision, common language, and systematic approach to addressing chronic disease. It offers a spectrum of strategies and program models for us to choose from and emphasizes policies that can improve local community conditions in Berkeley.³

Overweight/Obesity, Nutrition & Physical Activity in Berkeley

What is this?

Over one-third of the US population is obese, and at least that many more are overweight. This is a result of changing patterns of diet and activity.⁴ Overweight and Obesity are defined by the "Body Mass Index" (BMI), with overweight meaning a BMI of 25-29.9, and obese meaning a BMI greater than 30.⁵

Why is this important?

Overweight and obesity increase the risk for high blood pressure, type 2 diabetes, heart disease, stroke, arthritis, respiratory problems, and some types of cancer. Changing these factors can prevent or decrease the impact of chronic diseases. A healthy diet includes ample servings of fresh fruits and vegetables every day. In addition to healthy eating, regular vigorous physical activity is associated with improved health.⁴

What is Berkeley's status?

More than 60% of Berkeley adults are of healthy weight (neither obese nor overweight). This rate is well above the national average, and more than meets the HP2020 goal of 33.9% of adults of healthy weight. Berkeley rates of overweight/obesity are below those of Alameda County and the state. However, overweight and obesity are not evenly distributed in Berkeley. African Americans and those with lower levels of education have rates of overweight/obesity of greater than 60%.

Overweight/Obesity, Nutrition & Physical Activity in Berkeley continued

One third of Berkeley adults reports being overweight or obese. Those most likely to be overweight or obese are middle-aged, African Americans, and those with less than a high school education.

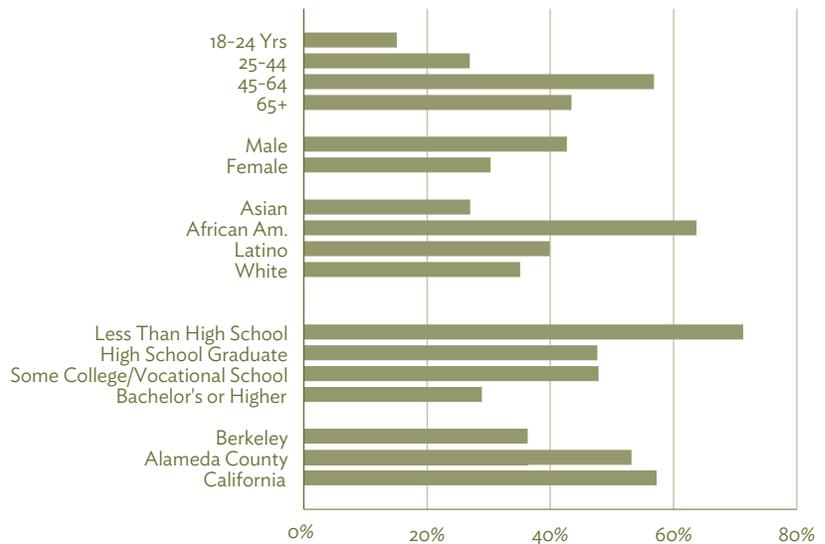
HP2020 sets a goal of 33.9% or more of the population being of healthy weight (neither obese nor overweight—ie having a BMI <25). Thirty-six percent of Berkeley residents are overweight or obese, meaning approximately 64% are of healthy weight. Berkeley meets this HP2020 goal.

Note: Those with a BMI <18.5 are considered underweight, not healthy weight.⁵ Data on this weight category are not available.

Berkeley residents report high rates of physical activity. Those least likely to exercise regularly are the elderly, African Americans, the poor, and those with less than a high school level education.

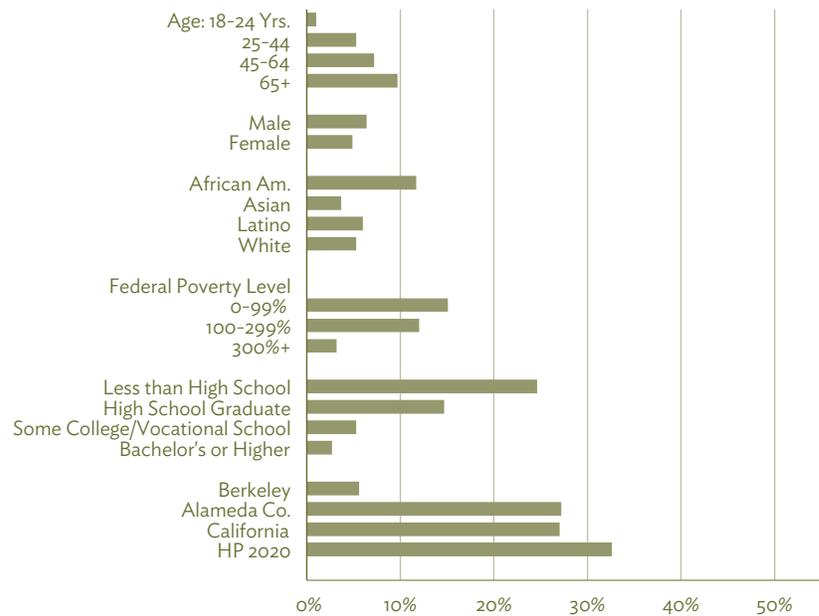
The HP2020 goal is that fewer than 32.6% of adults report no regular physical activity. Berkeley meets this goal, with fewer than 10% of residents reporting no physical activity.

Figure 4.1 OVERWEIGHT OR OBESE ADULTS (18 YEARS AND OLDER) BASED ON BODY MASS INDEX (BMI) OF 25 AND GREATER Berkeley, 2005-2007-2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

Figure 4.2 ADULTS (18 YEARS AND OLDER) WHO HAVE NO PHYSICAL ACTIVITY Berkeley, 2005-2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), 2005-2007-2009, Berkeley

Tobacco and Alcohol Use

What is this?

Tobacco and alcohol are pervasive public health problems in the US. Although rates of cigarette smoking are on the decline,⁶ tobacco’s harmful health effects still account for 1 of every 5 deaths in the US every year.⁷ Alcohol misuse is a leading risk factor for serious injury and preventable death in the US.⁸ Data on tobacco and alcohol use in Berkeley are available from the California Health Information Survey (CHIS). While this is self-reported information, it is the most reliable and detailed information available about behaviors of Berkeley residents.

Why is this important?

Tobacco and alcohol use are significant risk factors for chronic diseases. Smoking is associated with conditions including cancer, cardiovascular disease, and respiratory disease.⁷ Secondhand smoke exposure is a growing national priority

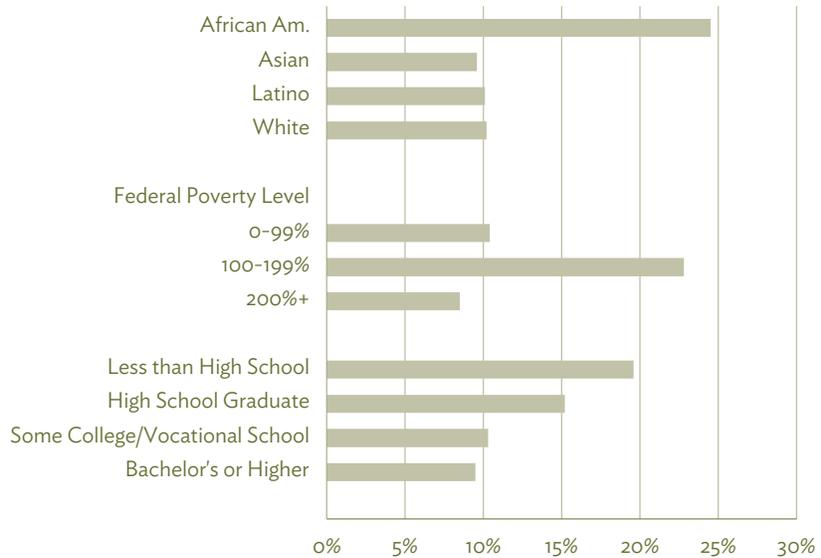
and is a trigger for asthma and other respiratory illnesses.⁹ Alcohol misuse and abuse has health effects on the user and those close to the user; its use is associated with increased crime.¹⁰ Interventions to decrease tobacco and alcohol use—through environmental, social-norms and policy change, and education—can reduce chronic disease rates and mortality related to these behaviors.

What is Berkeley’s status?

An estimated 11,000 Berkeley adults are current smokers. Adult males have the highest smoking rates. Berkeley’s overall smoking prevalence meets the HP2020 objective of <12% of adults smoking, and is lower than smoking rates in Alameda County and California. Alcohol retail outlets are concentrated near the University campus and in West Berkeley. There are no available population data about alcohol use among adult Berkeley residents.

Smoking rates among African Americans exceed rates for any other racial/ethnic group. One out of four African American adults smoke compared to one out of ten adults of any other racial/ethnic group. Those with a high school education or less are more likely to smoke.

Figure 4.3 ADULTS (18 YEARS AND OLDER) WHO SMOKE CIGARETTES EVERY DAY AND SOME DAYS BY RACE/ETHNICITY, POVERTY LEVEL, AND EDUCATION Berkeley, 2005–2009



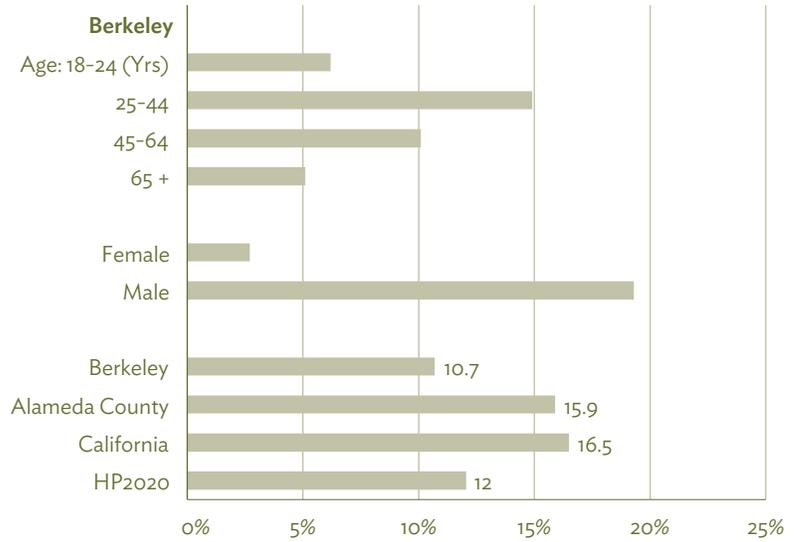
Source: California Health Interview Survey (CHIS), 2005–2009, Berkeley

Tobacco and Alcohol Use *continued*

Twenty-five to 44 is the age-group with the highest smoking rate among Berkeley residents. Nearly 1 out of every 5 men currently smokes. Smoking rates for men are 7 times higher than those for women.

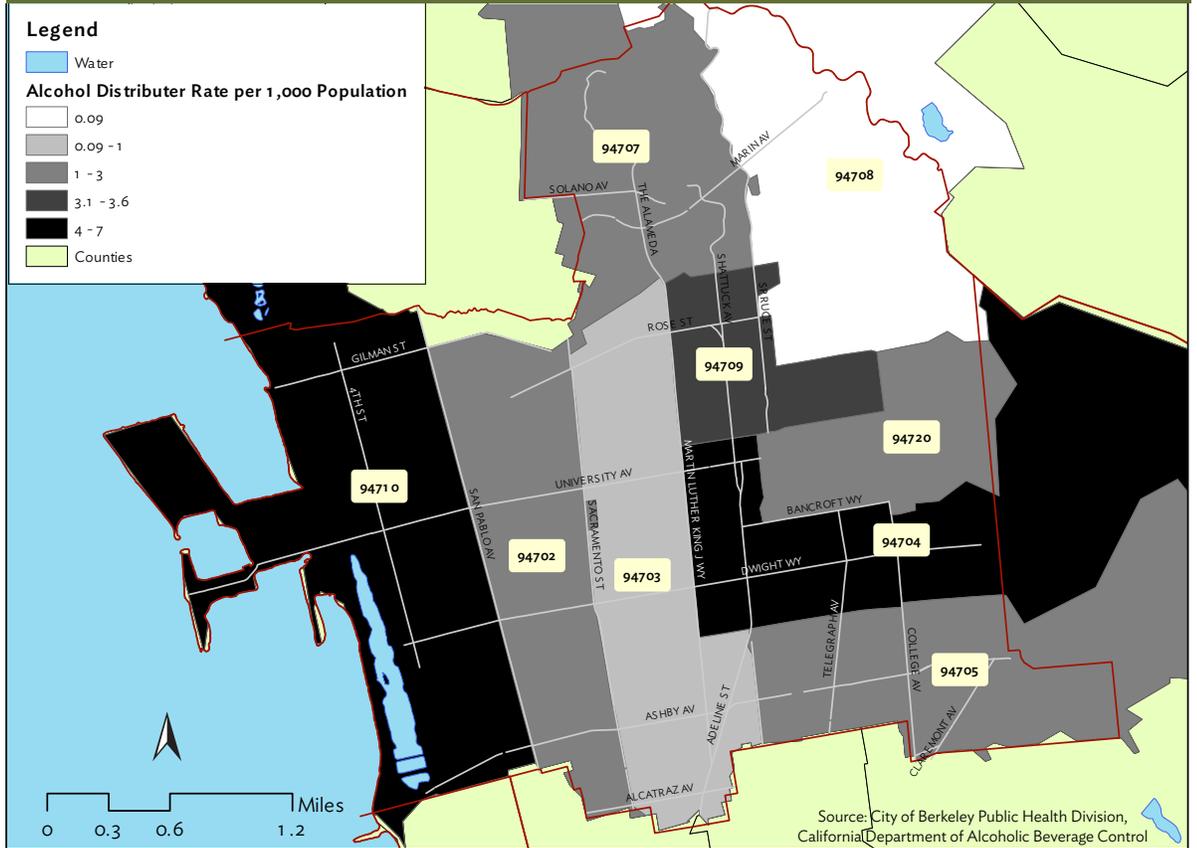
Berkeley's overall smoking rate of 10.7% meets the HP2020 goal of 12% or lower. Many sub-populations, however, do not meet this goal.

Figure 4.4 ADULTS (18 YEARS AND OLDER) WHO SMOKE CIGARETTES BY AGE AND GENDER Berkeley, Alameda County, California, 2005-2009

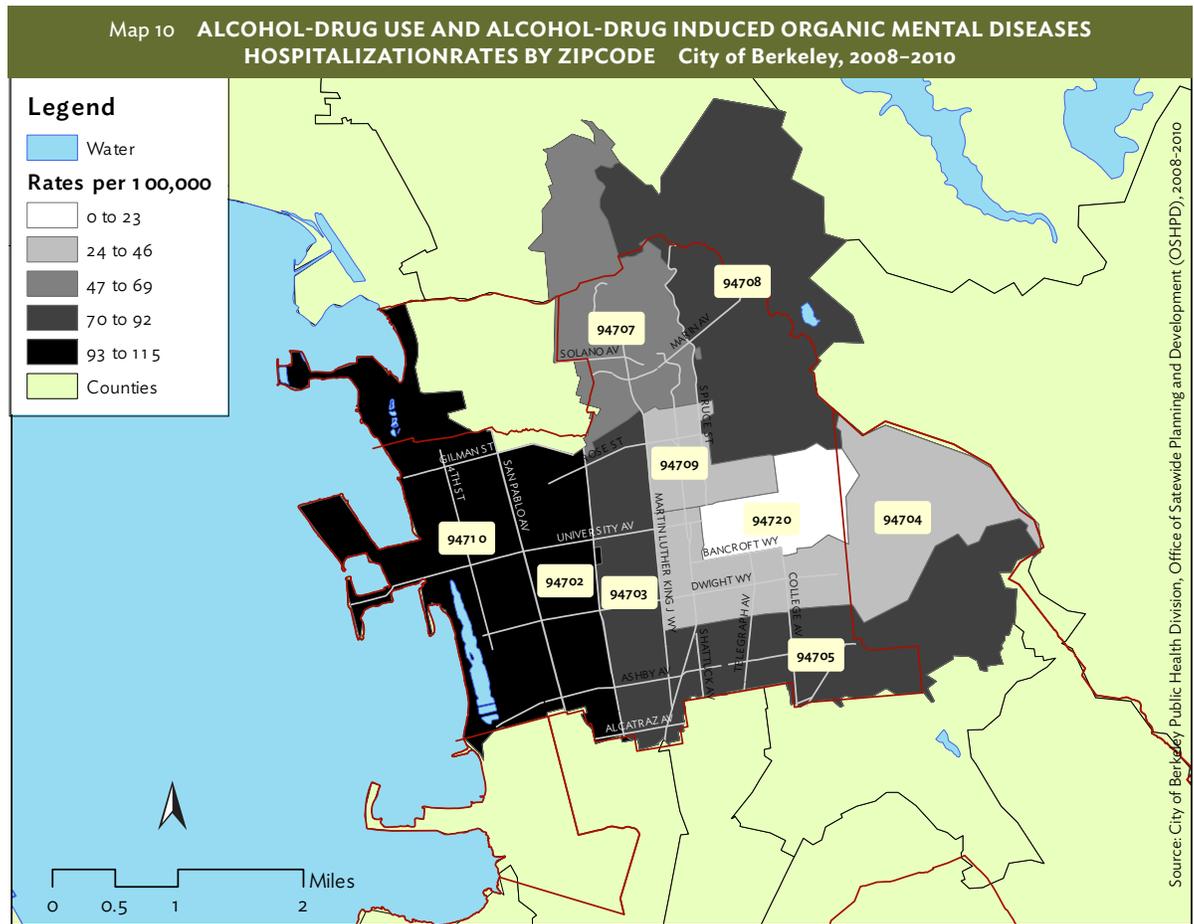


Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), 2005-2007-2009, Berkeley

Map 9 ALCOHOL DISTRIBUTERS PER 1,000 POPULATION City of Berkeley, 2009



Alcohol distributors are most concentrated around the UC campus and in West Berkeley.



Hospitalizations related to alcohol and drug use occur throughout the City, although they are most common in West Berkeley.

HIGHLIGHT: Tobacco Prevention, Cessation, and Policy

The Tobacco Prevention program offers free, multi-session smoking cessation classes as well as brief individual cessation assistance. Program staff responds to complaints about smoking on sidewalks in commercial districts and in multi-unit housing. An ordinance regulating smoking in all multi-unit housing has been presented to City Council and is undergoing revision before being returned to Council in fall, 2013. The proposed ordinance would limit non-consensual exposure to secondhand smoke in the home, and thus decrease the adverse health impacts of second-hand smoke exposure.

Diabetes

What is this?

Diabetes mellitus (sometimes called “sugar diabetes”) is the body’s inability to produce and use insulin, resulting in blood sugar levels which are too high. Over the course of the disease, poorly controlled diabetes may lead to a variety of disabling and life-threatening complications such as heart disease, blindness, kidney failure, infection, and amputation.¹¹ Diabetes affects the quality of life due to the challenges of monitoring blood sugar, making dietary changes, and managing complications. Early and effective treatment minimizes the risk of short and long term complications.

Why is this important?

Many cases of diabetes can be prevented or controlled by diet and exercise—especially early in the course of the disease. The complications of untreated or poorly controlled diabetes can have a significant effect on an individual’s ability to work and to participate fully in community life. Diabetes increases the risk of heart disease and stroke 2 to 4 times, and people

with diabetes are twice as likely to die as people the same age without diabetes. The economic impact of diabetes is profound: it is estimated at \$174 billion per year, including excess medical care costs and the costs of disability, lost work, and premature death.¹² Across the nation, 25.8 million people (8% of the population) have diabetes.¹³ The occurrence of diabetes is increasing rapidly, especially among African Americans and Latinos, lower income people, and the elderly. Overweight/obesity, unhealthy diets and low physical activity rates all contribute to diabetes.¹³

What is Berkeley’s status?

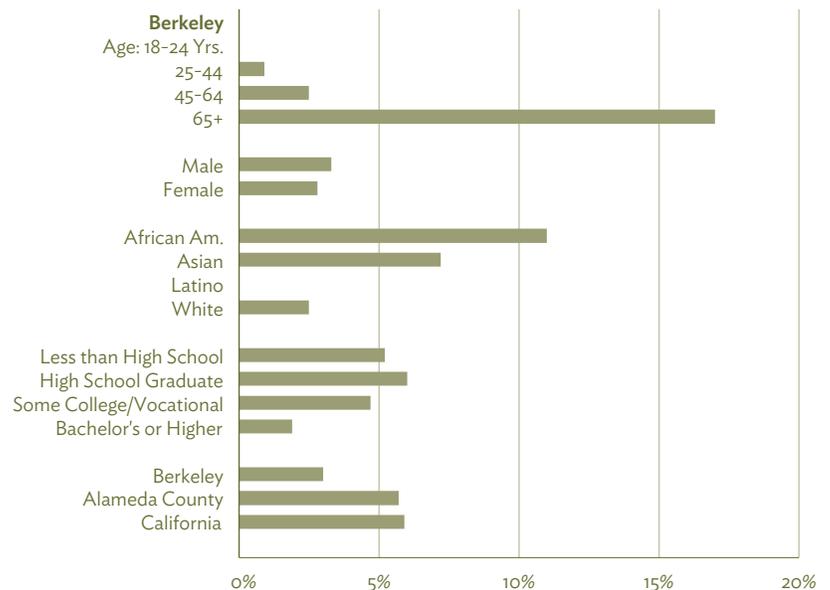
Berkeley has remarkably low rates of diabetes and diabetic complications, on average, when compared with Alameda County and the State. However, these average figures mask vast disparities: the rates of diabetes and all of its complications are many times higher in Berkeley’s African American population than in other groups. This is one of Berkeley’s most remarkable health inequities.

Three percent of Berkeley adults have been told by a physician that they have diabetes. Berkeley’s rate of diabetes is about half the rate of Alameda County and California.

Aging is associated with increased diabetes risk, and diabetes rates are highest among those 65 years of age and older.

The percentage of African Americans diagnosed with diabetes is highest of all racial/ethnic groups, followed by Asians.

Figure 4.5 ADULTS (18 YEARS AND OLDER) WHO WERE EVER TOLD BY A DOCTOR THEY HAVE DIABETES Berkeley, 2005–2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

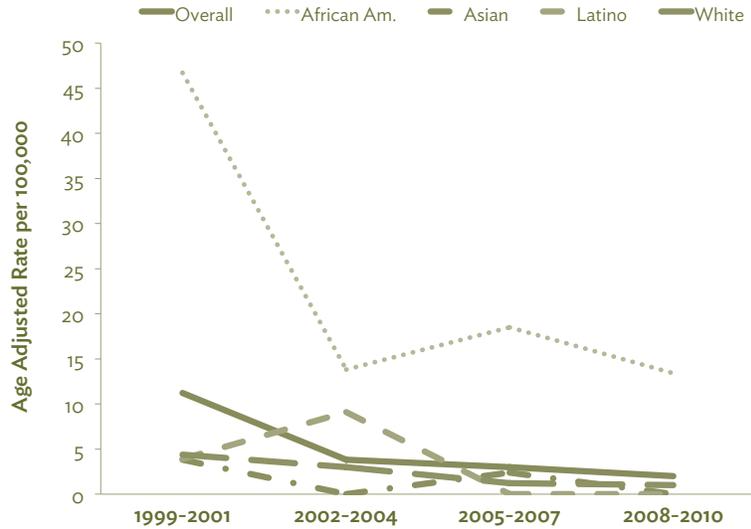
Diabetes continued

Uncontrolled Diabetes

Diabetes control requires attention to diet, exercise, monitoring of blood sugar, and medication. Uncontrolled diabetes increases the risk of complications.¹⁴

African Americans historically in Berkeley have had the highest rates of hospitalization due to uncontrolled diabetes. The gap between African American and other populations has decreased dramatically over the last 2 decades. African Americans continue to experience higher rates of hospitalization than any other racial/ethnic group.

Figure 4.6 HOSPITALIZATION RATES DUE TO UNCONTROLLED DIABETES BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 1999–2010

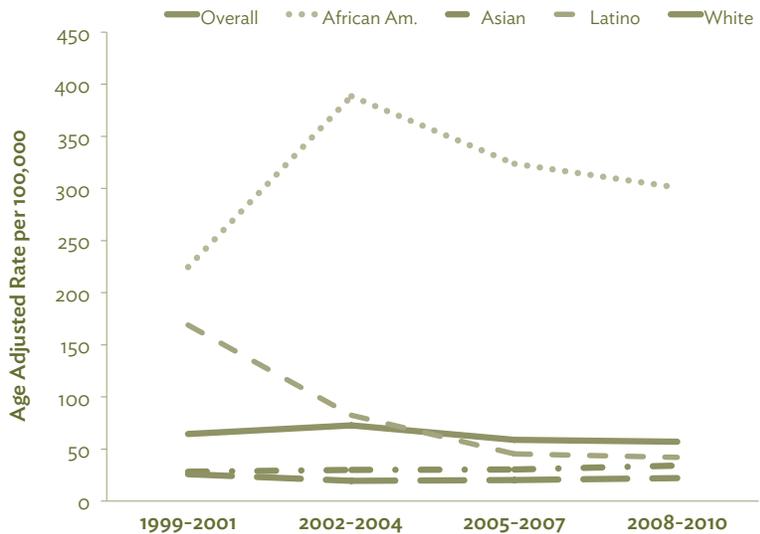


Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999-2010

Long-term Diabetes Complications

Diabetes long-term complications include kidney, eye, neurological, or circulatory complications, among others. Although hospitalization rates are decreasing, the rate among African Americans remains many times that of other groups, and is higher in recent years than it was 2 decades ago.

Figure 4.7 HOSPITALIZATION RATES DUE TO LONG-TERM DIABETES COMPLICATIONS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 1999–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999-2010

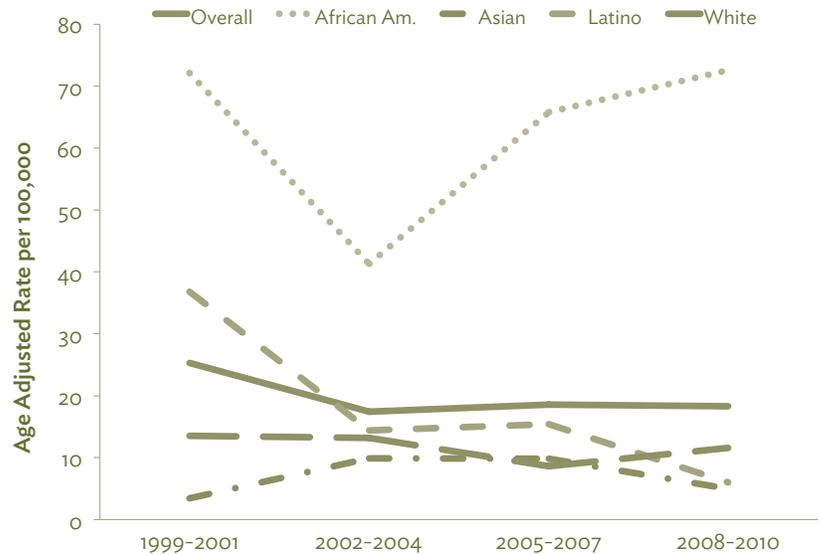
Diabetes continued

Lower-Extremity Amputation among Patients with Diabetes

Poorly controlled diabetes over many years can result in nerve and tissue damage to the feet and lower legs. When severe, this can necessitate amputation.

Hospitalization rates due to diabetes-related amputations are much higher for African Americans than for any other race/ethnicity in Berkeley. The rate in this population is rising, while it is stable or falling in other groups.

Figure 4.8 HOSPITALIZATION RATES DUE TO DIABETES AMPUTATION BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 1999–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999–2010

HIGHLIGHT: Ambulatory Care Sensitive Conditions

Preventable complications of illness are called “Ambulatory Care Sensitive Conditions” (ACSC)—meaning that ambulatory (out-patient) health care has a significant impact on these conditions (the conditions are “sensitive to”—that is influenced by—ambulatory care). Improved access to effective primary and preventive care reduces hospitalization rates due to ACSCs.¹⁵

Uncontrolled diabetes, short and long term diabetes complications, and amputations related to diabetes are all preventable causes of hospitalization. If individuals with diabetes have ready access to comprehensive, affordable, culturally and linguistically competent health care services, most of these conditions need not progress to hospitalization.

Hypertension and congestive heart failure are other ACSCs. Most hospitalizations due to hypertension or congestive heart failure could be avoided with timely access to effective outpatient health care.

Asthma and pneumonia are also ACSCs. Access to timely, effective, affordable, quality primary care in outpatient settings can reduce or prevent hospitalizations for these conditions.

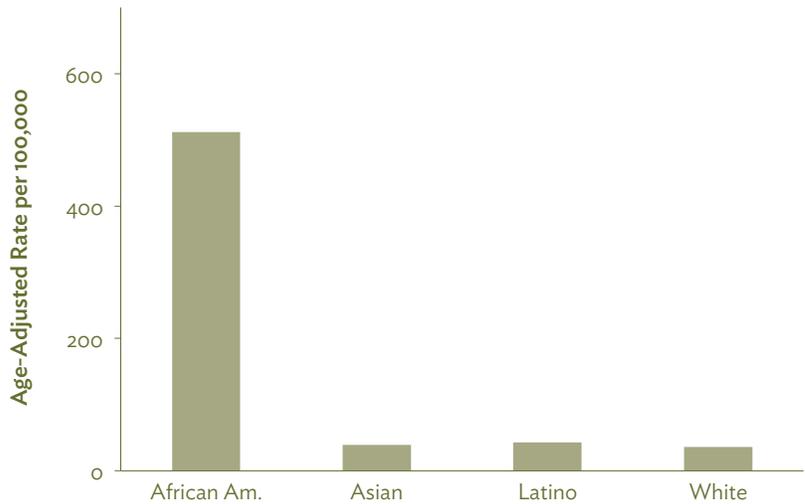
HIGHLIGHT: Access to Health Care

Public Health programs linking residents to health care services help prevent hospitalizations for ACSCs, and improve overall health and well-being of the community. Berkeley’s Public Health Division facilitates access through its El Centro program, Public Health Field Nursing, and Nurse of the Day telephone assistance. These programs are highlighted in Chapter 1.

Diabetes continued

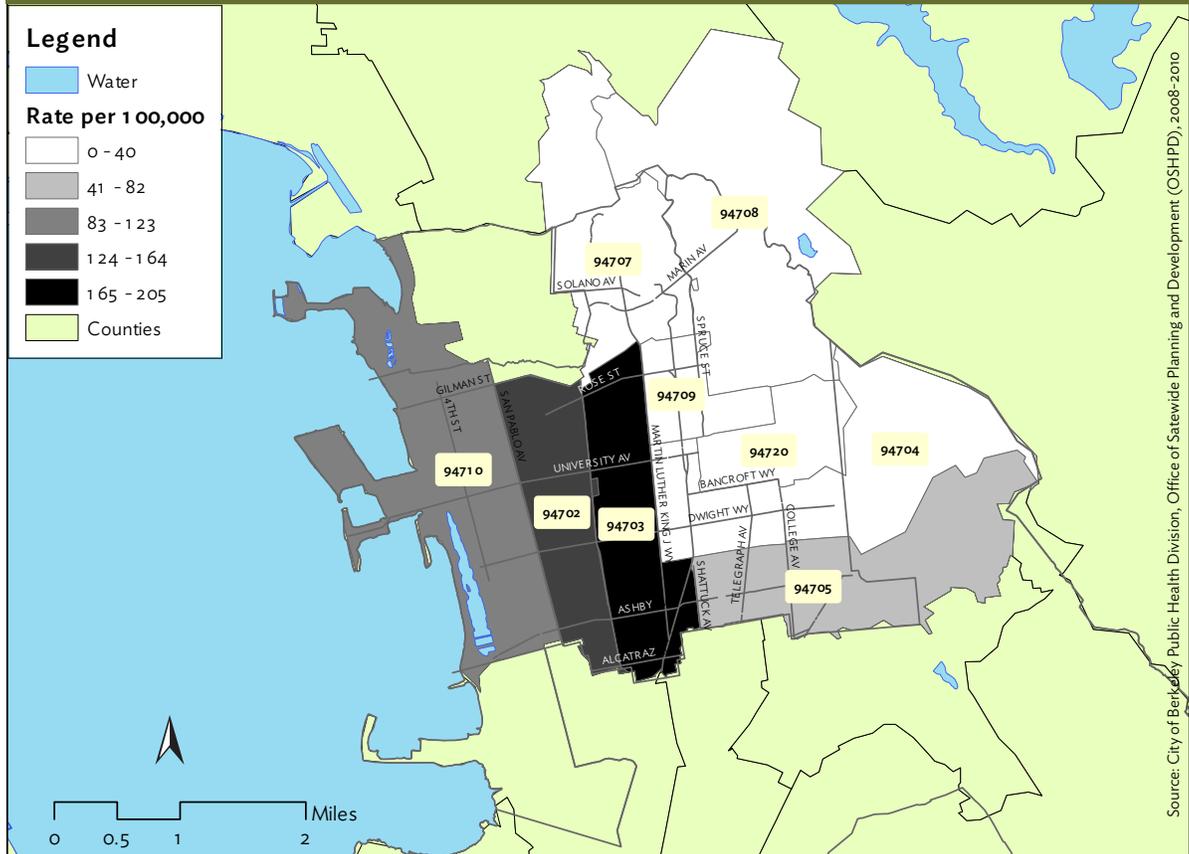
African American diabetes-related hospitalization rates are more than 10 times that of any other racial/ethnic group.

Figure 4.9 DIABETES HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY Berkeley, 1999-2010



Source: Office of Statewide Health Planning and Development, U.S. Census 2010

Map 11 AGE ADJUSTED DIABETES HOSPITALIZATION RATES BY ZIPCODE City of Berkeley, 2008-2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development (OSHPD), 2008-2010

Diabetes is not evenly distributed geographically in Berkeley. The highest rates of diabetes-related hospitalizations are among residents of South and West Berkeley.

Hypertension (High Blood Pressure)

What is this?

High blood pressure is one of the leading controllable underlying causes of heart disease and stroke. Blood pressure can be controlled by a combination of exercise, weight loss, diet, and medication. If uncontrolled, high blood pressure causes changes in the heart and blood vessels that can lead to heart attacks, heart failure, and strokes, as well as kidney failure.¹⁶

Why is this important?

About 1 in 3 U.S. adults has high blood pressure. Of those, nearly half have uncontrolled high blood pressure. Uncontrolled hypertension increases the risk of heart disease and stroke, which are

leading causes of death in the United States. Estimates are that every 10% increase in hypertension treatment could prevent an additional 14,000 deaths per year in the adult population.¹⁶

What's Berkeley's status?

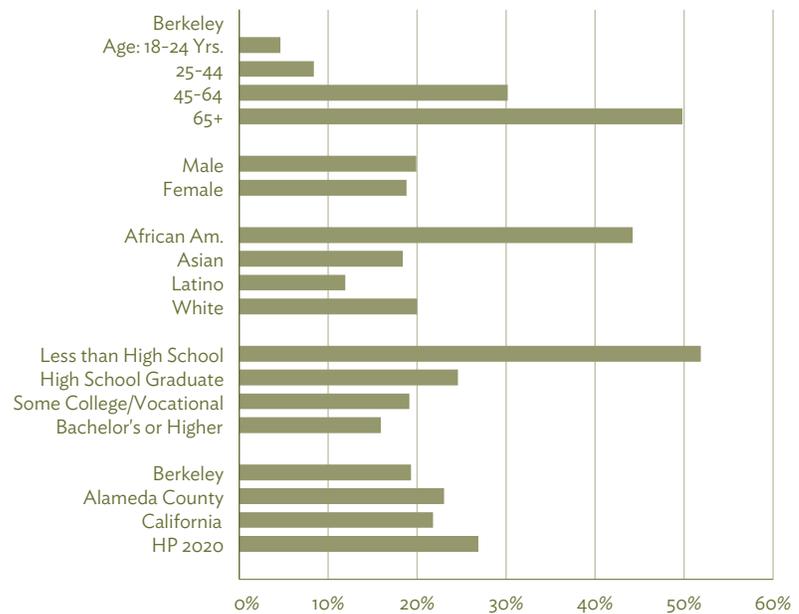
In Berkeley hypertension rates, like those of diabetes, are remarkably low overall and meet HP2020 goals. Again, however, Berkeley's African American community does not benefit equally from this favorable status. Among African Americans in Berkeley, high blood pressure and its effects are a major component of health inequities. Those with lower education levels in Berkeley are similarly more likely to have high blood pressure.

Berkeley's overall hypertension rates meet the HP2020 goal of 26.9% or less, and are below rates in Alameda County and the State.

Overall self-reported hypertension rates have increased somewhat since 2001.¹⁷ This may reflect increased screening, diagnosis and community awareness.

Those over 65, African Americans, and those with less than a high school education have the highest rates of hypertension in Berkeley.

Figure 4.10 **ADULTS (18 YEARS AND OLDER) WHO WERE EVER TOLD BY A DOCTOR THEY HAVE HIGH BLOOD PRESSURE Berkeley, 2005-2009**



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

HIGHLIGHT: Berkeley Hypertension Program

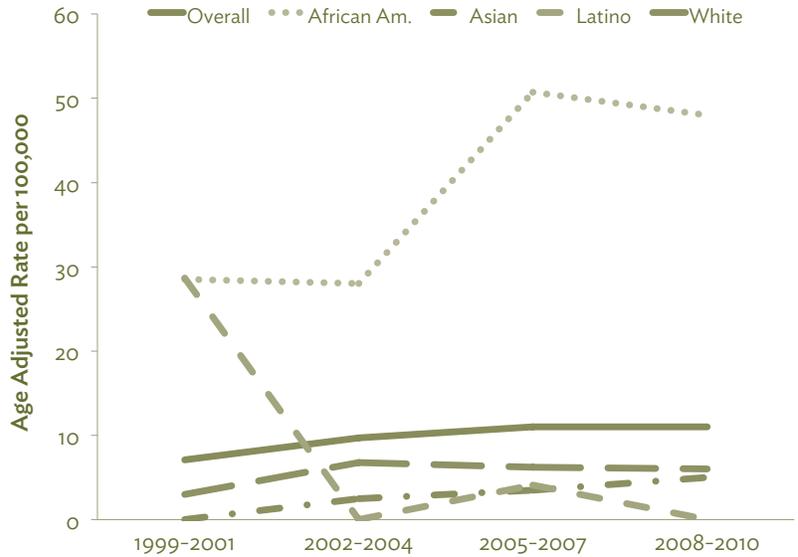
In partnership with Lifelong Medical Center, this program focuses on community-based health promotion and environmental changes to encourage healthy eating and physical activity; increase access to hypertension screening and treatment; implement the Chronic Care Model to improve the quality of care for hypertension patients; and train Community Health Workers in a program focused on outreach, education, and intensive counseling and support. A highlight of the program is the weekly drop-in Hypertension Clinic that provides free blood pressure screenings and education for anyone, and provides treatment for uninsured residents with hypertension.

Attendance at the drop-in Hypertension Clinic is correlated with lowered blood pressure among residents who attend the clinic consistently.

Hypertension (High Blood Pressure) continued

While hypertension hospitalization rates remain relatively stable for most racial/ethnic groups, the rate for African Americans has increased sharply. From 2005-2010, the African American hospitalization rate was five times that of the population as a whole. In contrast, the hospitalization rate for Latinos has fallen dramatically and is the lowest of all racial/ethnic groups.

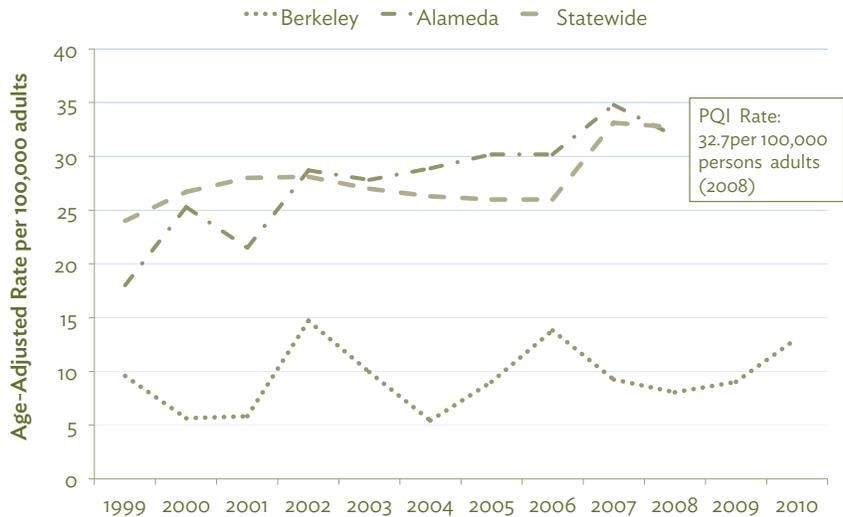
Figure 4.11 HOSPITALIZATION RATES DUE TO HYPERTENSION BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 1999-2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999-2010

Berkeley's overall hypertension hospitalization rates are consistently lower than countywide and statewide rates.

Figure 4.12 HOSPITALIZATION RATES DUE TO HYPERTENSION BY YEAR OF HOSPITALIZATION Berkeley, Alameda County, and California 1999-2010



Source: Office of Statewide Health Planning and Development, 1999-2010

Heart Disease

What is this?

Heart disease refers primarily to congestive heart failure, hypertensive heart disease, and coronary heart disease.

Why is this important?

Heart disease is a leading cause of death in the U.S. Once established, heart disease can be controlled with medication but usually cannot be reversed. Therefore, prevention is directed at the underlying risk factors for heart disease, which include tobacco use, nutrition, physical activity, high blood pressure, cholesterol levels, stress, and other social, behavioral, and environmental factors.¹⁸

Heart disease risk increases about 3-fold with each advancing decade.¹⁹ Some of this increase is the result of natural aging processes, and some is due to lifestyle and environmental factors that can be modified.

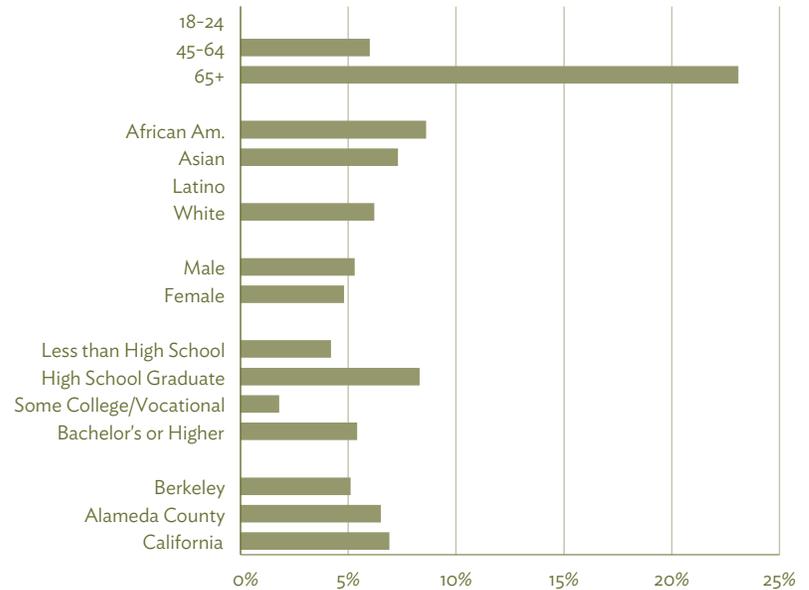
In Berkeley, heart disease follows national patterns of being most common among the elderly. Overall rates are lower than in Alameda Co and the State.

Rates are higher among African Americans and those with less than a High School education.

What is Berkeley's status?

Many of the underlying risk factors for heart disease are the same as those for diabetes and hypertension, so it is not surprising that heart disease in Berkeley shows a similar pattern to those chronic conditions. Once again, Berkeley on average has low rates of heart disease compared to the County and the State, but inequitably high rates among African Americans and among those with lower educational attainment.

Figure 4.13 **ADULTS (18 YEARS AND OLDER) WHO WERE EVER TOLD BY A DOCTOR THEY HAVE HEART DISEASE** Berkeley, 2005-2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

Heart Disease *continued*

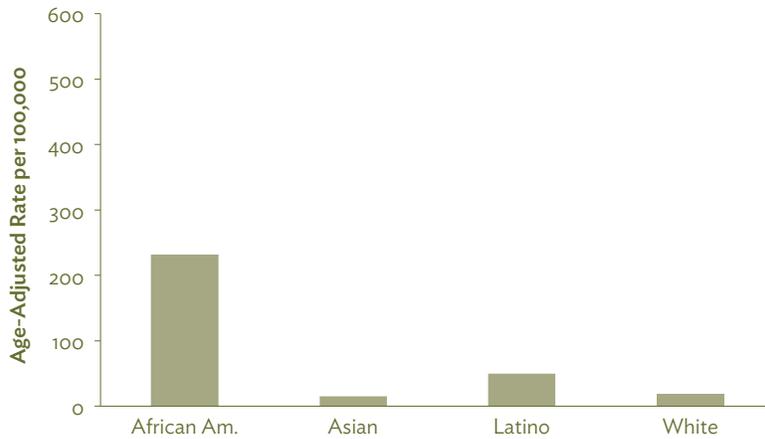
Hypertensive Heart Disease

Hypertensive heart disease is the result of long-standing uncontrolled or poorly controlled high blood pressure. Rates of hypertensive heart disease increase with age, and are similar in men and women.

Hypertensive heart disease hospitalization rates for African Americans are more than 10 times greater than the rate for Whites.

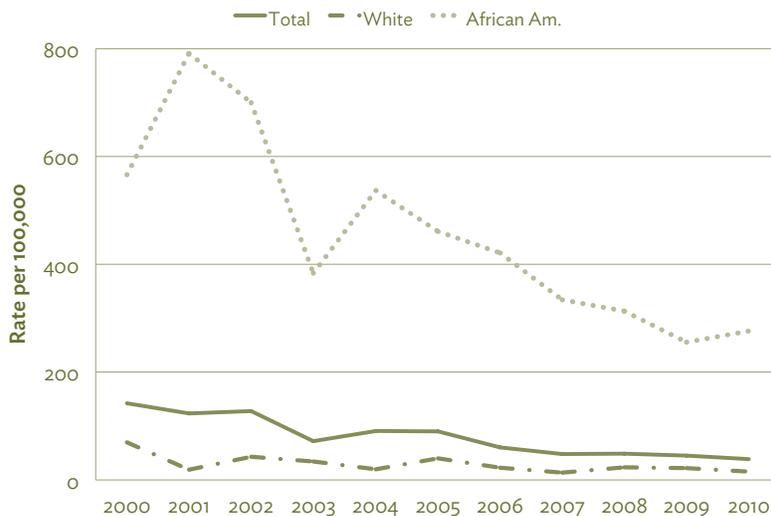
Hypertensive heart disease hospitalizations have decreased among all racial/ethnic groups over the past 2 decades. African Americans remain many times more likely than others to be hospitalized because of hypertensive heart disease, although the gap between African American rates and rates among others has narrowed.

Figure 4.14 HYPERTENSIVE HEART DISEASE HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY Berkeley, 2008–2010



Source: Office of Statewide Health Planning and Development, U.S. Census 2000

Figure 4.15 HYPERTENSIVE HEART DISEASE HOSPITALIZATION RATE IN ADULTS BY YEAR OF HOSPITALIZATION Berkeley, 2000–2010

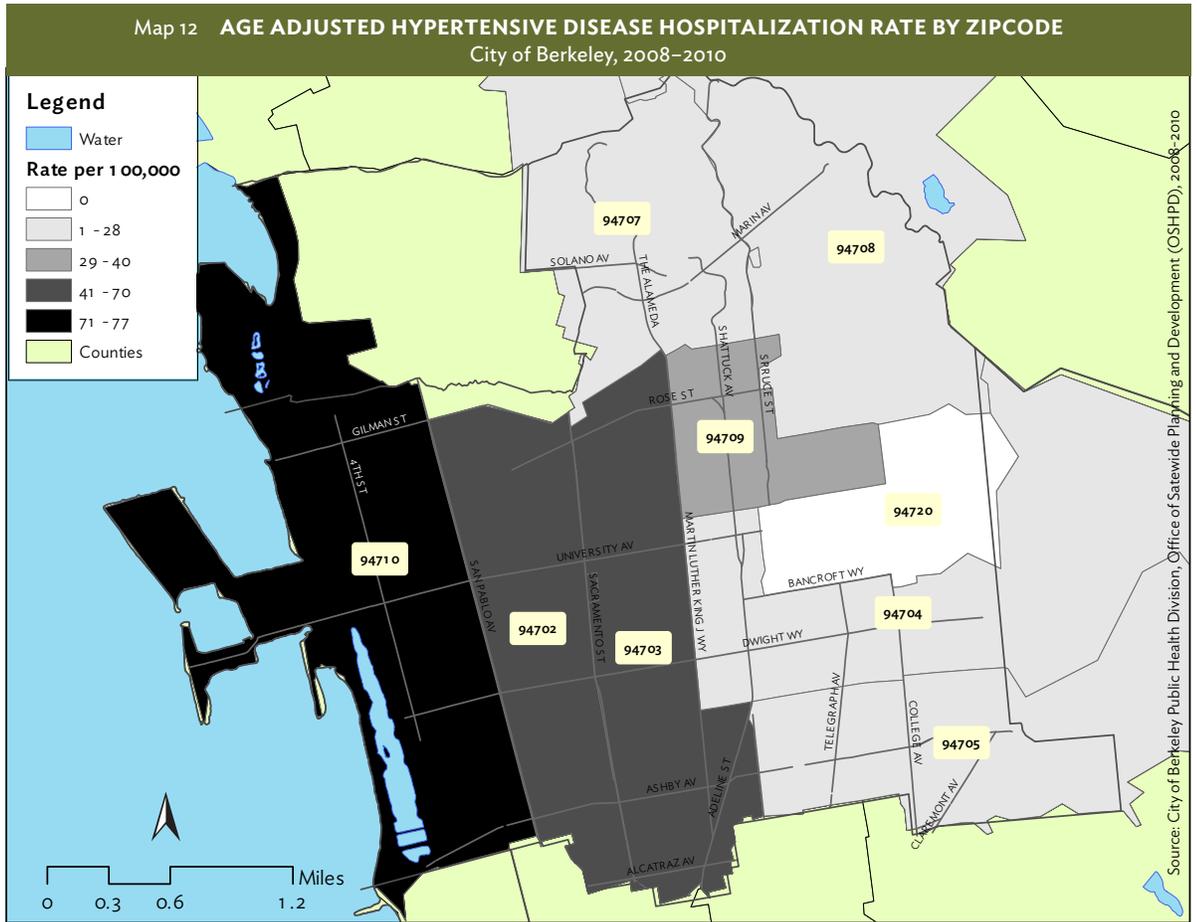


Source: Office of Statewide Health Planning and Development, U.S. Census 2000

HIGHLIGHT: Heart 2 Heart

The H2H neighborhood program targets a specific South Berkeley neighborhood selected for both its assets and its challenges. H2H uses a community-based approach to addressing health inequities in high blood pressure and heart disease. In partnership with LifeLong Medical Care and other community organizations, H2H engages community members in accessing resources, assets, and information to promote healthier living and healthier neighborhoods. Community engagement, relationship-building, and long-term commitment are key to the success of this program. With initiatives ranging from monthly mobile health van events, to blood-pressure screening and education in partnership with local businesses, to national drug take-back days, to mini-grants for local organizations, the program seeks to empower residents and build community cohesion and capacity. This work does not translate into immediate changes in health status—but the favorable response of the community and the positive qualitative feedback to Public Health and our partners lead us to believe that we are on the right track.

Heart Disease
continued



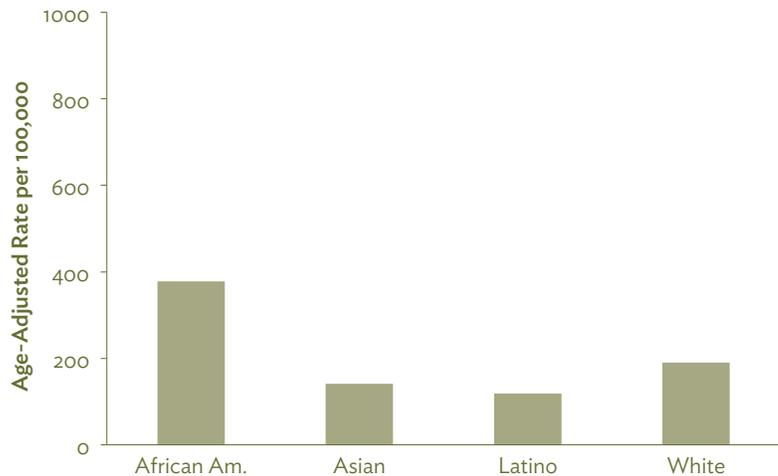
Hospitalization rates for hypertensive heart disease are highest in west and south Berkeley. These are the same neighborhoods with high rates of diabetes hospitalizations.

Coronary Heart Disease

Also called ischemic heart disease or coronary artery disease, coronary heart disease means that there is reduced blood supply to the heart muscle. Coronary heart disease is a leading cause of death in the United States.¹⁸

African Americans and Whites have a higher risk of coronary heart disease hospitalization than Asians and Latinos in Berkeley. The rate in African Americans is approximately double that in Whites.

Figure 4.16 CORONARY HEART DISEASE HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY Berkeley, 2000-2010

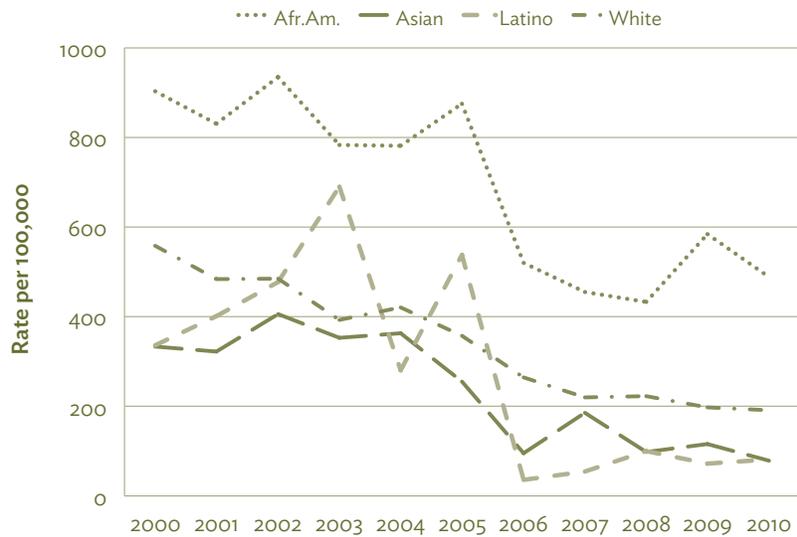


Source: Office of Statewide Health Planning and Development, U.S. Census 2000

Heart Disease continued

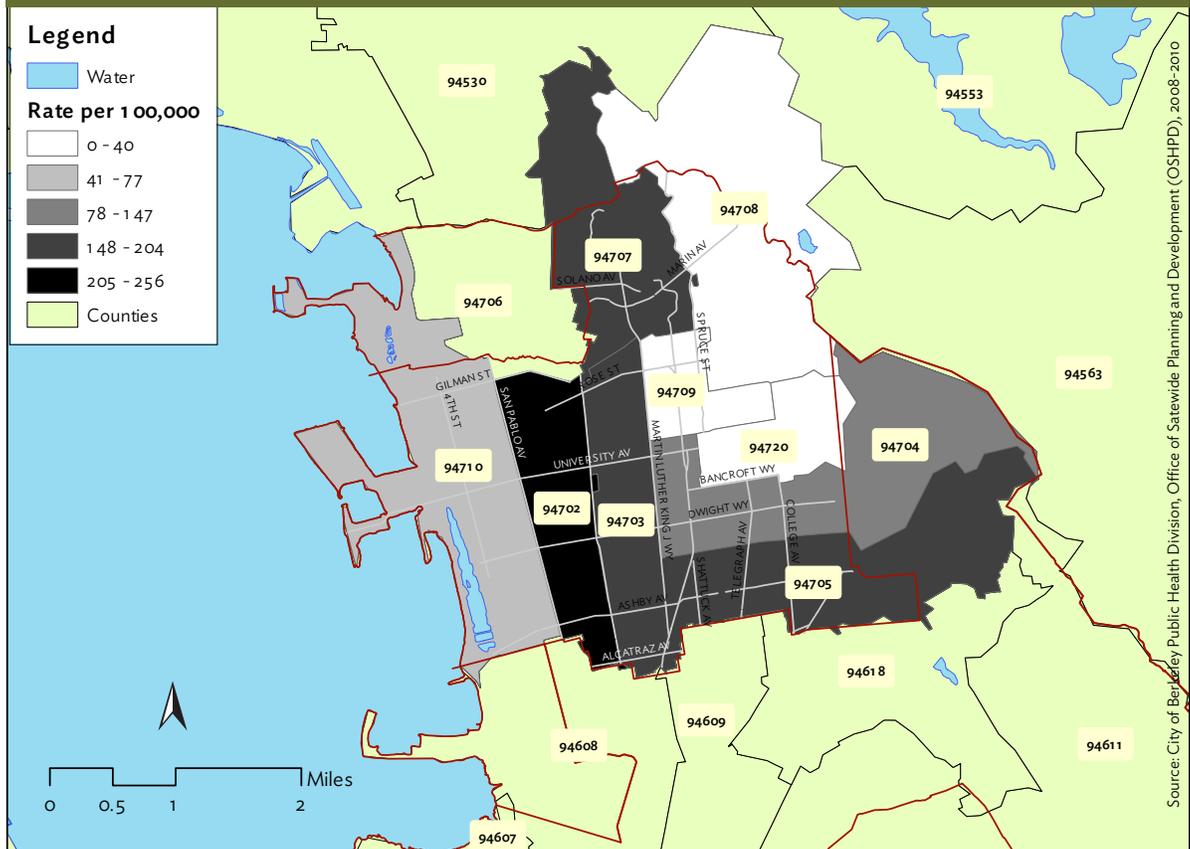
Coronary heart disease hospitalization rates have decreased for all racial/ethnic groups over the last 2 decades. The disparity between African American and other racial/ethnic groups persists.

Figure 4.17 CORONARY HEART DISEASE HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2010



Source: Office of Statewide Health Planning and Development, U.S. Census 2000

Map 13 AGE ADJUSTED CORONARY HEART DISEASE HOSPITALIZATION RATES BY ZIPCODE City of Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Planning and Development (OSHPD), 2008–2010

The geographic distribution of coronary heart disease in Berkeley is similar to that of other chronic conditions, with highest rates seen in South and West Berkeley.

Heart Disease continued

Congestive Heart Failure

Congestive heart failure is a condition in which the heart can no longer pump enough blood to the rest of the body. Heart failure is most commonly a progressive, chronic, long-term condition.

Congestive heart failure hospitalization rates among African Americans have declined since 2005. However, these rates remain higher than those of any other racial/ethnic group.

Stroke

What is this?

A stroke occurs when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts. The underlying causes of stroke are similar to the underlying causes of heart disease: high blood pressure and cholesterol, cigarette smoking, diabetes, poor diet and physical inactivity, and overweight and obesity.²⁰

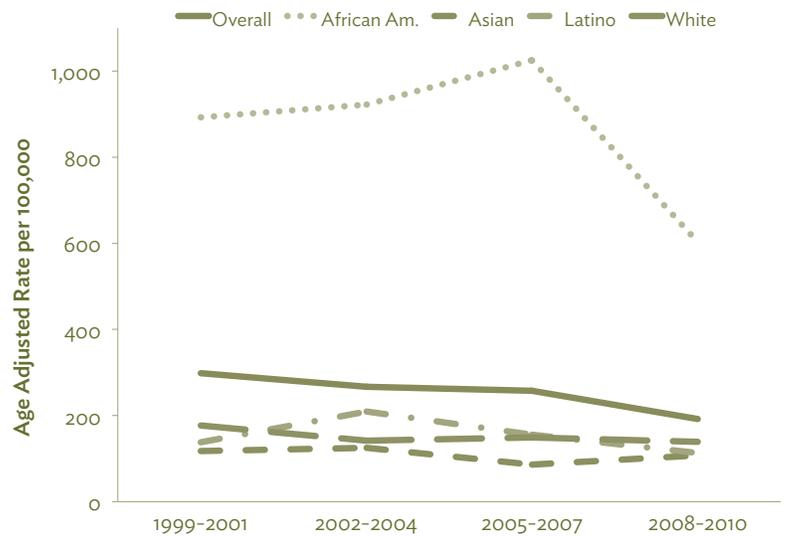
Why is this important?

Stroke is another leading cause of death and disability. Strokes can be devastating when they occur, but many can be prevented by addressing the underlying causes listed above. Prevention

African Americans have higher rates of hospitalizations due to stroke than other racial/ethnic groups in Berkeley. The rate in African Americans is more than double that in Whites.

Strokes are equally common in men and women, and they increase with age, especially after age 64.

Figure 4.18 HOSPITALIZATION RATES DUE TO CONGESTIVE HEART FAILURE BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 1999-2010



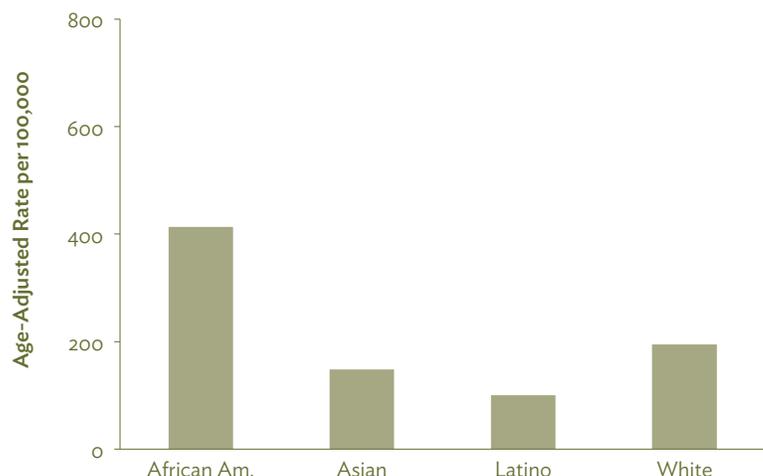
City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999-2010

measures directed at these underlying causes can decrease rates of many chronic conditions, including strokes.

What is Berkeley's status?

Stroke in Berkeley shows a similar pattern to the other chronic conditions which share the same underlying causes. Berkeley on average has low rates of stroke compared to the County and the State, but inequitably high rates among African Americans and those living in South and West Berkeley.

Figure 4.19 STROKE HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY Berkeley, 2008-2010

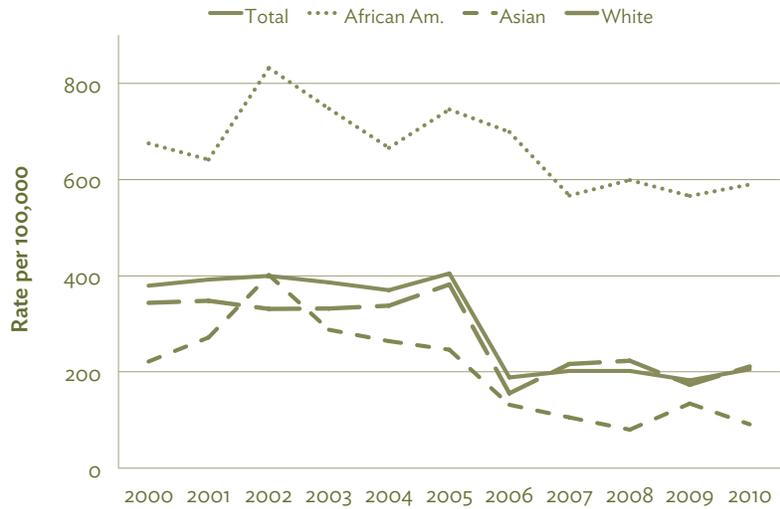


Source: Office of Statewide Health Planning and Development, U.S. Census 2000

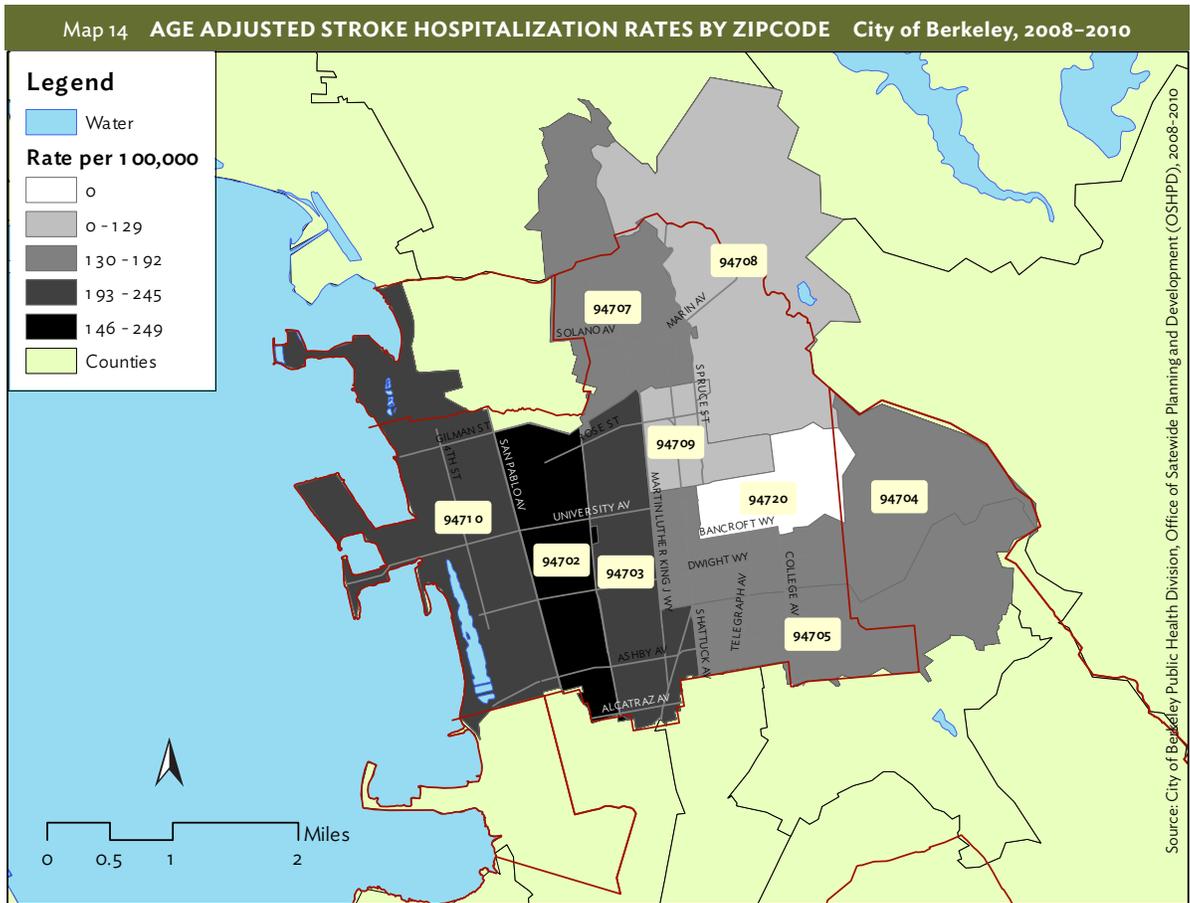
Stroke continued

The rates of stroke hospitalization have decreased somewhat over the past decade. The disparity between African American and other racial/ethnic groups persists and has not narrowed appreciably.

Figure 4.20 **STROKE HOSPITALIZATION RATE IN ADULTS BY YEAR OF HOSPITALIZATION Berkeley, 2000-2010**



Source: Office of Statewide Health Planning and Development, U.S. Census 2000



Stroke rates are highest in the same south and west Berkeley neighborhoods that experience higher rates of diabetes and heart disease.

Respiratory Diseases

What is this?

Respiratory diseases are diseases of the lungs. They impair breathing, and thus limit an individual's ability to exercise or even comfortably to carry out the activities of daily living. Asthma is the most familiar respiratory condition. Chronic obstructive pulmonary disease (COPD) and emphysema are others.

Why is this important?

Asthma and chronic obstructive pulmonary disease (COPD) often are triggered or made worse by cigarette smoke, air pollution, allergens, and other environmental factors, as well as

stress. Minimizing episodes or exacerbations of the disease by controlling exposure to triggers, adequately and appropriately managing the condition with medication, monitoring lung function, and helping patients to become active participants in their own care can help reduce the burden of the disease.²¹

What is Berkeley's status?

Respiratory diseases in Berkeley show similar patterns to other chronic conditions. Berkeley on average has low rates of respiratory diseases compared to the County and the State, but inequitably high rates among African Americans and among those with lower educational attainment.

Asthma

What is this?

Asthma is a chronic disease of the lungs. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. The breathing problems of asthma are reversible, and the disease can be managed with attention to the environment and use of appropriate medication.²²

Why is this important?

Asthma attacks can range in severity from mild to life threatening. Regular, effective, preventive treatment can prevent symptoms and asthma attacks, prevent unnecessary hospitalizations, and enable individuals who have asthma to lead active lives. The burden of respiratory disease falls not only on the affected individuals, but also on their families, schools, workplaces, and

communities. Because of the cost to the health care system, the burden of respiratory diseases also falls on society; it is paid for with higher health insurance rates, lost productivity, and tax dollars. Annual costs associated with asthma are estimated at \$56 billion.²³

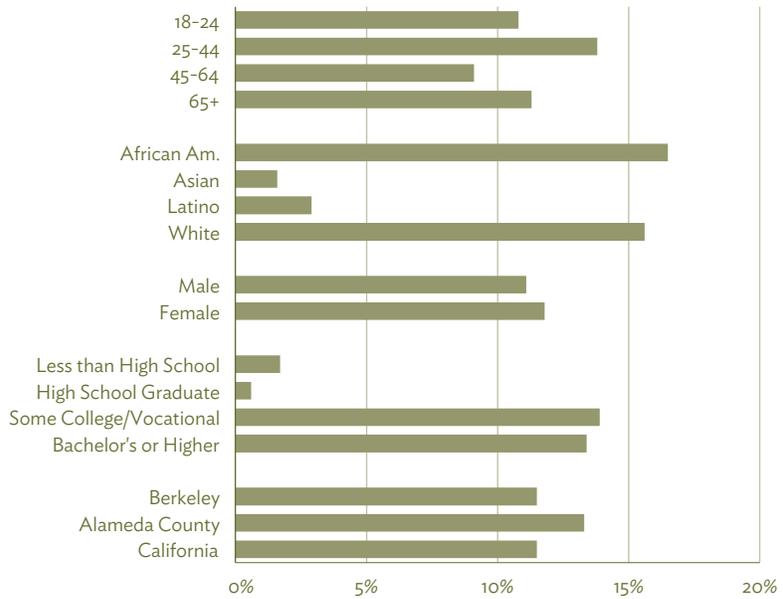
What is Berkeley's status?

Overall Berkeley asthma rates exceed those of California, but are somewhat lower than the rest of Alameda County. The racial/ethnic health disparities of other chronic conditions are equally evident for asthma, with African Americans being affected significantly more than other racial/ethnic groups. Although White and African American asthma disease rates are similar, the rate of asthma hospitalizations among African Americans is many times greater.

Asthma continued

Berkeley asthma rates are similar to California’s rates and rates are evenly spread across age groups. However, African Americans and Whites have a much higher rate of asthma. Adults with higher levels of education also experience greater rates of asthma.

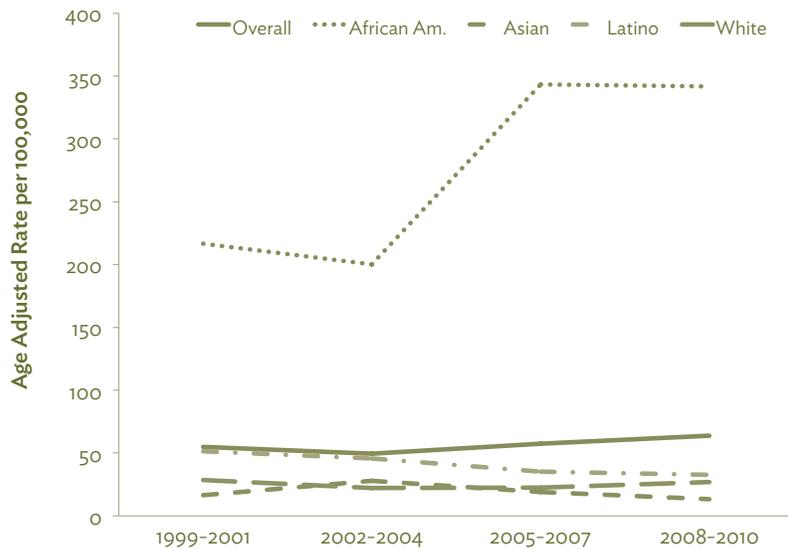
Figure 4.21 ADULTS (18 YEARS AND OLDER) WHO WERE EVER TOLD BY A DOCTOR THEY HAVE ASTHMA Berkeley, 2005–2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

Asthma hospitalizations in Berkeley’s adult African American population show a similar pattern to other chronic diseases. African Americans have many times the rate of asthma-related hospitalizations of Berkeley as a whole, and are the only racial/ethnic group for whom rates have increased in recent years.

Figure 4.22 HOSPITALIZATION RATES DUE TO ASTHMA BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION IN ADULTS 18 YEARS AND OLDER Berkeley, 1999–2010



City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999–2010

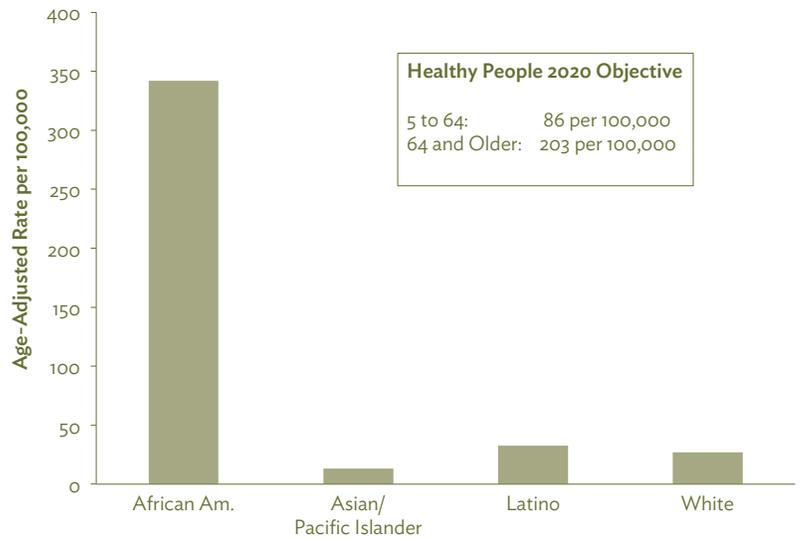
Asthma continued

The asthma hospitalization rate among African Americans is more than 10 times that of Whites, and fails to meet HP2020 goals.

The overall asthma hospitalization rate for Berkeley’s adult population is 64 per 100,000, which meets the HP2020 goals.

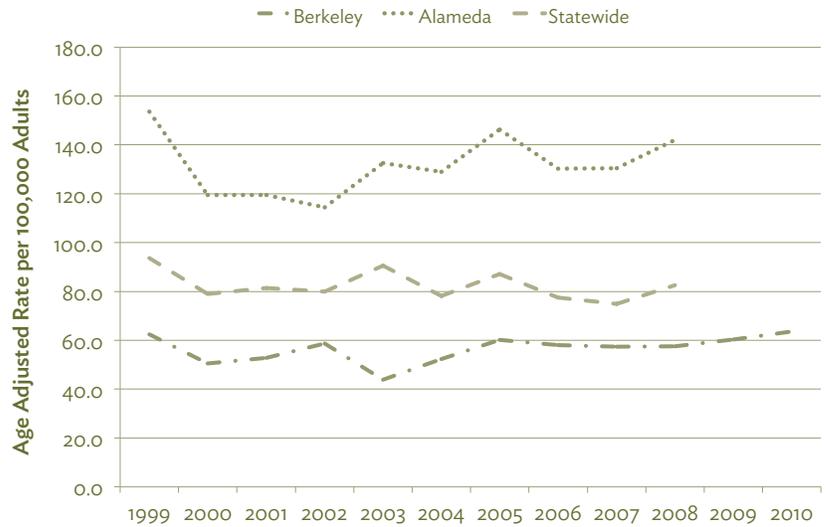
Overall adult asthma hospitalization rates in Berkeley are lower than rates for Alameda County and California. This has remained the case over the last two decades.

Figure 4.23 ASTHMA HOSPITALIZATION RATE IN ADULTS 18 YEARS AND OLDER BY RACE/ETHNICITY Berkeley, 2008–2010



City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 2008–2010

Figure 4.24 ASTHMA HOSPITALIZATION RATES IN ADULTS 18 YEARS AND OVER BY YEAR OF HOSPITALIZATION Berkeley, Alameda County, and California, 1999–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999–2010

Chronic Obstructive Pulmonary Disease

What is this?

Chronic Obstructive Pulmonary Disease (COPD) refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema and chronic bronchitis. COPD is a preventable and treatable disease, but unlike asthma, it is not fully reversible.²⁴

Overall hospitalization rates due to COPD have decreased over the past 2 decades. The hospitalization rate for African Americans remains substantially higher than the city’s average rate throughout this period, and the disparity remains large.

Hospitalization rates due to COPD are lower in Berkeley than in Alameda County and California.

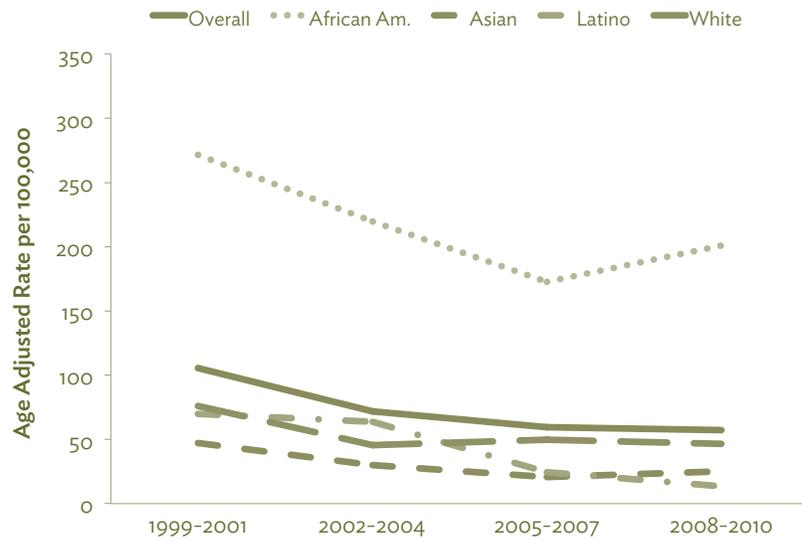
Why is it important?

COPD is most commonly caused by exposure to cigarette smoke or to occupational or other air pollutants.

What is Berkeley’s status?

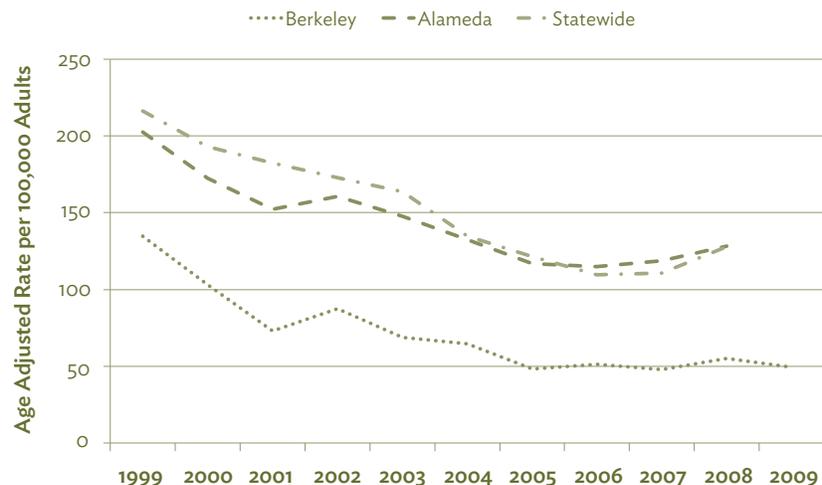
In Berkeley, COPD follows the same pattern as other chronic diseases, with Berkeley overall showing lower rates than Alameda County or the State, but African Americans being disproportionately affected.

Figure 4.25 HOSPITALIZATION RATES DUE TO CHRONIC OBSTRUCTIVE PULMONARY DISEASE BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 1999–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 1999–2010

Figure 4.26 HOSPITALIZATION RATES DUE TO CHRONIC OBSTRUCTIVE PULMONARY DISEASE BY YEAR OF HOSPITALIZATION Berkeley, Alameda County, and California, 1999–2009



Source: Office of Statewide Health Planning and Development, 1999–2009

Cancer and Cancer Screening

What is this?

Cancer shares many of the same risk factors as other chronic diseases. It can be related to tobacco use, physical inactivity, poor nutrition, and obesity. Environmental exposures, genetics, age, and gender also are important in determining risk.²⁵

Why is this important?

Cancer is a leading cause of death nationally, second only to heart disease. Cancer is increasingly treatable and curable, as well as preventable. Primary prevention includes measures such as limiting sun exposure to prevent skin cancer, Hepatitis B vaccine to prevent liver cancer, and HPV (human papilloma virus) vaccine to prevent cervical cancer. Screening and early detection play a role in improving survival and quality of life.

Screening measures include mammography for breast cancer, PAP smears for cervical cancer, and colorectal cancer screening tests.²⁶

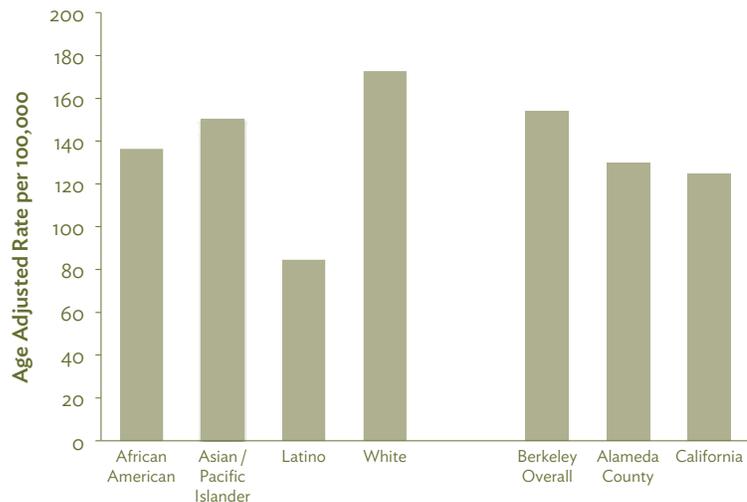
What is Berkeley's status?

In Berkeley as nationwide, cancer is not evenly distributed by race/ethnicity, income, education, and geography. White women have higher rates of breast cancer than do other racial/ethnic groups. Prostate cancer and lung cancer rates are highest in the African American population.

Breast cancer rates are higher in Berkeley than in Alameda County or the State. White women are affected at higher rates than other racial/ethnic groups.

Berkeley is part of a Bay Area region with high rates of breast cancer. Several such regions have been identified statewide and are under investigation to understand the underlying causes.²⁷

Figure 4.27 FEMALE BREAST CANCER INCIDENCE RATE BY RACE/ETHNICITY
Berkeley, 2007–2009



Source: Berkeley Public Health Division, Cancer Prevention Institute of California, 2007–2009.

HIGHLIGHT: Public Health Clinic

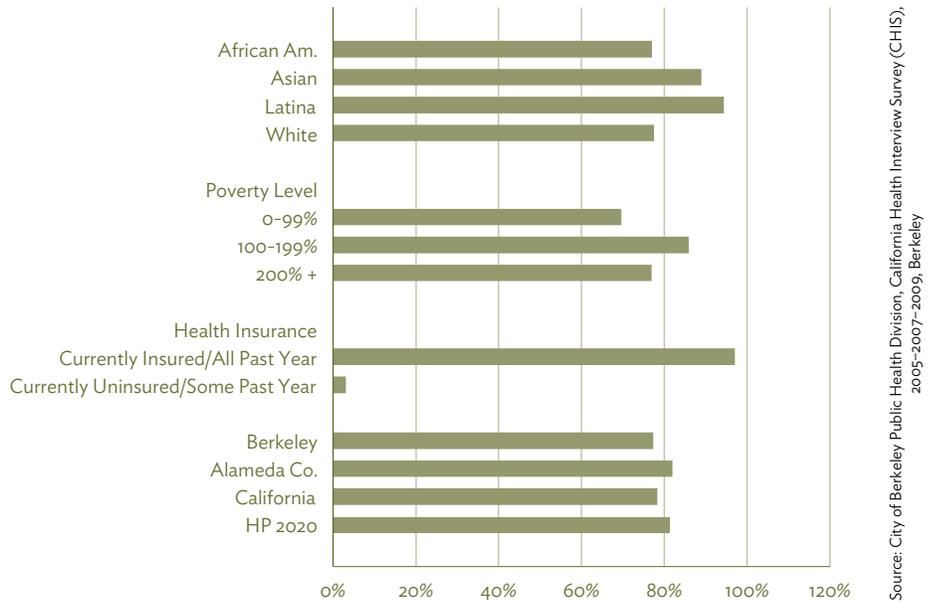
Berkeley's Public Health Clinic offers services to prevent and screen for some types of cancer. The clinic provides HPV (Human Papilloma Virus) vaccine which prevents HPV infection. HPV infection is a known cause of cervical cancer in women and penile cancer in men. The clinic also offers Hepatitis B vaccine to prevent Hepatitis B infection. Chronic Hepatitis B infection is a leading cause of liver cancer. These immunizations are among the most effective tools available for decreasing cancer morbidity and mortality.

Women who receive Reproductive and Sexual Health services at the clinic are offered PAP smears for screening and early detection of cervical cancer. They also receive screening breast exams and referrals for mammography for early detection of breast cancer.

Cancer and Cancer Screening continued

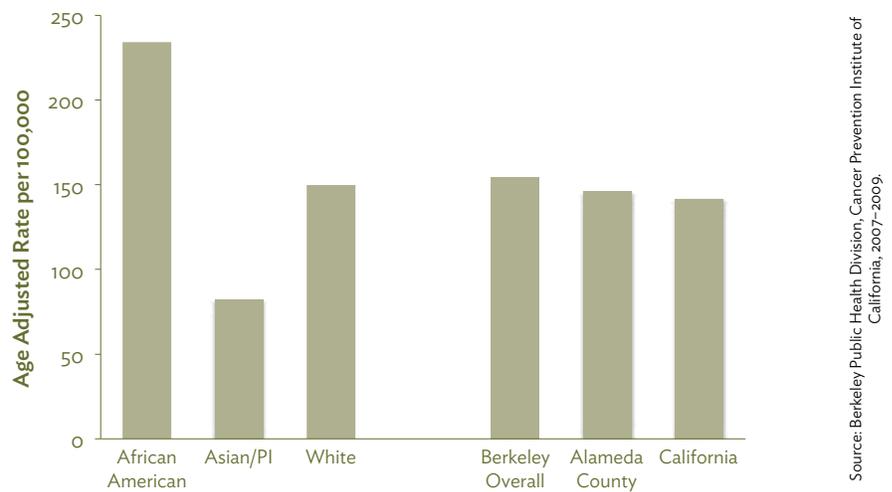
Berkeley residents fall just short of meeting the HP2020 goal for screening mammograms. Screening is most highly correlated with insurance status: uninsured women are extremely unlikely to have mammograms performed as recommended.

Figure 4.28 MAMMOGRAM IN PAST 2 YEARS IN WOMEN AGED 40 YEARS AND OLDER City of Berkeley, 2005-2009



Prostate cancer rates in Berkeley are somewhat higher than those in Alameda County and the State. African American men are affected at higher rates than other racial/ethnic groups.

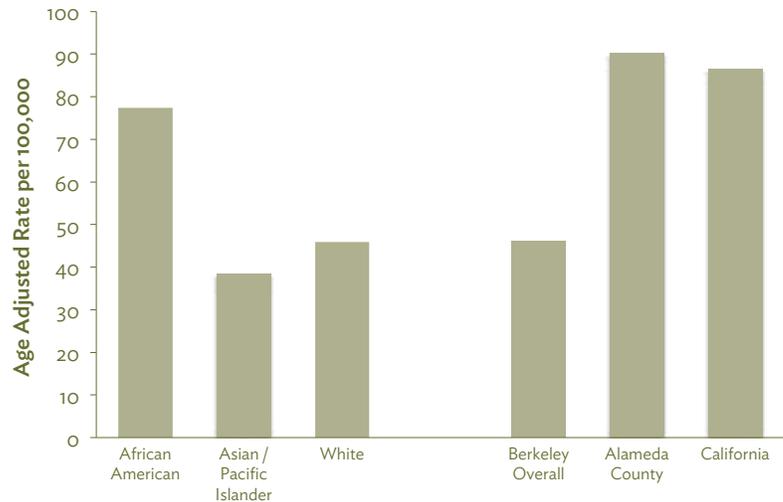
Figure 4.29 PROSTATE CANCER INCIDENCE RATE BY RACE/ETHNICITY Berkeley, 2007-2009



Cancer and Cancer Screening continued

Lung cancer rates in Berkeley are much lower than rates in Alameda County as a whole and in the State. African Americans in Berkeley have the highest rate of lung cancer, and even that rate remains below the County and State levels.

Figure 4.30 LUNG CANCER INCIDENCE RATE BY RACE/ETHNICITY
Berkeley, 2007–2009



Source: Berkeley Public Health Division, Cancer Prevention Institute of California, 2007–2009.

Mental Health

What is this?

Mental health disorders are common. The National Institute of Mental Health estimates that over the course of a single year more than a quarter of Americans over the age of 18 are living with a mental disorder; Major Depressive Disorder accounts for a quarter of those diagnoses.²⁸

A serious mental illness is one that causes significant impairment in social, occupational, or other important areas of functioning. For example, it may be disabling enough to prevent working, going to school, or having healthy relationships. Symptoms of schizophrenia, mood disorders like Bipolar or Major Depression, and Post-Traumatic Stress Disorder (PTSD) can cause major disability. Individuals suffering from serious mental illness are often diagnosed with more than one severe mental health disorder.²⁹

Why is this important?

Mental disorders account for considerable suffering. More than 90 percent of people who commit suicide have a diagnosable mental disorder, typically depression or a substance use disorder. Mental health disorders are a leading cause of disability

in the United States. Disparities in access to mental health care due to racial, ethnic, and economic factors further reduce quality of life for millions of people. Exposure to traumatic environmental and other stressors increases the risk of developing a mental disorder.³⁰

Individuals suffering from serious mental illness are served primarily through public mental health programs, such as Berkeley Mental Health.

What is Berkeley's status?

Among the 15 cities in Alameda County, Berkeley ranks 7th in Emergency Department (ED) visits for mental health disorders, with rates above average Alameda County rates for the years 2006–2008.³¹

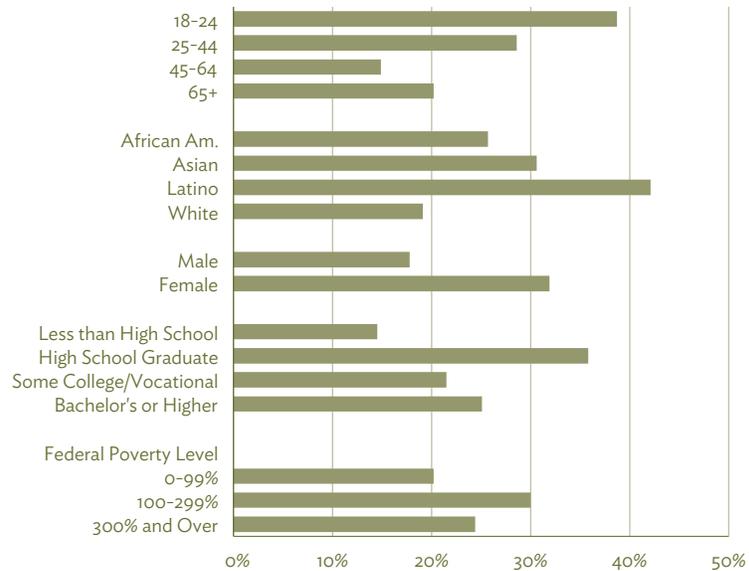
Among Berkeley residents visiting EDs for mental health disorders during this period, 30% were African American, 7% Latino, 2% Asian, and 50% White.³¹ African Americans are disproportionately represented in mental health ED visits, as they make up only 10% of the population, but nearly one third of mental health ED visits.

Mental Health continued

Self-reported indicators of emotional well-being among Berkeley residents show varying patterns by age, race/ethnicity, education, and income.

Individual and cultural differences in the willingness to report depression and in the use of the term depression contribute to the variations in these rates.

Figure 4.31 ADULTS (18 YEARS AND OLDER) WHO FELT DEPRESSED ALL OF THE TIME, MOST OF THE TIME, SOME OF THE TIME, OR A LITTLE OF THE TIME DURING THE PAST 30 DAYS Berkeley, 2005-2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

HIGHLIGHT: **Berkeley Mental Health**

Berkeley is one of only two cities in California with its own public mental health program. Berkeley's Mental Health Division provides a range of community-based mental health services to Berkeley and Albany residents. Through its two clinical programs, Family, Youth, and Children's Services (FYC) and Adult Services Program, city mental health workers in multidisciplinary teams assist people in clinics, at schools, in their homes, on the street or in shelters, and in a variety of other community settings.

HIGHLIGHT: Mobile Crisis

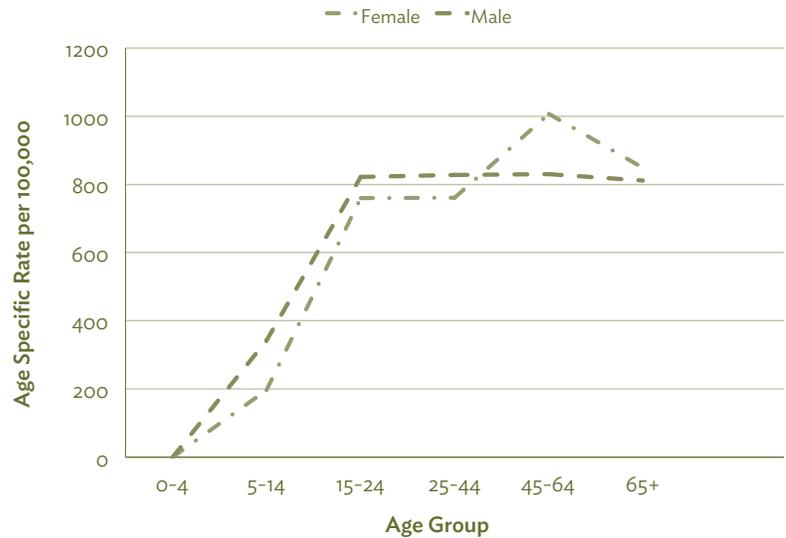
Berkeley Mental Health's Mobile Crisis Team (MCT) provides crisis intervention services at locations throughout the city, disaster and trauma-related mental health services, and consultation regarding mental health issues to the police and fire departments, hospital emergency personnel, community agencies, and citizens. The team of three experienced mental health clinicians provides on-call service in Berkeley 365 days/year, from 11:30 am to 10:00 pm. In 2011 alone, MCT had over 1500 contacts representing approximately 1,000 unique clients. Over 80% of those served in 2011 were community members in need of crisis intervention and consultation, but were not on-going mental health services clients.

Mental Health continued

Mental Health hospitalization rates vary over the life course, increasing steeply in the late teens and early adulthood.

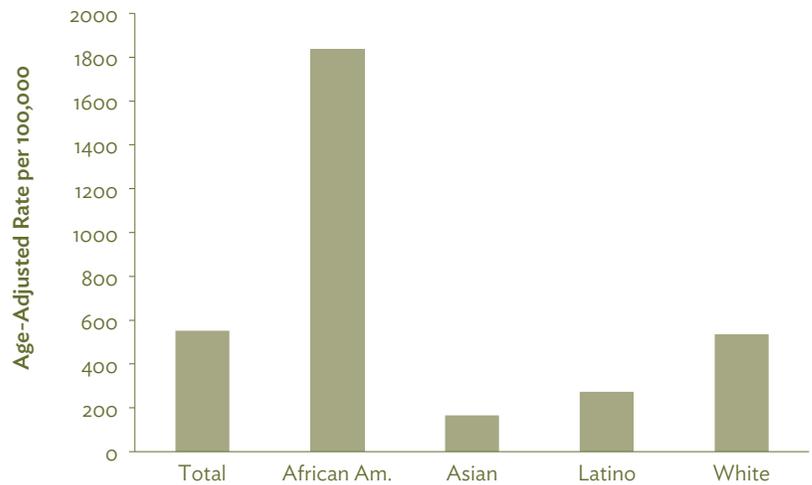
Mental health hospitalization rates for African Americans demonstrate that like other chronic diseases, this is an area of major health inequities in Berkeley. African Americans are hospitalized for mental health disorders at much higher rates than other racial/ethnic groups.

Figure 4.32 MENTAL HEALTH DISORDERS HOSPITALIZATION RATES BY AGE AND SEX City of Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 2008–2010

Figure 4.33 MENTAL HEALTH DISORDERS HOSPITALIZATION RATE BY RACE/ETHNICITY (AGE 25 AND OVER) Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 2008–2010

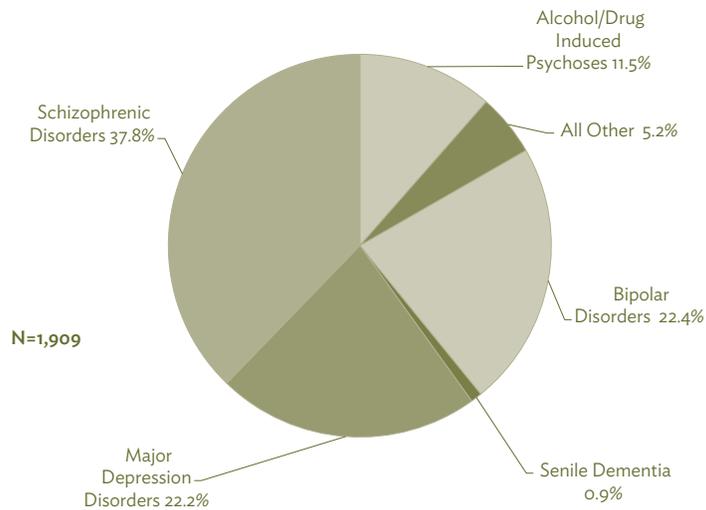
HIGHLIGHT: Adult Mental Health Clinic

Berkeley Mental Health Adult Clinic provides a full range of specialized mental health services to low income adult residents with severe and persistent mental illness. Services include initial screening, intake assessment, community based referrals and short term therapy, in addition to ongoing service team assignment for long-term comprehensive care. Services are matched to the individual participant’s needs and may include ongoing case management, medication support, crisis intervention, and a variety of wellness related group activities. The multidisciplinary staff includes peer counselors, licensed mental health practitioners, psychiatrists, nurses, community health workers and graduate student interns.

Mental Health continued

Mental Health hospitalizations in Berkeley are due primarily to schizophrenia, bipolar disorders, and major depressive disorders.

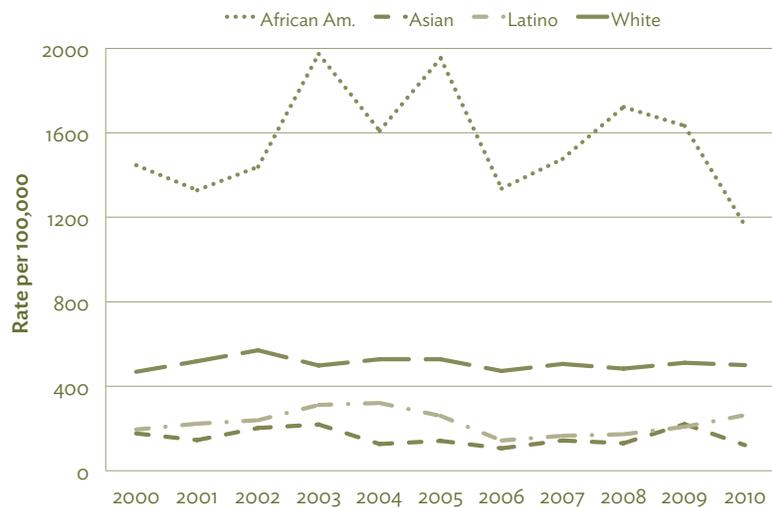
Figure 4.34 ALL MENTAL DISORDERS HOSPITALIZATIONS BY DIAGNOSIS (AGE 25 AND OVER) Berkeley, 2008–2010



Source: Office of Statewide Health Planning and Development, 2008–2010

Hospitalizations for psychosis (including schizophrenia, bipolar disorders, major depressive disorders, and others) occur at a much greater rate among African Americans than among other racial/ethnic groups. Asians and Latinos have lower rates of hospitalization for psychosis than Whites or African Americans.

Figure 4.35 PSYCHOSIS HOSPITALIZATION RATES BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION (AGE 25 AND OVER YEARS) Berkeley, 2006–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development, 2000–2010

Mental Health continued

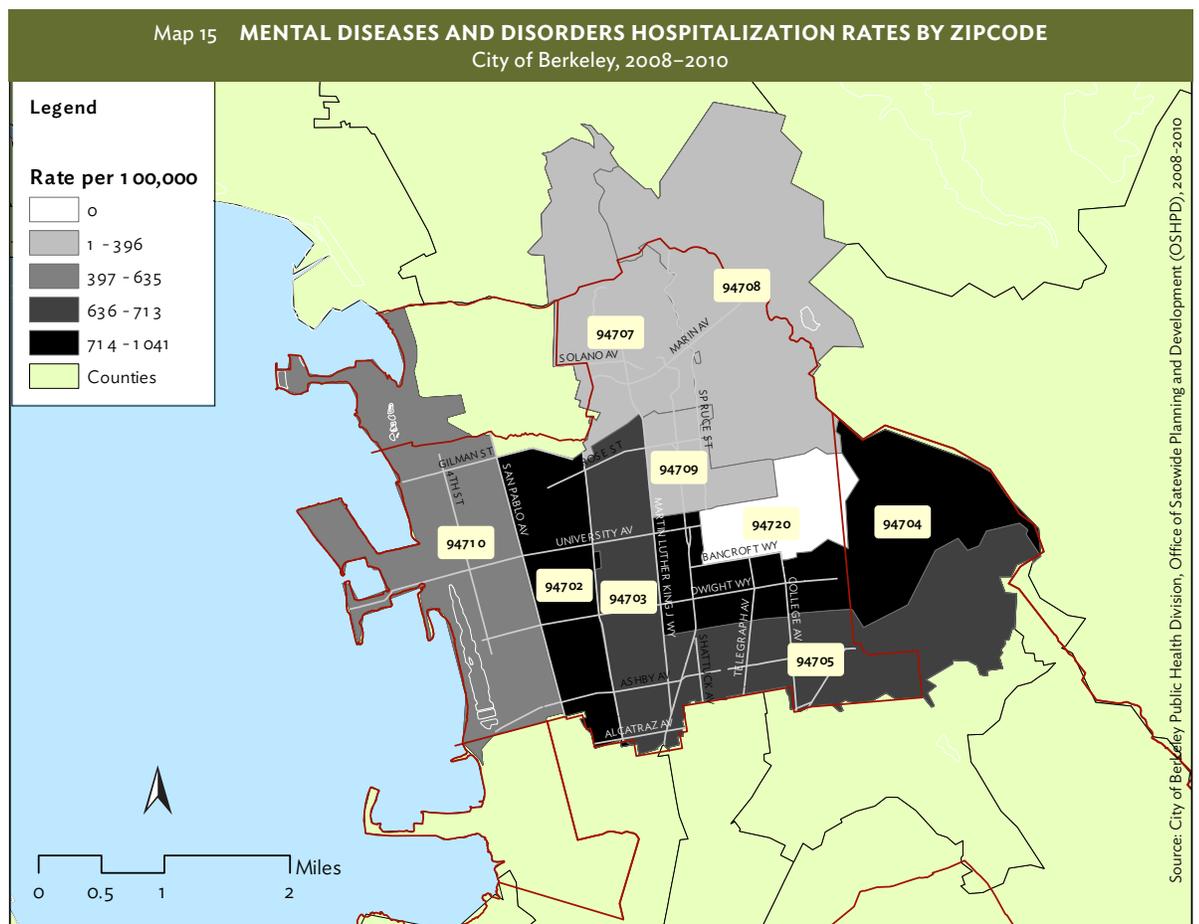
Mental Health and Racial/Ethnic Identity in Berkeley

Mental health diagnoses and services are not evenly distributed among racial/ethnic groups. The Berkeley Mental Health Program serves African Americans at disproportionately higher rates than other racial/ethnic communities.

Diagnosed mental disorders and associated hospitalization rates are lower for Latinos and Asians, but these numbers may not reflect the reality or scope of mental health needs in these communities. Cultural beliefs and attitudes towards mental illness, language barriers, acculturation, and immigration status affect the decision to seek mental health services, and are likely a partial explanation of low mental health service utilization rates.

Providing culturally congruent treatment and prevention services to clients of all racial/ethnic identities in mental health settings, including those in the City of Berkeley, is necessary in order to improve mental health outcomes for clients, families, and the community.

The Surgeon General's report, *Mental Health: Culture, Race, and Ethnicity*, states, "Culture and society play pivotal roles in mental health, mental illness, and mental health services."³²



Hospitalizations for mental health disorders occur throughout Berkeley, but are more common in residents of West and South Berkeley and the areas adjoining the UC campus.

Injuries

What is this?

Injuries include accidental injuries, such as falls and motor-vehicle accidents; intentional injuries such as those resulting from abuse, assault, or homicide; and self-inflicted injuries including suicide and suicide attempts.³³

Why is this important?

Injuries are a preventable cause of illness and disability. Public Health measures such as seat belts and bicycle and motorcycle helmets have successfully decreased the rates of injuries and disabilities.³³ Understanding the causes and distribution of injuries can guide future efforts to further decrease injury rates.

What is Berkeley's status?

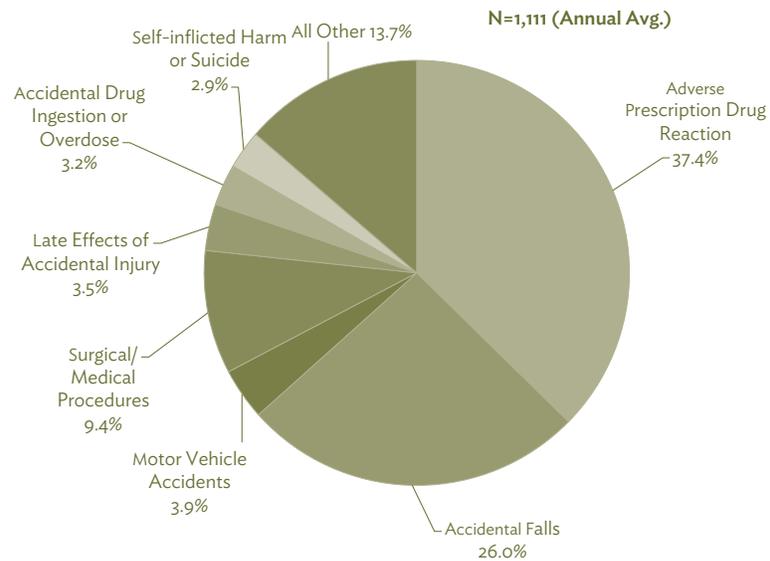
Accidental injuries are responsible for hospitalizations primarily of Berkeley's 65 and older population, and are more common among residents of North Berkeley. Non-accidental injuries are more common causes of hospitalization for residents of West Berkeley.

There are about 400 traffic injuries annually in Berkeley. This number has decreased dramatically overall, although there has been a small increase in bicyclist injuries in recent years. Traffic injuries peak at ages 15-24 years.

Injuries in Berkeley's Adults

Berkeley has more than 1,000 injury-related hospitalizations every year. Nearly two-thirds of these hospitalizations are due to either adverse reactions to prescription medications or falls. Motor vehicle collisions were the cause in only 4% of injury-related hospitalizations.

Figure 4.36 **LEADING CAUSES OF INJURY HOSPITALIZATIONS, ADULTS OF 25 YEARS OF AGE AND OLDER Berkeley, 2008-2010**



Source: Office of Statewide Health Planning and Development

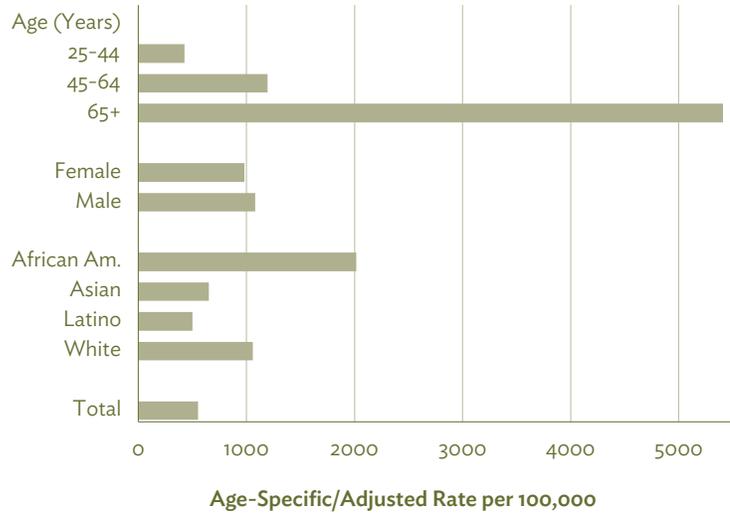
Injuries continued

Injury hospitalization rates increase sharply after the age of 64, as expected due to changes associated with aging.³⁴

The injury hospitalization rates of males and females are similar, while the rate among African Americans is substantially higher than in other racial/ethnic groups.

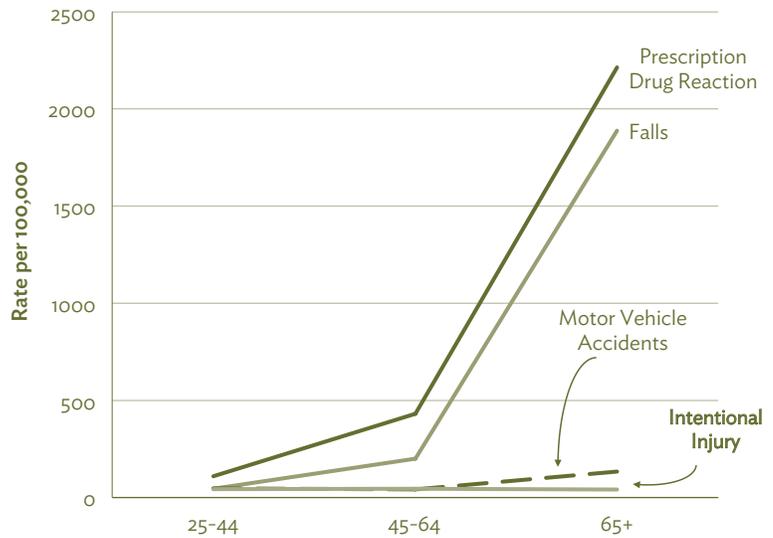
Hospitalizations related to falls and adverse prescription drug reactions increase in middle and older age groups. In comparison, rates of intentional injuries, like homicide and suicide, remain low throughout the life course. Hospitalizations related to motor vehicle injuries increase somewhat with advancing age.

Figure 4.37 INJURY HOSPITALIZATION RATES IN ADULTS OF 25 YEARS OF AGE AND OLDER BY AGE, SEX, AND RACE/ETHNICITY Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development

Figure 4.38 INJURY HOSPITALIZATION RATE BY AGE AND CAUSE Berkeley, 2008–2010

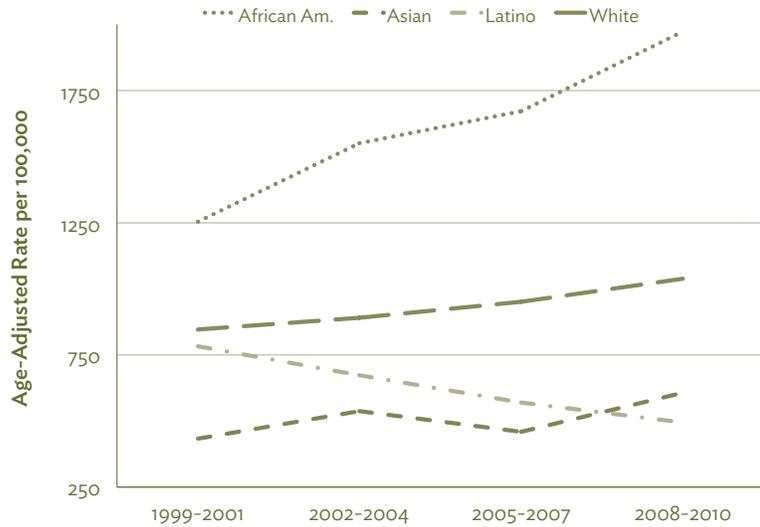


Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development

Injuries continued

Over the last decade, injury hospitalization rates have steadily increased among African Americans, Whites, and Asians. Latinos are the only racial/ethnic group for whom current rates are lower than 10 years ago. The rate of injuries for African Americans is currently more than twice as high as that of Whites. Both rates are increasing and the gap appears to be widening.

Figure 4.39 INJURY HOSPITALIZATION IN ADULTS OF 25 YEARS OF AGE AND OLDER BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2008–2010



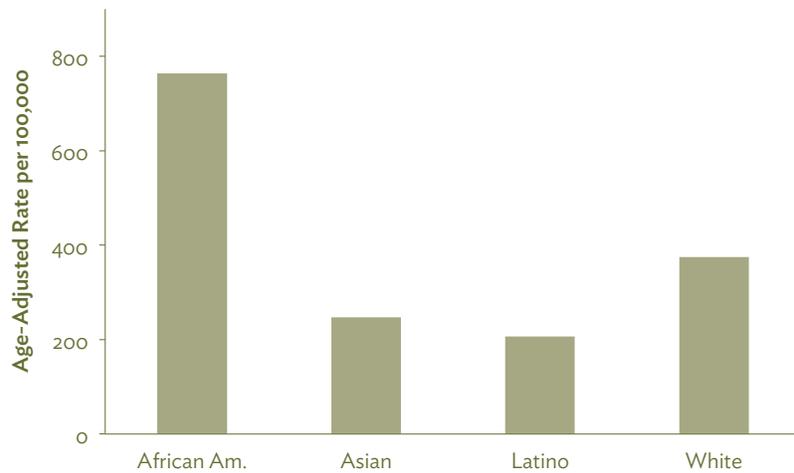
Source: Office of Statewide Health Planning and Development, U.S. Census 2000, 2010

Prescription Drug Reaction Hospitalizations

In Berkeley, adverse prescription drug reactions are the leading cause of injury hospitalization, accounting for 37.4% of all injury hospitalizations.

Categories of prescription drugs causing adverse reactions include: chemotherapy drugs, corticosteroids, anticoagulants (blood thinners), and opiates or narcotics, among others.

Figure 4.40 PRESCRIPTION DRUG REACTION HOSPITALIZATION RATE IN ADULTS OF 25 YEARS OF AGE AND OLDER BY RACE/ETHNICITY Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Health Planning and Development

Injuries continued

Falls

Hospitalization rates due to falls are highest among White female Berkeley residents and lowest among Asian female residents.

Fall rates among adult men are relatively constant across racial/ethnic groups.

Figure 4.41 FALL INJURY HOSPITALIZATION RATE IN ADULTS OF 25 YEARS OF AGE AND OLDER BY SEX AND RACE/ETHNICITY Berkeley, 2008–2010

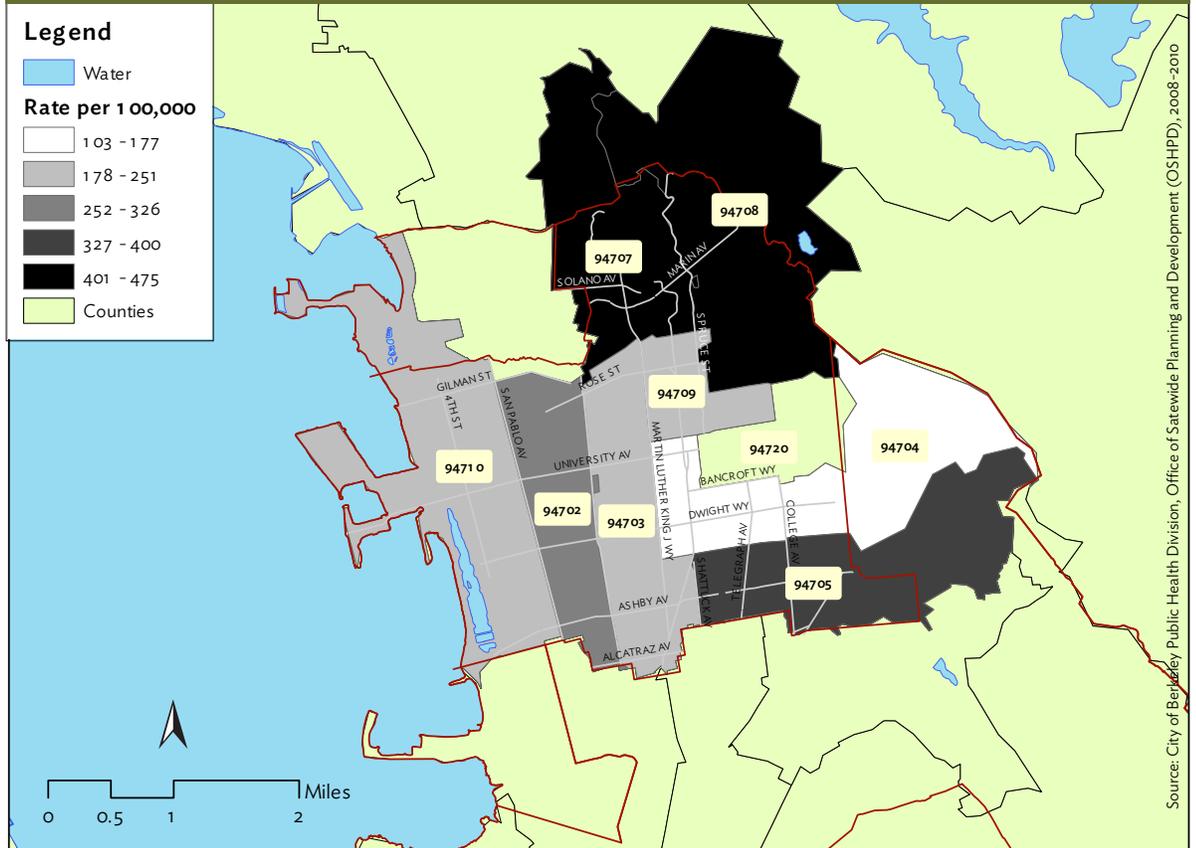


Source: Office of Statewide Health Planning and Development, U.S. Census, 2010

Geography of Injuries

Injury-related hospitalization rates related to different types of injuries have different distributions across the City.

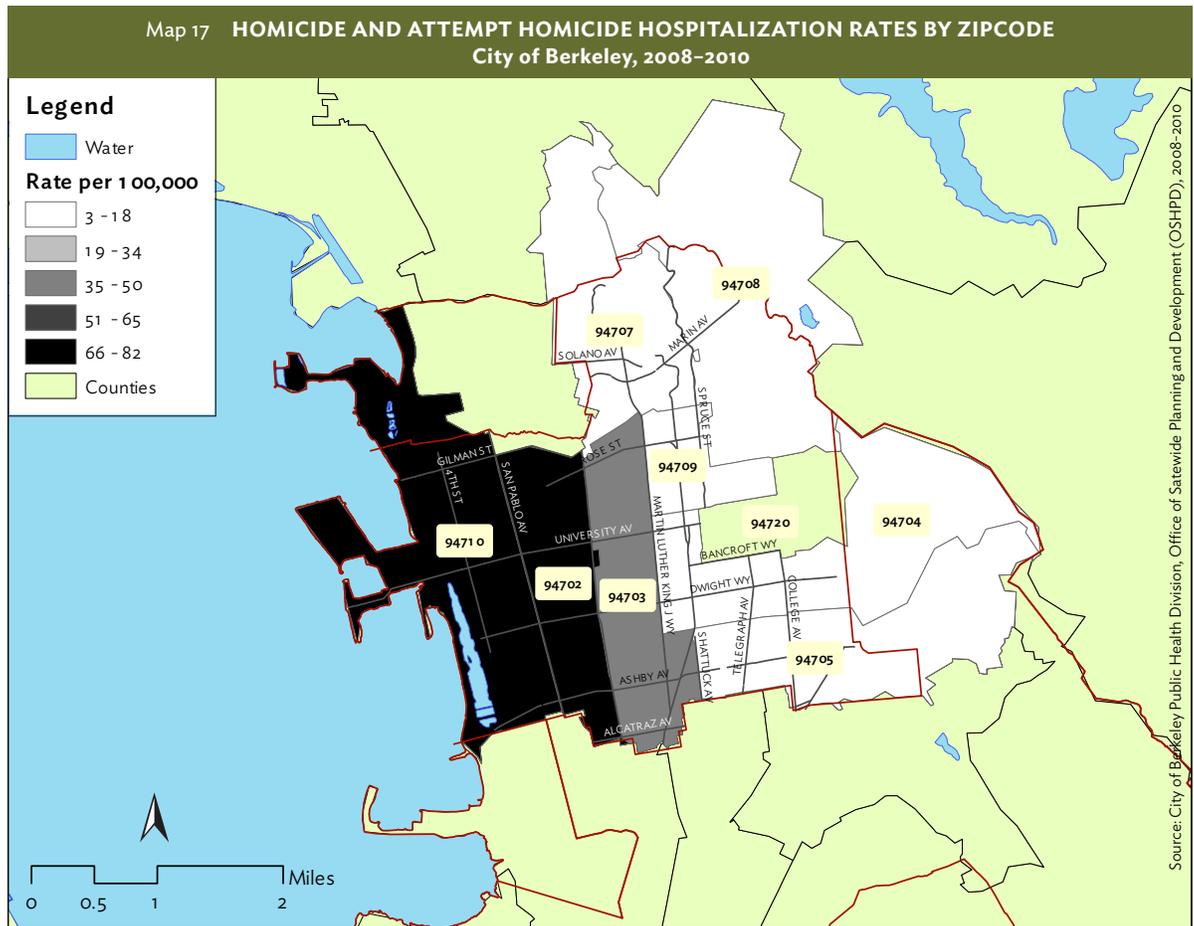
Map 16 UNINTENTIONAL FALLS HOSPITALIZATION RATES BY ZIPCODE City of Berkeley, 2008–2010



Source: City of Berkeley Public Health Division, Office of Statewide Planning and Development (OSHPD), 2008–2010

Falls cause higher rates of hospitalization among North Berkeley residents than among residents elsewhere in the City.

Injuries continued



Homicide and attempted homicide rates requiring hospitalization are higher in West Berkeley than in other parts of the City.

HIGHLIGHT: Senior Injury Prevention Program

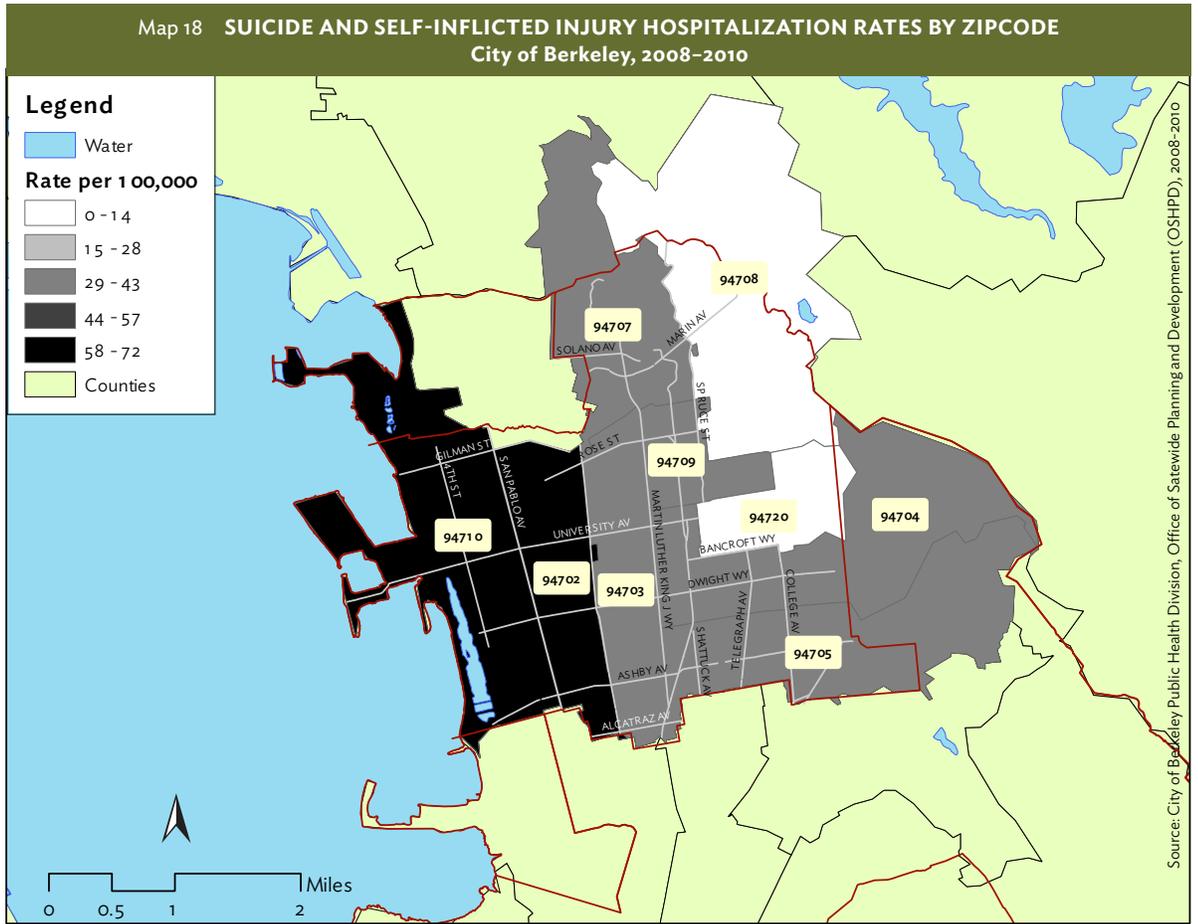
The Aging Services Division and the Berkeley Fire Department are partners in Berkeley's Senior Injury Prevention Program. The program identifies older adults at risk and targets assistance to help them maintain independence and quality of life.

Berkeley Fire Department refers vulnerable older adults to Aging Services staff, who follow up with an in-home assessment. The assessment includes a review of risks in the home, such as clutter, issues with rugs or electrical cords, lack of railings, or need for assistive devices. Aging Services provides referrals to agencies that can install needed home improvement devices such as safety bars or rails, ramps, bath chairs, or raised toilet seats. Staff follows up with family members, medical providers, Adult Protective Services or other social service programs to ensure the senior receives ongoing support if needed.

Aging Services partners with the Problem Properties team in the City Manager's office when seniors have property issues that cause safety hazards.

Senior Centers provide periodic fall prevention classes, and exercise classes are offered to seniors with a range of mobility, including Zumba, Tai Chi, Yoga and Chair Exercise.

Injuries continued

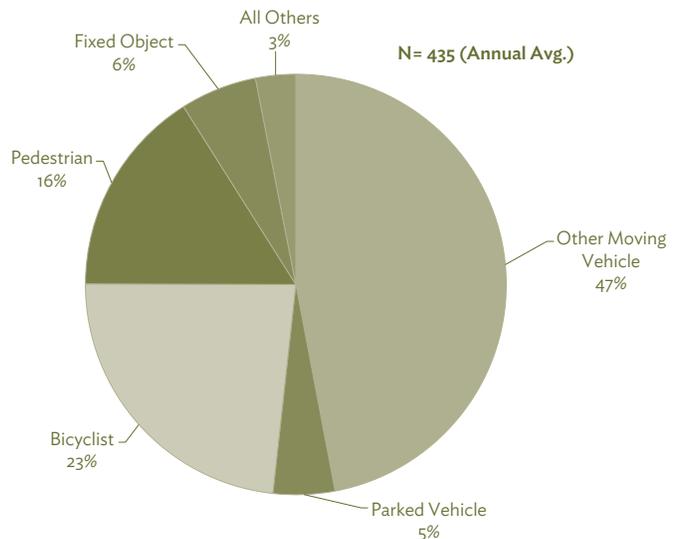


Suicide and other self-inflicted injuries requiring hospitalization also occur at the highest rates in West Berkeley neighborhoods.

Motor Vehicle Traffic Injuries

Over 400 traffic injuries occur in Berkeley annually. Nearly half of these injuries result from collision of two moving vehicles. Bicyclists are the next largest group, accounting for nearly one quarter of the motor vehicle injuries, followed by pedestrians.

Figure 4.42 TRAFFIC INJURIES INVOLVING A COLLISION BETWEEN A MOVING VEHICLE AND OTHER VEHICLES, BICYCLISTS, AND PEDESTRIANS Berkeley, 2005-2010

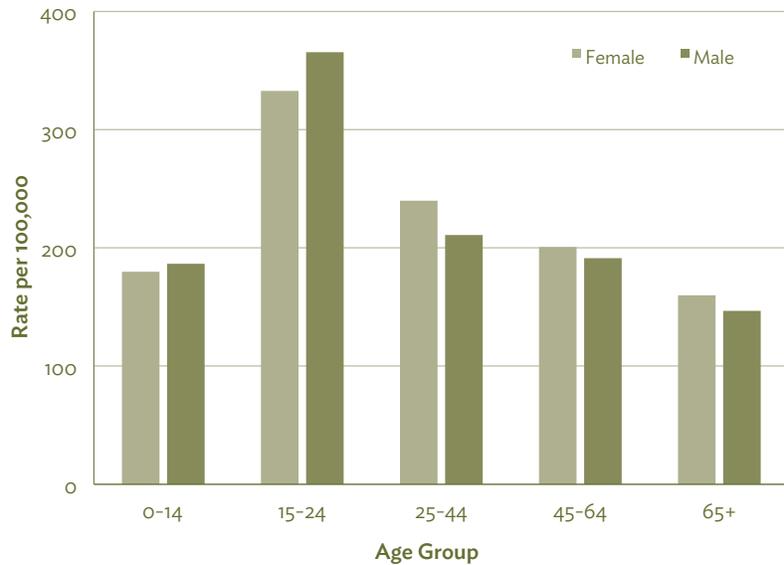


Source: Statewide Incident Traffic Reporting System (SWITRS)

Injuries continued

Traffic injuries occur at the highest rates among young adults, ages 15-24. Injury rates decrease among residents as they age, with the lowest rate of traffic injuries occurring among adults over the age of 65. (Note that these data include all Berkeley traffic injuries, not just those requiring hospitalization.)

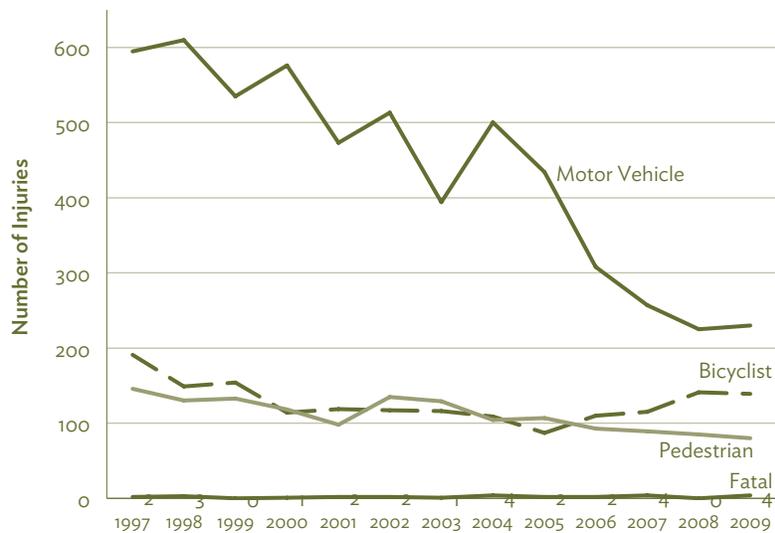
Figure 4.43 **TRAFFIC INJURY INCIDENCE RATES BY AGE AND SEX**
Berkeley, 2006-2010



Source: Statewide Incident Traffic Reporting System (SWITRS), U.S. Census 2000

In the last decade, traffic injury numbers in Berkeley have decreased for motor vehicle, and pedestrian accidents. The most dramatic decrease has occurred in motor vehicle accidents – the number of motor vehicle injuries has dropped by more than 50%. Bicyclist traffic injuries have increased in recent years, but remain below their highest level in the late 1990’s. This may be related to increasing numbers of bicycle riders.

Figure 4.44 **TRAFFIC INJURY INCIDENCES BY TYPE OF INJURY AND YEAR**
Berkeley, 1997-2009



Source: Statewide Incident Traffic Reporting System (SWITRS)

Injuries continued

Domestic Violence/Intimate Partner Violence

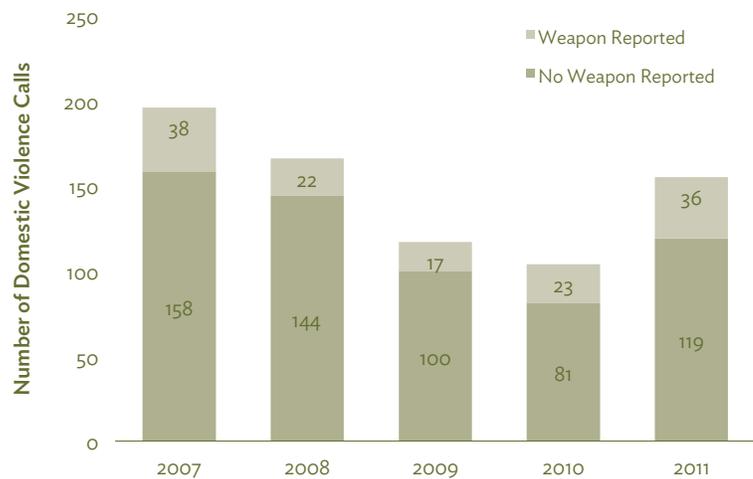
Domestic Violence (DV) is a serious, preventable public health problem affecting millions of Americans. The term “intimate partner violence” describes physical, sexual, or psychological harm by a current or former partner or spouse.³⁵ “Domestic violence” is harm done by a family member or someone residing in the same household, but not necessarily an intimate partner. Most incidents of DV/IPV are not reported to the police. DV/IPV results in nearly 2 million injuries and 1,300 deaths nationwide every year.³⁶

Nationally, women, especially young women, are disproportionately affected by DV/IPV.³⁷ Approximately 37% of women seeking injury-related treatment in hospital emergency rooms were there because of injuries inflicted by a current or former spouse/partner.³⁸ Frequent mental distress is common among women experiencing DV/IPV and more than half of them want help, but few seek treatment for their mental health.³⁹

From 2007 to 2011, there was an average of 141 domestic violence-related calls per year to the City of Berkeley Police Department. Of the total number of calls, a weapon was reported as involved in 17% of the cases. “Personal weapons”, such as hands and feet, were reported in 55% of the cases reporting weapon use.

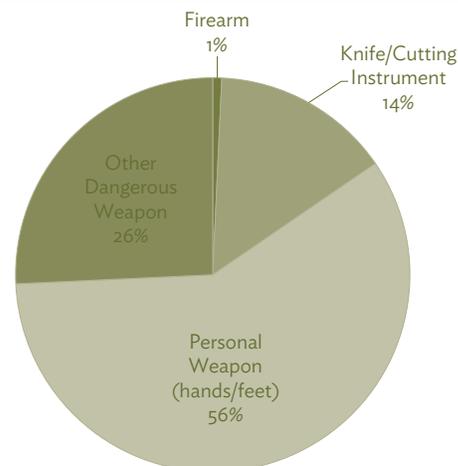
Personal weapons (hands, feet, or other body parts) were the most commonly reported type of weapon used in domestic violence incidents involving a weapon. Other types of weapons reported include knives, cutting instruments, and firearms.

Figure 4.45 REPORTED DOMESTIC VIOLENCE-RELATED CALLS FOR ASSISTANCE BY YEAR City of Berkeley and UC Berkeley, 2007–2011



Source: State of California Department of Justice

Figure 4.46 TYPE OF WEAPON USED IN DOMESTIC VIOLENCE-RELATED INCIDENTS City of Berkeley and UC Berkeley, 2007–2011



Source: State of California Department of Justice

Disability

What is this?

An estimated 37 to 56 million people in the U.S. have a disability, such as hearing loss, mental disability, physical limitation, or vision loss.⁴⁰ A disability may be physical, cognitive, mental, emotional, developmental or a combination of these.⁴¹ Some disabilities are easy to see, such as when a person uses a wheelchair or a white cane. Other disabilities, like intellectual disability or a chronic condition like arthritis, may not be readily apparent.

Why is this important?

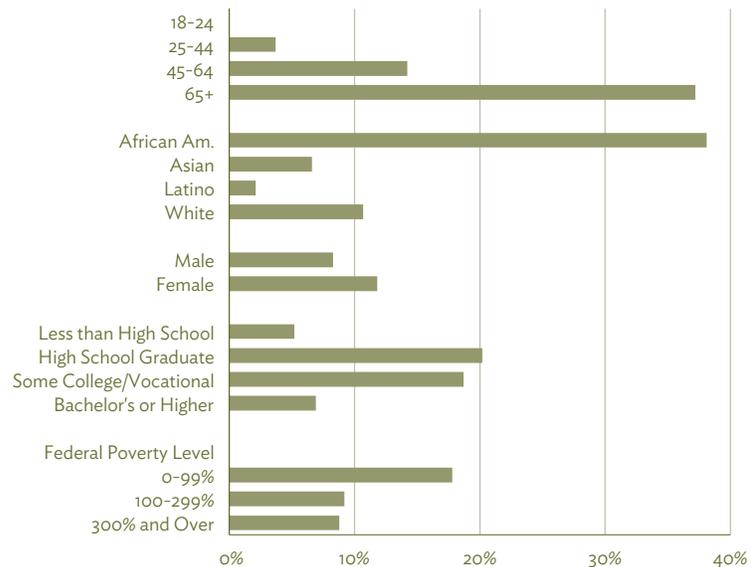
Individuals with disabilities may face greater challenges to living healthy lives. Appropriate services may not be available, or may be difficult to access. Public health can assist with removing barriers to health encountered by people with disabilities.

Older adults are much more likely to report a limitation in physical activity than younger adults. The proportion of people who report limitations in physical activity also varies by race/ethnicity. African Americans have the largest proportion who report limitations.

What is Berkeley's status?

Berkeley has a strong history of focus on rights and access for those with disabilities. An example of this focus is the recently-opened Ed Roberts Campus, founded by disability organizations that share a common history in the Independent Living Movement of People with Disabilities. The campus is a universally designed, transit-oriented facility in South Berkeley, with offices for collaborating organizations and fully accessible meeting rooms, resource and fitness centers, and a child development center.⁴² One quarter of Berkeley adults report having a disabling physical, emotional, or mental condition, which is the same proportion as reported statewide.

Figure 4.47 **ADULTS (18 YEARS AND OLDER) WITH CONDITIONS LIMITING PHYSICAL ACTIVITY** Berkeley, 2005-2009



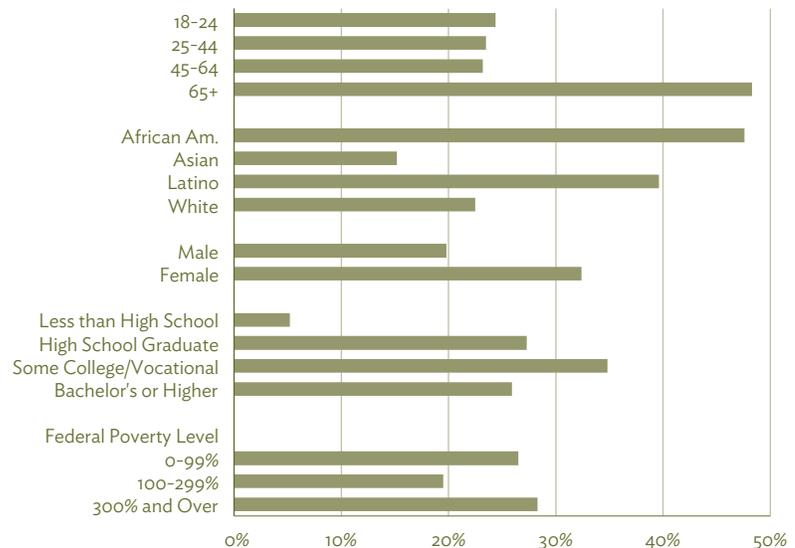
Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

Disability continued

Disability covers a wide variety of conditions — physical, emotional and mental. Women, African Americans, Latinos and the elderly experience greater levels of these disabilities than other populations. Overall, 26% of Berkeley residents report being affected by a disabling condition.

Berkeley's rate of reported disability by this measurement tool is similar to the statewide rate of 27% and higher than the Alameda County rate of 21%.⁴³

Figure 4.48 ADULTS (18 YEARS AND OLDER) WITH A DISABILITY DUE TO PHYSICAL, EMOTIONAL, OR MENTAL CONDITIONS Berkeley, 2005-2009



Source: City of Berkeley Public Health Division, California Health Interview Survey (CHIS), Pooled years 2005, 2007 and 2009

Communicable Disease

What is this?

Communicable or infectious diseases are caused by bacteria, viruses, and other infectious agents. Infectious diseases can spread from person to person. They include diseases such as tuberculosis (TB), measles, and sexually transmitted infections, including HIV/AIDS. Some infectious diseases can be treated and cured with antibiotics or other medications. Others are not easily treated and can become long-lasting chronic infections. Communicable diseases of public health significance are “reportable”—that is, state law requires health care providers and laboratories to report diseases and outbreaks to their local public health authority.

Why is this important?

Public Health traditionally has focused on controlling infectious diseases—initially through establishing clean water and effective

sanitation, and subsequently with vaccinations and antibiotics. Although chronic diseases have surpassed infectious diseases as leading causes of death and disability, communicable diseases remain a significant cause of illness and death. New infectious agents and diseases continue to appear, and diseases once considered under control – such as pertussis, also known as whooping cough – have re-emerged in recent years.⁴⁴ Furthermore, antibiotic resistance increasingly renders treatments against micro-organisms ineffective.⁴⁵ Infectious disease control and prevention are essential core Public Health functions.

What is Berkeley's status?

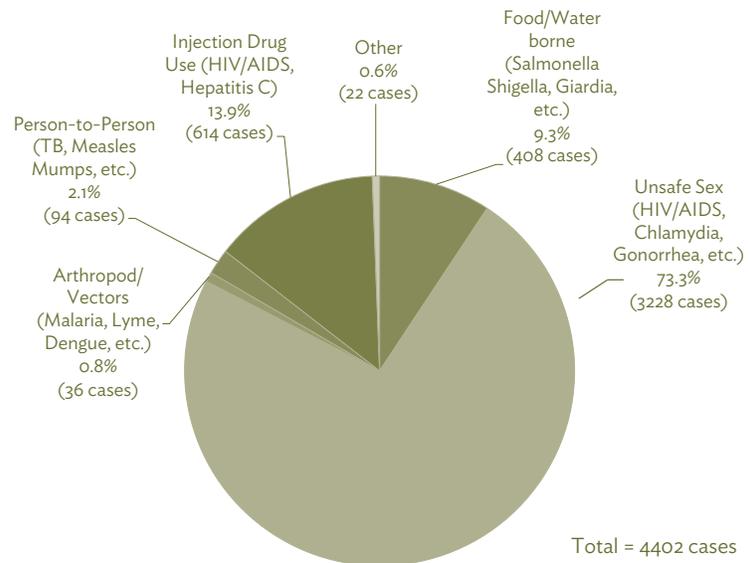
Berkeley receives an average of 880 communicable disease reports each year. Almost three quarters of the reports are of sexually transmitted infections (STIs). The public health response to these reports is tailored to the severity, method of transmission, and ease of spread of the disease.

Communicable Disease continued

Diseases such as measles or tuberculosis (TB) are transmitted through air-borne droplets and can spread easily to large numbers of individuals. Control of these diseases involves identification notification, evaluation, and management of those at risk of having been infected — often large numbers of people from multiple sites. Ill individuals may need to be isolated until they are not infectious, and sometimes exposed people are quarantined in order to avoid spreading disease to others. Prophylactic medications or vaccines can help control the spread of disease.

In contrast, STIs are transmitted by intimate contact. They are controlled by treating the infected individual and his/her partner(s).

Figure 4.49 **CASES OF COMMUNICABLE DISEASE BY PROBABLE MODE OF TRANSMISSION Berkeley, 2006–2010**



Source: Berkeley Public Health Division

HIGHLIGHT: Communicable Disease Control Program

The Communicable Disease program controls and prevents the occurrence and spread of communicable diseases through surveillance and outbreak control. Staff and the Health Officer work with community partners including Berkeley Unified School District, UC Berkeley's University Health Services, Alta Bates Summit Medical Center and other health care providers, as well as with the State Department of Public Health and neighboring public health jurisdictions.

Outbreak control and contact investigations in recent years have included cases of measles, mumps, tuberculosis, pertussis (whooping cough), chicken pox, campylobacter, salmonella, and Norovirus. Settings for these investigations include preschools, schools, and college/university campuses, businesses, restaurants, health care facilities, recreational facilities, and skilled nursing facilities. The number of individuals contacted in each investigation frequently exceeds 100, and preventive immunizations administered to control an outbreak can be in the thousands. This program is integral to public health's preparedness to respond to emerging infections such as H1N1.

Foodborne Illness and Food Safety

What is this?

The City's Environmental Health Division is responsible for food safety in Berkeley's commercial kitchens. This includes restaurants, health care facilities, schools, and businesses or facilities that sell or provide food to the public.

In the U.S., 1 out of every 6 people gets food poisoning each year, or an estimated 48 million people experience foodborne illness annually.⁴⁶ The major causes of foodborne illnesses are improper food preparation, storage, and distribution; poor hand hygiene among food handlers; and an increasingly global food supply.⁴⁷ Outbreaks such as E. coli from spinach have drawn more attention to these illnesses, and are a reminder that our food supply must be monitored. Restaurants serving safe food, free of contamination, are essential for a healthy and sustainable Berkeley community.

Complaints of suspected foodborne illness receive priority response and are typically investigated by the Environmental Health Division within 24 hours. Foodborne illness outbreaks are managed collaboratively by Environmental Health and Public Health.

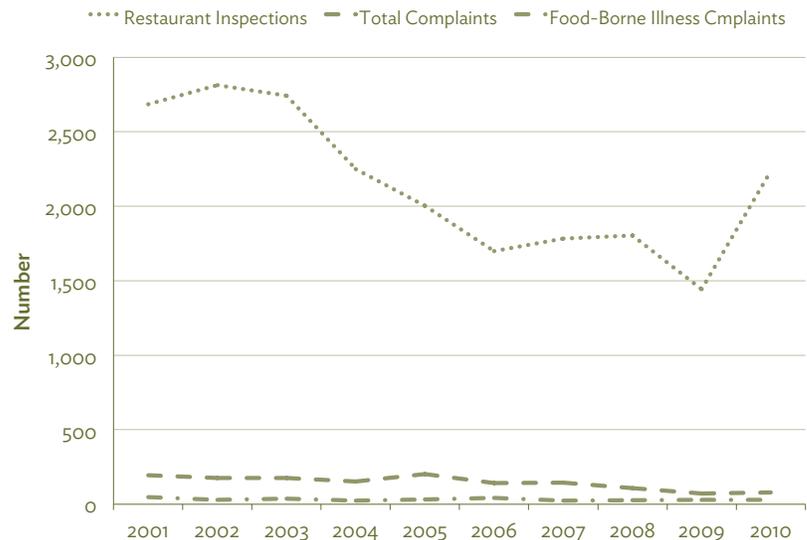
Why is this important?

Meals prepared outside of our homes are increasingly a part of daily life. We eat out for pleasure, entertainment, and convenience, as well as of necessity if hospitalized or in a residential facility. Food safety programs are designed to make those eating experiences safe and healthy, and minimize the risk of foodborne illnesses.

What is Berkeley's status?

Each year, the Environmental Health Division conducts over 2,000 routine restaurant inspections. The division receives an annual average of 180 complaints from restaurant patrons; about 19% of the complaints are related to suspected foodborne illness.

Figure 4.50 RESTAURANT INSPECTIONS AND COMPLAINTS Berkeley, FY 2001–2010



City of Berkeley Environmental Health Division, 2001–2010

HIGHLIGHT: Response to Foodborne Illness

When there is a foodborne illness associated with a restaurant or other commercial kitchen, Environmental Health and Public Health take prompt action to stop the spread of disease. This involves on-site inspections, environmental or food sampling, interviews with staff and patrons, and identifying corrective actions.⁴⁸ Ill food handlers are restricted from work until they are medically cleared. Specific foods or food preparation techniques may be prohibited. In some cases, a facility may need to be closed until the situation is under control and remedial actions have been taken. Keeping Berkeley's food safe for diners is a high priority of the Department.

HIGHLIGHT: Environmental Health Division

The Division administers several local programs to protect the public against environmental health hazards. This is achieved through community education efforts and by enforcement of state and local laws to ensure safe supplies of food, water and a clean environment, to monitor the proper management of wastes, to control human disease vectors, to investigate environmental health-related causes of illness and to abate hazardous environmental health conditions. Local programs include food safety, public pools and spas, noise control, smoking control, tobacco licensing, demolition inspections, abandoned vehicles, vector control, waste tire management, water quality monitoring, Berkeley Municipal Code Enforcement, and public health emergency response.

Tuberculosis (TB)**What is this?**

Tuberculosis is a highly infectious bacterial disease that is spread from person-to-person through the air. TB usually affects the lungs, but can affect any part of the body including the kidney, spine, or brain. If not treated properly, TB disease can be fatal.⁴⁹

Why is this important?

TB is easily treated when it is identified early, and early treatment limits the spread of illness to others. When the disease goes untreated, it becomes serious and even life-threatening. While the number of new TB cases overall is declining, highly drug resistant forms of TB have emerged that are very difficult to treat. Populations at high risk for TB include new immigrants

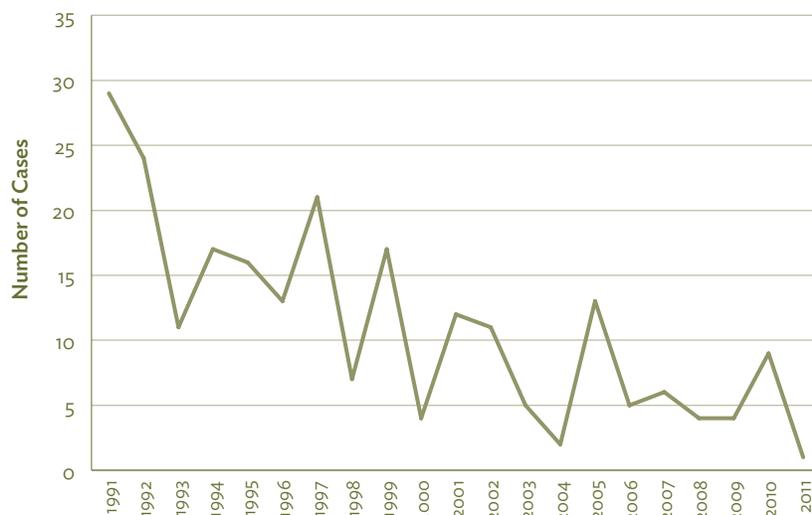
from countries in which TB rates are high, people with HIV/AIDS, young infants and those with weakened immune systems. Individuals who are homeless or are injection drug users are also particularly vulnerable to TB.^{50,51}

What is Berkeley's status?

Berkeley is a diverse and mobile community. Berkeley residents travel abroad, and visitors, scholars, and immigrants settle here from all over the world. Berkeley has a significant homeless population, residents infected with HIV/AIDS, and many young children. Control and prevention of TB are significant public health concerns for Berkeley.

TB in Berkeley decreased overall during the last two decades. The number of confirmed cases of TB every year is small, so year-to-year variations are expected.

Figure 4.51 **CONFIRMED TUBERCULOSIS CASES BY YEAR OF REPORT**
City of Berkeley, 1991–2011

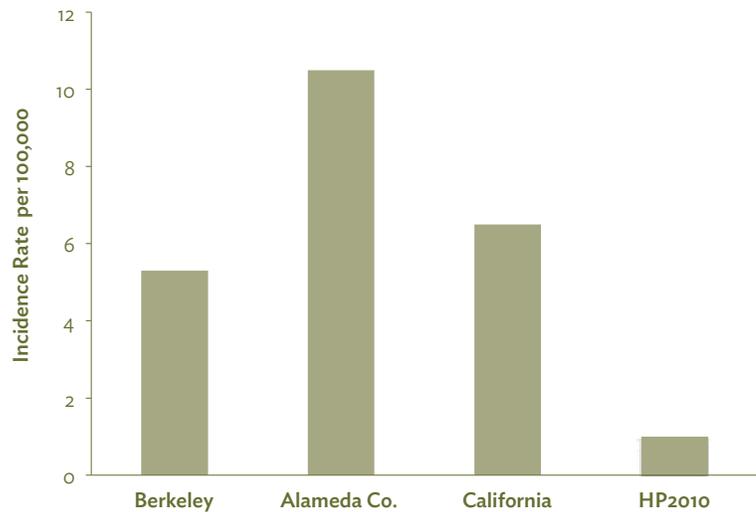


Source: Berkeley Public Health Division, CD Program

Tuberculosis (TB) continued

Population rates of new cases of TB in Berkeley are lower than California as a whole, and much lower than the rest of Alameda County. However, Berkeley does not meet the Healthy People 2020 goal of 1 new case of tuberculosis per 100,000 population.

Figure 4.52 **TUBERCULOSIS INCIDENCE RATE** Berkeley, Alameda County, California, 2008-2010 and HP2020



Source: City of Berkeley Public Health Division, CD Program

HIGHLIGHT: Tuberculosis (TB) Control

New cases of TB in Berkeley residents are reported to the TB control team. This team is responsible for determining whether TB has spread to anyone else and preventing further spread. Contact investigation is a fundamental strategy for the control and prevention of tuberculosis. Each case generates anywhere from 3 to 100 or more contacts to follow up for examination, evaluation and possibly treatment. Each newly diagnosed case of tuberculosis is assigned a public health nurse to assist and observe the patient taking medication each day so that the entire course of medication is completed correctly. Treatment generally takes 6-9 months, but sometimes up to 24 months. Lapses in the regimen can lead to spread to other individuals, reactivation of disease, and drug resistance.

The Public Health Clinic offers TB skin testing and reading. Berkeley residents without a medical provider or health insurance are eligible for the Health Department's monthly TB Diagnostic Clinic, where a chest x-ray, medical examination and medicine may be provided.

Vaccine-Preventable Diseases

What is this?

Vaccines prevent many diseases which were common in earlier generations. Routine vaccinations are recommended for adults as well as for children. “Vaccine-preventable diseases” are those diseases for which we have effective vaccines. These include measles, mumps, tetanus, pertussis (whooping cough), Hepatitis A and B, and influenza, among others. Booster vaccinations for adolescents and adults are needed for many of these diseases, because immunity decreases over time.⁵²

Why is this important?

The occurrence of vaccine-preventable diseases within a community is an indication that the community may not be

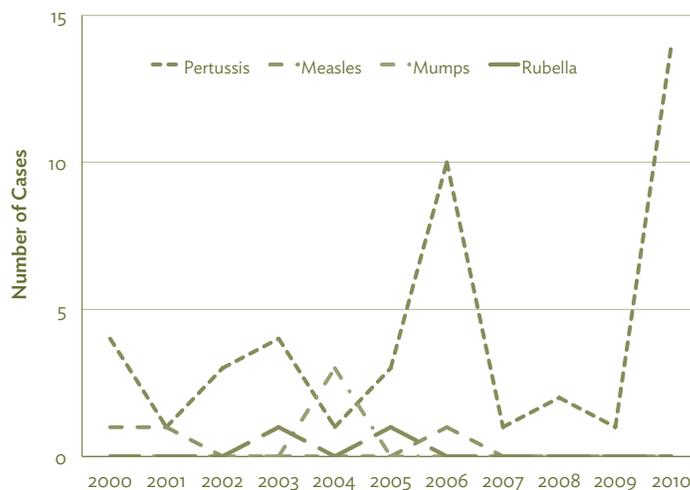
In 2010 California experienced an epidemic of pertussis (whooping cough). Rates of infection were higher than had been seen in over 60 years, and 10 California infants died of the disease.⁵⁴ Berkeley was fortunate not to experience any pertussis deaths, but disease rates rose here as they did statewide. The actual rates of pertussis were likely even higher, as milder cases frequently go undiagnosed.

fully immunized. Adolescents, young adults, or older adults may not be receiving recommended boosters. If a large enough subset of the community is not vaccinated, disease can spread throughout the community. In order to control and prevent vaccine-preventable diseases, public health monitors disease reports and immunization rates in the community.⁵³

What is Berkeley’s status?

Berkeley has small numbers of vaccine-preventable diseases reported every year. In recent years, pertussis (whooping cough) has been the most common vaccine-preventable disease.

Figure 4.53 VACCINE-PREVENTABLE DISEASES BY YEAR OF REPORT
Berkeley, 2000-2010



Source: Berkeley Public Health Division

HIGHLIGHT: Response to Pertussis (whooping cough) Epidemic

In response to California’s 2010 pertussis epidemic, public health took new measures to increase Tdap (pertussis) vaccination of adolescents and adults. California established a new Tdap requirement for middle and high school students.

Berkeley’s Public Health Immunization program worked with BUSD to notify parents and providers of this new requirement and to offer Tdap vaccine to students who had difficulty obtaining it from their usual health care provider. As part of this effort, BUSD staff gained access to California’s immunization registry (CAIR), improving the District’s capacity to track up-to-date immunization information for students.

Because of the special vulnerability of infants, Public Health outreach efforts targeted new parents and grandparents. Alta Bates hospital now offers Tdap vaccination to mothers of all newborn infants before they leave the hospital. Other family members are encouraged to receive Tdap from their health care providers, and are referred to the Public Health Immunization clinic if they do not have another source of care for immunization.

Sexually Transmitted Infections

What is this?

Sexually transmitted Infections (STIs), also known as STDs (sexually transmitted diseases) are bacterial, viral, and other diseases transmitted from person-to-person by unprotected sexual contact. STIs can largely be prevented by consistent use of “safe sex” practices, in particular, consistent and correct use of condoms.⁵⁵

Why is this important?

STIs have harmful, costly, and often irreversible health impacts—and they continue to pose significant health threats to the community. Chlamydia—though often without symptoms—can cause infertility. Gonorrhea increases the risk for pelvic inflammatory disease, infertility, ectopic (“tubal”) pregnancy, and HIV. Gonorrhea is now resistant to many drugs previously

used to treat the infection. STIs contribute to the sexual transmission of HIV infection. Syphilis is increasingly common among men who have sex with men and among those with HIV. Human papilloma virus (HPV) is associated with genital cancer in both women and men.⁵⁶

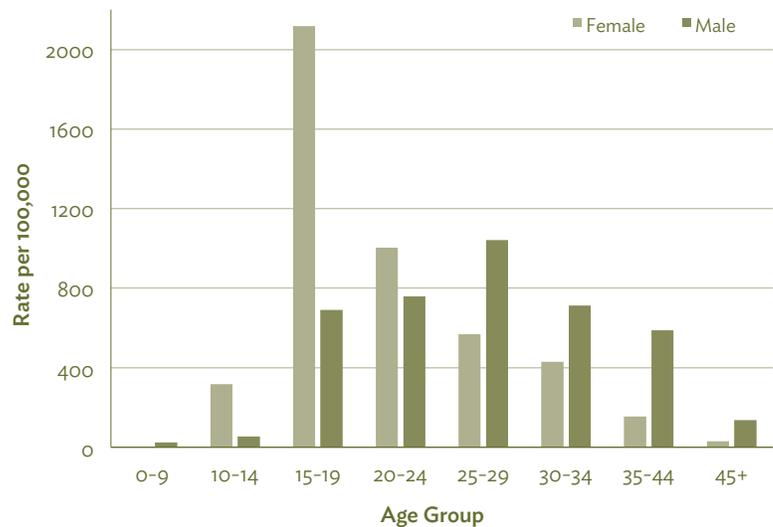
What is Berkeley’s status?

STIs are common in Berkeley. Highest rates are among those 15-29 years of age, and in West Berkeley and the areas surrounding the University campus. Chlamydia is the commonest STI, and rates of chlamydia are highest among African American women. Gonorrhea infections are more common among African American men and women than among other racial/ethnic groups. Syphilis is most common among African American men.

Sexually Transmitted Infections as a Group

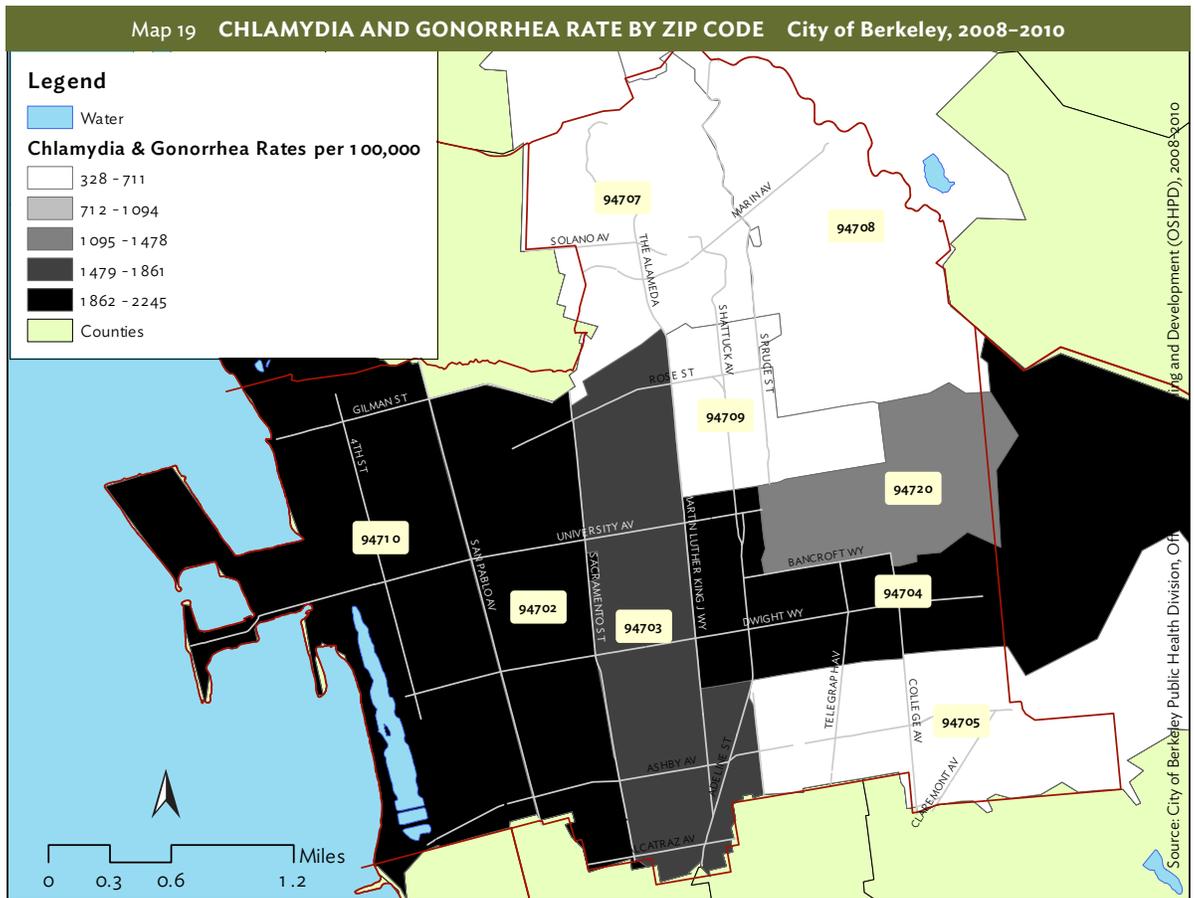
The peak age for STIs for young women is 15-19 years of age. For men, the peak is ages 25-29. The early peak in women has a significant potential impact on their future fertility. The difference in infection rates between females and males may be attributed, in part, to differences in health care-seeking behavior.⁵⁷

Figure 4.54 CHLAMYDIA, GONORRHEA, AND PRIMARY AND SECONDARY SYPHILIS INFECTIONS BY AGE AND SEX Berkeley, 2009-2011



Source: Berkeley Public Health Division

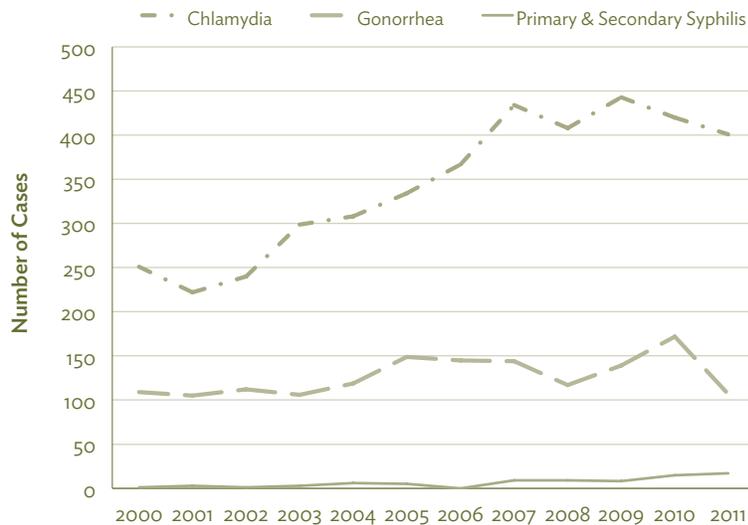
Sexually Transmitted Infections continued



Berkeley's STI rates are highest in West Berkeley and in the areas surrounding the University campus.

Berkeley's rates of chlamydia, gonorrhea, and syphilis rose over the last decade, but have shown some decrease in the most recent year for which we have data. Changes in rates may reflect changes in STI screening or reporting, as well as actual changes in disease rates. The most dramatic rise has been in primary and secondary syphilis.

Figure 4.55 CHLAMYDIA, GONORRHEA, AND PRIMARY AND SECONDARY SYPHILIS INFECTIONS BY YEAR OF REPORT Berkeley, 2000-2011



Source: Berkeley Public Health Division

Sexually Transmitted Infections continued

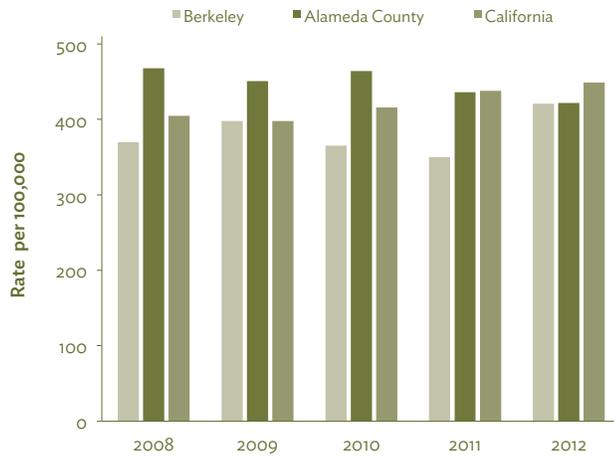
Chlamydia

Chlamydia rates in Berkeley and Alameda County are somewhat lower than in the State. Prior to 2012, Berkeley's rates were lower than those in Alameda County.

Chlamydia infections among African American women occur at double the rate of African American men, and rates are higher among African Americans than among other racial/ethnic groups.

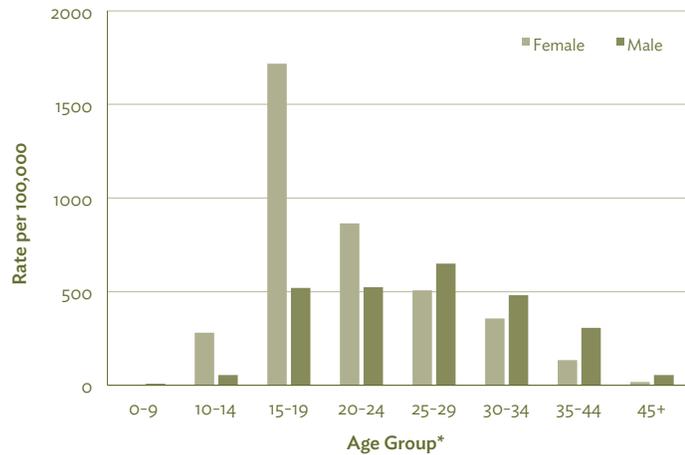
Chlamydia infections peak among females at ages 15-19 and among males at ages 25-29.

Figure 4.56 CHLAMYDIA CASE RATES
City of Berkeley, Alameda County, California, 2008-2010



Source: Berkeley Public Health Division

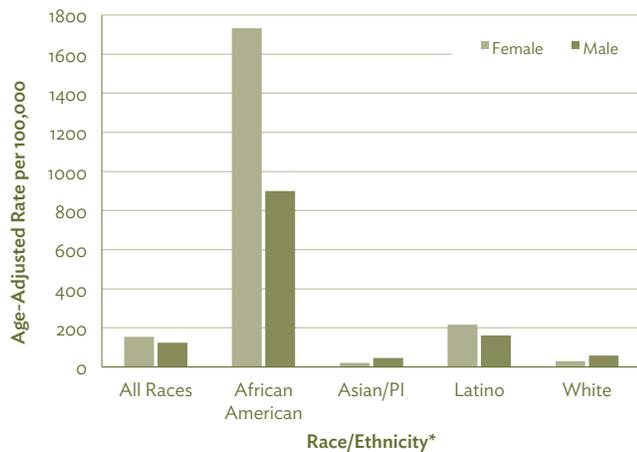
Figure 4.57 CHLAMYDIA CASE RATES BY AGE AND SEX Berkeley, 2009-2011



*Unspecified age and gender ranged from 0% to 0.1% of cases in any given year.

Source: Berkeley Public Health Division

Figure 4.58 CHLAMYDIA CASE RATES BY RACE/ETHNICITY Berkeley, 2009-2011



*Race/Ethnicity "Unknown" ranged from 40.5% to 41.4% of cases in any given year.

Source: Berkeley Public Health Division

Sexually Transmitted Infections *continued*

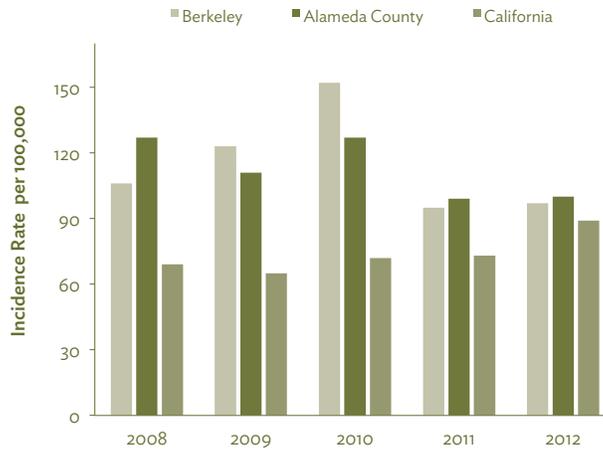
Gonorrhea

Gonorrhea rates in Berkeley and Alameda County are somewhat higher than those of California. Berkeley's gonorrhea rate has decreased in recent years.

African American men and women have higher rates of gonorrhea infection than other racial/ethnic groups, and men and women are affected at more similar rates than for chlamydia.

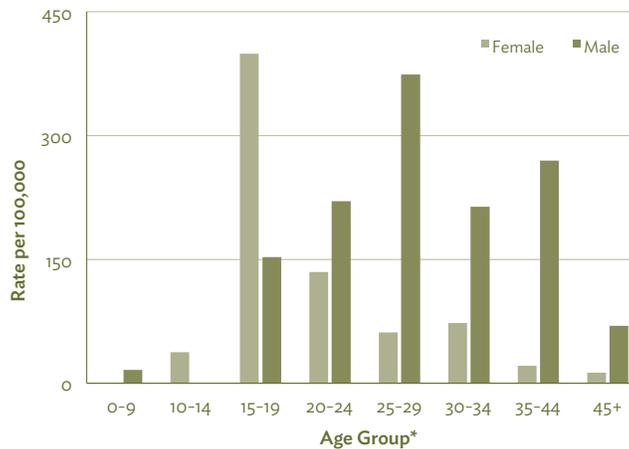
Like chlamydia, gonorrhea infections peak among females at ages 15-19 and among males at ages 25-29. Gonorrhea among males remains at higher rates through age 44.

Figure 4.59 GONORRHEA CASE RATES
Berkeley, Alameda County, California, 2008-2010



Source: Berkeley Public Health Division

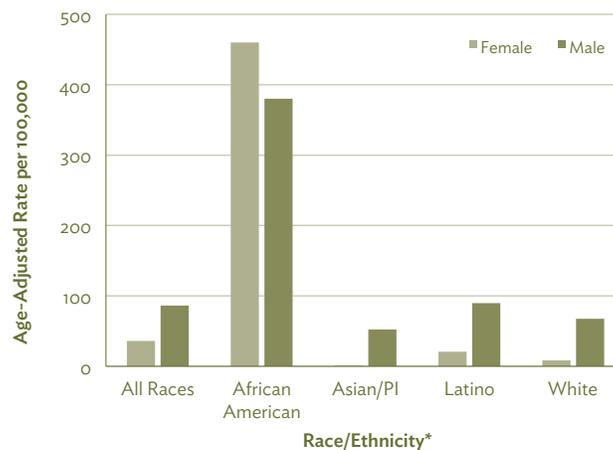
Figure 4.60 GONORRHEA CASE RATES BY AGE AND SEX Berkeley, 2009-2011



*Unspecified gender ranged from 0% to 0.1% of cases in any given year.

Source: Berkeley Public Health Division

Figure 4.61 GONORRHEA CASE RATES BY RACE/ETHNICITY Berkeley, 2009-2011



*Race/Ethnicity "Unknown" ranged from 40.5% to 41.4% of cases in any given year.

Source: Berkeley Public Health Division

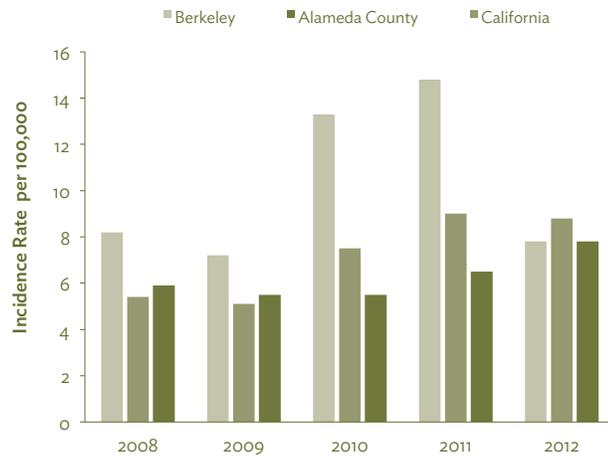
*Sexually Transmitted Infections continued***Syphilis (primary and secondary)**

Primary and secondary syphilis rates in Berkeley were higher than those of Alameda County and California through 2011. In 2012, rates in Berkeley are very similar to Alameda County and the State.

Syphilis disproportionately affects men. Berkeley does not meet the HP2020 goal of fewer than 6.8 new cases per 100,000 males. With a new syphilis case rate among women of 1.7 per 100,000, Berkeley nearly meets the HP2020 goal for women, of fewer than 1.4 new cases per 100,000.

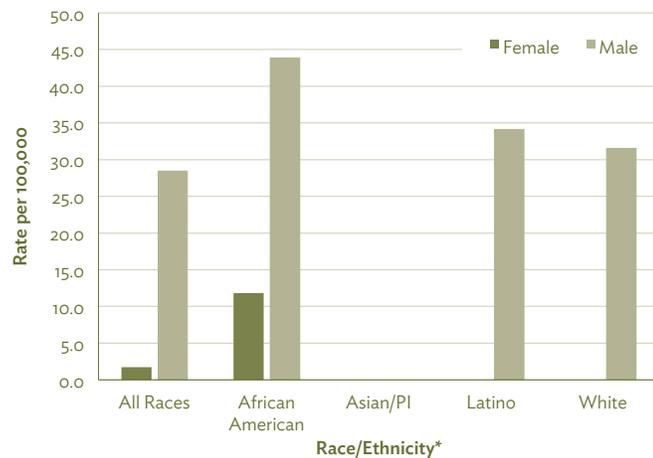
African American males experience the highest rates of syphilis.

Figure 4.62 PRIMARY AND SECONDARY SYPHILIS CASE RATES
Berkeley, Alameda County, California, 2008-2010



Source: Berkeley Public Health Division

Figure 4.63 PRIMARY AND SECONDARY SYPHILIS CASE RATES BY RACE/ETHNICITY
Berkeley, 2009-2011



*Race/Ethnicity "Unknown" ranged from 40.5% to 41.4% of cases in any given year.

Source: Berkeley Public Health Division

HIGHLIGHT: Public Health Clinic's Reproductive and Sexual Health Services

Berkeley's Public Health Clinic offers confidential testing, diagnosis, treatment, and prevention education to residents who think they may have a sexually transmitted infection, including HIV. Clinic staff follows up with clients who have STIs to ensure that they and their partners receive appropriate treatment. The program also provides free condoms and lubricants.

The Public Health Clinic offers STI services in the context of comprehensive family planning services including nearly all types of birth control, reproductive life counseling, Pap smears (cervical cancer prevention), Hepatitis A, B and HPV vaccines, and referrals to local and low-cost breast screening/mammography services. The Clinic offers reproductive and sexual health services men and women for reduced rates with a sliding fee based on income. No one is turned away because of inability to pay.

Clinic clients are linked to a wide range of community and health services. Assistance is offered to victims of domestic violence. Community outreach and presentations are provided on family planning methods, clinic services, STIs, HIV and STI/HIV prevention. In 2012 over 2,300 individuals were seen at the clinic, many for more than one visit.

Human Immunodeficiency Virus (HIV) & Acquired Immunodeficiency Syndrome (AIDS)

What is this?

HIV infection causes the disease AIDS. HIV kills or damages cells of the body's immune system and destroys the body's ability to fight infections and certain cancers⁵⁵. Infection with HIV progresses to AIDS when HIV is untreated or when treatments fail. HIV infection, before it progresses to AIDS, may not cause symptoms. HIV screening tests can detect early HIV infection and enable infected individuals to receive treatment. Medications can slow or stop the progression of HIV to AIDS, but HIV cannot be cured or eliminated from the body—it is a lifelong condition. HIV is most commonly transmitted from person to person by unprotected sexual contact, sharing needles, or from infected mother to infant.⁵⁸

Why is this important?

More than 1.1 million people in the US over the age of 13 are living with HIV/AIDS.⁵⁹ Geographic trends of the epidemic

vary across the U.S., but overall, the HIV/AIDS epidemic is taking an increasing toll on minorities, especially African Americans.⁶⁰ Access to adequate health care and effective anti-retroviral therapy are essential for preventing the progression from HIV to AIDS. Disproportionate rates of new HIV infections among African American and Latino populations leads to even more disproportionate rates of AIDS in these groups, if infected individuals do not have access to quality, timely, affordable and culturally and linguistically appropriate preventive health care services.

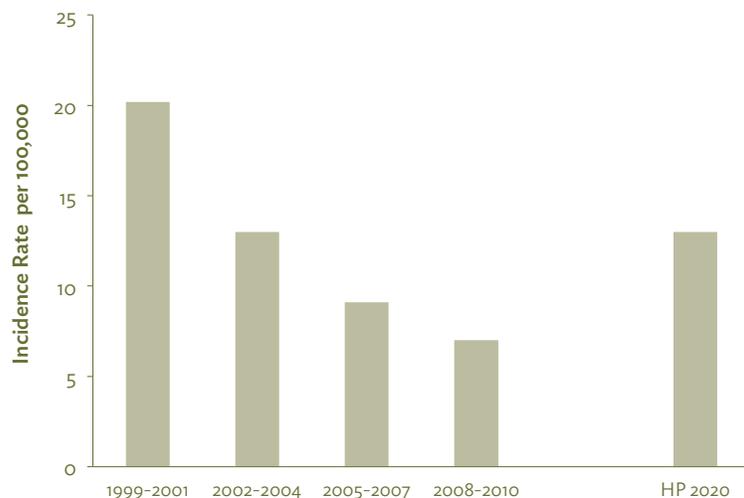
What is Berkeley's status?

In Berkeley, HIV/AIDS infections and deaths are decreasing. HIV and AIDS continue to affect primarily men who have sex with men, and intravenous drug users. African American and Latino men are disproportionately affected. Among women, HIV/AIDS exposure occurs with heterosexual sex and with injection drug use.

The rate of new AIDS cases occurring annually in Berkeley has fallen steadily over the last decade. Berkeley's rate of new cases meets the Healthy People 2020 goal of fewer than 13 new cases per 100,000 population annually.

There were no reported Berkeley AIDS deaths in 2010, the most recent year for which data are available. Antiretroviral drugs account for the reduction in number of HIV cases that progress to AIDS and for the decline in deaths attributable to AIDS.⁶¹

Figure 4.64 **REPORTED INCIDENCE OF AIDS (AGED 13 AND OVER)**
City of Berkeley, 1999–2010



Source: City of Berkeley Public Health Division, HIV/AIDS Registry

Human Immunodeficiency Virus (HIV) & Acquired Immunodeficiency Syndrome (AIDS)
continued

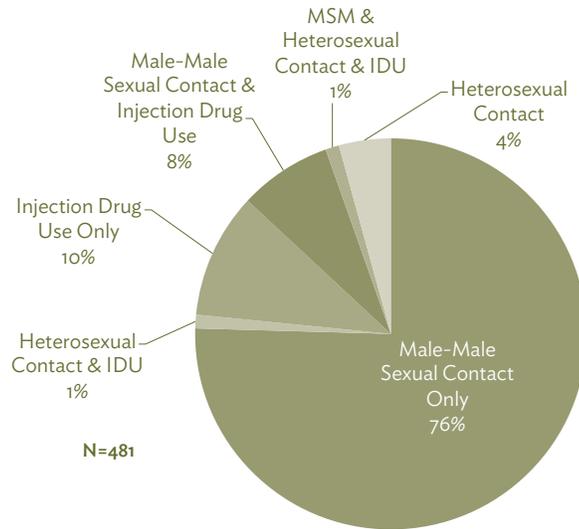
Among all new cases of HIV/AIDS, male-to-male sexual contact is the primary mode of transmission of HIV/AIDS in Berkeley. Heterosexual contact and injection drug use each account for 7% of new cases.

Men make up the vast majority (85%) of new HIV/AIDS cases in Berkeley.

New cases of HIV/AIDS among males are predominantly related to male-to-male sexual contact. Injection drug use plays a larger role in transmission among men, and heterosexual contact is a less common source.

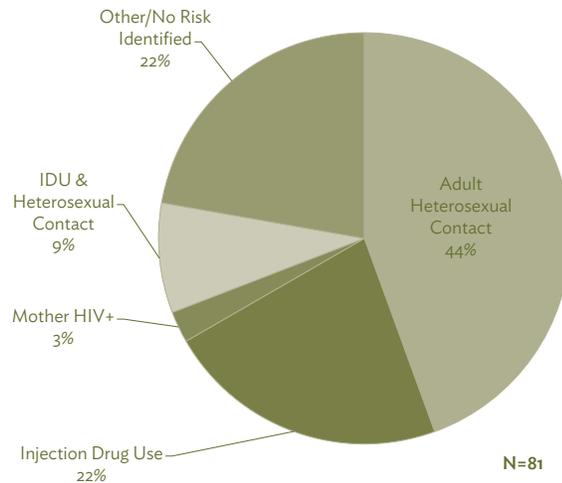
New cases of HIV/AIDS in women show a very different pattern: heterosexual contact is the primary mode of exposure, followed by injection drug use.

Figure 4.65 PROPORTION OF HIV/AIDS CASES FOR MALES BY MODE OF EXPOSURE
City of Berkeley, 1990–2010



Source: City of Berkeley Public Health Division, HIV/AIDS Registry

Figure 4.66 PROPORTION OF HIV/AIDS CASES FOR FEMALES BY MODE OF EXPOSURE
City of Berkeley, 1990–2010

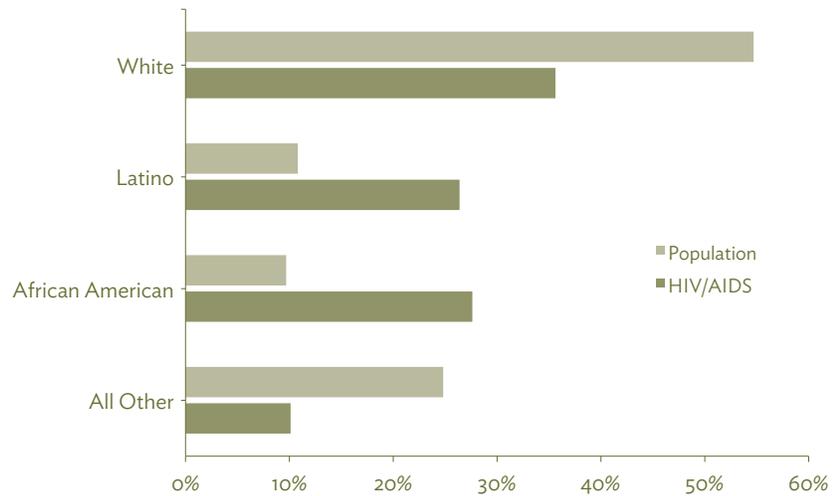


Source: City of Berkeley Public Health Division, HIV/AIDS Registry

Human Immunodeficiency Virus (HIV) & Acquired Immunodeficiency Syndrome (AIDS)
continued

African Americans and Latinos experience disproportionately high rates of new HIV/AIDS cases, compared to their representation in Berkeley's population.

Figure 4.67 PROPORTION OF HIV/AIDS CASES BY RACE/ETHNICITY AND 2010 POPULATION Berkeley, 2006–2010



Source: City of Berkeley Public Health Division, HIV/AIDS Registry

Hepatitis C

What is this?

Hepatitis C virus (HCV) is the most common chronic blood borne viral infection in the United States. The most common source of infection is sharing equipment among injection drug users.⁶² The CDC recommends that all adults born between 1945 and 1965 be tested for chronic HCV infection, because this population has disproportionately high rates of undiagnosed, asymptomatic HCV infection putting them at risk for liver disease.⁶³

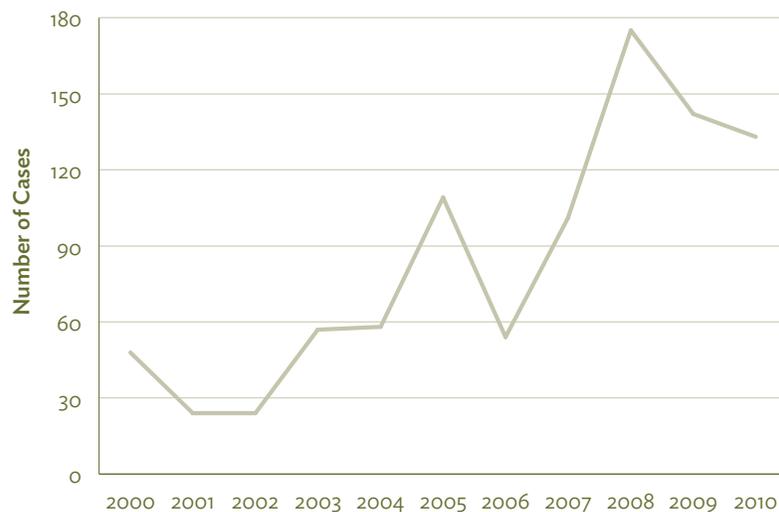
Why is this important?

Hepatitis is the name of a family of viral infections that affect the liver. Hepatitis C usually begins as an acute viral infection and progresses to a chronic infection if not treated. This lifelong infection can lead to serious liver problems including liver cirrhosis and liver cancer.⁶⁴ These complications can be prevented by timely diagnosis and treatment.

What is Berkeley's status?

The number of Hepatitis C cases in Berkeley has generally risen in the last decade. Because HCV is a chronic infection which may not be diagnosed or reported consistently, these numbers likely are most indicative of increased testing for this condition.

Figure 4.68 HEPATITIS C (ACUTE AND CHRONIC) BY YEAR OF REPORT Berkeley, 2000–2010



Source: Berkeley Public Health Division

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5

CHAPTER 5: MORTALITY

What is this?

This chapter presents information about the end of life: the ages at which people die, the immediate and underlying causes of death, and the demographic patterns of death in the City. It contains information about Berkeley trends in deaths, life expectancy, leading causes of death, and years of potential life lost.

Why is it important?

Patterns of death help us understand health status and health inequities in Berkeley. Changes in these patterns can inform us about the City's progress in reducing unnecessary deaths, whether by preventing disease and promoting healthy environments and behaviors or by identifying and treating diseases early in their course.

What is Berkeley's status?

Life expectancy in Berkeley has increased steadily for both men and women. Death rates from cardiovascular disease and cancer have decreased for all groups over the last decade. The leading causes of death in Berkeley are similar to those in Alameda County and the state. Cancer is the leading cause of death in the population as a whole, followed by heart disease. Among African Americans in Berkeley, this is reversed: heart disease is the leading cause of death, followed by cancer.

There are racial/ethnic variations in causes of death, death rates, and years of potential life lost, as there are in health status throughout the life course. Shortened lives and premature mortality are the cumulative result of health inequities that span the life course from conception to old age.

Public health and community programs target the underlying causes of health inequities; their impact on mortality will not be seen for many years. Intermediate outcomes such as hospitalization rates and disease rates—as reported throughout this report—show the impact of these efforts before it is seen in mortality data.

Key Findings

- **Healthy People 2020 Goals**

- Berkeley as a whole *meets* HP2020 goals for:
 - Coronary heart disease death rate
 - Cancer death rate
 - Lung cancer death rate
 - And very nearly meets the goal for Stroke death rate.
- African Americans in Berkeley *do not meet* HP2020 goals for:
 - Coronary heart disease death rate
 - Cancer death rate
 - Stroke death rate.
- Berkeley as a whole *does not meet* HP 2020 goals for:
 - Breast cancer death rate
 - Prostate cancer death rate

- **Life Expectancy**

- Life expectancy for Berkeley women is 86 years and for men is 82 years.
- Death rates in Berkeley are lower than those of surrounding Alameda County and California—reflecting the City's long life expectancy.
- The death rate for African Americans in Berkeley is twice the death rate of Whites, and the gap appears to be widening.
- Latinos have the lowest death rate of Berkeley's racial/ethnic groups.

- **Causes of Death**

- “*Actual*” causes of death are risk factors such as tobacco use, physical inactivity, poor diet, and alcohol and drug use. One third of Berkeley deaths are attributable to these risk factors.
- Cancer and heart disease are the leading “*underlying*” causes of death (as recorded on death certificates) in Berkeley. They account for half of all deaths.

continues

Key Findings *continued*

- Cancer is the leading cause of death for all racial/ethnic groups except African Americans. Among African Americans, heart disease is the leading cause of death.
- Cardiovascular disease death rates are twice as high among African Americans as among the population as a whole. Cardiovascular disease deaths have decreased over the last decade, but the gap between death rates of African American and other groups has remained constant.
- The death rate from cardiovascular disease among Latinos is half that of the population as a whole, and the lowest of any group.
- The stroke death rate among African Americans is more than double that of any other group.
- Latina women have the lowest death rates from breast cancer in Berkeley, and are the only group to meet the HP2020 goal for breast cancer deaths.
- **Years of Potential Life Lost (YPLL)**
 - African Americans account for a disproportionate number of YPLL in Berkeley. Although comprising less than 10% of Berkeley's population, they account for more than a third of YPLL. African Americans in Berkeley die younger than other racial/ethnic groups.
 - Cancer accounts for the most YPLL in Berkeley as a whole.

Life Expectancy**What is this?**

Life Expectancy is the average number of years a newborn baby can be expected to live if current mortality trends continue.¹ Life expectancy is calculated using information about birth and death rates.

Why is this important?

Life expectancy is one way of looking at overall health of a population. If life expectancy is long, it generally reflects a high level of health in the population as a whole.

What is Berkeley's status?

Life expectancy in Berkeley has increased steadily in recent years, and is currently 86 years for women and 82 years for men.

Figure 5.1 LIFE EXPECTANCY BY GENDER Berkeley, 1994–2010



Source: Berkeley Public Health Division Death Certificates, US Census

Deaths in Berkeley

What is this?

This section reports information about deaths, death rates, and causes of death for Berkeley residents.

The “death rate” is a measure of the number of deaths that occur among a group of people in a given time period. The death rate in a population can be thought of as a reflection of the chance of dying for members of that population, at any given time. A higher death rate generally is an indication of a lower level of health in that population.

Causes of death can be considered in two ways: “*Actual*” causes of death are risk factors such as tobacco use, physical inactivity, poor diet, and alcohol and drug use. These social, environmental, and behavioral factors lead to the development of diseases which ultimately result in death.² “*Underlying*” causes of death are conditions such as heart disease or cancer, which are recorded as the cause of death on death certificates.³

Death Rates

The death rate in Berkeley is lower than in Alameda County, California, or the US. This rate indicates that Berkeley residents are healthier, on average, than other residents of our county, state, and nation.

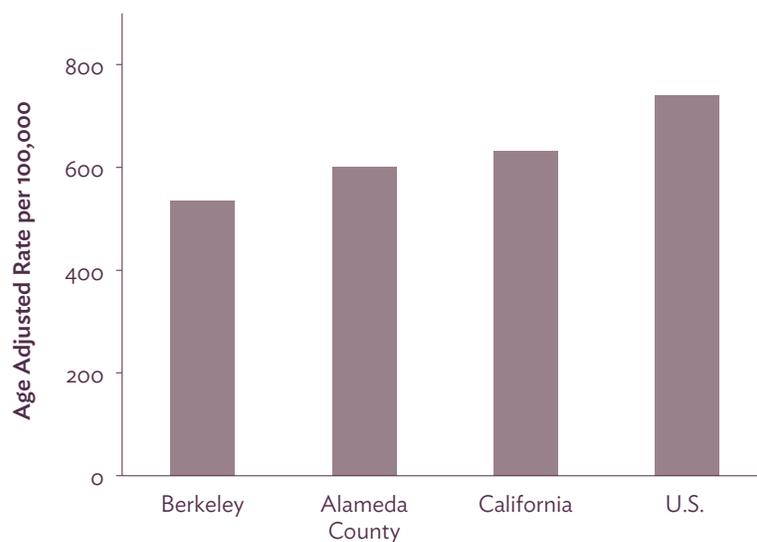
Why is this important?

The ages at which people die and the causes of death provide valuable information about patterns of chronic diseases, communicable diseases, accidents, violence, and other health conditions in the community. Shifts in the leading causes of death are useful in guiding public health priorities and in assessing the long-term impact of health interventions.

What is Berkeley’s status?

In the last decade cancer has overtaken heart disease as the single leading cause of death in Berkeley. There are important variations by age, gender, and race/ethnicity. Approximately 40% of Berkeley deaths are attributable to the risk factors described above. Cancer and heart disease cause nearly half of all deaths.

Figure 5.2 DEATH RATES Berkeley (2008–2010), Alameda County (2008–2010), California (2008–2010), and the United States (2009)



Source: Berkeley Public Health Division, US Census, Death Certificates

Deaths in Berkeley continued

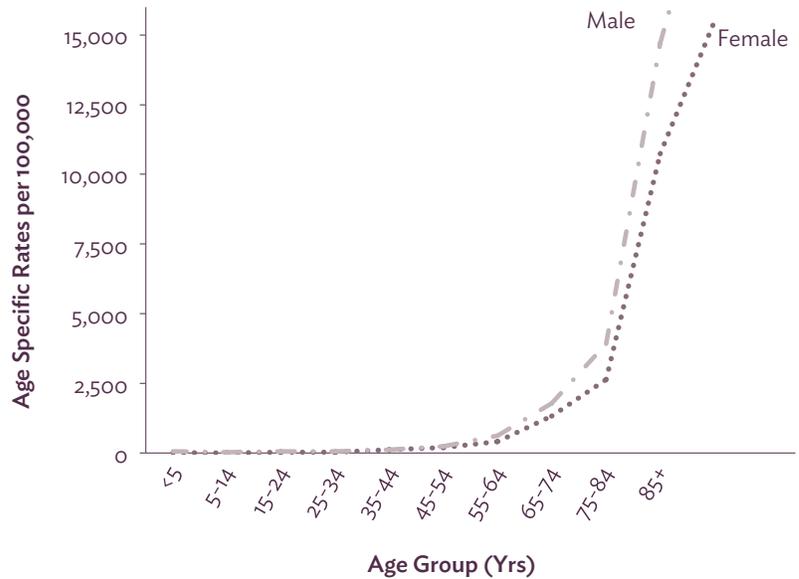
There are about 4 deaths each year among infants younger than 1 year of age. The death rate remains very low in adolescents and young adults, and increases sharply after age 65.

Death rates are higher for men than women: this is consistent with the longer life expectancy of women.

The death rate for African American men is over twice that of men overall. The death rate for African American women similarly is nearly double that of women overall. African American men stand out as having the highest death rate of all racial/ethnic and gender groups.

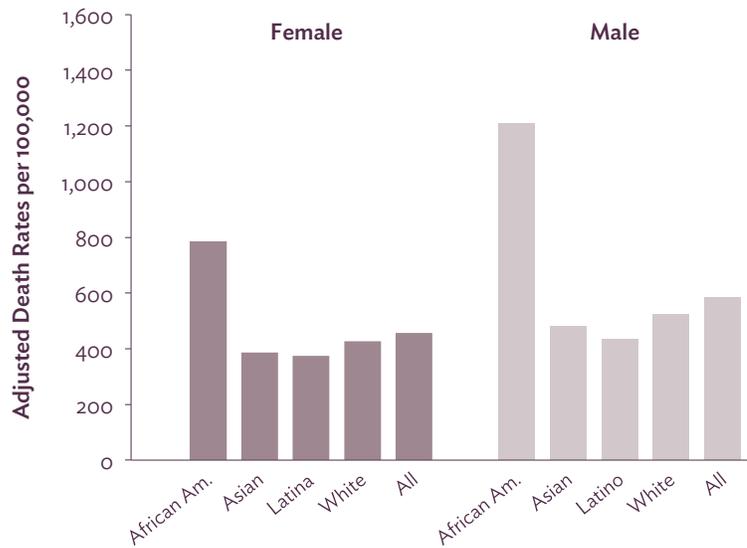
These vast differences in death rates are the result of differences in health status as seen throughout this report; these are health inequities.

Figure 5.3 DEATH RATES BY AGE AND GENDER Berkeley, 2008–2010



Source: Berkeley Public Health Division Death Certificates, US Census

Figure 5.4 DEATHS RATES BY GENDER AND RACE/ETHNICITY Berkeley, 2008–2010



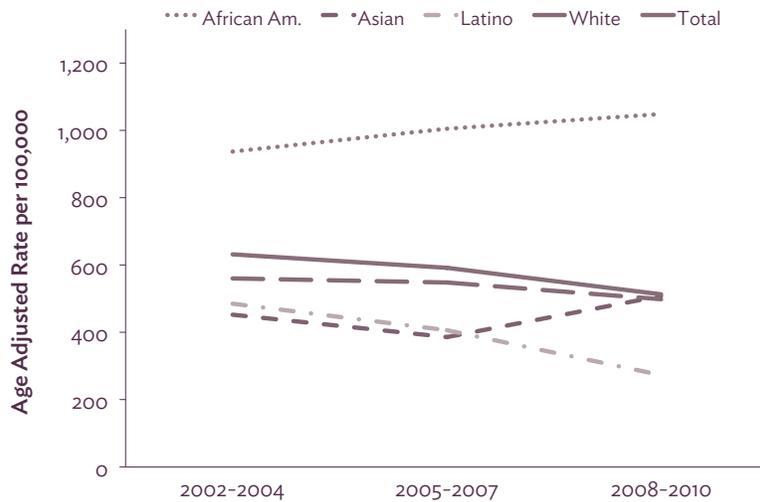
Source: Berkeley Public Health Division Death Certificates, US Census

Deaths in Berkeley continued

Throughout the last decade the death rate for African Americans has been markedly higher than the death rate of Whites and of the population overall. This gap appears to be widening.

The Latino death rate, in contrast, has decreased steadily during this time and is the lowest of all racial/ethnic groups.

Figure 5.5 DEATH RATES BY RACE/ETHNICITY AND YEAR OF DEATH Berkeley, 2001-2009



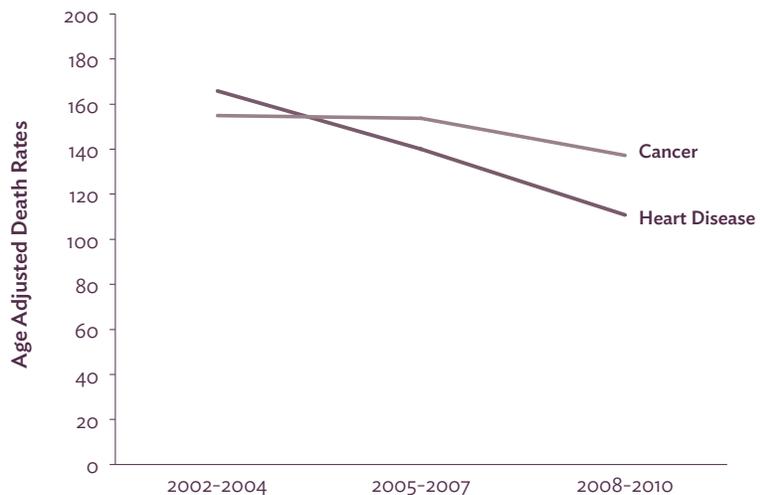
Source: Berkeley Public Health Division Death Certificates, US Census

Causes of Death

Cancer and heart disease are the leading causes of death among Berkeley residents. They account for nearly half of all deaths.

Cancer has recently overtaken heart disease as the leading cause of death in Berkeley. Rates of both cancer and heart disease have decreased, but heart disease has decreased more quickly.

Figure 5.6 HEART DISEASE AND CANCER AGE ADJUSTED DEATH RATES City of Berkeley, 2002-2010



Source: Berkeley Public Health Division Death Certificates, US Census

Deaths in Berkeley *continued*

These two figures depict the difference between the underlying cause of death (as recorded on death certificates)³ and the actual cause(s) of death—the social, environmental, and behavioral factors that cause death.²

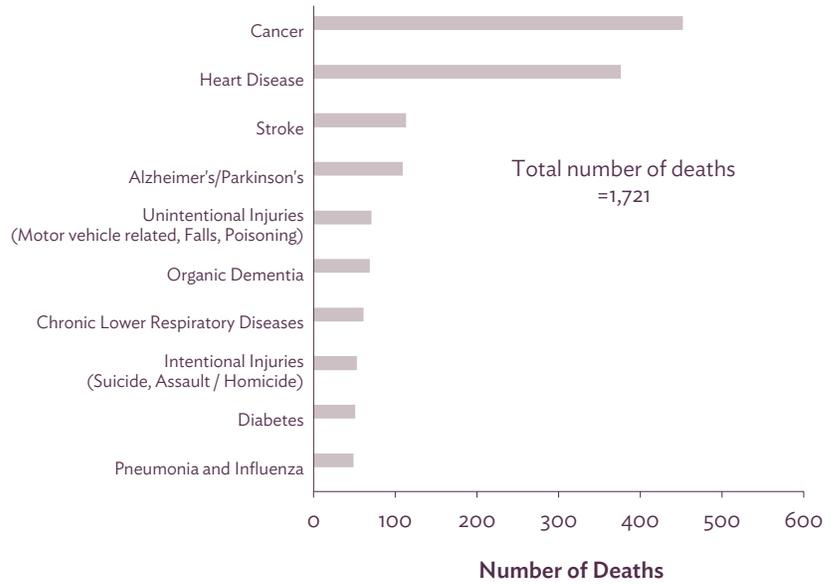
For example, a death certificate may indicate lung cancer as the underlying cause of death. But if the individual who died was a lifelong heavy smoker, the actual cause of death can be attributed to tobacco use.

One third of all deaths in Berkeley are due to actual causes of tobacco, alcohol and drug use; lack of physical activity; and poor nutrition.

While health behaviors are often viewed as individual choices, individual behaviors are strongly influenced by the environments and neighborhoods in which people live, work, learn, and raise their families. These social determinants heavily influence health-related choices and behaviors.⁴

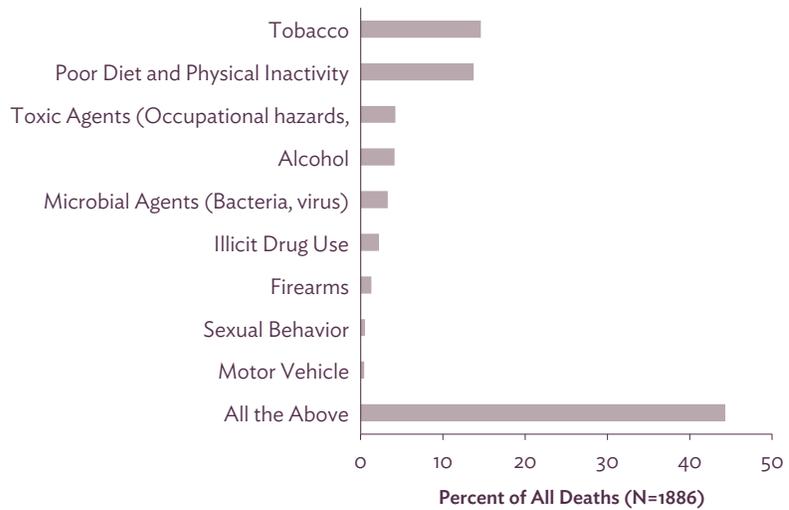
Creating healthier community environments supports people in making healthy choices and can prevent many of these deaths.

Figure 5.7 LEADING UNDERLYING CAUSES OF DEATH (DEATH CERTIFICATE)
Berkeley, 2008–2010



Source: Berkeley Public Health Division Death Certificates

Figure 5.8 LEADING ACTUAL CAUSES OF DEATH (BEHAVIORAL RISK FACTOR)
Berkeley, 2007–2009



Source: Berkeley Public Health Division Death Certificates, McGinnis JM, Foegle WH. Actual causes of death in the United States. JAMA 1993;270:2207–2212.

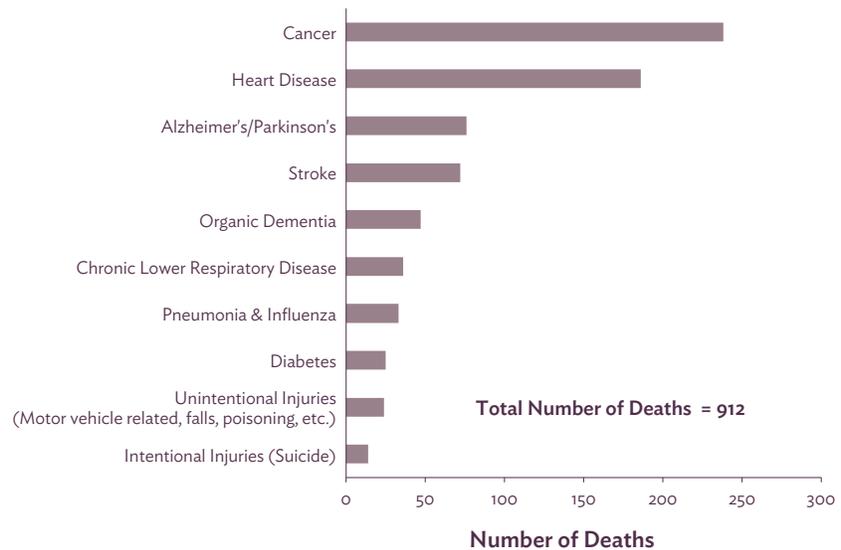
Deaths in Berkeley *continued*

Causes of Death by Gender

Cancer is the most common cause of death for both men and women. Heart disease and cancer together account for half of all deaths in both men and women.

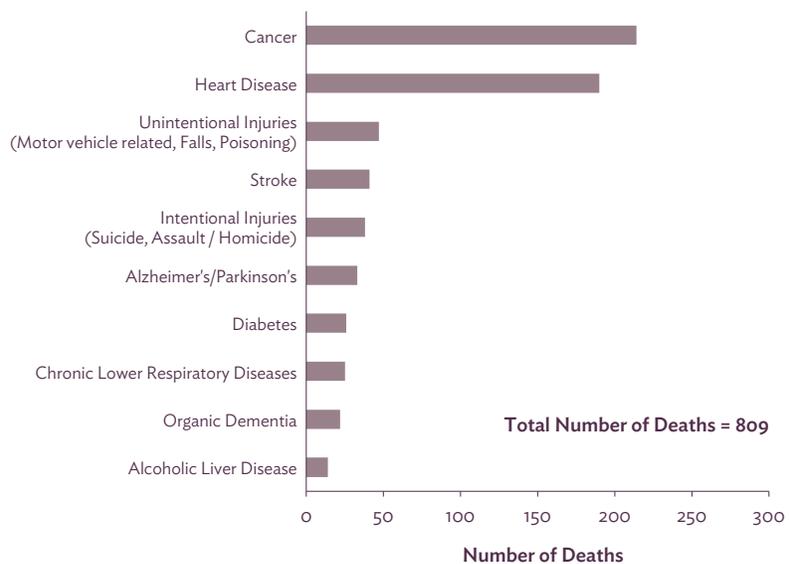
Following cancer and heart disease, leading causes of death differ between men and women. Men are more likely to die from injuries, and women are more likely to die from Alzheimer's, Parkinson's, dementia, or stroke. Diabetes is among the top 10 causes of death for both sexes.

Figure 5.9 LEADING CAUSES OF DEATH AMONG FEMALES Berkeley, 2008–2010



Source: Berkeley Public Health Division Death Certificates

Figure 5.10 LEADING CAUSES OF DEATH AMONG MALES Berkeley, 2008–2010



Source: Berkeley Public Health Division Death Certificates

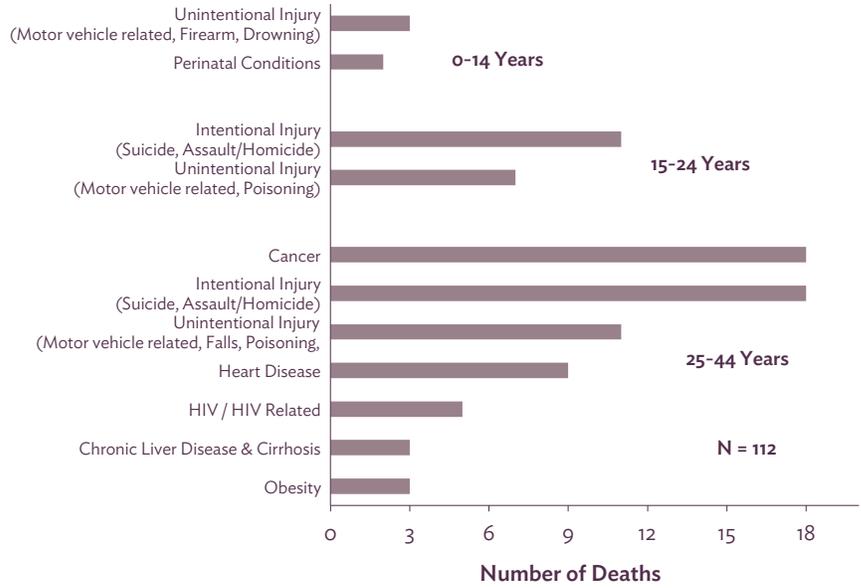
Deaths in Berkeley *continued*

Causes of Death by Age

The leading causes of death vary across the lifespan. Among teenagers and young adults, injuries are the leading cause of death. In the 25-44 year old age group, cancer and injury are significant causes of death, and heart disease begins to contribute to deaths.

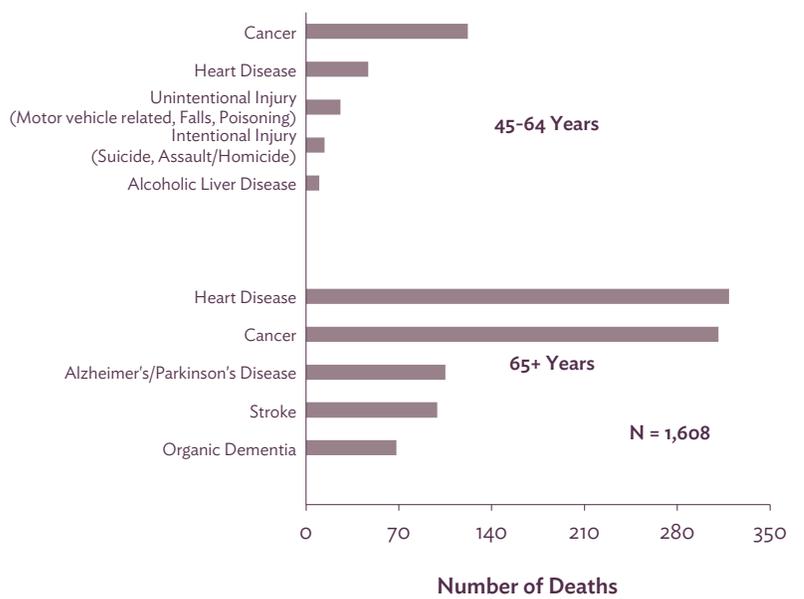
As people move into middle and older adulthood, cancer and heart disease emerge as the leading causes of death.

Figure 5.11 LEADING CAUSES OF DEATH, AGES 44 AND YOUNGER Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates

Figure 5.12 LEADING CAUSES OF DEATH, AGES 45 AND OLDER Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates

Deaths in Berkeley *continued*

Causes of Death by Race/Ethnicity

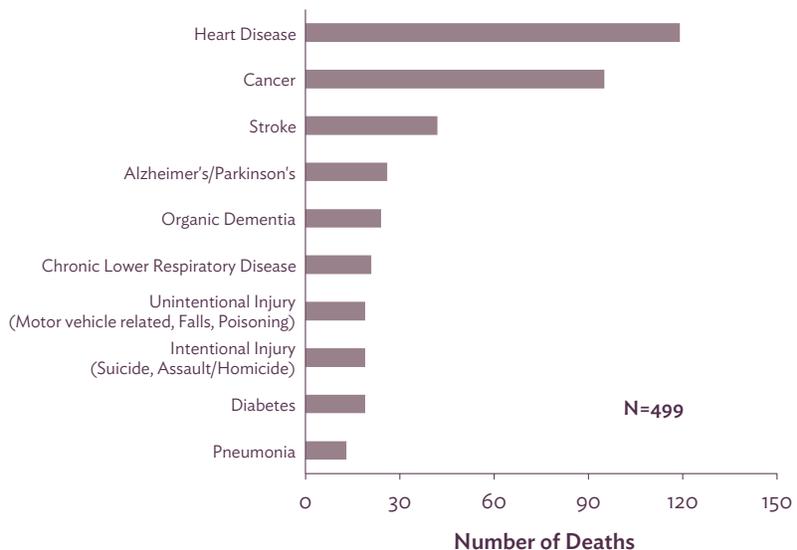
The leading causes of death vary by race/ethnicity, as shown in figures 5.13–5.16.

Cancer is the leading cause of death in all racial/ethnic groups except African Americans.

Among African Americans, heart disease is the leading cause of death.

Stroke, Alzheimer's/Parkinson's disease, Dementia, and Diabetes are among the top 10 causes of death for all groups.

Figure 5.13 LEADING CAUSES OF DEATH AMONG AFRICAN AMERICANS
Berkeley, 2008–2010

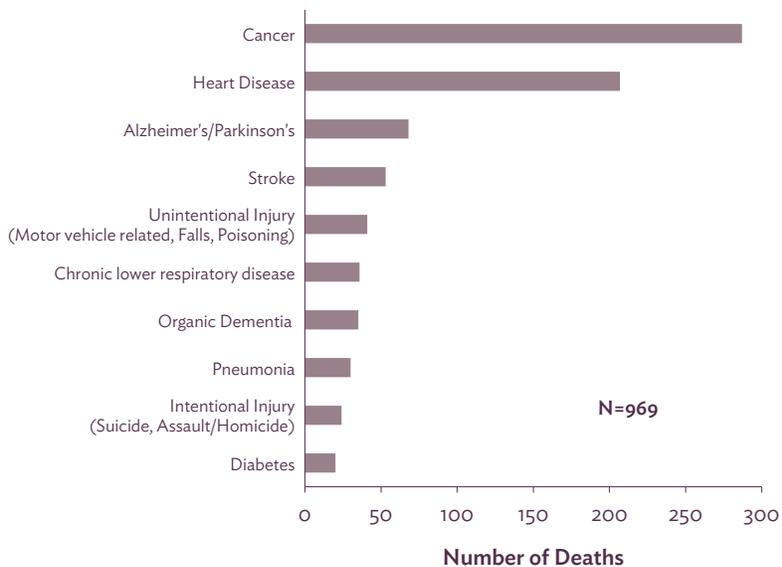


Source: Berkeley Public Health Division Death Certificates

HIGHLIGHT: Senior and Caregiver Support

The City of Berkeley's Aging Services Division offers support for seniors and their families. Caregivers in need of support or advice can receive consultation through the Social Services program. The North Berkeley Senior Center hosts a Parkinson's disease Movement class, provided by the Berkeley Adult School, and a Parkinson's Caregiver Support group. Both the North Berkeley Senior Center and the South Berkeley Senior Center provide a Brain Boost class sponsored by Bay Area Community Services.

Figure 5.14 LEADING CAUSES OF DEATH AMONG WHITES
Berkeley, 2008–2010



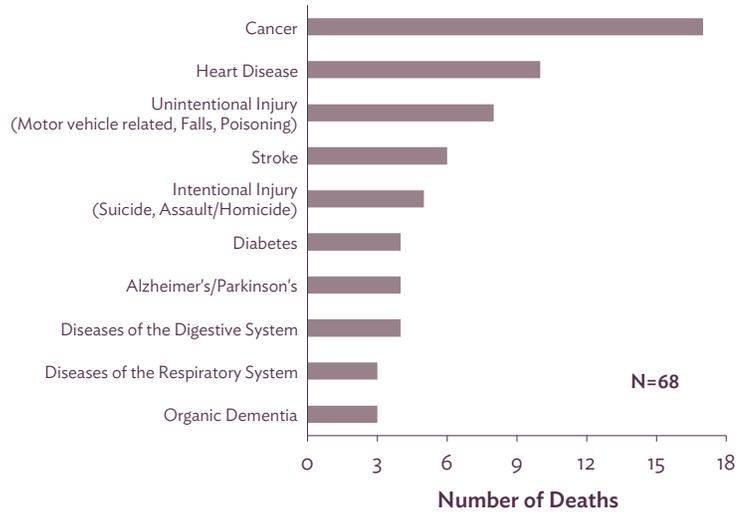
Source: Berkeley Public Health Division Death Certificates

Deaths in Berkeley continued

Among Latinos, unintentional injuries account for more deaths than heart disease.

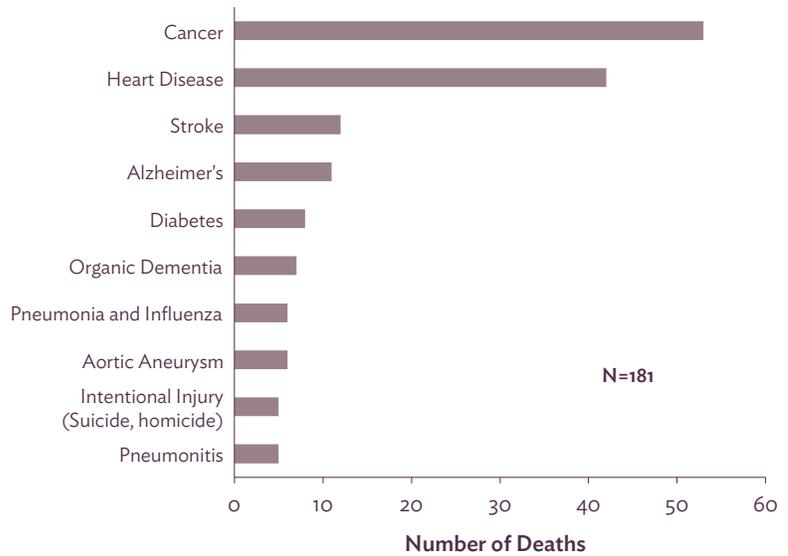
The Asian/Pacific Islander population is the only racial/ethnic group for whom unintentional injury is not a leading cause of death.

Figure 5.15 LEADING CAUSES OF DEATH AMONG LATINOS Berkeley, 2008–2010



Source: Berkeley Public Health Division Death Certificates

Figure 5.16 LEADING CAUSES OF DEATH AMONG ASIANS/PACIFIC ISLANDERS Berkeley, 2008–2010



Source: Berkeley Public Health Division Death Certificates

Deaths in Berkeley continued

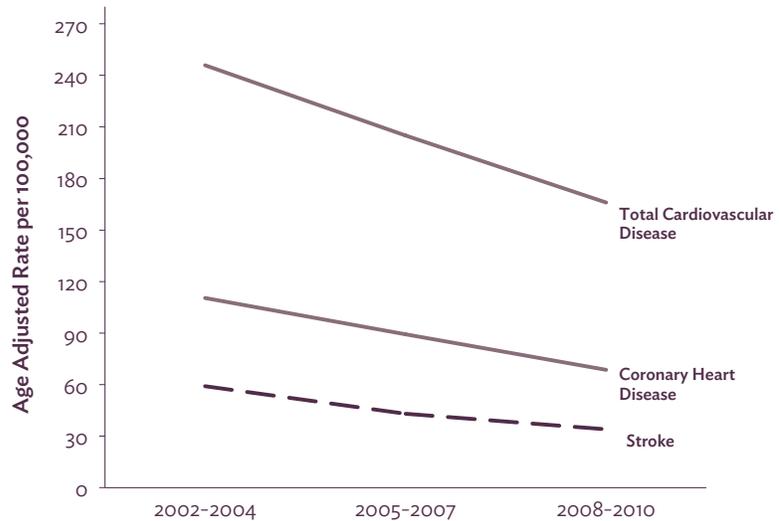
Cardiovascular Disease Deaths

Cardiovascular disease includes diseases of the heart and blood vessels (coronary heart disease), and stroke.⁵ Death rates due to all types of cardiovascular disease are decreasing in Berkeley.

Cardiovascular disease death rates have decreased for all racial/ethnic groups. The gaps among groups, however, remain unchanged.

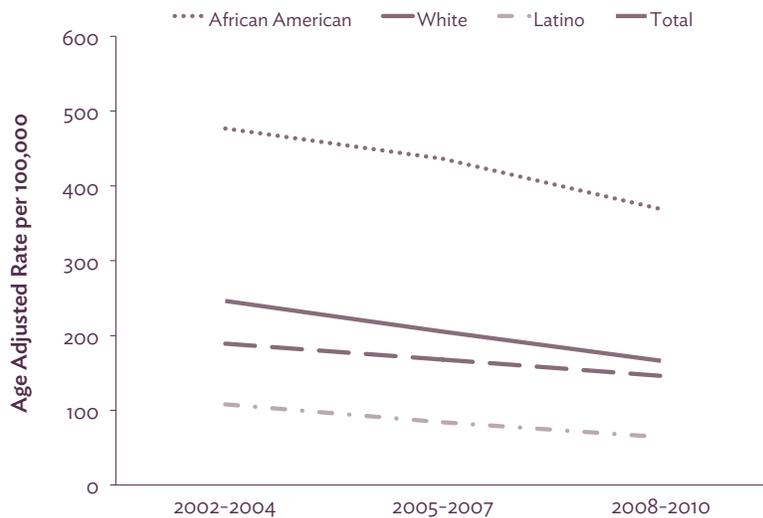
The cardiovascular disease death rate among African Americans is double that of the population as a whole. In contrast, the rate among Latinos is half that of the population as a whole.

Figure 5.17 CARDIOVASCULAR DISEASE DEATH RATES BY YEAR OF DEATH 2002-2010



Source: Berkeley Public Health Division Death Certificates, US Census

Figure 5.18 ALL CARDIOVASCULAR DISEASE DEATH RATES BY RACE/ETHNICITY City of Berkeley, 2002-2010



Source: Berkeley Public Health Division Death Certificates, 2002-2010

Deaths in Berkeley continued

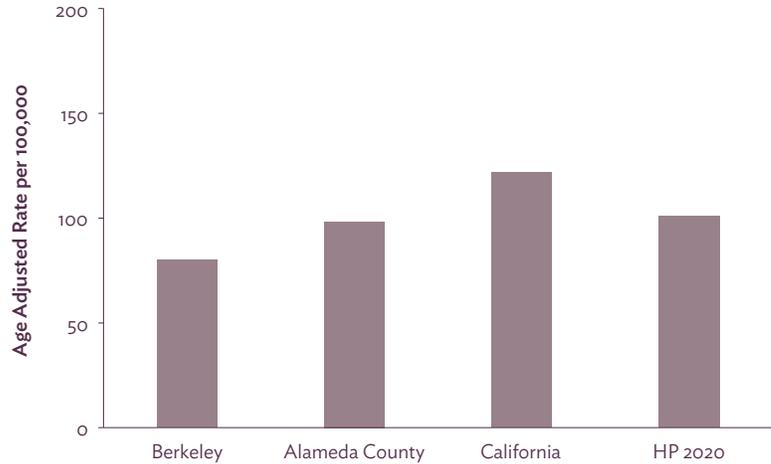
Coronary Heart Disease

Coronary heart disease is disease of the arteries that feed the heart. It can cause heart attacks and angina, or chest pain.⁶ Berkeley overall has a lower rate of death due to coronary heart disease than Alameda County and the state of California. Berkeley's coronary heart disease death rate meets the Healthy People 2020 goal.

However, not everyone in Berkeley has low rates of coronary heart disease. Men have higher rates than women, and African Americans have higher rates than other racial/ethnic groups.

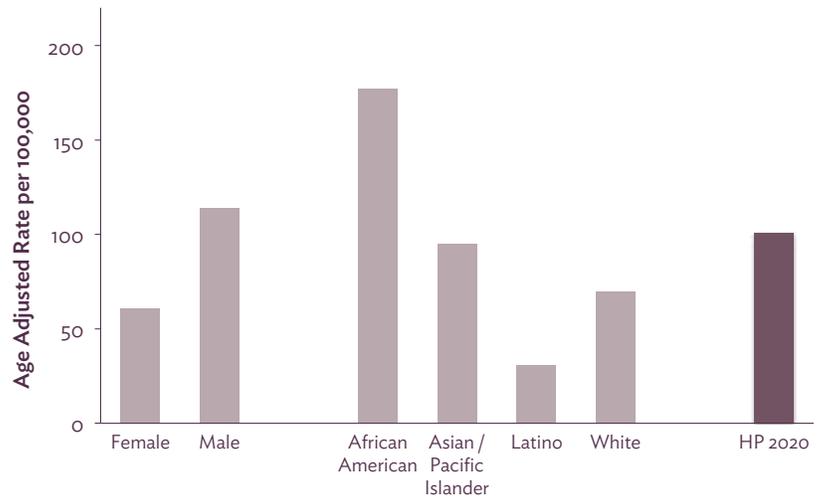
The coronary heart disease death rate among Berkeley African Americans is nearly double the Healthy People 2020 goal, and exceeds that of any other group in Berkeley.

Figure 5.19 CORONARY HEART DISEASE DEATH RATES
Berkeley (2008-2010), Alameda County (2008-2010), California (2008-2010),
and the United States Goal of HP 2020



Source: Public Health Division, US Census, Death Certificates

Figure 5.20 CORONARY HEART DISEASE DEATH RATES BY GENDER AND
RACE/ETHNICITY Berkeley, 2008-2010



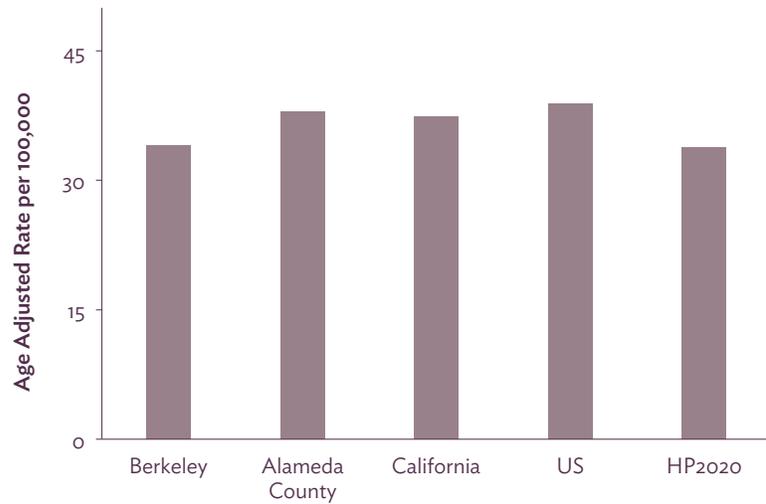
Source: Public Health Division, US Census, Death Certificates

Deaths in Berkeley continued

Stroke

Stroke is one of the 10 leading causes of death in Berkeley. Berkeley has a lower stroke death rate than Alameda County and the state of California. Berkeley very nearly meets the Healthy People 2020 goal.

Figure 5.21 STROKE DEATH RATES
Berkeley (2008-2010), Alameda County (2008-2010), California (2008-2010), and the United States (2008-2010), US Goal for HP 2020

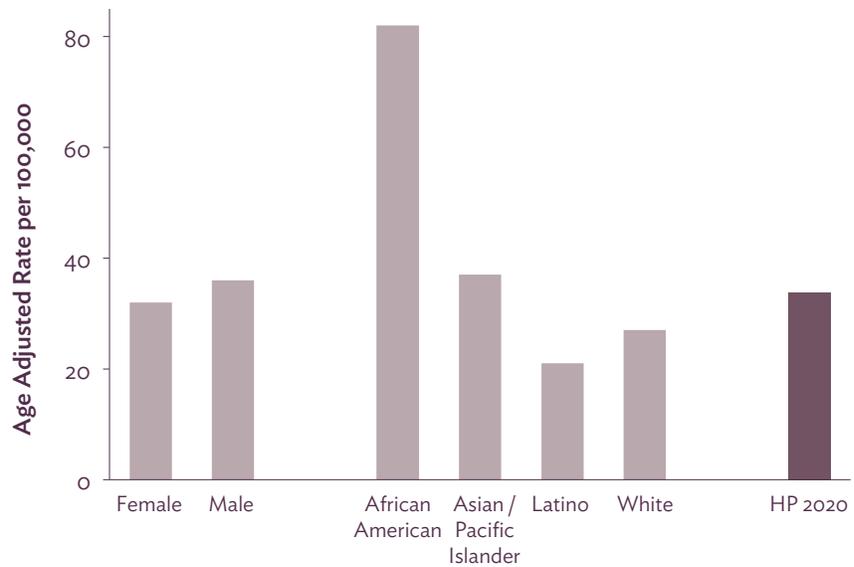


Source: Public Health Division, US Census, Death Certificates

The stroke death rate among African Americans in Berkeley far exceeds the rate for other racial/ethnic groups and is more than double the Health People 2020 goal.

For males and Asian/Pacific Islanders, stroke death rates exceed the Healthy People 2020 goal by a small margin.

Figure 5.22 STROKE DEATH RATES BY GENDER AND RACE/ETHNICITY
Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates, US Census

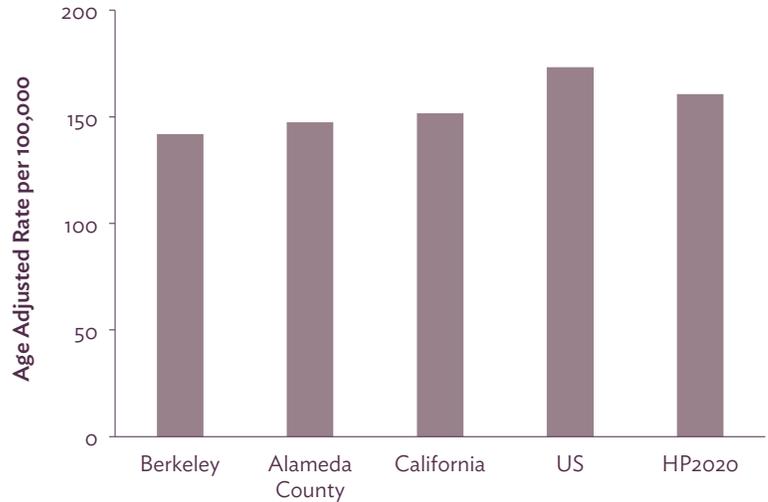
Deaths in Berkeley *continued*

Cancer Deaths

Cancer death rates are lower in Berkeley than in Alameda County and California, and meet the Healthy People 2020 goal.

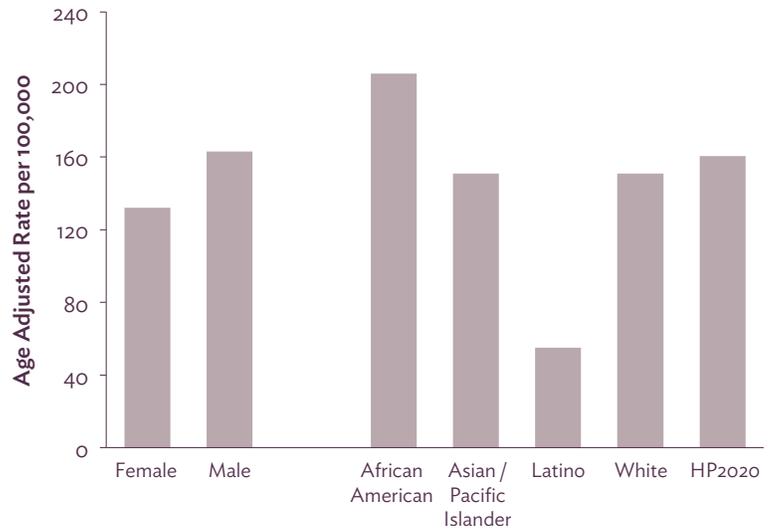
Men have higher cancer death rates than women, and African Americans have higher cancer death rates than other racial/ethnic groups. African Americans are the only racial/ethnic group whose cancer death rate does not meet the HP2020 goal.

Figure 5.23 **CANCER DEATH RATES**
Berkeley (2008-2010), Alameda County (2008-2010), California (2008-2010), and the United States (2008), US Goal for HP 2020



Source: Public Health Division, US Census, Death Certificates

Figure 5.24 **CANCER DEATH RATES BY GENDER AND RACE/ETHNICITY**
Berkeley, 2008-2010

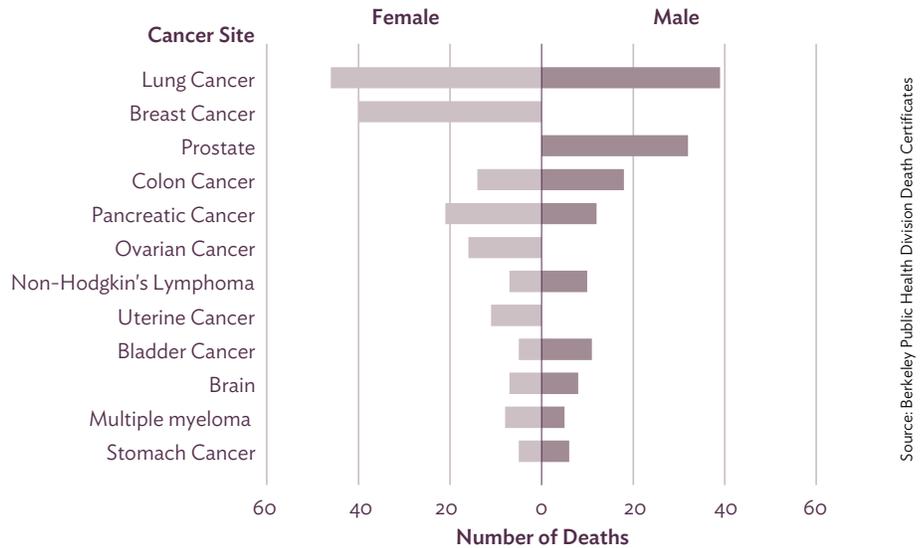


Source: Berkeley Public Health Division Death Certificates, US Census

Deaths in Berkeley continued

Cancer deaths differ between men and women. Lung cancer is the leading cause of cancer death for both sexes. It is followed by breast cancer among women and by prostate cancer among men.

Figure 5.25 LEADING CANCER CAUSES OF DEATH BY GENDER 2008-2010



Source: Berkeley Public Health Division Death Certificates

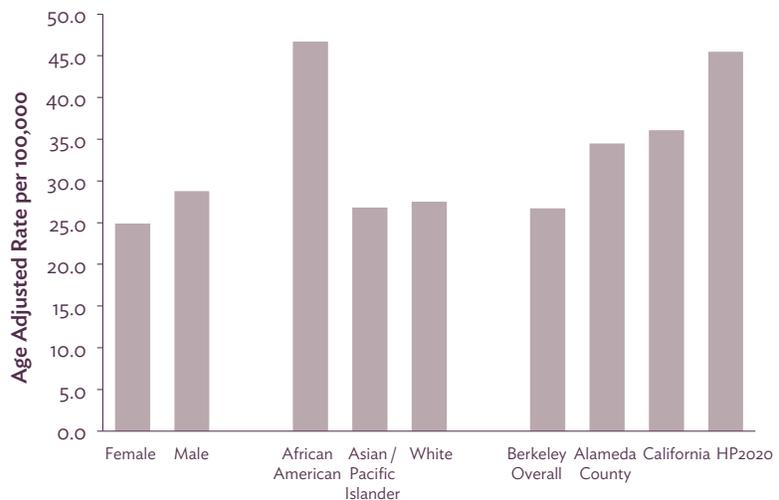
Lung Cancer

The lung cancer mortality rate is slightly higher in men than in women and is highest for African Americans.

The Berkeley lung cancer mortality rate is the lowest among all cities in Alameda County⁷ and is lower than the State. The City's population overall meets the Healthy People 2020 goal for lung cancer death rate.

African Americans in Berkeley very nearly meet the HP2020 goal for lung cancer deaths.

Figure 5.26 LUNG CANCER DEATH RATES BY GENDER AND RACE/ETHNICITY Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates, US Census

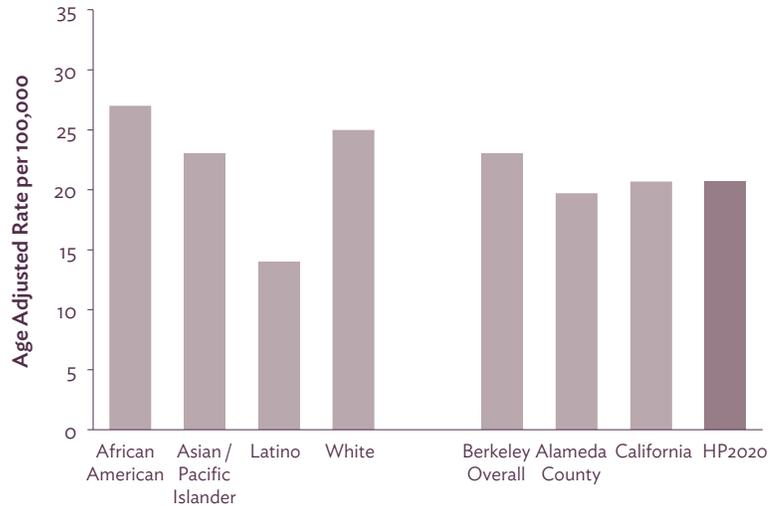
Deaths in Berkeley *continued*

Breast Cancer

Breast cancer is the most common cancer diagnosed among women in California, and the second most common cause of cancer deaths in women.⁸

The only racial/ethnic group in Berkeley to meet the HP2020 goal for breast cancer is Latino women. All other groups have higher breast cancer mortality rates than Alameda County, the State, and the Healthy People 2020 goal.

Figure 5.27 FEMALE BREAST CANCER MORTALITY RATE BY RACE/ETHNICITY Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates, US Census

HIGHLIGHT: Breast Cancer Area of Concern

Berkeley is located in the North San Francisco Bay “Area of Concern,” recently identified as one of four regions in the state with elevated rates of invasive breast cancer.⁹ The reasons for these elevated rates remain to be determined, and are the subject of investigation and research.

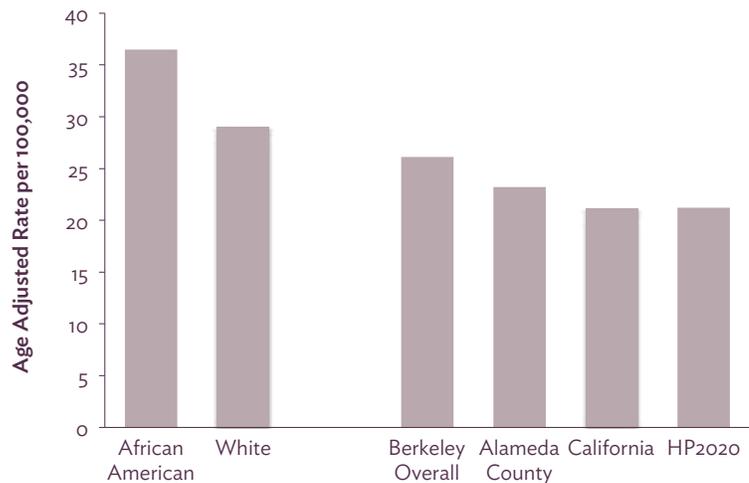
Prostate Cancer

Prostate cancer is the most commonly diagnosed cancer among men in California and the second most common cause of cancer death in men.⁸

Prostate cancer mortality is higher among African American than others.

Berkeley ranks second in prostate cancer incidence rate among all cities in Alameda County.⁷ Berkeley mortality rates are higher than those of Alameda County and the State, and do not meet the Healthy People 2020 goal.

Figure 5.28 PROSTATE CANCER MORTALITY RATE BY RACE/ETHNICITY Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates, US Census

Years of Potential Life Lost (YPLL)

What is this?

YPLL is a measure of premature death.¹⁰ It is a way of accounting for the difference between death at a relatively young age and death which occurs near the end of the natural human lifespan.

Why is this important?

Death rates and leading causes of death emphasize causes of death among older people. YPLL gives more weight to deaths among younger people. Thus, YPLL helps quantify the social and economic losses due to premature illness and death. When an entire demographic group experiences disproportionate YPLL, we lose the benefit of full participation of that sector in community life.

Causes of YPLL

Cancer is the leading cause of YPLL in Berkeley. This reflects the combined effects of cancer being the leading cause of death and being an illness that commonly strikes a broad age range.

In contrast, heart disease is much more common in older age than among children or young adults.

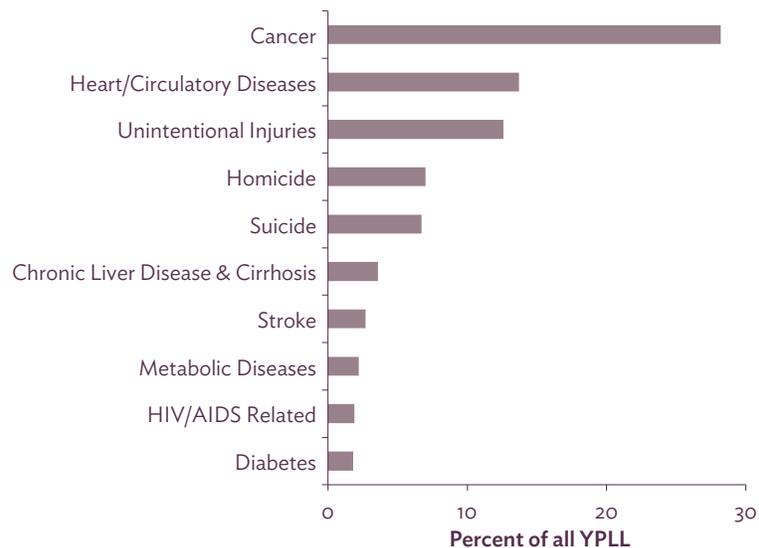
Unintentional injuries contribute almost as much as heart disease to YPLL. Although injuries are not as common a cause of death as heart disease, injuries affect younger individuals.

Causes of death that are more common in young people, such as injuries, have a large impact on total years of potential life lost. Public health may choose to target these issues for prevention efforts. Prevention of early deaths benefits the individual and the community by increasing the individual's opportunity to live a full and productive life.

What is Berkeley's status?

Cancer is the leading cause of YPLL in Berkeley. African Americans account for a disproportionately large share of the YPLL in Berkeley. This means that potential contributions of African Americans in the Berkeley community are disproportionately reduced by premature deaths.

Figure 5.29 YEARS OF POTENTIAL LIFE LOST (YPLL) BEFORE AGE 75 BY CAUSE OF DEATH Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates

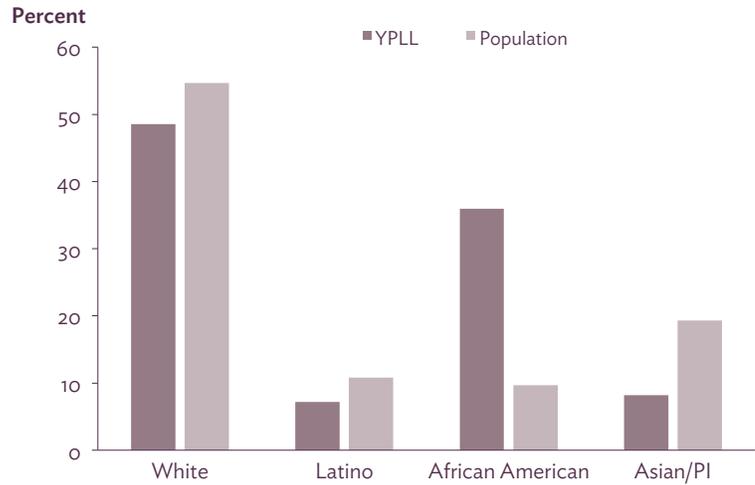
Years of Potential Life Lost (YPLL) continued

YPLL are not distributed evenly by race/ethnicity.

African Americans comprise less than 10% of Berkeley's population, but they account for more than 35% of years of potential life lost.

Other racial/ethnic groups in Berkeley contribute a smaller portion of the total YPLL than their representation in the population. Their lives are not being disproportionately shortened.

Figure 5.30 **YEARS OF POTENTIAL LIFE LOST (YPLL) BY RACE/ETHNICITY**
Berkeley, 2008-2010



Source: Berkeley Public Health Division Death Certificates

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CONCLUSION

This report presents a current snapshot of the health of the Berkeley Community. It describes how the health of our community compares to previous reports, how we compare to our County, the State, and national Healthy People 2020 goals, and how groups within Berkeley compare to each other. Berkeley’s community health is characterized by overall excellent health status and by striking health inequities.

These patterns are neither new nor unique to Berkeley. The underlying causes and their solutions lie in the environments

and neighborhoods in which people live, work, learn and raise their families. Public Health’s charge is to create the conditions in which everyone has access to environments which support a full and healthy life. Truly addressing the root causes of health inequities requires focused, consistent, comprehensive, and sustained effort on many fronts. Partnerships with community organizations, other City departments and divisions, and varied funding sources are key to effective public health interventions.

HOW BERKELEY PROVIDES THE 10 ESSENTIAL SERVICES OF PUBLIC HEALTH

Berkeley’s Public Health Division is responsible for fulfilling the 10 Essential Services of Public Health. The examples below demonstrate how Berkeley’s public health activities fulfill these essential services, the outcomes these programs achieve, and how they are funded. The work of the Division targets health issues and health inequities in Berkeley, but cannot solve them without the involvement of the broader community. These are examples only, not a comprehensive accounting of Public Health activities.

Essential Service	Berkeley Examples	Berkeley Outcomes	Funding Sources
1. Monitor health status to identify and solve community health problems	<ul style="list-style-type: none"> Communicable Disease surveillance (including TB, STIs, HIV/AIDS) Registration of births and deaths (Vital Statistics) 	<ul style="list-style-type: none"> Understanding of disease patterns and risk groups, by gender, age, race/ethnicity, education, geography and income Identification and response to emerging trends in births, deaths, and causes of death 	<ul style="list-style-type: none"> State funds for HIV surveillance and TB control Vital Statistics (fees for birth and death certificates) City General Funds State Public Health Realignment funds
2. Diagnose and investigate health problems and health hazards in the community	<ul style="list-style-type: none"> Communicable disease outbreaks Health inequities in cardiovascular disease, low birth weight, diabetes, and asthma 	<ul style="list-style-type: none"> Identification and control of outbreaks such as mumps and norovirus Low birth weight disparity has decreased from 4-fold to 2.5-fold Increased community awareness and treatment of high blood pressure 	<ul style="list-style-type: none"> State and Federal funds; (Nutrition; Tobacco Prevention) Berkeley City General Fund (including Health Disparities)
3. Inform, educate and empower people about health issues	<ul style="list-style-type: none"> Berkeley High School Health Center and Berkeley Technology Academy Clinic School Linked Health Services 	<ul style="list-style-type: none"> Youth and their families have access to health information and services in the context of their education, recognizing the critical links between education and health 	<ul style="list-style-type: none"> Family PACT City General Fund CFHC/Title X CHDP Alameda County Measure A BUSD
4. Mobilize community partnerships and action to identify and solve health problems	<ul style="list-style-type: none"> Health-care institutions: LifeLong Medical Care, Alta Bates Hospital, Berkeley Free Clinic Community Service providers: Head Start, NEED, Childcare providers, faith-based organizations 	<ul style="list-style-type: none"> Free Drop-in Hypertension Clinic, monthly neighborhood health van and barbershop blood pressure screenings with LifeLong Medical Care Early developmental screening and referral for infants and toddlers in community settings Safe needle exchange available locally 	<ul style="list-style-type: none"> City general fund (including Health Disparities) State Public Health Realignment Mental Health Services Act Prevention/Early Intervention (MHSA/PEI)

HOW BERKELEY PROVIDES THE 10 ESSENTIAL SERVICES OF PUBLIC HEALTH *continued*

Essential Service	Berkeley Examples	Berkeley Outcomes	Funding Sources
5. Develop policies and plans that support individual and community health efforts	<ul style="list-style-type: none"> Tobacco ordinances Heart 2 Heart mini-grant program for community members and groups 	<ul style="list-style-type: none"> Smoke-free Multi-Unit Housing Ordinance under development Limit involuntary exposure to secondhand smoke in the home and associated health effects including asthma exacerbation Enhanced neighborhood leadership in creating healthy environments 	<ul style="list-style-type: none"> State Tobacco Prevention Program City General Fund State Public Health Realignment Alameda County Measure A
6. Enforce laws and regulations that protect health and ensure safety	<ul style="list-style-type: none"> Immunization requirements for school entry Public Health Emergency Preparedness program 	<ul style="list-style-type: none"> Enhance compliance with immunization requirements in preschools and schools, including middle school Tdap requirement Develop and exercise coordinated emergency responses in the community and with partner agencies 	<ul style="list-style-type: none"> State Immunization Program City general fund State Public Health Realignment State and Federal PH Emergency Preparedness funding City Measure GG funding
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable	<ul style="list-style-type: none"> Nursing Targeted Case Management (TCM) Partnerships with LifeLong Medical Care and Alameda County Public Health 	<ul style="list-style-type: none"> Comprehensive nursing needs assessment of families receiving case management services, with linkage to Medi-Cal providers and to other health and social services Linkage to full-scope eligibility and enrollment assistance, including transitions related to Health Care Reform 	<ul style="list-style-type: none"> City General fund State Public Health Realignment
8. Assure a competent public and personal health care workforce	<ul style="list-style-type: none"> Youthworks and AmeriCorps opportunities Training site for health professional students of all types and levels (high school, community college, undergraduates, graduate students, and clinical internships) 	<ul style="list-style-type: none"> Strengthening of the pipeline for a well-trained, diverse, local workforce committed to serving the Berkeley community 	<ul style="list-style-type: none"> Program funds (e.g. Tobacco Prevention and PH Preparedness) City General Fund State Public Health Realignment
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services	<ul style="list-style-type: none"> Member of the local Fetal and Infant Mortality Review Board Participation in Alta Bates Hospital's Infection Control Committee 	<ul style="list-style-type: none"> High quality community-based perinatal services Monitoring and minimizing hospital-based infections 	<ul style="list-style-type: none"> State CHDP/Perinatal Services Coordinator City General fund State Public Health Realignment
10. Research for new insights and innovative solutions to health problems	<ul style="list-style-type: none"> Contribute our experience to the scientific literature and to professional and academic venues Pilot-test site for BARHII's health equity self-assessment tool 	<ul style="list-style-type: none"> Mumps outbreak experience published in CDC's MMWR, including national policy recommendations BARHII self-assessment health equity tool is now part of NACCHO's national Health Equity toolkit 	<ul style="list-style-type: none"> City General funds (Health Disparities) State Public Health Realignment

NEXT STEPS

Despite the on-going efforts of public health in Berkeley, and despite many successes, health inequities which have been present for decades persist. Berkeley has made significant progress in improving many measures of health, including decreasing the magnitude of some health inequities —and much work remains to be done.

The work cannot be done by public health alone. Input from the community as a whole, and partnerships among community members and organizations, are key to addressing the root causes of health inequities with a focused, consistent, comprehensive, and sustained effort.

This Report is a starting point from which Public Health, HHCS, and the City can develop priorities and strategic interventions to improve community health. As a City public health jurisdiction whose community includes a school of Public Health, a non-

profit hospital, a robust Community Health Center network, a strong business community, a rich array of community partners, and an engaged population, Berkeley is a strong candidate for developing and piloting innovative approaches to health equity.

We look forward to discussing this report with Berkeley residents and community partners to shape our work going forward. You may contact us at publichealth@cityofberkeley.info.

Information about community meetings, City Council meetings and reports, and Community Health Commission meetings is available at <http://www.ci.berkeley.ca.us>.

You are an essential part of ensuring a vibrant and healthy Berkeley for all.

Thank you.

TECHNICAL NOTES

DATA SOURCES

Population and Demographics

- **The Decennial Census:** Conducted every ten years by the U.S Census Bureau, the Census is a total count of the population and the main source for population demographics and characteristics.¹
- **The American Community Survey:** The American Community Survey (ACS) is an ongoing survey of a sample of the US population addressing characteristics such as age, sex, race, family, income, education. The survey data is used for distribution of federal and state funds in addition to helping communities plan investments and services.²
- **Alameda Countywide Homeless Count and Survey Report:** Alameda County conducts a research study, a point-in-time survey, every two years to count how many people are homeless in the county and several key characteristics of those who are not housed.³
- **The California Employment Development Department (EDD):** The source of estimates of employment and unemployment rates for this report. These data are produced for the nation and the state, and for selected local areas. The unemployment rate is derived from a federal survey of 5,500 California households.⁴

K-12 Students in the Berkeley Unified School District (BUSD)

- **Demographic information:** The demographics of K-12 students enrolled in the Berkeley Unified School District were reported by the Berkeley Unified School District (BUSD) to the California Department of Education.⁵
- **California Healthy Kids Survey (CHKS):** The California Healthy Kids Survey is the source of data for youth behaviors measured in students enrolled in 5th, 7th, 9th, and 11th grades in the Berkeley Unified School District.⁶ The survey was developed under a contract from the California Department of Education by WestEd and Duerr Evaluation resources. Comparison data is available for California (California Student Survey)⁷ and the United States (Youth Behavioral Risk Survey).⁸

Physical Fitness

- **Physical Fitness:** FITNESSGRAM Healthy Fitness Zone (HFZ) Charts: Standards established by The Cooper Institute in association with the California Department of Education that represent levels of fitness offering some degree of protection against diseases resulting from sedentary living. These standards are organized by gender and age.⁹

Birth & Death Certificates

- **Public Health Division Vital Statistics Office:** The Public Health Division Vital Statistics Office of Berkeley is a unit within the city's Public Health Division responsible for registration and maintenance of birth and death certificates.¹⁰

DATA SOURCES *continued*

- o Birth certificates record characteristics of the parents (e.g., maternal age), pregnancy (e.g. duration of pregnancy and prenatal care visits), and birth outcomes (weight of the newborn).
- o Death certificates provide demographics of the decedent, the cause of death, and census tract of residence.

Breastfeeding

- **California Newborn Screening Program Database:** Screening information of newborns conducted by the Genetic Disease Branch of the California Department of Health Services. The program screens newborn blood samples for over 80 conditions such as cystic fibrosis, phenylketonuria, and sickle cell disease. Additional information within the database includes in-hospital breastfeeding rates.¹¹
- **Women, Infants and Children (WIC) Program Database:** WIC is a federally-funded national health and nutrition program for women, infants, children, and low-income families. The program provides information on breastfeeding, cooking, education materials and immunization data.¹²

Communicable Diseases

- **California Department of Public Health, STD Control Branch:** Case reports are submitted to local health jurisdictions in the form of laboratory reports and Confidential Morbidity Reports (CMRs). The local health jurisdictions then submit the data to the California Department of Public Health (CDPH).¹³
- **Confidential Morbidity Reports:** Mandated communicable disease reports submitted to the local health officer by phone, fax, or mail within specified time limits. These reports are received and compiled by the Berkeley Public Health Division. Information includes patient's demographics, disease diagnosed, and laboratory tests.¹⁴
- **HIV/AIDS Registry:** The statistics presented in the HIV and AIDS section were obtained using the Berkeley HIV/AIDS Case Registry. HIV/AIDS cases are reported to the Berkeley Public Health Division and then to the State Office of AIDS as part of the confidential HIV/AIDS Surveillance System.¹⁵

Childhood Immunization

- **California Department of Health Services Expanded Kindergarten Retrospective Survey:** A primary source of information about childhood immunization coverage in California. This survey provides estimates of immunization coverage among kindergarten students.¹⁶

Hospital Discharge (OSHPD)

- **Office of Statewide Health Planning and Development (OSHPD):** OSHPD is the leader in data collection and dissemination of California's healthcare infrastructure in association with the State of California. Publications include data compilation on hospitalizations, patient discharge, and hospital workforce.¹⁷

Adult Health Behaviors

- **California Health Interview Survey (CHIS):** The California Health Interview Survey is the largest state health survey in the nation. The survey provides both state-wide and county-wide data on topics such as self-perceived health status, disability, chronic health conditions, cancer screening, health insurance, alcohol and tobacco use, mental health, diet, and physical activity.¹⁸

Traffic Injuries

- **Statewide Integrated Traffic Records System (SWITRS):** The SWITRS is an annually updated database conducted by the California Highway Patrol in collaboration with CalTrans, the California Department of Transportation, and the California Department of Motor Vehicles. The database provides information on traffic collisions throughout California including demographics of the injured and many other aspects of the collision on both state and countywide levels.¹⁹

Domestic Violence

- **State of California Department of Justice:** The Berkeley Police Department collects data on domestic violence incidents reported to the police and then reported to the State of California Department of Justice. The data collected from police reports includes both victim and aggressor demographics and their relationship (spouse, ex-spouse/boyfriend/girlfriend, cohabitation).²⁰

Cancer Incidence

- **Cancer Prevention Institute of California (CPIC):** The Cancer Prevention Institute of California works across all communities to explore the causes of cancer by studying the genetic, environmental, and viral origins of cancers and monitoring cancer incidence diagnosed each year in the general population.²¹

KEY TERMS

Adjustment Disorders: A psychological response, such as marked distress, to an identifiable stressor or stressors.²²

Age-Adjusted Rates: Rates for hospitalization and mortality were age-adjusted. Age-adjustment is a statistical technique that makes it possible to compare health outcomes of populations that have different age distributions. Hospitalization and death rates increase rapidly after age 60, so population groups that have proportionately more older persons will appear to have high rates compared to groups that have a smaller proportion of older people. Once the rate is age adjusted, any difference seen cannot be attributed to age.²³

Ambulatory Care Sensitive Conditions (ACSC): ACSCs are conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease.²⁴

Anxiety Disorders: Disorders with prominent anxiety symptoms such as panic and/or phobias.²⁵

Body Mass Index (BMI): A number calculated from an individual's weight and height. BMI does not measure body fat directly but correlates to direct measures.²⁶

Bipolar Disorders: Disorders characterized by marked mood swings, including periods of depressive symptoms and periods of elevated mood/mania.²⁵

Civilian Population: All individuals who are at least 16 years of age, who are not institutionalized (in, for example, correctional, residential nursing, or mental health facilities) nor on active duty in the Armed Forces.²⁷

Coefficient of Variation (CV): The CV is a way to describe the variation of an estimate. Data with CV values of 30% and greater may be unreliable, and subsequently were not included in this report. As a result, some rates pertaining to certain ethnicities or genders may be missing from this report.²⁸

Cultural Competence: A set of behaviors, attitudes, policies, and procedures that enable individuals to work effectively across cross-cultural and diverse linguistic situations.²⁹

Death Rate (Mortality Rate): Reflects the likelihood of death occurring at a given age. The rate is calculated by dividing the number of deaths in a specified time period by the population.²³

Disorders of Infancy, Childhood, or Adolescence: Psychological disorders usually first diagnosed early in an individual's life.²²

Disruptive Behaviors: Disorders characterized by rule-breaking, aggressive, and/or oppositional behavior by a child or adolescent.²²

Dropout Rate: By using dropout and enrollment counts from the same scholar year, the annual dropout rate is calculated by dividing the number of dropouts in grades nine through twelve by the total enrollment in those grades.^{30, 31}

Educational attainment: A term referring the highest level of education that an individual has completed. Educational attainment is distinct from the level of schooling an individual is currently enrolled in.³²

Employed/Employment: Members of the civilian population who worked during the reference period week. In the American Community household survey for determining employment status, the reference period is generally the calendar week that includes the 12th of the month.^{27, 31}

Federal Poverty Level (FPL): The FPL is established annually. The 2010 FPL for a family of 4 was an annual income of \$22,050. See "Poverty" for further discussion.³³

Health Disparities: Differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups.²⁹

Health Inequity(s): Concerns those differences in population health that can be traced to unequal economic and social conditions and are systemic and avoidable; thus being inherently unjust and unfair.²⁹

Healthy People 2020 (HP2020) is a national ten-year framework for improving the health of all people in the United States.³⁴ It identifies four overarching goals:

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development, and healthy behaviors across all life stages.



KEY TERMS *continued*

Homelessness: A state of residence which can be categorized into one or more of the following:³⁵

- o **Hidden Homeless:** A status which includes individuals in certain unstable or short-term housing situations which often lead to literal or chronic homelessness. These short-term housing situations include living temporarily with a friend or relative, in a motel, or facing eviction within seven days.
- o **Literal Homeless:** A status which includes individuals who sleep in places not meant for human habitation, such as a car or the street, individuals residing in emergency shelters and transitional housing, and individuals who have been in places such as a hospital or jail for a short period after having been homeless.
- o **Chronic Homeless:** A status referring to adults who do not have children with them, have at least one disability, and have been homeless for a long time or frequently in the recent past.

Household: A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied.³¹

- o **Family household:** A unit composed of a householder living with people related to him or her by birth, marriage (excluding same sex couples) or adoption.
- o **Nonfamily household:** A unit composed of a householder living alone or with nonrelatives only.
- o **Householder:** The person who owns or rents the home.
- o **Single householder families:** A family unit composed of an adult living with related children and without a spouse.

Income vs. Wealth: Income is the net monetary earnings of an individual or household. Wealth refers to the total accumulated amount of resources or assets an individual possesses.³⁶

Labor Force: The group made up of Americans who have jobs or are seeking a job, are 16 years of age or older, are not serving in the military, and are not institutionalized. In other words, all Americans who are eligible to work in the everyday U.S. economy represent the labor force.^{27, 31}

- o **Not in the Labor Force:** Members of the civilian population who are not classified as employed or unemployed. This category includes retired persons, students, those taking care of children or other family members, and others who are neither working nor seeking work.

Life Expectancy: The number of years that a newborn is expected to live based on current death rates. For this report, life expectancy was calculated using the abridged life table method using mortality rates in 19 age bands.²³

Linguistic Isolation: Since 2010 the U.S. Census term, “Linguistic Isolation” has been replaced with the descriptive phrase: “Households in which no one 14 and over speaks English only or speaks a language other than English at home and speaks English very well.” In other words, all members of the household 14 years old and over have at least some difficulty with English.³⁷

Low Birth-Weight Infants: Describes live births in which the newborn weighs less than 2,500 grams or 5.5 pounds. The low birth weight rate (or percentage) is the number of newborns weighing less than 2500 grams divided by the total number of live births in a specified time period.³⁸

Major Depression (Major Depressive Disorder): Chronic feelings of sadness and depression which are frequent enough to interfere with an individual’s daily life.^{25, 22}

Mood Disorders: Mental disorders characterized by alternating periods of elevated and depressive moods.^{25, 22}

Obese: Individuals who have a body mass index (BMI) of 30 or greater.³⁹

Overweight: Individuals who have a BMI between 25 and 29.9.³⁹

Post-traumatic Stress Disorder (PTSD): An anxiety disorder in which individuals continue to experience feelings of anxiety, fear, or stress despite being in safe conditions. PTSD symptoms often follow exposure to an extreme traumatic stressor, such as threat of physical injury.^{25, 22}

Poverty: Poverty status measures family income relative to family size using the poverty threshold developed by the U.S. Census Bureau. Families or individuals with income below their appropriate threshold are classified as below the poverty level. The thresholds vary by the number of adults and children in the family. The 2010 threshold for a family of 4 was an annual income of \$22,050. The methodology was created in the 1960’s and reflects the assumption that the cost of food for a minimum but adequate diet accounted for one-third of family income.^{40, 31}

Premature birth: A live birth with a gestation age of less than 37 weeks.⁴¹

Prescription drug reactions: “correct drug properly administered in therapeutic or prophylactic dosage, as the cause of any adverse effect.”^{37, 42}

KEY TERMS *continued*

Schizophrenia: Schizophrenia is a chronic, severe, and disabling brain disorder often involving visual and auditory hallucinations. Other common symptoms include distorted thought processes and paranoia.^{25, 22}

Social Determinants of Health (SDOH): The complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world.²⁹

Socioeconomically disadvantaged: The California State Board of Education defines the “socioeconomically disadvantaged subgroup” as students who meet either of two criteria: Neither of the student’s parents has received a high school diploma **OR** the student is eligible for the free or reduced-price lunch program, also known as the National School Lunch Program (NSLP).⁴³

Timely Initiation of Prenatal Care: Defined as one or more prenatal visits to a doctor occurring in the first trimester of the pregnancy.³⁸

Unemployed: Members of the civilian population who did not work during the week (including the 12th of the month) but who looked for work and were able and available for work.^{27, 31}

Unemployment Rate: The number of unemployed individuals divided by the labor force. The rate is expressed as a percentage.²⁷

Unintentional Injuries: Injuries which are accidental or without personal intent, such as motor vehicle crashes or fires.⁴⁴

Years of Potential Life Lost (YPLL): The concept of years of potential life lost (YPLL) involves estimating the average time a person would have lived had he or she not died prematurely. This measure is used to help quantify social and economic loss due to premature death. For example, assuming an average lifespan of 75 years, an individual who dies at age 25 has died 50 years earlier than expected ($75-25=50$). Those 50 years of potential life have been lost; the YPLL is 50 years. If the same individual had died at age 70, the YPLL would only be 5 ($75-70=5$).²³



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