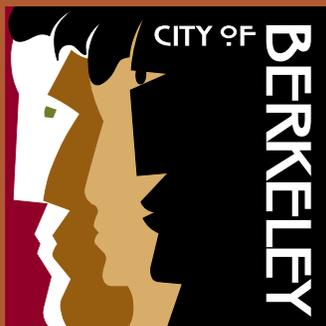


City of Berkeley

Health Status Report 2018



ACKNOWLEDGEMENTS

We wish to acknowledge the many persons who contributed their time, expertise, and wisdom to inform this report. The assistance has been invaluable. We thank the City Manager, Dee Williams-Ridley, the City Council, Health Housing and Community Services (HHCS) Director Paul Buddenhagen, and HHCS staff for their support and dedication to the City's health.

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Berkeley Unified School District

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.

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.

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Robin Kempster





BerkeleySide



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EXECUTIVE SUMMARY

The City of Berkeley is a prosperous, innovative, and thriving community. Our city has considerable wealth, high levels of educational attainment, and a rich culture that all contribute to a healthy community. Despite overall good health, Berkeley is not a city where all people are living long and healthy lives and are achieving the highest possible level of health. In Berkeley, African Americans and other people of color die prematurely and are more likely than White people to experience a wide variety of adverse health conditions throughout their lives.

Achieving optimal health for all requires that everyone has access to resources and environments that support health and wellness. Higher incidence of disease is linked to neighborhoods that have been historically under-resourced and overexposed to unhealthy conditions. These neighborhoods have more people living in poverty and more people of color than surrounding neighborhoods. A truly healthy Berkeley depends on achieving and maintaining optimal health and wellness for all people regardless of an individual's or group's position in society. Health inequities among racial and ethnic groups are striking and extend across a number of indicators. These health inequities are neither new nor unique to Berkeley—nevertheless, they are unjust and unacceptable. The conditions in which we are born, grow, live, work, and age, broadly known as the social determinants of health, greatly influence how well and how long we live. To aggressively address the health inequities we see in this report requires that we also address the underlying social, economic, and environmental inequities that perpetuate them.

Berkeley is well positioned to realize greater health equity. Our community is known for its political and social activism. Our residents are passionate about creating healthier communities. Our leaders have a long standing commitment to achieving health equity and have been at the forefront of innovative health programs and policies. We are one of three cities in the state of California that has its own Public Health Jurisdiction. This distinction enables public health services to be focused on and dedicated to a discreet population. While the challenges we face should not be underestimated, through strategic collaboration, a unified vision, and broad community engagement we can achieve our mission of optimal health and wellness for all.

The Health Status Report is written by the Public Health Division of the Department of Health, Housing and Community Services and is released periodically to provide a picture of the health status of people who live in Berkeley. The report has three key objectives:

- Monitor health concerns impacting the City with a focus on health disparities and social determinants of health;
- Show trends and changes in health over time;
- Guide our Public Health work and support community partners in shaping and responding to policy and other factors influencing Berkeley's health and quality of life.

This report will help the Public Health Division define goals and objectives for improving Berkeley's health. It is also designed to spark community conversations, spur collaboration and inform decision making throughout Berkeley.



HISTORY OF HEALTH STATUS IN BERKELEY

Our last health status report, released in 2013, identified four leading health inequities. Since 2013, some of these disparities have narrowed while others persist. The Public Health Division has focused on them through our work and programs in the community. These health inequities, described below, will continue to be a focus of Berkeley's Public Health Division.

- **Cardiovascular disease: high blood pressure, coronary heart disease, and stroke**

High blood pressure is one of the leading risk factors for heart disease and stroke. Fortunately, people can lower their high blood pressure, and thus reduce or prevent heart disease and strokes through a healthy diet, exercise, proper medications, and close monitoring of blood pressure levels.

In Berkeley, the rate of hospitalizations due to high blood pressure continues to rise. African Americans continue to be hospitalized at a greater rate than the overall population, and that rate is increasing. Hospitalizations due to hypertensive heart disease, a serious complication of untreated or poorly controlled high blood pressure, has decreased among all racial/ethnic groups in the most recent years. We have seen the greatest decline in hospitalization rates among African Americans.

The Affordable Care Act (ACA) increased access for previously uninsured or underinsured individuals. This opportunity enabled individuals to seek care for ignored health concerns and also receive preventive care for undiagnosed health conditions. In addition, the Berkeley Public Health Division has focused efforts on neighborhoods that have the highest rates of hypertensive heart disease and stroke. Our Heart 2 Heart Program's continued collaboration with Lifelong Health Center addresses cardiovascular disease in South Berkeley. Health education and blood pressure screenings occur at monthly mobile van events, barbershops, senior centers, through faith-based community partnerships, and events such as neighborhood block parties and other outreach/abling events.

- **Asthma hospitalizations among Berkeley children under 5 years of age**

Asthma is one of the most prevalent chronic health conditions among children and adolescents in Berkeley. Poorly controlled asthma in children is frequently associated with school days missed. Controlling asthma improves quality of life, reduces



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medical costs, and increases productivity at school. The number of asthma hospitalizations among children under 5 in Berkeley decreased from 56 in 2000 to 15 in 2014. Asthma hospitalization rates decreased across all racial/ethnic groups. However, the improvements in hospitalizations among African American and Latino children under five may be reversing as rates in these groups have begun increasing again. The largest disparity is seen between Whites and African Americans.

The incidence of asthma is greatest in West Berkeley and along the I-80 corridor. Addressing asthma rates in Berkeley requires a combination of education efforts and improving the environments where children live and grow. Public Health efforts continue to focus on home visitation, assessments, and education. The Northern California Breathmobile Program is a free program that treats students with asthma and allergies in a mobile asthma clinic. It is staffed by asthma specialists and, through partnership with Berkeley Unified School District (BUSD) and Berkeley Public Health, it visits pre-schools, K-12 schools, and community centers every 4-6 weeks. In Berkeley, it is part of the City's efforts to make healthcare accessible and help close the school achievement gap in high risk populations.

- **Low birth weight and prematurity**

The percentage of infants born early or underweight is a measure on the status of the public health systems. When those indicators are poor the adequacy of healthcare and nutrition for women is inadequate. Preterm and low birth weight infants are at increased risk for a variety of developmental problems related to health, psychological adjustment, and intellectual functioning. The rates of low birth weight and premature infants for everyone have improved over time in Berkeley. For the first

time ever recorded, African Americans in Berkeley meet the national goal of less than 11.4% of births occurring prematurely. The low birth weight gap between African American and White infants has also decreased overtime. However, the number of premature births to African American women continues to be larger than for other racial/ethnic groups in the City.

A number of programs provided by the City of Berkeley work to continue to reduce this disparity, including Berkeley Black Infant Health (BBIH), Women, Infants, and Children (WIC) and our public health nurse case management services.

- ***Sexually transmitted infections (STIs)***

STIs are once again having a marked impact on the nation's and City's health. Rates of chlamydia, gonorrhea, and syphilis have all increased in Berkeley. However the steady climb in rates can be interrupted because unlike some infectious diseases, we know how to detect and treat STIs.

Until recently, chlamydia rates in Berkeley had been lower than Alameda County and California. In 2015, Berkeley's rate increased substantially, surpassing Alameda County and California. From 2011 to 2017, Berkeley's chlamydia rate has more than doubled from 349.7 per 100,000 to 738.2 per 100,000. Gonorrhea rates in Berkeley are consistently higher than those of Alameda County and California. From 2011 to 2017, Berkeley's gonorrhea rate more than tripled from 94.8 per 100,000 to 301.7 per 100,000.

COMMUNITY DIALOGUES AND THE CHANGING LANDSCAPE

Following the release of the Health Status Report in 2013, the City Council and Public Health Division intensified our work on reducing health inequities. The Division launched internal and external dialogues to understand the community's needs more deeply. Conversations with the community identified additional priorities such as mental illness, diabetes, and obesity and amplified others such as asthma and marijuana use among youth. Homeless residents expressed the need for additional substance use treatment and rehabilitation programs.

We also heard solutions to addressing health disparities from the community. They suggested a focus on prevention and addressing inequities in the social determinants of health. The community voiced a need for access to caring, culturally relevant, high quality health care services. Residents expressed a wish to collaborate with the Public Health Division and community organizations to work on the root causes of poor health. While work has started in these areas, there is more thoughtful strategic work to be done.

Addressing the social determinants of health continues to be a key objective of the Public Health Division. Research has shown that health is dependent largely on conditions that are not related to medical care. In fact, about 80% of our health is influenced by the environments around us which include social, economic factors, and every day behaviors. Conditions



such as poverty, homelessness, shifting federal and local policies, changing City demographics, gentrification, and the subsequent rise in the cost of housing all have profound impacts on community health. In many of these areas, the Public Health Division works collaboratively with other departments, and with divisions in the City of Berkeley's Department of Health, Housing and Community Services. For example, Public Health staff are working on a multi-departmental group formulating the regulatory environment for newly legal adult use marijuana, which has serious public health impacts.

An important, continuing trend seen in the 2018 Health Status Report is the steady and significant shift in the City's demographics. Compared to the 2010 Census, the African American population has decreased from approximately 10% to 7% of the population, while other racial/ethnic groups have remained relatively stable. The phenomenon is not unique to Berkeley, but is a regional trend that is evidence of displacement caused by gentrification. Displacement disrupts access to education, employment, health care, and healthy neighborhood resources. Residents forced to move may face longer commutes to work or school, leading to increased stress, loss of income, job loss or greater school dropout rates. Displaced residents may have trouble obtaining medical records, prescriptions, and affordable health care services. Displacement can also mean relocation to neighborhoods with fewer health-promoting resources, such as high quality jobs, healthy food options, accessible public transit, and safe and walkable streets.

Socioeconomic status is one of the most powerful predictors of disease, injury, and mortality. In Berkeley, African Americans have lower income than any other ethnic/racial group. For every dollar a white family earns, an African American family earns 28 cents. This income inequality paired with unemployment or under employment can increase stress levels, make it difficult to find safe and affordable housing, and lower educational prospects. Research demonstrates that poverty is the single greatest threat to children's well-being. Children living in poverty are at significantly higher risk for poor health and development. In Berkeley, 10% of all children under the age of 18 live in poverty. Notably, 29% of African American children live in poverty, which is seven times the poverty rate for white children, and two to three times the rate of any other racial group.

Additionally, homelessness impacts the health of the entire community. Berkeley has the second highest number of homeless people among all Alameda County cities, second only to Oakland. Berkeley's homeless population accounts for 17% of the homeless people in Alameda County. Given that Berkeley makes up only 7% of the population of Alameda County, it is home to a disproportionate number of people experiencing homelessness. Poor health conditions among people who are homeless are frequently co-occurring with a mix of psychiatric, substance use, and social challenges. Exposure to high stress, unhealthy or dangerous environments, and food insecurity worsens overall health and often results in visits to emergency rooms and hospitalization. Nationally,



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individuals experiencing homelessness are three to four times more likely to die prematurely than their housed counterparts, and experience an average life expectancy as low as 41 years. Far too often, those experiencing homelessness are people of color. African Americans make up less than 8% of Berkeley's general population, but are 50% of the homeless population.

NOTABLE IMPROVEMENTS SINCE OUR LAST REPORT

While the indicators just discussed are sobering, we have seen improvements to the City's health in six notable areas:

- The proportion of African American infants that are LBW or premature has been declining. The disparity between African Americans and Whites in this outcome has also decreased.
- The proportion of children in 5th and 7th grade who are overweight or obese has declined from 39% in 2010 to 29% in 2016.
- 85% of all kindergarteners have all required immunizations, which is the highest percentage ever recorded.
- Approximately 7.6% of Berkeley's residents were smokers in 2014, which was a substantial decrease from 11.5% in 2012.
- African Americans met the HP2020 goals for lung cancer mortality rates for the first time ever.
- From 2007 to 2016, Berkeley's mortality rate declined 14%. This has resulted in an increase in life expectancy from 82 to 85 years.



KEY THEMES IN 2018 HEALTH STATUS REPORT

Three key themes can be found in the Health Status Report and will continue to guide the work of the Public Health Division:

- ***Inequities in Health.*** Since 1999, the Berkeley Public Health Division has been at the forefront of breaking down data to uncover hidden inequities in health. It is only through examining data by characteristics such as race, ethnicity, gender, age, income, neighborhood, immigration status and other qualities that we can see a true and full picture of health. The Berkeley Public Health Division is committed to monitoring health indicators by relevant, available demographic characteristics and investigating the status of health equity in our community. We will be thoughtful, intentional, and strategic in the development of programming to address these inequalities.
- ***Importance of Prevention.*** Prevention is a continuum and extends from deterring diseases and behaviors that foster disease to slowing the onset and severity of illness when it does arise. A focus on prevention includes focusing on upstream factors those that are largely outside of an individual's control and promoting conditions that support good health.
- ***Emerging Health Threats.*** The health landscape in Berkeley is not static but evolves, and new threats can emerge on both a global and local scale. Infectious disease such as tuberculosis, sexually transmitted infections, and diseases once considered under control such as pertussis, continue to be a significant source of illness in Berkeley. These threats require constant monitoring and a responsive public health system. New health threats can emerge from a variety of directions: from the rise in antibiotic resistant bacteria, to new risks from climate change and global connectedness, to the health impacts caused by changing federal and local policies. Additionally, public health systems across the country are responding in various ways to the complex and inter-related social, economic and environmental inequities that are connected to poor health.

HEALTH INEQUITIES IN BERKELEY

Chapter 1: Sociodemographic Characteristics & Social Determinants of Health	Chapter 2: Pregnancy & Birth	Chapter 3: Child & Adolescent Health	Chapter 4: Adult Health	Chapter 5: Life Expectancy & Mortality
<p>Families headed by a White householder earn 3.4 times more than African American families, 1.9 times more than Latino families, and 1.4 times more than Asian families.</p>	<p>The risk of an African American mother having a LBW baby is 2.5 times higher than the risk for White mothers.</p>	<p>African American children (under 18) are 7 times more likely, Latino children are 5 times more likely, and Asian children are 2 times more likely than White children to live in poverty.</p>	<p>African Americans are 3 times more likely than Whites to be hospitalized due to coronary heart disease.</p>	<p>African Americans are 2.3 times more likely to die in a given year from any condition compared to Whites.</p>
<p>The proportion of families living in poverty is 8 times higher among African American families, 5 times higher among Latin families and 3 times higher among Asian families, compared to White families.</p>	<p>The risk of an African American mother having a premature baby is 2 times higher than the risk for White mothers.</p>	<p>African American high school students are 1.4 times more likely than White students to drop out of high school.</p>	<p>African Americans are 34 times more likely than Whites to be hospitalized due to hypertension.</p>	<p>African Americans are 2.0 times more likely than Whites to die of cardiovascular disease.</p>
<p>African Americans are 2.8 times less likely, Latinos are 1.6 times less likely and Asian children are 1.1 times less likely than Whites to have a bachelor's degree or higher.</p>	<p>The teen birth rate among African Americans is 9 times higher, and among Latinas is 3 times higher than the rate among White teens.</p>	<p>The asthma hospitalization rates for children under 5 for African American children is 10 times higher, and for Latino children is 2.8 times higher than the rate among White children.</p>	<p>African American women are 1.5 times more likely than Whites to be diagnosed with breast cancer.</p>	<p>African Americans are 1.8 times more likely than Whites to die of cancer.</p>

Against this backdrop, four key areas are important to monitor and develop interventions for:

- Obesity in both children and adults. While the overall childhood obesity rate in Berkeley is lower than in Alameda and California, the proportion of African American children who are overweight and obese in Berkeley is higher than Alameda County and California. In 2014, 16% of Berkeley adults were categorized as obese based on Body Mass Index (BMI), which is an increase from 2012. Additionally, among children and adults, African Americans and Latinos experience higher rates of obesity than Whites and Asians.
- Hypertension is increasing in all people in Berkeley. Hospitalization rates due to high blood pressure for the overall population is 20/100,000, the highest in a decade. The hospitalization rate for African Americans has sharply increased and is 120/100,000, over five times that of the total population.
- Sexually transmitted disease rates are at epidemic levels. Historically, chlamydia rates in Berkeley were lower than the State, but in 2015, Berkeley's rate increased substantially, surpassing both Alameda County and California. From 2011 to 2017, Berkeley's chlamydia rate has increased from 349.7 per 100,000 to 738.2 per 100,000. Gonorrhea rates in Berkeley are also consistently higher than those of Alameda County and California. From 2011 to 2017, Berkeley's gonorrhea rate has increased from 94.8 per 100,000 to 301.7 per 100,000.
- African Americans are more likely to die prematurely than any other racial/ethnic group in Berkeley. Years of Potential Life Lost (YPLL), a measure of premature death, demonstrates the significance. Although African Americans comprise 8% of the population; they account for almost 30% of the YPLL.

An additional emerging key area of interest that we will be monitoring is in demographic shifts in breast cancer incidence. For the first time, African American women have surpassed White women in the rate of breast cancer diagnosis. As we monitor this notable change, we will also seek to understand what is driving this trend.

LOOKING AHEAD

The City of Berkeley Health Status Report 2018 is the groundwork from which the Public Health Division, the Department of Health, Housing and Community Services, the City, and the Berkeley community will identify priorities, develop a strategic plan, and implement tailored interventions to improve community health. This path to better health is not one we can take alone. It is the charge of the entire community to create a healthy Berkeley. As a community member, you make choices that impact not only your own personal health, but the health of your families and neighbors. Community leaders in our City government, community based organizations, faith institutions, and local businesses, in addition to providers and residents all have a role to play in creating a healthier community. Collectively, we can achieve a better quality of life for all who live in Berkeley. We look forward to working with you.



Robin Kempster



Annie Burke



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 social and physical 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 which include 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, a list of key findings, the importance of the health indicator and its current status in Berkeley.

COMPARISONS: One way to evaluate the health of our City is to compare ourselves to others. Each time Berkeley meets one of the Healthy People 2020 (HP2020) goals, that goal is reported. By doing this, it allows us to compare the data on how Berkeley is doing relative to national health benchmarks. We also compare Berkeley with Alameda County and 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: https://www.cityofberkeley.info/Health_Human_Services/Public_Health/A_to_Z_Public_Health_Services.aspx

FROM THE COMMUNITY: This report contains quotes and summaries from a series of community engagement events. These events were held in 2014 and were organized in order to hear from Berkeley residents and community members about what they see as priority areas for reducing health inequities.

DATA: This report contains quantitative data about the health of the Berkeley community. The data is as objective as possible — there may be biases related to reporting errors, 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.

We use the latest year of data available at the time of analysis. For hospitalization and emergency department visit data, changes in the coding system were implemented in the last quarter of 2015 which made the previous years not comparable with current data. The last full year of data under the prior coding system was 2014, thus data on hospitalization and emergency department visits are only presented through 2014.

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 Epidemiology and Vital Statistics Unit at publichealth@cityofberkeley.info.

While the challenges we face should not be underestimated, through strategic collaboration, a unified vision, and broad community engagement we can achieve our mission of optimal health and wellness for all.



Annie Burke



Nancy Rubin, BerkeleySide

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CHAPTER 1: SOCIODEMOGRAPHIC CHARACTERISTICS AND SOCIAL DETERMINANTS OF HEALTH

The social and physical environments in which we live, work and play greatly influence our overall health. Experts agree that health is in part determined by access to social and economic opportunities; the cleanliness of our water, food and air; availability of preventative health care and wellness programs; the nature of our social interactions and relationships; and the resources and supports available in our schools, homes and neighborhoods. These conditions are broadly known as the social determinants of health.

The inequities in the social determinants of health negatively impact people of color and low-income people in Berkeley. The health disparities we discuss in later chapters can be directly tied to the economic, social, and environmental inequities that can be found in certain neighborhoods in Berkeley (in particular West, South and Central Berkeley). These residents of these communities are predominately people of color and low income. Those inequities in the social determinants of health are highlighted and discussed in this chapter.



Berkeley Unified School District

Key Findings

- **Population**
 - Over the last 5 years, the African American population has decreased from approximately 10% to 7% of the population, while other racial/ethnic groups have remained relatively stable.
 - Age distribution is highly influenced by the university student population, with the largest proportion of the population between 15–24 years of age.
- **Language**
 - Nearly 28% of the Berkeley population 5 years and older primarily speak a language other than English at home. Among them, 74% speak English “very well” and do not have limited English proficiency.
- **Income and Wealth**
 - Income is unevenly distributed, with White families earning around 3 times more than African American families. In other words, African American families earn 28 cents for every dollar earned by a White family.
 - More White householders (57%) own the home they live in than African American (41%), Asian (35%), or Latino (35%) householders.
 - Approximately 7% of families live below the federal poverty level.
 - Berkeley has the second highest number of homeless among all Alameda County cities, second only to Oakland.
- **Employment and Transportation**
 - Unemployment in Berkeley has been decreasing steadily since 2010 and is lower than in Alameda County and California.
 - The majority of Berkeley’s population drives alone or takes public transportation to work. Nearly a quarter bike or walk to work.

continues

Key Findings *continued*

- **Education**

- Approximately 96% of Berkeley residents 25 and over have at least a high school diploma.
- Over 70% of residents have a bachelor's, graduate, or professional degree, compared with 43% in Alameda County and 31% in California.
- Among adults age 25 and older, African Americans are the least likely to have a bachelor's degree or higher and Latinos are the least likely to have graduated from high school.

- **Access to Health Care**

- Only 7% of Berkeley residents are uninsured, compared to 10% in Alameda County.
- Individuals living in Berkeley who are not US citizens are more likely to be uninsured (14%) than those who are citizens (7%).

- **Crime**

- Violent crime rates in Berkeley are similar to those in California, and they have remained fairly stable over the past decade.

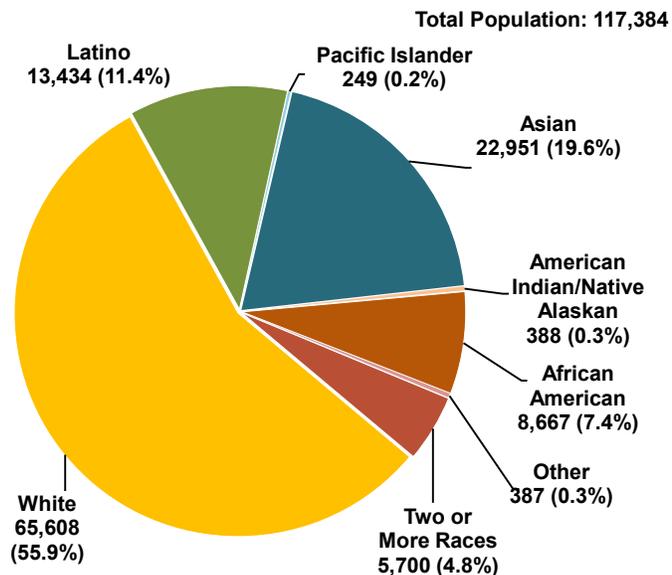
Race/Ethnicity Distribution

Berkeley is at the geographic center of the East Bay Corridor. The population is ethnically and racially diverse, even though it has experienced a significant loss of the African American population during the last few decades.

According to the 2011–2015 American Community Survey, the city's residents are 56% White, 20% Asian, 10% Latino and 7% African American. Compared to the 2010 Census, the African American population has decreased from approximately 10% to 7%, while other racial/ethnic groups have remained relatively stable.

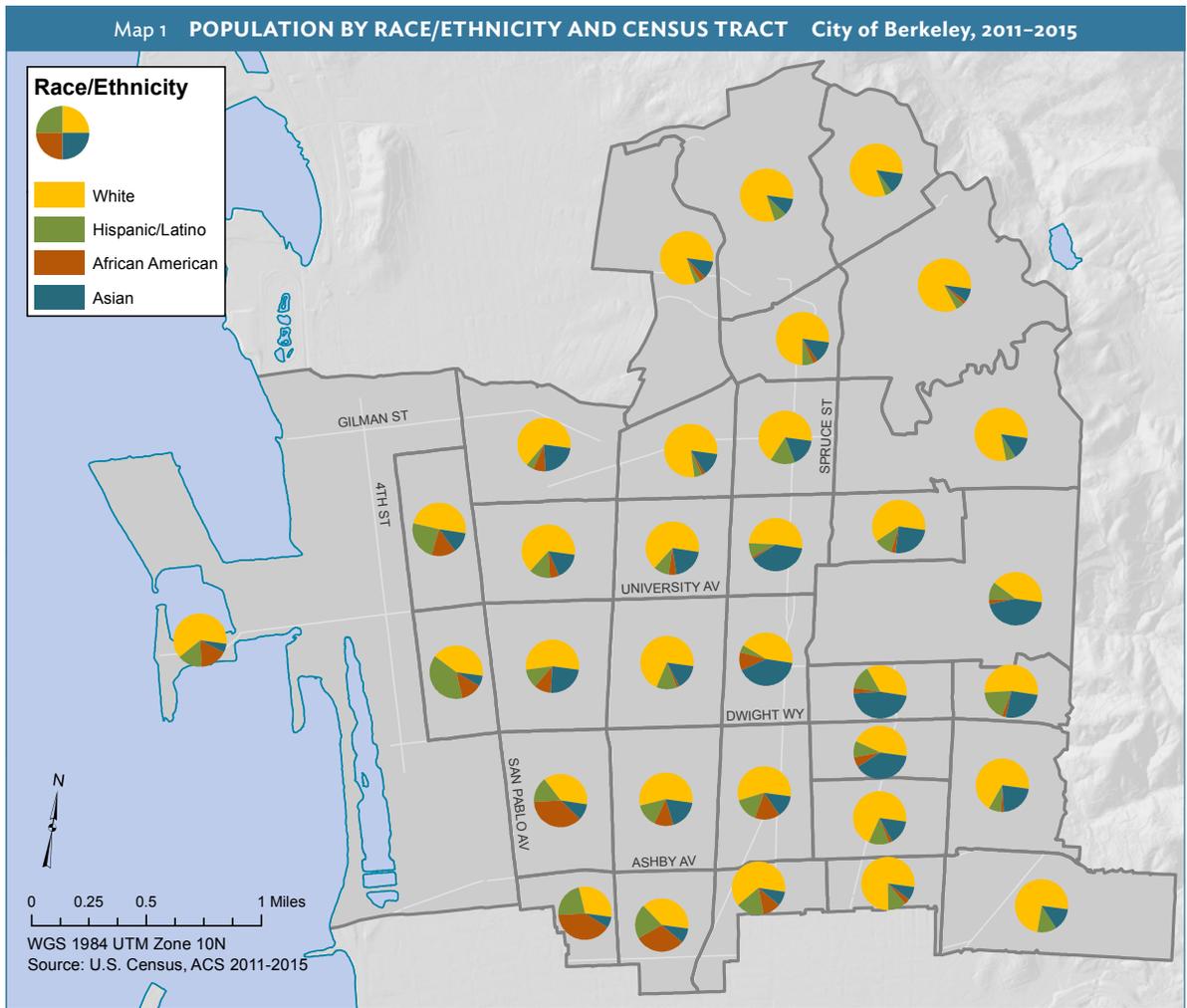
Berkeley has a substantial foreign-born immigrant population, with 21% of the population identified as foreign-born. Of these, 57% were identified as non-citizens and 43% were naturalized as citizens.

Figure 1.1 POPULATION DISTRIBUTION BY RACE/ETHNICITY Berkeley, 2011–2015



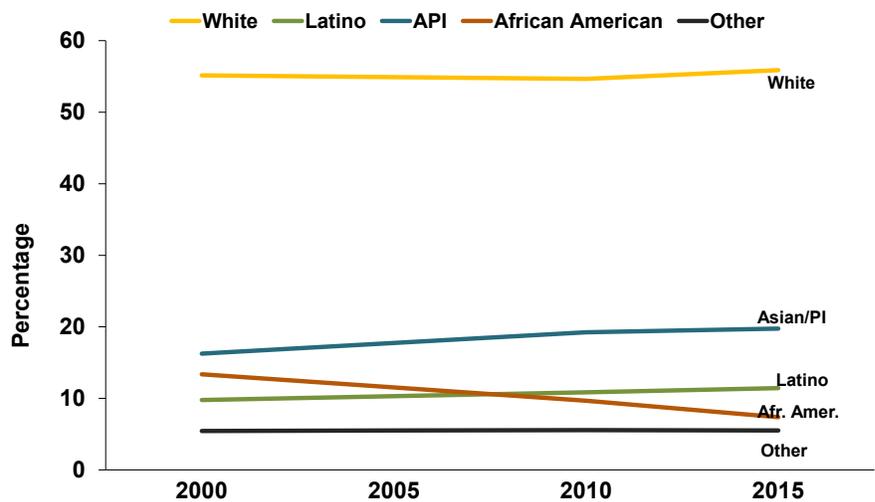
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Race/Ethnicity Distribution continued



The racial/ethnic distribution also varies by geographic areas in Berkeley. Whites are more widely distributed throughout the entire City than any other race/ethnicity. The predominant population in the East and North Berkeley Hills is White, census tracts with the highest household incomes. Latinos and African Americans are concentrated in South and West Berkeley and Asians in census tracts surrounding UC Berkeley Campus.

Figure 1.2 POPULATION DISTRIBUTION BY RACE/ETHNICITY Berkeley, 2000-2015



Source: City of Berkeley Public Health Division, Office of Epidemiology and Vital Statistics, U.S. Census Bureau, 2000-2015

Age and Gender Distribution

The largest proportion of Berkeley’s population is between 15–24 years of age. The age distribution in Berkeley is highly influenced by the university student population, with 31% of the population enrolled in college or graduate school.

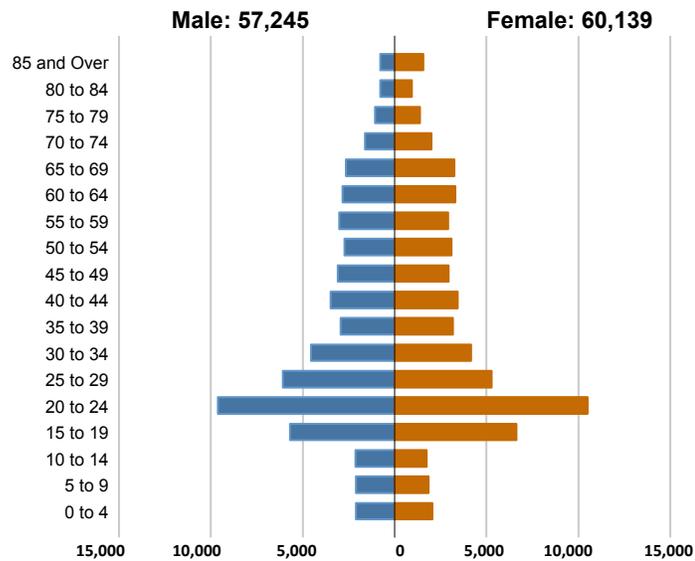
UC Berkeley is the largest college/ university in Berkeley. Not all UC Berkeley students live in Berkeley, however, of the 30,574 undergraduate students at UC Berkeley, 66% report living on campus or within a mile from campus.

In Berkeley, as the population gets older, the number of females is greater than males, doubling at age 85+.

This reflects the fact that women, on average, live longer than men. In Berkeley, life expectancy for men is 81.7 years versus 86.7 years for women.

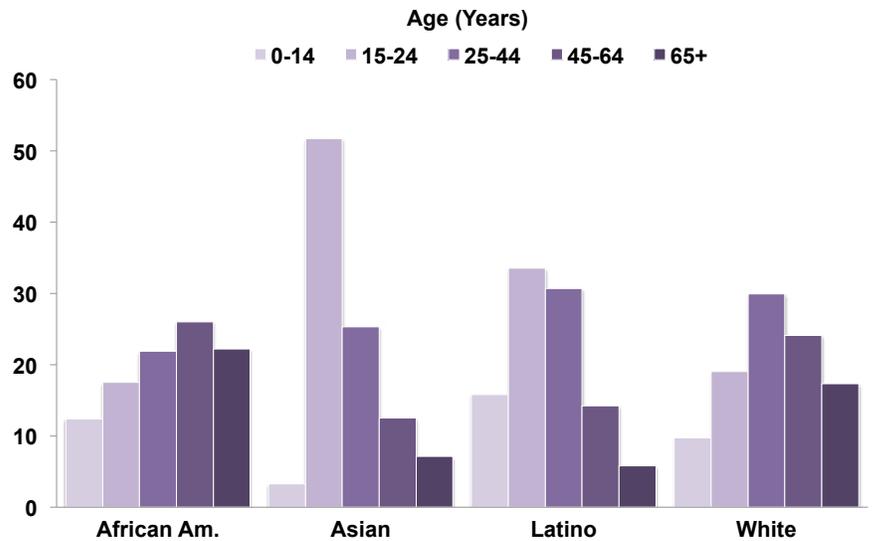
Berkeley’s age distribution varies by race/ethnicity. The African American and Latino populations are older than the Asian and White populations. Over half of the Asian population is in the 15–24 year age group, a much higher proportion than for other racial/ ethnic groups. This is primarily due to the large Asian student population at UC Berkeley where Asian students make up 43% of the student body. More than 20% of African Americans in Berkeley are over the age of 65. The median age of African Americans has increased from 34 years in 1990 to 43 years in 2010.

Figure 1.3 POPULATION DISTRIBUTION BY AGE AND GENDER Berkeley, 2011–2015



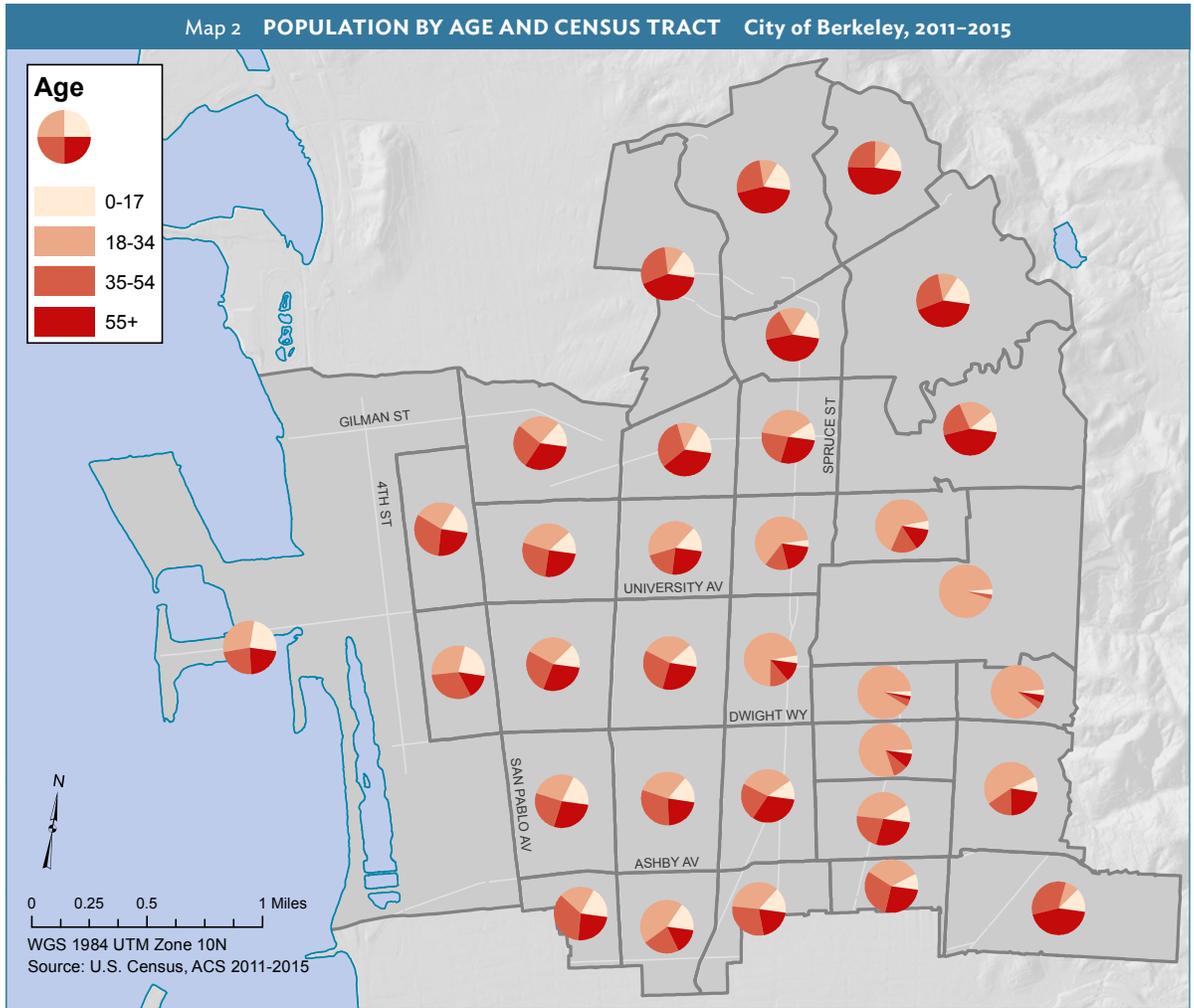
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.4 AGE DISTRIBUTION BY RACE/ETHNICITY Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

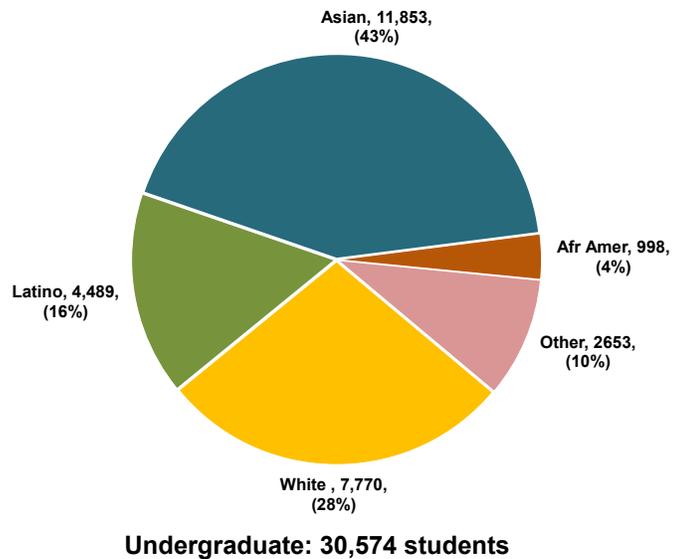
Age and Gender Distribution continued



This may reflect gentrification in the Berkeley community with younger African Americans moving away. However, children age 0 to 4 years comprise a larger percentage of the African American and Latino groups than of the Asian and White groups.

Age distribution also varies significantly by geography in Berkeley, with children under 18 concentrated in West and South Berkeley and younger adults 18 to 34 concentrated around the University Campus. The older population 55 and over is concentrated in North Berkeley/Berkeley Hills.

Figure 1.5 UC BERKELEY POPULATION DISTRIBUTION BY RACE/ETHNICITY, Berkeley, 2011-2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; University of California Berkeley, Office of Planning and Analysis

Household Type

A **household** contains one or more people. Everyone living in a housing unit makes up a household. One of the people who owns or rents the residence is designated as the householder. For the purposes of examining family and household composition, two types of households are defined: **family** and **nonfamily**.

A family household has at least two members related by birth, marriage, or adoption, one of whom is the householder. A nonfamily household can be either a person living alone or a householder who shares the housing unit only with nonrelatives—for example, boarders or roommates.

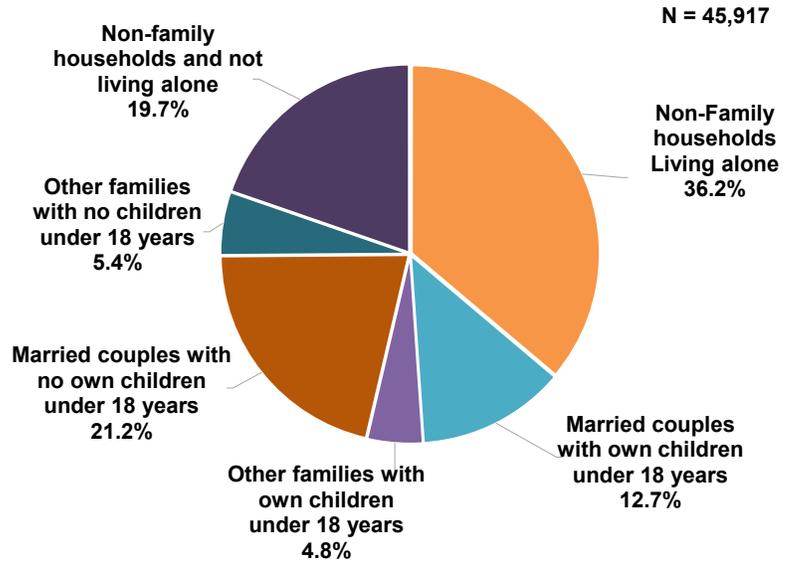
Own children are a subset of all children and include biological, step, or adopted children (not foster children). Own children are also limited to children who have never been married and are under the age of 18.

Berkeley has approximately 46,000 households. Around 17% of these households include children less than 18 years of age compared with 34% in Alameda County.

Berkeley residents are less likely to live in family households than Alameda County residents: 44% of Berkeley households are families compared to 66% in Alameda County. This is greatly influenced by the large student population living in Berkeley.

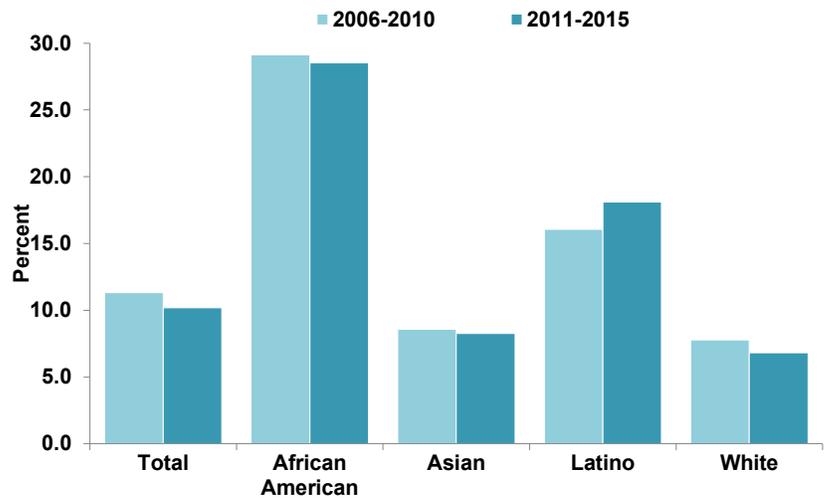
Approximately 57% of Berkeley households are renter-occupied housing units and 43% are owner-occupied.

Figure 1.6 HOUSEHOLD TYPE AND PRESENCE OF CHILDREN Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.7 PERCENT OF SINGLE PARENT HOUSEHOLDS WITH CHILDREN UNDER 18 YEARS OF AGE BY RACE/ETHNICITY OF PARENT Berkeley, 2006–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2006–2015

Household Type continued

A single-parent household is defined as families where one parent lives with dependent children, either alone or in a larger household, without a spouse or partner. Among family households in Berkeley, 10% are single parents with related children under 18 years of age. The percentage of single parent households with children under 18 has decreased in Berkeley as a whole and slightly for every race/ethnic group, except for Latinos. The highest proportion of single parents with children under 18 is among African Americans. Nearly 77% of single-parent households with

children under 18 are headed by a female householder while 23% are headed by a male householder.

Two-parent households are those in which biological or adopted children live in a household with two married parents. The proportion of children living in a two-parent household is at the lowest point in more than half a century: 69% are in this type of family arrangement today, compared with 73% in 2000 and 87% in 1960. Even children living in two-parent households are more likely to experience a variety of family arrangements due to increases in divorce and cohabitation.

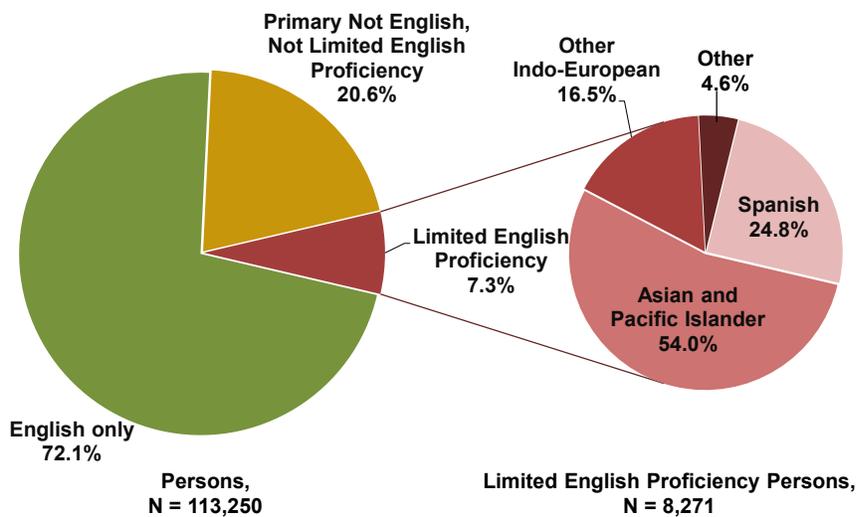
Language Spoken at Home

Despite the predominance of the English language, many people in the United States speak languages other than English. There is an interest in these groups and in how well they are able to participate in civic life and interact with the English speaking majority.

The primary purpose of collecting data on language use is to measure the portion of the population that has limited English proficiency. Translation services, education, and/or assistance in accessing government services are needed by residents who have limited English proficiency.

Almost 28% of the Berkeley population 5 years and older primarily speak a language other than English at home. Among them, 74% speak English “very well” and do not have limited English proficiency. However, 7% of the population 5 years and older is linguistically isolated. Of these, 54% speak Asian/Pacific Islander languages and 24% Spanish.

Figure 1.8 LANGUAGE ABILITY AND LIMITED ENGLISH PROFICIENCY Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

From the Community

Latino and African American residents recommended a community center in their neighborhoods where they could access information, services, recreation and informal supports.

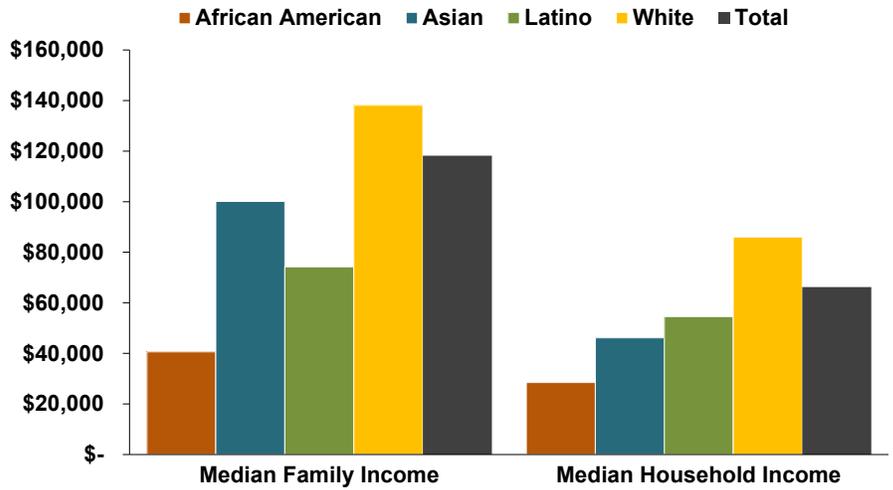
Income, Poverty, and Wealth

Household income is defined as the income from all adults living in one household, regardless of the size of the household or the number of working adults. Family households include only those households with at least two members related by birth, marriage, or adoption. 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.

In Berkeley the median family income is \$118,190. The median household income is \$66,237, which is influenced by the large population of low-income university students Berkeley.

Income in Berkeley is unevenly distributed. Families with a White head of household are more likely to be higher income while those headed by non-White households are more likely to be low income. White families earn around 3 times more than African American families. In other words, African American families earn 28 cents for every dollar earned by a White family. All families and households have experienced an increase in median income during the last decade, except for African Americans who experienced a slight decrease.

Figure 1.9 MEDIAN FAMILY AND HOUSEHOLD INCOME IN PAST 12 MONTHS (IN 2015 INFLATION-ADJUSTED DOLLARS) BY RACE/ETHNICITY IN BERKELEY 2011–2015



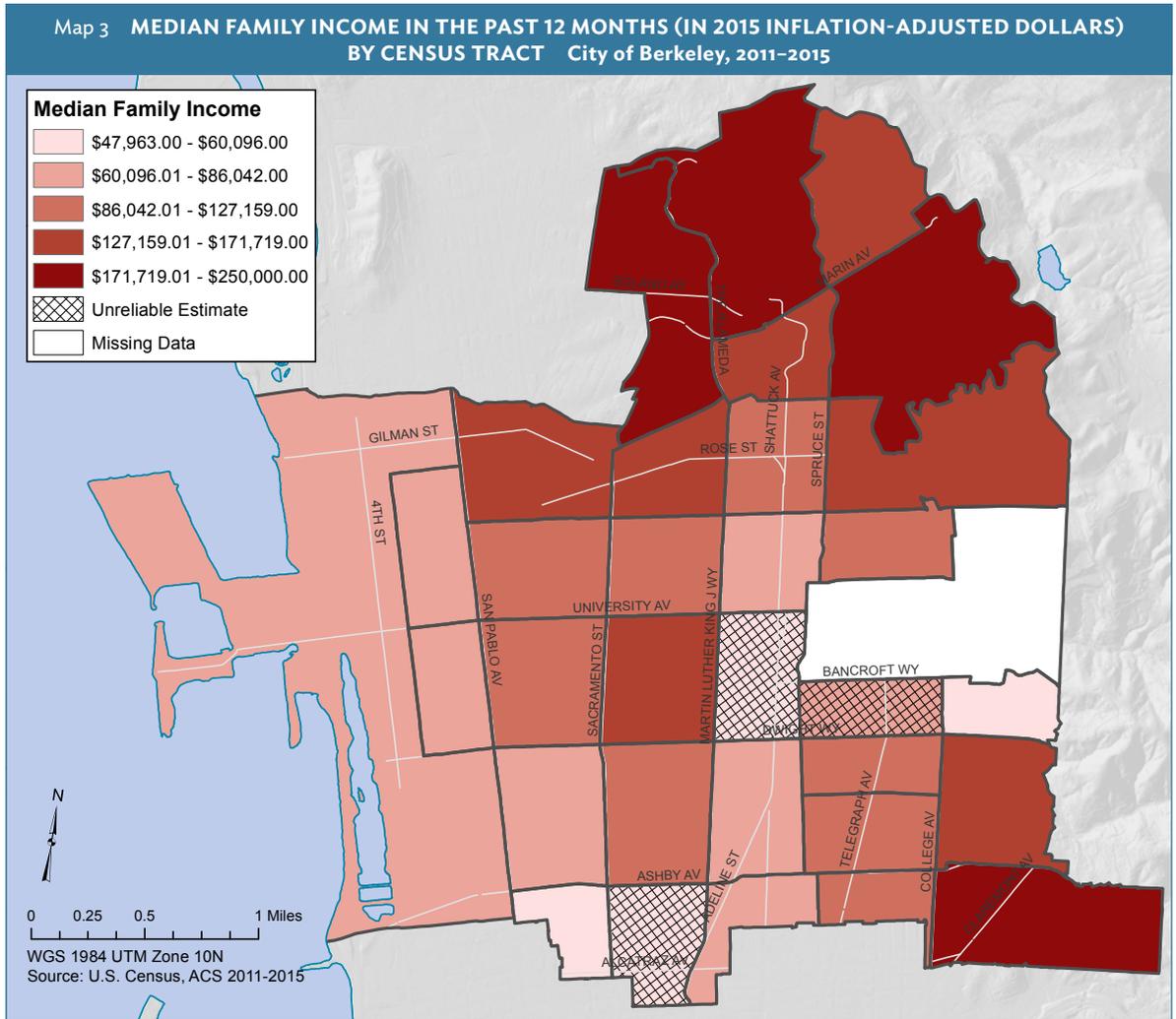
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

From the Community

Other City divisions and departments need to be engaged as core stakeholders in achieving the broader goal of building healthy communities, reducing inequities and promoting the health and well-being of impacted communities.



Income, Poverty, and Wealth continued



People living in the Berkeley Hills and the Claremont areas have the highest median family income. Except for census tracts next to the University of California, where students predominate, census tracts in South and West Berkeley have the lowest median family income.



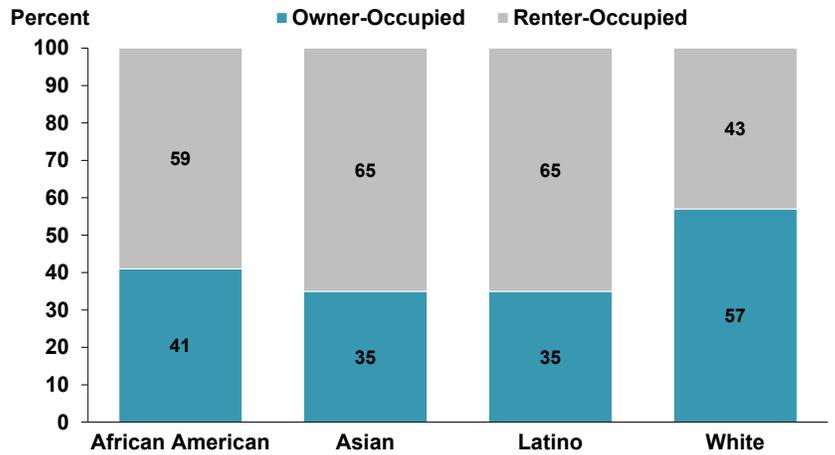
Home Ownership

Housing quality and accessibility are important determinants of health status. Home ownership is an important indicator of wealth and can influence the sense of belonging and control over one’s place of residence. Homeowners tend to create more social ties and lasting relationships. These relationships contribute to positive mental health and happiness.

In Berkeley there are nearly 46,000 occupied housing units. About 9% of them are occupied by an African American householder, 16% are occupied by an Asian householder, 8% are occupied by a Latino householder, and 63% are occupied by a White householder. A higher proportion of White householders own the housing unit they live in (57%) as compared to African American (41%), Asian (35%), and Latino (35%) householders.

Berkeley is in the center of a region in which housing costs have increased faster than incomes for the past few decades. Higher income home seekers have bid up the price of housing in traditionally low-income South and West Berkeley, made significant physical improvements to the housing stock, and increased the tax base for local property taxes. This phenomenon of gentrification results in the decrease of housing affordability and impacts the neighborhood stability and cohesion.

Figure 1.10 PERCENT OF OCCUPIED HOUSING UNITS BY TENURE (OWNER-OCCUPIED VERSUS RENTER-OCCUPIED) BY RACE/ETHNICITY OF HOUSEHOLDER Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

From the Community

African American respondents noted that African American communities and families are being displaced because of a lack of jobs, housing and community investments. Others noted that health inequities are rooted in poverty, racism, inadequate access to culturally relevant and high quality health services, and a lack of community and economic development in their communities.



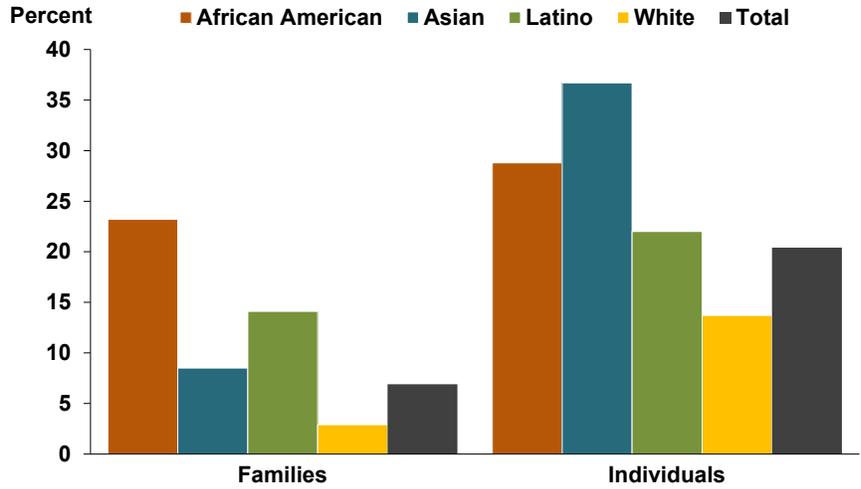
Poverty

Approximately 7% of Berkeley families live below the federal poverty level. Poverty rates vary drastically by race/ethnicity. Compared to White families, the proportion of families living in poverty is 8 times higher among African American families, 5 times higher among Latino families and 3 times higher among Asian families.

At the individual level, about 20% of all Berkeley residents live below the federal poverty level, which is strongly influenced by the large university student population in Berkeley. The Asian population has the highest rate of individual poverty, reflecting the large Asian 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 those who do not attend college.

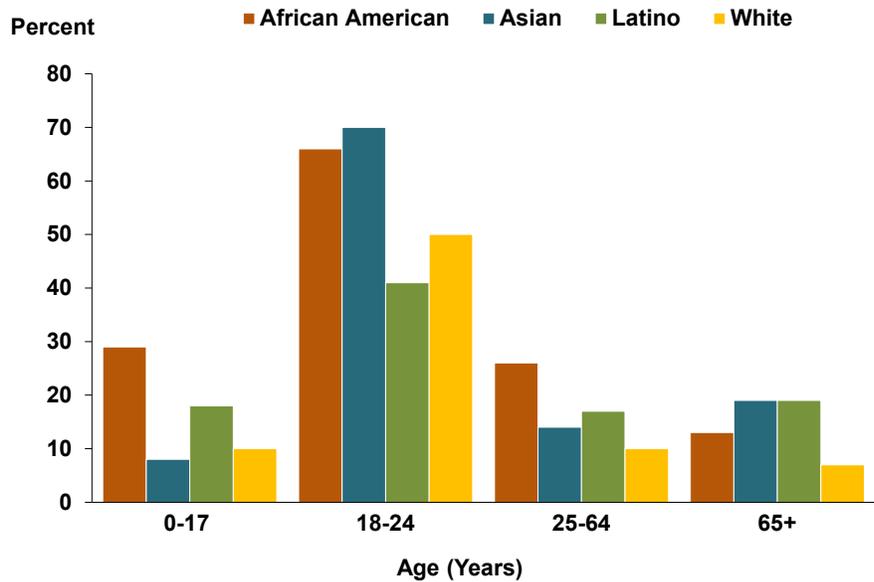
Poverty rates also vary by age. The proportion of individuals living in poverty is highest among those 18–24 years old, and the rates are lowest among those 0–17 and those 65 and older. For African Americans over the age of 65, the poverty rates decrease substantially compared to those age 64 and under.

Figure 1.11 PERCENT OF FAMILIES AND INDIVIDUALS BELOW FEDERAL POVERTY LEVEL IN THE PAST 12 MONTHS BY RACE/ETHNICITY IN BERKELEY 2011–2015



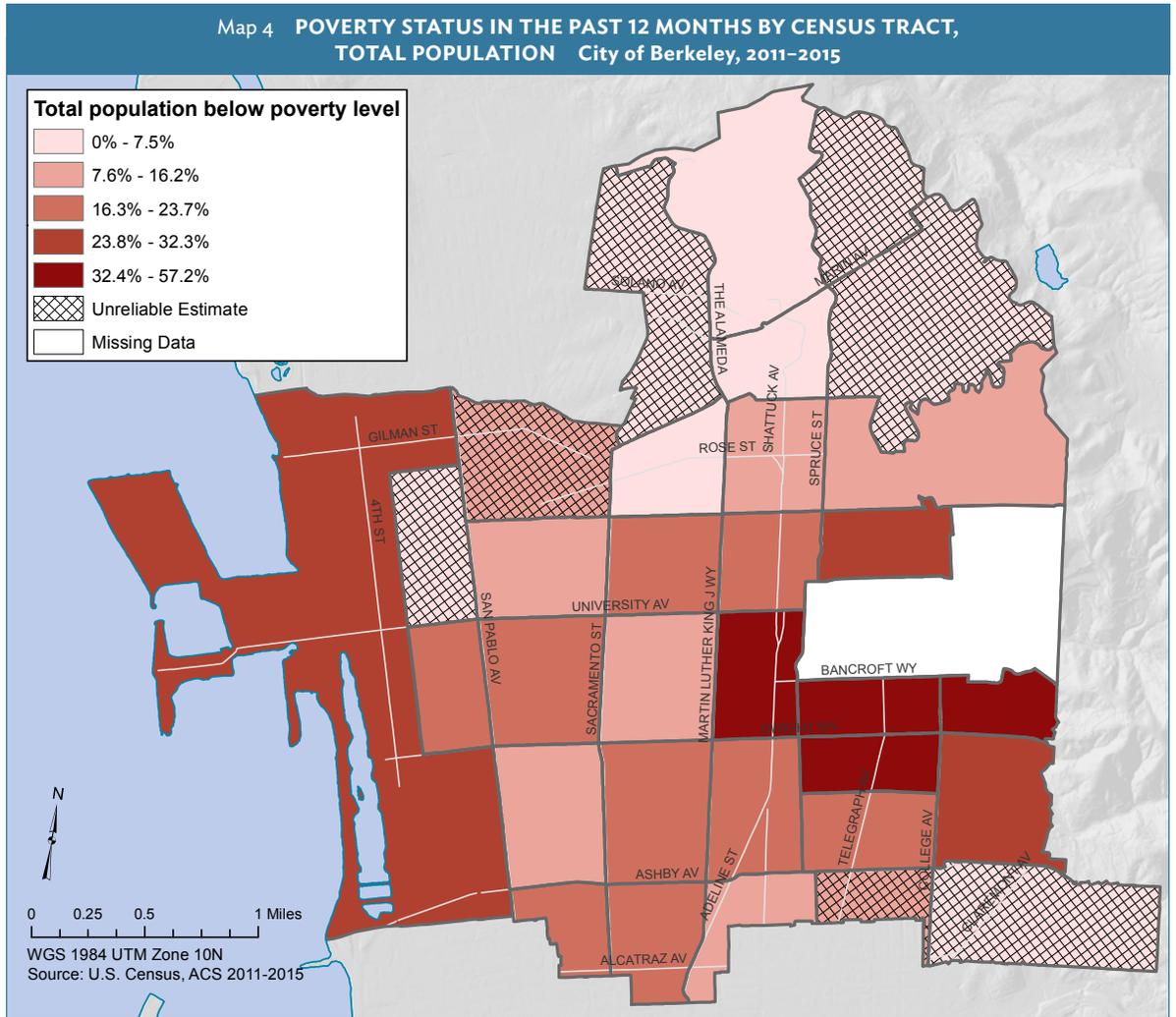
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.12 PERCENT OF POPULATION BELOW THE FEDERAL POVERTY LEVEL BY AGE AND RACE/ETHNICITY Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Poverty continued



Poverty status is also unequally distributed by geographic areas in Berkeley. This distribution also corresponds with areas with high concentrations of African Americans and Latinos. Except for census tracts predominantly populated by students around the University Campus, census tracts in South and West Berkeley show the highest rates of poverty in Berkeley.



Berkeley Homeless Population

On January 30, 2017, hundreds of non-profit, City and County staff and volunteers, organized by EveryOne Home, carried out a point-in-time count of people who are homeless in Alameda County.

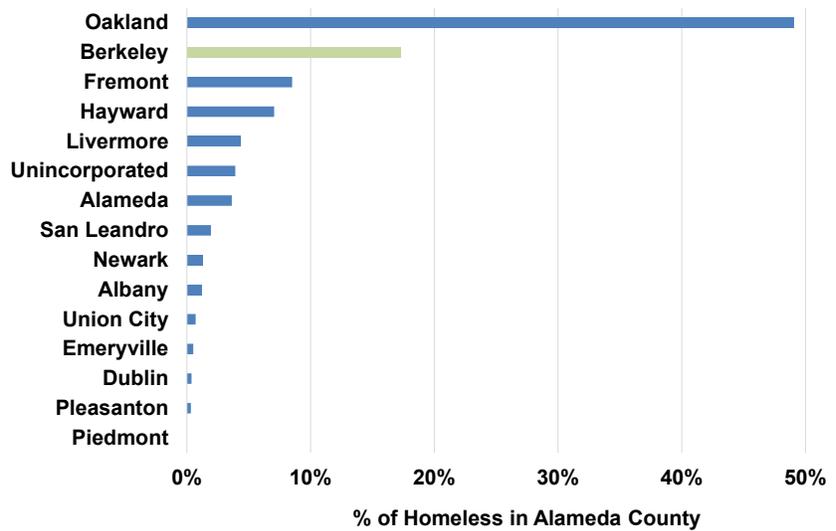
Berkeley has the second highest number of homeless among all Alameda County cities, second only to Oakland. Berkeley’s homeless population accounts for 17% of the 5,629 homeless people in Alameda County. Given Berkeley makes up only 7% of the population of Alameda County, it is home to a disproportionate number of homeless.

Over a quarter (27%) of Berkeley’s homeless are chronically homeless. When the point-in-time count was done, of the 972 people estimated to be homeless in Berkeley, 308 people (32%) were sheltered and 664 (68%) were unsheltered.

Of the homeless population in Berkeley, 61% identify as male, 38% as female, and 1% as transgender. Nearly all homeless in Berkeley are single adults (95%), which is higher than Alameda County (87%). Nearly 20% of Berkeley’s homeless are unaccompanied transitional age youth age 18-24 years. An additional 68% are age 25-60 and 8% are over 60 years old.

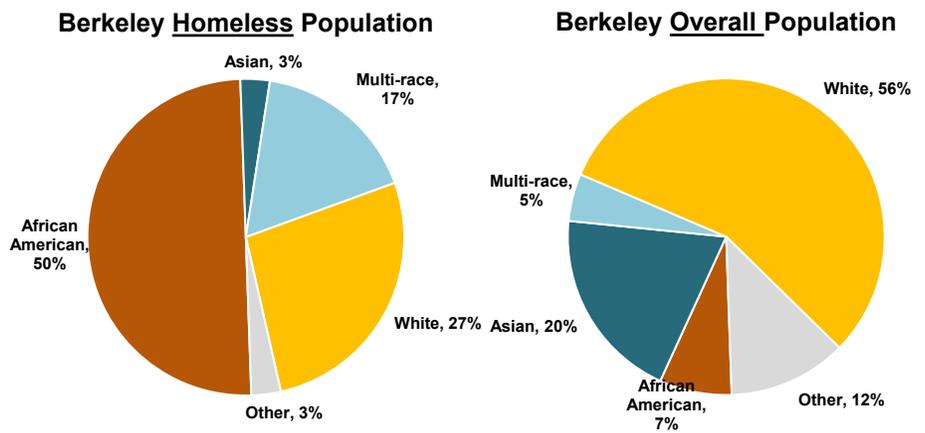
African Americans are over-represented in the homeless population. African Americans are 7.4% of Berkeley population, but are 50% of the homeless population. The proportion of the homeless population in each racial group is similar to the proportion throughout Alameda County.

Figure 1.13 ALAMEDA COUNTY HOMELESS POPULATION PERCENT BY CITY, 2017



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Alameda County 2017 Homeless Point-In-Time Count

Figure 1.14 RACE OF HOMELESS POPULATION IN BERKELEY, 2017 AND THE OVERALL BERKELEY POPULATION, 2011-2015

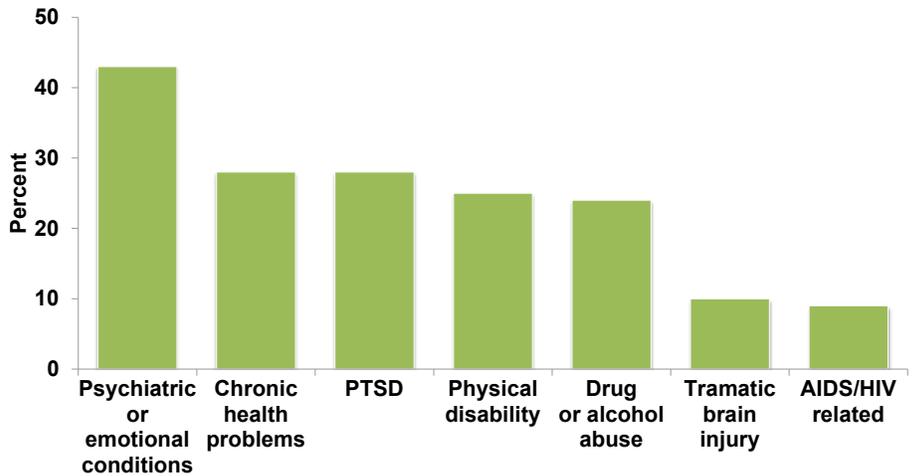


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Berkeley and Alameda County 2017 Homeless Point-In-Time Count

Berkeley Homeless Population continued

Many of the homeless in Berkeley report experiencing health conditions. Among those surveyed, 43% reported psychiatric or emotional problems, 38% reported chronic health problems, 28% reported post-traumatic stress disorder (PTSD), 25% report having a physical disability and 24% struggle with drug or alcohol abuse. 10% report having a traumatic brain injury and 9% report having an AIDS/HIV related condition.

Figure 1.15 HEALTH CONDITIONS OF HOMELESS IN BERKELEY 2017

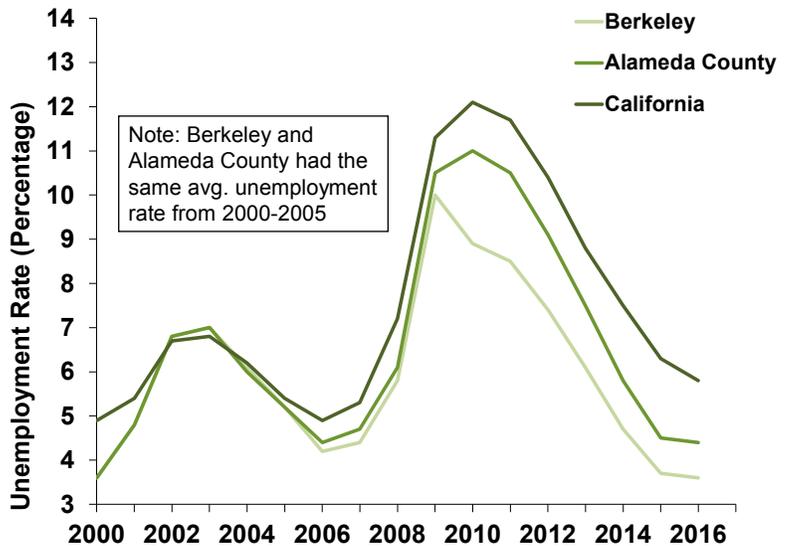


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Berkeley 2017 Homeless Point-In-Time Count

Employment

In 2016, the unemployment rate in Berkeley dropped to 3.6%, the lowest recorded since 2000. The unemployment rate in Berkeley has been decreasing steadily since 2010 and it is lower than the rates in Alameda County and California. This is a strong indicator of the economic recovery after the recession.

Figure 1.16 UNEMPLOYMENT RATE Berkeley and California, 2000–2016

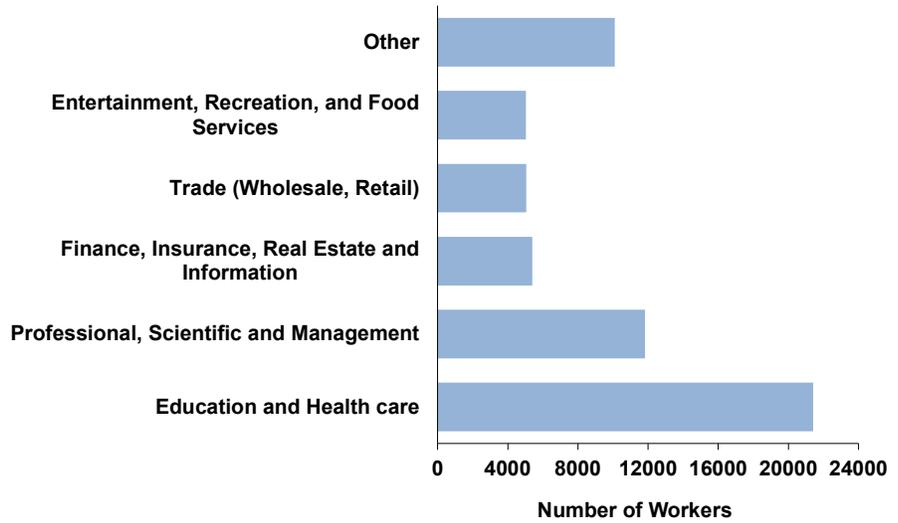


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Employment Development Department, Bureau of Labor Statistics

Employment continued

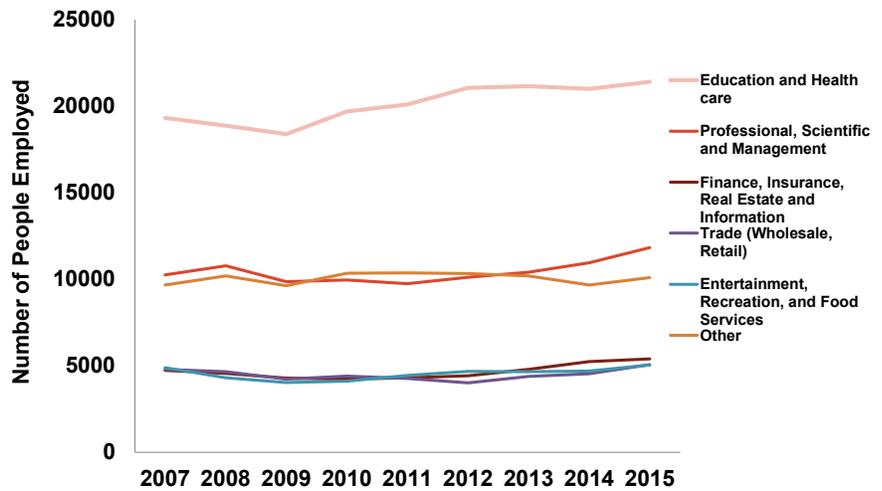
Jobs in education & health, and in professional, scientific, & management, comprise the majority of employment among Berkeley residents, accounting for 56.5% of jobs. Residents employed in these fields have increase in Berkeley during the last decade. This may be a contributor to the decline in Berkeley’s unemployment rates.

Figure 1.17 INDUSTRY OF EMPLOYED POPULATION, AGED 16 YEARS AND OVER Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.18 INDUSTRY OF EMPLOYED POPULATION, AGED 16 YEARS AND OVER Berkeley, 2007–2015

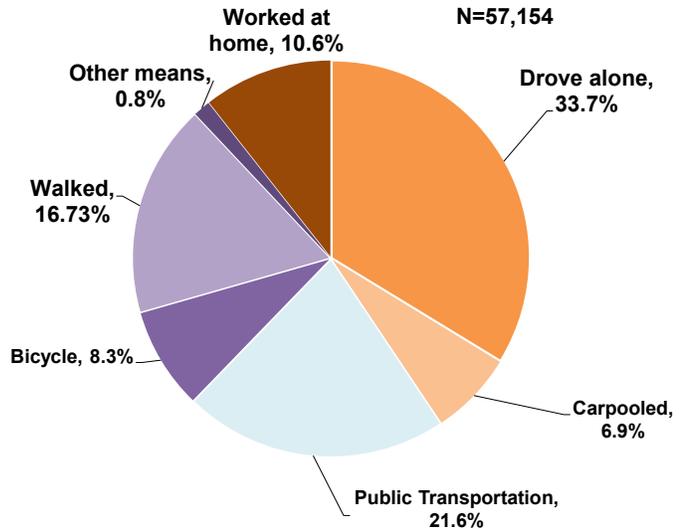


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Transportation

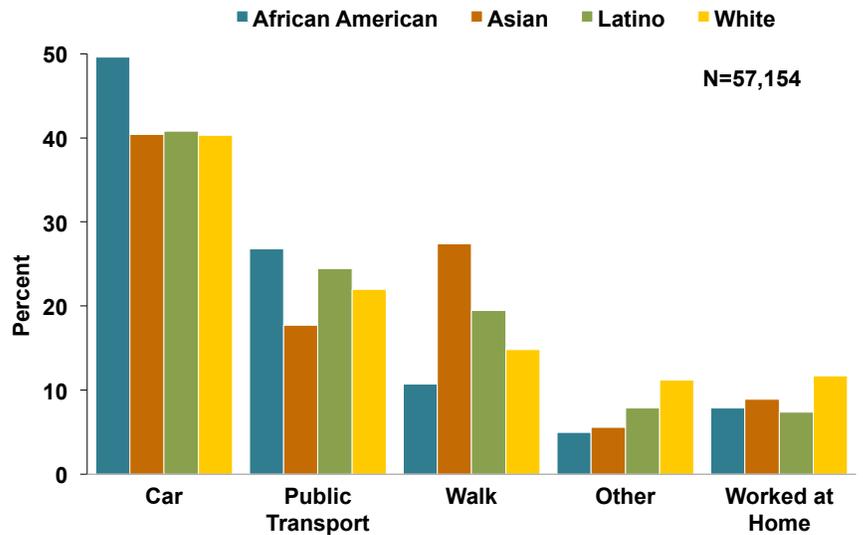
The over a third of Berkeley residents drive alone (34%) to work. Driving alone to work contributes to poor health by increasing traffic, pollution, and individual stress. An additional 22% use public transportation and 7% carpool to work. These particular modes of transportation reduce traffic and pollution. About a quarter of residents engage in active methods of transportation, such as walking or cycling, to get to work which have health advantages over driving. African Americans have the highest percentage of driving to work and the lowest percentage of walking.

Figure 1.19 MEANS OF TRANSPORTATION TO WORK, RESIDENTS 16 YEARS AND OLDER Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.20 MEANS OF TRANSPORTATION BY RACE/ETHNICITY FOR THE POPULATION AGED 18 OR GREATER Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

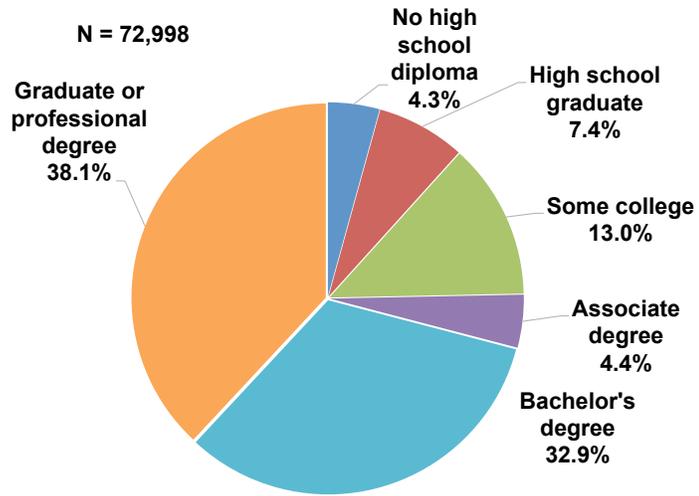
Education and Educational Attainment

Educational attainment is one of the strongest predictors of income and good health. Each additional year in school is associated with increased life expectancy and better health.

Approximately 84% of Berkeley residents ages 25 and over attended at least some college. Over 70% of residents have a bachelor, graduate, or professional degree, compared with 43% in Alameda County and 31% in California. The educational attainment in Berkeley is significantly higher than in Alameda County for every single race or ethnic group. Approximately 80% of Whites, 71% of Asians, 50% of Latinos and 29% of African Americans, have a Bachelor’s degree or higher in Berkeley, compared to 54% of Whites, 54% of Asians, 17% of Latinos and 25% of African Americans in Alameda County.

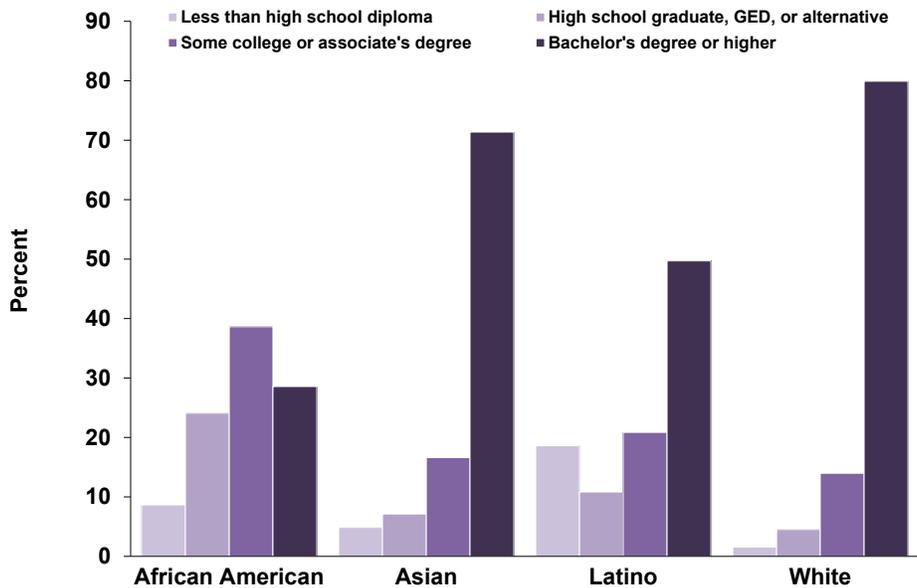
Berkeley’s levels of educational attainment are not evenly distributed. Whites and Asians have the highest rates of higher education. Latinos are the least likely to graduate from high school, and African Americans have the lowest rate of college and professional degrees.

Figure 1.21 EDUCATIONAL ATTAINMENT OF POPULATION AGED 25 AND OLDER Berkeley, 2011–2015



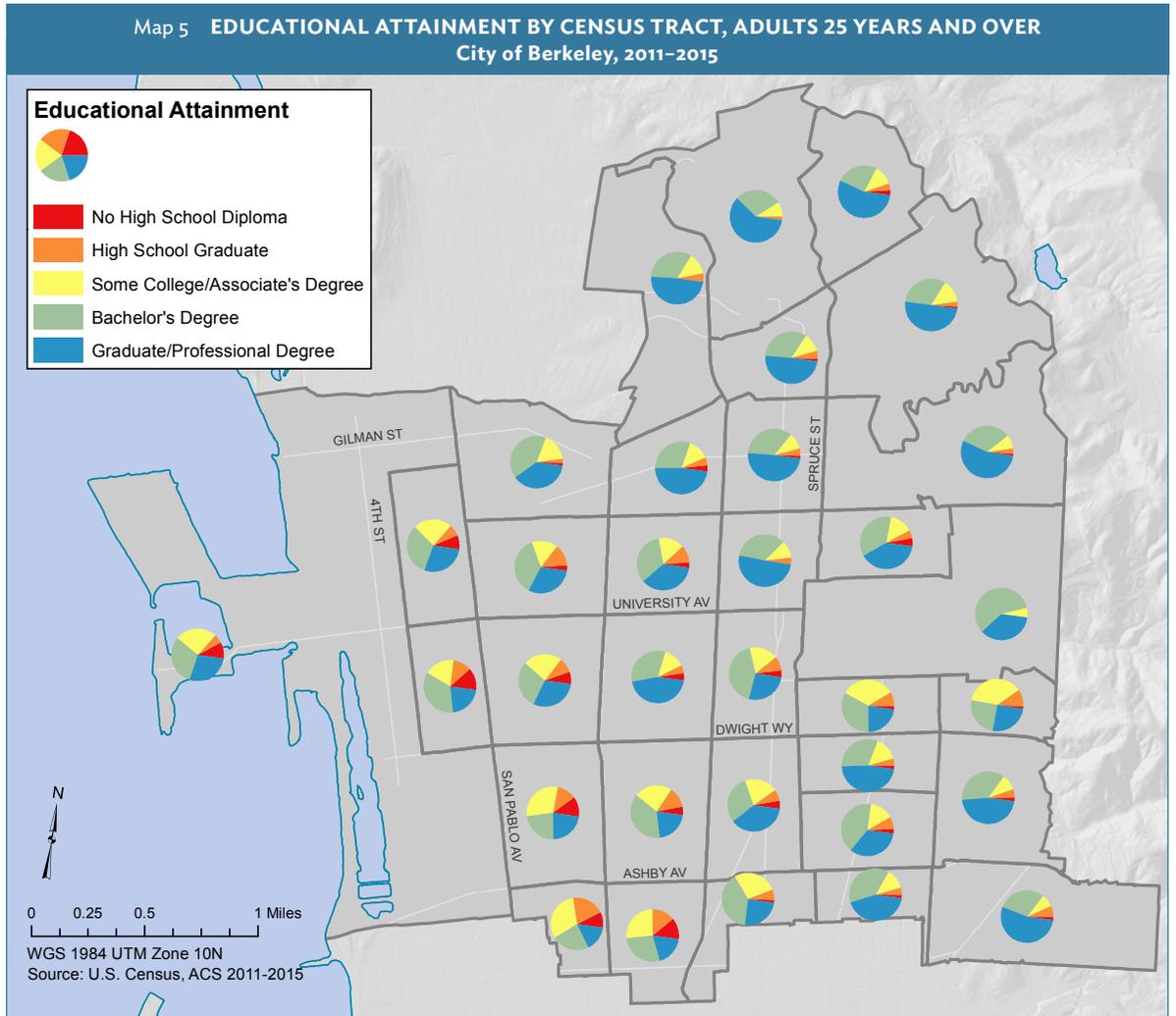
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.22 EDUCATIONAL ATTAINMENT OF POPULATION AGED 25 AND OLDER BY RACE/ETHNICITY Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Education and Educational Attainment continued



Residents in census tracts in the Berkeley Hills, the Claremont Area and those surrounding the University Campus are more likely to have a Bachelor’s degree or higher as compared with residents in census tracts in South and West Berkeley.



Health Insurance and Access to Healthcare

Health insurance coverage is an important determinant of access to health care. Uninsured children and nonelderly adults are substantially less likely to have a usual source of health care or a recent health care visit than their insured counterparts. The majority (52%) of persons under age 65 who have health coverage, have coverage through private employer-sponsored group health insurance.

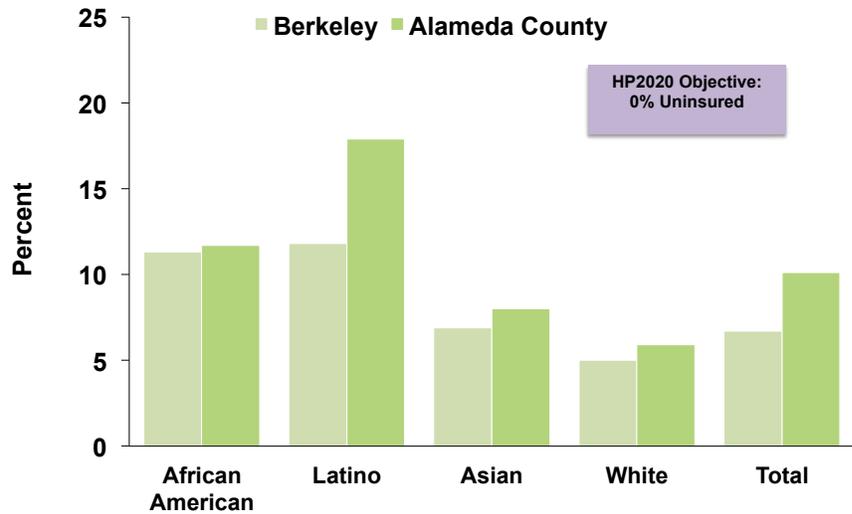
The percentage of uninsured in Berkeley (7%) is lower than in Alameda County (10%). In 2009–2011, the rate was 9% and 13% in Berkeley and Alameda County respectively. The recent decrease in uninsured rate may reflect the impact of the Affordable Care Act expanding health care coverage.

The percentage of uninsured varies by race/ethnicity, as well as by age and education. People of color are at higher risk of being uninsured than non-Hispanic Whites. The percentage of uninsured is higher among African American, Latino, and Asians compared to Whites.

From the Community

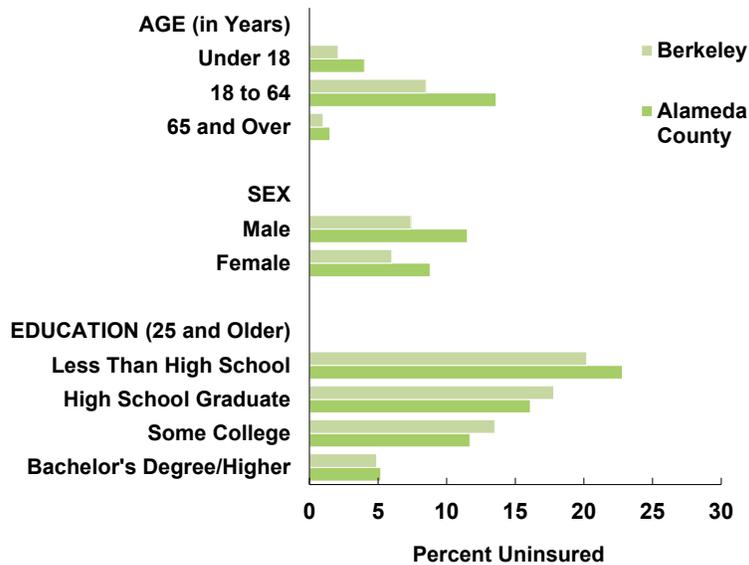
Participants cited the need for increased access to affordable health insurance.

Figure 1.23 HEALTH INSURANCE COVERAGE STATUS: PERCENT UNINSURED BY RACE/ETHNICITY City of Berkeley and Alameda County, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 1.24 HEALTH INSURANCE COVERAGE STATUS: UNINSURED BY AGE, SEX AND EDUCATIONAL ATTAINMENT City of Berkeley and Alameda County, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Health Insurance and Access to Healthcare
continued

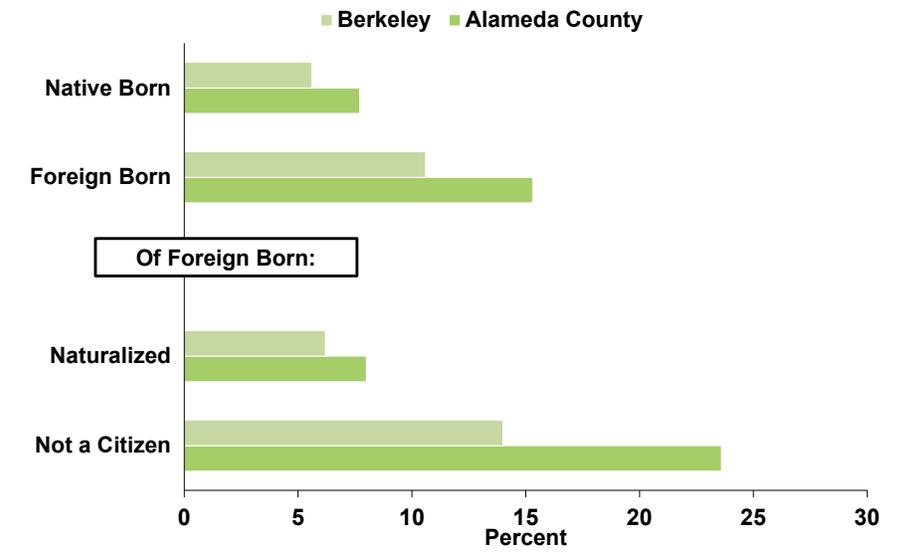
The uninsured percentage between Berkeley and Alameda County is similar for all racial/ethnic groups except for Latinos. A higher proportion of Latinos in Berkeley have health insurance compared to Alameda County. Low income and less educated residents are also at higher risk of being uninsured. Though the Affordable Care Act expanded the availability of health insurance, insurance gaps still remain. Undocumented immigrants, for example, are not eligible for coverage. Some who are eligible will remain uninsured, either by choice or because premiums are not affordable. In addition, it is not clear in the current political environment if the Affordable Care Act will remain or be repealed.

Individuals living in Berkeley who are not US citizens are more likely to be uninsured than those who are citizens. Less than 7% of native born and foreign born naturalized citizens in Berkeley are uninsured. In contrast, 14% of those who are not US citizens are uninsured.

Crime

A safe neighborhood that is free of violence and crime is vital for a healthy community. The physical and mental ramifications of violence and crime contribute largely to the burden of disease and deaths. Violent crimes significantly and disproportionately affect communities of color and young adults. Post-traumatic stress in the victims of crime and assault contributes to the burden of mental health status and the chronic diseases like cardiovascular disease. The total reported number of crimes in Berkeley has fluctuated over time between 2006 and 2016. Robbery and aggravated assault made up 93.8% of all reported crimes in the past decade.

Figure 1.25 **PERCENT UNINSURED BY PLACE OF BIRTH AND US CITIZENSHIP**
City of Berkeley and Alameda County, 2011–2015

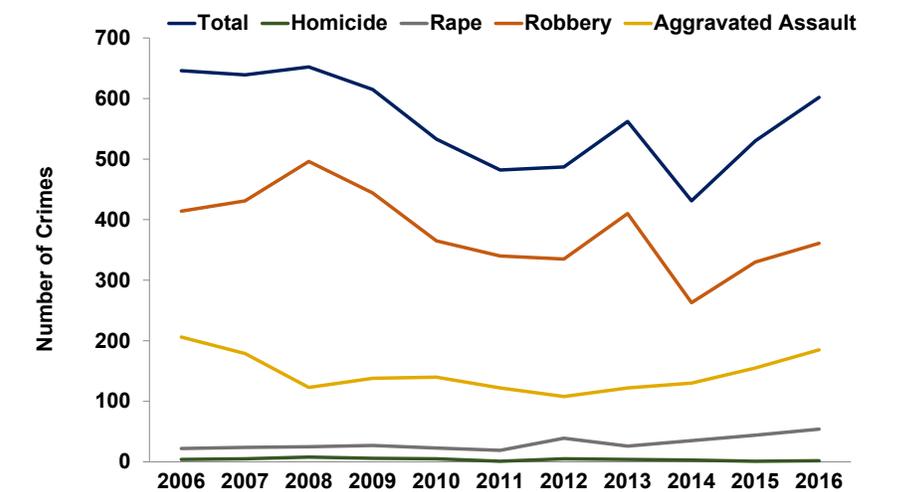


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

From the Community

Many comments focused on ensuring culturally relevant and appropriate services and care. Latino respondents cited the need for more bilingual providers and outreach and information in Spanish.

Figure 1.26 **VIOLENT CRIMES REPORTED TO POLICE DEPARTMENT**
Berkeley, 2006–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, State of California Department of Justice, 2006–2016

Crime continued

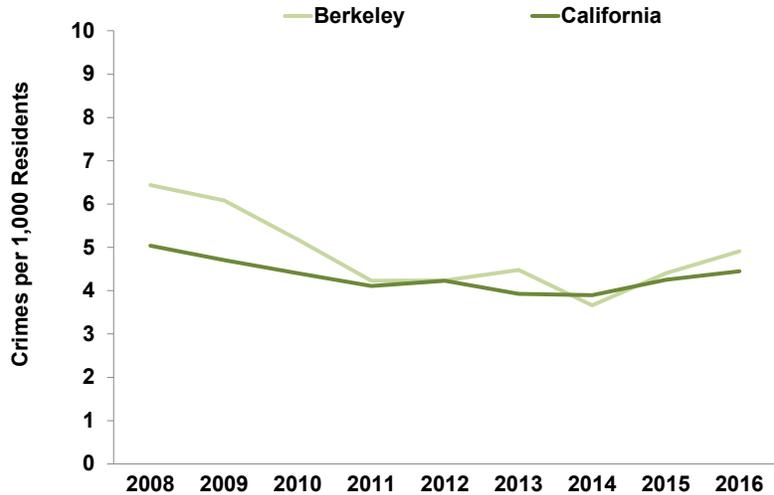
Violent crime rates in Berkeley are similar to those in California, and they have remained fairly stable over the past decade.

From the Community

“I used to feel like I was in a safe haven in Berkeley. It does not feel safe anymore. I got robbed while at the ATM recently. I don’t feel like I can walk down the street the way I used to. We need to feel more safe and supported in this community.”

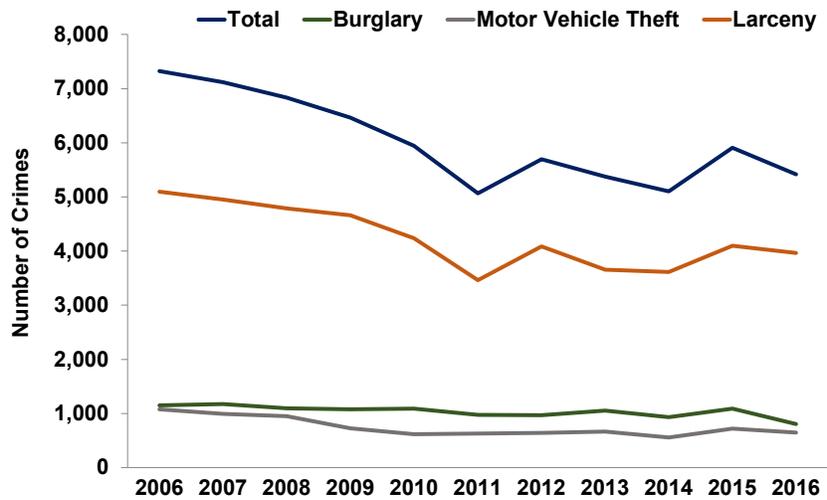
Property crimes in Berkeley were on the decline until 2011. After that year, the property crime rate has remained largely steady. Larceny is the most common type of Berkeley property crime, at 70.4% over the past decade. Larceny is the wrongful taking of someone else’s personal property or goods without permission from the owner.

Figure 1.27 VIOLENT CRIMES PER 1,000 RESIDENTS Berkeley and California, 2008–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Federal Bureau of Investigation (FBI), 2006–2016

Figure 1.28 PROPERTY CRIMES REPORTED TO POLICE DEPARTMENT Berkeley, 2006–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, State of California Department of Justice, 2006–2016

References

1. M. Whitehead, "The Concepts and Principles of Equity and Health," WHO, EURO Report, 1991.
2. P. Braveman, "The Social Determinants of Health: Coming of Age," Annual Review of Public Health, vol. 32, pp. 381–398, 2011.
3. US Dept. of Health and Human Services, "About Healthy People," 2012. [Online]. Available: <https://www.healthypeople.gov/2020/About-Healthy-People>. [Accessed 2017].
4. CDC, "The Public Health System and the 10 Essential Public Health Services," 2017. [Online]. Available: <https://www.cdc.gov/stltpublichealth/publichealthservices/essentialhealthservices.html>. [Accessed 2017].
5. UC Berkeley, "Berkeley Undergraduate Profile, UC Berkeley," 2011. [Online]. Available: <http://opa.berkeley.edu/sites/default/files/UndergraduateProfile.pdf>. [Accessed 2017].
6. US Census Bureau, "State & county Quickfacts: Alameda County, CA.," 2016. [Online]. Available: <https://www.census.gov/quickfacts/fact/table/alamedacountycalifornia/PST045216>. [Accessed 2017].
7. CDC, "NCHS Data Brief Number 125," 2013. [Online]. Available: <http://www.cdc.gov/nchs/data/databriefs/db125.htm#refi>. [Accessed 2017].
8. R. Speigelman, "Everyone home, Ending Homelessness in Alameda County. 2009 Alameda Countywide Homeless Count and Survey," 2009.
9. US Census Bureau, "2006–2010 American Community Survey [California]," 2011.

2

CHAPTER 2: PREGNANCY AND BIRTH

Pregnancy and childbirth mark the beginning of an individual's journey along the life course. The health conditions of pregnancy, birth, and early infancy have a profound impact on health and well-being throughout life. It is important to pay particular attention to this critical life stage when assessing the overall health status of a community.

Berkeley has excellent overall health indicators related to pregnancy and birth, and meets most HP2020 goals in these areas. There have been substantial improvements in health outcomes related to pregnancy and birth, including low birth weight (LBW), prenatal care, and teen birth.

African American mothers and infants now meet HP2020 goals for prenatal care, LBW and prematurity. Despite these improvements, inequities in pregnancy and birth-related outcomes persist. For example, the birth rate among African American youth is higher than the rates among all other racial/ethnic groups. Improving the reach and effectiveness of programs, partnerships, and outreach to better meet the needs of at-risk youth are priorities for public health.



Robin Kempster

Key Findings

- **Healthy People 2020 (HP2020) Goals**
 - Berkeley overall *meets* HP2020 goals for:
 - Prenatal care
 - Low Birth Weight
 - Prematurity
- **Mothers**
 - Nearly 94% of pregnant women receive prenatal care in the first trimester.
- **Teens**
 - From 2004–2006 to 2014–2016 the overall teen birth rate decreased by 82%. For African Americans the rate decreased by 76% during the same time period.
 - African American teens have a birth rate 9 times higher than that of White teens and 2 times that of Latina teens.
- **Infants**
 - In 1993–1995, an African American woman in Berkeley was 5 times as likely as a White woman to have a low birth weight (LBW) infant. In 2014–2016, 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, for the first time ever recorded, met the HP2020 objective for prematurity in 2014–2016. Additionally, while the disparity is decreasing, African American babies are twice as likely to be born prematurely as White, Latino, or Asian babies.

Live Births

The annual number of live births in Berkeley has been gradually decreasing over the last two decades in all racial/ethnic groups. White women have the largest number of live births, reflective of their larger proportion of the Berkeley population. Of the 845 babies born in 2016, 10% were from African American, 14% from Asian/Pacific Islander, 12% from Latina, and 53% from White mothers.

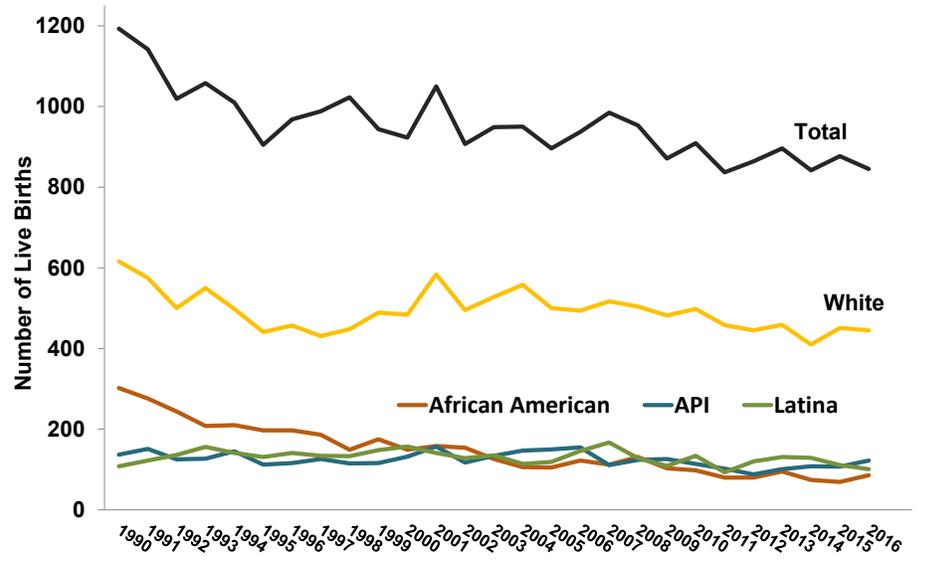
Fertility Rate

The fertility rate is the number of live births per 1,000 women aged 15–44 years old in a given year. Fertility rates are important for estimating population growth and for understanding the current and future needs of a population. Fertility rates have decreased over the past ten years in every racial and ethnic group in Berkeley. Other jurisdictions have also experienced this decrease, which may be linked to economic constraints experienced nationwide over the last decade.

Prenatal Care

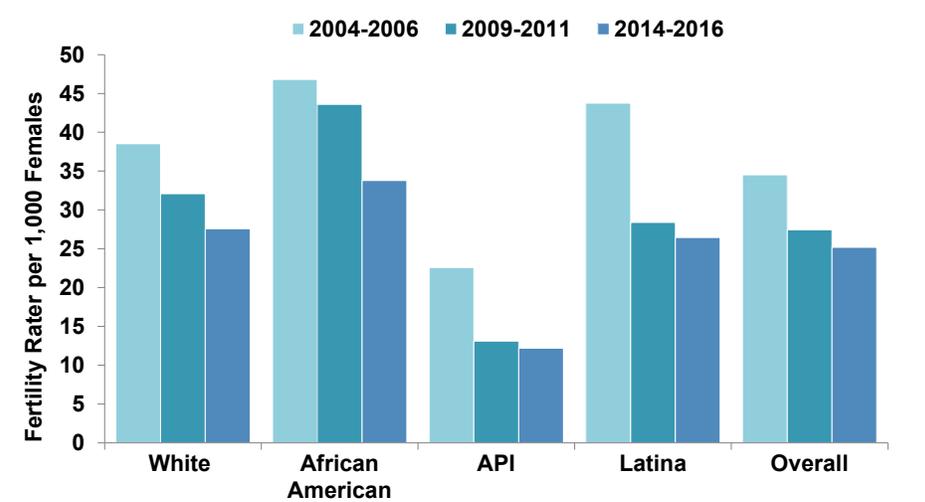
Prenatal care is health care received during a woman’s pregnancy and includes education, monitoring, and health screening. Early prenatal care starting in the first trimester of pregnancy, is essential for having the best possible outcome for a mother and child. Early and consistent prenatal care correlates closely with improved birth weight and lower risk of preterm delivery, which are factors that can lead to morbidity and mortality in the newborn.

Figure 2.1 **LIVE BIRTHS TO BERKELEY RESIDENT MOTHERS BY RACE/ETHNICITY Berkeley, 1990–2016**



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

Figure 2.2 **FERTILITY RATES PER 1000 FEMALES AGE 15–44 in Berkeley, 2004–2006, 2009–2011, 2014–2016 (3-year intervals)**



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

From the Community

“I was born and raised in Berkeley. [Berkeley Black Infant Health] has been a big impact in a lot of our lives, helping us navigate our lives.”

Berkeley Black Infant Health (BBIH) Program

Berkeley’s BIH program aims to improve birth outcomes and reduce health disparities affecting African American women and their babies. Through culturally affirming group education and complementary case management, the program works to empower African-American mothers and their families. BBIH helps to build social support, develop parenting and life skills, learn stress management tools, promote healthy behaviors and relationships, and support a healthy pregnancy. In addition, BBIH provides resource linkages to assist participants in connecting with the community, social, and health services to meet their needs.

Prenatal Care continued

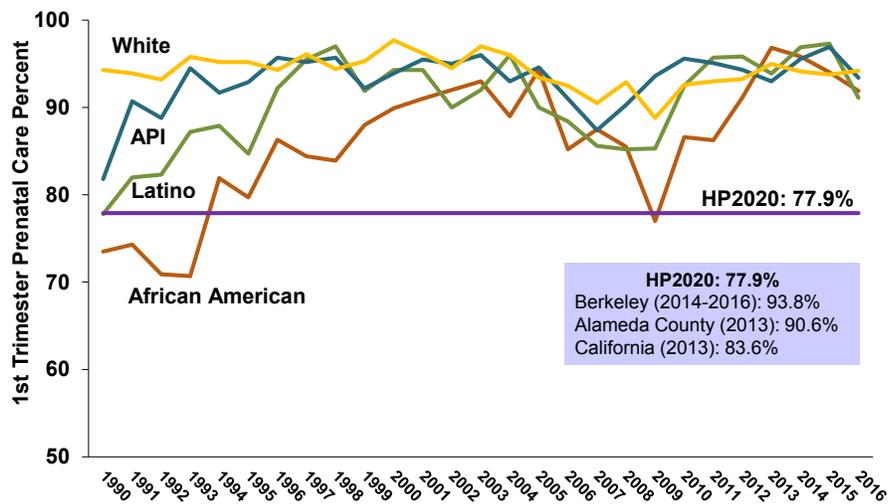
Nearly 94% of pregnant Berkeley mothers of all racial/ethnic groups receive prenatal care in the first trimester, which is higher than Alameda County and California. Berkeley meets the HP2020 goal and there is no racial disparity in this indicator.

Low Birth Weight

Low birth weight (LBW) is weight at birth of less than 5 lb. and 8 oz. or 2,500 grams. LBW infants have higher rates of morbidity and mortality than normal weight infants. They are at increased risk for cerebral palsy, developmental delays, respiratory infections, and long-term disability. Women who are teenagers, smoke cigarettes, or receive inadequate prenatal care are more likely than others to have LBW infants. This has an impact on the long term health of the infants throughout their life course.

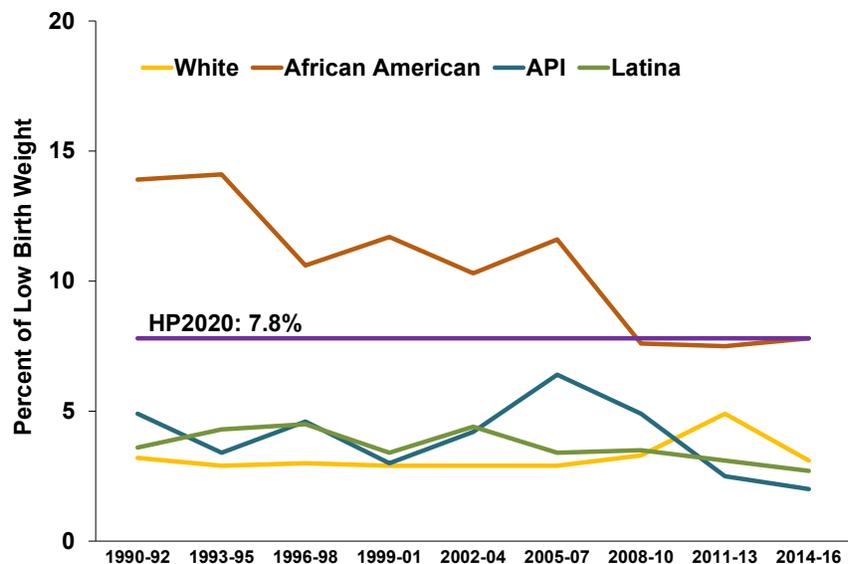
Since 2008, all racial/ethnic groups in Berkeley have met the HP2020 goal for low birth weight (LBW). Infants born to African American women now are less likely to be LBW than they were in the early nineties when LBW was at it’s peak. In 1993–1995, an African American woman in Berkeley was almost 5 times as likely as a White woman to have a LBW infant. Despite a significant decrease, large racial and ethnic disparities persist in LBW. The risk of an African American mother having a LBW baby remains 2.5 times higher today than that of her White counterpart.

Figure 2.3 PERCENT OF PREGNANT MOTHERS RECEIVING PRENATAL CARE IN 1ST TRIMESTER Berkeley, 1990–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

Figure 2.4 LOW BIRTH WEIGHT BY RACE/ETHNICITY (EXCLUDES MULTIPLE BIRTHS) Berkeley, 1990–2016 (3-year-intervals)



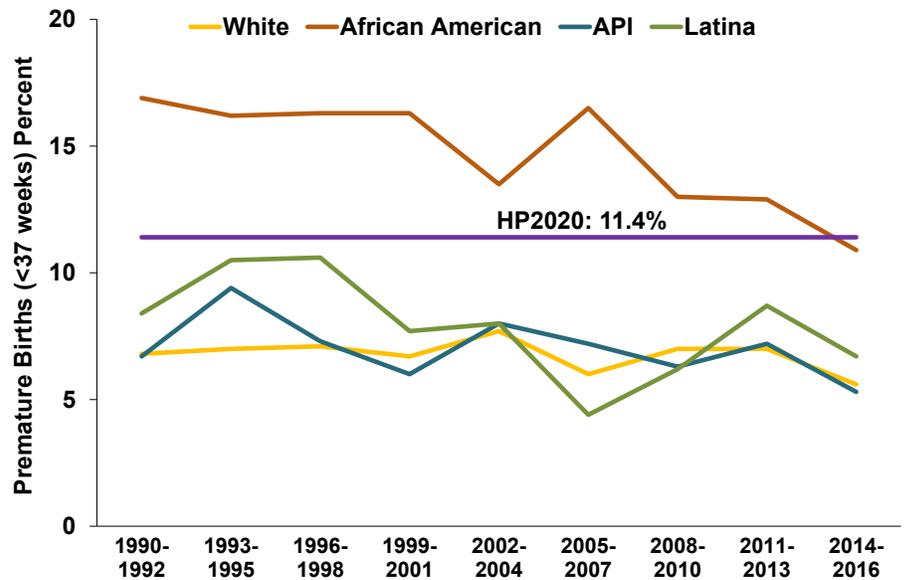
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

Premature Birth

Premature or preterm delivery is the birth of an infant before 37 weeks of gestation. 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, poor nutrition, and domestic violence. Like LBW infants, infants born prematurely are more likely to experience cerebral hemorrhaging, developmental delays, respiratory infections, and long term disability.

The rates of premature babies have decreased during the last decade for all racial/ethnic groups. All racial/ethnic groups meet the HP2020 objective for prematurity. Even though prematurity has decreased significantly in all race/ethnic groups in Berkeley, the disparity persists. In 1990–1992, African American mothers were 2.5 times more likely to have a premature baby. This rate has decreased to 2 times more likely in 2014–2016.

Figure 2.5 **PREMATURE BIRTHS BY RACE/ETHNICITY AND YEAR OF BIRTH**
Berkeley, 1990–2016 (All Births; 3-year intervals)



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

BE A STAR (Behavioral, Emotional, Assessment, Treatment and Referral) is a Public Health program that promotes developmental screening of children birth to 5 years of age. Through partnerships with Help Me Grow-Alameda County, Berkeley pediatric healthcare providers, BUSD preschools, home visiting Public Health Nurses and our Berkeley WIC program, Be a Star is aiming to screen all Berkeley infants and children under the age of 5. The overarching goal of the program is to not only identify children who have developmental delays and provide referrals to services, but also to help parents feel the success of when their child is developing and meeting milestones. By both engaging parents in the conversation around their child's development and by identifying children who may need extra resources, parents are better supported in the important early childhood development years which helps their children to be better prepared to enter kindergarten.

Teen Births

Teen births are births to women under 20 years of age. In general, these young women have not yet completed their high school education, may be dependent on family support, and are still maturing into adulthood. The health and socioeconomic consequences of teenage pregnancy and childbearing are significant. Teen mothers are more likely to drop out of school, receive late and inadequate prenatal care, and experience complications during pregnancy. Babies born to teen mothers are at higher risk of low birth weight and preterm birth.

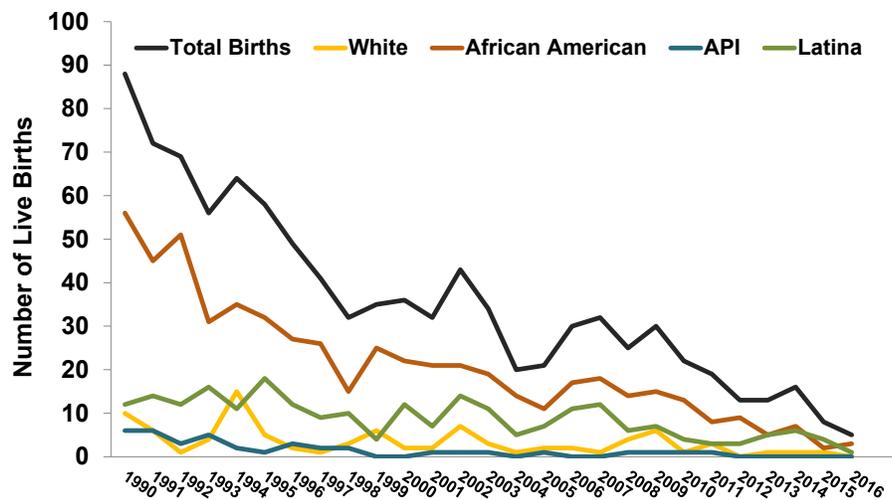
The annual number of live births to teenagers age 15–19 years old in Berkeley has decreased over the last two decades in all racial/ethnic groups. The total annual number of births to teens age 15–19 has fallen from a high of 88 in 1990 to only 5 in 2016. For African American teen mothers this number decreased from 56 to 3 in 2016, a decrease of over 90%.

Berkeley’s teen birth rate has been decreasing in all racial/ethnic groups over the past decade and it is at its lowest ever recorded. From 2004–2006 to 2014–2016, the overall teen birth rate decreased by 82%. For African Americans the rate decreased by 76% during the same time period. As a result, the disparity persists. The birth rate among African American young women is higher than among all other racial/ethnic groups. The rate in this population for 2014–2016 is 2 times the rate for Latina young women and 9 times the rate for Whites.

From the Community

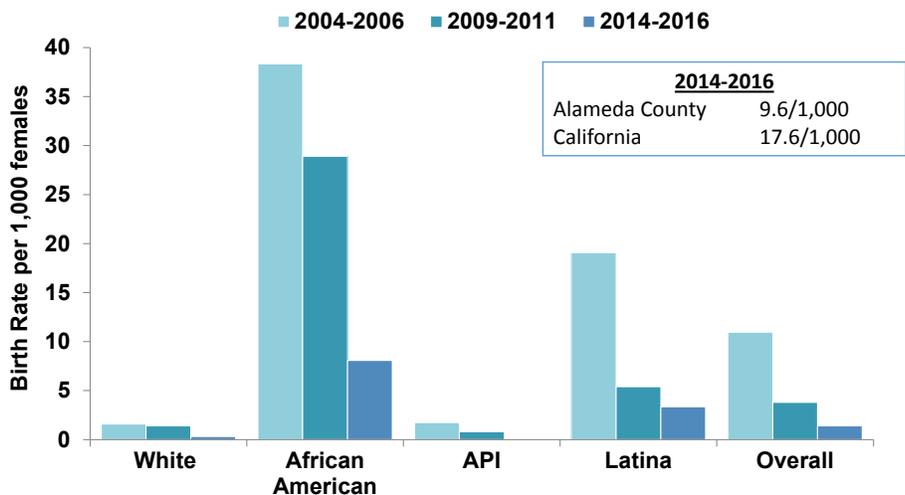
“All around, we need to care about the health and safety for the moms in the family and especially single moms. Single moms sometimes are down and out; they need more care. They are caring for a whole community. You take care of her, then you are reaching a lot of people. If she doesn’t feel safe, then a whole family will fall down.”

Figure 2.6 LIVE BIRTHS IN FEMALES 15 TO 19 YEARS OLD Berkeley, 1990–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

Figure 2.7 BIRTH RATES IN FEMALES 15 TO 19 YEARS OLD BY RACE/ETHNICITY Berkeley, 2004–2006, 2009–2011, 2014–2016 (3-year intervals)

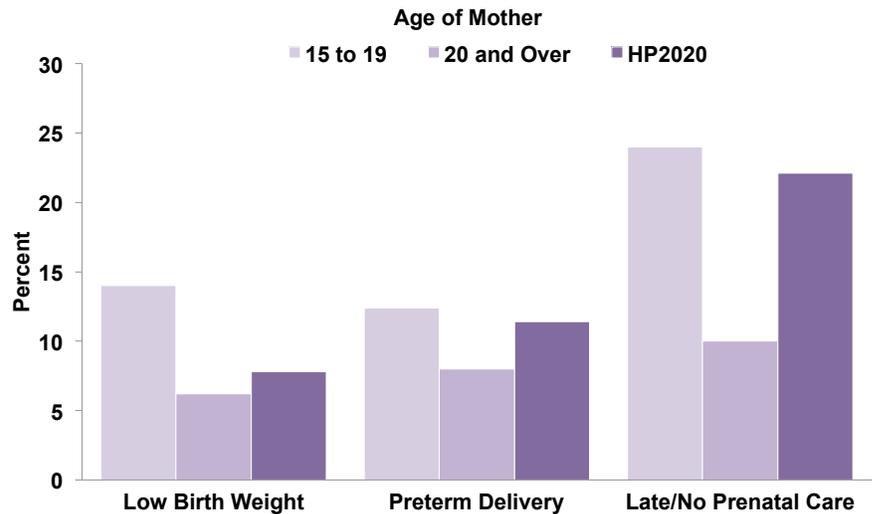


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 1990–2016

Teen Births continued

Teen mothers age 19 and under are more likely than non-teen mothers to have had late or no prenatal care, and their babies are more likely to be low birth weight or preterm. In contrast to mothers 20 years of age and older, these young women and their infants do not meet the HP2020 goals for prenatal care, birth weight or prematurity.

Figure 2.8 PERINATAL OUTCOMES BY AGE OF MOTHER Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Birth Records 2011–2015

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, 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 other health and social services; assisting with enrollment in low cost medical and dental plans; and helping families support children's growth and development.

References

1. C. Kirkham, "Evidence-Based Prenatal Care: Part I. General Prenatal Care and Counseling Issues," *American Family Physician*, vol. 71, no. 7, pp. 1307–1316, 2005.
2. S. Lorch, "Factors that mediate racial/ethnic disparities in US fetal death rates," *American Journal of Public Health*, vol. 102, no. 10, pp. 1902–10, 2012.
3. CDC, "Preconception Health and Health Care," 2014. [Online]. Available: <http://www.cdc.gov/preconception/overview.html>. [Accessed 2017].
4. CDC, "Teen Pregnancy," 2017. [Online]. Available: <http://www.cdc.gov/TeenPregnancy/index.htm>. [Accessed 2017].
5. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau, "Child Health USA 2008–2009," U.S. Department of Health and Human Services, Rockville, Maryland, 2009.
6. CDC, "Births: Provisional Data for 2016," 2017. [Online]. Available: <https://www.cdc.gov/nchs/data/vsrr/report002.pdf>. [Accessed 2017].
7. ChildStats.gov Forum on Child and Family Statistics, "America's Children: Key National Indicators of Well-Being, 2017: Preterm Birth and Low Birthweight," 2013. [Online]. Available: <http://www.childstats.gov/americaschildren/health1.asp>. [Accessed 2017].
8. M. Lu, "Racial and Ethnic Disparities in Birth Outcomes: A Life-Course Perspective," *Maternal and Child Health Journal*, vol. 7, no. 1, pp. 13–30, 2003.

3 CHAPTER 3: CHILD AND ADOLESCENT HEALTH

Childhood and adolescence are important developmental periods in the life course. Health in early life is the basis for continued health over the life span. Educational foundations are established during this time, influencing future learning and employment opportunities. Personal habits of physical activity, diet, and social connections are also formed.

This chapter summarizes the state of health of children and adolescents in Berkeley: practices and behaviors, use of alcohol, tobacco and other drugs, overweight and obesity, childhood immunizations, and specific health outcomes including mental health, asthma hospitalizations, injuries, and sexually transmitted diseases.

Key Findings

• Healthy People 2020 (HP2020) Goals

- Berkeley as a whole *meets* HP2020 goals for the following:
 - Students who graduate with a regular diploma 4 years after starting 9th grade
- Berkeley as a whole *fails to meet* HP2020 goals for the following:
 - Asthma hospitalization rates of children under 5 years of age

• Demographics

- Children under 18 years old make up 12.5% of Berkeley's population.
- Half of the children in Berkeley belong to non-White racial and ethnic groups; the largest proportion of these is Latino.
- 10% of children under the age of 18 in Berkeley live in poverty. 29% of African American children live in poverty, which is over 7 times the rate of poverty among White children and approximately 2–3 times the rate in any other group.
- In the last decade, the percentage of children living below the poverty level has decreased for the overall Berkeley population and every racial/ethnic group except Latinos.
- Children in poverty are concentrated in South and West Berkeley.

• School Enrollment and Education

- African American and Latino children make up a disproportionately high percentage of the students in the Berkeley Unified School District (BUSD) compared to their respective proportions of Berkeley school-aged children.
- In the 2016 California Standard Tests (CSTs), Berkeley students performed better overall in both English language proficiency and mathematics than both students in Alameda County and statewide.
- African American and Latino children across Berkeley, Alameda County and California demonstrate lower overall proficiency in English Language Arts and Mathematics than other racial/ethnic groups.
- The disparity between White and African American students in Berkeley exceeds the disparity in Alameda County and in California as a whole.
- For grades 3 through 11, students considered socioeconomically disadvantaged have strikingly lower levels of English Language Arts/Mathematics proficiency than their non-disadvantaged counterparts.
- The BUSD four-year high school drop out rate fell to 10.7% for the 2015–2016 school year. Despite a decrease from 18.8% to 13.5% since 2010–2011, African Americans still have the highest drop-out rate in Berkeley.

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Key Findings *continued*

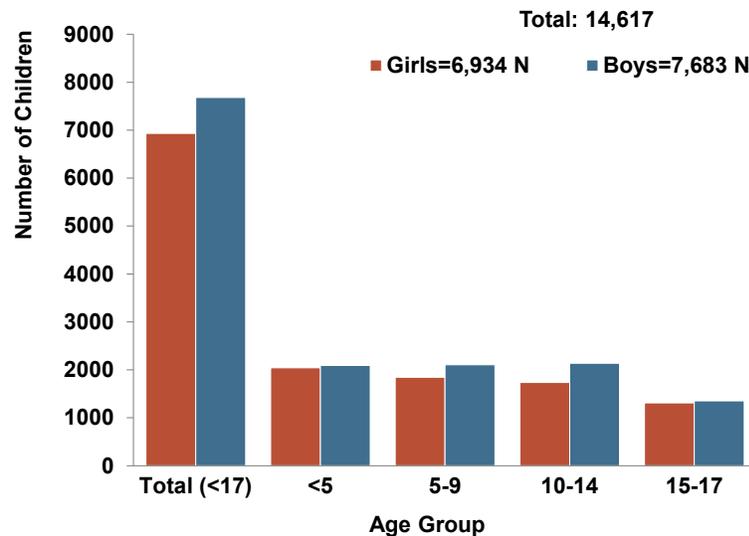
- **School Enrollment and Education** *continued*
 - African American BUSD high school graduates are less likely to be eligible for University of California (UC) or California State University (CSU) than graduates of other racial/ethnic groups.
- **Physical Activity and Obesity**
 - A higher proportion of BUSD 5th graders meet all 6 of the FITNESSGRAM Healthy Fitness Zone standards compared to both Alameda County and California. However, a lower proportion of BUSD 7th graders meet all standards compared to Alameda County and California.
 - The proportion of children that are overweight and obese in Berkeley (30.4%) is lower than that of Alameda County (34.6%) and California (38.3%). African Americans and Latinos have the highest proportions of obese and overweight children in Berkeley.
- **Asthma**
 - The number of asthma hospitalizations among children under 5 in Berkeley decreased from 122 in 2000 to 80 in 2014. Asthma hospitalization rates decreased for all racial/ethnic groups, including African Americans, but the disparity between Whites and African Americans increased.
 - For African American children under 5, the asthma hospitalization rate is 13 times the HP2020 goal.
- **Alcohol, Tobacco, and Marijuana Use**
 - Cigarette smoking, already at comparatively low levels, has continued to drop for 7th and 9th graders but fluctuated for 11th graders. There has been a drop in e-cigarette use for students at all grade levels.
 - The percentage of BUSD students who have been drunk or high on school property has steadily decreased for all grade levels over the past six years.
 - Alcohol is the most commonly used substance among BUSD students, followed by marijuana. Among B-Tech students, marijuana use is the highest, followed by cigarette use.
- **Mental Health, Safety, and Violence**
 - BUSD high school students in 9th and 11th grades were substantially more likely to be offered illegal drugs than 7th grade students.
 - As grade levels increase, bullying and verbal harassment decreases among BUSD students.
 - The percentage of 7th and 9th graders who experienced cyber bullying increased in 2016, but the percentage of 11th graders decreased.
 - Physical fighting decreases from 7th through 11th grades.
 - Mental health hospitalizations for children under 18 years decreased from 490 in 2008–2010 to 196 in 2012–2014. Over 50% of the hospitalizations are related to episodes of depression.
- **Injuries**
 - The rate of injury hospitalization among African American children in Berkeley is much higher than that of any other race/ethnic group at more than 1,200 injury hospitalizations per 100,000 people.
 - Self-inflicted injuries in youth are usually associated with suicide attempts, and they are much more common in young women than young men.
- **Sexually Transmitted Diseases in Children Under 18**
 - Chlamydia is the most common STD reported among Berkeley youth, but the total number of cases has been decreasing.
 - From 2012 to 2014, there was an increase in the proportion of 9th and 11th graders who had sex. During this time, there was an increase in students who used both condoms and birth control, but also students who used neither methods.
- **Immunizations**
 - The proportion of Kindergarten children with all required immunizations has been consistently lower in Berkeley compared to Alameda County and California, but it peaked at 85% in 2016.
 - 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.
 - Except for sporadic outbreaks, Berkeley has small numbers of vaccine-preventable diseases reported every year. UC Berkeley experienced a mumps outbreak in 2011 and California experienced a pertussis epidemic in 2014.

Demographics of Children and Youth

In Berkeley, children under 18 years old comprise 12.5% of the city's total population. In contrast, children make up 22% of the Alameda County population and 24% of the total population in California. Of Berkeley's children, 28% are under 5 years of age, 27% are age 5–9, 27% are age 10–14, and 18% are 15 to 17 years old.

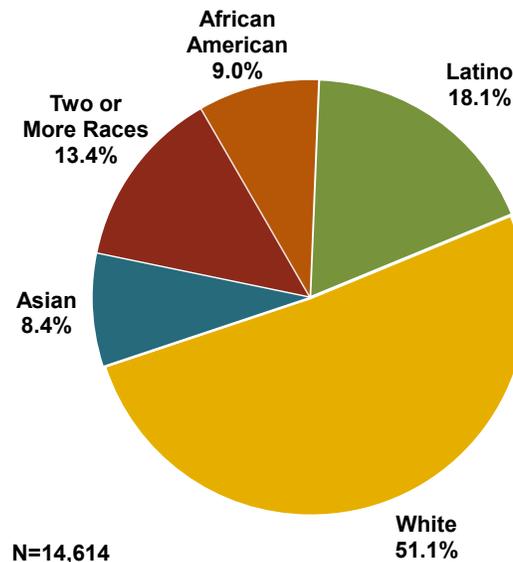
Half of the children in the Berkeley population belong to non-White racial and ethnic groups. Latinos comprise the largest proportion of non-White children, while African American children currently make up 9% of the child population. The proportion of children under 18 that are African American decreased substantially from 21% in 2000 to 9% in 2011–2015. 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 continual decrease in Berkeley's overall African American population. The proportion of children under 18 that are Latino increased from 16% in 2000 to 18% in 2011–2015. The proportion of children that are White also increased somewhat from 46% in 2000 to 51% in 2011–2015.

Figure 3.1 DISTRIBUTION OF CHILDREN 17 YEARS OF AGE AND YOUNGER BY SEX Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

Figure 3.2 CHILDREN 17 YEARS OF AGE AND YOUNGER BY RACE/ETHNICITY Berkeley, 2011–2015

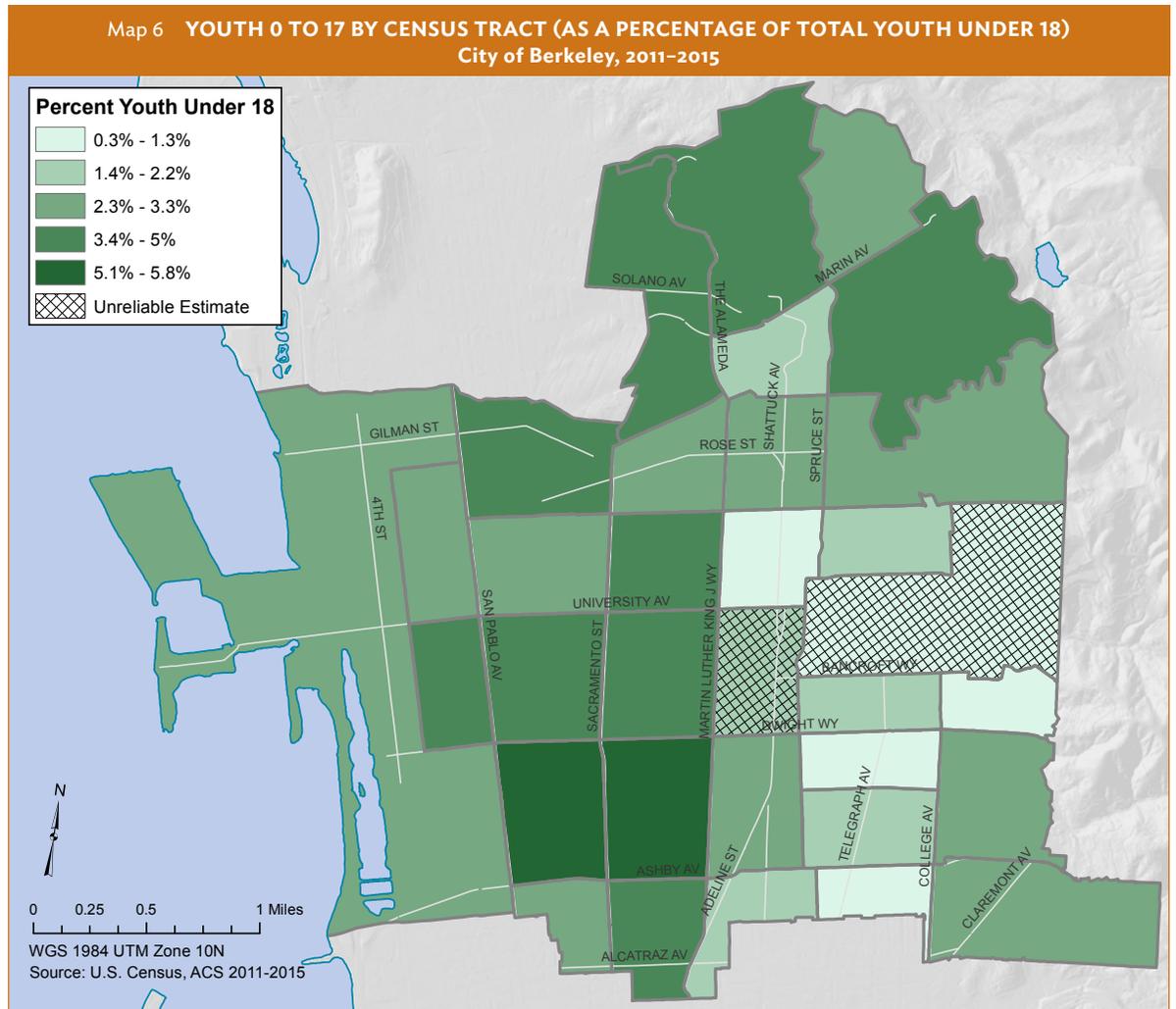


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2011–2015

From the Community

“It’s been an amazing experience to be born and raised here in Berkeley, grow up in Berkeley Unified School District, and to be able to work with the people that I’ve grown up with. We’ve had children together, been pregnant together.”

Demographics of
Children and Youth
continued



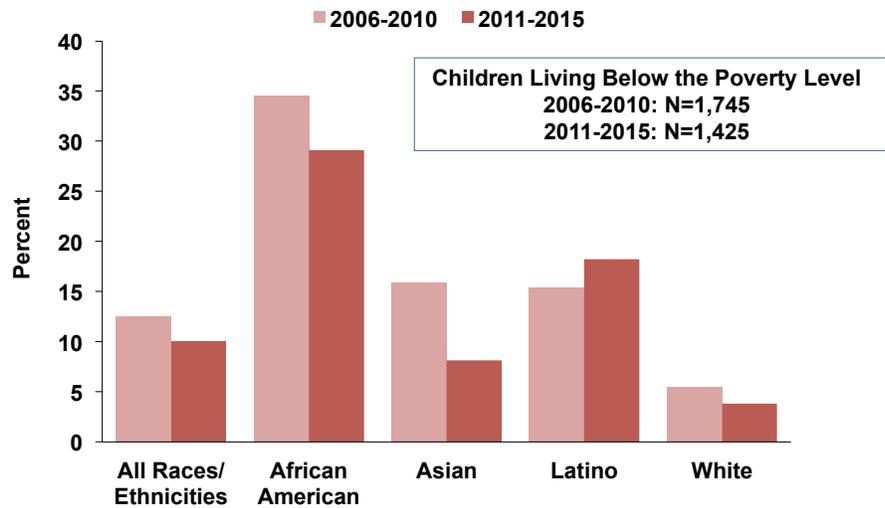
The majority of Berkeley children are concentrated in South Berkeley census tracts, as well as the central region and the hills. Census tracts around UC Berkeley campus have the lowest concentration of children under 18 years old.

Childhood Poverty

If the income of a child's household falls below a federally defined poverty line, that child is defined as being in poverty. The federal government sets state-by-state income thresholds based on the number of household members, which define the poverty line for that size of household. In 2015, the FPL for a family of 4 was an annual income of \$24,250. If a household's total income is less than the poverty line, then that family and every individual in the home is considered in poverty. People living in poverty are more likely to be exposed to greater personal and environmental health risks, are less well nourished, and are less able to access health care; thus, they have a higher risk of illness and disability.

The overall percentage of children living below the poverty level has decreased in Berkeley during the last decade. This is true for every racial/ethnic group, except for Latinos. Just over 1,400 (10%) children under the age of 18 in Berkeley live in poverty. This decreased from 13% in the previous 5 years. Nearly one-third of African American children (29%) live in poverty, which is over 7 times the rate of poverty among White children and approximately 2–3 times the rate in any other group of children. Children in poverty predominately reside in South and West Berkeley.

Figure 3.3 PERCENT OF CHILDREN 17 YEARS AND YOUNGER LIVING BELOW THE POVERTY LEVEL BY RACE/ETHNICITY Berkeley, 2006–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; U.S. Census, ACS 2006–2015



Berkeley Unified School District

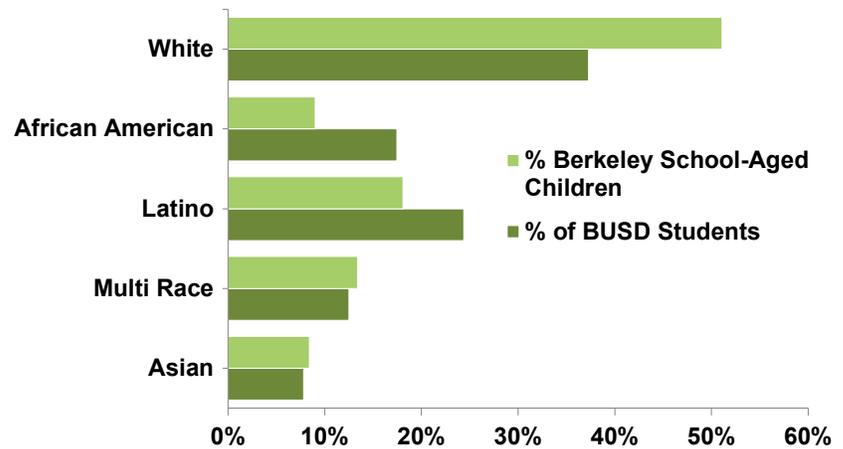
School Enrollment and Education

Healthy students tend to learn better in school. They are more likely to attend school regularly and are better able to focus in class, which ultimately leads to higher scores and overall higher classroom achievement. In turn, students who are successful in school are more likely to be successful in their employment and income attainment, and therefore to have healthier lives throughout the adult years of their life course.

The Berkeley Unified School District (BUSD) is the public school system in Berkeley. African American and Latino children make up a disproportionately high percentage of the students in the BUSD compared to their respective proportions of Berkeley school-aged children. White children make up 37% of BUSD students and 51% of Berkeley school-aged children. A higher proportion of White Berkeley children are enrolled in private school or other educational settings.

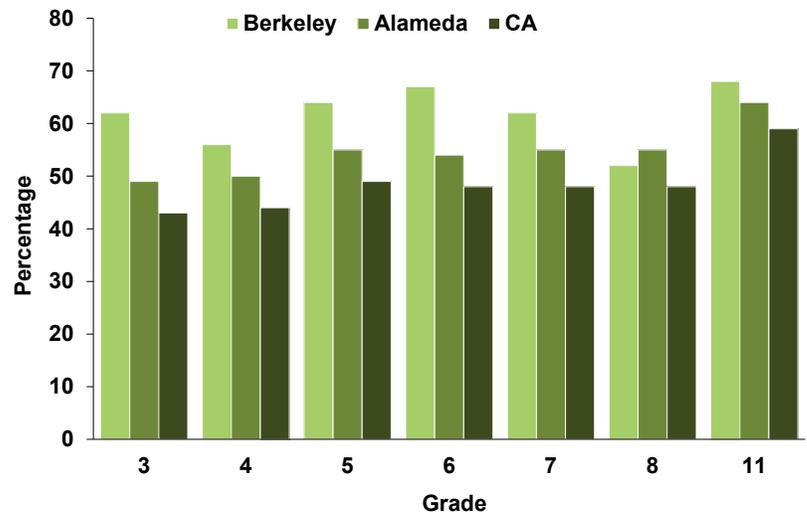
Administered in California public schools, California Standard Tests (CSTs) measure students' progress towards achieving academic standards in a range of subjects. In the 2016 reading proficiency tests, Berkeley students overall performed better than students statewide and in Alameda County. Berkeley students' English-Language Arts (ELA) proficiency fluctuates from a low of 52% in 8th grade to a high of 68% in 11th grade.

Figure 3.4 PERCENT OF STUDENTS ENROLLED IN BERKELEY UNIFIED SCHOOL DISTRICT AND PERCENT OF BERKELEY SCHOOL-AGED CHILDREN BY RACE/ETHNICITY 2015-2016



Source: City of Berkeley Public Health Division, California Department of Education, ACS 2015-2016

Figure 3.5 PERCENTAGE MEETING OR EXCEEDING ENGLISH LANGUAGE ARTS/LITERACY STANDARD Berkeley Unified School District, Alameda County, and California, 2015-2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CAASPP English Language Arts/Literacy 2015-2016

From the Community

"I just think we should have more programs, even just once a month for people to build communities for young kids. In grade school, if you can't afford to put them in afterschool, they are just out there, on their own sometimes. ... We need Boys and Girls Clubs that support black kids in the community and places where they live."

From the Community

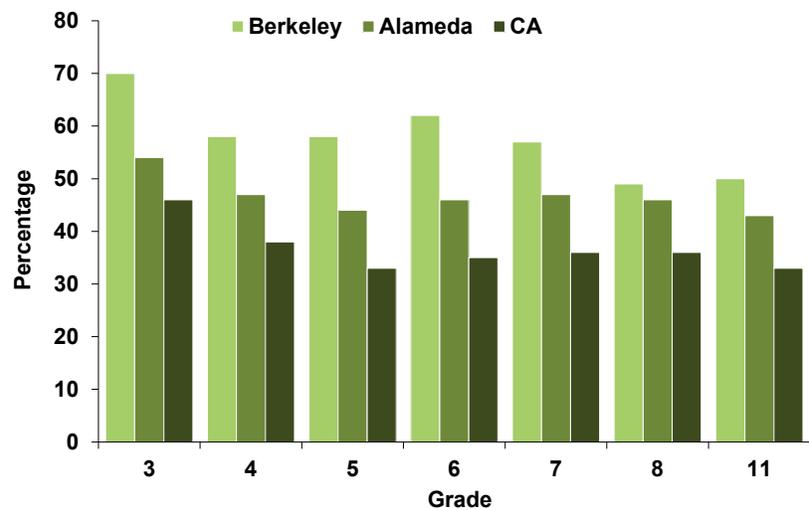
“It’s really hard for kids of color (Latinas); you know, this is a predominantly white school—the white kids, they have all kinds of privilege; their parents have been paying for tutoring for years; they have been reading to them for years; they have so much more to start with. I don’t understand my homework, I can’t go to my parents for help. My mom didn’t graduate from high school; that is why it is really frustrating when it comes to going to college, getting ahead.”

School Enrollment and Education continued

In 2016 mathematics proficiency tests, Berkeley students performed better than students statewide and in Alameda County for all grade levels. Berkeley students’ mathematics proficiency fluctuates from a low of 49% in 8th grade to a high of 70% in 3rd grade.

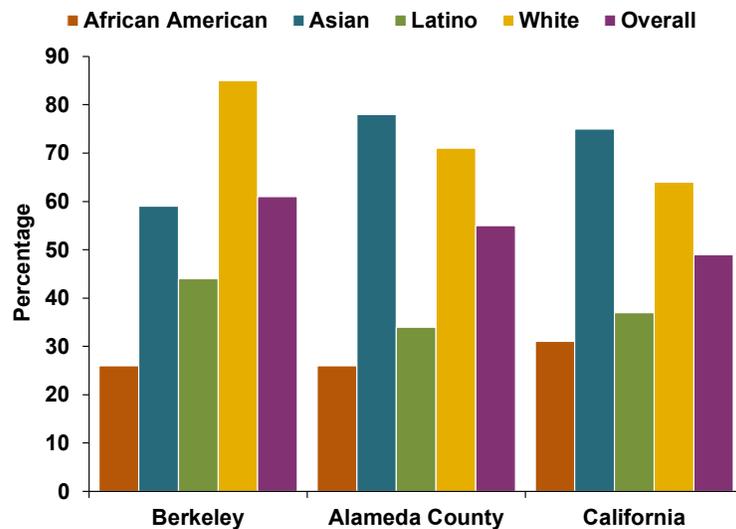
African American and Latino children in Berkeley, Alameda County and California demonstrate lower overall English Language Arts/Literacy (ELA) proficiency than all other racial/ethnic groups of children. Berkeley’s Asian BUSD students do not score as well as their peers in Alameda County and across California. In contrast, White and Latino BUSD students have higher ELA proficiency than their peers in Alameda County and the State. The disparity in ELA proficiency between White and African American students in Berkeley exceeds the disparity in Alameda County and in California as a whole.

Figure 3.6 PERCENTAGE MEETING OR EXCEEDING MATHEMATICS STANDARD Berkeley Unified School District, Alameda County, and California, 2015–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CAASPP Mathematics 2015–2016

Figure 3.7 PERCENTAGE MEETING OR EXCEEDING ENGLISH LANGUAGE ARTS/LITERACY STANDARD BY RACE/ETHNICITY Berkeley Unified School District, Alameda County, and California, 3rd–8th and 11th Graders, 2015–16

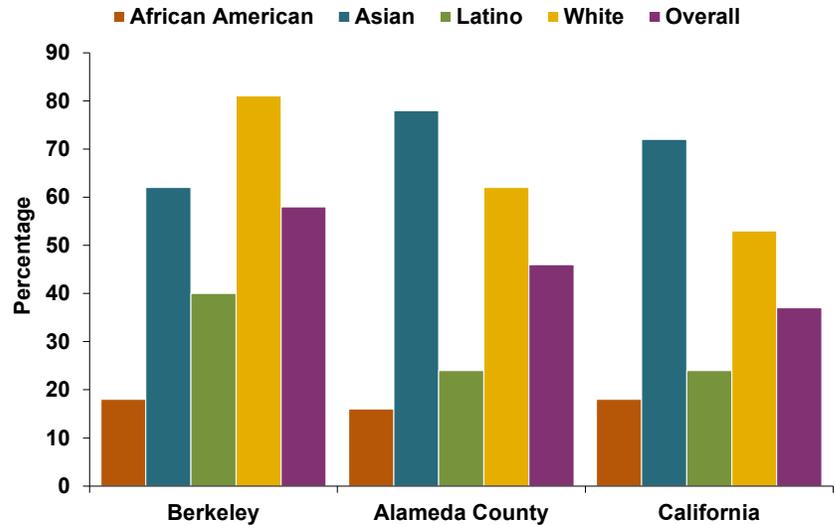


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CAASPP English Language Arts/Literacy 2015–2016

School Enrollment and Education continued

African American and Latino children across Berkeley, Alameda County and California demonstrate lower overall proficiency in mathematics than White and Asian children. Nonetheless, Berkeley's Asian BUSD students do less well than their peers in Alameda County and across California. In contrast, White and Latino BUSD students have higher mathematics proficiency than their peers in Alameda County and the State. The disparity in mathematics proficiency between White and African American students in Berkeley exceeds the disparity in Alameda County or in California as a whole.

Figure 3.8 PERCENTAGE MEETING OR EXCEEDING MATHEMATICS STANDARD BY RACE/ETHNICITY Berkeley Unified School District, Alameda County, and California, 3rd–8th and 11th Graders, 2015–16

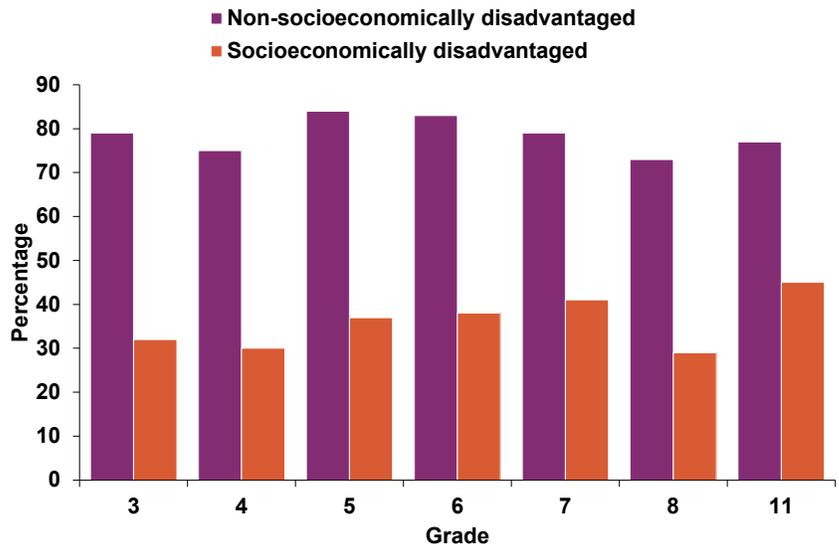


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CAASPP Mathematics 2015–2016

Student Proficiency by Socioeconomic Status

Socioeconomically disadvantaged students are defined by the California Department of Education as students who are eligible for the free or reduced-price lunch program, or for whom neither parent is a high school graduate.

Figure 3.9 PERCENT PROFICIENT OR ABOVE IN ENGLISH LANGUAGE ARTS/ LITERACY BY POVERTY LEVEL Berkeley Unified School District, 2015–2016

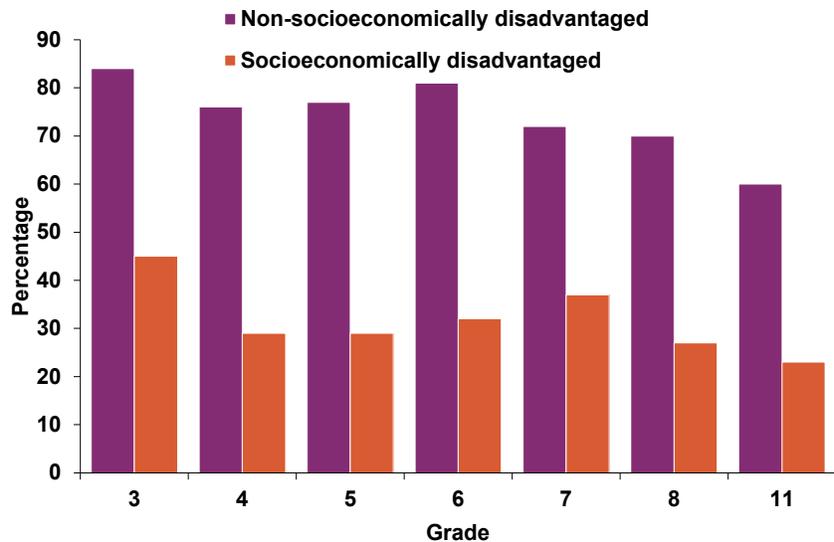


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CAASPP English Language Arts/Literacy 2015–2016

Student Proficiency by Socioeconomic Status
continued

For all grades 3 through 11, students considered socioeconomically disadvantaged have strikingly lower levels of ELA and mathematics proficiency than their non-disadvantaged counterparts. As shown previously, the majority of these children come from a minority racial/ethnic group.

Figure 3.10 PERCENT PROFICIENT OR ABOVE IN MATHEMATICS BY POVERTY LEVEL Berkeley Unified School District, 2015–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CAASPP Mathematics 2015–2016

2020 Vision

Berkeley's 2020 Vision is a city-wide collective impact effort to achieve equity in education for all Berkeley children from "cradle to career". The Berkeley community collaborates on six areas of systemic focus to end racial disparities in education, especially for Berkeley's African American and Latino children. Berkeley's 2020 Vision strives to "move the needle" on the following key indicators of educational equity: Kindergarten Readiness, Third Grade Reading Proficiency, Ninth Grade Math Proficiency, Attendance, College and Career Readiness, and Community Engagement. Berkeley's 2020 Vision also includes the Berkeley Promise, a college scholarship initiative



Berkeley Unified School District



Berkeley Unified School District

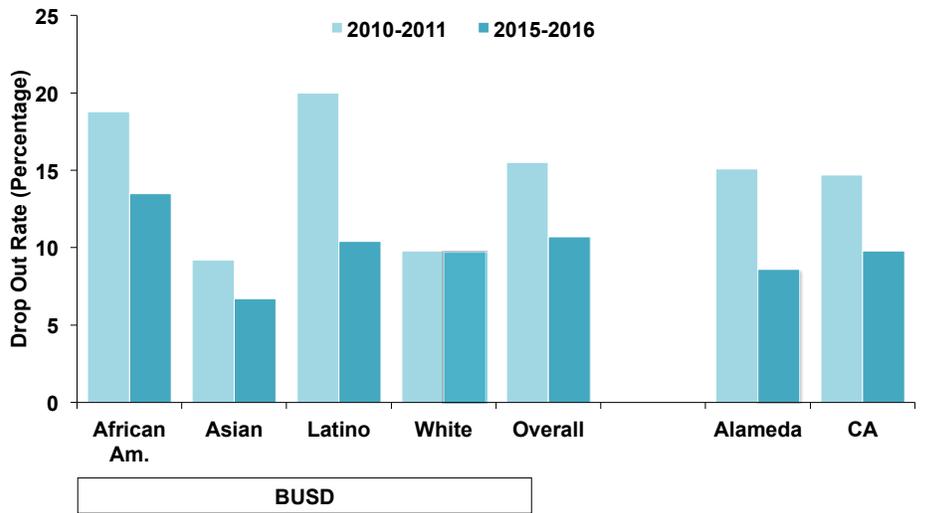
High School Dropout and Graduation Rates

BUSD high school data include students at Berkeley High School, Berkeley Technology Academy, and Berkeley Independent Study. In the 2015–2016 school year, the BUSD high school four-year dropout rate dropped to 10.7%, a decrease of 31% from the 15.5% dropout rate in the 2010–2011 school year. Berkeley’s 2016 rate is similar to Alameda County and statewide dropout rates. Approximately 1 in 10 Latino students did not graduate from high school in 2015–2016 school year, a proportion that has decreased substantially (by 50%) from 2010–2011 school year, when 1 in 5 Latinos did not graduate.

Despite a 26% drop since 2010–2011, the African American student population still has the highest dropout rate in the 2015–2016 school year.

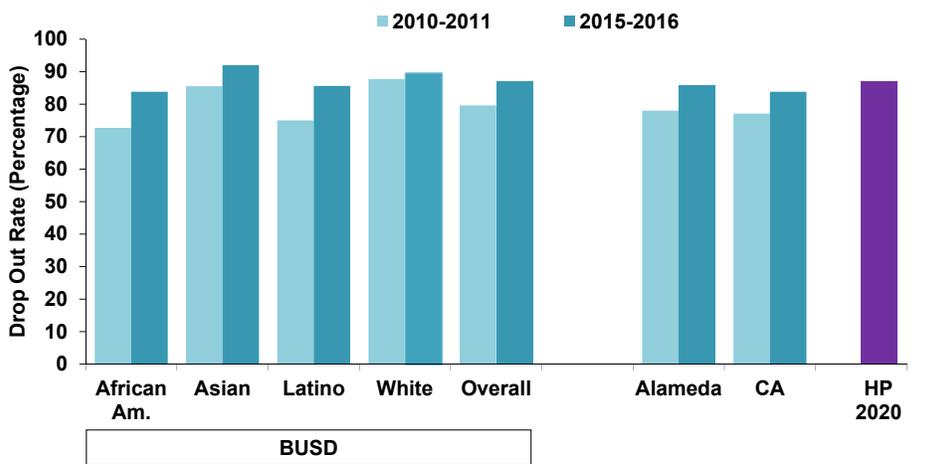
The proportion of students who graduate with a regular diploma 4 years after starting 9th grade is 87% which meets the HP2020 goal of 87%. Hispanic, American Indian and African American students do not meet the HP2020 goal (rates are 86%, 50%, and 84% respectively).

Figure 3.11 DROPOUT RATES, OVERALL AND BY RACE/ETHNICITY Berkeley Unified School District, Alameda County, and California, 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Department of Education

Figure 3.12 4-YEAR GRADUATION RATES, OVERALL AND BY RACE/ETHNICITY Berkeley Unified School District, Alameda County, and California, 2010–2016



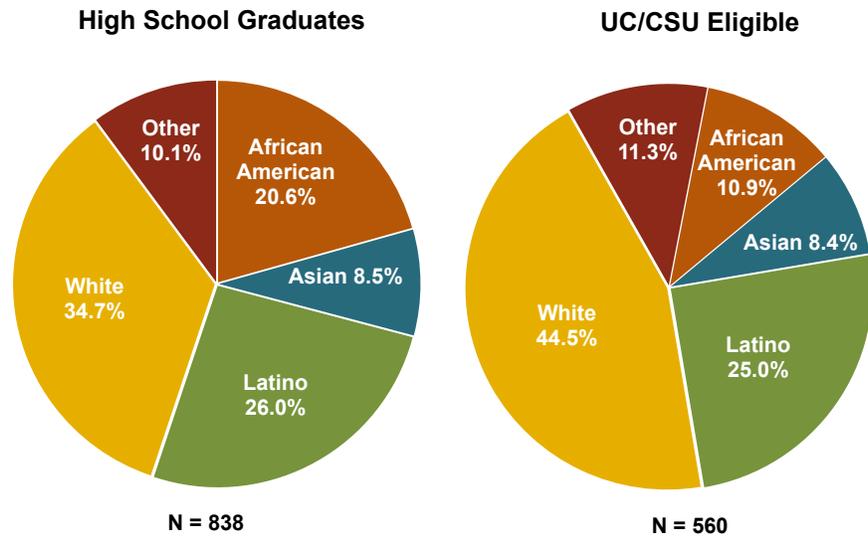
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Department of Education

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 21% of high school graduates, they make up only 11% of the graduates prepared to enter UC or CSU.

In contrast, White students make up 35% of graduates, but 44% of those eligible for UC or CSU. This racial disparity in graduate eligibility limits the opportunities for African Americans in Berkeley to higher education, and perpetuates the vicious cycle of inequities.

Figure 3.13 UC/CSU ELIGIBILITY OF GRADUATES BY RACE/ETHNICITY
Berkeley Unified School District, Alameda County, and California, 2015–2016



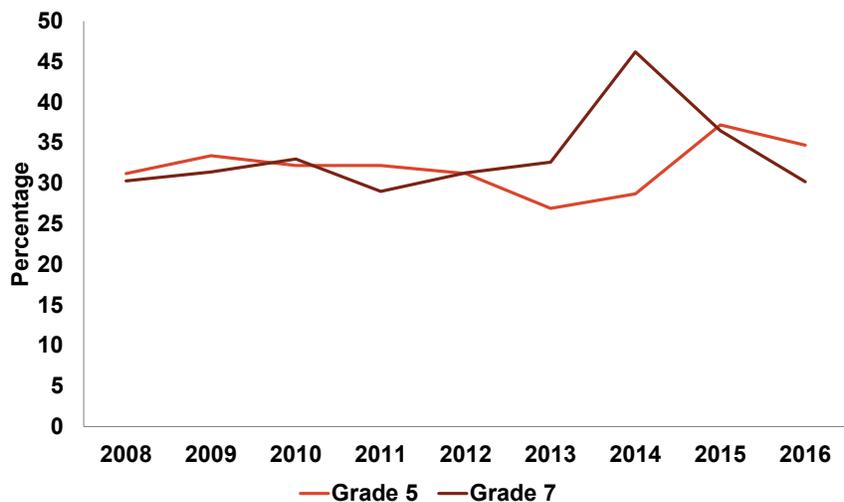
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Department of Education, Graduate Report 2015–2016

Physical Activity and Fitness

Regular physical activity during childhood and adolescence is important for preventing various health conditions. It improves overall health and reduces the risk for chronic diseases such as obesity, type 2 diabetes, heart disease, stroke, depression, and some cancers.

Among BUSD students, various measures of physical fitness and health are measured through California FITNESSGRAM testing. The six areas of fitness measured in the student fitness test are: aerobic capacity, abdominal strength and endurance, upper body strength and endurance, body composition, trunk extensor strength and flexibility, and flexibility. In each area, there are standards established to identify if students are in the Healthy Fitness Zone, which indicates they have sufficient fitness

Figure 3.14 PERCENTAGE OF STUDENTS THAT PASSED THE FITNESS TEST
(6 OUT OF 6 FITNESS STANDARDS MET), 5TH AND 7TH GRADERS
Berkeley Unified School District, 2008–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California FITNESSGRAM 2008–2016

Physical Activity and Fitness continued

for good health. The main goal of the fitness test is to encourage students to develop lifelong habits of regular physical activity.

An indicator of overall fitness levels for students is the percentage of students who meet the Healthy Fitness Zone standards for all 6 of the fitness tests. Among BUSD students, 34.7% of 5th graders meet all 6 of the fitness standards, which is higher than both Alameda County (29.6%) and California (25.9%). However, among BUSD 7th graders, the percentage that meet all 6 fitness standards (30.2%) is lower than both Alameda County (32.1%) and California (32.1%).

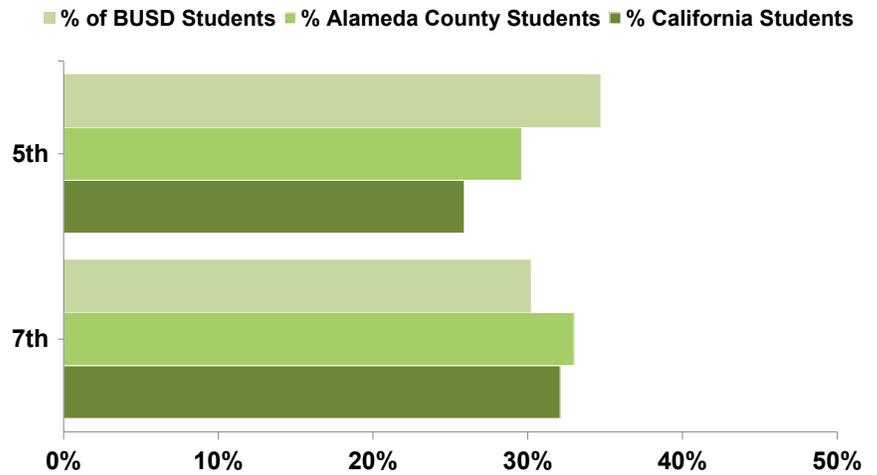
Overweight and Obesity

Childhood obesity is a serious problem in the United States putting kids at risk for poor health. Obesity-related conditions include heart disease, stroke, type 2 diabetes and certain types of cancers—some of the leading causes of preventable death.

The FITNESSGRAM test also measures body composition using standards that have been established for both percent body fat and BMI (Body Mass Index).

Berkeley has a lower proportion of 5th and 7th grade children who are overweight and obese (29.4%) compared to children in Alameda County (35.3%) but has a higher proportion compared to California (26.8%). A higher proportion of African American children are overweight and obese in Berkeley compared to in Alameda County and California. Within Berkeley, African American and Latino populations have significantly

Figure 3.15 PERCENTAGE OF STUDENTS THAT PASSED THE FITNESS TEST (6 OUT OF 6 FITNESS STANDARDS MET), 5TH AND 7TH GRADERS Berkeley, Alameda County and California

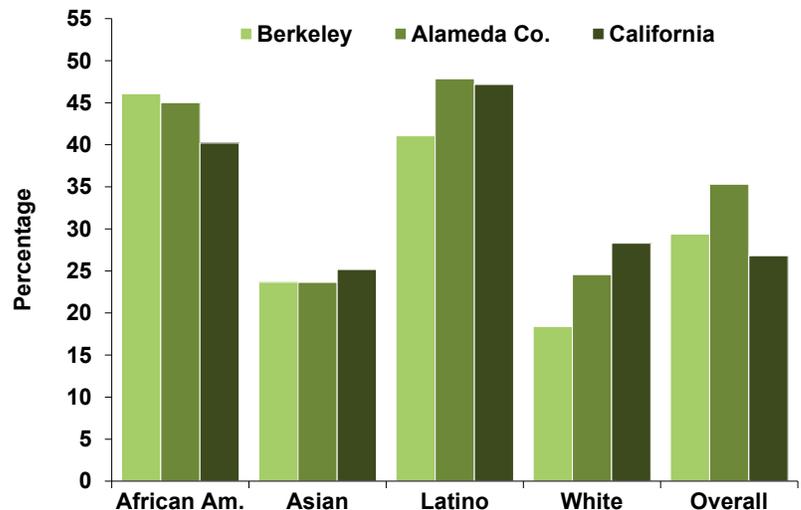


Source: Berkeley Public Health Division, California Department of Education, 2015–2016

From the Community

“One day your kid gets bigger and you worry. Is my child healthy or is she obese?”

Figure 3.16 PERCENTAGE OF OVERWEIGHT AND OBESE CHILDREN IN 5TH AND 7TH GRADES BY RACE/ETHNICITY BUSD, Alameda County, and California School Districts, 2015–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Department of Education, FITNESSGRAM 2015–2016

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 and divisions (such as Parks, Waterfront and Recreation and Aging Services), community members, and local businesses. The program also supports and collaborates with community organizations to provide nutrition education and increase fresh produce availability for low-income residents through produce stands.

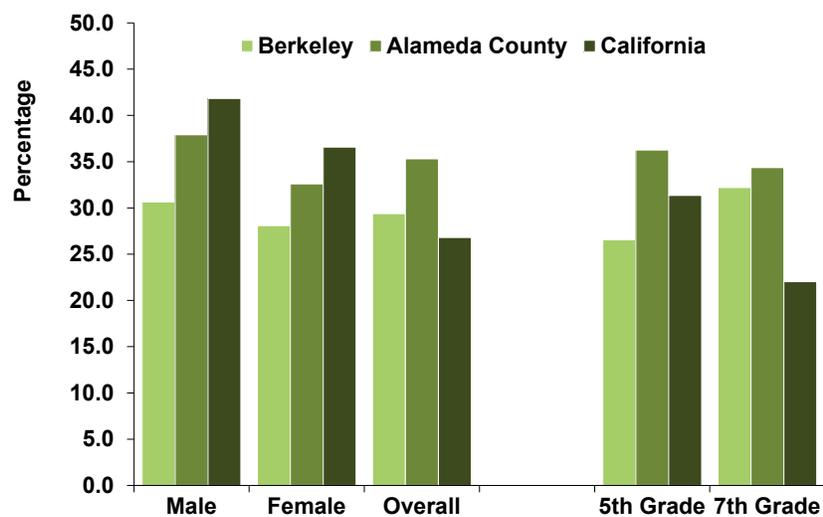
Overweight and Obesity *continued*

higher proportions of overweight and obese children when compared to Asian and White children.

Both male and female children in Berkeley have lower rates of overweight and obesity compared to Alameda County and California. Male children in Berkeley, Alameda County, and California are slightly more likely to be overweight or obese than female children.

As children get older in Berkeley, the likelihood that they will be overweight or obese increases. For example, in the 2015–2016 school year 26.6% of BUSD 5th graders were overweight or obese compared to 32.2% of 7th graders. Nevertheless, overall, the percentage of overweight children has decreased in Berkeley in the past five years (compared to an increase in Alameda County). Additionally, Berkeley's current overall percentage among 5th and 7th graders (29.4%) is lower than that of Alameda County (35.3%).

Figure 3.17 PERCENTAGE OF OVERWEIGHT AND OBESE CHILDREN IN 5TH AND 7TH GRADE BY GENDER AND GRADE BUSD, Alameda County, and California School Districts, 2015–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California FITNESSGRAM 2015–2016

Healthy Berkeley Program

Initiated in 2015, this program stemmed from Berkeley's historic passing of an excise tax (1 cent/oz.) on the distribution of sugar-sweetened beverages (SSB). The program goal is to reduce the consumption of SSB as a pathway for decreasing the rates of Type 2 diabetes, obesity, and tooth decay in Berkeley. The Healthy Berkeley program offers multi-year community agency grants for programs designed to reduce SSB consumption and promote healthy beverages such as tap water in low-income communities, particularly children and youth targeted by the beverage industry; the Sugar-Sweetened Beverage Product Panel of Experts (SSBPPE) Commission makes agency funding recommendations to the City Council. The Healthy Berkeley program collaborates with the Bay Area Nutrition and Physical Activity Collaborative (BANPAC), Healthy Food America, University of California in Berkeley, and the Public Health Institute.

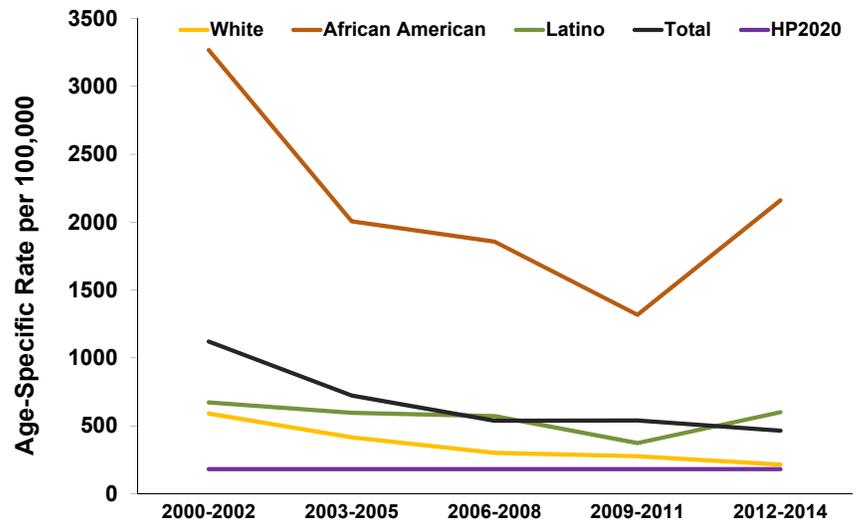
Asthma

Asthma is a common chronic disorder of the airways characterized by periods of airflow obstruction known as asthma episodes or attacks. Common symptoms during an asthma attack include wheezing, coughing, shortness of breath, and chest tightness or pain. Triggers for asthma attacks include exercise, airway infections, airborne allergens (e.g., pollen, mold, animal dander, dust mites), occupational exposures, and air pollution (e.g., environmental tobacco smoke, particulate matter, and volatile organic compounds). Asthma is one of the leading causes of childhood hospitalization and school absenteeism.

In 2000, there were a total of 122 asthma hospitalizations among Berkeley residents. Of these, 46% were among children under 5 years of age. In 2014 there was a total of 80 asthma hospitalizations and 19% were among children under 5 years of age. This drop in the number of asthma hospitalizations among children under 5 has significantly decreased the overall asthma hospitalization rate in Berkeley from 1,121 per 100,000 in 2000–2002 to 465 per 100,000 in 2012–2014. Despite this decline, Berkeley does not meet the HP2020 goal of 182 hospitalizations per 100,000.

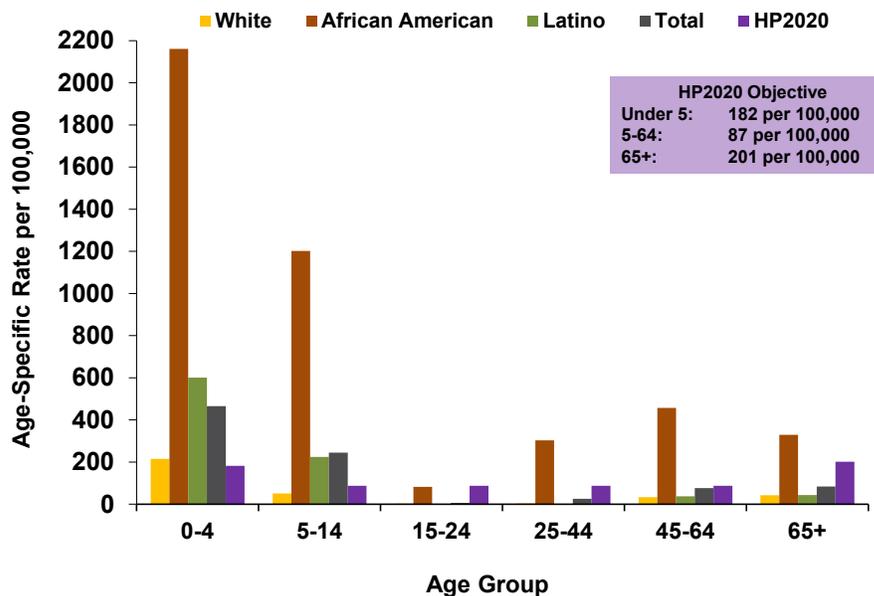
The asthma hospitalization rates for children under 5 in all racial/ethnic groups have declined as well. Compared to the HP2020 goal, the rate for African American children is 12 times higher, for Latino children is 3.3 times higher and for White children is 1.2 times higher. The number of hospitalizations among Asian children under 5 are too small to calculate a reliable rate and are therefore not presented in the figures.

Figure 3.18 AGE-SPECIFIC ASTHMA HOSPITALIZATION RATE OF CHILDREN UNDER 5 YEARS OF AGE BY RACE/ETHNICITY Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Office of Statewide Health Planning and Development, 2000–2014

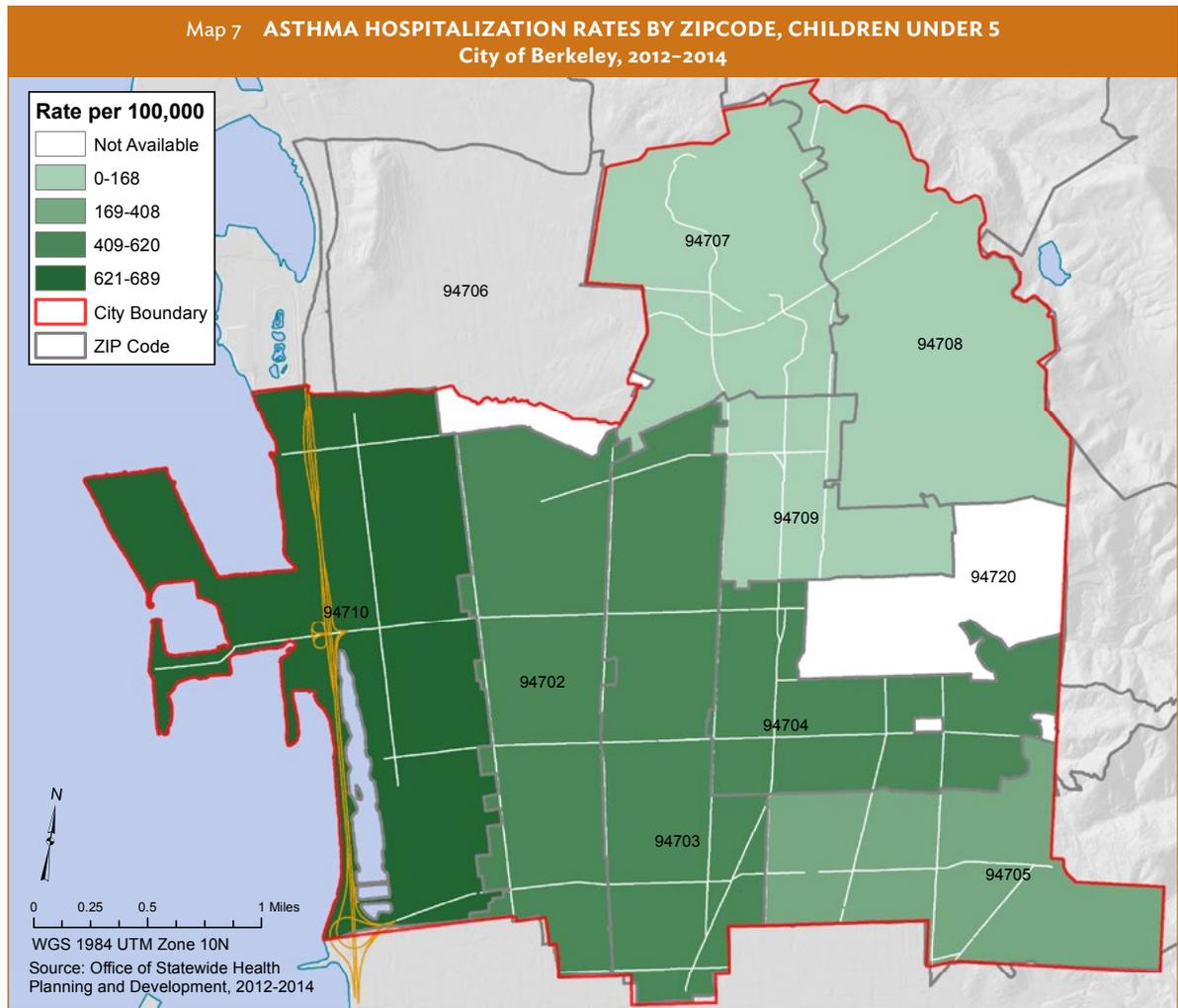
Figure 3.19 AGE-SPECIFIC ASTHMA HOSPITALIZATION RATE BY AGE GROUP AND RACE/ETHNICITY Berkeley, 2012–2014



HP2020 Objective
 Under 5: 182 per 100,000
 5-64: 87 per 100,000
 65+: 201 per 100,000

Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Office of Statewide Health Planning and Development, 2012–2014

Asthma continued



Although the rate of asthma hospitalization among African Americans decreased substantially from 2000 to 2014, the disparity between African Americans and Whites increased. In 2000–2002, the rate of African Americans was 5.5 times higher than the rate of Whites, while in 2012–2014, the rate was almost 10 times higher.

The risk of asthma hospitalization is highly correlated with age. Approximately 55% of all asthma hospitalizations are among children 0 to 14 years of age. African American children under 5 years of age are hospitalized at a rate almost ten times higher than their White counterparts, while Latino children under 5 years are hospitalized at a rate almost 3 times higher than Whites. Risk of asthma hospitalization decreases as the population gets older. However, racial/ethnic disparities persist throughout the life course.

Asthma hospitalizations of children under 5 years of age are most common in West Berkeley along Interstate 80, as shown in previous analysis and reports.

Breathmobile

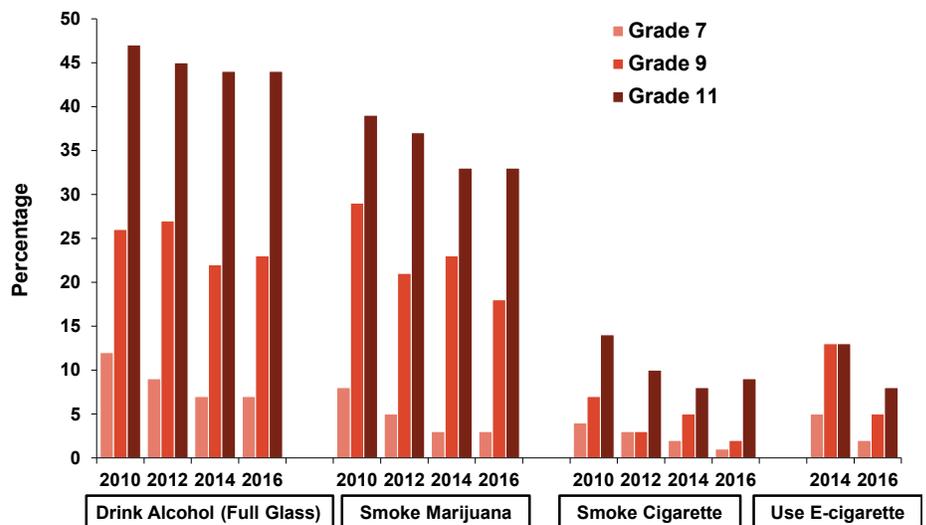
The Breathmobile, a project of the Prescott-Joseph Center for Community Excellence (PJCCE), is partnering with Berkeley Unified School District and the City of Berkeley Public Health Division to bring asthma care to BUSD students. This free mobile asthma clinic provides diagnosis, education, and treatment 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. In its fourth year (2016–2017) of partnership, the Breathmobile has expanded services to include all three BUSD preschools. PJCCE and school staff work 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.

Alcohol, Tobacco and Marijuana Use in Berkeley's Youth

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

The initiation of substance use early in life contributes to higher levels of use and abuse later in life. Early onset is also associated with a host of negative health, social, and behavioral outcomes. These include physical and mental health problems, violent and aggressive behavior, and adjustment problems in the workplace and family.

Figure 3.20 ALCOHOL, TOBACCO, AND MARIJUANA USE IN PAST 30 DAYS: 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District (BUSD), 2010–2016



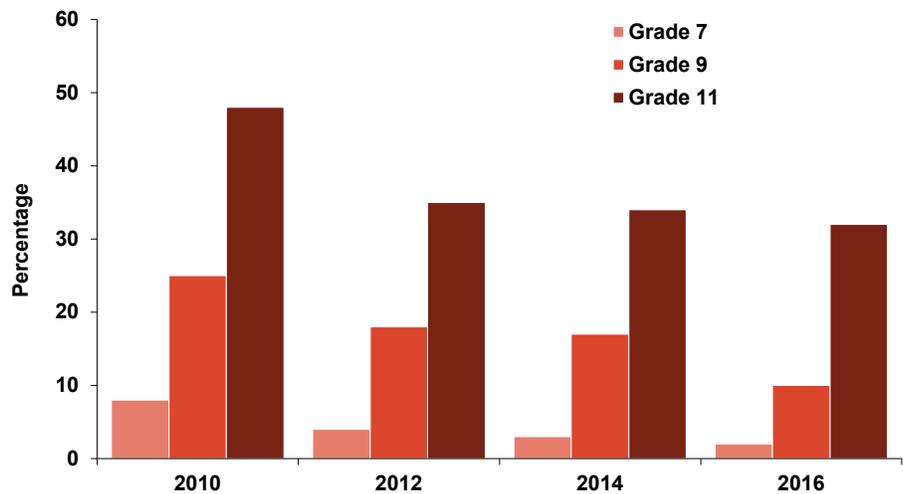
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

Alcohol, Tobacco and Marijuana Use in Berkeley's Youth continued

The percent of BUSD students who report that they drink alcohol, use marijuana, and smoke cigarettes or e-cigarettes increase with age (i.e., from 7th to 11th grade). Alcohol and marijuana are the most commonly used substances among BUSD students, though numbers have generally decreased for 7th and 11th graders in the past six years. The use of alcohol and marijuana have fluctuated among 9th graders. Cigarette smoking, already at comparatively low levels, has continued to drop for 7th and 9th graders but fluctuated for 11th graders. There has been a drop in e-cigarette use for students at all grade levels.

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 the past six years, the percentage of BUSD students who have ever been drunk or high on school property has steadily decreased for all grade levels. On average, the percentage was cut almost in half, from 27% in 2010 to 15% in 2016.

Figure 3.21 **EVER DRUNK OR HIGH ON SCHOOL PROPERTY: 7TH, 9TH, AND 11TH GRADERS** Berkeley Unified School District (BUSD), 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

Tobacco Prevention Program

The Tobacco Prevention Program provides community-based tobacco education programs and services to the community. Berkeley community members receive education about federal, state, and local tobacco control laws including ordinances relating to City of Berkeley's tobacco control related ordinances such as Smoke-Free Multi-Unit Housing, 600 ft. flavored tobacco buffer zone near schools K-12, tobacco free pharmacies and commercial zones ordinances. The Smoke-Free Multi-Unit Housing ordinance prohibits smoking in 100% of multi-unit housing with two or more units (i.e. apartments, co-ops, condominiums, common interest developments, etc.) and common areas. Free cessation classes are available to anyone interested in planning and sustaining a smoke-free lifestyle. Tobacco program staff also collaborate with Berkeley Tobacco Prevention Coalition members in the community, retailers, and policy makers in the City to develop policy aimed at reducing community members' exposure to tobacco smoke and tobacco products – including electronic nicotine delivery systems.

Violence, Safety and Mental Health in School

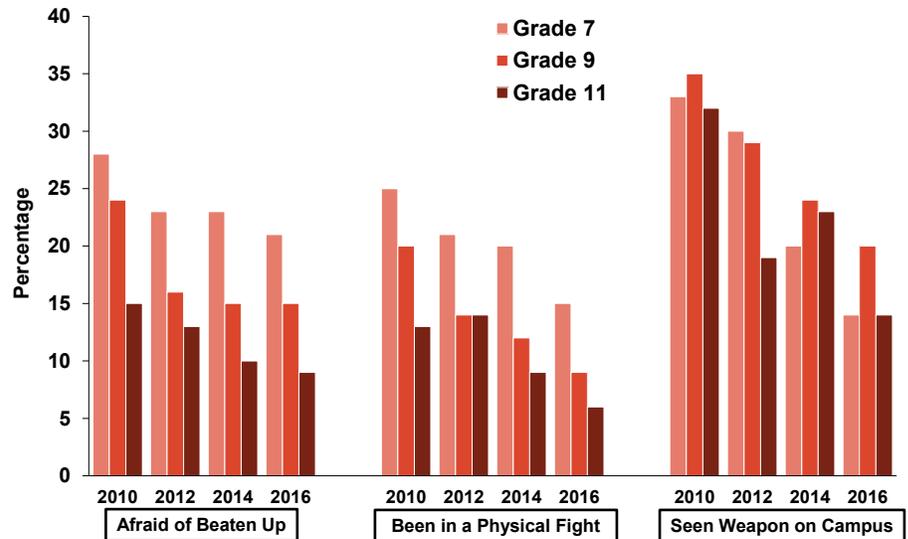
Violence is the intentional use of physical force or power, against another person, group, or community. School violence is a subset of youth violence, a broader public health problem that typically includes persons between the ages of 10 and 24. Pathways to youth violence can begin in early childhood. Some violent acts—such as bullying, pushing, and shoving—can cause more emotional harm than physical harm. Mental health is an important part of the overall health of children and adolescents.

At all grade levels, all measures of physical violence and victimization on school property showed improvement from 2010 to 2016. As students get older and move from middle school to high school, fewer students report experiencing physical violence or intimidation.

Fewer students were afraid of being beaten up when comparing 2016 to 2010. The greatest decrease was found for 7th grade students, which dropped from 28% in 2010 to 21% in 2016. However, 7th grade students continued to report higher percentages than older students. In 2016, 21% of 7th graders were afraid of being beaten up compared to just 9% of 11th grade students.

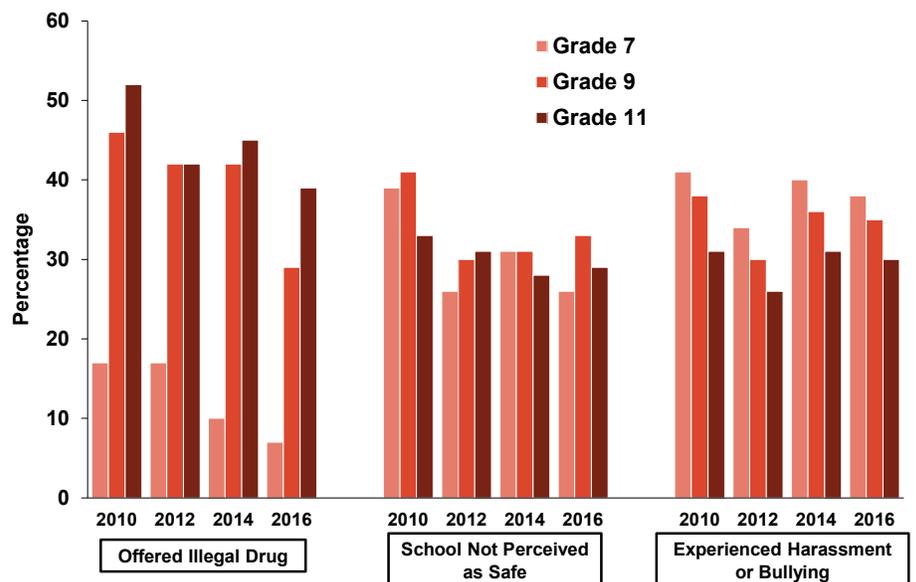
The percentage of students who have been in a physical fight in the past year decreased from 2010 to 2016. In 2016, 7th grade students were 2.5 times more likely to have been in a physical fight as 11th graders.

Figure 3.22 PHYSICAL VIOLENCE AND VICTIMIZATION ON SCHOOL PROPERTY IN THE PAST 12 MONTHS: 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District (BUSD), 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

Figure 3.23 SAFETY ON SCHOOL PROPERTY IN THE PAST 12 MONTHS: 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District (BUSD), 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

Violence, Safety and Mental Health in School
continued

From 2010 to 2016, at all grade levels, fewer students saw a weapon on campus. Ninth grade students continued to report slightly higher rates than both middle school and older high school students.

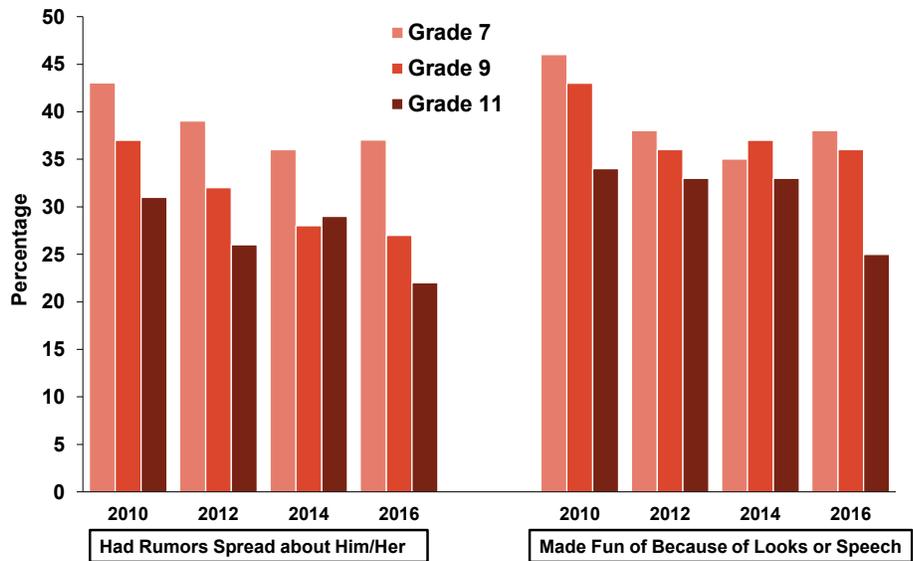
BUSD high school students in 9th and 11th grades were substantially more likely to be offered illegal drugs than 7th grade students. The percentage has decreased in the past six years, mirroring decreases in alcohol and cigarette use, as seen in previous graphs.

Students at the three grades surveyed reported similar levels of feeling unsafe at school. Over the last four years, for all grade levels there have been fluctuations but no overall decrease in the percentages of students who reported feeling that school was not safe.

As students get older, fewer report having experienced harassment or bullying. In 2016, 30% of 11th graders experienced harassment or bullying, while 38% of 7th graders did. Despite slight fluctuations, reported harassment or bullying at each grade level has remained largely the same over the past six years.

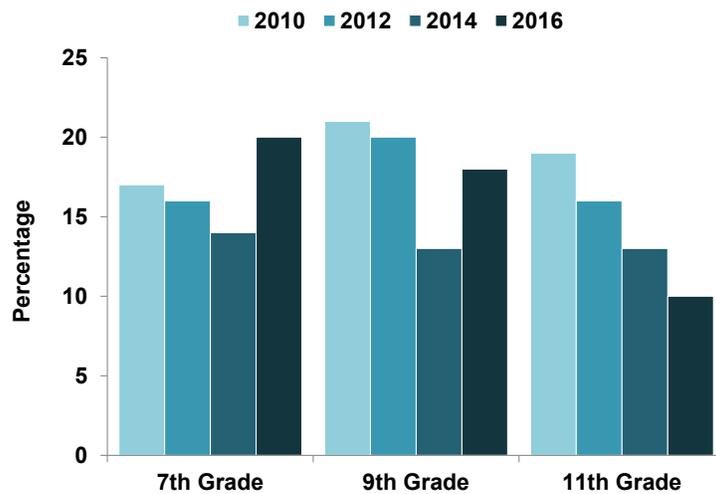
From school year 2010 to 2016, there were fewer BUSD students at all grade levels who had rumors spread about them. Similarly, over this period of time the number of 7th grade students who reported being made fun of because of their looks or speech decreased from 46% to 38%. Verbal harassment also decreases as grade level increases. For example, 7th graders report significantly higher percentages than 9th graders, and 9th graders report higher percentages than 11th graders.

Figure 3.24 **VERBAL HARASSMENT ON SCHOOL PROPERTY IN THE PAST 12 MONTHS: 7TH, 9TH, AND 11TH GRADERS**
Berkeley Unified School District (BUSD), 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

Figure 3.25 **PERCENTAGE OF STUDENTS WHO EVER EXPERIENCED CYBER BULLYING IN PAST 12 MONTHS** Berkeley Unified School District, 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

School-Linked Health Services Program

School Linked Health Services (SLHS) works to enhance the capacity of the Public Health Division and the Berkeley Unified School District (BUSD) to provide health services to elementary-aged youth and to facilitate collaboration among programs. This includes: partnering to reduce barriers to learning and addressing health as a means 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; policy recommendations and strengthening coordination of Public Health Division programs working in schools. While SLHS primarily serves elementary-aged youth, SLHS scope of services include BUSD K–8 youth and their families.

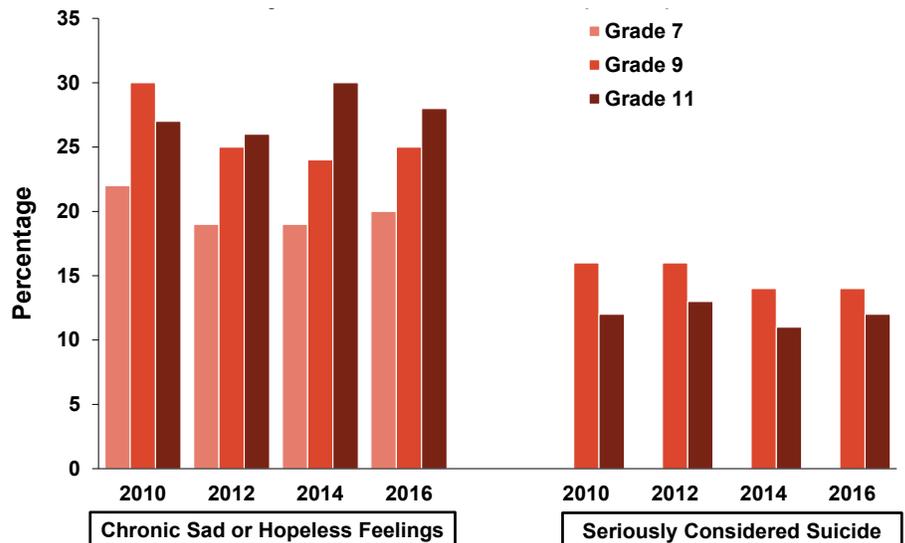
Violence, Safety and Mental Health in School *continued*

The proportion of 7th and 9th grade students reporting cyber-bullying increased in 2016. For students in 11th grade, however, the percentage of students who experienced cyber-bullying decreased in the past six years (2010–2016).

The percentage of BUSD students who experienced chronic sad or hopeless feelings remained steady from 2010 to 2016 overall, with the highest proportions in 9th and 11th grade students.

The proportion of BUSD students who seriously considered suicide between 2010 and 2016 remained steady at 12% for 9th grade students but slightly decreased from 16% to 14% for 11th grade students. This question was not asked of 7th graders.

Figure 3.26 STUDENTS WHO SERIOUSLY CONSIDERED ATTEMPTING SUICIDE OR HAD CHRONIC SAD OR HOPELESS FEELINGS IN THE PAST 12 MONTHS: 7TH, 9TH, AND 11TH GRADERS Berkeley Unified School District (BUSD), 2010–2016



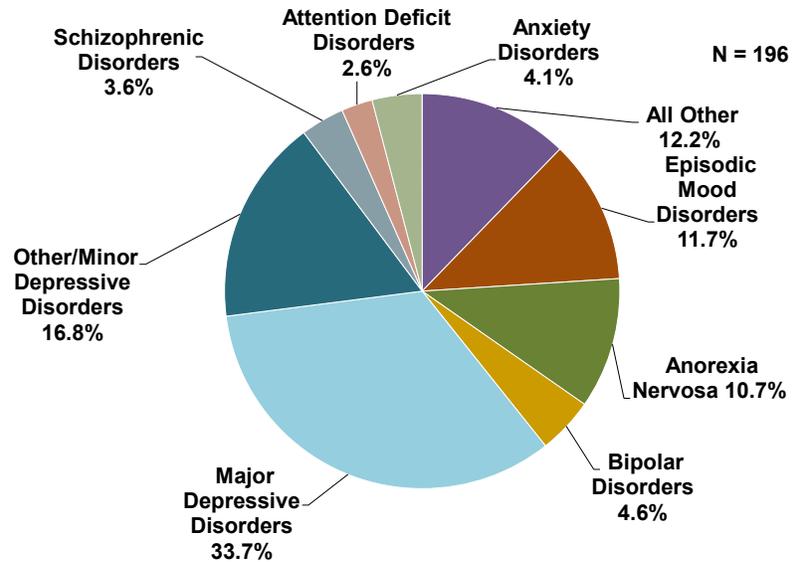
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2010–2016

Mental Health Hospitalizations in Children and Youth

Mental health disorders among children are defined as serious changes in the way children typically learn, behave, or handle their emotions, causing distress. Mental health disorders are often chronic health conditions that can continue through the lifespan.

Youth mental health hospitalizations are uncommon in Berkeley, and occur for a broad range of mental health conditions. There were a total of 196 child and youth mental health hospitalizations from 2012 to 2014. This is a significant decrease from the 490 hospitalizations that occurred in 2008 to 2010. Approximately 50% of these hospitalizations are related to episodes of depression.

Figure 3.27 ALL MENTAL DISORDERS HOSPITALIZATIONS BY DIAGNOSIS (YOUTH UNDER 18 YEARS OF AGE) Berkeley, 2012–2014



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Office of Statewide Health Planning and Development, 2012–2014

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 (BHS HC) 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 ongoing 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.

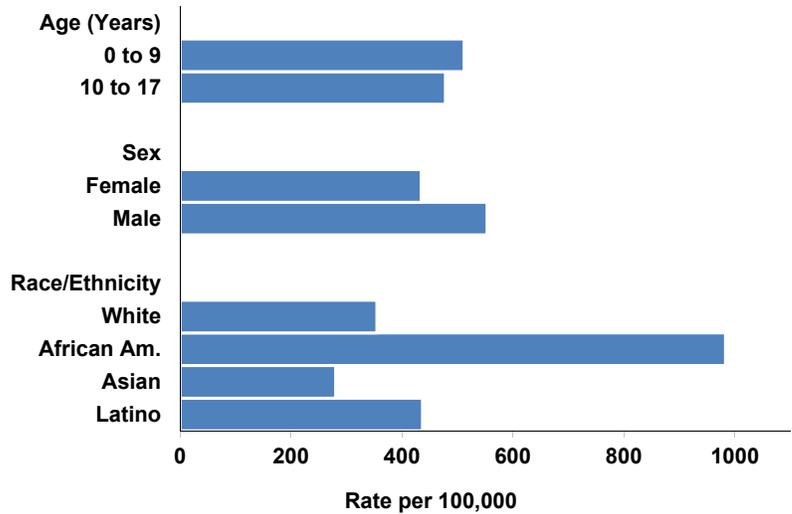
Injuries in Children and Youth

Injuries are a significant cause of morbidity and mortality for children and youth. Injury hospitalizations include suicide attempts, poisonings and overdoses, motor vehicle accidents, assaults, and others. Injuries in adolescents are associated with risk-taking behaviors, alcohol and drug use, and the stresses of maturation into adulthood. In young children, injuries may be associated with failure to consistently use preventive measures such as car seats and bicycle helmets.

Among youth, injury hospitalization rates are slightly higher among 0 to 9 years olds compared to 10–17 year olds. Males have an injury hospitalization rate 1.3 times higher than the female rate. The African American injury hospitalization rate is much higher than that of any other racial/ethnic group at almost 1,000 injury hospitalizations per 100,000 people.

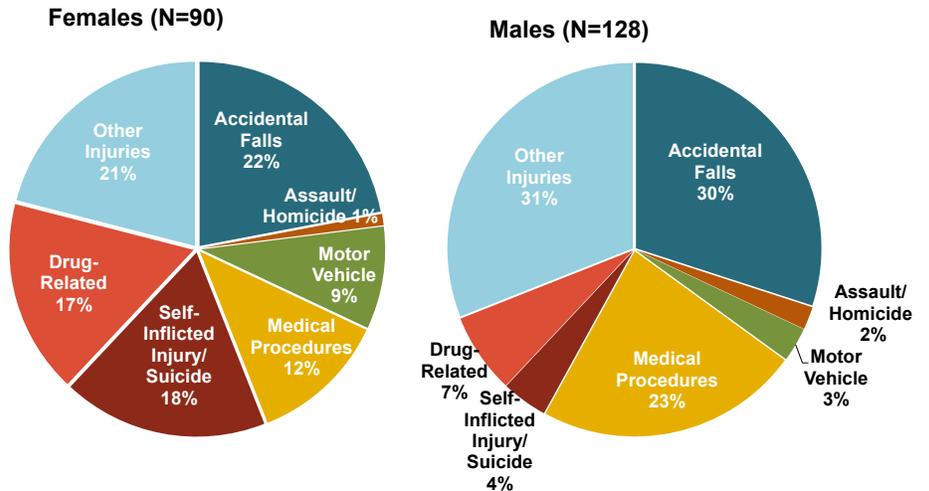
Injuries resulting in hospitalizations are different for female and male youth. Males have higher rates of accidental falls, medical procedure related hospitalizations (e.g. accidental cuts or incorrect dosage during surgery), and assault/homicide. On the other hand, females have higher rates of self-inflicted injuries/suicide, drug-related hospitalizations, and motor vehicle accidents.

Figure 3.28 INJURY HOSPITALIZATION RATES IN YOUTH UNDER 18 YEARS BY AGE, SEX, AND RACE/ETHNICITY Berkeley, 2012–2014



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Office of Statewide Health Planning and Development, 2012–2014

Figure 3.29 LEADING CAUSES OF INJURY HOSPITALIZATION IN YOUTH UNDER 18 YEARS OF AGE BY GENDER Berkeley, 2012–2014



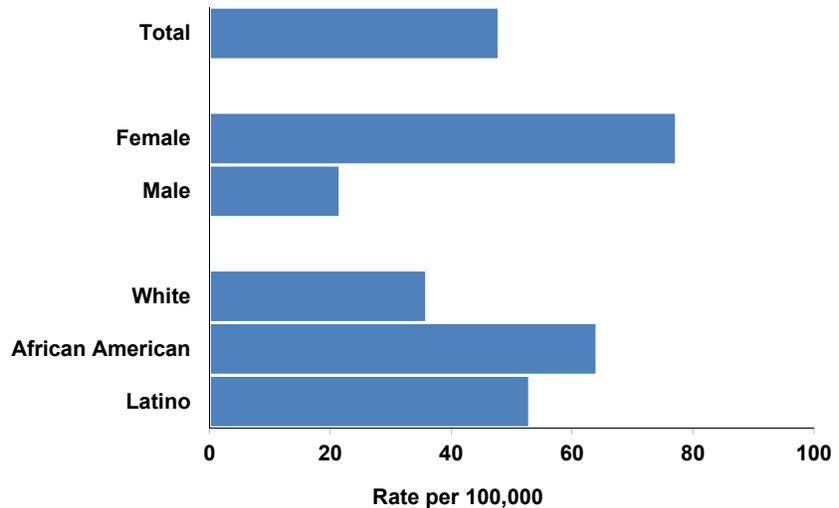
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Office of Statewide Health Planning and Development, 2012–2014

Injuries in Children and Youth continued

Self-inflicted injuries in youth are usually associated with suicide attempts. Suicide attempts are much more common in young women than young men. The female self-inflicted injury hospitalization rate is 3.5 times higher than the male rate. African American youth also have higher rates of self-inflicted injury hospitalizations than either White or Latino youth.

In the 2012–2014 period, there were only three assault/homicide incidents that resulted in hospitalization in youth under 18. Homicide hospitalization rates in youth under 18 by sex and race/ethnicity were too unreliable to calculate.

Figure 3.30 SELF-INFLICTED INJURY/SUICIDE HOSPITALIZATION RATES IN YOUTH UNDER 18 YEARS BY SEX AND RACE/ETHNICITY Berkeley, 2012–2014



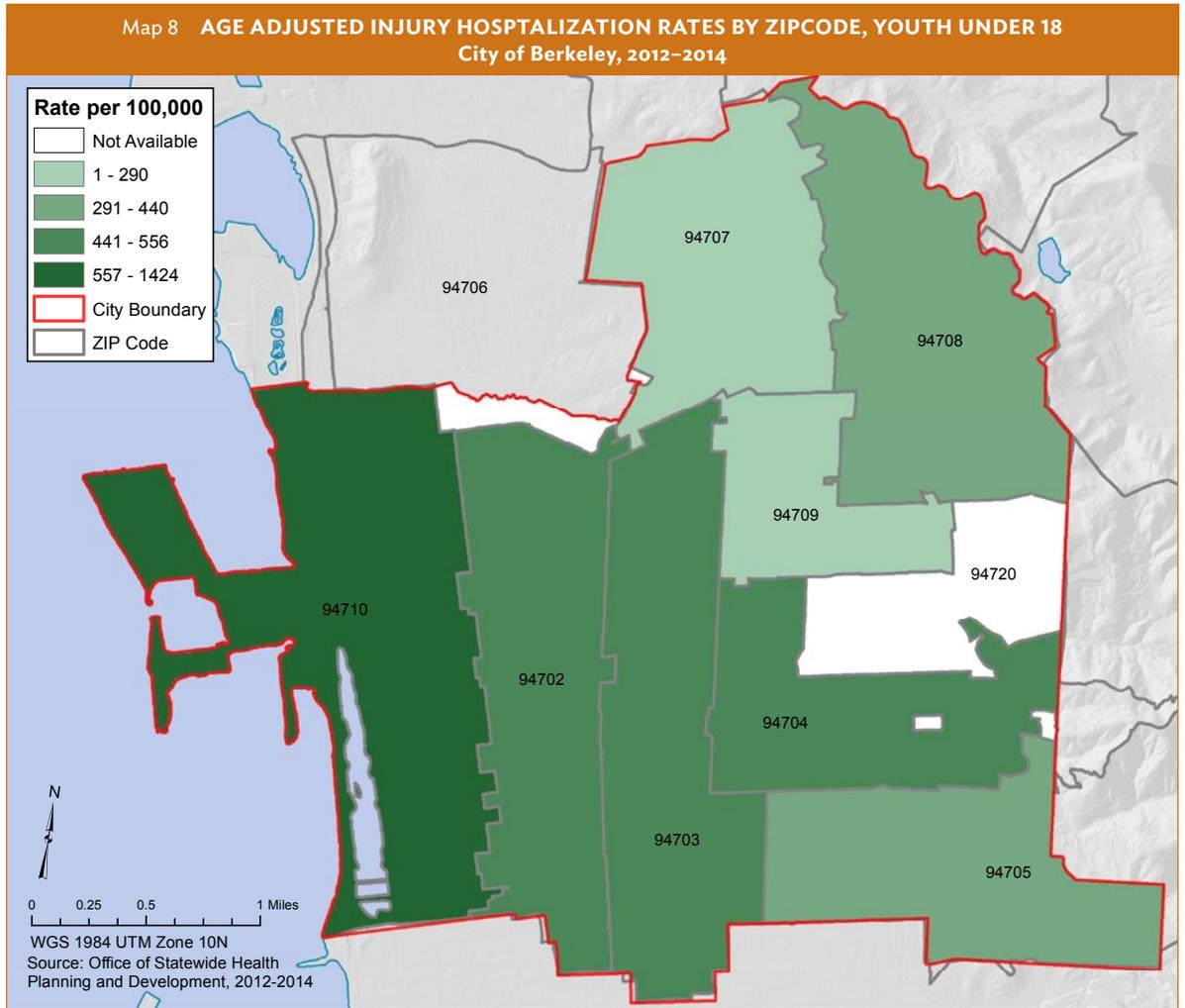
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Office of Statewide Health Planning and Development, 2012–2014

Child Health and Disability Prevention Program (CHDP)

CHDP improves health care access for Medi-Cal and low-income children in Berkeley by providing outreach, education, and linkages to regular, no cost, health check-ups. CHDP pediatricians provide well-child check-ups until the age of 21 that include immunizations, developmental and dental assessments, physical exams, vision and hearing screening, health education and appropriate lab tests for infants, children and teens with Medi-Cal or who meet other eligibility requirements, including undocumented children, low-income children with no other health insurance, children in foster care or in Head Start and state preschool programs.



Injuries in Children and Youth *continued*

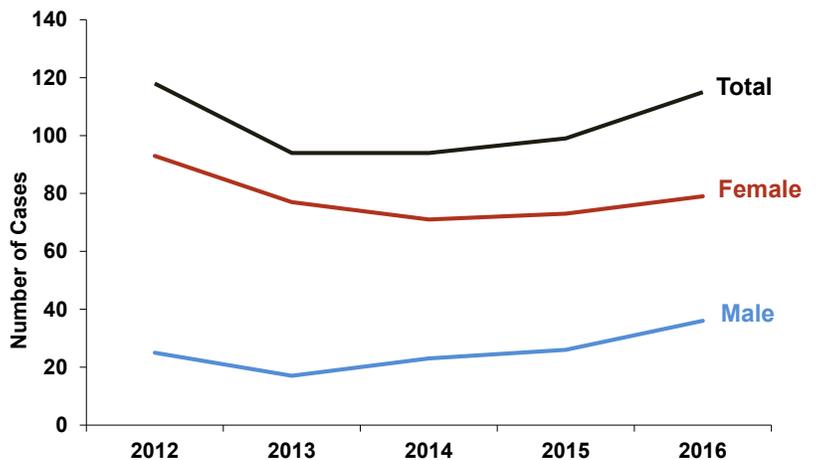


Injury hospitalization rates among children and adolescents are significantly higher in zip code 94710 in West Berkeley, just below the San Pablo corridor.

Sexually Transmitted Infections in Youth

Sexually transmitted infections (STIs) for which data is available in Berkeley 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.

Figure 3.31 NUMBER OF CHLAMYDIA CASES REPORTED AMONG YOUTH 15-19 BY YEAR OF EPISODE AND GENDER City of Berkeley, 2012-2016



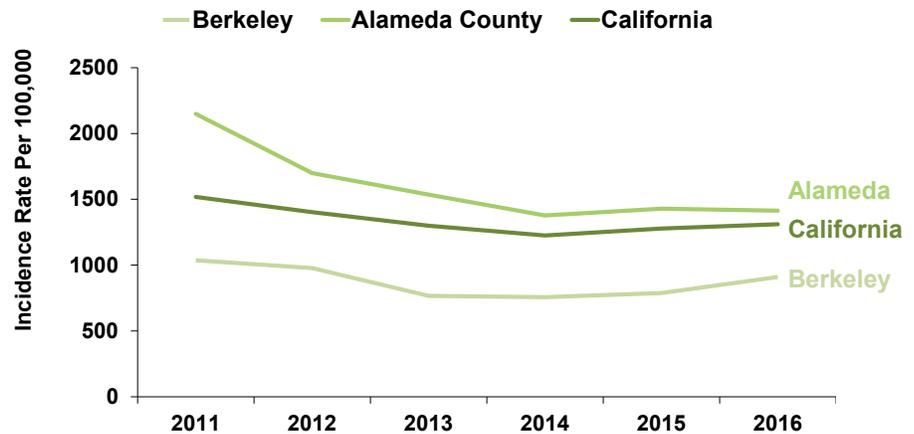
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CDPH STD Control Branch, Detailed LHJ Tables, 2012-2016

Sexually Transmitted Infections in Youth
continued

Chlamydia is the most common STI reported among Berkeley youth. The number of chlamydia cases reported in youth age 15–19 years has increased from 94 in 2014 to 115 in 2016. In all years, about 70–80% of reported chlamydia infections occur among females. In 2016, the overall rate of chlamydia infection among youth age 15–19 years was 909 per 100,000, which is lower than both Alameda County (1414) and California (1311).

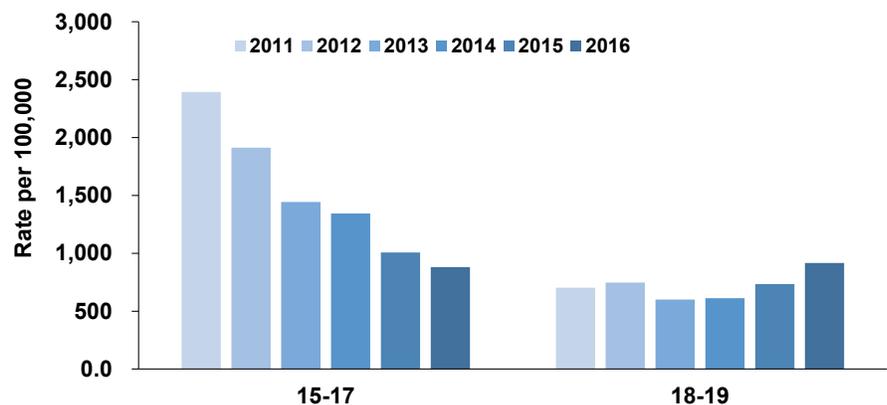
The rate of chlamydia among youth age 15–17 has consistently declined since 2011, however the rate among older youth ages 18 and 19 has increased over time.

Figure 3.32 AGE-SPECIFIC CHLAMYDIA RATES REPORTED AMONG YOUTH 15–19 BY YEAR OF EPISODE City of Berkeley, Alameda County, and California, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CDPH STD Control Branch, Detailed LHJ Tables, 2012–2016

Figure 3.33 AGE-SPECIFIC CHLAMYDIA CASE RATES AMONG YOUTH 15–19 Berkeley, 2011–2016

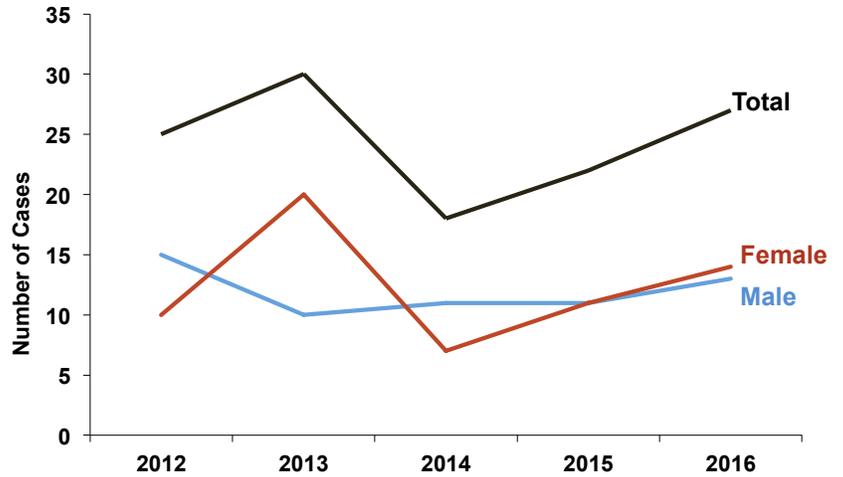


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Sexually Transmitted Infections in Youth
continued

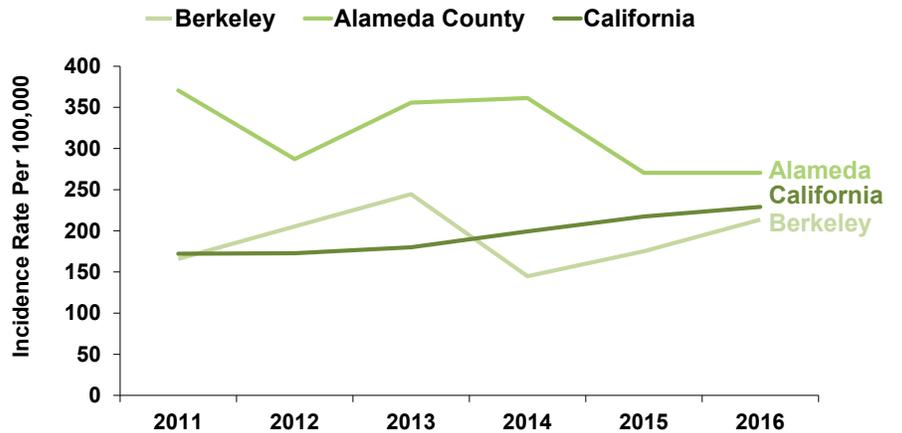
Gonorrhea is the 2nd most common STI among Berkeley youth age 15–19 years. While the number of cases has fluctuated over the years, the number has increased in each year since 2014 (from 18 in 2014 to 27 in 2016). The number of gonorrhea cases is more evenly distributed by gender than chlamydia, with anywhere from 40 to 67% of cases occurring among females. In 2016, the rate of gonorrhea infection among youth age 15–19 years was 214 per 100,000, which is lower than both Alameda County (271) and California (229).

Figure 3.34 NUMBER OF GONORRHEA CASES REPORTED AMONG YOUTH 15–19 BY YEAR OF EPISODE AND GENDER City of Berkeley, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CDPH STD Control Branch, Detailed LHJ Tables, 2012–2016

Figure 3.35 AGE-SPECIFIC GONORRHEA RATES REPORTED AMONG YOUTH 15–19 BY YEAR OF EPISODE City of Berkeley, Alameda County, and California, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CDPH STD Control Branch, Detailed LHJ Tables, 2012–2016

High School Health Centers: The Berkeley High School and B-Tech Health Centers provide free, adolescent-friendly, confidential, 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.

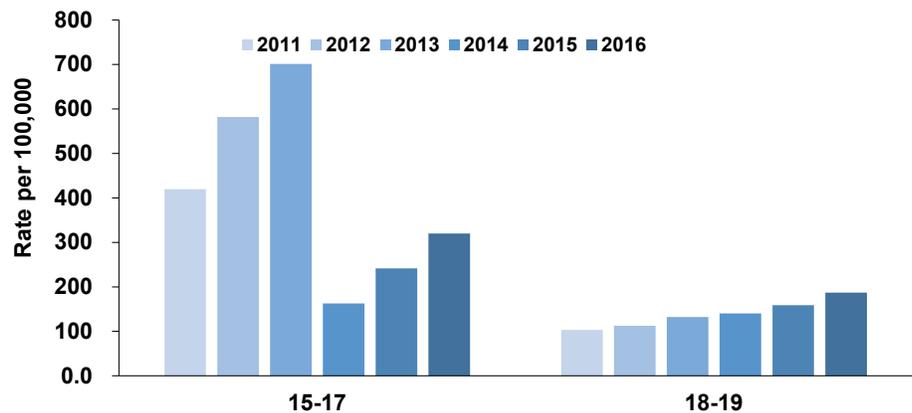
Sexually Transmitted Infections in Youth
continued

The rate of gonorrhea among youth age 15-17 declined sharply between 2013 and 2014 but has been increasing annually since then. The rate among older youth age 18 and 19 has increased consistently over time.

From 2011 to 2016, there were no reported cases of syphilis among youth ages 15-19 years old in the city of Berkeley.

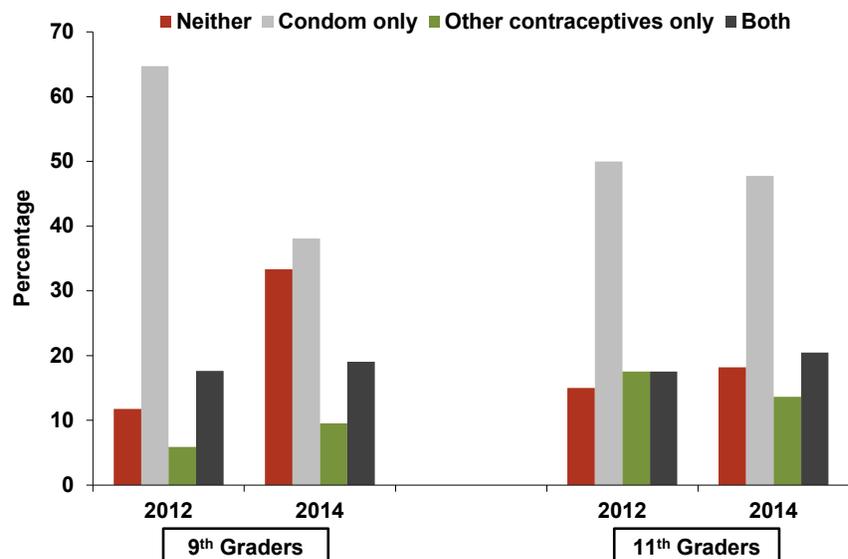
From 2012 to 2014, the overall proportion of students who had sex increased from 16% to 22% in 9th graders and from 41% to 44% in 11th graders. Among 9th and 11th graders who had sex, the proportions of students who used both condoms and other contraceptive methods increased from 2012 to 2014. However, there was also an increase in the proportion of students who had sex and used neither method of protection. The percentage of 9th graders who only used a condom, however, decreased from 2012 to 2014. Condom use alone continues to be the most commonly used protection method among students in both grades.

Figure 3.36 AGE-SPECIFIC GONORRHEA CASE RATES AMONG YOUTH 15-19 Berkeley, 2011-2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011-2016

Figure 3.37 STUDENT USE OF CONTRACEPTIVES DURING MOST RECENT SEXUAL ACTIVITY, 9TH AND 11TH GRADERS Berkeley Unified School District (BUSD), 2012-2014



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Healthy Kids Survey (CHKS) 2012-2014

Vaccine-Preventable Diseases

Vaccines prevent many diseases which were previously common in earlier generations. Routine vaccinations are recommended for both adults and children. Vaccine-preventable diseases are those 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.

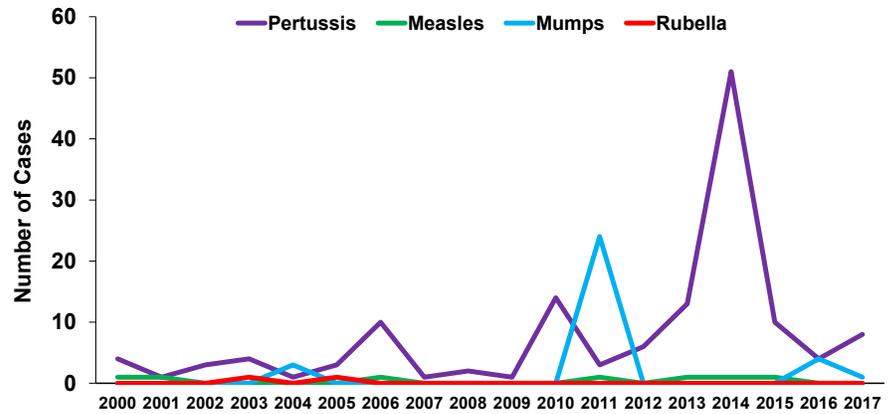
The occurrence of vaccine-preventable diseases within a community is an indication that the community may not be fully immunized. Adolescents, young adults, or older adults may not be receiving recommended boosters. If a large enough subset of the community is not vaccinated, disease can spread throughout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

Outbreaks of vaccine-preventable diseases necessitate costly investigations and control measures, such as isolation or exclusion from school, to prevent further spread. In recent

years, pertussis (whooping cough) has been the most common vaccine-preventable disease. In 2014, California experienced an epidemic of pertussis, which was consistent with the trend of peaks in incidence every 3–5 years. The number of cases in 2014 was much higher than the cases of previous outbreaks, resulting in three infant deaths due to pertussis in California. The actual rates of pertussis were likely even higher, as milder cases frequently go undiagnosed.

Measles and mumps remain diseases of concern and have caused notable recent outbreaks with exposures in congregate settings such as universities, amusement parks, and public transportation.

Figure 3.38 SELECTED VACCINE-PREVENTABLE DISEASES BY YEAR OF REPORT Berkeley, 2000–2017



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, CD Program, 2000–2017

Immunization Program

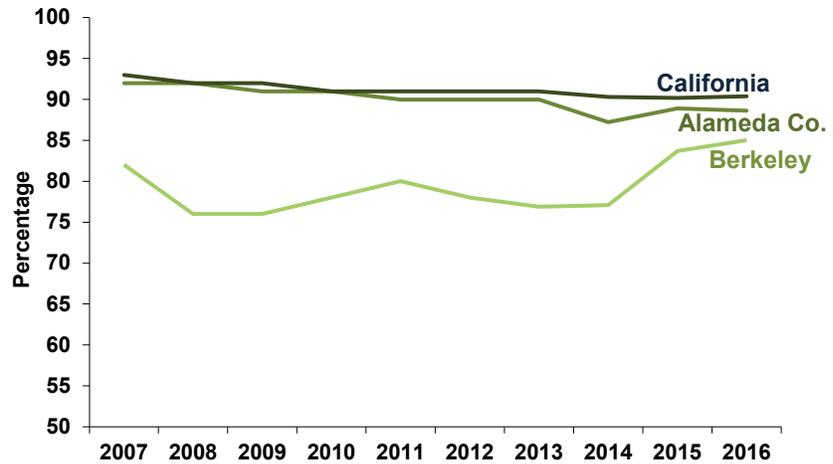
The Public Health Immunization Program works to increase immunization rates for all Berkeley residents across the life span. Special efforts are targeted at African American and Latino children less than two years of age by collaborating with WIC; public and private preschools; licensed family childcare 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. In addition, the Public Health Clinic expands its service by providing varicella vaccines to adults who are uninsured or underinsured.

Childhood Immunization

Immunizations are one of the most significant public health achievements of the 20th century. They are among the most successful and cost-effective preventive health care interventions, helping children avoid contracting numerous serious and potentially fatal infectious diseases. 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. At the community or population level, under-immunized children are at risk of acquiring illness and of spreading it to others, potentially leading to disease outbreaks.

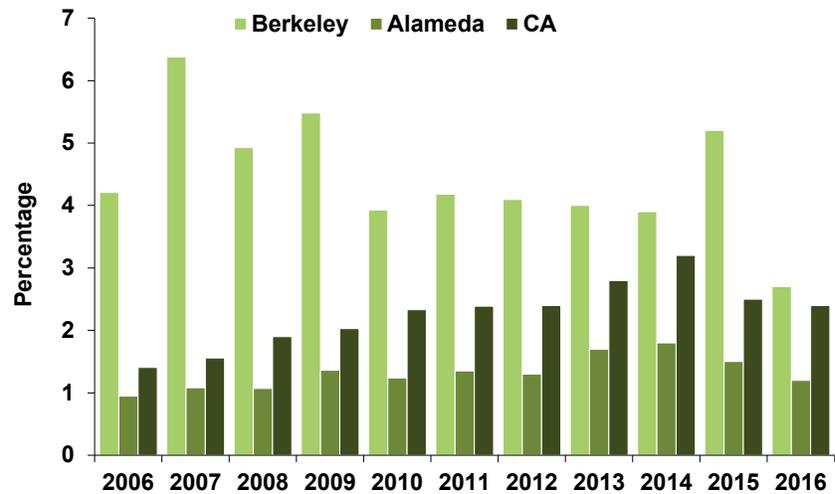
For the past decade, the proportion of Kindergarten children immunized against the nine diseases for which childhood immunizations are required has been consistently lower in Berkeley compared to both Alameda County and California. Berkeley's immunization rate has also experienced some fluctuations with a recent peak of an 85% immunization rate in 2016, the highest percentage ever recorded. Required immunizations include polio, measles, mumps, rubella, diphtheria, tetanus, pertussis, hepatitis B, and varicella vaccines.

Figure 3.39 PERCENT OF KINDERGARTEN CHILDREN WITH ALL REQUIRED IMMUNIZATIONS Berkeley, Alameda County, and California, 2007–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Department of Public Health, Immunization Branch

Figure 3.40 PERCENT OF KINDERGARTEN CHILDREN WITH PERSONAL BELIEF EXEMPTIONS (PBE) Berkeley, Alameda County, and California, 2006–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; California Department of Public Health, Immunization Branch

Childhood Immunization continued

Personal belief exemptions (PBEs) allow students to enter school without required immunizations. Despite dramatic decreases from 2015 to 2016 due to Senate Bill 277 (SB277), Berkeley schools continue to have 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.

Senate Bill 277 (SB277)

California Senate Bill 277 (SB277) was signed into law by Governor Jerry Brown on June 30, 2015. The law, which became effective July 1, 2016, removed personal belief exemptions (PBEs) to vaccination requirements for entry to private or public elementary and secondary schools and child day care centers. The bill was prompted by the 2014 Disneyland measles outbreak and the historically low levels of vaccination in some California schools, with some areas showing personal belief exemptions exceeding 20%.

Under SB 277, PBEs have remained valid for children who entered multiyear kindergarten programs (e.g., transitional kindergarten) before 2016 and continue in kindergarten during 2016–2017. However, given that PBEs are no longer allowed for newly enrolled children, within a few years, there will not be children in schools that are not vaccinated due to PBEs.



Annie Burke



Berkeley Unified School District

References

1. ASPE, "Computations for the 2016 Poverty Guidelines," 2016. [Online]. Available: <https://aspe.hhs.gov/computations-2016-poverty-guidelines>. [Accessed 2017]
2. W. O'Hare, "The Changing Child Population of the United States: Analysis of Data from the 2010 Census," The Annie E. Casey Foundation, Population Bureau, Baltimore, 2011.
3. US Census Bureau, "US Census Bureau QuickFacts selected: UNITED STATES," 2013. [Online]. Available: <https://www.census.gov/quickfacts/fact/table/CA,US/PST045216>. [Accessed 2017].
4. L. Anderson, "Community Interventions to Promote Healthy Social Environments: Early Childhood Development and Family Housing," MMWR: Morbidity and Mortality Weekly Report, vol. 51, no. RR01, pp. 1–8, 2002.
5. CDC, "Adolescent and School Health: Childhood Obesity Facts," 2017. [Online]. Available: <http://www.cdc.gov/healthyyouth/obesity/facts.htm>. [Accessed 2017].
6. L. Akinbami, "The State of Childhood Asthma, United States, 1980–2005. Advance Data from Vital and Health Statistics: No. 381, Revised December 29, 2006. Hyattsville, MD: National Center for Health Statistics, 2006," 2006. [Online]. Available: <https://www.cdc.gov/nchs/data/ad/ad381.pdf>. [Accessed 2017].
7. CDC, "Healthy Schools: Asthma in Schools," 2017. [Online]. Available: <https://www.cdc.gov/healthyschools/asthma/index.htm>. [Accessed 2017].
8. CDC, "Smoking & Tobacco Use: 2012 Surgeon General's Report—Preventing Tobacco Use Among Youth and Young Adults," 2012. [Online]. Available: http://www.cdc.gov/tobacco/data_statistics/sgtr/2012/index.htm. [Accessed 2017].
9. CDC, "Alcohol and Public Health: Facts Sheet – Underage Drinking," 2016. [Online]. Available: <https://www.cdc.gov/alcohol/fact-sheets/underage-drinking.htm>. [Accessed 2017].
10. Berkeley Unified School District, "Berkeley Unified School District: Berkeley Technology Academy," 2017. [Online]. Available: <http://www.berkeleyschools.net/schools/high-schools/berkeley-technology-academy/>. [Accessed 2017].
11. R. Perou, "Mental Health Surveillance Among Children — United States, 2005–2011," MMWR: Morbidity and Mortality Weekly Report, vol. 62, no. 02, pp. 1–35, 2013.
12. CDC, "Injury Prevention & Control: Youth Violence," 2017. [Online]. Available: <http://www.cdc.gov/violenceprevention/youthviolence/index.html>. [Accessed 2017].
13. CDC, "Youth Violence: Facts at a Glance 2016," 2016. [Online]. Available: <https://www.cdc.gov/violenceprevention/pdf/yv-datasheet.pdf>. [Accessed 2017].
14. CDC, "Understanding Bullying: Fact Sheet 2016," 2016. [Online]. Available: <https://www.cdc.gov/violenceprevention/pdf/bullying-factsheet.pdf>. [Accessed 2017].
15. Department of Justice Office of Justice Programs, "National Institute of Justice: Hate Crime," 2017. [Online]. Available: <https://www.nij.gov/topics/crime/hate-crime/Pages/welcome.aspx>. [Accessed 2017].
16. CDC National Center for Injury Prevention and Control, Office of Statistics and Programming, "Injury Prevention & Control: Data & Statistics, Web-based Injury Statistics Query and Reporting System (WISQARS)," 2017. [Online]. Available: <http://www.cdc.gov/injury/wisqars/index.html>. [Accessed 2017].
17. Prevention Institute, "A Public Health Approach to Preventing Violence: FAQ," 2009. [Online]. Available: <https://www.preventioninstitute.org/sites/default/files/publications/Preventing%20Violence-%20A%20Primer.pdf>. [Accessed 2017].
18. CDC, "Sexually Transmitted Diseases (STDs): STDs & Infertility," 2017. [Online]. Available: <http://www.cdc.gov/std/infertility/default.htm>. [Accessed 2017].
19. CDC, "Vaccine & Preventable Diseases," 2016. [Online]. Available: <https://www.cdc.gov/vaccines/vpd/vaccines-diseases.html>. [Accessed 2017].
20. CDC, "Lead," 2017. [Online]. Available: <http://www.cdc.gov/nceh/lead/>. [Accessed 2017].
21. US Environmental Protection Agency, "Renovation, Repair, and Painting Program," 2017. [Online]. Available: <http://www2.epa.gov/lead/renovation-repair-and-painting-program>. [Accessed 2017].
22. US Census Bureau, "American Fact Finder: Physical Housing Characteristics 2011 Berkeley CA," 2011. [Online]. Available: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_1YR_S2504&prodType=table. [Accessed 2017].

Healthy students tend to learn better in school. They are more likely to attend school regularly and are better able to focus in class, which ultimately leads to higher scores and overall higher classroom achievement.



Berkeley Unified School District



Berkeley Unified School District

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 affect adults' well-being. Mental health issues, injuries, and communicable diseases continue to have major roles as well. This is the period of life in which one is most likely to work, accumulate wealth, have partners, and hold responsibilities for other family members. Health is essential to the quality of adult life—not only for the individual but also for those around him or her. These adverse health conditions interfere with productivity during this stage of life.



Key Findings

• Healthy People (HP2020) Goals

- Berkeley as a whole *meets* HP2020 goals for the following:
 - Chronic obstructive pulmonary disease (COPD) hospitalizations
- Berkeley as a whole *does not meet* HP2020 goals for the following:
 - New cases of tuberculosis
 - New cases of syphilis in men and women

• Chronic Diseases

- In 2014, 15.7% of Berkeley adults were categorized as obese based on BMI, and those who are African American or Latino are more likely to be obese.
- Approximately 7.6% of Berkeley residents were smokers in 2014, which was a substantial decrease from 11.5% in 2012.
- Berkeley's African American population experiences inequitably high rates of hospitalization due to uncontrolled diabetes and long-term complications, such as kidney, eye, neurological and circulatory complications. However, the hospitalization rate among African Americans for lower-extremity amputation has substantially decreased between 2006 and 2014.
- For Latinos, hospitalizations for lower-extremity amputations dropped dramatically from 29.3 per 100,000 in 2000–2002 to 5.9 per 100,000 in 2003–2005. The Latino rate has continued downward with no reported amputations in 2012–2014.
- The rate of hospitalization due to hypertension among Berkeley's African American population has sharply increased, and is now over five times that of the total population.
- Hypertensive heart disease hospitalizations have decreased among all racial/ethnic groups over the past decade with the most dramatic decrease among African Americans—from 170 per 100,000 in 2000–2002 to 51 per 100,000 in 2012–2014.

continues

Key Findings *continued*• **Chronic Diseases** *continued*

- Asthma hospitalizations in Berkeley show strong disparities between racial/ethnic groups, as African Americans have substantially higher rates of asthma compared to other groups.
- Overall, South, West and Central Berkeley neighborhoods experience higher rates of stroke, diabetes, heart disease and asthma.
- White women had the highest incidence rate of breast cancer in Berkeley compared to other racial/ethnic groups from 2006–2011. African American women began to have a higher rate in 2012–2014.
- Prostate and lung cancer rates are highest among African Americans.
- Berkeley has higher rates of uterine cancer, colorectal cancer, melanoma skin cancer, and Non-Hodgkin Lymphoma, compared to Alameda County and the state of California.

• **Mental Health**

- Mental health hospitalization rates have been stable in Berkeley over the past decade.
- Among the 14 cities in Alameda County, Berkeley ranks 1st in mental illness hospitalizations.
- Asians and Latinos have the lowest rates of mental health hospitalizations in Berkeley.
- Mental health hospitalization rates are the highest among older adults ages 45–64.

• **Injuries**

- Injuries in adults over age 65 are a significant cause of hospitalization. They are most common in West and Greater Downtown Berkeley.
- Hospitalization rates for injuries have risen in the last decade among all groups except Latinos, for whom the rate has remained stable. The rate for African Americans is over double that for Whites, and the gap is widening.
- The number of motor vehicle injuries has remained stable in the most recent years. The most common type of traffic injury collision involves another motor vehicle. Traffic injuries are most common among those 45–64 years of age.
- On average, Berkeley police receives 170 domestic violence calls annually.

• **Communicable Diseases**

- Berkeley receives an average of 1,400 communicable disease reports each year, of which 1,150 are confirmed cases.
- Over half of communicable diseases are transmitted through unsafe sex.
- While the number of TB cases is declining overall, highly drug-resistant forms of TB have emerged, which are very difficult to treat.
- Almost all cases of Syphilis in Berkeley were male.
- African Americans and Latinos experience disproportionately high rates of HIV/AIDS.

Chronic Diseases and Risk Factors

Chronic diseases are illnesses of long duration and generally slow progression. These diseases—such as heart disease, diabetes, and cancer—are among the most common, costly, and preventable of all health problems in the U.S. Heart disease, cancer, and stroke account for more than 50% of all deaths each year. 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. Primary prevention is more cost-effective, and provides greater benefits to individual health and well-being than treating chronic disease after it is well established.

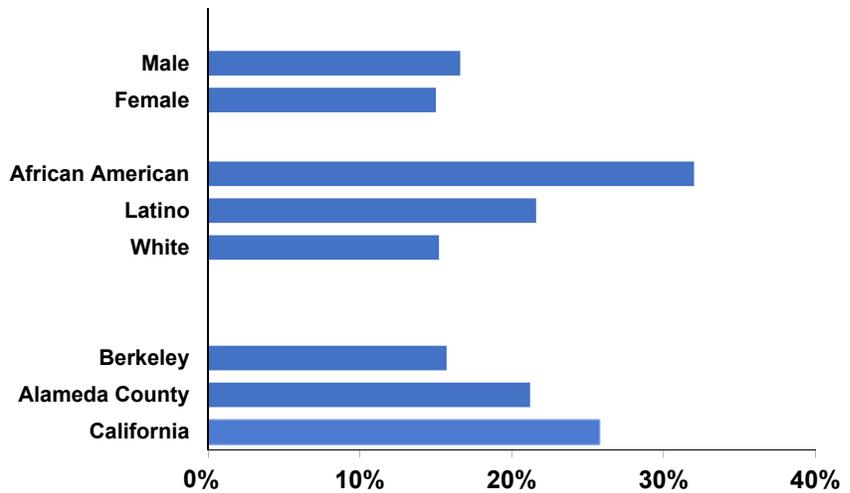
Obesity and Physical Activity

In the U.S., rates of obesity have consistently increased each year. Currently, more than one-third of adults in the country are obese. These trends were found by measuring Body Mass Index (BMI), or the relationship between a person’s weight and height. Adults who are overweight have a BMI of 25.0–29.9, while people who are obese have a BMI that is 30.0 or greater. An overweight or obese status is a strong risk factor for many chronic conditions, including type-2 diabetes, heart disease, stroke, and cancer.

In 2014, 15.7% of Berkeley adults were categorized as obese, and those who are African American or Latino are more likely to be obese. This trend suggests the need to improve greater access to physical activity and healthy foods. No data on overweight adults was available in the California Health Interview Survey (CHIS) Neighborhood Edition.

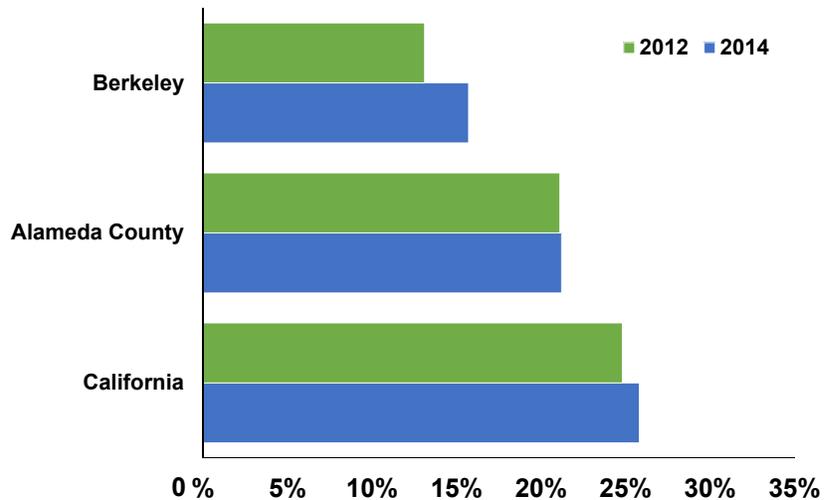
Between 2012 and 2014, the proportion of adults with obesity has slightly increased for Berkeley and the state of California. However, Berkeley’s obesity rate, remains below that of Alameda County and California.

Figure 4.1 OBESITY IN ADULTS BASED ON BODY MASS INDEX (BMI) OF 30 AND GREATER Berkeley, Alameda County, CA, 2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2014

Figure 4.2 OBESITY IN ADULTS BASED ON BODY MASS INDEX (BMI) OF 30 AND GREATER Berkeley, Alameda County, CA, 2012, 2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Obesity and Physical Activity continued

From 2012 to 2014, the proportion of Berkeley adults who walked at least 150 minutes in the past week increased from 41.7% to 49.2%. The proportion of Berkeley adults who engaged in this level of activity is higher than that the proportion of adults in Alameda County and California overall.

Tobacco Use

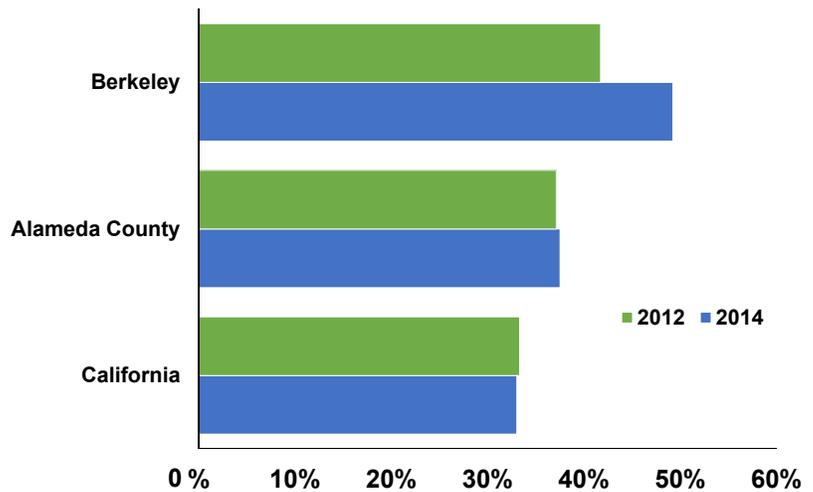
Although smoking is one of the most preventable risk factors that causes negative health outcomes, it remains a prominent issue in the U.S. More than 16 million Americans are currently living with a disease caused by smoking. About 1 in 5 deaths each year is attributable to cigarette smoking. While people are aware of the harmful effects of smoking and its relationship to cancer, respiratory diseases, and heart disease, people continue to smoke. At least in part, this is due to social pressures and advertising from the tobacco industry. Furthermore, secondhand smoke is a national priority due to its impact on asthma and other respiratory illnesses.

Approximately 7.6% of Berkeley residents were smokers in 2014, which was a substantial decrease from 11.5% in 2012. Neither Alameda County nor California showed as comparable decreases in smoking. Also, this recent decrease placed Berkeley's smoking rate substantially below that of Alameda County (12.2%) and California (13.8%).

From the Community

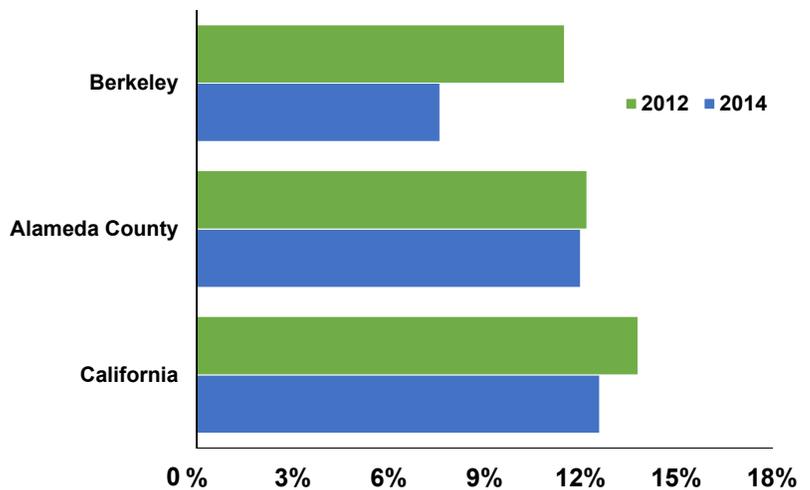
“We are living on limited income and we are going to buy what is cheap and what is there.”

Figure 4.3 ADULTS WHO WALKED AT LEAST 150 MINUTES IN THE PAST WEEK
Berkeley, Alameda County, CA, 2012, 2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Figure 4.4 ADULTS WHO ARE CURRENT SMOKERS
Berkeley, Alameda County, CA, 2012, 2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Diabetes

Diabetes is a chronic condition where there is an elevation in the level of glucose/sugar in the blood. Over time, this disease can lead to a number of health complications; including heart disease, blindness, kidney damage, and amputations. In type-1 diabetes, the body's immune system mistakenly attacks cells that produce insulin which regulates blood sugar. Type-1 diabetes, or insulin-dependent diabetes, accounts for approximately 5–10% of all diagnosed diabetes cases. Type-2 diabetes, or non-insulin dependent diabetes, develops from insulin resistance due to various environmental or behavioral factors, and accounts for 90–95% of all diagnosed diabetes cases.

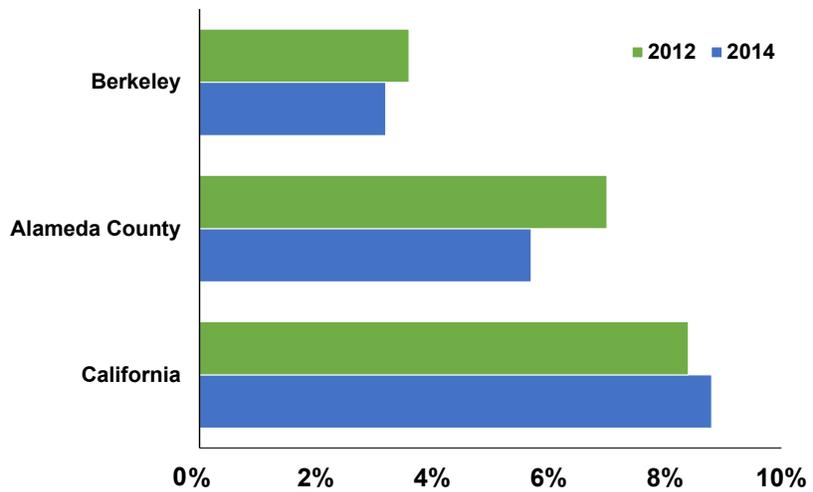
Untreated or poorly controlled diabetes can hinder a person's ability to live or work optimally. Across the nation, 30.3 million people (9.4% of the population) have diabetes. The occurrence of diabetes has increased over time, for African Americans and Latinos, people of lower income, and the elderly. Risk factors for diabetes include family history, obesity, high blood pressure, unhealthy diet, and low physical activity.

On average, Berkeley has lower rates of diabetes compared to Alameda County and the state of California. In 2014, the prevalence of diabetes in Berkeley was 3.2%, compared to 5.7% in Alameda County and 8.8% in California.

From the Community

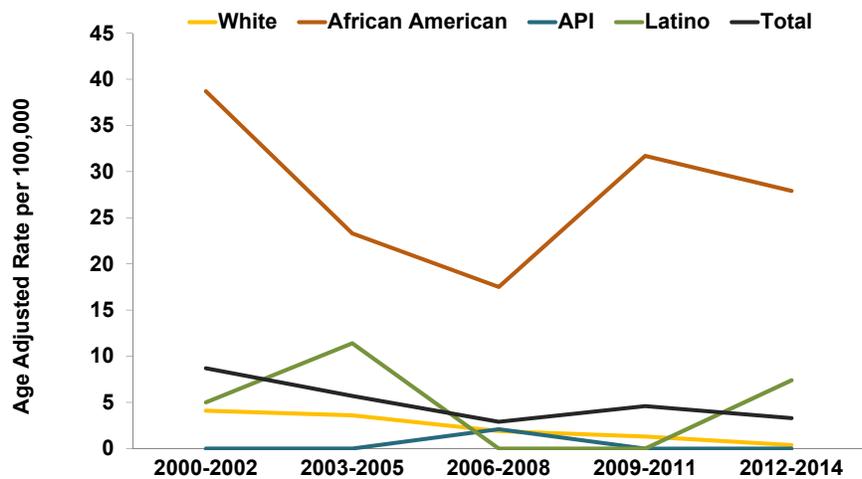
“We know about healthy eating, but it is hard when you can't get it in your neighborhood.”

Figure 4.5 ADULTS EVER DIAGNOSED WITH DIABETES
Berkeley, Alameda County, CA, 2012, 2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Figure 4.6 HOSPITALIZATION RATES DUE TO UNCONTROLLED DIABETES BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Diabetes continued

Uncontrolled Diabetes

Careful control of diabetes requires proper diet, exercise, blood sugar monitoring, and medication. When diabetes is left uncontrolled, there is a higher risk of health complications, which can lead to hospitalizations.

Over the course of the past decade, African Americans have had the highest rates of hospitalization due to uncontrolled diabetes in Berkeley. There has been a slight decrease in the gap between African Americans and other racial groups, but the disparity continues to exist.

Long-Term Diabetes Complications

Long-term complications for diabetes include damage to the kidney, eye, nerves, or circulatory vessels. This in turn can cause outcomes such as blindness and amputations.

Overall in the past decade, the Berkeley population has a decreasing rate of hospitalizations due to long-term diabetes complications, but the rate among African Americans remains higher than that of other groups.

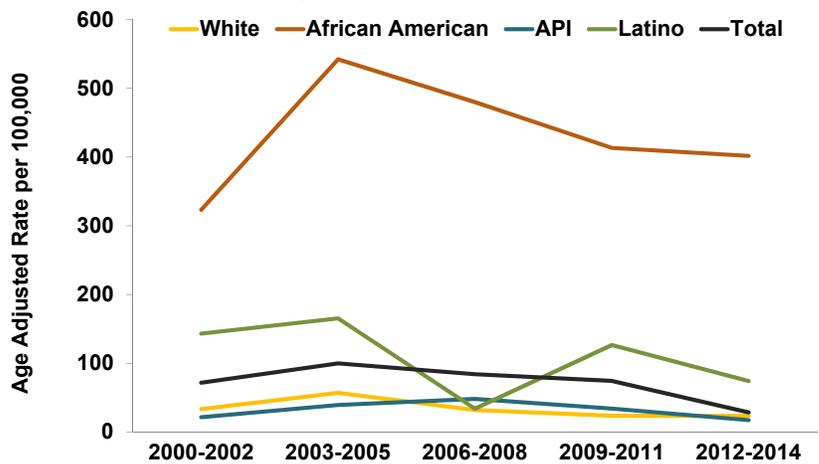
Lower-Extremity Amputations among Patients with Diabetes

When diabetes is poorly controlled, one potential consequence is nerve and tissue damage to the legs and feet due to reduced blood flow. This can lead to severe infection, which may necessitate amputation to prevent further damage.

From the Community

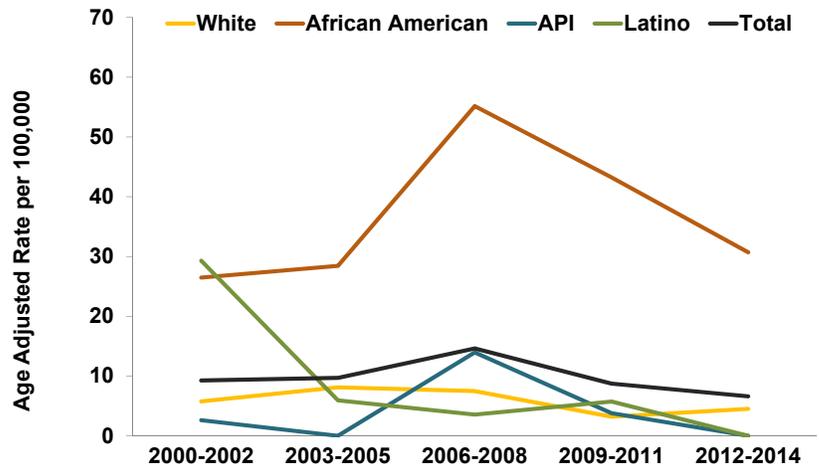
“I am concerned about sugary drinks. I have seen that we have diabetes in our community. You try to control it, but, I see that in my community, at a certain point, a certain age we get diabetes. It puts our children in danger.”

Figure 4.7 HOSPITALIZATION RATES DUE TO LONG-TERM DIABETES COMPLICATIONS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

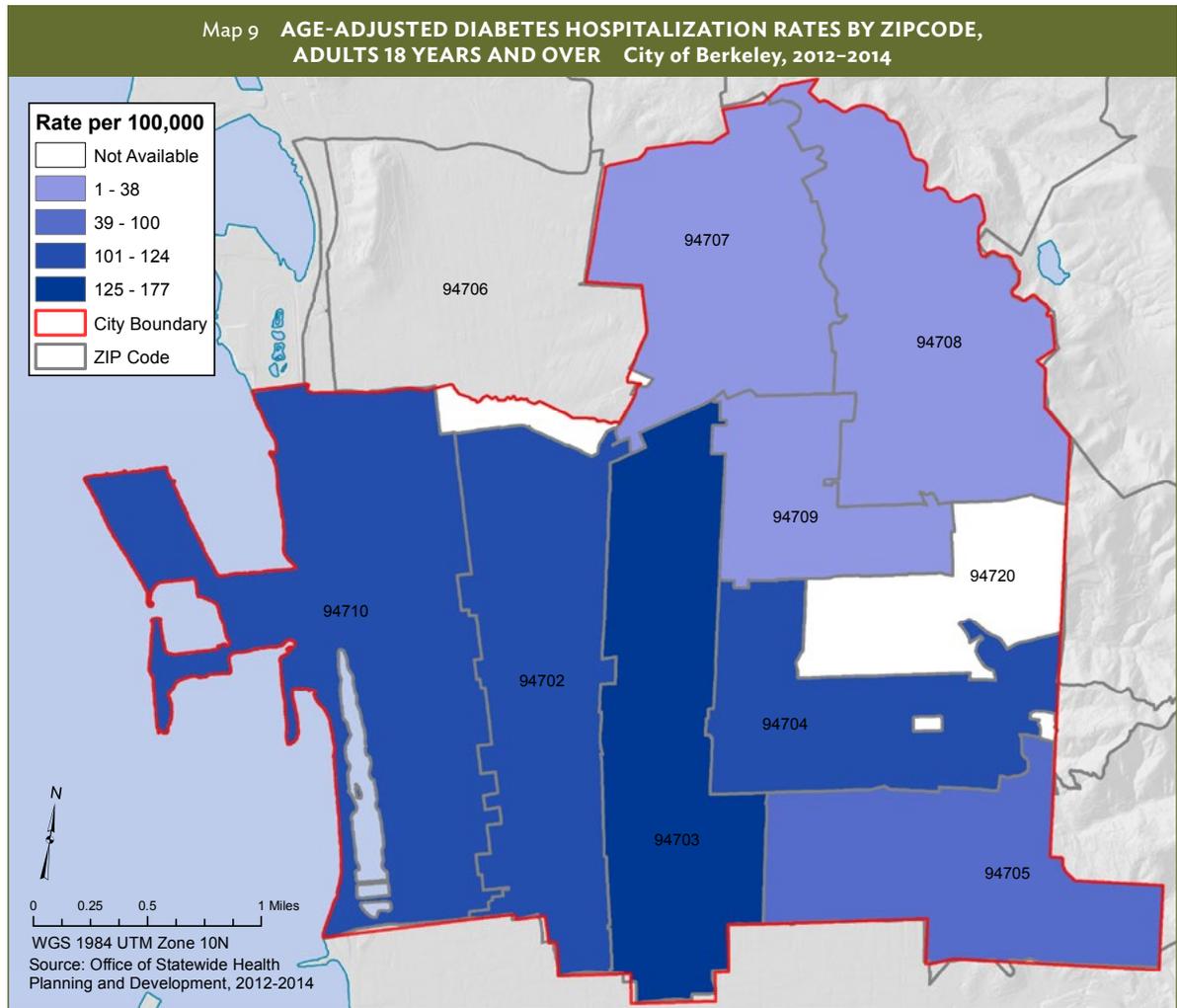
Figure 4.8 HOSPITALIZATION RATES DUE TO LOWER-EXTREMITY AMPUTATIONS FROM DIABETES BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Diabetes continued

African Americans have higher rates of hospitalization from lower-extremity amputations than other racial groups in Berkeley. However, the hospitalization rates among African Americans have substantially decreased between 2006 and 2014. For Latinos, hospitalizations for lower-extremity amputations dropped dramatically from 29.3 per 100,000 in 2000–2002 to 5.9 per 100,000 in 2003–2005. The Latino rate has continued downward with no reported amputations in 2012–2014. The overall hospitalization rate for lower-extremity amputations has remained relatively stable over time.



Diabetes hospitalization rates are not evenly distributed geographically in Berkeley. The highest rates of hospitalizations are among residents of South and Central Berkeley, particularly in the zip code 94703.

From the Community

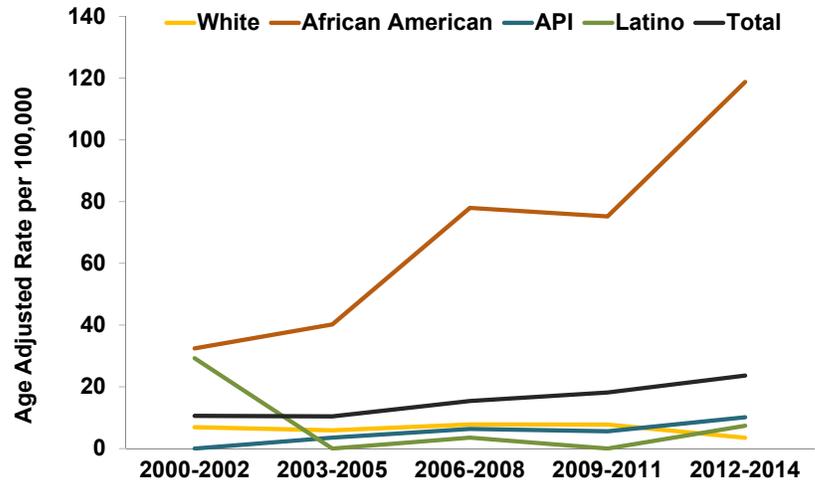
“It’s really overwhelming when you go to a store, and even when you think it’s healthy, you don’t know how much sugar there is in it. Juice has sugar and you don’t realize it.”

Hypertension (High Blood Pressure)

High blood pressure is one of the leading risk factors for heart disease, stroke, and other causes of death. There are many ways to control high blood pressure; these include taking proper medications, a healthy diet, exercise, and close monitoring of blood pressure levels. High blood pressure is typically referred to as a “silent killer” since there are no obvious symptoms, so people may be unaware that they have this condition. In the United States, about 1 in 3 adults have high blood pressure, and almost half of these individuals do not have their high blood pressure under control.

Berkeley’s overall hypertension hospitalization rate has slowly increased over time, which may reflect increased screening, diagnosis, and awareness in the population. In the past decade, the rate for African Americans has sharply increased, and it is now over five times that of the total population.

Figure 4.9 HOSPITALIZATION RATES DUE TO HYPERTENSION BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Heart-2-Heart & Berkeley Hypertension Prevention

Heart 2 Heart (H2H) uses a holistic, community-based approach to addressing health inequities in Berkeley. The program focuses on preventing high blood pressure and heart disease in South Berkeley; additionally, healthy eating and physical activity are also encouraged. The program provides increased access to hypertension screening and treatment, and trains Community Health Advocates in a program focused on outreach, education, and intensive counseling and support. H2H serves to bridge community, programs, resources, and services that are necessary to address the needs of community members.

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 in residents who attend the clinic consistently.

Heart Disease

Heart disease is the leading cause of death in the United States. Over 600,000 people die of heart disease every year. This term refers to a number of heart conditions, including hypertensive heart disease, coronary heart disease, and congestive heart failure. Early detection of heart disease can reduce further disease development and risk of complications such as heart attack. Ways to reduce heart disease include maintaining a healthy weight and diet, exercising, avoiding tobacco use and exposure to tobacco smoke, and reducing stress.

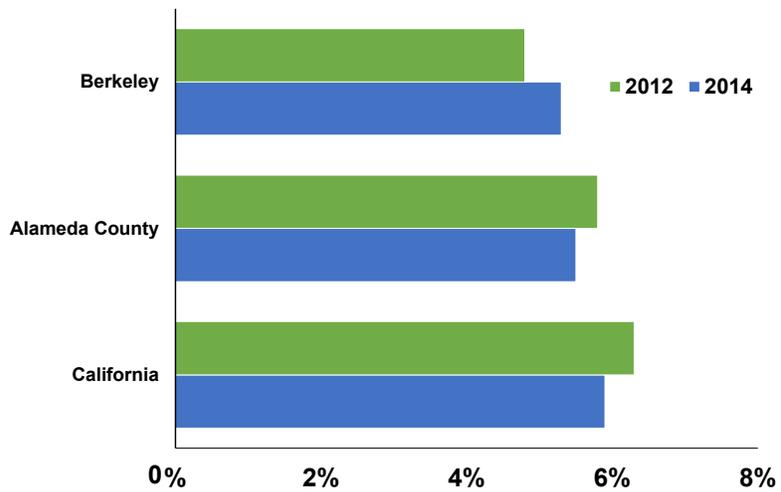
The proportion of adults in Berkeley who reported ever being diagnosed by a doctor with heart disease has slightly increased from 2012 to 2014. This rate is now similar to that of Alameda County and the State of California.

Hypertensive Heart Disease

Hypertensive heart disease arises from long-standing uncontrolled or poorly controlled high blood pressure. It includes heart failure, enlarged heart and heart attack. Rates of hypertensive heart disease increase with age and are similar in men and women.

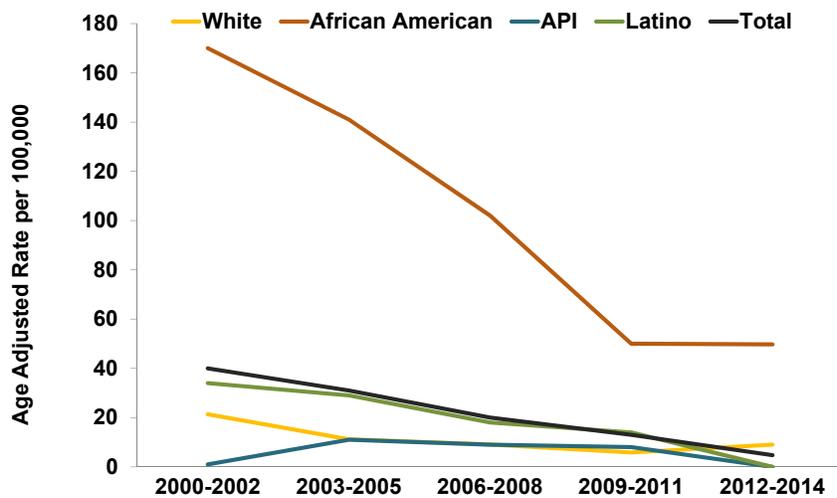
Hypertensive heart disease hospitalizations have decreased among all racial/ethnic groups over the past decade. The decrease among African Americans has been the most dramatic—from 170 per 100,000 in 2000–2002 to 50 per 100,000 in 2012–2014. African Americans remain more likely than other groups to be hospitalized because of hypertensive heart disease, although the gap between African American rates and rates among others has narrowed over time.

Figure 4.10 ADULTS EVER DIAGNOSED WITH HEART DISEASE Berkeley, Alameda County, CA, 2012, 2014



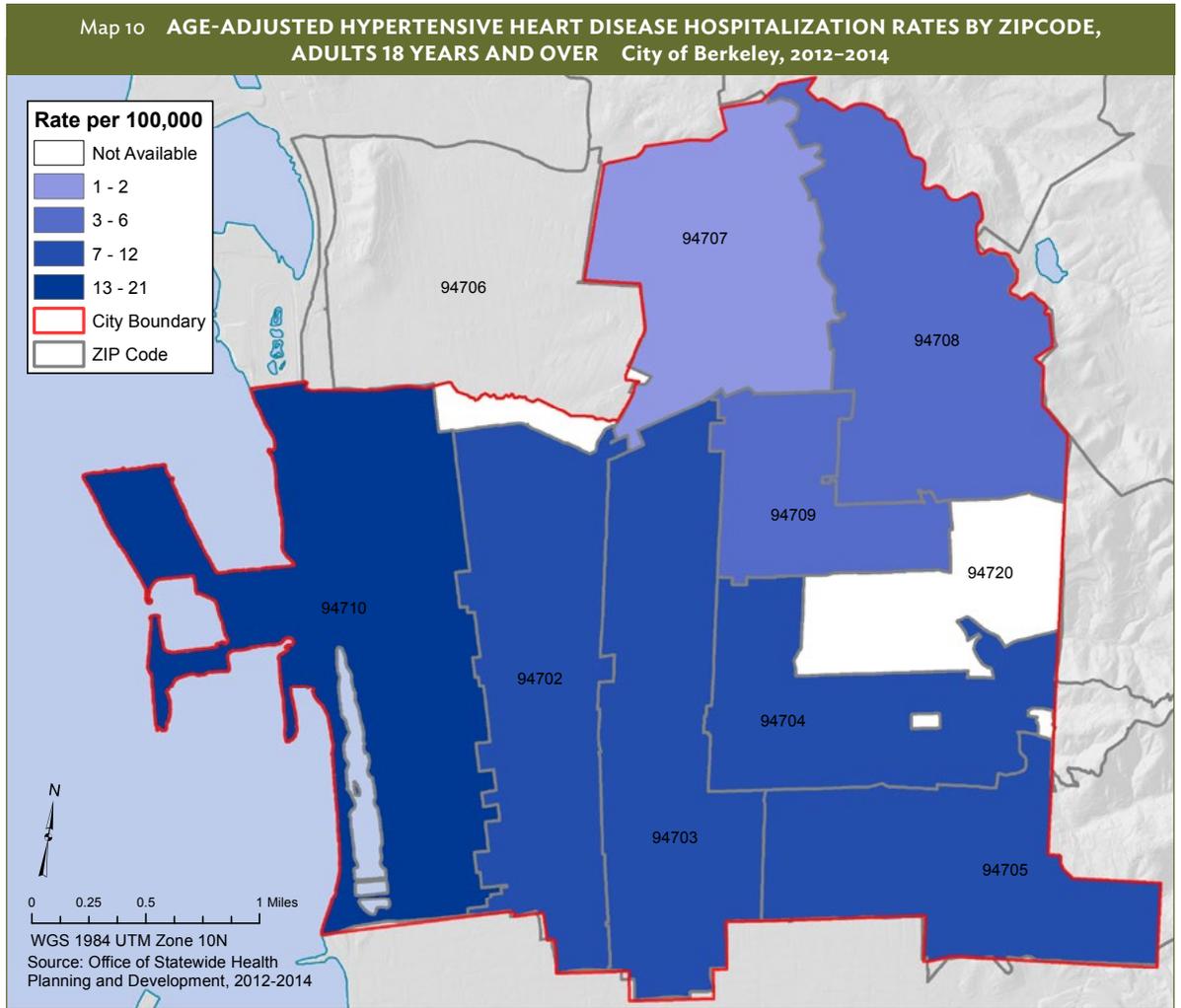
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Figure 4.11 HYPERTENSIVE HEART DISEASE HOSPITALIZATION RATES IN ADULTS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Heart Disease
continued

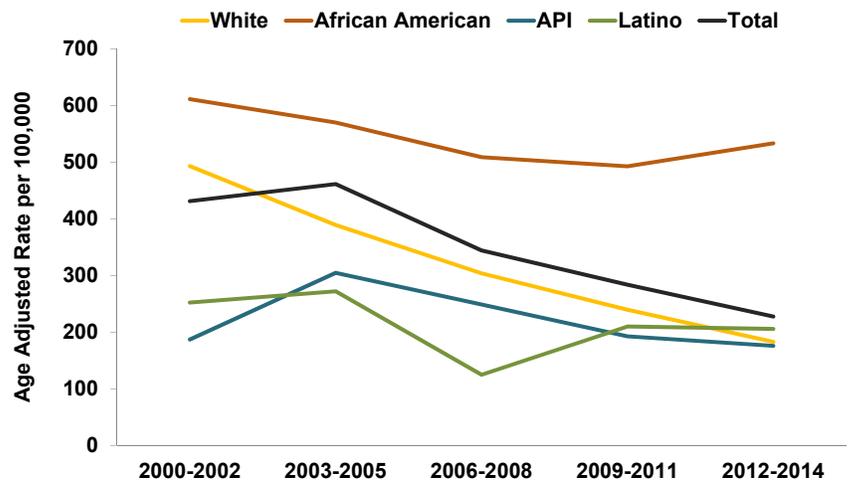


Hospitalization rates for hypertensive heart disease are highest in West Berkeley, particularly in zip code 94710.

Coronary Heart Disease

Also referred to as ischemic heart disease or coronary artery disease, coronary heart disease is caused by plaque buildup in the arteries. This reduces blood supply to the heart and rest of the body. In the United States, coronary heart disease is the most common type of heart disease. Risk factors include high cholesterol and high blood pressure. Eating low fat and low sodium foods, in addition to other healthy lifestyle changes, can reduce risk for coronary heart disease.

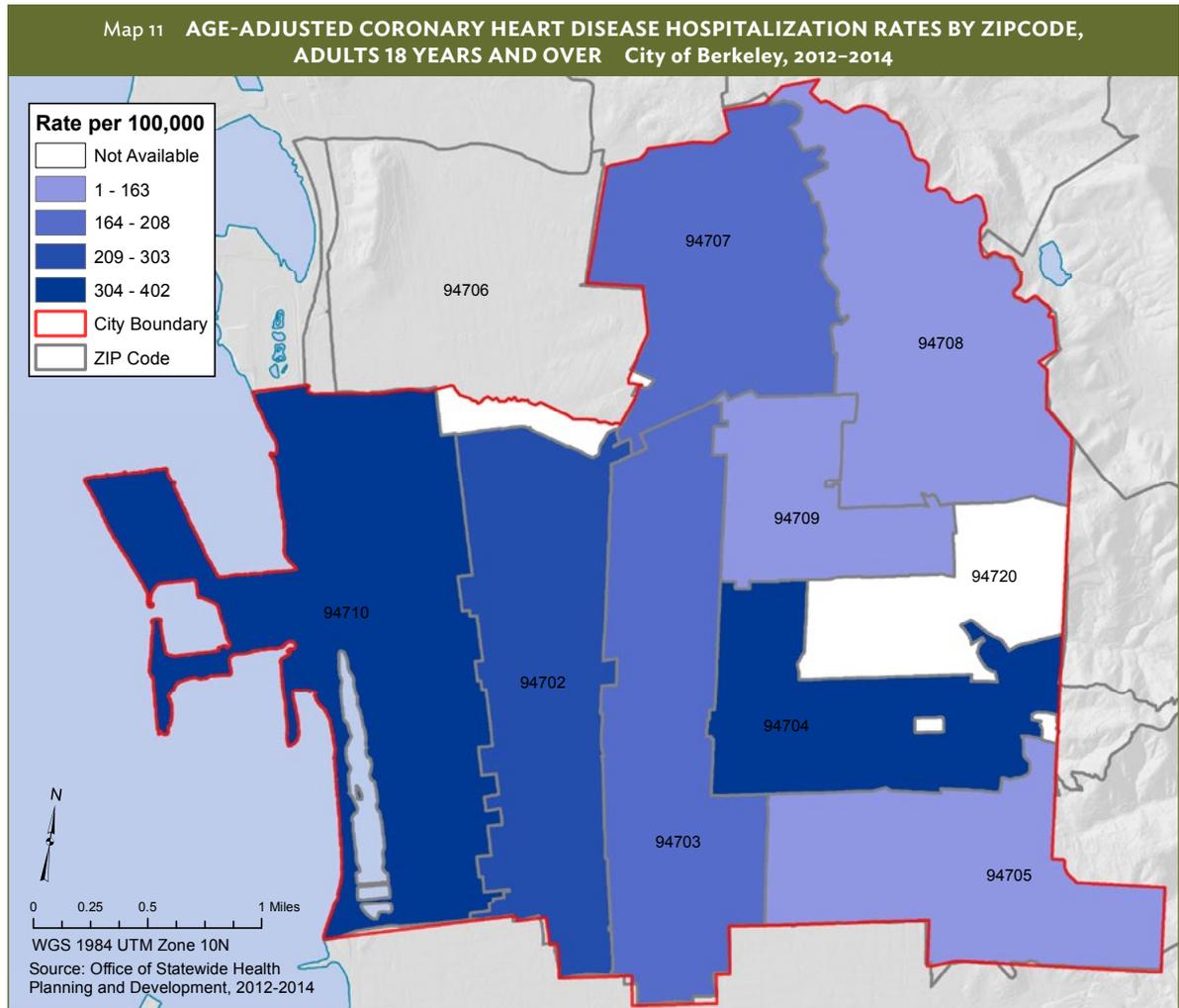
Figure 4.12 CORONARY HEART DISEASE HOSPITALIZATION RATES IN ADULTS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000-2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000-2014

*Heart Disease
continued*

Coronary heart disease hospitalization rates decreased in the total population from 2000–2014, even though Latinos have experienced an increase between 2006 and 2014. However, due to the low number of overall cases in Latinos, caution should be exercised in interpreting this trend. African Americans have the highest rates compared to other racial/ethnic groups.



The geographic distribution of coronary heart disease is similar to that of other chronic conditions, with the highest rates seen in West Berkeley and Greater Downtown Berkeley. The zip codes with the highest coronary heart disease hospitalization rates are 94710 and 94704.

From the Community

“We need programs that are specific for Black people...we have different needs than White people.”

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 a commonly progressive, chronic, longterm condition.

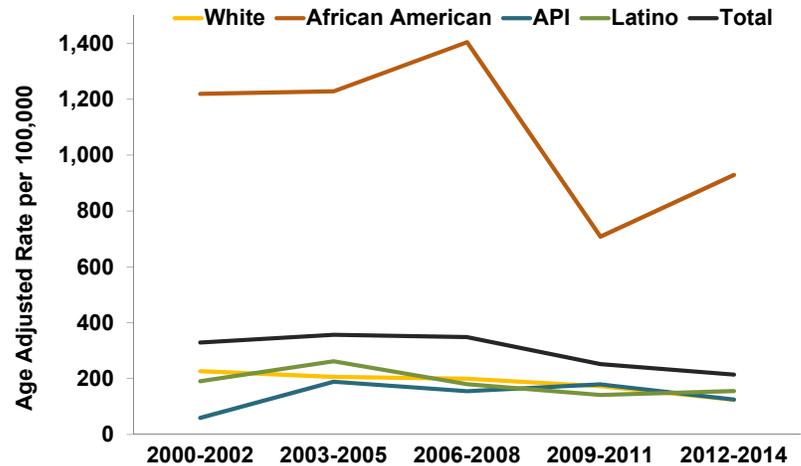
Congestive heart failure hospitalization rates among African Americans have declined in the past decade. However, these rates still remain substantially higher than those of other racial/ethnic groups.

Stroke

Stroke is a leading cause of longterm disability and death. A stroke occurs when the blood supply to the brain is blocked or a blood vessel in the brain bursts. The underlying causes of stroke are similar to the underlying causes of heart disease. Common causes include high blood pressure and high cholesterol, cigarette smoking, diabetes, poor diet, physical inactivity, and obesity. Prevention programs directed at these underlying causes can decrease rates of strokes, as well as many other chronic conditions.

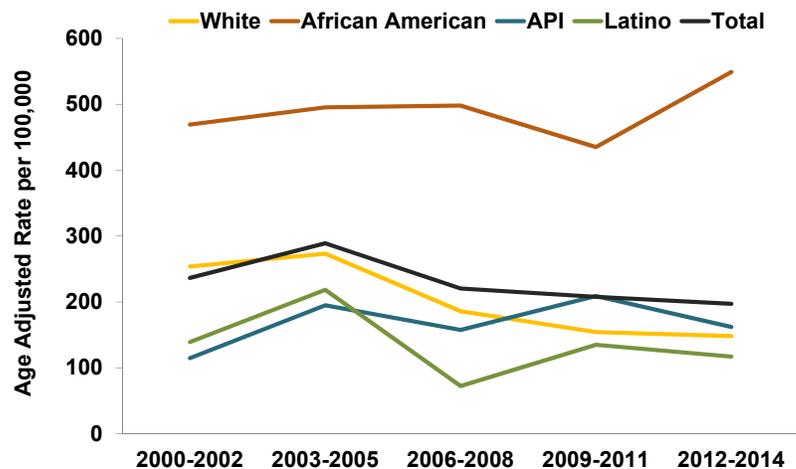
The rates of stroke hospitalization have remained relatively stable over the past decade, with a slight increase among African Americans in the last years of data. As a result, the disparity between African Americans and other racial/ethnic groups persists.

Figure 4.13 HOSPITALIZATION RATES DUE TO CONGESTIVE HEART FAILURE BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Figure 4.14 ACUTE STROKE HOSPITALIZATION RATES IN ADULTS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014

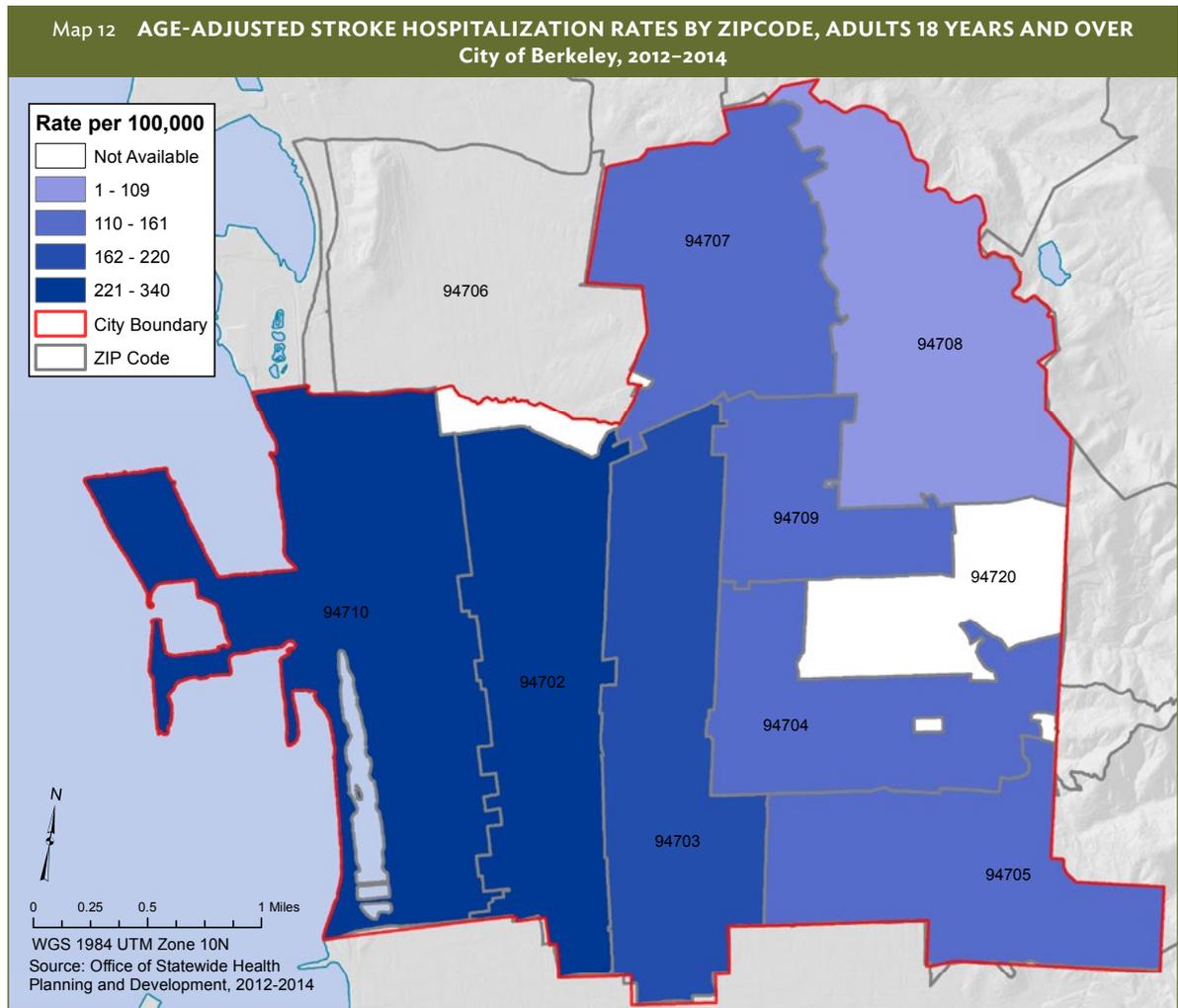


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

From the Community

“Our community prevents us from being healthy. I’m over in South Berkeley area near Ashby and San Pablo. There are no healthy choices there as far as being able to get a snack or lunch. They have an expensive [grocery stores]. If you are on a fixed income and you don’t have enough money and several mouths to feed, that’s not going to cut it.”

Stroke continued



Stroke rates are highest in the same West, South, and Central Berkeley neighborhoods that experience higher rates of diabetes and heart disease.

Respiratory Diseases

Respiratory diseases are diseases related to the lungs. They impair breathing and thus limit an individual's ability to exercise or comfortably carry out daily living activities. Asthma is the most common respiratory condition. Emphysema and chronic bronchitis are others. These diseases are collectively referred to as chronic obstructive pulmonary disease (COPD). Respiratory diseases are often triggered or worsened by cigarette smoke, air pollution, allergens, and other environmental factors, as well as by stress. Minimizing episodes or exacerbations of the disease

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

The burden of respiratory diseases affects individuals, their families, schools, workplaces, and communities. The burden of respiratory diseases also falls on community with higher health insurance rates, greater tax-funded health costs, and lost productivity.

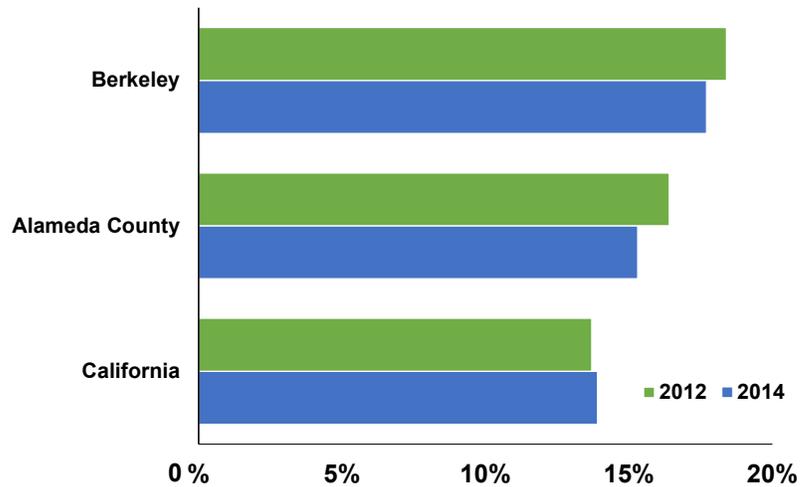
*Respiratory Diseases continued***Asthma**

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 careful attention to the environment and use of appropriate medication. Asthma attacks can range from mild to life-threatening severity. Regular and effective treatment can prevent symptoms and asthma attacks, avoid unnecessary hospitalizations, and enable individuals who have asthma to lead active lives.

The proportion of adults in Berkeley who reported ever being diagnosed by a doctor with asthma is slightly higher than the proportion in Alameda County and California.

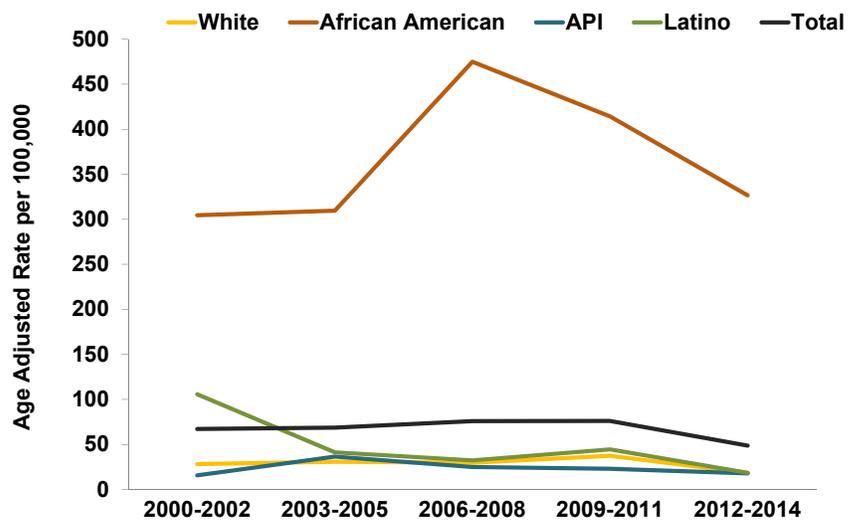
Asthma hospitalizations in Berkeley adults 18 and over show a strong disparity between African Americans and all other racial/ethnic groups, as African Americans have substantially higher rates of asthma compared to other groups. Asthma hospitalizations in African Americans have declined from 474.9 per 100,000 in 2006–2008 to 327 per 100,000 in 2012–2014. Still, the rate in 2012–2014 is higher than the rates in 2000–2005. Disparities have virtually disappeared in all other racial/ethnic groups by 2012–2014. The overall asthma hospitalization rate among adults has remained relatively stable over time.

Figure 4.15 ADULTS WHO WERE EVER DIAGNOSED WITH ASTHMA
Berkeley, Alameda County, CA, 2012, 2014



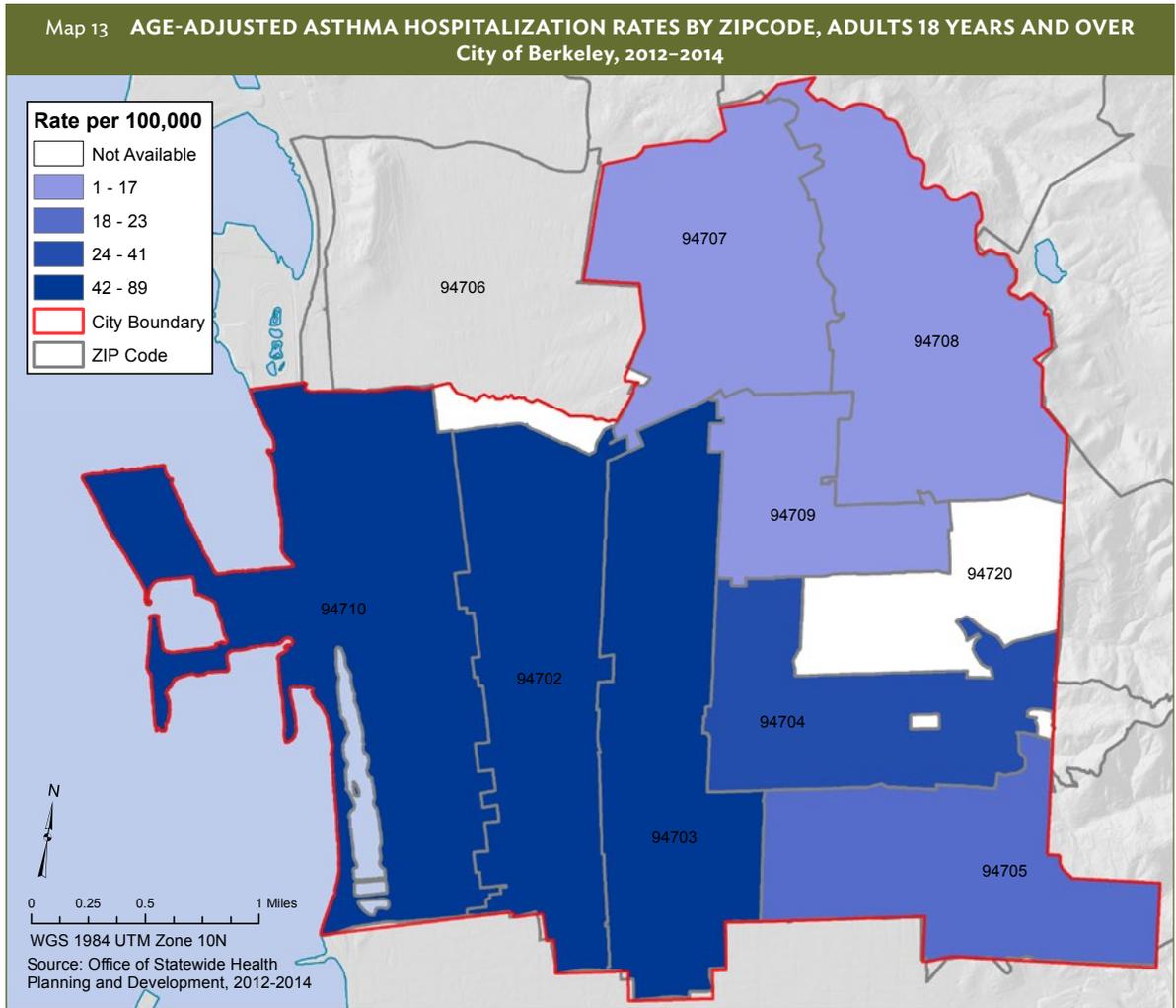
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Figure 4.16 ASTHMA HOSPITALIZATION RATES IN ADULTS BY RACE/ETHNICITY
AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

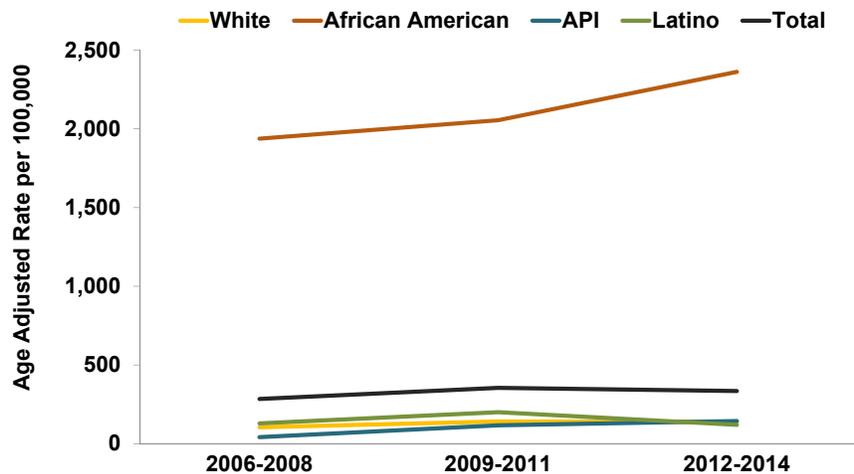
Respiratory Diseases
continued



Emergency room visit rates for asthma show African Americans have a drastically higher rate compared to other racial/ethnic groups. These data on emergency room visits are particularly useful since emergency departments provide a safety net for those who have difficulty accessing alternative sources of care.

Asthma hospitalization rates are highest in the West, South, Central, and Greater Downtown Berkeley neighborhoods.

Figure 4.17 ADULT ASTHMA EMERGENCY ROOM VISIT RATES BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2006-2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2006-2014

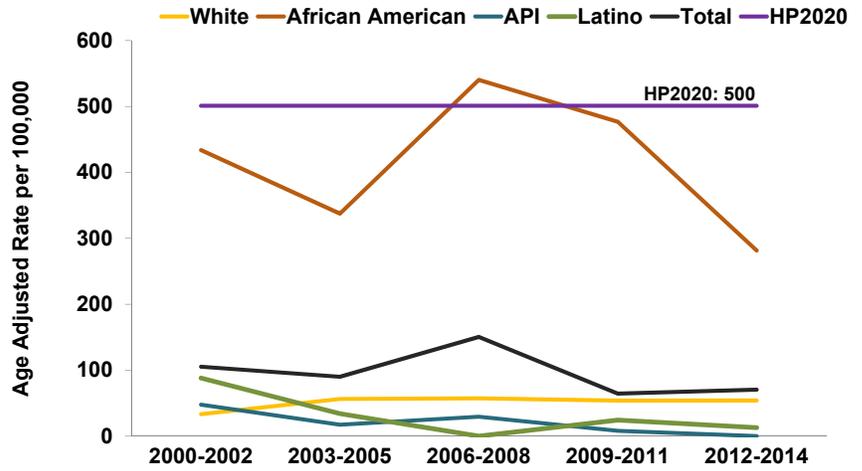
Respiratory Diseases *continued*

Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease (COPD) is a group of diseases that can cause airflow blockage and problems with breathing. These diseases include emphysema, chronic bronchitis, and asthma. COPD was the 3rd leading cause of death in the United States in 2015, and the 6th leading cause of death in Berkeley.

Overall, the hospitalization rates of COPD have decreased over the past decade in the Berkeley population. Every racial/ethnic group in Berkeley meets the HP2020 goal of 501 or fewer hospitalizations for COPD per 100,000 adults age 45 and older. Despite significant declines, African Americans continue to have the highest rates. In 2012–2014, African Americans had 4.0 times the rate of COPD compared to the total population.

Figure 4.18 HOSPITALIZATION RATES DUES TO CHRONIC OBSTRUCTIVE PULMONARY DISEASE BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION, ADULTS 45 AND OLDER Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

From the Community

“We have to be our own advocates at the doctor’s office. We need the resources to be able to advocate for ourselves.”



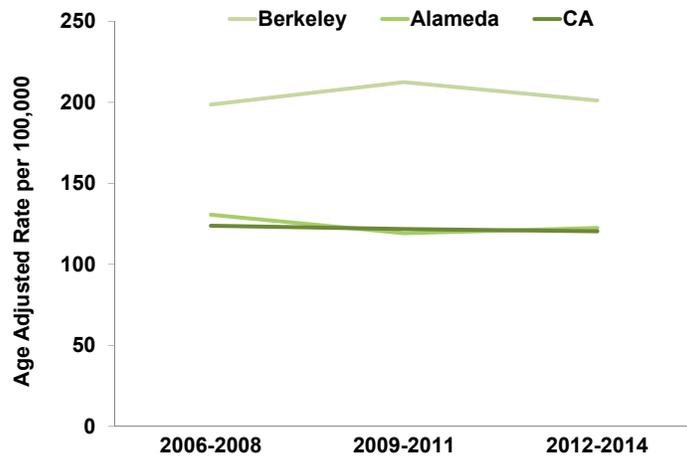
Cancer Incidence

Cancer shares many of the same risk factors as other chronic diseases, including tobacco use, physical inactivity, poor nutrition, and obesity. Environmental exposures, genetics, age, and gender also are important in determining risk. Cancer is a leading cause of death nationally, second to heart disease. There have been substantial efforts to treat and cure cancer, as well as to prevent it. Primary prevention includes measures

such as limiting sun exposure to prevent skin cancer, hepatitis vaccination to prevent liver cancer, and HPV (human papilloma virus) vaccination to prevent cervical cancer. Screening and early detection play a key role in improving survival and quality of life. Cancer screenings include mammography for breast cancer, Pap smears for cervical cancer, and fecal immunochemical tests (FIT) or colonoscopies for colorectal cancer.

Berkeley has consistently had an overall breast cancer incidence rate higher than those of Alameda County and California as a whole. In fact, in 2012–2014, the rate in Berkeley was 1.7 times the rates in Alameda County and the State.

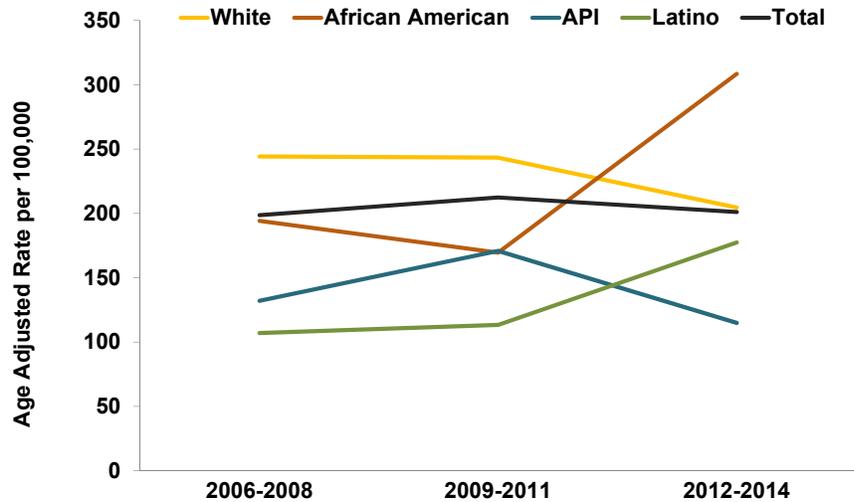
Figure 4.19 FEMALE BREAST CANCER INCIDENCE RATES Berkeley, Alameda County, CA, 2006–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2006–2014

Historically, in Berkeley, white women have had the highest rates of breast cancer. However, in 2012–2014 African American women had the highest incidence of breast cancer.

Figure 4.20 FEMALE BREAST CANCER INCIDENCE RATES BY RACE/ETHNICITY Berkeley, 2006–2014

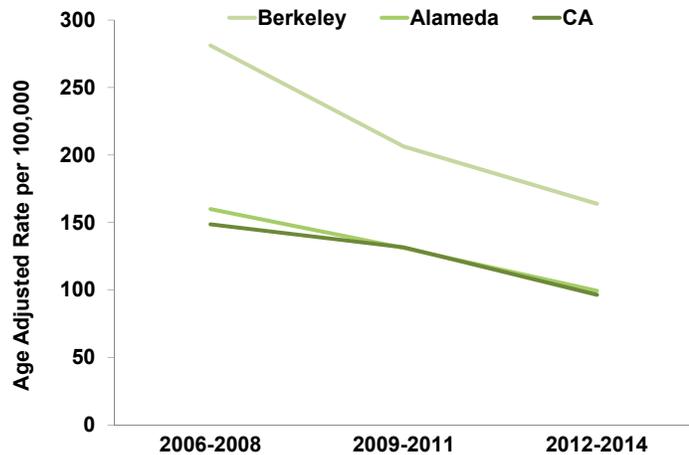


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2006–2014

Cancer Incidence continued

The incidence rate of prostate cancer has decreased over time for Berkeley, Alameda County, and the State of California, but Berkeley continues to have a higher rate.

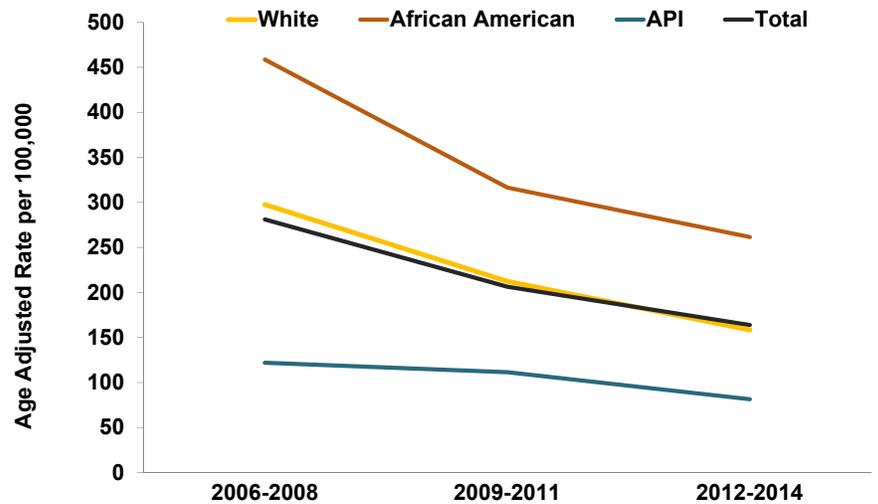
Figure 4.21 MALE PROSTATE CANCER INCIDENCE RATES
Berkeley, Alameda County, CA, 2006–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2006–2014

African American men continue to have higher prostate cancer rates than other racial/ethnic groups. The disparity between these groups has decreased over the past years. In 2012–2014, the prostate cancer incidence rate in Berkeley was 1.7 times the rates in Alameda County and the State.

Figure 4.22 MALE PROSTATE CANCER INCIDENCE RATES BY RACE/ETHNICITY
Berkeley, 2006–2014

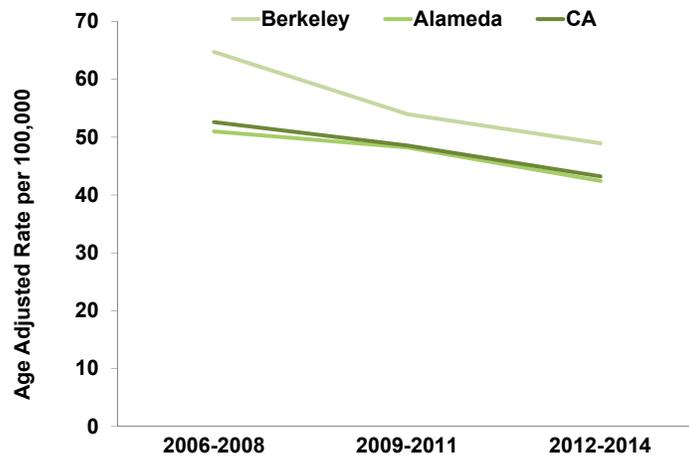


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2006–2014

Cancer Incidence continued

Lung cancer rates in Berkeley are higher than rates in Alameda County and California. However, Berkeley has experienced a greater decrease than Alameda County or the State.

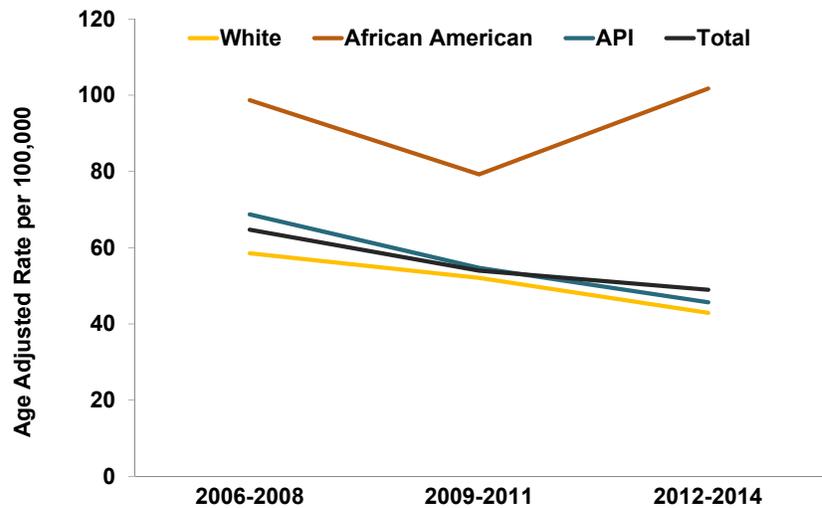
Figure 4.23 LUNG CANCER INCIDENCE RATES
Berkeley, Alameda County, CA, 2006–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2006–2014

African Americans living in Berkeley have the highest rate of lung cancer, followed by Asians and Pacific Islanders.

Figure 4.24 LUNG CANCER INCIDENCE RATES BY RACE/ETHNICITY
Berkeley, 2006–2014

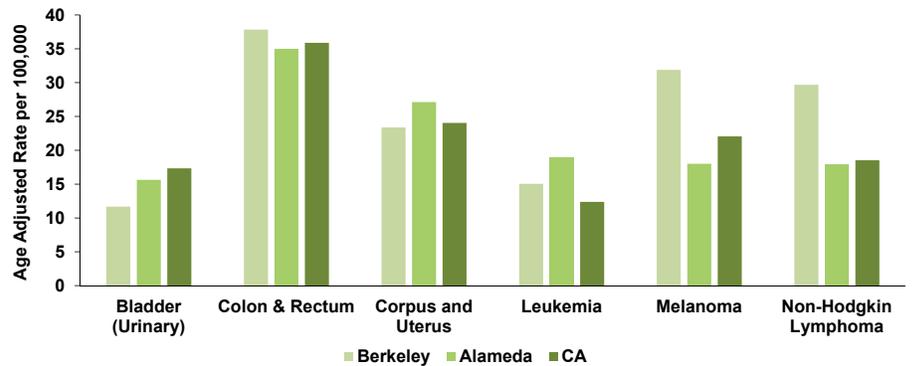


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2006–2014

Cancer Incidence continued

Other types of cancers that are found in Berkeley are cancer of the bladder, colorectal cancer, uterine cancer, leukemia, melanoma, and non-Hodgkin lymphoma. Of those, colorectal, uterine, melanoma, and non-Hodgkin lymphoma cancers have higher rates in Berkeley compared to Alameda County and the State of California.

Figure 4.25 OTHER TYPES OF CANCER INCIDENCE RATES
Berkeley, Alameda County, CA, 2012–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Cancer Prevention Institute of California, 2012–2014

Ann Chandler 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.

Mental Health

In the United States, mental health disorders have become increasingly common. The National Institute of Mental Health has estimated that in 2015, 17.9% of Americans over the age of 18 were living with mental illness. Major depression accounted for over a third of those diagnoses.

A serious mental illness is one that causes significant impairment in social, occupational, or other important areas of functioning. For example, it may prevent people from working, going to school, or having healthy relationships. Common serious mental illnesses include schizophrenia, bipolar disorder, major depression, and post-traumatic stress disorder (PTSD). Individuals suffering from serious mental illness are often diagnosed with more than one mental health disorder.

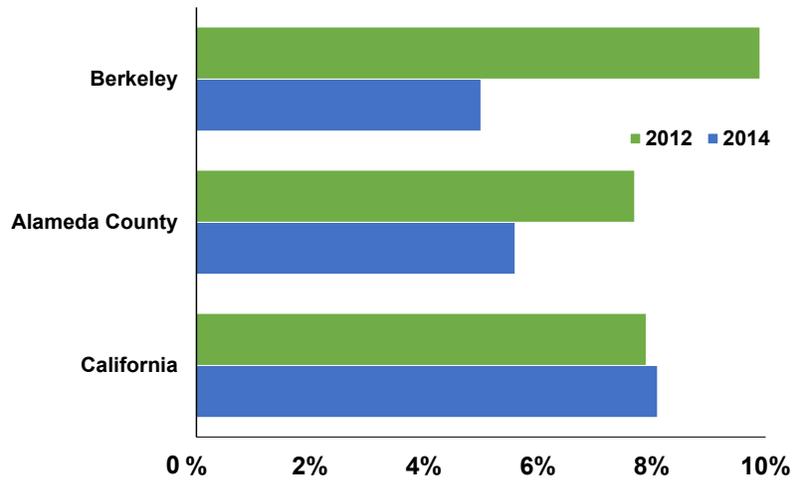
More than 90 percent of people who commit suicide have a diagnosable mental health disorder; typically depression or a substance use disorder. Mental health disorders are a leading cause of disability in the United States. Lack of access to mental health care further reduces quality of life for millions of people. Disparities in access to care are often the result of racial, ethnic, and economic factors, leading to disparate impacts on certain communities—in Berkeley, primarily the African American community. Exposure to traumatic and environmental stressors increases the risk of developing a mental health disorder.

Among the 14 cities in Alameda County, Berkeley ranks 1st in mental illness hospitalizations. Among Berkeley residents, African Americans are disproportionately represented in mental health emergency department visits.

Mental Health continued

Previously, Berkeley had a higher proportion of adults with serious psychological distress, such as symptoms of depression and anxiety, compared to Alameda County and the State of California. In 2014, however, Berkeley's proportion had decreased from 9.9% to 5.0%, which is lower than that of Alameda County and California as a whole.

Figure 4.26 ADULTS WITH SERIOUS PSYCHOLOGICAL DISTRESS
Berkeley, Alameda County, CA, 2012, 2014



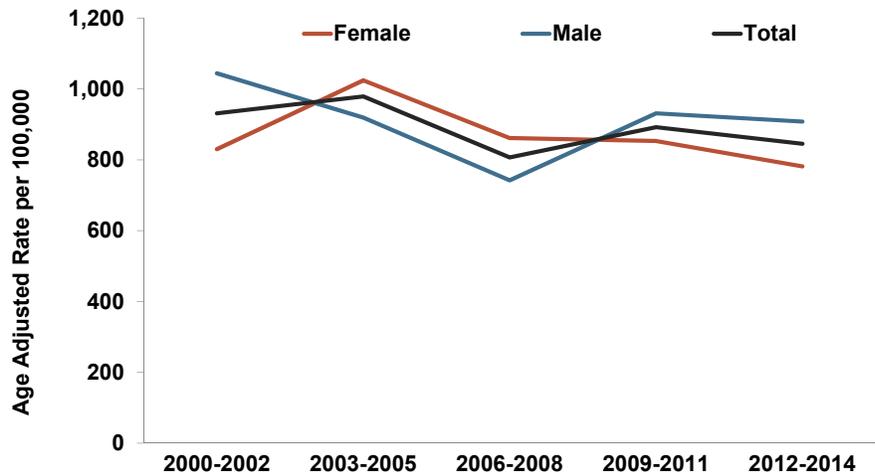
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Health Interview Survey (CHIS), 2012, 2014

Berkeley Mental Health

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.

Despite fluctuations, mental health hospitalization rates have remained relatively stable over time from 2000-2014. Currently, both males and females have similar rates.

Figure 4.27 MENTAL HEALTH DISORDERS HOSPITALIZATION RATES IN ADULTS BY SEX
Berkeley, 2000-2014



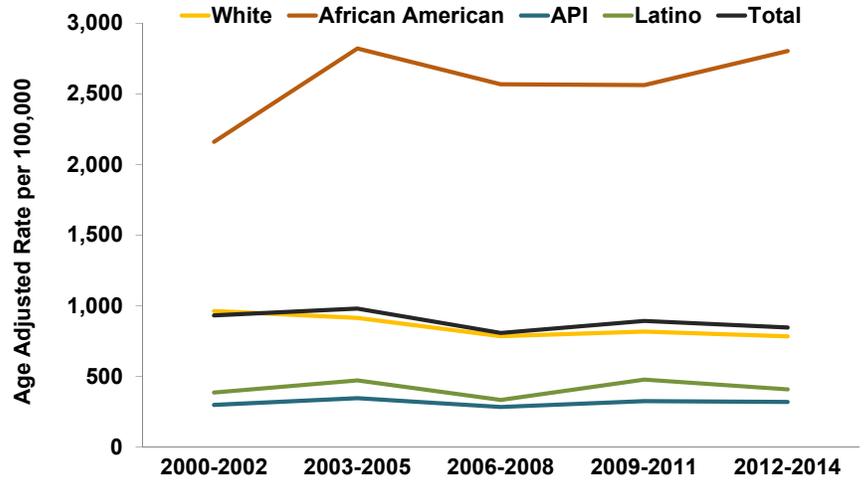
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000-2014

Mental Health continued

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

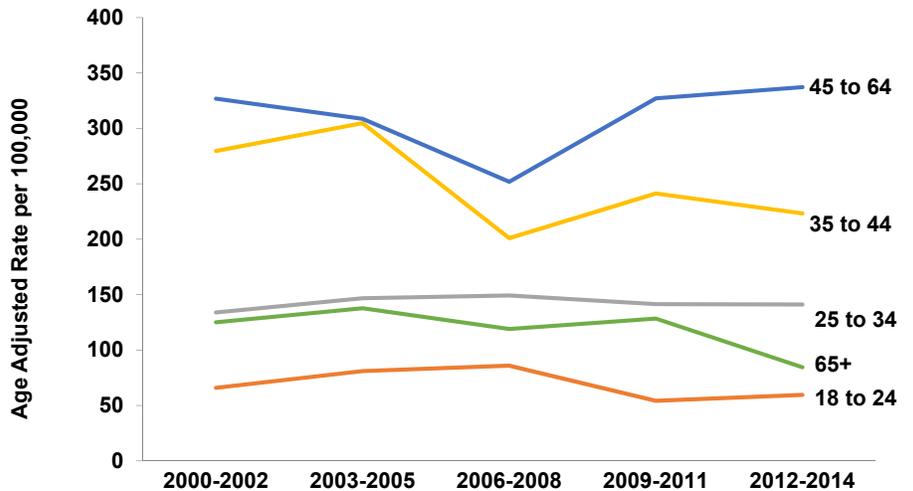
Hospitalization rates for mental health disorders increase with age until age 65 and older. Young adults, ages 18 to 24, have the lowest rate of mental health hospitalizations.

Figure 4.28 MENTAL HEALTH DISORDERS HOSPITALIZATION RATES IN ADULTS BY RACE Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Figure 4.29 MENTAL HEALTH DISORDERS HOSPITALIZATION RATES IN ADULTS BY AGE Berkeley, 2000–2014

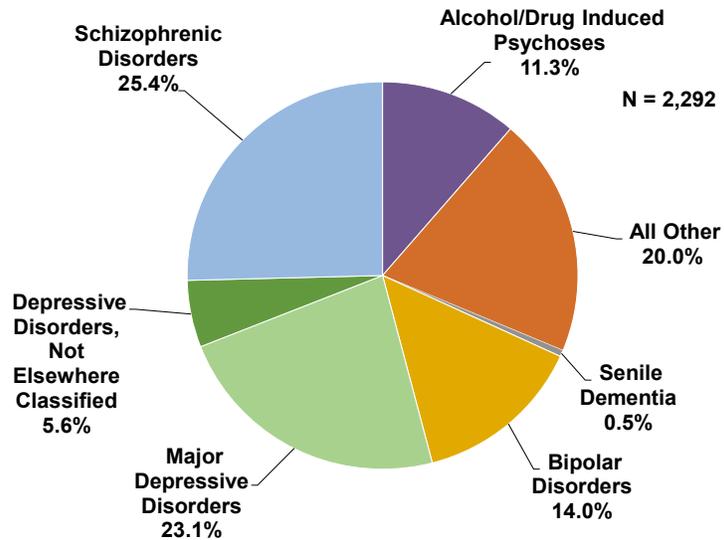


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Mental Health continued

In 2012–2014, there were 2,292 mental health disorder hospitalizations in Berkeley. Those hospitalizations have been primarily comprised of depressive (28.7%) or schizophrenic (25.4%) disorders.

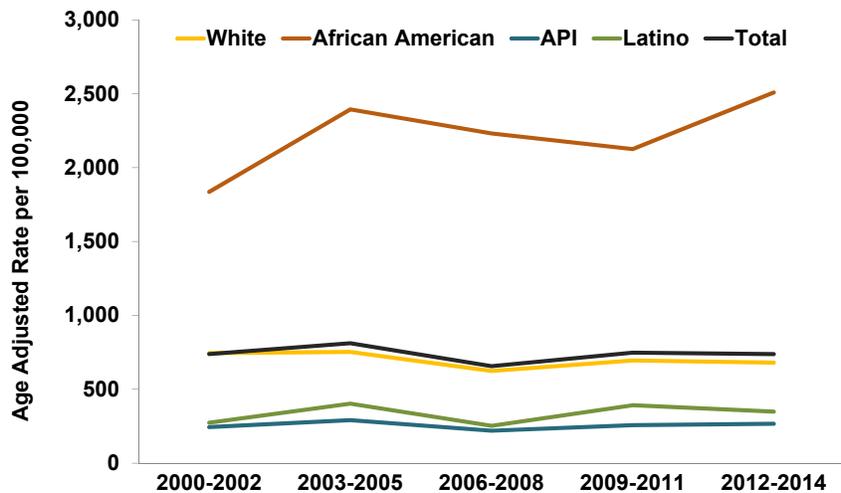
Figure 4.30 ALL MENTAL HEALTH DISORDERS HOSPITALIZATIONS AMONG ADULTS BY DIAGNOSIS Berkeley, 2012–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2012–2014

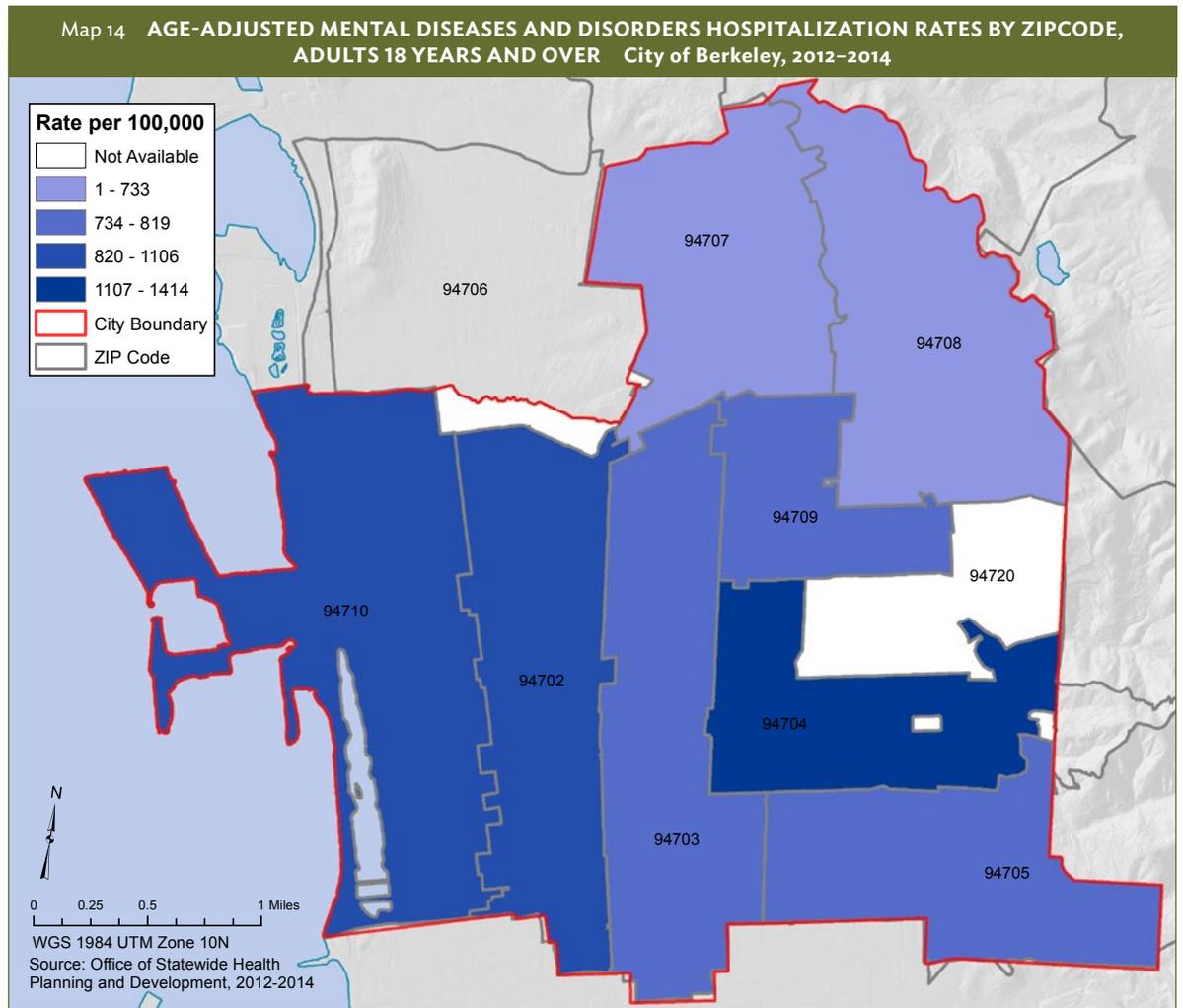
Hospitalizations for psychosis (including schizophrenia, bipolar disorders, and major depressive disorders) have occurred at a much greater rate among African Americans than among other racial/ethnic groups.

Figure 4.31 PSYCHOSIS HOSPITALIZATION RATES IN ADULTS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Mental Health
continued



Hospitalizations for mental health disorders occur throughout Berkeley but are more common in residents of the areas in the Greater Downtown area and less common in the Berkeley Hills.

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.

Injuries

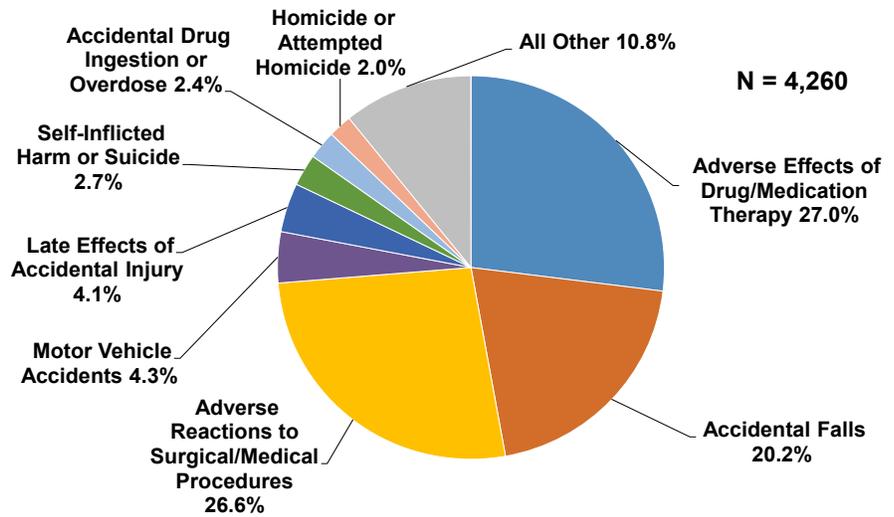
Injuries include unintentional injuries (e.g., falls and motor vehicle accidents) and intentional injuries (e.g., those resulting from abuse, assault, or homicide). Intentional injuries may be inflicted on others or may be self-inflicted (e.g., suicide and suicide attempts). Injuries are a preventable cause of illness and disability. Public health interventions, such as seat belts and helmets for bicycles and motorcycles, have successfully decreased the rates of injuries and disabilities. Understanding the causes and distribution of injuries can guide future efforts to further decrease injury rates.

Unintentional injuries are more common among Berkeley’s older population and residents closest to the UC Berkeley campus and downtown. Intentional injuries are more common for residents of West Berkeley. There are over 500 traffic injuries annually in Berkeley, and this number has remained stable in recent years. Traffic injuries peak at ages 45–64 years.

In 2012–2014, Berkeley had approximately 1,400 injury-related hospitalizations each year, approximately 4 per day. This was higher than in 2008–2010. Over half of these hospitalizations (53.6%) were due to adverse reactions to prescription medications or adverse reactions to surgical or medical procedures.

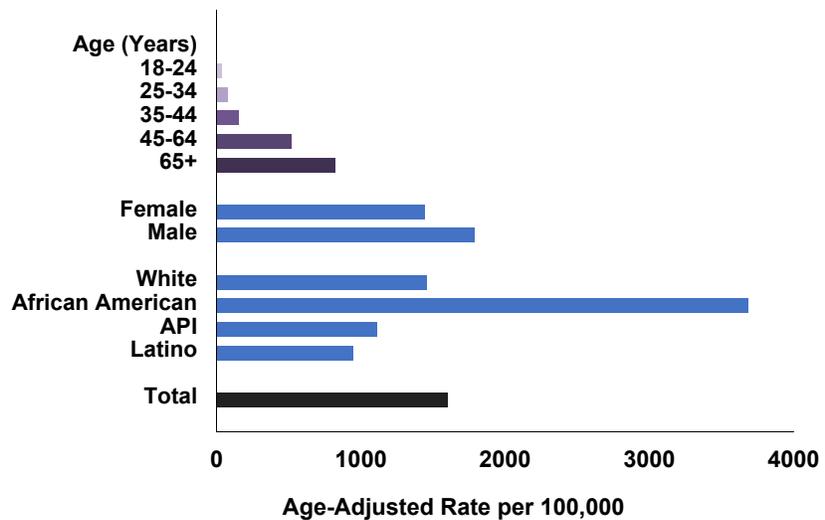
As expected, injury hospitalization rates increase with age due to changes associated with aging. The injury hospitalization rate of males is slightly higher than females. The rate among African Americans is substantially higher than in other racial/ethnic groups. The risk of African Americans being hospitalized for injury is more than twice as high as any other group.

Figure 4.32 LEADING CAUSES OF INJURY HOSPITALIZATIONS AMONG ADULTS Berkeley, 2012–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2012–2014

Figure 4.33 INJURY HOSPITALIZATION RATES IN ADULTS BY AGE, SEX, AND RACE/ETHNICITY Berkeley, 2012–2014



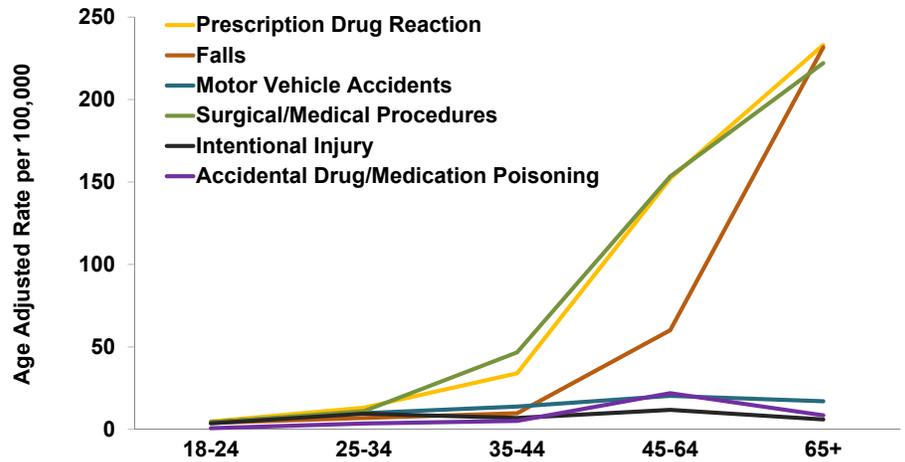
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2012–2014

Injuries continued

Injury hospitalizations are substantially higher in adults aged 45 and over, particularly for prescription drug reactions, falls, and surgical/medical procedures. However, injuries involving motor vehicle accidents, accidental drug/medication poisoning, and intentional injury remain relatively the same across all age groups, with slight increases for advancing age.

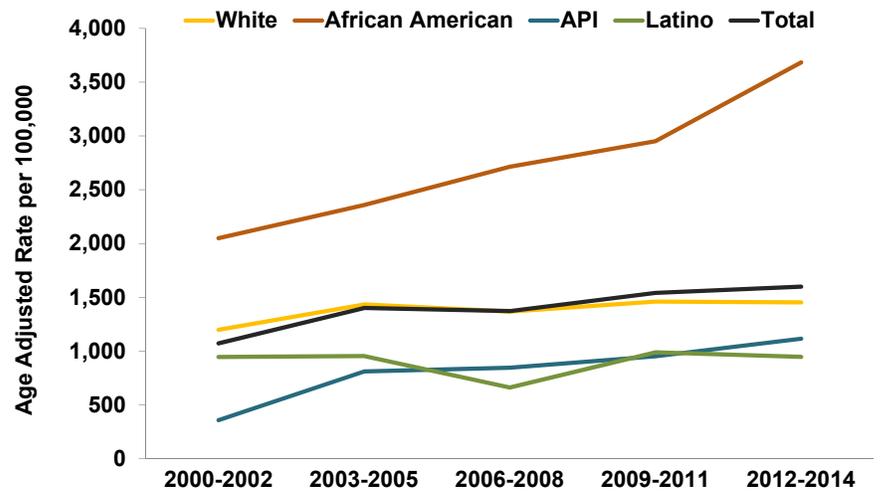
From 2000–2014, injury hospitalization rates have increased among African Americans and Asians, while rates have remained steady among Whites and Latinos. The gap between rates of racial/ethnic groups appears consistent over time.

Figure 4.34 INJURY HOSPITALIZATION RATES BY AGE AND CAUSE
Berkeley, 2012–2014



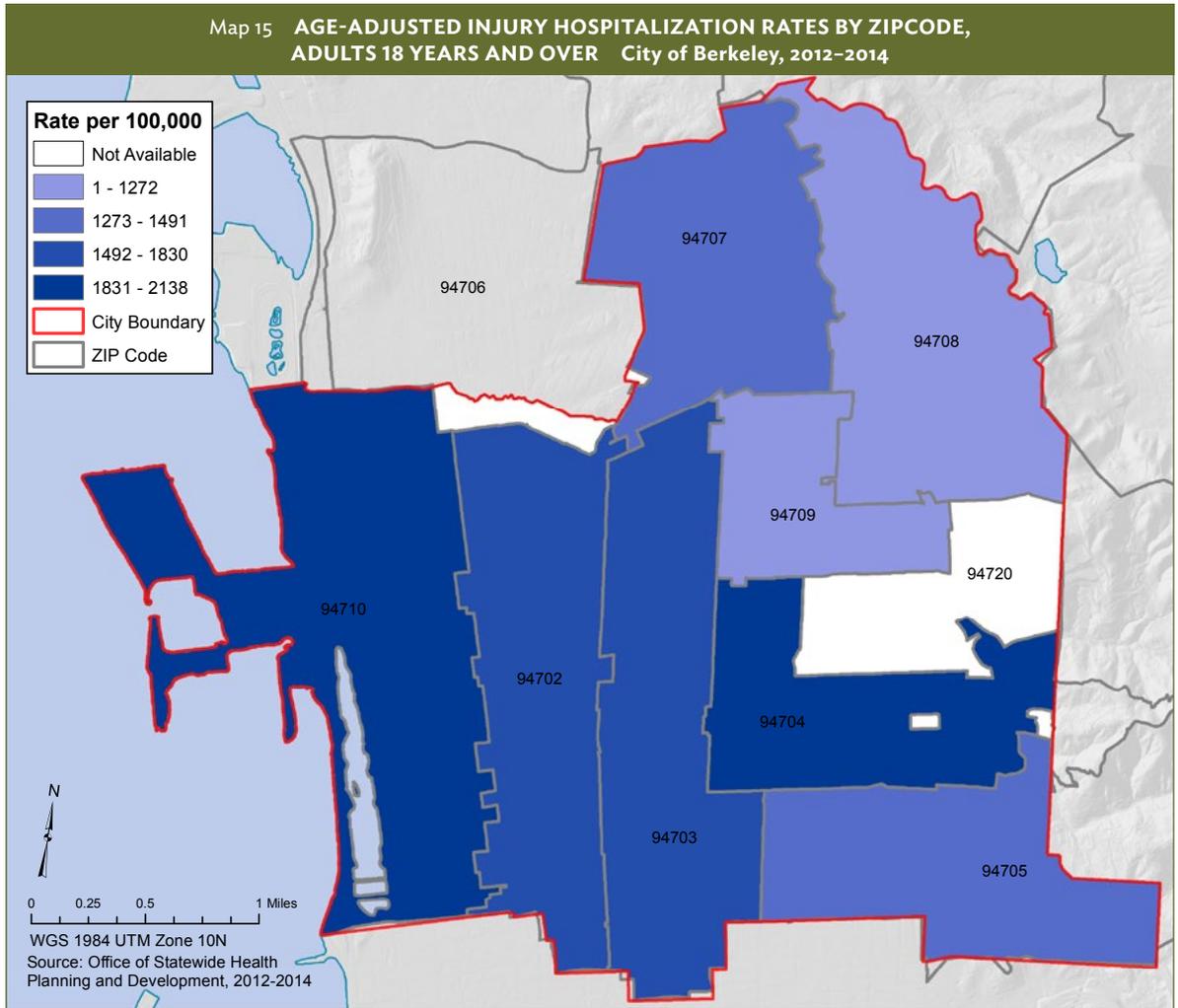
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2012–2014

Figure 4.35 INJURY HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY AND YEAR OF HOSPITALIZATION
Berkeley, 2000–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2000–2014

Injuries continued



Injury-related hospitalization rates are highest around the UC Berkeley campus and West Berkeley neighborhoods.



Injuries continued

Prescription Drug Reaction Hospitalizations

Prescription drug reaction hospitalizations may result from allergic or hypersensitivity reactions after taking the properly administered dosage. Prescription drugs that most commonly cause these hospitalizations include antineoplastic (chemotherapy drugs) or immunosuppressive drugs, corticosteroids, anticoagulants (blood thinners), and opiates or related narcotics.

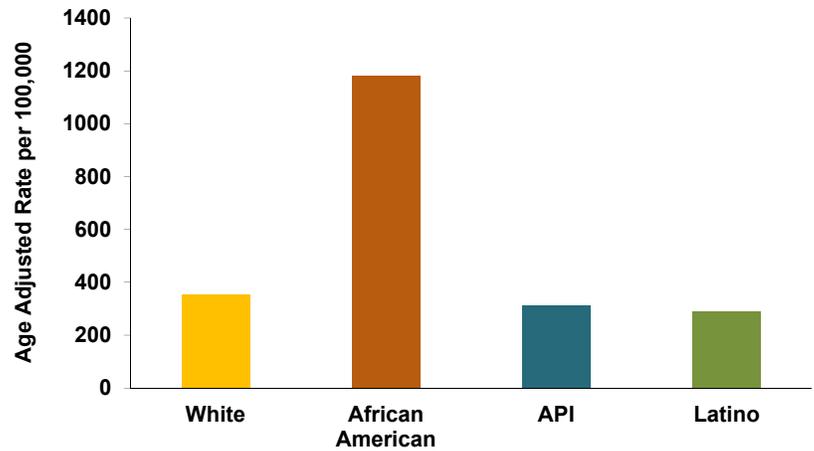
In Berkeley, African Americans are at highest risk for hospitalizations from prescription drug reactions. The African American rate is three times as high as the rate for Whites and Latinos.

Opioid Overdose Hospitalizations

The opioid overdose epidemic continues to worsen in the United States. In 2016, a total of 63,632 drug overdose deaths occurred, a 21.4% increase from 2015.

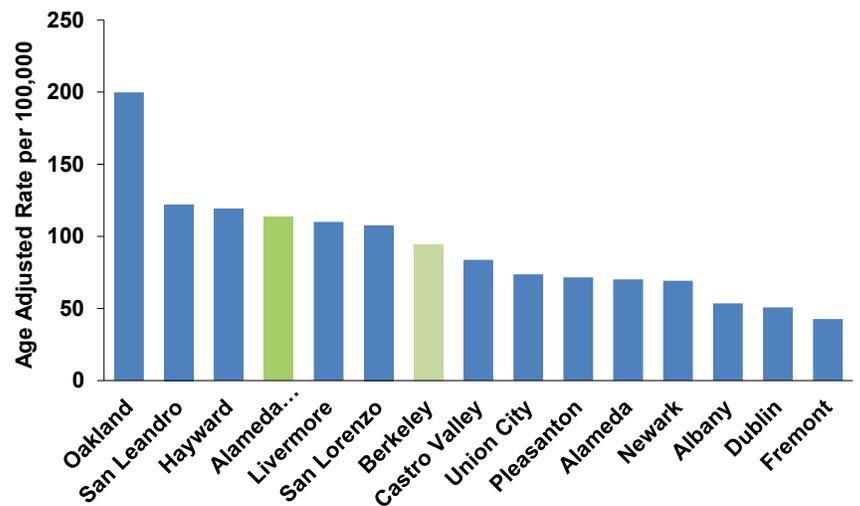
The rate of opioid overdose hospitalization in Berkeley is 56.5 per 100,000. This rate is higher than that of Alameda County as a whole. Berkeley ranks second after Oakland among all cities in the County of Alameda.

Figure 4.36 **PRESCRIPTION DRUG REACTION HOSPITALIZATION RATE IN ADULTS BY RACE/ETHNICITY Berkeley, 2012–2014**



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2012–2014

Figure 4.37 **OPIOID-RELATED EMERGENCY DEPARTMENT VISIT RATE 2013–September 2015, Cities in Alameda County, CA**

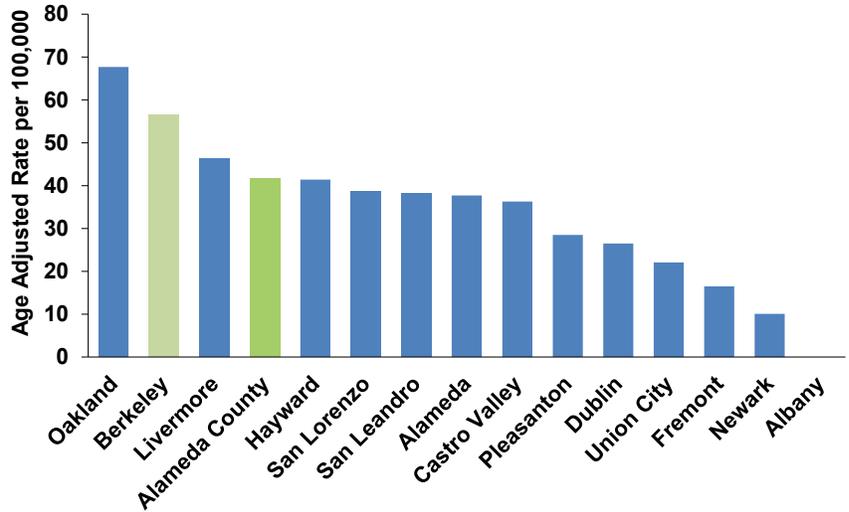


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2016–2017; California Opioid Overdose Surveillance Dashboard 2017; Alameda County Public Health Department

Injuries continued

The opioid-related emergency department visit rate for Berkeley is 94.5 per 100,000. This rate is lower than that of Alameda County and Berkeley ranks number 6 among all cities in the County of Alameda.

Figure 4.38 OPIOID-RELATED HOSPITALIZATION RATE 2013–September 2015, Cities in Alameda County, CA

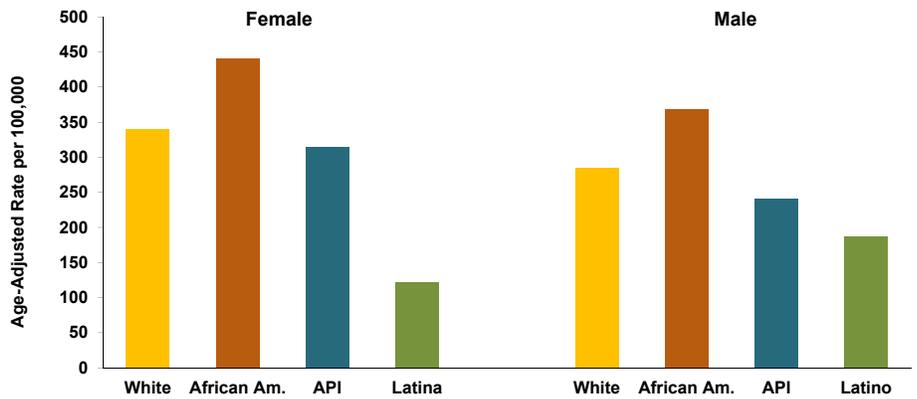


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2016–2017; California Opioid Overdose Surveillance Dashboard 2017; Alameda County Public Health Department

Falls

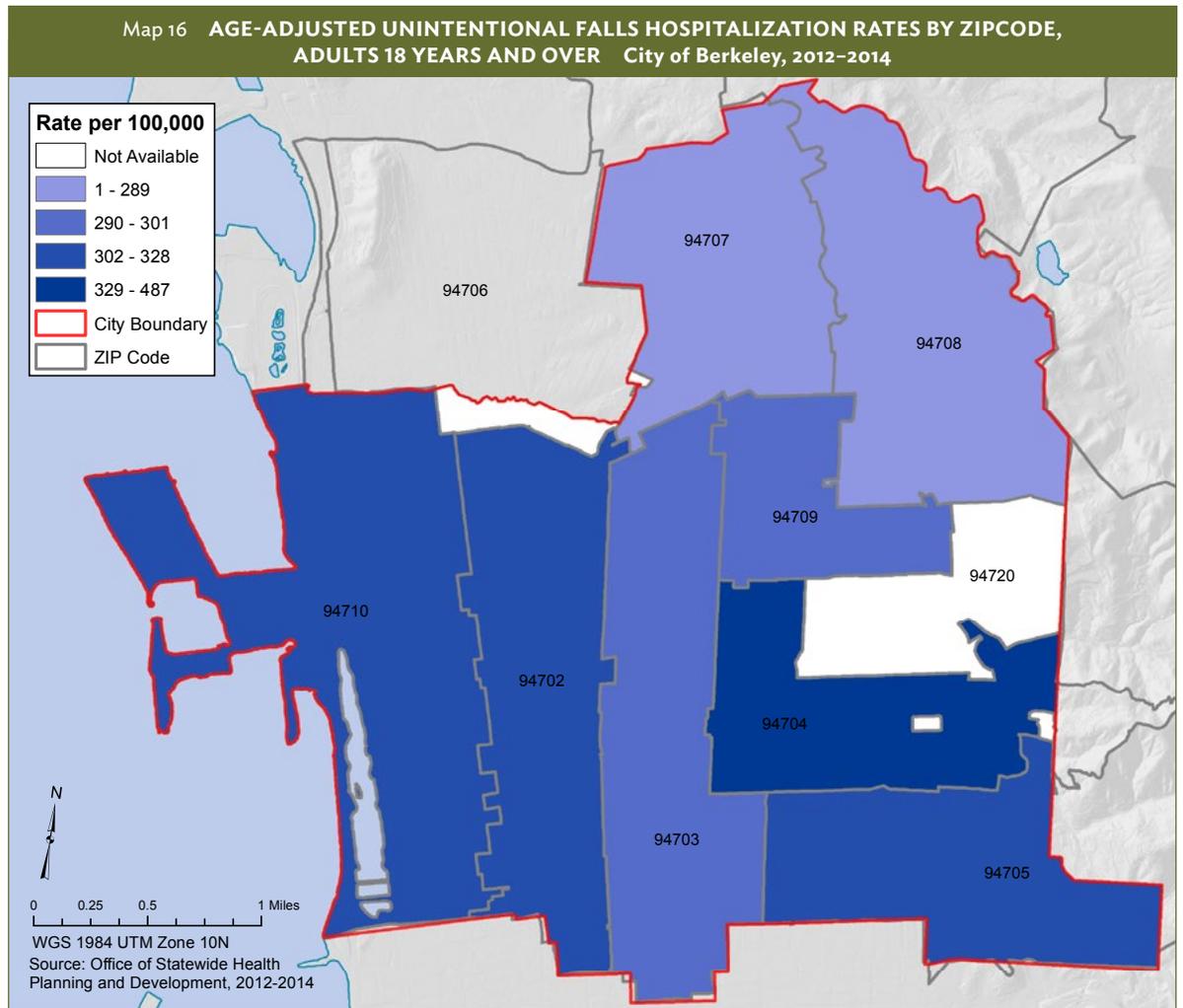
Hospitalization rates due to falls are highest among Latino male Berkeley residents and lowest among Latina female residents. The rate of Latino males is almost three times the rate of White males.

Figure 4.39 FALL INJURY HOSPITALIZATION RATE IN ADULTS BY SEX AND RACE/ETHNICITY Berkeley, 2012–2014



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Office of Statewide Health Planning and Development, 2012–2014

Injuries continued



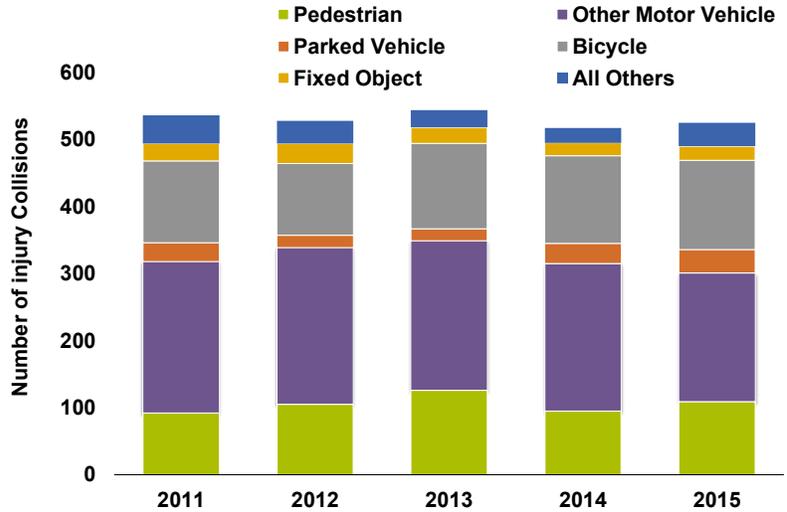
The highest rates of hospitalizations caused by falls occur among residents in the Greater Downtown area and areas surrounding UC Berkeley.

Injuries continued

Motor Vehicle Traffic Injuries

Between 2011 and 2015, an average of 530 traffic collision injuries occurred each year in Berkeley. Nearly half of these injuries resulted from collisions between two moving vehicles. Bicyclists are the next largest group, accounting for nearly one quarter of motor vehicle injuries, followed by pedestrians.

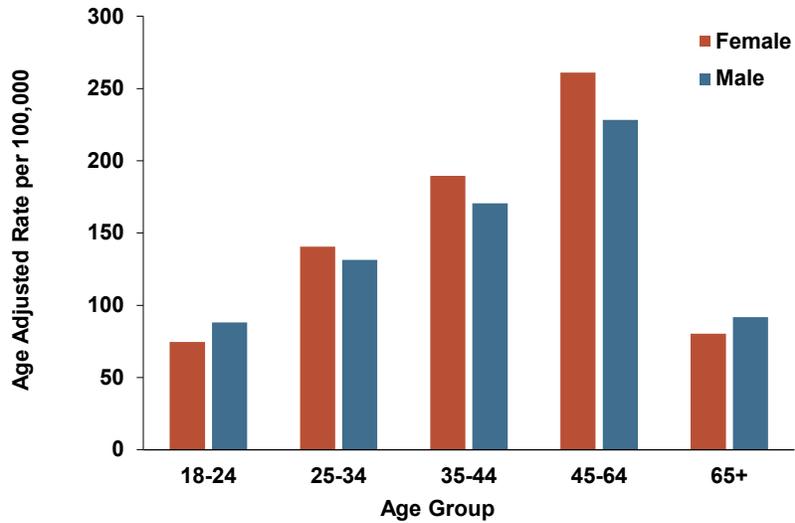
Figure 4.40 TRAFFIC INJURIES INVOLVING A COLLISION BETWEEN A MOVING VEHICLE AND OTHER VEHICLES, BICYCLISTS, AND PEDESTRIANS Berkeley, 2011–2015



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Statewide Integrated Traffic Records System (SWITRS), 2011–2015

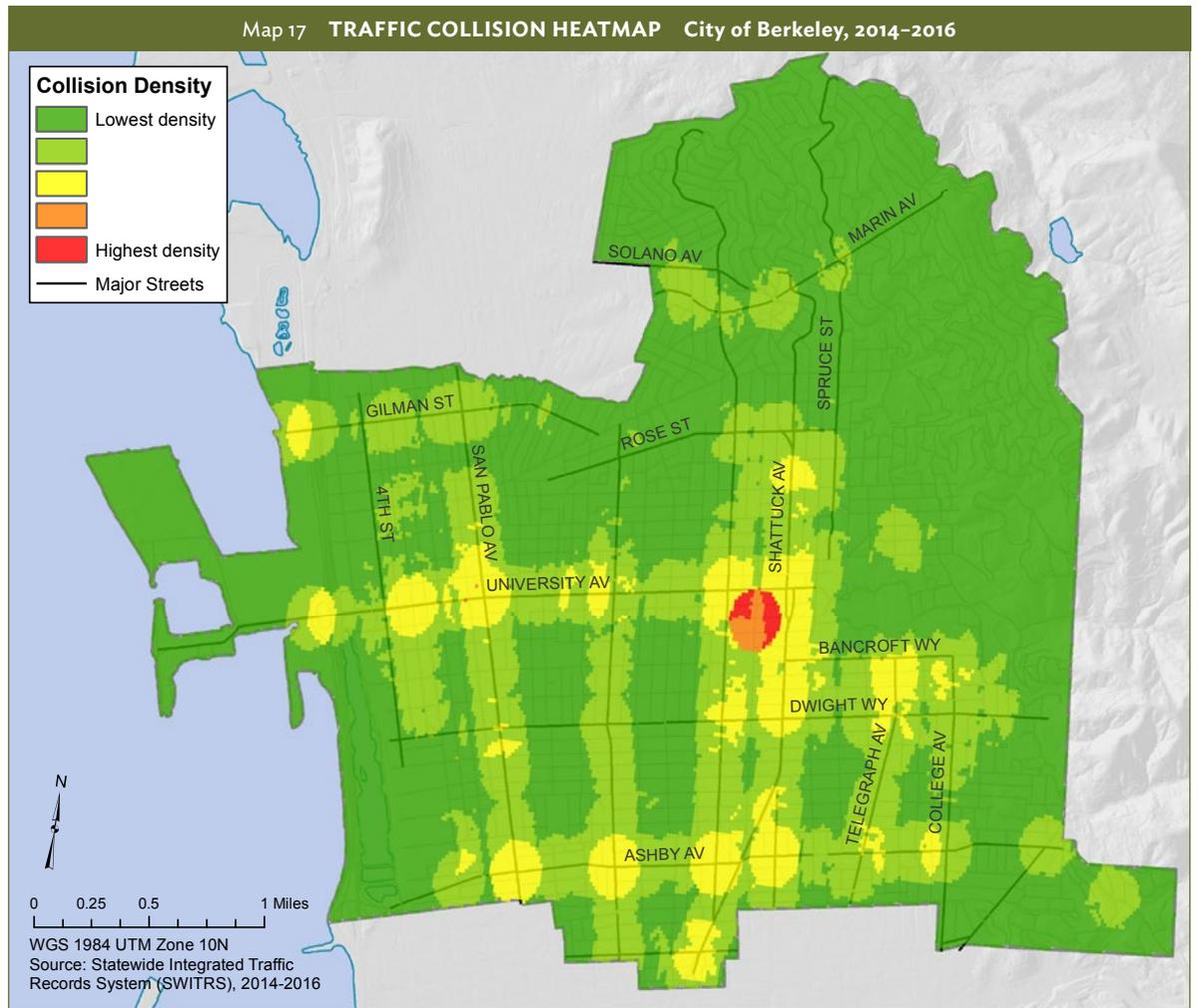
The rate of traffic injury is highest among Berkeley residents ages 45–64 for both females and males.

Figure 4.41 TRAFFIC INJURY RATES BY AGE AND SEX Berkeley, 2011–2015



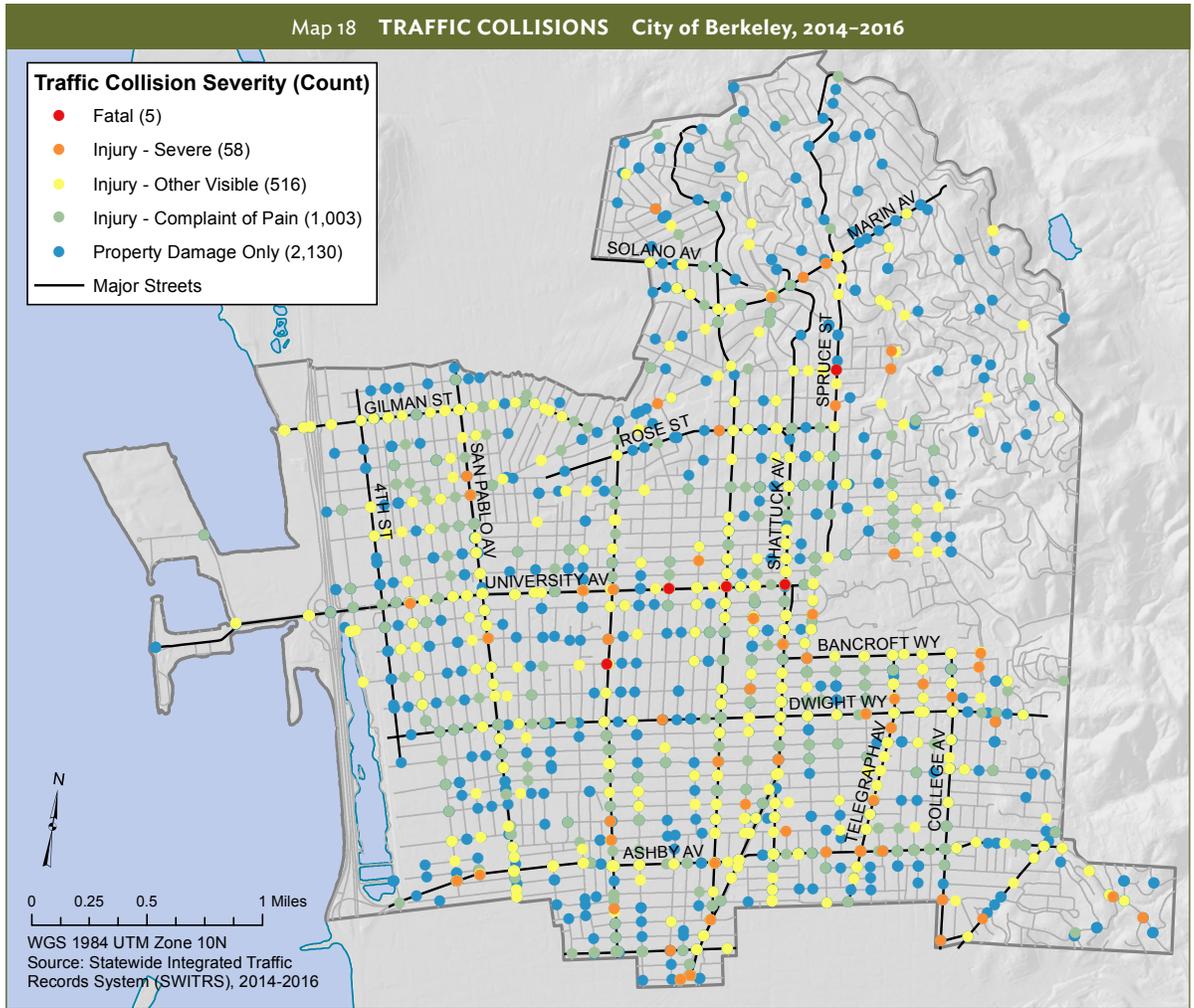
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Statewide Integrated Traffic Records System (SWITRS), 2011–2015

Injuries continued



The highest density of traffic collisions in Berkeley is located in the Greater Downtown area, which is in close proximity to the Downtown Berkeley BART station and the Berkeley City College campus.

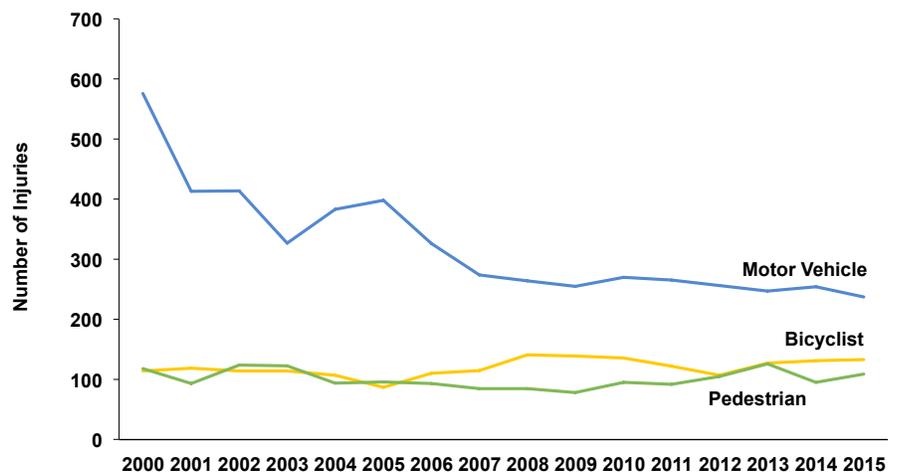
Injuries continued



Predictably, most fatal and severe injuries from traffic collisions in Berkeley have occurred on its busiest streets, especially University Avenue.

In the last decade, the number of traffic injuries in Berkeley have decreased for motor vehicle accidents by more than 50%. Despite high bicycle usage in Berkeley, bicyclist traffic injuries have remained fairly stable over this period. In each year from 2000 to 2015, the number of total fatal traffic injuries has ranged from 0 to 4.

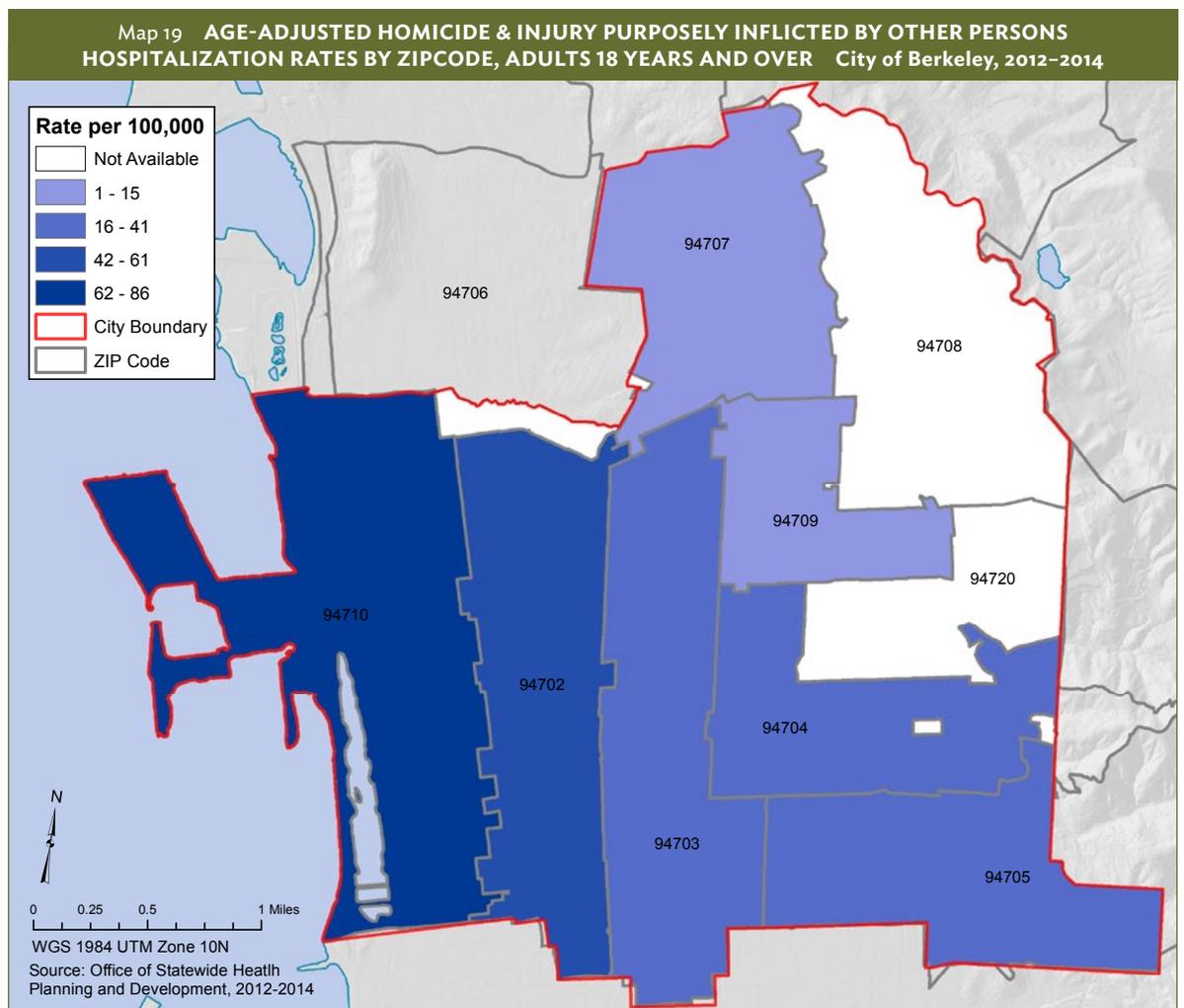
Figure 4.42 TRAFFIC INJURY INCIDENCES BY MODE OF TRANSPORTATION AND YEAR Berkeley, 2000-2015



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, Statewide Integrated Traffic Records System (SWITRS), 2000-2015

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 work with family members, medical providers, Adult Protective Services or other social service programs to ensure the senior receives ongoing support if needed.

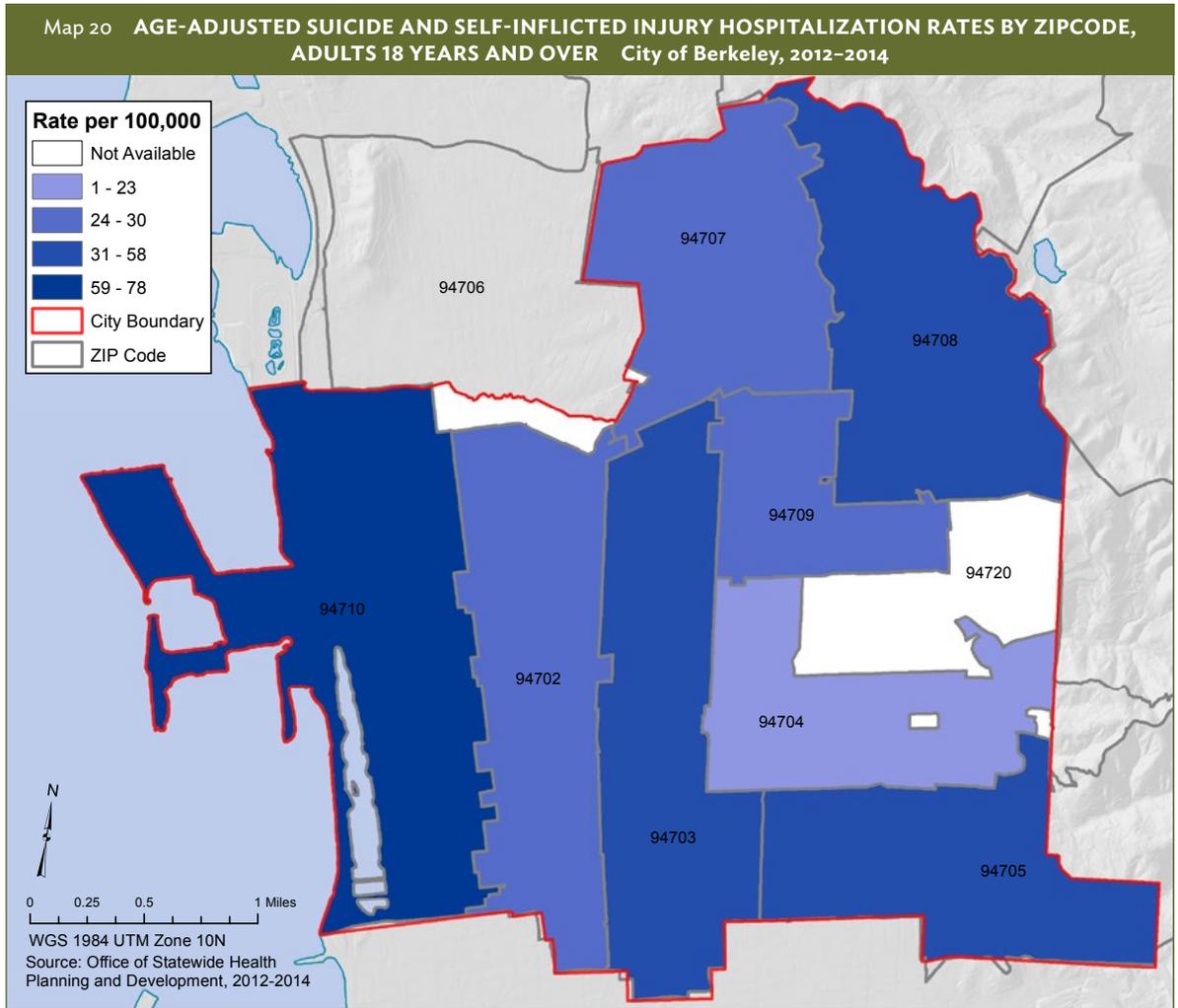
Injuries continued



Homicide and Suicide

As in previous reports, rates of hospitalization for homicide and intentional injury inflicted by other persons are higher in West Berkeley than in other parts of Berkeley.

Injuries continued



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

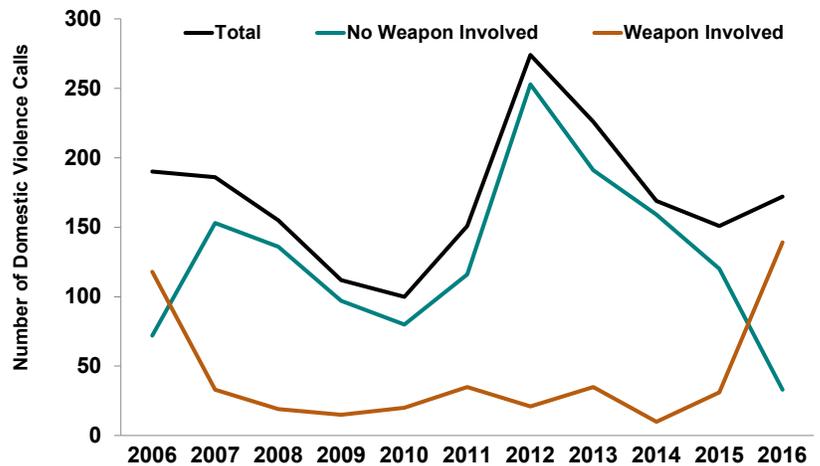
Domestic Violence/Intimate Partner Violence

The United States Department of Justice defines domestic violence (DV) as a pattern of abusive behavior in any relationship that is used by one partner to gain or maintain power and control over another intimate partner. Domestic violence can be physical, sexual, emotional, economic, or psychological actions or threats of actions that influence another person. The term intimate partner violence (IPV) is the most current term being used by health professionals to describe domestic violence. IPV is a serious, preventable public health problem affecting millions of Americans. Most incidents of IPV are not reported to the police. 1 in 4 women and 1 in 9 men aged 18 and older in the United States have experienced IPV in their lifetime. Nationally, women, specifically young women, are disproportionately affected by IPV. 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. The impact of IPV is both physical and mental. More than half of those experiencing IPV want help with their mental health, but few seek treatment.

From 2006 to 2016, domestic violence-related calls to the City of Berkeley Police Department have fluctuated, with the highest peak in 2012. Approximately 170 domestic violence calls are received by Berkeley police each year. Out of the total number of calls in 2006–2016, a weapon was involved in 25.2% of the cases.

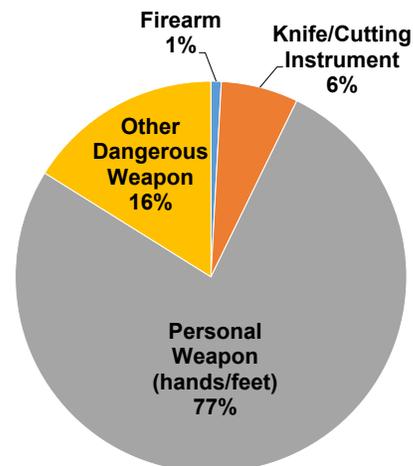
Personal weapons (hands/feet) were the most commonly reported weapons used in intimate partner violence-related incidents. Other weapons included knives/cutting instruments and firearms.

Figure 4.43 DOMESTIC VIOLENCE-RELATED CALLS FOR ASSISTANCE BY WEAPON INVOLVEMENT AND YEAR Berkeley, 2006–2016



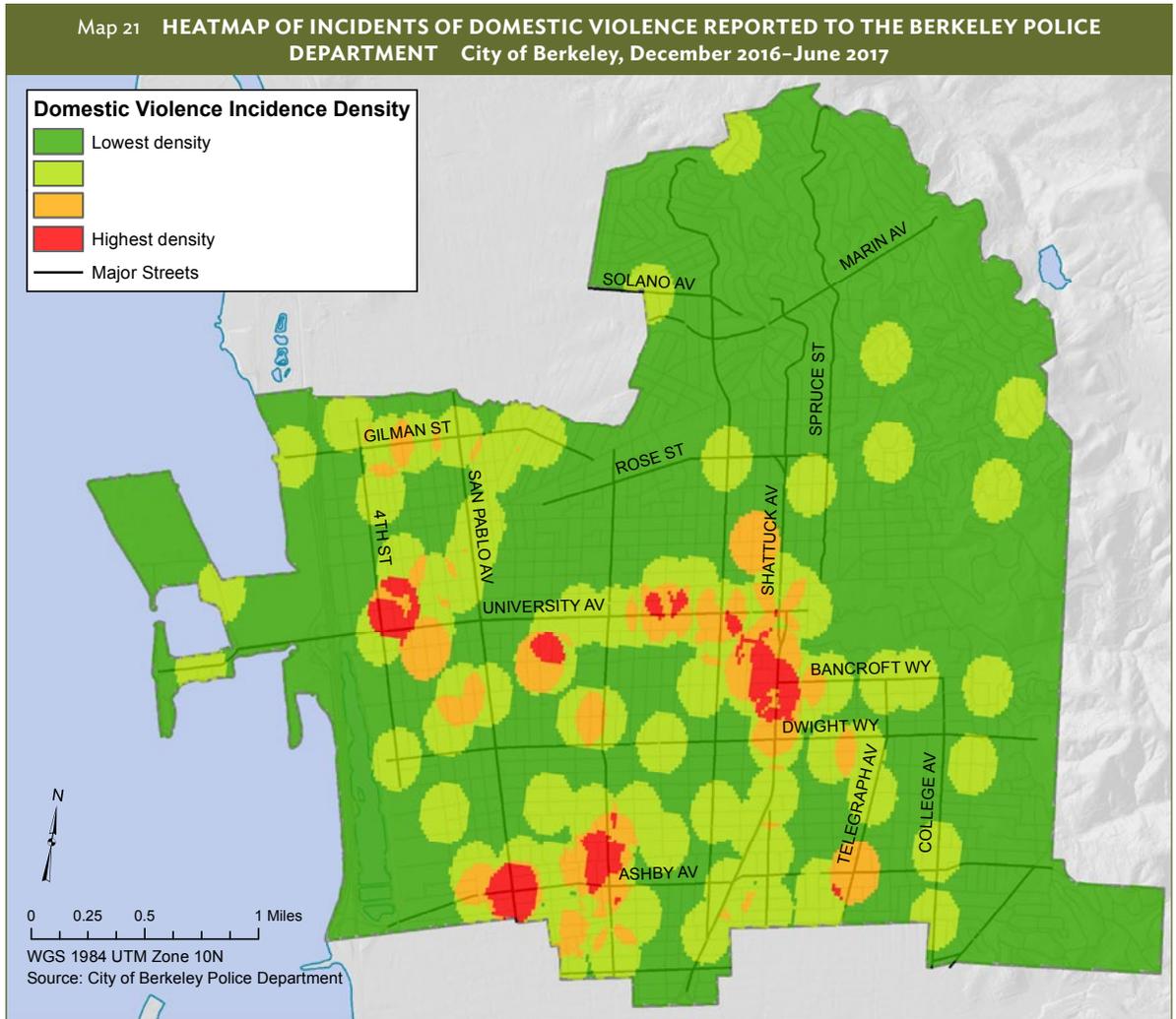
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, State of California Department of Justice, 2006–2016

Figure 4.44 TYPE OF WEAPON USED IN DOMESTIC VIOLENCE-RELATED INCIDENTS City of Berkeley and UC Berkeley, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, State of California Department of Justice, 2012–2016

Injuries continued



The highest proportions of intimate partner violence incidents in Berkeley are located in the West, South, and Greater Downtown areas.

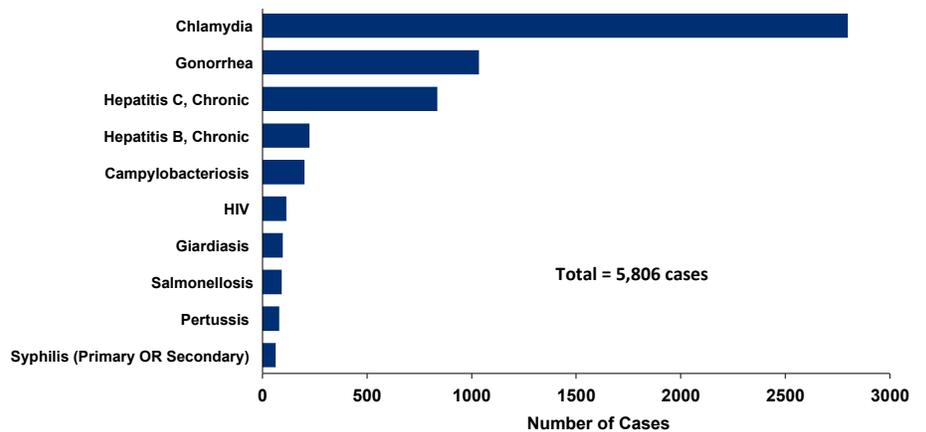
Communicable or Infectious Diseases

Communicable diseases (also known as 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 (STIs), and 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. Certain communicable diseases of public health significance are “reportable”—that is, federal and state laws require health care providers and laboratories to report these diseases and outbreaks to their local public health authority.

In recent years, an annual average of 1,400 communicable disease infections were reported in Berkeley, of which an average of 1,150 were confirmed cases. Chlamydia and gonorrhea account for 66% of all communicable disease cases in Berkeley. The extent of the public health response to an infectious disease report is based on the severity, method of transmission, and ease of spread of the disease.

The field of public health has traditionally 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, these 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. Furthermore, antibiotic resistance increasingly renders treatments against bacteria ineffective. Infectious disease control and prevention are core public health functions, and are essential to the health of the community.

Figure 4.45 LEADING COMMUNICABLE DISEASES BY CONFIRMED CASES
Berkeley, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; CD Program, 2012–2016

Response to Foodborne Illness: When there is a foodborne illness associated with a restaurant or other commercial kitchen, Environmental Health and Public Health Divisions 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. 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 remedial actions have been taken.

Communicable Disease Control Program

The Communicable Disease Program controls and prevents the occurrence and spread of communicable diseases through surveillance, disease and outbreak control. The Program responds to reports of over eighty five (85) serious infectious diseases. This response includes performing case investigation and contact tracing as well as providing education on behaviors and practices contributing to disease transmission. Staff work in partnership with medical providers, the Environmental Health Division, neighboring public health jurisdictions, the California Department of Public Health, and community partners. Key partners include Berkeley Unified School District, UC Berkeley's University Health Services, Alta Bates Summit Medical Center and other health care providers.

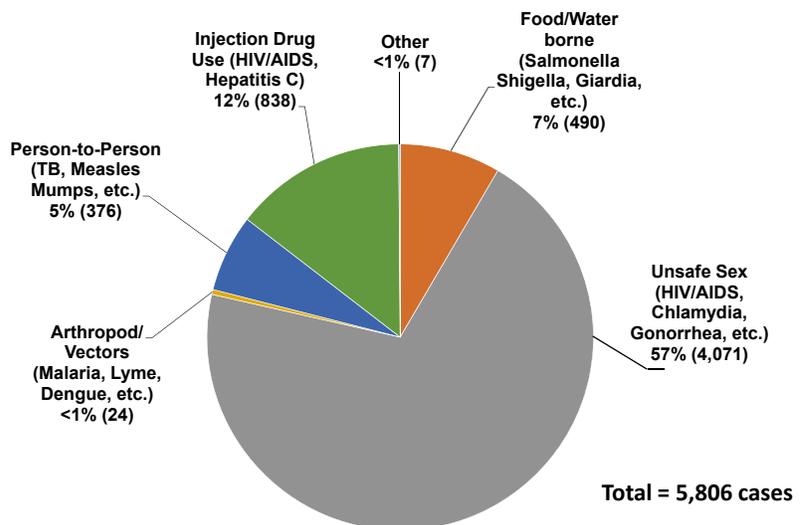
Outbreak monitoring and control is a core function of the Communicable Disease Program. In recent years, outbreak and contact investigations have included cases of measles, mumps, tuberculosis, pertussis (whooping cough), chicken pox, campylobacter, and norovirus. Settings for these investigations included preschools, schools, college/university campuses, businesses, restaurants, health care facilities, recreational facilities, and skilled nursing facilities. The Communicable Disease Program in partnership with the Public Health Preparedness Program is integral to the response and control of emerging infections such as Ebola and Zika viruses.

Communicable or Infectious Diseases *continued*

In Berkeley, in recent years, the number of communicable diseases reported has been on the rise. Almost two-thirds of these communicable diseases resulted from unsafe sex. Other common modes of transmission include injection drug use, foodborne/waterborne disease, and person-to-person contact.

Diseases such as measles or tuberculosis (TB) are transmitted through air-borne droplets and can spread via person-to-person contact. Control of these diseases involves identification, notification, medical evaluation, and management of those at risk of having been infected—at times, large numbers of people from multiple sites. Ill individuals may need to be isolated until they are no longer infectious. Sometimes exposed people are quarantined in order to avoid spreading disease to others. Prophylactic medications or vaccines can help control the spread of disease. STIs on the other hand are transmitted by intimate contact, and are controlled by treating the infected individuals and their respective partners.

Figure 4.46 **CASES OF COMMUNICABLE DISEASE BY PROBABLE MODE OF TRANSMISSION** Berkeley, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics, CD Program, 2012–2016

Communicable or Infectious Diseases continued

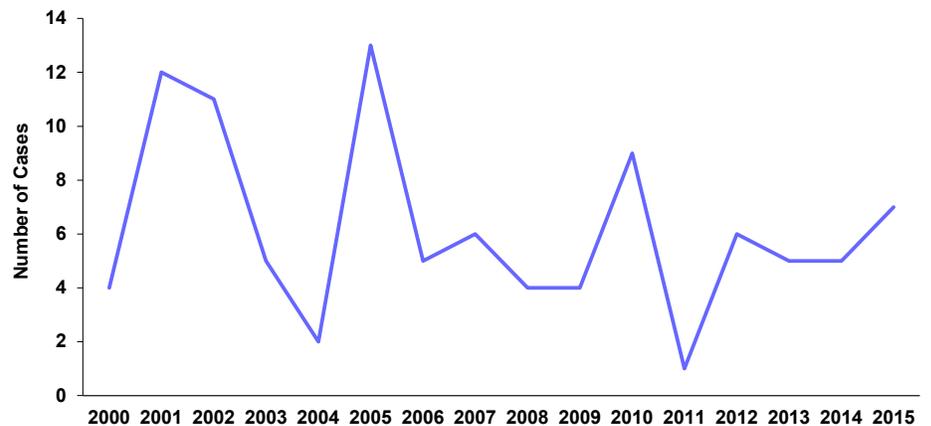
Tuberculosis (TB)

Tuberculosis is an infectious bacterial disease that is spread from person to person through the air. TB usually affects the lungs, but it can affect any part of the body, including the kidney, spine, or brain. TB is easily treated when it is identified early, and early treatment limits the spread of illness to others. When the disease goes untreated or is not treated properly, 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, which are very difficult to treat. Populations at high risk for having TB include new immigrants from countries in which TB rates are high. Populations at high risk for acquiring TB include young infants, people with HIV/AIDS, and others with weakened immune systems. Individuals who are homeless or injection drug users are also particularly vulnerable to TB.

There are only a small number of confirmed cases of TB in Berkeley each year, so year-to-year variations are expected. Berkeley has a large immigrant population, a significant homeless population, and a proportionately high number of residents living with HIV/AIDS. Therefore, control and prevention of TB are significant public health concerns for Berkeley.

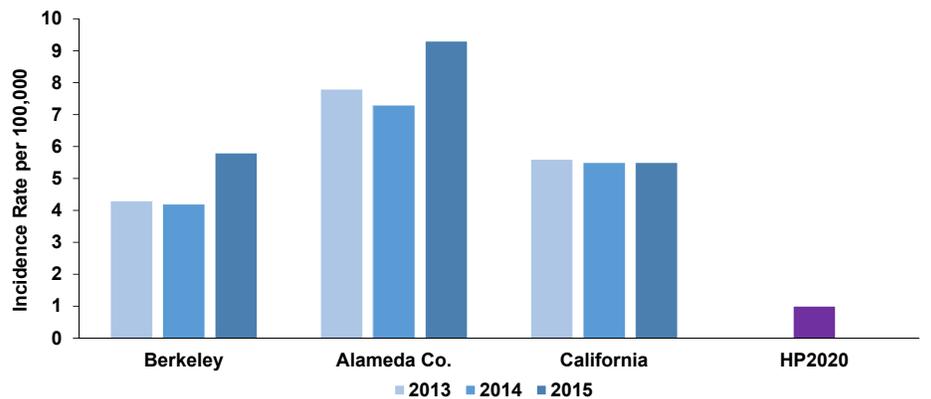
Rates of new cases of TB in Berkeley are lower than Alameda County as a whole. On average, rates of TB in Berkeley are also lower than those in California, despite an increase of the TB rate in Berkeley in 2015. However, Berkeley does not meet the HP2020 goal of 1 new case of tuberculosis per 100,000 population.

Figure 4.47 **CONFIRMED TUBERCULOSIS CASES BY YEAR OF REPORT**
Berkeley, 2000–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics, CD Program, 2000–2015

Figure 4.48 **TUBERCULOSIS INCIDENCE RATES**
Berkeley, Alameda County, CA, 2013–2015



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics, CD Program, 2013–2015

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.

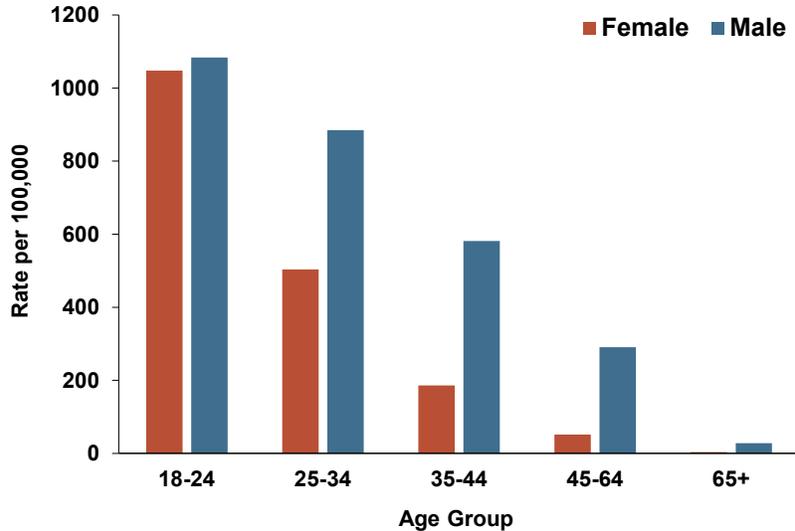
Communicable or Infectious Diseases continued

Sexually Transmitted Infections

Sexually transmitted infections (STIs), also known as STDs (sexually transmitted diseases), may be bacterial or viral. They are transmitted from person-to-person by unprotected sexual contact. STIs pose significant health threats to the community, and have harmful, costly, and often irreversible health impacts. Chlamydia can cause infertility in both men and women, often without any symptoms. Gonorrhea increases the risk of pelvic inflammatory disease, infertility, ectopic (“tubal”) pregnancy, and HIV. 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. STIs can largely be prevented by consistent use of “safe sex” practices (e.g. proper condom use), and by screening and treatment.

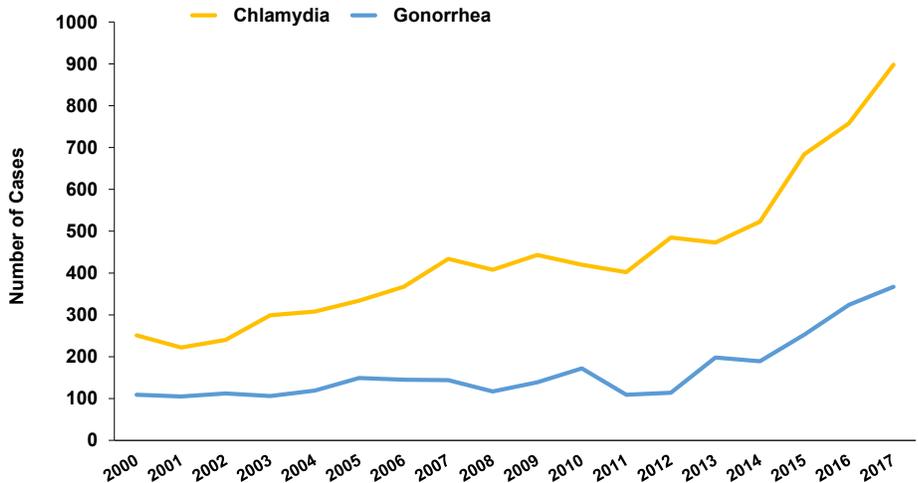
The rate of STIs is higher in males than in females in all age groups. The peak age for STIs is 18–24 for both males and females and the early peak in women has a significant potential impact on their future fertility.

Figure 4.49 CHLAMYDIA, GONORRHEA, AND PRIMARY AND SECONDARY SYPHILIS INFECTIONS BY AGE AND SEX Berkeley, 2012–2014



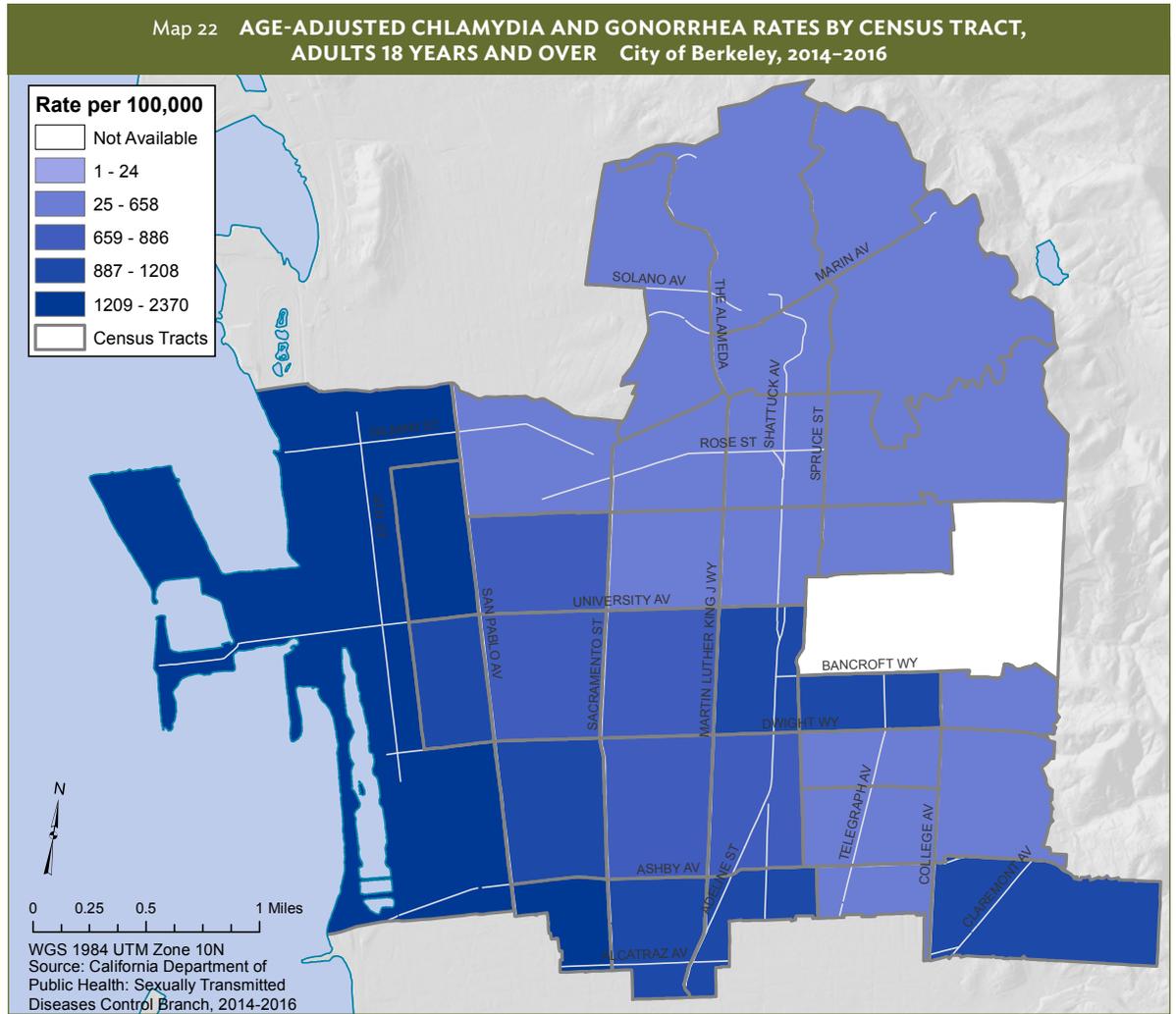
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, 2012–2014

Figure 4.50 CHLAMYDIA AND GONORRHEA INFECTIONS BY YEAR OF REPORT Berkeley, 2000–2017



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2000–2017

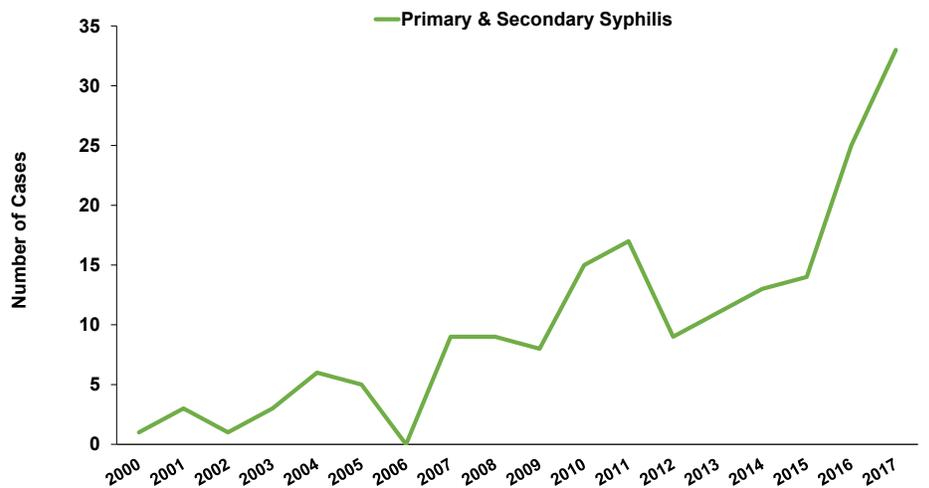
Communicable or Infectious Diseases
continued



Berkeley’s sexually transmitted infection (STI) rates are highest in West Berkeley and in the areas surrounding the UC Berkeley campus.

The annual number of cases of chlamydia, gonorrhea, and syphilis has increased in the last decade. These changes in rates may reflect either changes in STI screening or reporting, as well as actual changes in higher disease incidence. The most dramatic rise has been in chlamydia in recent years.

Figure 4.51 PRIMARY AND SECONDARY SYPHILIS INFECTIONS BY YEAR OF REPORT Berkeley, 2000-2017



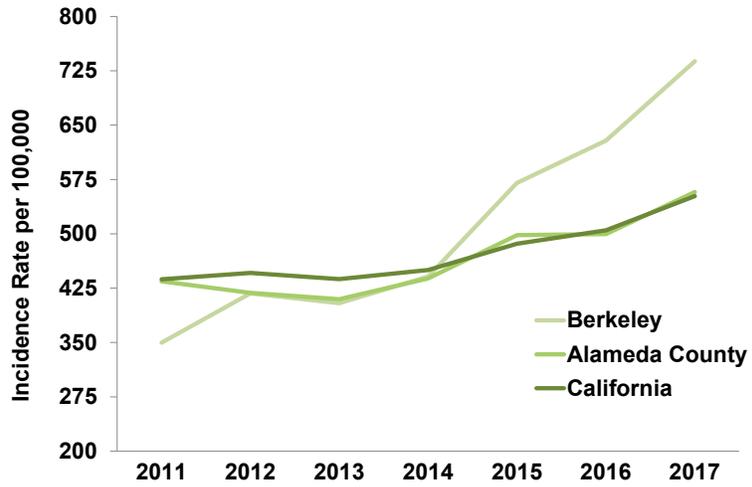
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2000-2017

Communicable or Infectious Diseases continued

Chlamydia

Up until recently, chlamydia rates in Berkeley and Alameda County had been lower than that of the State of California. In 2015, however, Berkeley’s rate increased substantially, surpassing Alameda County’s and California’s.

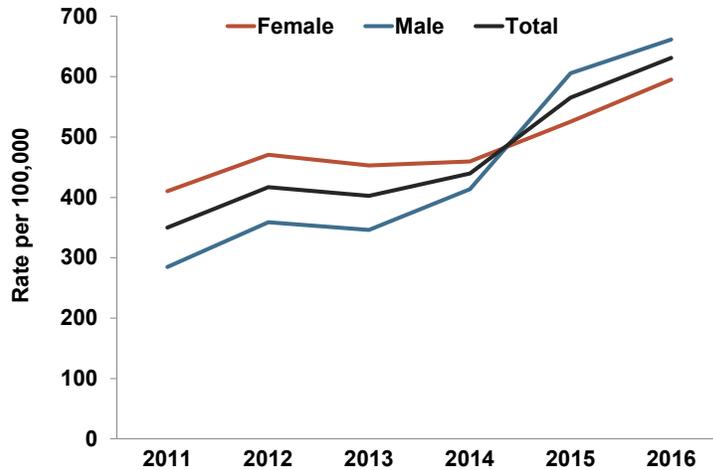
Figure 4.52 CHLAMYDIA CASE RATES Berkeley, Alameda County, CA, 2011–2017



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2017

There has been a shift in chlamydia rates by sex in the City of Berkeley. From 2011–2014, females had higher rates than males, but in 2015, the rate of chlamydia for males had a greater increase, resulting in a higher rate among males. This trend continued through 2016.

Figure 4.53 CHLAMYDIA CASE RATES BY SEX Berkeley, 2011–2016



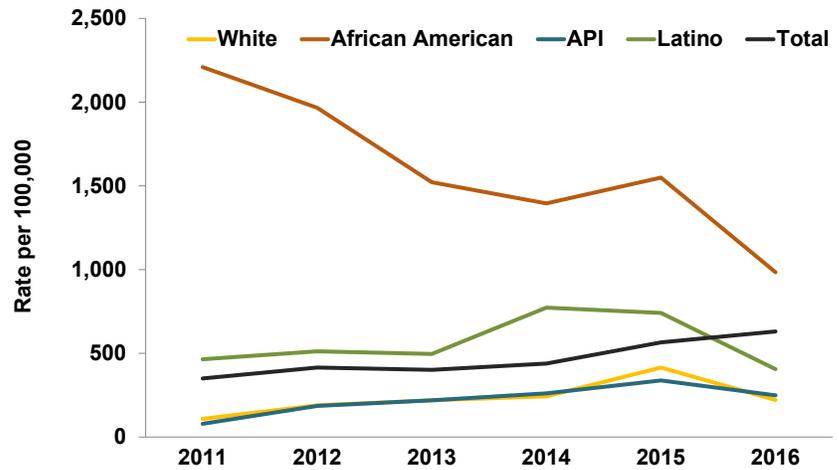
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Communicable or Infectious Diseases continued

Chlamydia infections among African Americans occur at a higher rate compared to the total population and other racial/ethnic groups. Over time, the disparity between racial/ethnic groups has decreased. In fact, the most dramatic decrease in the chlamydia rate has been among the most impacted group—African Americans. The ethnicity of a large percentage of cases (43%–55%) is unknown, which is why the overall rate of chlamydia is increasing while the rates of all known ethnicities are decreasing.

Chlamydia rates have been increasing for all adult age groups in Berkeley. Chlamydia infections peak at ages 20–24 among the Berkeley population.

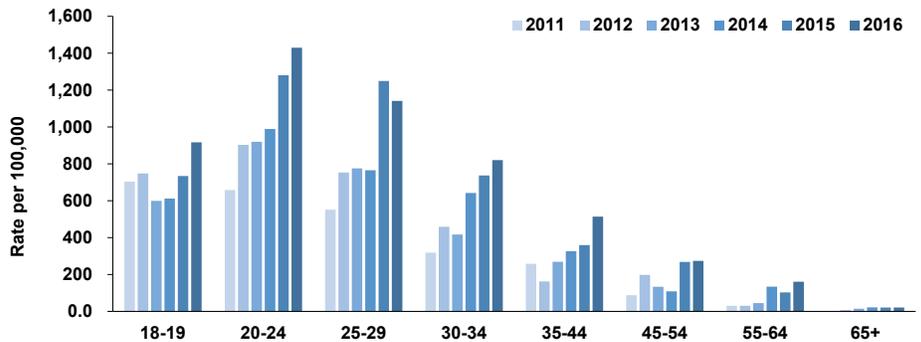
Figure 4.54 CHLAMYDIA CASE RATES BY RACE/ETHNICITY Berkeley, 2011–2016



*Race/Ethnicity "Unknown" ranged from 43.14% to 55.0% of cases in any given year.

Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Figure 4.55 CHLAMYDIA CASE RATES BY AGE (YEARS 18 AND OLDER) Berkeley, 2011–2016



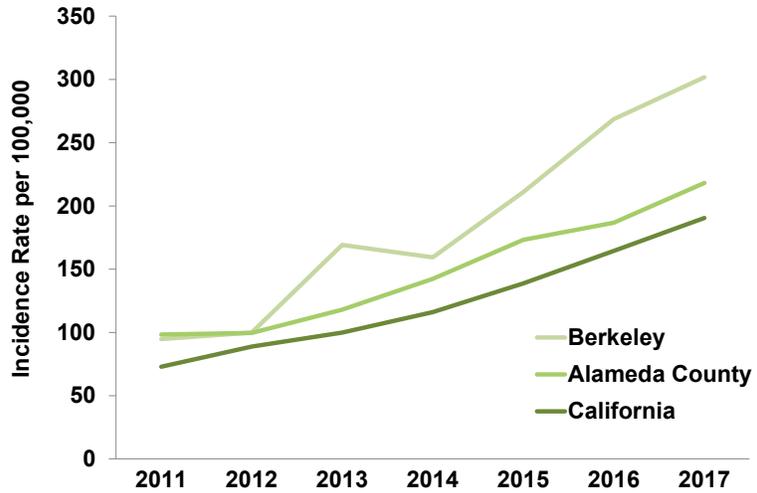
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Communicable or Infectious Diseases continued

Gonorrhea

Gonorrhea rates in Berkeley are consistently higher than those of Alameda County and California. From 2011 to 2017, Berkeley's gonorrhea rate increased from 94.8 per 100,000 to 302 per 100,000.

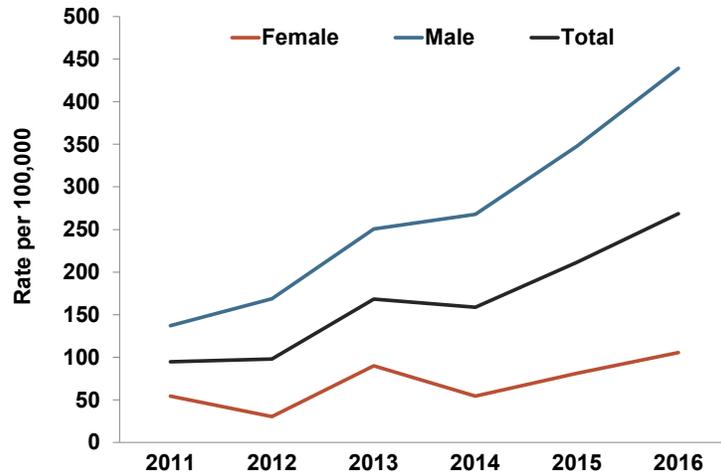
Figure 4.56 GONORRHEA CASE RATES Berkeley, Alameda County, California, 2011–2017



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2017

Males have consistently had higher rates of gonorrhea than females in the City of Berkeley. Rates among males have increased dramatically over this five year period. As a result, whereas males were 2.5 times as likely as females to contract gonorrhea in 2011, in 2016 they were 4.3 times as likely. The gonorrhea rate in the total population has also increased over this period.

Figure 4.57 GONORRHEA CASE RATES BY SEX Berkeley, 2011–2016

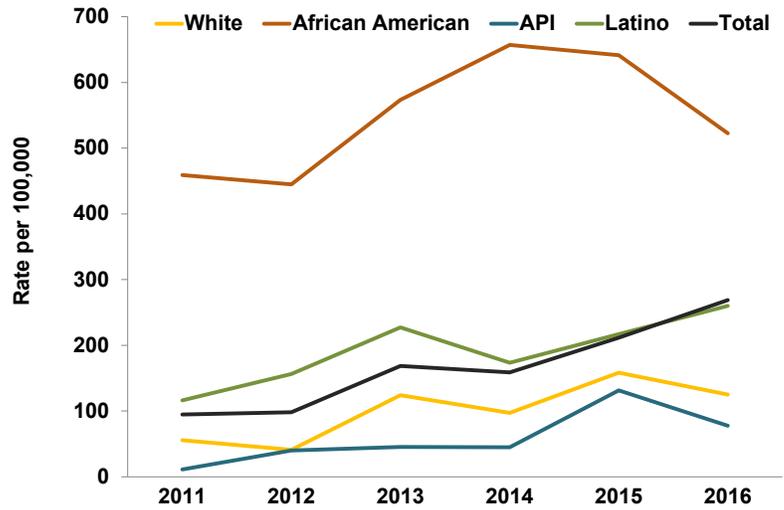


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Communicable or Infectious Diseases continued

African Americans have higher rates of gonorrhea infection than other racial/ethnic groups, but the rate has declined since 2014. All other racial/ethnic groups had slight increases in rates from 2011 to 2016.

Figure 4.58 GONORRHEA CASE RATES BY RACE/ETHNICITY Berkeley, 2011–2016

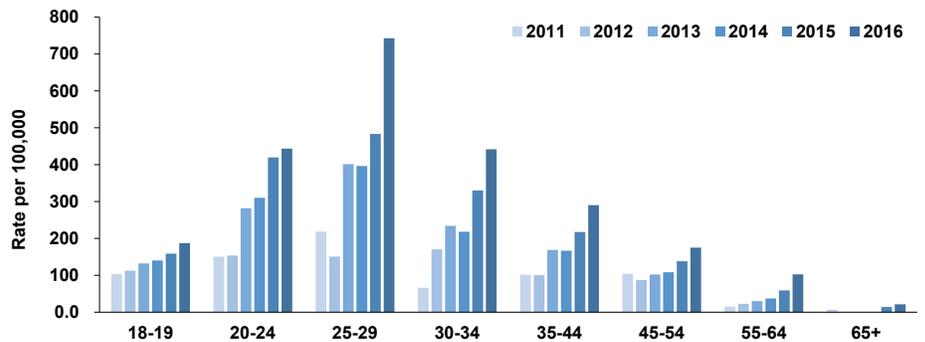


*Race/Ethnicity "Unknown" ranged from 35.24% to 46.73% of cases in any given year.

Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

The peak age of gonorrhea infection is 25–29 among the Berkeley population. Between 2014 and 2016, gonorrhea rates increased for all age groups.

Figure 4.59 GONORRHEA CASE RATES BY AGE (YEARS 18 AND OVER) Berkeley, 2011–2016



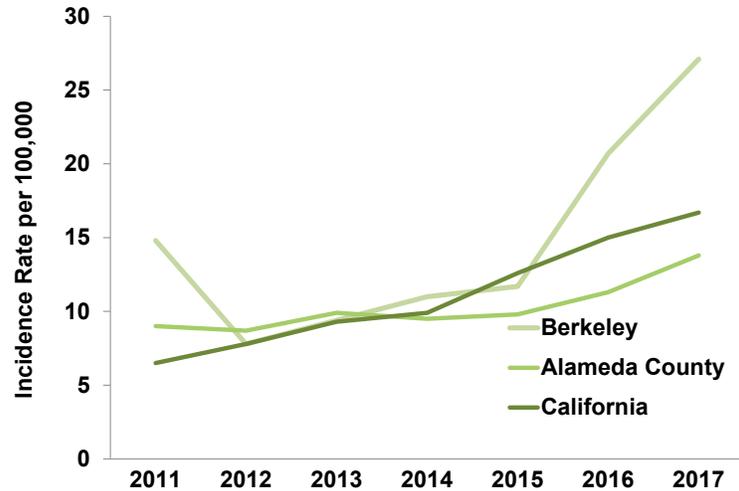
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Communicable or Infectious Diseases continued

Syphilis

Primary and secondary (infectious) syphilis rates in Berkeley were substantially higher than Alameda County and California in 2011, but the Berkeley rates decreased in 2012 to meet the county and state rates. However, syphilis rates in Berkeley dramatically increased again in 2016. Of note, between 2015 and 2017, Berkeley had no congenital syphilis while there were 16 cases in Alameda County.

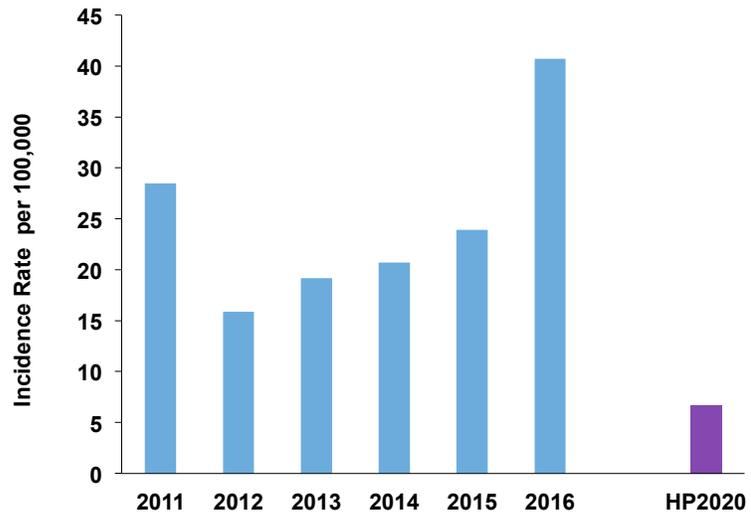
Figure 4.60 PRIMARY AND SECONDARY SYPHILIS CASE RATES Berkeley, Alameda County, CA, 2011–2017



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2017

Almost all cases of syphilis in Berkeley were male in 2011–2016. The incidence rate of syphilis among males in Berkeley has been increasing since 2012, with a significant jump in 2016. Berkeley does not meet the HP2020 goal of fewer than 6.7 new male cases per 100,000. Incidentally, Berkeley’s syphilis rate among females in 2016 was 1.6 per 100,000, which also does not meet the HP2020 goal of 1.3 new female cases per 100,000.

Figure 4.61 PRIMARY AND SECONDARY SYPHILIS CASE RATES FOR MALES Berkeley, 2011–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, STD Control Branch, 2011–2016

Communicable or Infectious Diseases continued

Human Immunodeficiency Virus (HIV) & Acquired Immunodeficiency Syndrome (AIDS)

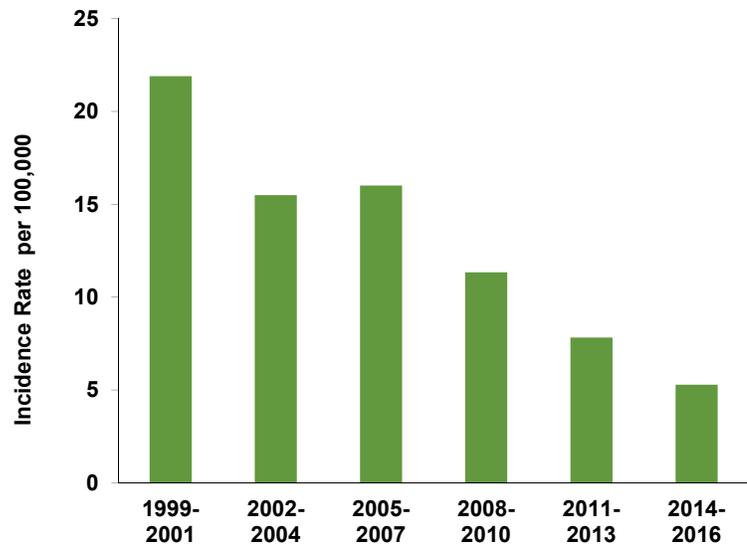
HIV infection damages or kills cells of the body's immune system, and there by destroys the body's ability to fight infections. HIV infection can progress to the disease AIDS if untreated or if treatment fails. Screening tests can detect early HIV infection and enable infected individuals to receive early treatment. Medications can slow or stop the progression of HIV to AIDS, but there is currently no cure for HIV. HIV is most commonly transmitted from person to person by unprotected sexual contact, sharing needles, or from infected mother to infant.

In 2015, more than 1.1 million people in the U.S. over the age of 13 were living with HIV/AIDS. Access to adequate health care and effective anti-retroviral therapy are essential for preventing the progression from HIV to AIDS. Trends vary across the U.S., but African Americans are the racial/ethnic group most affected by HIV in the country.

The incidence rate of AIDS in Berkeley has decreased over the last decade and the rate is now 5.3 per 100,000.

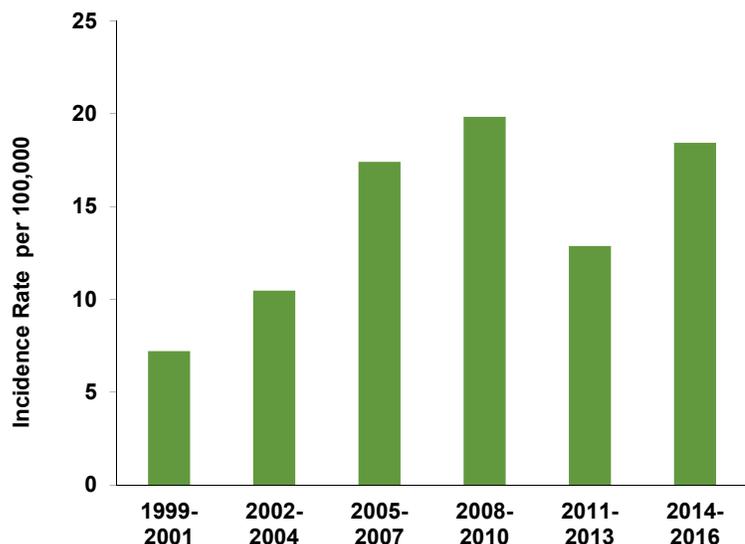
The rate of new HIV infections in Berkeley has fluctuated and was 18.3 per 100,000 from 2014–2016.

Figure 4.62 **REPORTED INCIDENCE OF AIDS (YEARS 13 AND OVER)**
City of Berkeley, 1999–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, HIV/AIDS Registry, 1999–2016

Figure 4.63 **REPORTED INCIDENCE OF HIV (YEARS 13 AND OVER)**
City of Berkeley, 1999–2016



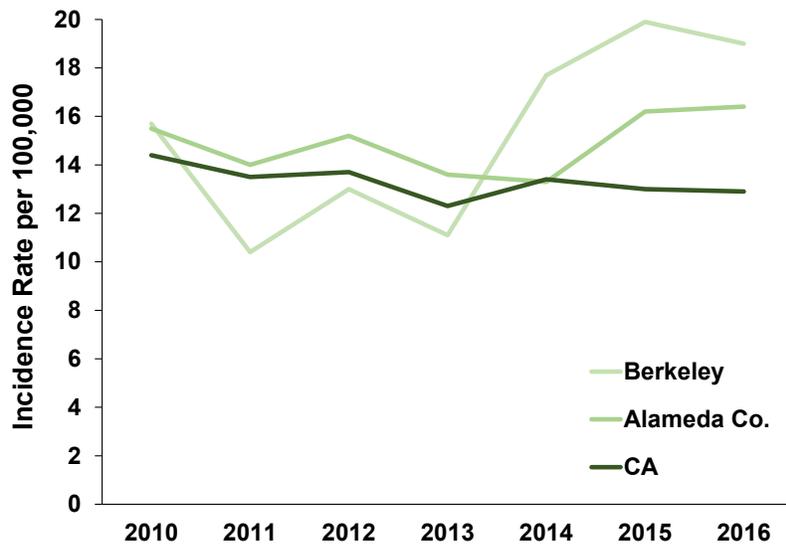
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, HIV/AIDS Registry, 1999–2016

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 sexually transmitted infection to ensure that they and their partners receive appropriate treatment. The program also provides free condoms and lubricant to both clients and non-clients on a drop-in basis. The Clinic offers 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. Assistance is offered to survivors of intimate partner violence. The Clinic offers reproductive and sexual health services to people of all genders. The Public Health Clinic accepts Medi-Cal and FPACT (state funded payment programs). Others may qualify for reduced rates based on income. Some clients may even qualify for free services. No one is turned away because of inability to pay. Clinic clients are linked to a wide range of community and health services. Community outreach and presentations are provided on family planning methods, clinic services, sexually transmitted illnesses, HIV and sexually transmitted illnesses/HIV prevention. In 2012 over 2,300 individuals were seen at the clinic, many for more than one visit.

Communicable or Infectious Diseases continued

The rate of new HIV infections in Berkeley was lower than Alameda County and California until 2014 when there was a significant increase.

Figure 4.64 HIV INCIDENCE RATES Berkeley, Alameda County, CA, 2010–2016

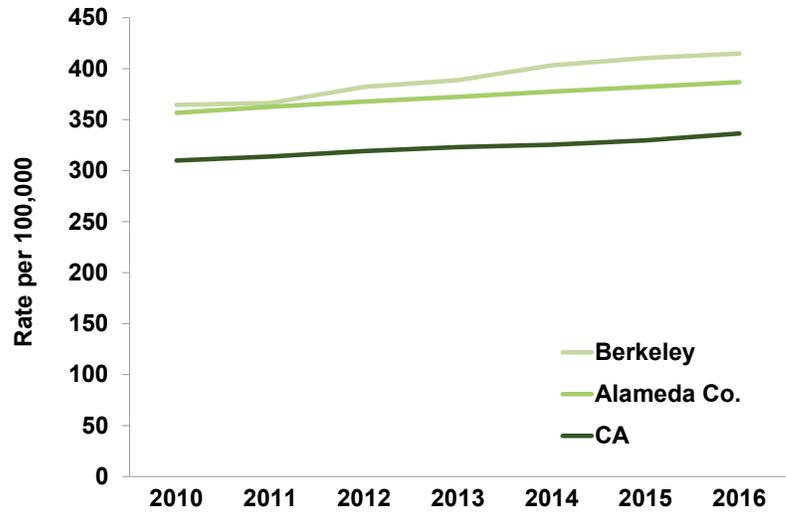


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, CDPH Office of AIDS, 2010–2016

Communicable or Infectious Diseases continued

Due to better treatment, people with HIV are living longer, and the overall number of people living with HIV is increasing. Berkeley has a higher rate of persons living with HIV than Alameda County and California.

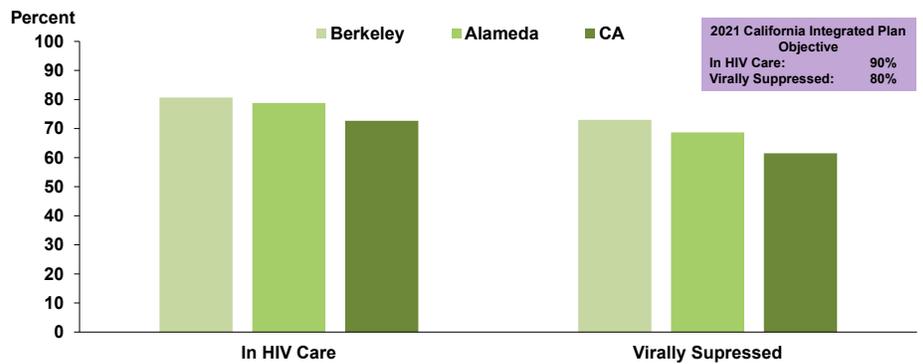
Figure 4.65 PERSONS LIVING WITH HIV BY CURRENT LOCAL HEALTH JURISDICTION Berkeley, Alameda County, CA, 2010–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, California Department of Public Health, CDPH Office of AIDS, 2010–2016

The proportion of persons living with HIV who are in care and who are virally suppressed is higher in Berkeley than both Alameda County and California. In 2016, 80.7% of persons living with HIV in Berkeley were in HIV care and 73% were virally suppressed. Berkeley does not yet meet the 2021 California Integrated Plan Objectives of 90% in care and 80% virally suppressed.

Figure 4.66 CONTINUUM OF HIV CARE FOR PERSONS LIVING WITH DIAGNOSED HIV INFECTION Berkeley, Alameda County, CA, 2016

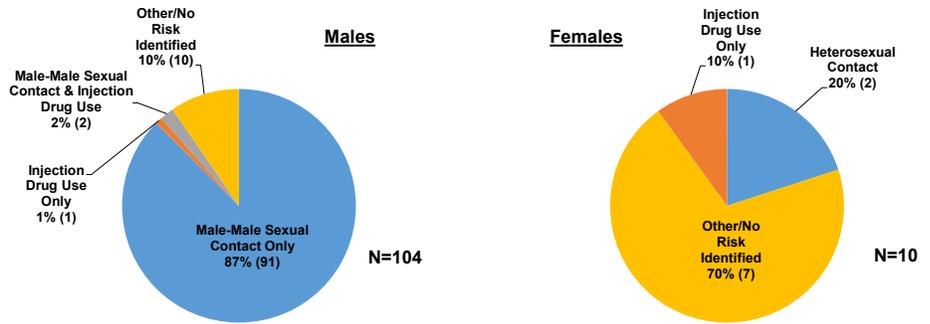


Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, CDPH, Office of AIDS, 2016

Communicable or Infectious Diseases continued

Among all new cases of HIV/AIDS in males in Berkeley, male-to-male sexual contact is the primary mode of transmission. Injection drug use may contribute up to 3% of new cases. Ten percent of males report other or unidentified risks. Among females, 70% of the cases of HIV/AIDS have unidentified modes of exposure. Heterosexual contact makes up 20% of cases, and injection drug use makes up 10%. Men make up a majority (91%) of the new HIV/AIDS cases in Berkeley.

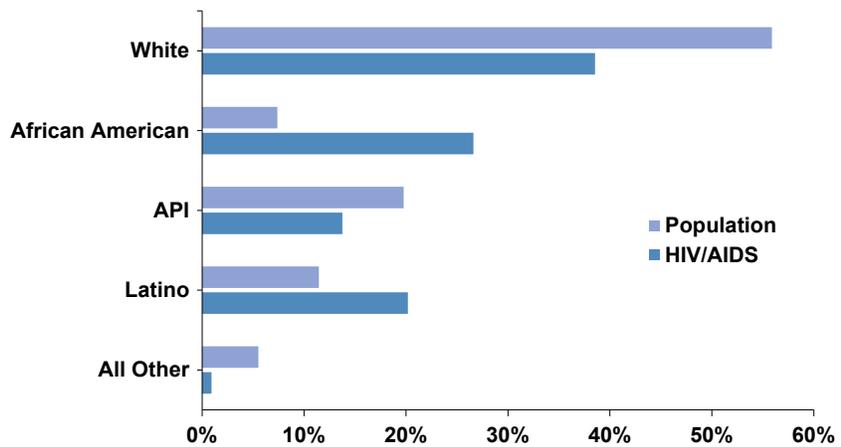
Figure 4.67 PROPORTION OF HIV/AIDS CASES FOR MALES AND FEMALES BY MODE OF EXPOSURE City of Berkeley, 2012–2016



Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, HIV/AIDS Registry, 2012–2016

African Americans and Latinos experience disproportionately high rates of new HIV/AIDS cases compared to their representation in Berkeley’s population.

Figure 4.68 PROPORTION OF NEW HIV/AIDS CASES BY RACE/ETHNICITY COMPARED TO THEIR REPRESENTATION IN THE POPULATION Berkeley, 2012–2016



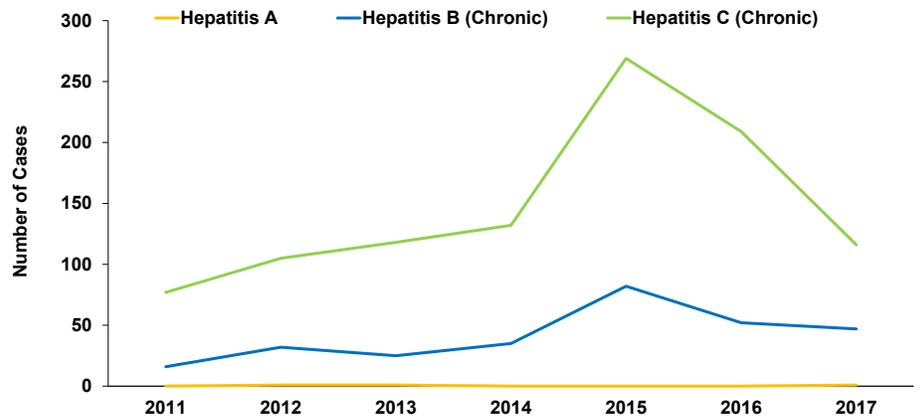
Source: City of Berkeley Public Health Division, Epidemiology and Vital Statistics, HIV/AIDS Registry, 1999–2016

Hepatitis A, B, and C

Hepatitis is a disease which causes inflammation of the liver. Hepatitis A is a vaccine-preventable disease that is usually transferred from person-to-person through the fecal-oral route or consumption of contaminated food or water. Hepatitis B is transmitted through blood, semen, or other bodily fluids. It can be an acute, short-term illness, or a long-term chronic infection depending on age at transmission. Hepatitis C is the most common chronic blood borne viral infection in the United States. The most common source of hepatitis C infection is sharing needles among injection drug users. 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. These complications can be prevented by timely diagnosis and treatment.

The number of hepatitis B and hepatitis C cases in Berkeley increased from 2011 to 2015, but fell from 2015 to 2017. Because hepatitis C is a chronic infection which may not be diagnosed or reported consistently, these numbers may underestimate the prevalence. New cases of hepatitis A in Berkeley fluctuate from 0 to 1 annually.

Figure 4.69 HEPATITIS A, HEPATITIS B (CHRONIC), AND HEPATITIS C (CHRONIC) BY YEAR OF REPORT Berkeley, 2011–2017



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics, CalREDIE Surveillance Data, 2010 to 2017



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References

1. CDC, "Chronic Disease Prevention and Health Promotion," 2017. [Online]. Available: <http://www.cdc.gov/chronicdisease/index.htm>. [Accessed 2017].
2. CCLHO-CHEAC Chronic Disease Prevention Leadership Project, "Chronic Disease Prevention Framework," 2013. [Online]. Available: https://issuu.com/eloine/docs/chronic_disease_report_screen_final. [Accessed 2017].
3. CDC, "Overweight and Obesity: Adult Obesity Facts," 2017. [Online]. Available: <https://www.cdc.gov/obesity/data/adult.html>. [Accessed 2017].
4. CDC, "Overweight and Obesity: Defining Overweight and Obesity," 2016. [Online]. Available: <http://www.cdc.gov/obesity/adult/defining.html>. [Accessed 2017].
5. CDC, "Smoking & Tobacco Use: Fast Facts," 2017. [Online]. Available: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/. [Accessed 2017].
6. CDC, "Smoking & Tobacco Use: Health Effects of Cigarette Smoking," 2017. [Online]. Available: http://www.cdc.gov/tobacco/data_statistics/Factsheets/health_effects.htm. [Accessed 2017].
7. CDC, "Smoking & Tobacco Use: Health Effects of Secondhand Smoke," 2017. [Online]. Available: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm. [Accessed 2017].
8. CDC, "Diabetes Home: Diabetes Basics," 2017. [Online]. Available: <https://www.cdc.gov/diabetes/basics/index.html>. [Accessed 2017].
9. CDC, "National Diabetes Statistics Report, 2017," 2017. [Online]. Available: <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>. [Accessed 2017].
10. CDC, "Diabetes Home: Diabetes Quick Facts," 2017. [Online]. Available: <https://www.cdc.gov/diabetes/basics/quick-facts.html>. [Accessed 2017].
11. Agency for Healthcare Research and Quality (AHRQ), "AHRQ Quality Indicators—Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Care Sensitive Conditions. Revision 4. AHRQ Pub. No. 02-R0203," Rockville, 2004.
12. National Center for Health Statistics (NCHS), "NCHS Data Brief No. 107: Hypertension Among Adults in the United States 2009–2010," 2015. [Online]. Available: <http://www.cdc.gov/nchs/data/databriefs/db107.htm>. [Accessed 2017].
13. CDC, "High Blood Pressure Facts," 2017. [Online]. Available: <http://www.cdc.gov/bloodpressure/facts.htm>. [Accessed 2017].
14. CDC, "Heart Disease: Heart Disease Facts," 2017. [Online]. Available: <http://www.cdc.gov/heartdisease/facts.htm>. [Accessed 2017].
15. CDC, "Coronary Artery Disease: Causes, Diagnosis & Prevention," 2017. [Online]. Available: https://www.cdc.gov/heartdisease/coronary_ad.htm. [Accessed 2017].
16. S. Stern, "Aging and Diseases of the Heart," *Circulation*, vol. 108, pp. e99–101, 2008.
17. CDC, "About Stroke," 2017. [Online]. Available: <https://www.cdc.gov/stroke/about.htm>. [Accessed 2017].
18. US Department of Health and Human Services, "HealthyPeople.gov: Respiratory Diseases Overview," 2017. [Online]. Available: <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=36>. [Accessed 2017].
19. CDC, "Asthma," 2017. [Online]. Available: <https://www.cdc.gov/asthma/default.htm>. [Accessed 2017].
20. CDC National Asthma Control Program, "Asthma's Impact on the Nation: Data from the CDC National Asthma Control Program," [Online]. Available: https://www.cdc.gov/asthma/impacts_nation/asthmafactsheet.pdf. [Accessed 2017].
21. CDC, "Health United States Report," 2016. [Online]. Available: <https://www.cdc.gov/nchs/data/hus/hus16.pdf>. [Accessed 2017].
22. CDC, "Chronic Obstructive Pulmonary Disease (COPD)," 2017. [Online]. Available: <https://www.cdc.gov/copd/index.html>. [Accessed 2017].
23. US Department of Health and Human Services, "HealthyPeople.gov: Cancer Overview," 2017. [Online]. Available: <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=5>. [Accessed 2017].
24. CDC, "Cancer Prevention and Control: How to Prevent Cancer or Find It Early," 2017. [Online]. Available: <http://www.cdc.gov/cancer/dccp/prevention/>. [Accessed 2017].
25. Public Health Institute; California Breast Cancer Research Program, "California Breast Cancer Mapping Project: Identifying Areas of Concern in California," http://www.cehtp.org/faq/resources/california_breast_cancer_mapping_project, California, 2012.
26. National Institutes of Health, "National Institute of Mental Health: Any Mental Illness (AMI) Among U.S. Adults," 2015. [Online]. Available: <https://www.nimh.nih.gov/health/statistics/prevalence/any-mental-illness-ami-among-us-adults.shtml>. [Accessed 2017].
27. Alameda County Public Health Department, "Alameda County Health Data Profile," 2014. [Online]. Available: http://www.acphd.org/media/353060/acphd_cha.pdf. [Accessed 2017].
28. Office of the Surgeon General (US); Center for Mental Health Services (US); National Institute of Mental Health (US), "Mental Health: Culture, Race, and Ethnicity: A Supplement to Mental Health: A Report of the Surgeon General," 2001. [Online]. Available: <http://www.ncbi.nlm.nih.gov/books/NBK44243/>. [Accessed 2017].
29. CDC, "Injury Prevention & Control: About CDC's Injury Center," 2017. [Online]. Available: <http://www.cdc.gov/injury/overview/index.html>. [Accessed 2017].

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References *continued*

30. C. Cutugno, "The 'Graying' of Trauma Care: Addressing Traumatic Injury in Older Adults," *American Journal of Nursing*, vol. 111, no. 11, pp. 40–48, 2011.
31. CDC, "Violence Prevention: Intimate Partner Violence," 2017. [Online]. Available: <http://www.cdc.gov/violenceprevention/intimatepartnerviolence/index.html>. [Accessed 2017].
32. CDC, "Injury Prevention & Control: Intimate Partner Violence: Consequences," 2017. [Online]. Available: <http://www.cdc.gov/violenceprevention/intimatepartnerviolence/consequences.html>. [Accessed 2017].
33. CDC: National Intimate Partner and Sexual Violence Survey (NISVS), "NISVS: An Overview of 2010 Summary Report Findings," 2017. [Online]. Available: https://www.cdc.gov/violenceprevention/pdf/NISVS_Report2010-a.pdf. [Accessed 2017].
34. End Abuse Family Violence Prevention Fund, "Intimate Partner Violence and Health People 2010 Fact Sheet," [Online]. Available: http://www.futureswithoutviolence.org/userfiles/file/Children_and_Families/ipv.pdf. [Accessed 2017].
35. CDC, "Injury Prevention and Control: National Intimate Partner and Sexual Violence Survey (NISVS)," 2017. [Online]. Available: <http://www.cdc.gov/violenceprevention/nisvs/index.html>. Accessed 2017].
36. CDC, "Pertussis (Whooping Cough): Pertussis Outbreak Trends," 2017. [Online]. Available: <http://www.cdc.gov/pertussis/outbreaks/trends.html>. [Accessed 2017].
37. CDC, "Antibiotic/Antimicrobial Resistance: About Antimicrobial Resistance: A Brief Overview," 2017. [Online]. Available: <http://www.cdc.gov/drugresistance/about.html>. [Accessed 2017].
38. CDC, "Tuberculosis (TB)," 2017. [Online]. Available: <http://www.cdc.gov/tb/>. [Accessed 2017].
39. CDC, "Tuberculosis (TB): TB in Specific Populations," 2013. [Online]. Available: <http://www.cdc.gov/tb/topic/populations/default.htm>. [Accessed 2017].
40. CDC, "Tuberculosis (TB): TB and HIV Coinfection," 2016. [Online]. Available: <https://www.cdc.gov/tb/topic/basics/tbhivcoinfection.htm>. [Accessed 2017].
41. CDC, "CDC Features: Adults Need Immunizations, Too," 2017. [Online]. Available: <http://www.cdc.gov/Features/AdultImmunizations/index.html>. [Accessed 2017].
42. CDC, "Vaccines & Preventable Diseases," 2016. [Online]. Available: <http://www.cdc.gov/vaccines/vpd-vac/>. [Accessed 2017].
43. California Department of Public Health (CDPH), "Pertussis (Whooping Cough)," 2017. [Online]. Available: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/pertussis.aspx>. [Accessed 2017].
44. CDC, "Condom Effectiveness: Condom Fact Sheet in Brief," 2013. [Online]. Available: <http://www.cdc.gov/condomeffectiveness/brief.html>. [Accessed 2017].
45. CDC, "Sexually Transmitted Diseases (STDs)," 2017. [Online]. Available: <http://www.cdc.gov/std/>. [Accessed 2017].
46. CDC, "CDC Fact Sheet: 10 Ways STDs Impact Women Differently from Men," 2011. [Online]. Available: <https://www.cdc.gov/std/health-disparities/stds-women-042011.pdf>. [Accessed 2017].
47. CDC, "HIV/AIDS: HIV Basics," 2017. [Online]. Available: <http://www.cdc.gov/hiv/basics/index.html>. [Accessed 2017].
48. CDC, "HIV/AIDS: Basic Statistics," 2017. [Online]. Available: <http://www.cdc.gov/hiv/basics/statistics.html>. [Accessed 2017].
49. CDC, "HIV/AIDS: HIV Among African Americans," 2017. [Online]. Available: <https://www.cdc.gov/hiv/group/raciaethnic/africanamericans/index.html>. [Accessed 2017].
50. CDC, "HIV/AIDS: Living with HIV," 2017. [Online]. Available: <http://www.cdc.gov/hiv/living/index.html>. [Accessed 2017].
51. CDC, "Division of Viral Hepatitis," 2017. [Online]. Available: <https://www.cdc.gov/hepatitis/index.htm>. [Accessed 2017].
52. CDC, "Hepatitis C Information for Health Professionals: Testing Recommendations for Chronic Hepatitis C Virus Infection," 2015. [Online]. Available: <http://www.cdc.gov/hepatitis/HCV/GuidelinesC.htm>. [Accessed 2017].

5 CHAPTER 5: LIFE EXPECTANCY AND MORTALITY

The number of years a person is expected to live, and the leading causes of death in Berkeley are important indicators of population health and guide Public Health Division program priorities. This chapter contains information about trends in life expectancy, deaths, leading causes of death, the years of potential life lost, and deaths due to various chronic diseases in Berkeley.

In the last decade, the mortality rate in Berkeley has decreased steadily and life expectancy has increased for both men and women. Mortality rates from cardiovascular disease and cancer have also decreased over this time period. Cancer is the leading cause of death in the population as a whole, followed by heart disease. However, among African Americans in Berkeley, heart disease is the leading cause of death, followed by cancer.

There are racial/ethnic variations in causes of death, mortality rates, and years of potential life lost, as there are differences in health status throughout the life course. Shortened lives and premature mortality are the cumulative results of health inequities that span the life course from conception to old age.



Annie Burke

Key Findings

• Healthy People 2020 (HP2020) Goals

- Berkeley as a whole *meets* HP2020 goals for the following:
 - Coronary heart disease mortality rate
 - Cancer mortality rate
 - Lung cancer mortality rate—for the first time in 2014–2016, African Americans in Berkeley met the HP2020 goal
 - Breast cancer mortality rate
 - Prostate cancer mortality rate
- African Americans in Berkeley *do not meet* HP2020 goals for the following:
 - Cancer mortality rate
 - Breast cancer mortality rate

• Life Expectancy

- Life expectancy is 86.7 years for Berkeley women and 83 years for men.
- Mortality rates in Berkeley are lower than those of surrounding Alameda County and California—reflecting the city's long life expectancy.
- The mortality rate for African Americans is twice as high as the mortality rate of Whites and is higher than the population overall. This disparity has remained consistent over time.

• Causes of Death

- Cancer and heart disease are leading causes of death (as recorded on death certificates) in Berkeley. They account for almost half of all deaths.
- 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.
- Breast and lung cancer are the top leading causes of cancer death for women, while lung and pancreatic cancer are the top leading causes of cancer death for men.

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Key Findings *continued*

- **Causes of Death** *continued*

- Mortality rates for cardiovascular disease are almost twice as high among African Americans compared to the population as a whole. Cardiovascular disease deaths have decreased over the last decade, and the gap between the mortality rates of African Americans and other groups has also decreased.
- Women who are Latina, Asian/Pacific Islander have the lowest mortality rates from breast cancer in Berkeley. Only African American women do not meet the HP2020 goal for breast cancer deaths.

- **Years of Potential Life Lost (YPLL)**

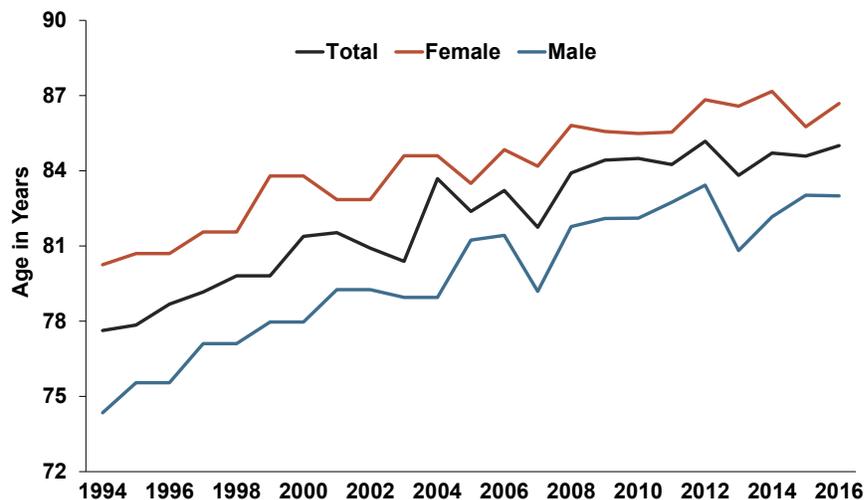
- African Americans account for a disproportionate number of YPLL in Berkeley. Although they make up 7% of Berkeley's population, they account for almost 30% of YPLL in the total population. African Americans in Berkeley die younger than other racial/ethnic groups.
- Cancer accounts for the most YPLL in Berkeley as a whole.

Life Expectancy

Life expectancy is one of the most important demographic indicators used to compare the health status of different population groups. Life expectancy at birth represents the average number of years that a group of infants would live if the group were to experience, throughout life, the mortality rates present in the year of birth. When life expectancy is high, it generally reflects a high level of health and low level of premature deaths in the population.

In Berkeley, life expectancy at birth has gradually increased in recent years and is currently at 85.0 years for the population as a whole, compared to 78.8 years in the U.S. and 80.8 years in California. For women in Berkeley, life expectancy is 86.7 years, compared to 81.2 years in the U.S. For men in Berkeley, it is 83.0 years, compared to 76.4 in the U.S. The current life expectancy gap between females and males is 4 years in Berkeley and 2.4 years in the U.S.

Figure 5.1 LIFE EXPECTANCY AT BIRTH BY GENDER Berkeley, 1994–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 1994–2016, US Census Bureau

Deaths in Berkeley

The mortality rate is a measure of the risk of dying from any cause in a given year or period of time. A high mortality rate is an indication of a lower level of health promotion and disease prevention in the community.

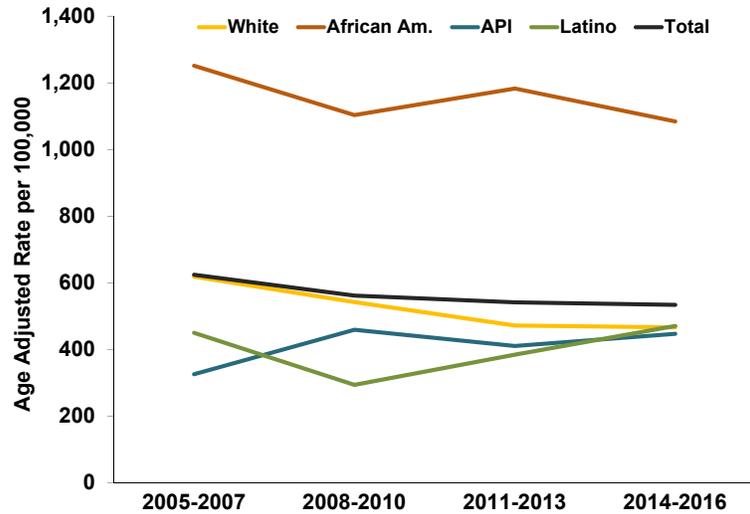
The mortality rate from all causes of death in Berkeley was 534 deaths per 100,000 population from 2014–2016. The risk of dying is equivalent to nearly 1 death per every 187 people per year.

The overall age-adjusted mortality rate in Berkeley has decreased steadily throughout the last decade. The mortality rate for African Americans has reached the lowest ever reported. In spite of this marked decrease, the age-adjusted mortality rate for African Americans is twice as high as the mortality rate of Whites and is higher than the population overall. This disparity has remained unchanged throughout these years.

Leading Causes of Death

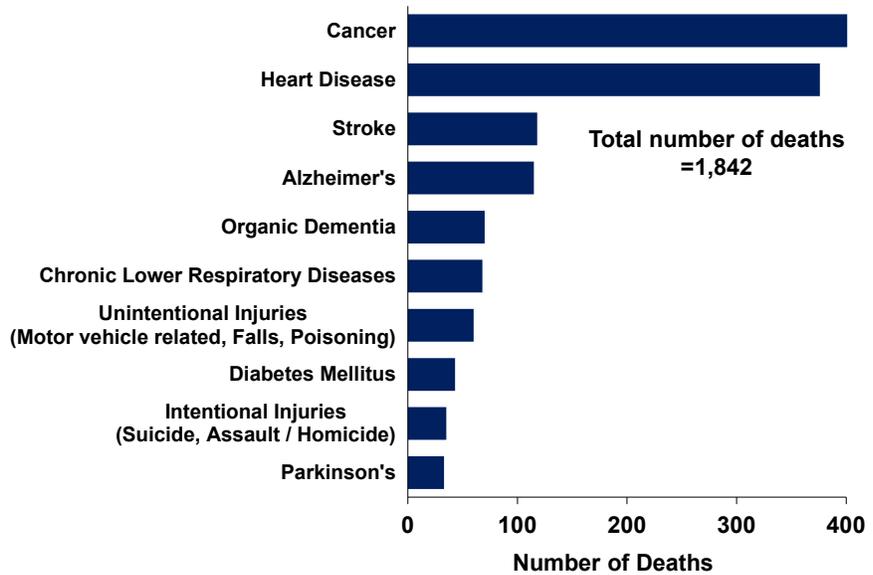
Cancer has overtaken heart disease as the single leading cause of death in Berkeley, accounting for 23% of all deaths. Chronic diseases such as cancer, heart disease, and stroke are responsible for 50% of all deaths in a given year in Berkeley. However, there are important variations by age, gender, and race/ethnicity.

Figure 5.2 MORTALITY RATES BY RACE/ETHNICITY AND YEAR OF DEATH Berkeley, 2005–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Figure 5.3 LEADING UNDERLYING CAUSES OF DEATH Berkeley, 2014–2016

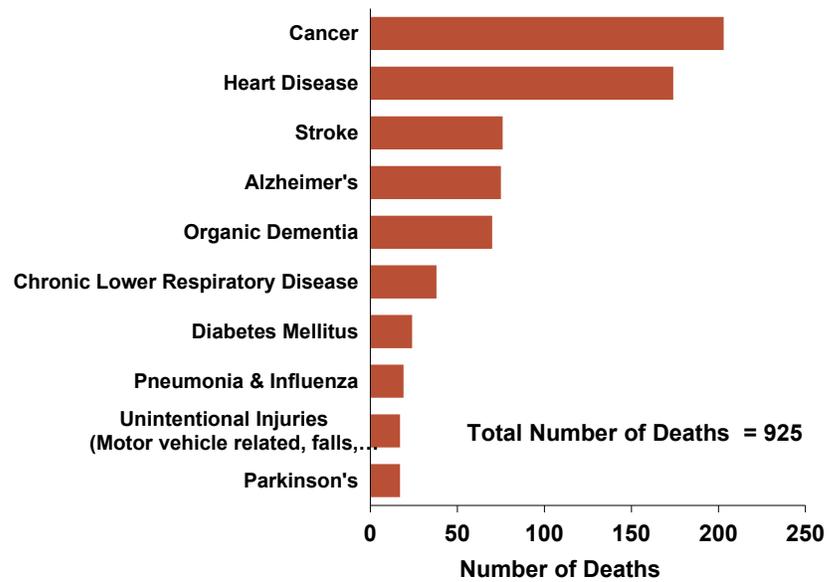


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Deaths in Berkeley continued

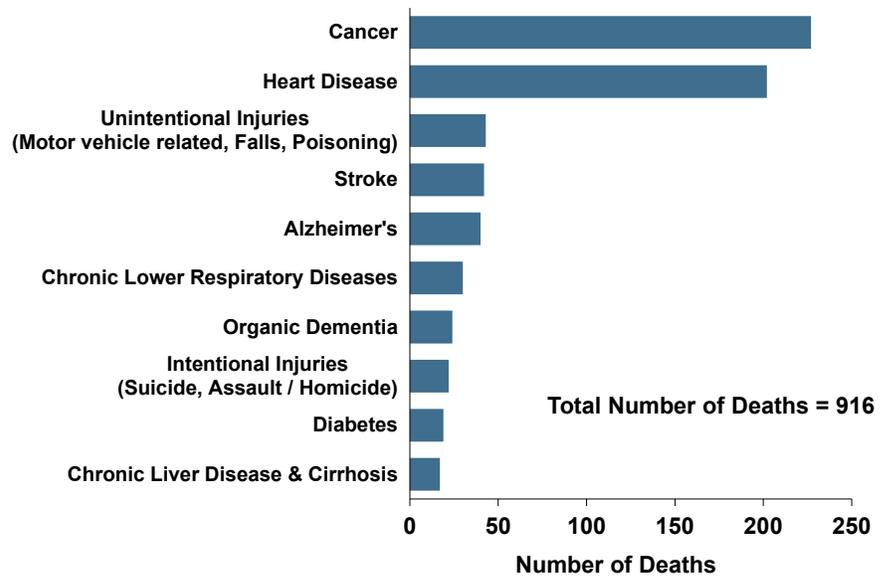
Cancer is the most common cause of death for both men and women. Heart disease and cancer together account for over 40% of all deaths in both men and women. After cancer and heart disease, the leading causes of death differ between men and women. Men are more likely to die from unintentional and intentional injuries, and women are more likely to die from Alzheimer's, dementia, and Parkinson's. Diabetes is among the top ten causes of death for both genders.

Figure 5.4 LEADING CAUSES OF DEATH AMONG FEMALES Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Figure 5.5 LEADING CAUSES OF DEATH AMONG MALES Berkeley, 2014–2016



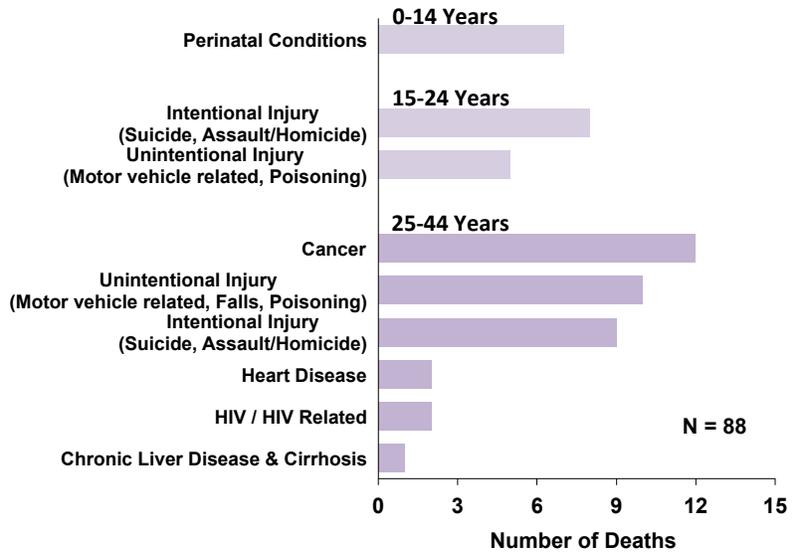
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Deaths in Berkeley continued

The leading causes of death vary across the lifespan. From 2014 to 2016, there were 88 deaths among residents under 45 years of age. These deaths represent only 5% of the total mortality burden in Berkeley. In the 0–14 year old age group, the leading cause of death was perinatal conditions that occur in infants who were 0–1 years of age. Among teenagers and young adults, intentional injuries, such as suicide and homicide, and unintentional injuries, such as motor vehicle accidents and accidental falls, are the leading causes of death. In the 25–44 year old age group, cancer, injury, heart disease and HIV/AIDS are leading causes of death.

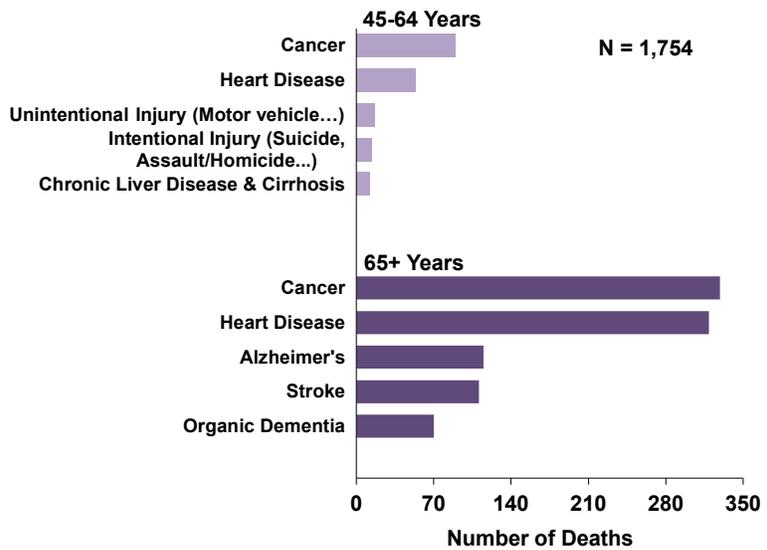
As people move into middle and older adulthood, chronic diseases such as cancer and heart disease become the leading causes of death.

Figure 5.5 LEADING CAUSES OF DEATH, AGES 44 AND YOUNGER Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Figure 5.6 LEADING CAUSES OF DEATH, AGES 45 AND OLDER Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Deaths in Berkeley continued

The leading causes of death vary by race/ethnicity. Overall, cancer, heart disease, stroke, Alzheimer’s disease, and dementia are among the top 10 causes of death for all racial/ethnic groups.

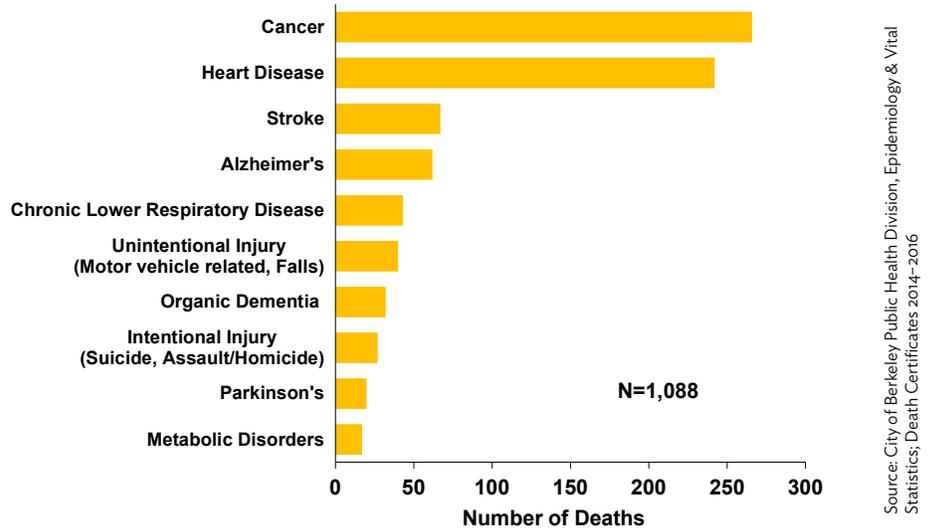
Figure 5.7 TOP 10 CAUSES OF DEATH BY RACE/ETHNICITY Berkeley, 2014–2016

Rank	White	Black	Latino	Asian/Pacific Islander
1	Cancer	Heart Disease	Cancer	Cancer
2	Heart Disease	Cancer	Heart Disease	Heart Disease
3	Stroke	Alzheimer's	Stroke	Stroke
4	Alzheimer's	Stroke	Unintentional Injury	Alzheimer's
5	Chronic Lower Respiratory Disease	Organic Dementia	Alzheimer's	Organic Dementia
6	Unintentional Injury	Chronic Lower Respiratory Disease	Organic Dementia	Diabetes
7	Organic Dementia	Diabetes	Diabetes	Pneumonia & Influenza
8	Intentional Injury	Nephritis & Nephrotic Syndrome	Pneumonia & Influenza	Parkinson's
9	Parkinson's	Unintentional Injury	Intentional Injury	Intentional Injury
10	Metabolic Disorders	Pneumonia & Influenza	Chronic Liver Disease & Cirrhosis	Chronic Liver Disease & Cirrhosis

NOTE: Color boxes denote causes of death that are leading in all racial/ethnic groups

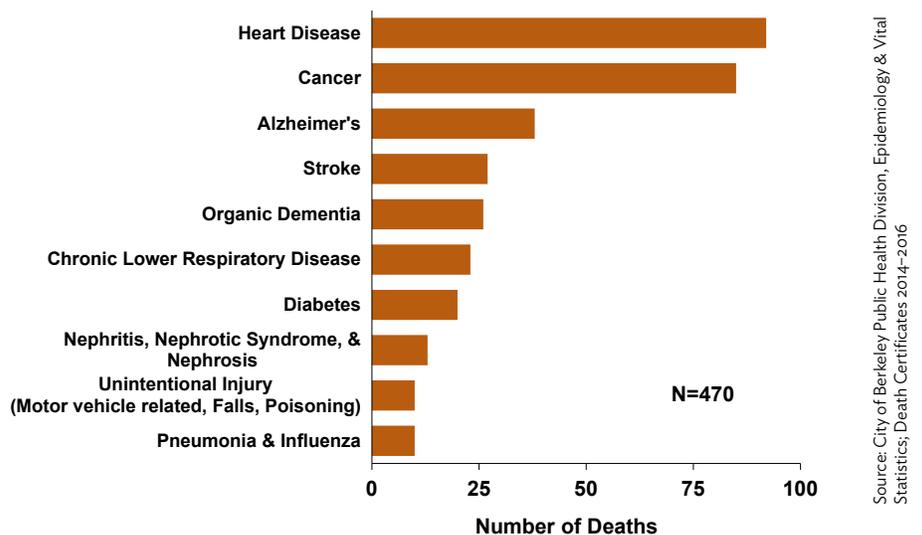
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Figure 5.8 LEADING CAUSES OF DEATH AMONG WHITES Berkeley, 2014–2016



Heart disease is the leading cause of death for African Americans. Although intentional injury was one of the leading causes of death among African Americans in 2008–2010, African Americans were the only group for which intentional injury was not a leading cause of death in 2014–2016.

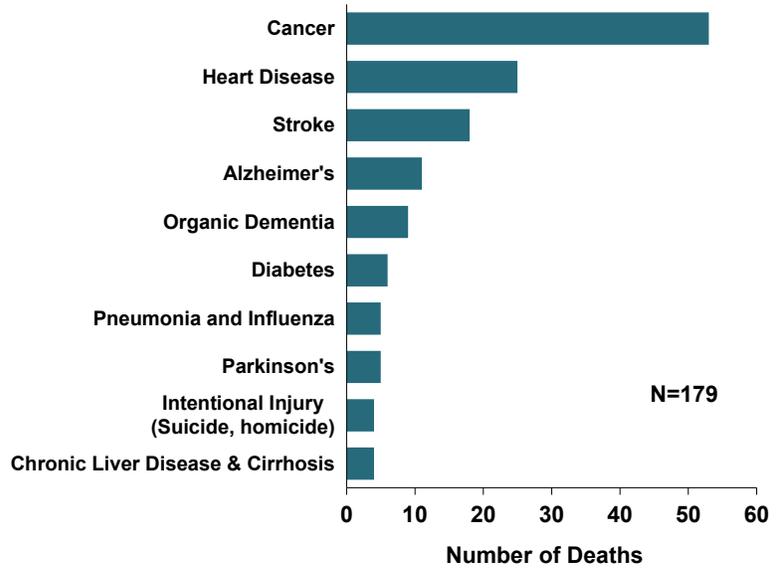
Figure 5.9 LEADING CAUSES OF DEATH AMONG AFRICAN-AMERICANS Berkeley, 2014–2016



Deaths in Berkeley continued

The Asian/Pacific Islander population is the only racial/ethnic group for whom unintentional injury is not a leading cause of death.

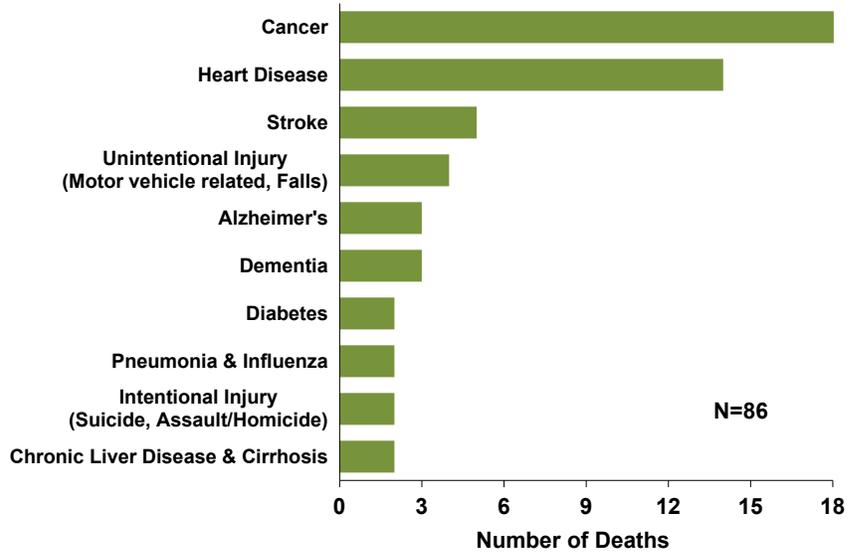
Figure 5.10 LEADING CAUSES OF DEATH AMONG ASIAN/PACIFIC ISLANDERS Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Among Latinos, injuries (unintentional and intentional combined) account for more deaths than stroke.

Figure 5.11 LEADING CAUSES OF DEATH AMONG LATINOS Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

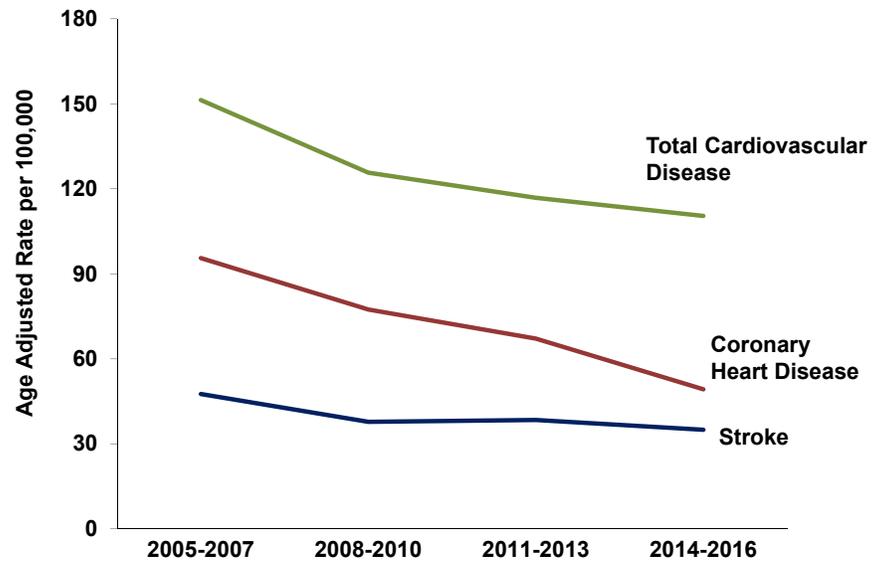
Deaths in Berkeley continued

Cardiovascular Diseases

Cardiovascular diseases include those of the heart and blood vessels, such as stroke and coronary heart disease. Strokes occur when blood flow to the brain is blocked or cut off. Mortality rates due to all types of cardiovascular disease are decreasing in Berkeley.

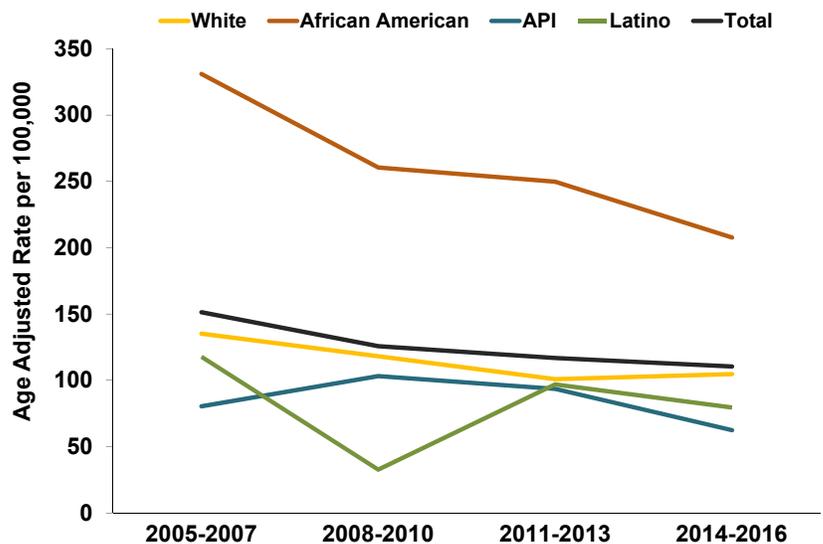
Cardiovascular disease mortality rates have decreased for all racial/ethnic groups. The cardiovascular disease mortality rate among African Americans is almost double that of the population as a whole. However, the disparity between African Americans and Whites decreased. The cardiovascular disease mortality rate among Asian/Pacific Islanders is half that of the total population.

Figure 5.12 **CARDIOVASCULAR DISEASE, CORONARY HEART DISEASE, & STROKE MORTALITY RATES BY YEAR OF DEATH** Berkeley, 2005–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Figure 5.13 **ALL CARDIOVASCULAR DISEASE MORTALITY RATES BY RACE/ETHNICITY** Berkeley, 2005–2016

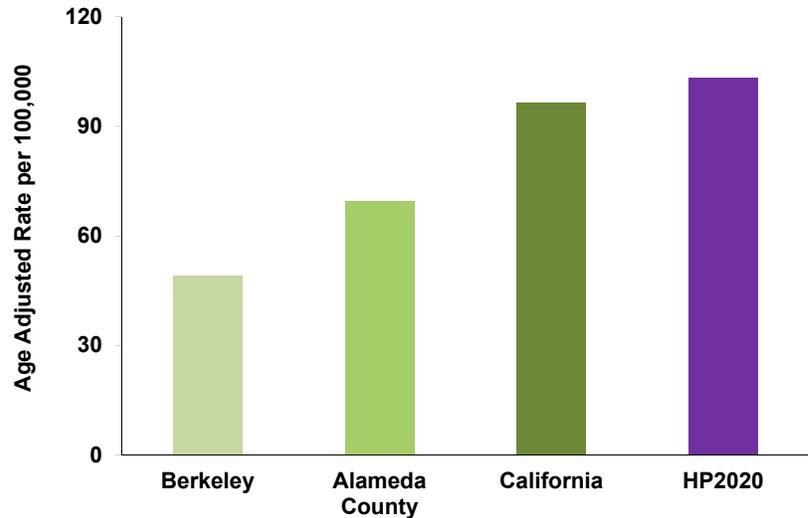


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Deaths in Berkeley continued

Coronary heart disease is the most common type of heart disease in the United States. It affects the arteries that feed the heart and can cause heart attacks and angina. Berkeley has a lower overall mortality rate due to coronary heart disease than Alameda County and California. At a rate of 49 deaths per 100,000 in the population, Berkeley's coronary heart disease mortality rate is below the HP2020 goal of fewer than 103 deaths per 100,000.

Figure 5.14 **CORONARY HEART DISEASE MORTALITY RATES** Berkeley (2014–2016), Alameda County (2012–2014), California (2012–2014), & HP2020

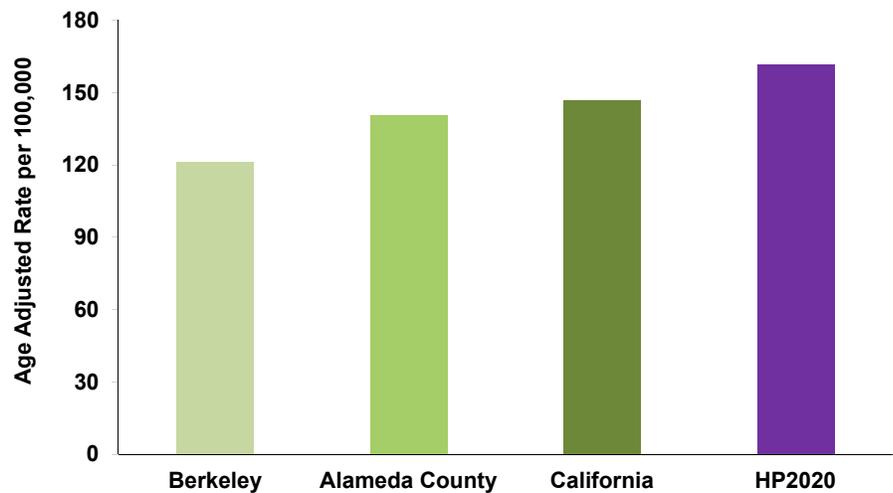


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016 & California Department of Public Health: County Health Profiles 2016

Cancer Deaths

While cancer is the leading cause of death in Berkeley, cancer mortality rates are lower in Berkeley than in Alameda County and California. It meets the HP2020 goal of fewer than 161.4 deaths per 100,000.

Figure 5.15 **CANCER MORTALITY RATES** Berkeley (2014–2016), Alameda County (2012–2014), California (2012–2014), & HP2020



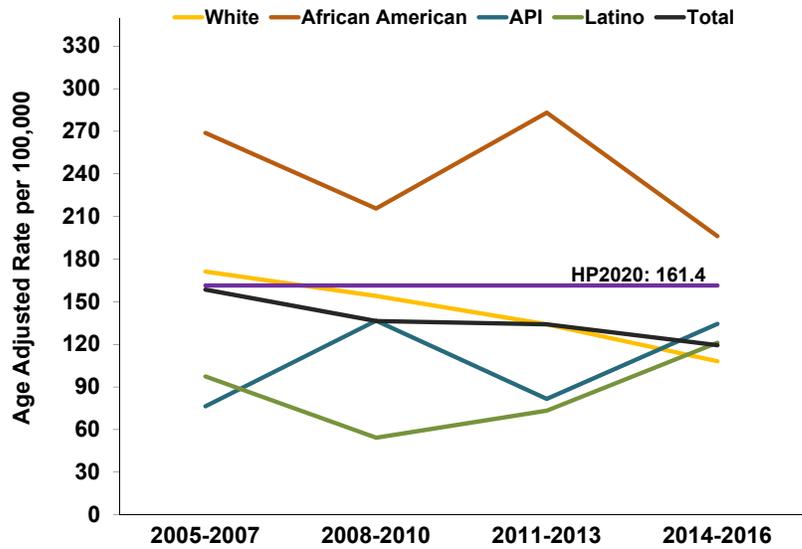
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016 & California Department of Public Health: County Health Profiles 2016

Deaths in Berkeley continued

African Americans have higher cancer mortality rates than other racial/ethnic groups. African Americans are the only racial/ethnic group whose cancer mortality rate does not meet the HP2020 goal.

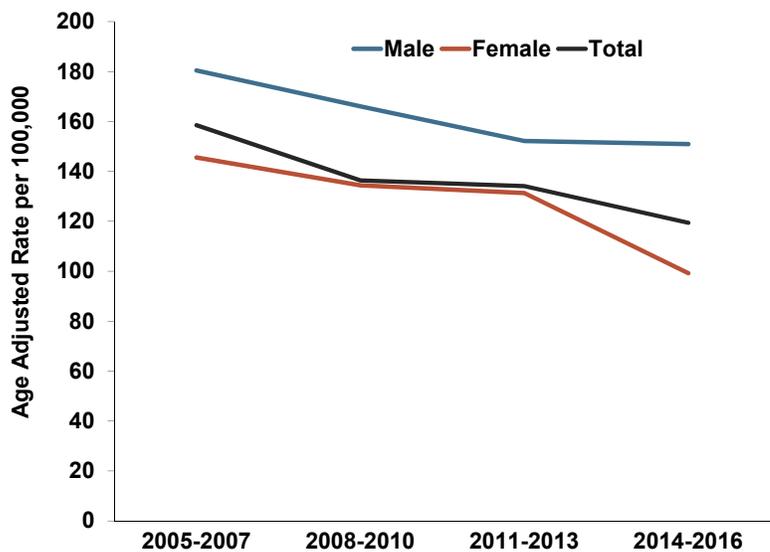
Cancer mortality rates for both sexes have decreased over the past decade. Decreases have been more pronounced for women compared to men. Men continue to have higher cancer mortality rates than women.

Figure 5.16 CANCER MORTALITY RATES BY YEAR OF DEATH & RACE/ETHNICITY Berkeley, 2005–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Figure 5.17 CANCER MORTALITY RATES BY YEAR OF DEATH & GENDER Berkeley, 2005–2016

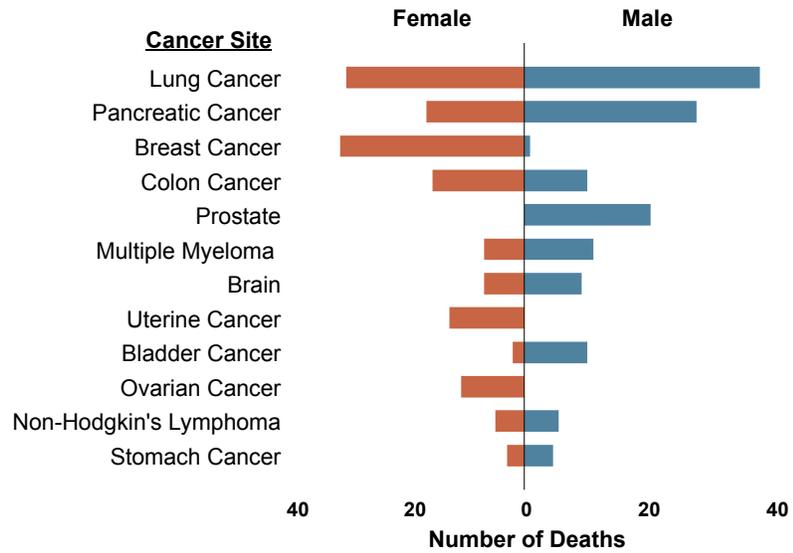


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Deaths in Berkeley continued

Cancer deaths differ between men and women. Lung cancer is the leading cause of cancer death for men, and breast cancer is the leading cause of death for women. Prostate cancer, once the second leading cause of cancer death for men, has been replaced by pancreatic cancer.

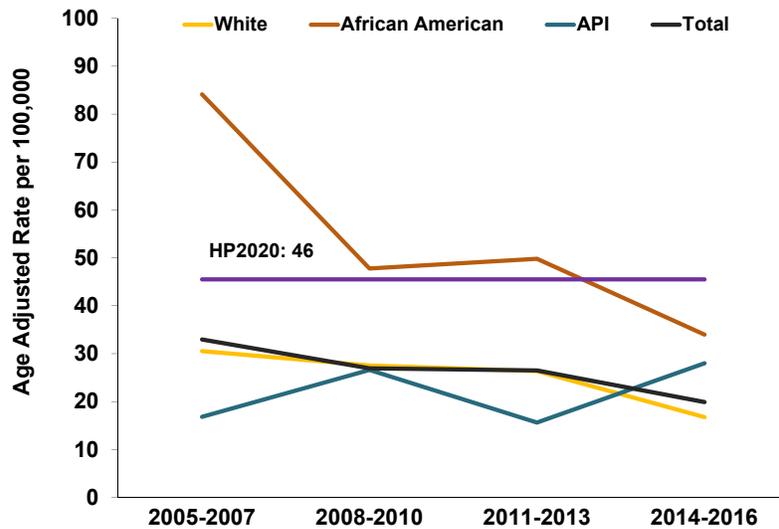
Figure 5.18 LEADING CAUSES OF CANCER DEATH BY GENDER Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Lung cancer deaths among African Americans have decreased dramatically over the last decade. African Americans have the highest lung cancer mortality rates among all racial/ethnic groups, however the disparity has decreased. All racial/ethnic groups now meet HP2020 objectives for lung cancer deaths.

Figure 5.19 LUNG CANCER MORTALITY RATES BY YEAR OF DEATH & RACE/ETHNICITY Berkeley, 2005–2016

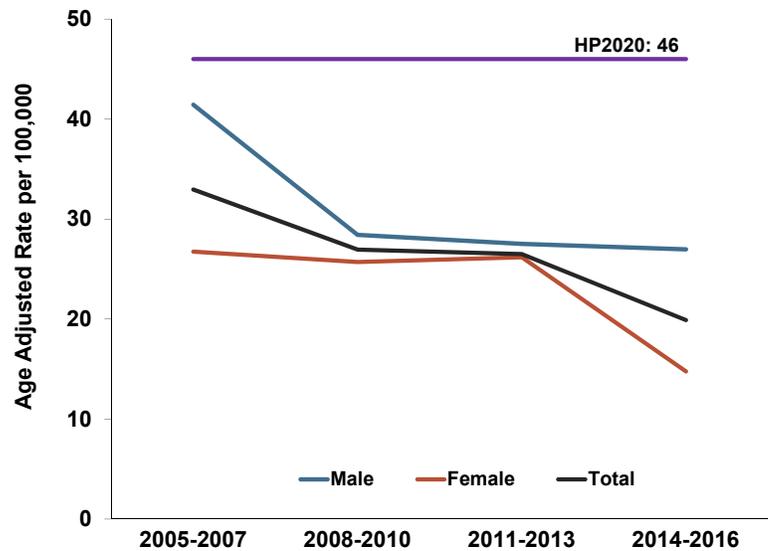


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Deaths in Berkeley continued

In the 2013 Health Status Report, the lung cancer mortality rate was only slightly higher in men than in women. Three years later, rates have dramatically dropped among women but remained largely unchanged among men. Today, lung cancer mortality rates among women are 15 per 100,000, but among men are 27 per 100,000. However, both sexes meet the HP2020 goal for lung cancer deaths.

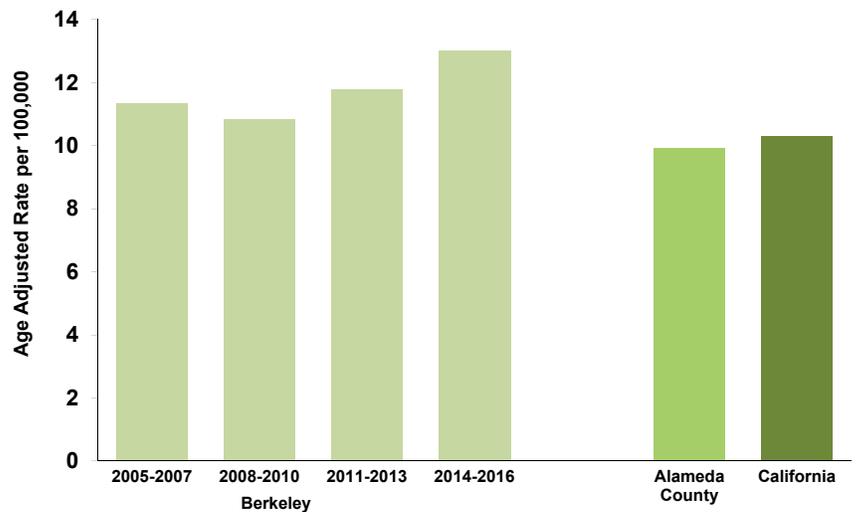
Figure 5.20 LUNG CANCER MORTALITY RATES BY YEAR OF DEATH & GENDER Berkeley, 2005–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016

Pancreatic cancer is the second leading cause of cancer-related death in Berkeley for men, and the third leading cause for women. Pancreatic cancer death rates are on the rise in Berkeley. There was an increase in pancreatic cancer deaths in Berkeley in 2014–2016, compared to previous years. From 2014–2016, in Alameda County & the state of California, the pancreatic cancer rates were lower than in the city of Berkeley. However, in 2008–2010, the pancreatic cancer death rates in Berkeley were only slightly higher than those of the state of California.

Figure 5.21 PANCREATIC CANCER MORTALITY RATES Berkeley (2005–2016), Alameda County (2012–2014), & California (2012–2014)



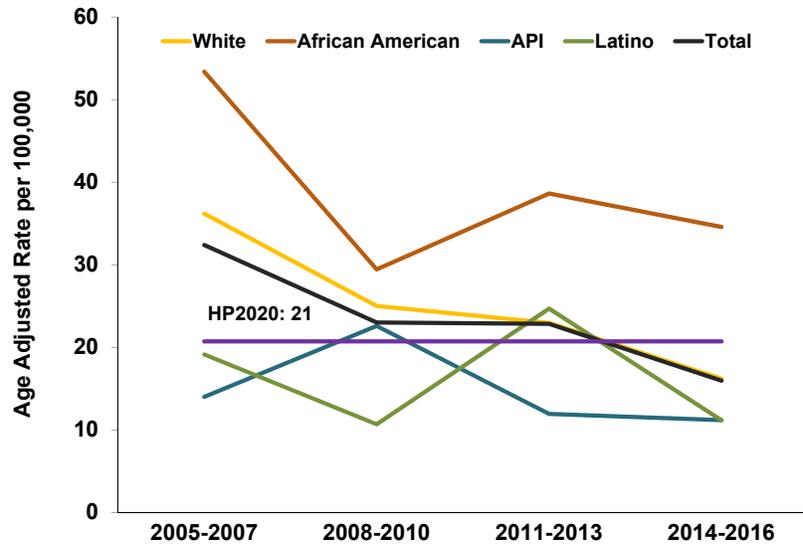
Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005–2016 & California Department of Public Health: County Health Profiles 2016

Deaths in Berkeley continued

In California, breast cancer is the most commonly diagnosed cancer among women, and the second leading cause of cancer deaths in women. Although female breast cancer mortality rates have dropped sharply over the past decade, significantly closing the gap between African Americans and other groups, there continues to be a disparity. African Americans are the only group for which we have not met the HP2020 goal for breast cancer deaths among women.

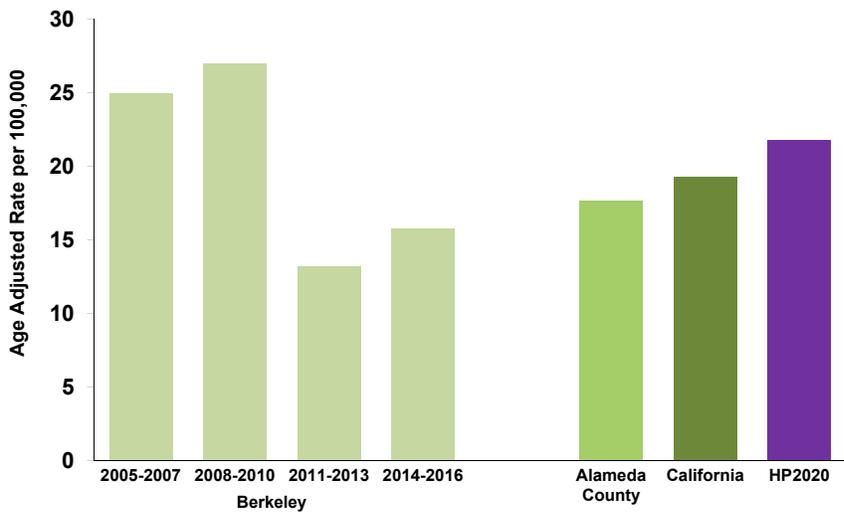
Prostate cancer is the most commonly diagnosed cancer among men in California. Prostate cancer mortality rates have decreased in Berkeley over the past decade. Berkeley prostate cancer mortality rates are lower than Alameda County and California rates and they meet the HP2020 goal.

Figure 5.22 FEMALE BREAST CANCER MORTALITY RATES BY YEAR & RACE/ETHNICITY Berkeley, 2005-2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005-2016

Figure 5.23 PROSTATE CANCER MORTALITY RATES Berkeley (2005-2016), Alameda County (2012-2014), California (2012-2014), & HP2020



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2005-2016 & California Department of Public Health: County Health Profiles 2016

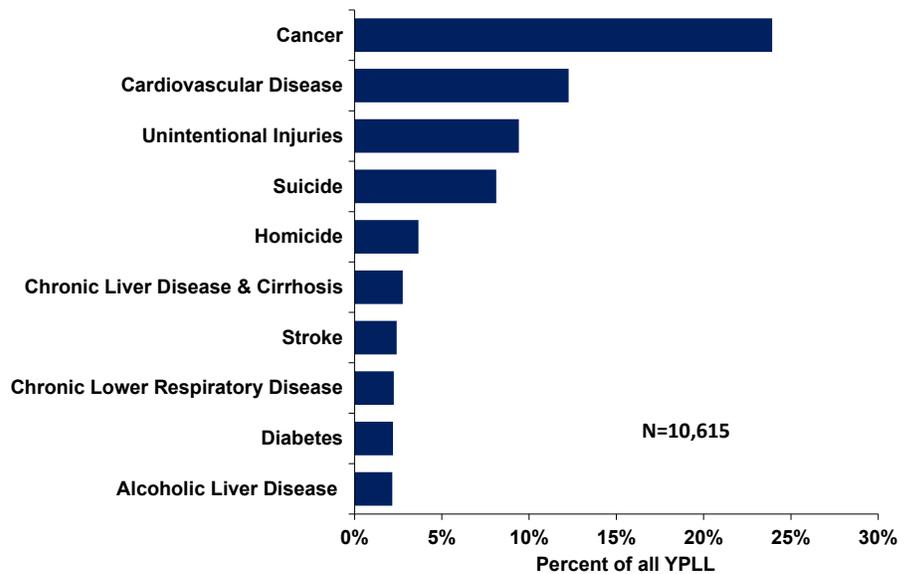
Premature Deaths and Years of Potential Life Lost (YPLL)

YPLL is a measure of premature death. It is a way of measuring the difference between when deaths actually occur in a population and when they should be expected to occur. It involves estimating the average time a person would have lived had he or she not died prematurely. Deaths before the age of 75 are considered by the CDC to be premature and the years not lived are potential years of life lost.

YPLL is important because it helps to quantify the social and economic losses that result from premature death. When a demographic group experiences disproportionate YPLL, we lose the benefit of full participation of that group in community life.

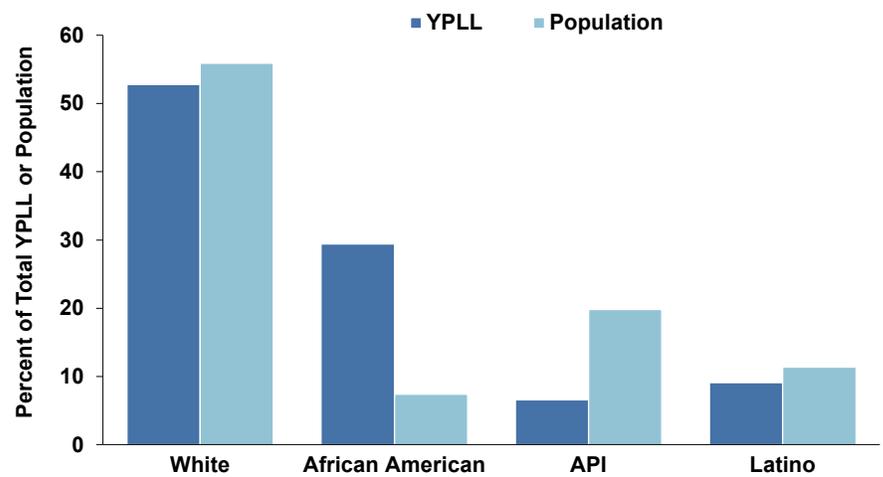
Deaths in younger people generate more YPLL. Causes of death that are more common in young people, such as injuries, falls, or drug overdose, have a large impact on total years of potential life lost. Prevention of early deaths benefits the individual and the community by increasing the individual's opportunity to live a full and productive life.

Figure 5.24 YEARS OF POTENTIAL LIFE LOST (YPLL) BEFORE AGE 75 BY CAUSE OF DEATH Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Figure 5.25 YEARS OF POTENTIAL LIFE LOST (YPLL) BY RACE/ETHNICITY Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Premature Deaths and Years of Potential Life Lost (YPLL) continued

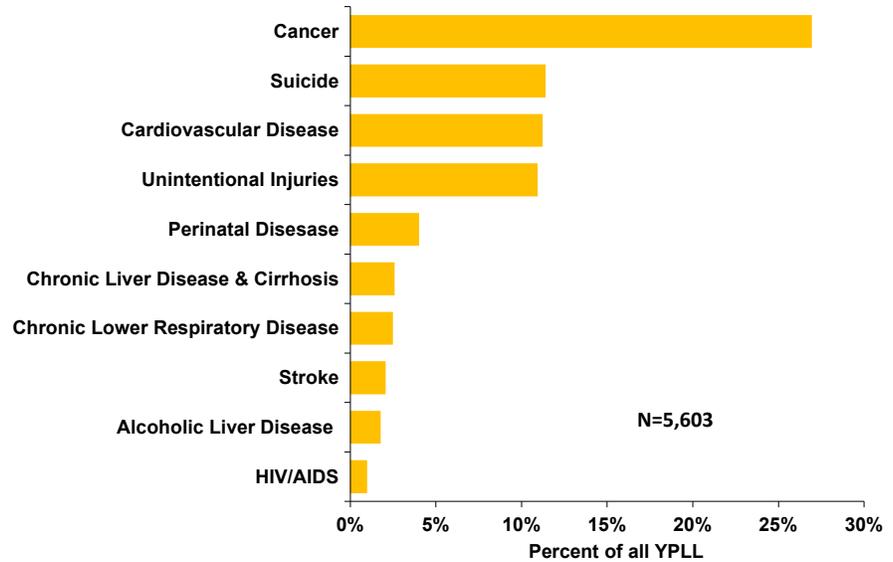
Cancer is the leading cause of YPLL in Berkeley. This reflects the combined effects of cancer as the leading cause of death and an illness that commonly affects a broad age range. In contrast, heart disease is much more common in people of older age than among children or young adults. Unintentional injuries contribute almost as much YPLL as heart disease. Although injuries are not as common a cause of death as heart disease, injuries affect younger individuals.

YPLL are not distributed evenly by race/ethnicity. African Americans make up 7% of Berkeley’s population but account for almost 30% of years of potential life lost. Other racial/ethnic groups in Berkeley contribute a smaller portion of the total YPLL than their representation in their population, indicating that their lives are not being disproportionately shortened.

Among the White population in Berkeley, cancer is the leading cause of YPLL, followed by suicide.

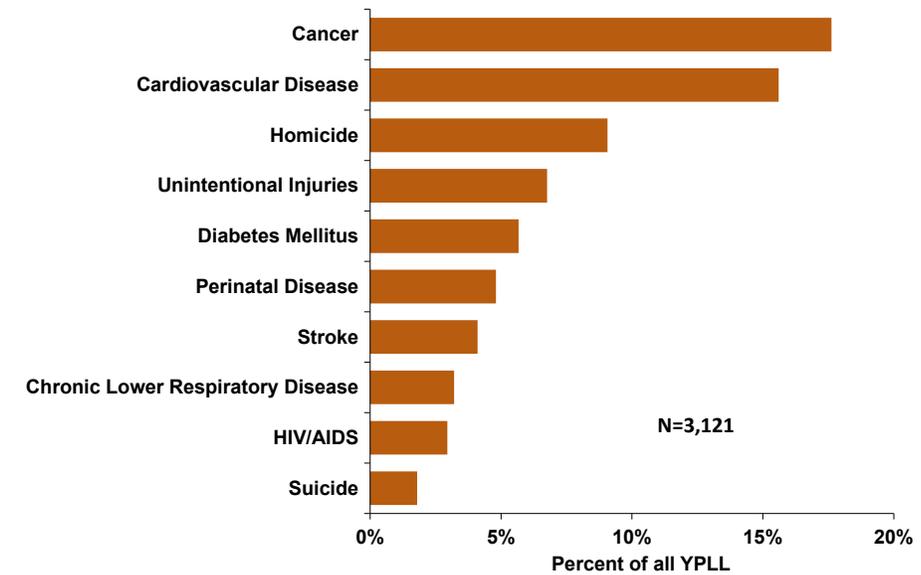
Among the African American population in Berkeley, cancer is the leading cause of YPLL, followed by cardiovascular disease. In comparison to the White population in Berkeley, a significant cause of YPLL in African Americans is homicide.

Figure 5.26 YEARS OF POTENTIAL LIFE LOST (YPLL) BEFORE AGE 75 BY CAUSE OF DEATH AMONG WHITES Berkeley, 2014–2016



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Figure 5.27 YEARS OF POTENTIAL LIFE LOST (YPLL) BEFORE AGE 75 BY CAUSE OF DEATH AMONG AFRICAN AMERICANS Berkeley, 2014–2016

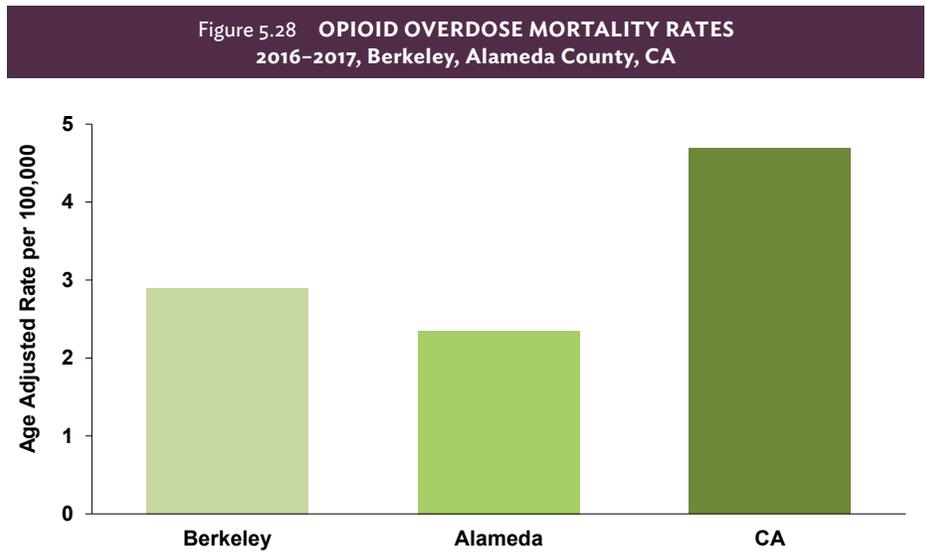


Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2014–2016

Opioid Overdose Related Deaths

Over the past two decades, as the prevalence of chronic pain and health care costs have exploded, an opioid epidemic with adverse consequences has escalated.

From 2016–2017 in Berkeley, there have been 7 deaths related to opioid overdose. Opioid mortality rates in Berkeley are higher than Alameda County but lower than California.



Source: City of Berkeley Public Health Division, Epidemiology & Vital Statistics; Death Certificates 2016–2017; California Opioid Overdose Surveillance Dashboard 2017; Alameda County Public Health Department

References

1. J. LAST, A DICTIONARY OF EPIDEMIOLOGY (4TH EDITION), USA: Oxford University Press, 2001.
2. J. McGinnis, “Actual causes of death in the United States,” *JAMA*, vol. 270, pp. 2207–2212, 1993.
3. CDC Wide-ranging Online Data for Epidemiologic Research (WONDER), “CDC WONDER: Underlying Cause of Death 1999–2015,” 2017. [Online]. Available: <http://wonder.cdc.gov/wonder/help/ucd.html>. [Accessed 2017].
4. World Health Organization (WHO), “Social Determinants of Health: Key Concepts,” 2017. [Online]. Available: http://www.who.int/social_determinants/thecommission/finalreport/key_concepts/en/index.html. [Accessed 2017].
5. CDC, “Heart Health Information: About Heart Disease,” 2015. [Online]. Available: <https://www.cdc.gov/heartdisease/about.htm>. [Accessed 2017].
6. Alameda County Public Health Department, “The Health of Alameda County Cities and Places: A Report for the Hospital Council of Northern and Central California, 2010,” Oakland, 2017.
7. American Cancer Society, California Department of Public Health, “California Cancer Facts and Figures 2017,” 2017. [Online]. Available: http://www.ccrca.org/pdf/Reports/ACS_2017_FF.pdf. [Accessed 2017].
8. Public Health Institute; California Breast Cancer Research Program, “California Breast Cancer Mapping Project: Identifying Areas of Concern in California,” 2012. [Online]. Available: <http://www.cehtp.org/download/cancer/breast-cancer-mapping-report-final-full>. [Accessed 2017].
9. US Department of Health and Human Services, “HealthyPeople.gov: General Health Status,” 2011. [Online]. Available: <http://www.healthypeople.gov/2020/about/genhealthabout.aspx#years>. [Accessed 2017].

CONCLUSION

This report presents a snapshot of the health of the Berkeley community. It describes how health changes over time, how we compare to our County, the State, and to the National Healthy People 2020 goals. It also shows how groups within Berkeley compare with each other and geographically. Berkeley’s health is characterized by an overall excellent health status with striking health inequities. These patterns of health inequities are neither new nor unique to Berkeley

nevertheless, they are unjust and unacceptable. The underlying causes and their solutions lie in the environments and neighborhoods in which people are born, grow, live, work, and age. Truly addressing the root causes of health inequities requires focused, consistent, comprehensive, and sustained effort on many fronts. Through strategic collaboration, a unified vision, and broad community engagement we can achieve our mission of optimal health and wellness for all.

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 as defined by the Centers for Disease Control and Prevention (CDC). The examples below demonstrate how Berkeley’s public health activities address these essential services. This is not a comprehensive account of Public Health activities.

Essential Service	Berkeley Examples
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)
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
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
4. Mobilize community partnerships and action to identify and solve health problems	<ul style="list-style-type: none"> • Berkeley Healthcare Preparedness Coalition/Hub • Comprehensive Perinatal Services Provider Roundtables
5. Develop policies and plans that support individual and community health efforts	<ul style="list-style-type: none"> • Tobacco ordinances • Sugar Sweetened Beverage Tax and Healthy Berkeley Program
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
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
8. Assure a competent public and personal health care workforce	<ul style="list-style-type: none"> • YouthWorks and AmeriCorps Programs • Training site for students interested in health (high school, college, graduate, and clinical)
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 Infection Control Committee
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 • Evaluation of impact of Sugar Sweetened Beverage Tax

LOOKING AHEAD

The City of Berkeley Health Status Report 2018 is the groundwork from which the Public Health Division, the Department of Health, Housing and Community Services, the City, and the Berkeley community will identify priorities, develop a strategic plan, and implement tailored interventions to improve community health. This path to better health is not one we can take alone. It is the charge of the entire community to create a healthy Berkeley. As a community member, you



make choices that impact not only your own personal health, but the health of your families and neighbors. Community leaders in our City government, community based organizations, faith institutions, and local businesses, in addition to providers and residents all have a role to play in creating a healthier community. Collectively, we can achieve a better quality of life for all who live in Berkeley. We look forward to working with you.



TECHNICAL NOTES

DATA SOURCES

Population and Demographics

- **The Decennial Census:** the Census is a total count of the population and the main source for population demographics and characteristics. It is conducted every ten years by the U.S Census Bureau.
- **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.
- **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.
- **The California Employment Development Department (EDD):** The source of estimates of employment and unemployment rates for this report. This data is produced for the nation, the state, and for selected local areas.

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 was reported by the Berkeley Unified School District (BUSD) to the California Department of Education.
- **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. 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) and the United States (Youth Behavioral Risk Survey).

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, organized by gender and age. This chart offers some degree of protection against diseases resulting from sedentary living.

DATA SOURCES *continued***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.
 - 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.

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).
- **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.
- **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.

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.

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, emergency department visits, and hospital workforce.

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.

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.

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).

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.

KEY TERMS

Adjustment Disorders: A psychological response, such as marked distress, to an identifiable stressor or stressors.

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.

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.

Anxiety Disorders: Disorders with prominent anxiety symptoms such as panic and/or phobias.

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.

Bipolar Disorders: Disorders characterized by marked mood swings, including periods of depressive symptoms and periods of elevated mood/mania.

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.

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.

Cultural Competence: A set of behaviors, attitudes, policies, and procedures that enable individuals to work effectively across cross-cultural and diverse linguistic situations.

Mortality Rate (Death 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 in the same period.

Disorders of Infancy, Childhood, or Adolescence: Psychological disorders usually first diagnosed early in an individual's life.

Disruptive Behaviors: Disorders characterized by rule-breaking, aggressive, and/or oppositional behavior by a child or adolescent.

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.

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.

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.

Federal Poverty Level (FPL): the indicator the U.S. government uses to determine who is eligible for federal subsidies and aid. The Department of Health and Human Services issues new poverty guidelines each January. In 2015, the FPL for a family of 4 was an annual income of \$24,250.

Health Disparities: Differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups.

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.

Healthy People 2020 (HP2020) is a national ten-year framework for improving the health of all people in the United States. It identifies four overarching goals:

- o Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- o Achieve health equity, eliminate disparities, and improve the health of all groups.
- o Create social and physical environments that promote good health for all.
- o Promote quality of life, healthy development, and healthy behaviors across all life stages.

Homelessness: A state of residence which can be categorized into one or more of the following:

- 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.

- 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.

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.

- 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.

Linguistic Isolation: Since 2010 the U.S. Census term, “Linguistic Isolation” has been replaced with the descriptive phrase: “Households in which no one 5 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 5 years old and over have at least some difficulty with English.

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.

Major Depression (Major Depressive Disorder): Chronic feelings of sadness and depression which are frequent enough to interfere with an individual’s daily life.

Mood Disorders: Mental disorders characterized by alternating periods of elevated and depressive moods.

Obese: Individuals who have a body mass index (BMI) of 30 or greater.

Overweight: Individuals who have a BMI between 25 and 29.9.

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.

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 2015 threshold for a family of 4 was an annual income of \$24,250. 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.

Premature birth: A live birth with a gestation age of less than 37 weeks.

Prescription drug reactions: Any adverse effect caused by any drug properly administered in therapeutic or prophylactic dosage.

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.

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.

KEY TERMS continued

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).

Timely Initiation of Prenatal Care: Defined as one or more prenatal visits to a doctor occurring in the first trimester of the pregnancy.

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.

Unemployment Rate: The number of unemployed individuals divided by the labor force. The rate is expressed as a percentage.

Unintentional Injuries: Injuries which are accidental or without personal intent, such as motor vehicle crashes or fires.

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 ($75-70=5$).