City of Berkeley

Health Status Report, 2001
Mortality and Hospitalizations

City of Berkeley
Department of Health and Human Services
Public Health Division

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Acknowledgements

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We would also like to recognize the following people for their assistance:

Paul Navazio, Budget Manager, Office of Budget and Fiscal Management
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Introduction

Every local health department in the State of California has the responsibility to gather health data on its residents, analyze that data, and report back to communities on their health status. The purpose of these reports is to provide useful information to understand a population's health in order to identify health priorities, plan and improve services, and guide health policy. The Berkeley Public Health Division began publishing Health Status Reports in 1997 and continued yearly until 1999. In the past, these reports were technical documents intended for our public health partners, health care providers, researchers and policy makers. However, the interest generated by the Health Status Report for 1999 revealed that many people in the community were hungry for health data and used it to plan community initiatives to improve the health of their neighborhoods. No better use of these data could have been envisioned. To nurture that community interest, we have changed the format of our reports to make them more readable and accessible.

Three years ago, our annual data report presented information about significant differences or disparities in health status between residents living in different parts of Berkeley and specific health disparities between Whites and African Americans in Berkeley. For example, our report revealed that Berkeley had among the highest percentage of low birth weight births for African American women (for all U.S. cities of a similar size). At the same time, the percentage of low-birth weight births among White women was the lowest in the nation.

Our report also revealed a disparity in mortality for Berkeley residents based on race. African Americans in Berkeley have shorter life spans in general than do Whites in Berkeley. Our health data shows that African Americans in Berkeley have significantly higher premature death rates for preventable or manageable diseases such as hypertension, stroke and diabetes.

These findings were a surprise for our community. And, to our credit, we have responded—in city government, in the private sector and in the neighborhoods. The Berkeley Public Health Division has worked diligently for the last three years to better understand the nature and origin of these disparities. New programs have been developed and ongoing services have been focused on eliminating disparities. Some of these new Public Health programs are the Black Infant Health Program, the Centering Pregnancy Program, the Chronic Disease Prevention Program and the Take It Outside Campaign of the Tobacco Prevention Program. Further, Community Action Teams (CATs) in South and West Berkeley are bringing residents together to understand the root causes of these health disparities and to look at solutions proposed by the community.

Our ultimate goal, and perhaps the single most important element of our work, is to develop and implement strategies to close gaps in health outcomes so that all Berkeley residents can enjoy long, healthy and productive lives.

What's Inside?

This report focuses on Mortality as one of the two largest health disparities identified in Berkeley. Inside you will find a section on general demographics so that you can put this information in a community context. The next several sections focus on the frequency and leading causes of death and hospitalization in Berkeley. We also examine premature deaths in detail. Comparisons are made between areas of Berkeley as well as surrounding communities.

We hope you find this report useful and that it serves as a catalyst for healthy change in your neighborhood.

Future Community Health Reports

Look for future Community Health Reports with information about Low Birth Weight, HIV/AIDS and Sexually Transmitted Infections, and Adolescent Health. By focusing health reports on special topics, we hope to analyze our data in greater depth and to increase our understanding about these community health issues.

Executive Summary

This Health Status Report focuses on mortality and related hospitalizations. Mortality and hospitalization data are important measurements of a community's health. They demonstrate causes of death, frequency and impact of early death, and how death rates vary between different sectors of the Berkeley community. Ultimately, with a better understanding of why people die earlier than expected, we can focus on the prevention of disease and work toward a healthier community in which all residents enjoy longer, more productive lives.

Mortality data are one of the most reliable data sets and represent the ultimate unequivocal endpoint for measuring health. These statistics provide a comprehensive picture of community health. By comprehensive, we mean that in time, everyone will be a part of the picture, albeit retrospectively. We use many different measures to talk about mortality. All are valid measures of the health of a community, but provide different views of that health from differing perspectives. The measures used in this report are:

Life Expectancy—A summary measurement of population health status based entirely on the mortality experience of a hypothetical cohort that is subjected throughout its lifetime to a set of age-specific death rates. Translated into plain English, this means taking a defined group and counting deaths from all causes at every age of life. Once that is done, it can be estimated how many of this group will survive each successive year and a life table can then be constructed for that group. Life expectancy can be calculated for any age, but is most often expressed as *life expectancy at birth*, which is most heavily influenced by deaths among infants and the very young. Life expectancy should not be confused with *life span* which is the maximum age biologically possible for the human species. **Life expectancy is used to estimate the number of years left in the life of a person at age *x;* this number changes as one progresses through life.**

Crude Mortality Rate—A summary measure calculated by dividing the total number of deaths from any cause in a given population by the number of individuals in that population, then multiplying the result by 100,000. Rates express the number of events that occurred over a specified time period (e.g. 1996-1998) per unit of population (per 1,000 or per 100,000 people). Rates are better than a count of the absolute number of cases because they are standardized for every 100,000 people. So the number of deaths occurring in a small population can be compared to the number of deaths in a large population without being distorted because of the difference in sizes of the two populations. However, crude rates can be misleading if there are substantial differences between the populations being compared such as different age structures.

Age Adjusted Mortality Rate—Since age affects most diseases, mortality rates vary with the age composition of a population. An older population will have more deaths than a younger one. Age adjustment eliminates age as a variable in the calculation of the death rate. It statistically removes the difference in age structure of a population so that

different populations can be compared with "all things being equal," at least in terms of age.

Average Age at the Moment of Death—All ages at the moment of death in a population are added up and divided by the number of deaths that occurred. This statistic gives a picture of the average age at death of a person in a given population. This can be done for all causes or be cause specific.

Years of Potential Life Lost—This measures the impact of premature death in a population. There are more years of potential life lost in the deaths of young people than deaths to elderly persons. Many of the deaths to younger persons are preventable and amenable to public health interventions.

The data included in the Year 2002 Health Status Report comes from a variety of sources. Most of the data on mortality is generated from death certificates collected by the Berkeley Public Health Division, Office of Epidemiology and Health Statistics. This data is necessarily over two years old as that is the length of time required to verify and complete this data set at the state. Other data sources include the California Department of Finance, US Census Bureau, California Office of Statewide Health Planning and Development. With some exceptions, the data included in this report cover the years 1996 to 1998. It is necessary to analyze Berkeley data in 3-year groupings so that year to year variation is eliminated. It is important to note that the mortality data included in this report cannot be compared with data from 1999 and beyond. Beginning in 1999, deaths are coded using the International Classification of Diseases, Tenth Revision (ICD-10). This change in coding is a worldwide standard created by the World Health Organization. Prior to 1999, all deaths were coded using the ICD, 9th revision. Mortality rates before 1999 are not comparable to those beginning in 1999. Thus 1999 is the base year for comparisons between future years and trend analysis between pre-1999 and post-1999 will not be statistically reliable for mortality data. Whenever possible, we have included national, state or county data for comparison of mortality data.

Highlights of Major Findings

Demographics of Berkeley population:

- According to the 2000 Census, there are 102,743 residents living in Berkeley. This is essentially no change from the 1990 Census population report of 102,724 residents.
- Since the 1990 Census, the population over the age of 85 has increased by 17% and the population under the age of 5 has decreased by 12%.
- Ten percent (10%) of the Berkeley population is over the age of 65 years.
- Twenty-nine percent (29%) of the Berkeley population is between the ages of 30-49 years.
- The median age for Berkeley residents is 32.5 years.
- Berkeley's population continues to be ethnically and racially diverse: 55.2% of residents are White, 16.4% Asian/Pacific Islander, 13.3% African American, 9.7% Hispanic/Latino, and 0.3% American Indian.

?? For the first time a multi-racial category in the census data provided residents the opportunity to identify themselves with 2 or more racial or ethnic groups. 4.5% of Berkeley residents self-identified as multi-racial.
?? Compared to 1998 population estimates presented in the 1999 Health Status Report, there has been a slight increase in the Asian/Pacific Islander population in Berkeley (1.8%) and a more noteworthy decrease in the African American population (5.8%). The population of Hispanic/Latino and White residents in Berkeley is relatively unchanged.

Mortality or Death:

?? The overall age adjusted death rate for all causes of death in Berkeley is 3 times greater for African Americans than for the White population. By comparison, the overall age adjusted death rate for African Americans in the United States as a whole is 1.5 times greater than the age adjusted death rate for Whites in the U.S.
?? In 1999, the life expectancy at birth in the City of Berkeley was 79.9 years. However, for African Americans, 50% of deaths occur before the age of 75, whereas for Whites 36% of deaths occur before the age of 75.
?? Heart disease, cancer and stroke are the top three causes of death in Berkeley and account for 59% of all deaths. Cancer is the leading cause of death for Whites and heart disease is the leading cause of death for African Americans in Berkeley.

Specific Causes of Death:

Cancer

?? African Americans in Berkeley are twice as likely to die from any form of cancer than are Whites. African Americans are also hospitalized for cancer at a greater rate than any other racial or ethnic group.
?? Lung cancer is the leading cause of cancer-related deaths in Berkeley. Most lung cancer deaths and disease are related to tobacco use and could be prevented by not smoking or quitting smoking.
?? The age-adjusted mortality rate for lung cancer is 3 times higher for African Americans than for Whites.
?? Breast cancer is the most common cancer related death and the third leading cause of all deaths among women in Berkeley. The rate of death from breast cancer is higher in Berkeley than in Alameda County or the State of California.
?? The age-adjusted mortality rate for African American women dying of breast cancer is 1.3 times higher than that of White women, yet White females are diagnosed with breast cancer at a rate 1.5 times higher than that of African American females.

Coronary Heart Disease

?? Heart disease is the leading cause of death for Berkeley residents in 1998. Many of these deaths could be prevented through lifestyle changes in diet, exercise and smoking.
?? The age-adjusted mortality rate for coronary heart disease for African Americans is more than 3 times that of Whites in Berkeley.

?? African Americans are 12 times more likely to be hospitalized for hypertensive heart disease than Whites in Berkeley. Hypertension (or high blood pressure) is a common precursor to heart disease and stroke.
?? The rate of hospitalization for diabetes is 10 times greater for African Americans than that of Whites and Asian/Pacific Islanders. The risk of hospitalization for diabetes for Hispanics is 3 times greater than for Whites or Asian/Pacific Islanders.

Cerebrovascular Disease (Stroke)

?? Stroke is one of the top 3 leading causes of death for Berkeley residents. Many stroke deaths can also be prevented by changes in diet, exercise and smoking.
?? The risk of dying from stroke is almost 5 times higher for African Americans than it is for Whites in Berkeley.

HIV/AIDS

?? The age-adjusted mortality rate for African Americans is 4 times higher than for Whites.
?? AIDS is the second leading cause of premature death among African Americans and the 5th leading cause of premature death for Whites in Berkeley.

Unintentional Injury

?? Unintentional injuries include all injuries caused by an unanticipated event, such as falls, poisonings, motor vehicle injuries, bicycle injuries, burns, drowning and unintentional shootings. Unintentional injuries are generally preventable but are one of the ten leading causes of death in Berkeley for 1998.
?? The risk of dying from unintentional injuries is 2 times higher for African Americans than for Whites.
?? In 1999, the three major reasons for hospitalizations due to unintentional injuries in Berkeley were: falls affecting primarily persons over the age of 65 years (40%); the use of therapeutic drugs that caused an adverse effect (34%); and motor vehicle injuries (10%).

Intentional Injury

?? Intentional injuries are those injuries purposely inflicted including both homicide and suicide.
?? The risk of dying due to injuries purposely inflicted by another person is 13.5 times higher for African Americans than it is for Whites.
?? Forty-seven percent (47%) of hospitalizations for intentional injuries are among young people ages 14-29 years. 71% of these injuries occurred to males.
?? Sixty-seven percent (67%) of suicide deaths in Berkeley are committed by Whites. Suicide is the leading cause of premature death for Whites in Berkeley and the 8th leading cause of death overall.

Conclusions

For the most part, the African American and White population suffer from the same ten leading causes of death, but African Americans in Berkeley still die at a younger age overall than Whites in Berkeley. The results of this report support and are consistent with those originally presented in the 1999 Health Status Report.

When we look at specific causes of death and examine how these causes effect length of life, African Americans in Berkeley have a far greater risk of premature death than do Whites in Berkeley. Premature death is defined by the Centers for Disease Control and Prevention (CDC) as dying before the age of 75 for United States residents. Additionally, when we compare age-adjusted mortality rates for leading causes of death in Berkeley to the 2000 National Health Objectives (national standards set by the CDC), the White population in Berkeley usually meets these standards, whereas the African American population in Berkeley does not. When compared to national data, in general, Whites in Berkeley are healthier and live longer, whereas African Americans in Berkeley suffer more disease and die earlier than African Americans in the United States.

The evidence of health disparities among racial/ethnic groups in Berkeley has not significantly changed since the last report, but change in health status for an entire population does not change that quickly. It takes diligent and focused efforts at all levels and over many years to close gaps in health status -- from changes in the infrastructure of health services to community action and individual response at the grass roots level.

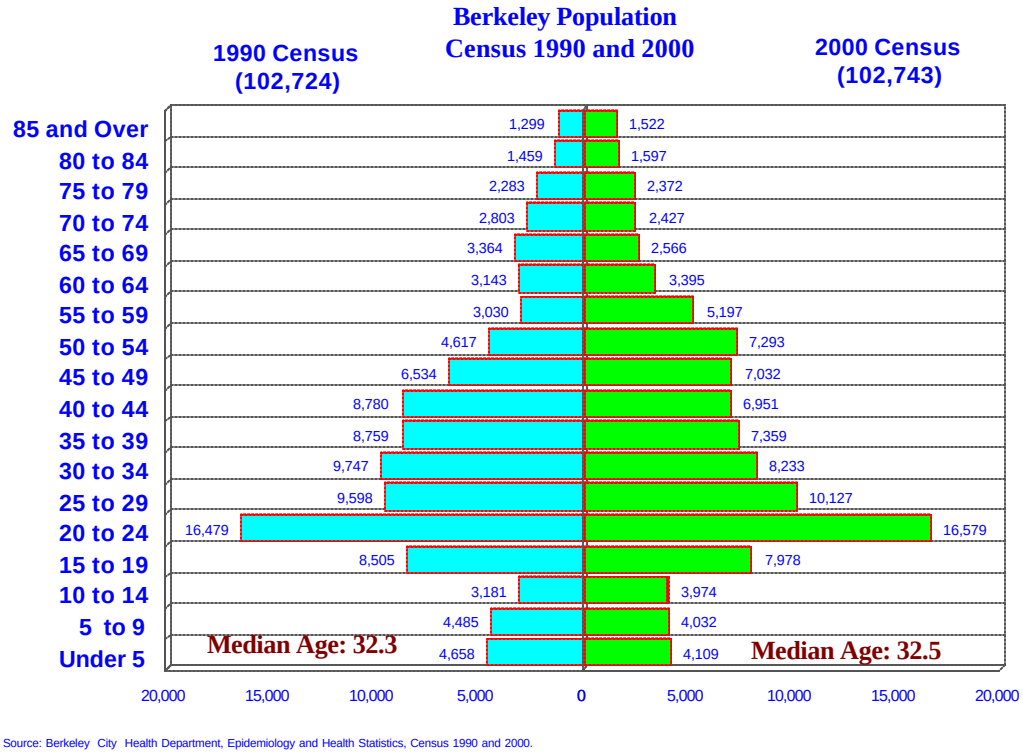
It should be noted that many of these health disparities exist in other communities. The knowledge of the existence of health disparities is not new. What is new to Berkeley is specific comparative data, that is, data specific to a community, that can help neighborhood and community groups focus efforts aimed at the elimination of these disparities.

It has long been recognized that the root causes of poor health and early death are enmeshed in issues of class and race in this country and around the world. In the larger arena, the social determinants of health need to be addressed. In the Public Health arena, prevention of disease and disability and access to quality health care need to be addressed. The Health Status Reports are valuable tools for both of these arenas. The mortality and hospitalization section examines in detail the differences in disease, hospitalization and cause of death between racial/ethnic groups in Berkeley. This report should be used to help identify gaps in services and unmet health needs and, in turn, guide the development of programs, the provision of health services, and health education strategies. All of these are strong indicators of social equality. Everyone at all levels has the responsibility to respond and take action to eliminate health disparities in Berkeley – city government, community-based agencies, the private sector and residents. Only by working collectively will Berkeley be a healthier community.

Demographics: A Diverse Berkeley Community

Berkeley Population

According to information recently released from the 2000 Census, there are 102,743 residents living in Berkeley, roughly the same number as in 1990. The following graph is called a Population Pyramid. It allows one to get a quick picture of how the age distribution in Berkeley has changed in the decade from 1990 to 2000.



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Census 1990 and 2000.

As one can see, we are getting slightly older on the whole and our child population under the age of 19 is slightly smaller. None of these slight changes reach statistical significance as our median age, that is the age at which there are equal numbers of people younger and older, is virtually unchanged.

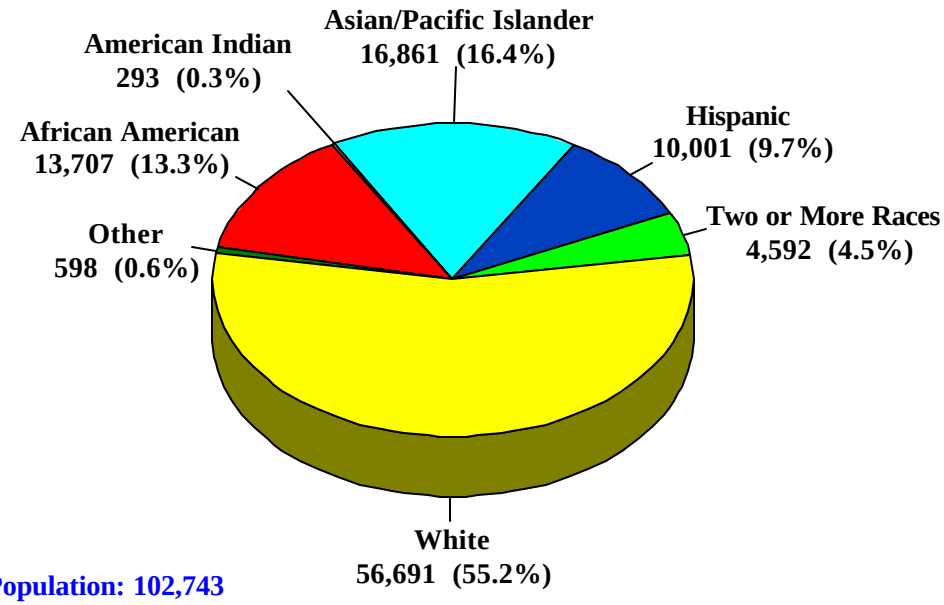
According to 2000 Census data:

- 10% of the total population of Berkeley is over the age of 65 years, which is consistent with the rest of Alameda County.
- The large numbers of young people in the 20-24 age category (16,579) represents the high numbers of students living in a city with a university.

- 29% of the population is between the ages of 30-49 years. This represents a 4% decrease, down from 33% in 1990. While this is not a significant decrease, it may represent a significant trend, as this is usually the age range when a population is the least mobile and most stable.
- The population over the age of 85 has increased by 17%, which is in keeping with the rest of the nation.
- The population under the age of 5 has decreased by 12%, which is a significant decrease and represents a decrease in the birth rate of Berkeley residents since the last decade and, possibly, the migration of young families out of Berkeley.

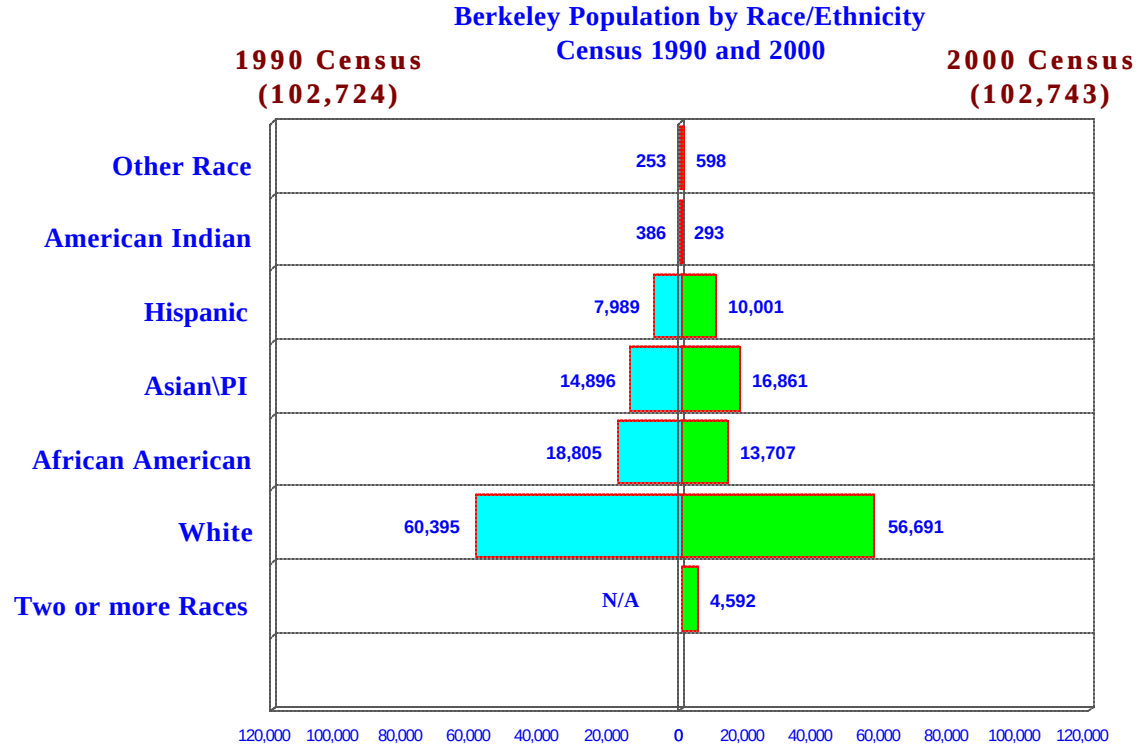
Berkeley Population by Race and Ethnicity

The following graph illustrates the diverse Berkeley community by racial and ethnic groups according to Census 2000 data. For the first time, the multi-racial category enabled residents to identify themselves with 2 or more racial groups: 4.5% of Berkeley residents identified themselves as multi-racial in 2000.



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Census 2000.

The following graph shows how the diversity of the city has changed during the past 10 years. Note that there has been a relative increase in the number of Hispanics (Latinos) and Asian/Pacific Islanders and a decrease in the number of African Americans and Whites living in Berkeley. These changes in the racial and ethnic makeup of Berkeley can be, at least in part, explained by the change in how data was collected for the 2000 census.



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Census 1990 and 2000.

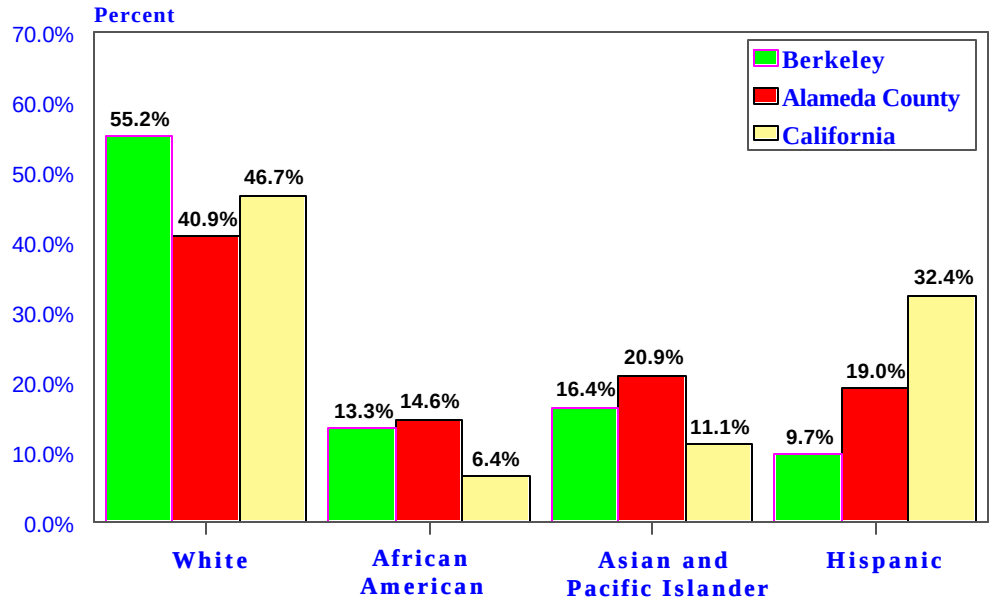
How Does Berkeley Compare to Alameda County and California?

The following graph compares the population of the City of Berkeley, Alameda County and California by race and Hispanic origin as reported in the 2000 Census. Hispanics are the fastest growing ethnic group in California and make up almost 1/3 or 32% of the State's population. In Berkeley, Hispanics are 9.7% of the population. While this percentage has increased during the past 10 years, Hispanics do not make up as large a percent of the population in Berkeley as they do in Alameda County (19%) or in California (32.4%).

African Americans comprise 13.3% of the Berkeley population compared to 14.6% of the total population of Alameda County and 6.4% of the State of California. Among the four cities in Alameda County with greater than 100,000 residents, Berkeley has the second largest proportion of African Americans, second only to Oakland (35.7%).

More than half of the population of Berkeley is White (55.2%) compared to 40.9% in Alameda County and 46.7% in California.

Population by Race and Hispanic Origin, Census 2000
City of Berkeley, Alameda County and California



Source: Berkeley City Health Departmentt, Epidemiology and Health Statistics; Census 2000.

Mortality and Hospitalizations

The ultimate measures of health for most people are the length of one's life and the overall quality of one's life. Increasing life expectancy measures the standard of civilization of a population. It implies healthy prenatal conditions, safe food and water, adequate nutrition, good health care, good housing, protection against toxins and environmental pollutants, adequate levels of physical activity and stability of government for a population. Progress in any one of these areas may have an incremental effect in increasing the life span of a population, however progress must be comprehensive to have marked and lasting effects. That is why it is estimated that increasing life span by one year involves ten years of concerted effort and substantive change in these life-protecting factors.

Why Look At Mortality?

Understanding why and how people die is necessary in order to prevent premature death. By understanding how and why some people die earlier than others, we can focus our efforts on reducing certain preventable causes of death and can help people better manage the conditions with which they currently live.

In this section we will examine crude death rates to get a sense of the magnitude of mortality in our community but then apply a statistical calculation to age-adjust the rates as death is certainly correlated with increasing age. Then we examine the ten leading causes of death in Berkeley and compare these causes to Alameda County, and some state and national data. Next we look at the distribution of death by age, comparing African Americans to Whites in Berkeley to introduce discussion of premature mortality. Premature mortality is defined in the United States as dying before the age of 75 according to data analysis by the Centers for Disease Control and Prevention (CDC). Specific causes of death are then analyzed in greater detail. Data for Hispanics and Asian/Pacific Islanders are included in the discussion when there are significant numbers to analyze.

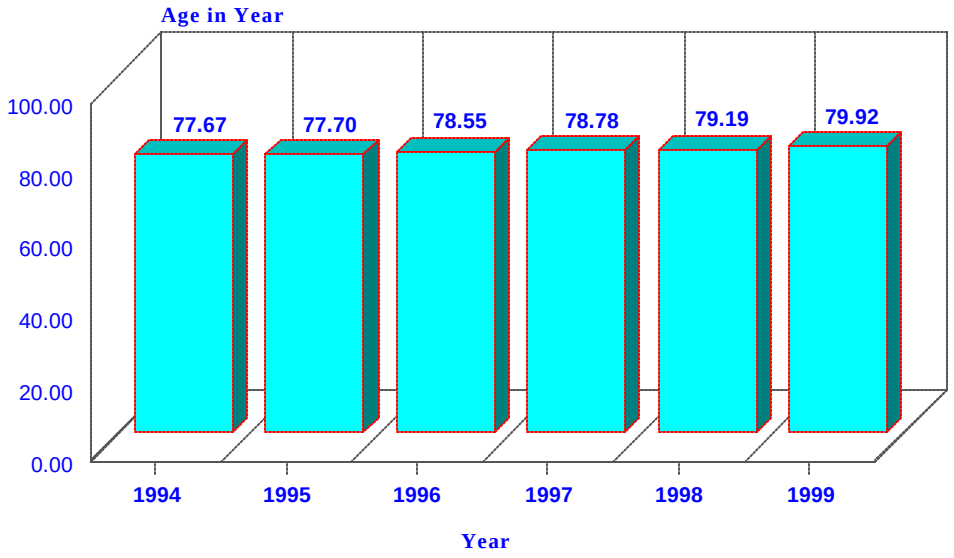
Life Expectancy

Life expectancy can be calculated for any age, but is most often expressed as *life expectancy at birth,* which is most heavily influenced by deaths among infants and the very young. In contrast to age adjusted mortality rates, life expectance is not influenced by the age structure of a population. Life expectancy should not be confused with *life span, which* is the maximum age biologically possible for the human species. **Life expectancy is used to estimate the number of years left in the life of a person at age *x*.** This number changes as one progresses through life.

In the United States, life expectancy increased dramatically during the first half of the 20th century. People gained approximately 30 more years of life with 25 of those years directly attributable to public health measures such as ensuring the safety of the food and water. This increased life expectancy in turn caused a substantial change in the age structure of the population in the second half of the century. There was an increase in the proportion of the

elderly population and an increase in the number of non-communicable chronic diseases primarily affecting older persons.

Life Expectancy at Birth by Year
City of Berkeley, 1994-1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Database, 1994-1999

As shown in the above graph, the life expectancy at birth in the City of Berkeley has been rising since 1994: in 1999 it was 79.9 years, an increase of 2.2 years as compared with 1994. Compared with life expectancy for the U.S. population (76.7 years), Berkeley residents are expected to live 3.2 years longer than the national average and 1.2 years longer than the average life expectancy of Californians (78.7 years). This increase in life expectancy in this time period is a result of a few prominent factors:

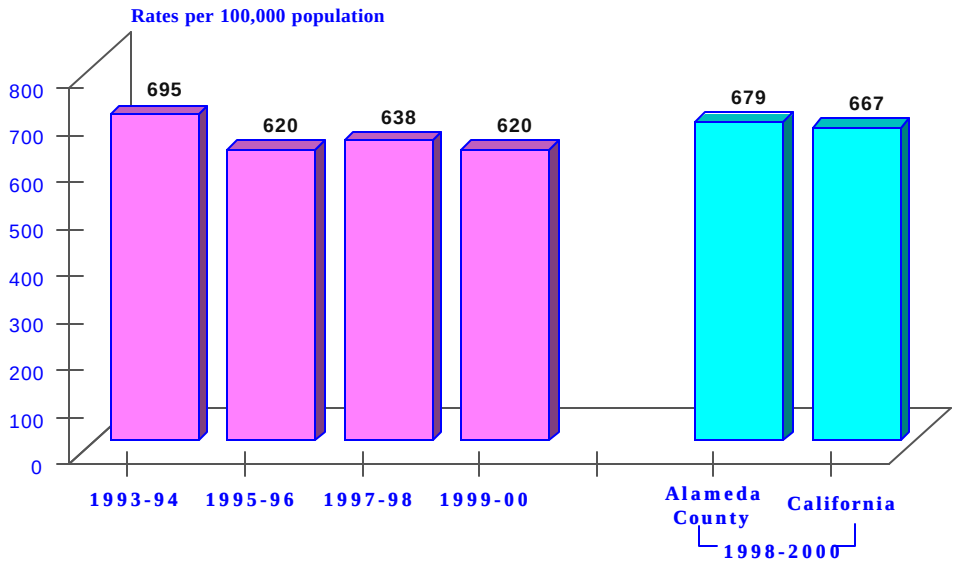
1. Decreases in mortality from HIV/AIDS, heart disease and homicide
2. Increase in percent of Asian population
3. Decrease in African American population.
4. Total population, as a whole remained stable: 102,703 in 1990 and 102,743 in 2000.

Crude Mortality Rate

The crude mortality rate expresses the risk of dying from any cause and at any age in a given year and, together with birth rate and migration, is one of the determinants of population size.

The following graph shows the crude mortality rate since 1993 per 100,000 persons for two years averaged. During the past eight years, the averaged crude mortality rates in Berkeley show a decrease of 12% from 1993-1994 (695/100,000) to 1999-2000 (620/100,000). The statistical risk of dying in Berkeley from any condition and at any age in a given year is approximately one death for every 161 persons.

Crude Mortality Rates (Two Years Averaged)
City of Berkeley, 1993-2000



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1993-2000, County Health Status Profiles, 2002, CDHS & CCLHO.

The chart below averages five years of mortality data for the 12 cities of Alameda County. As can be seen, Berkeley has the highest crude mortality rate for African Americans of any of these cities. The differences in death rates in this chart are substantial, but may be due in part to differences in the age composition of the racial groups in each city.

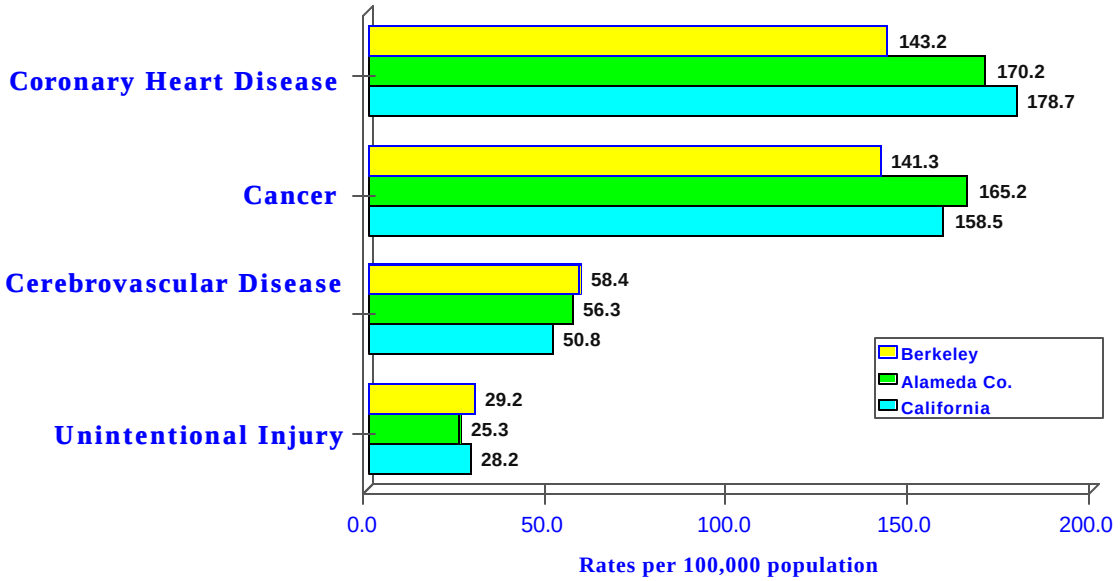
Crude Death Rates from All Causes
By Race/Ethnicity by City, 1994-1998

	African American	Asian/ Pacific Islander	Latino	White
Alameda	531.7	363.0	244.0	1078.6
Berkeley	1252.2	303.2	135.0	675.9
Castro Valley	735.7	302.8	272.4	1077.1
Dublin	39.5	186.8	123.4	408.2
Fremont	220.6	285.9	217.6	634.5
Hayward	533.0	417.4	299.4	1271.1
Livermore	377.0	251.2	193.2	574.1
Newark	418.8	325.5	185.1	643.8
Oakland	967.1	520.0	243.1	1361.0
Pleasanton	354.5	267.8	204.4	429.8
San Leandro	665.9	384.0	344.7	1509.5
Union City	379.7	308.5	277.9	1005.9
Alameda County	875.7	355.0	273.5	930.6

Data Source: Mortality Files, Alameda County Public Health Department

The following chart presents crude mortality rates for selected diseases for all races in Berkeley in 1998. Heart disease, cancer and stroke account for 60% of all deaths. The rate of death for coronary heart disease was 143.2 per 100,000 persons and 141.3 per 100,000 for cancer.

Crude Mortality Rates for Selected Conditions
City of Berkeley, 1998

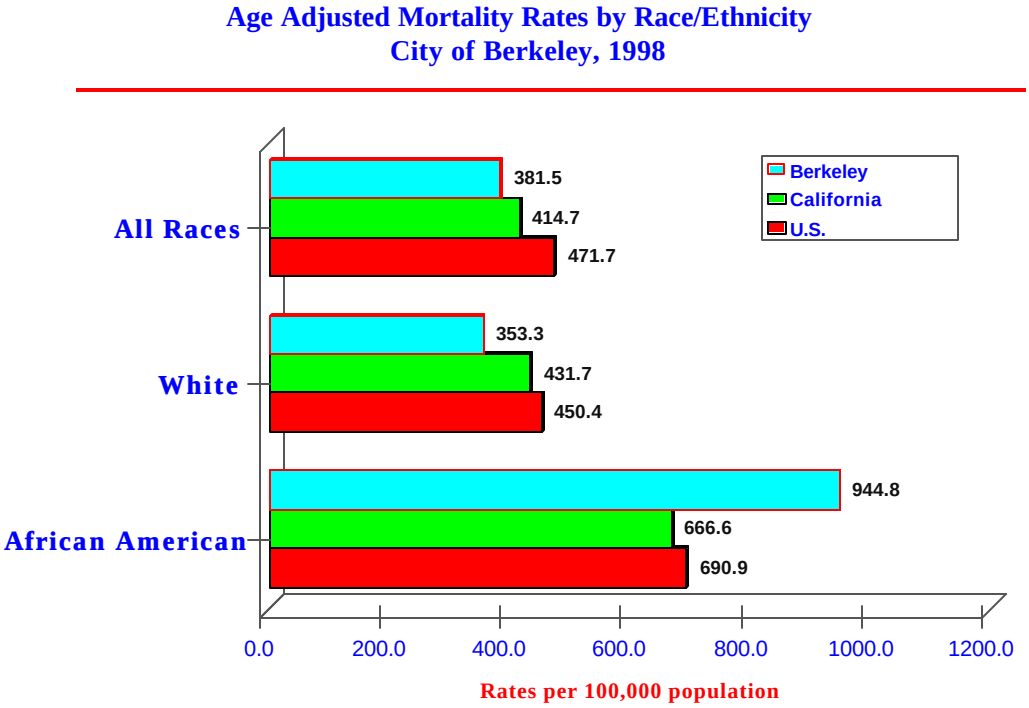


Note: Alameda County and California Rates are from 1995-1997.

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998, County Health Status Profiles, 1999, CDHS..

Age-Adjusted Mortality Rate

We all know that the real risk of dying increases as one ages in the United States. Crude mortality rates are highly affected by the age distribution of a population. For example, a population that is older will naturally have a higher mortality rate.



Source: Berkeley City Health Departmentt, Epidemiology and Health Statistics,Mortality Database, 1998, National Statistics Report, NCHS, July 24, 2000, CDHS.

In order to eliminate the effect of the age structure of a population and compare across different populations and geographical areas, death rates are age-adjusted using a standard population (in this report the 1940 U.S. standard population is used). This statistical adjustment only eliminates the variable of age, but does not weight deaths at younger ages more heavily than deaths at older ages. In Berkeley the age-adjusted death rate for all races in 1998 was 381.5 per 100,000 population, slightly lower than that of Alameda County (432.4/100,000) and California (425.7/100,000).

Our analysis of the disparity in death rates between racial/ethnic groups reveals that the age-adjusted death rate for African Americans in Berkeley is 3 times that of the White population. The age-adjusted death rate for African Americans in Berkeley declined 14% from 1995-1997 to 1998 yet the gap between Whites and African Americans remained unchanged. In comparison, in 1998, the age-adjusted death rate for African Americans in the U.S. was 1.5 times that of Whites.

Leading Causes of Death

The following chart lists the leading causes of death for Berkeley residents in 1998 and compares them to the leading causes in 1997 (1998 is the most recent data available). The number of deaths and the percent of total number of deaths are included for both years.

Ranking the leading causes of death is a common method of presenting mortality data and it is a useful tool to demonstrate the burden of disease-specific deaths in a population. Causes of death are ranked according to the number of deaths in a given year.

Leading Causes of Death for Berkeley Residents
City of Berkeley, 1997 and 1998

Cause of Death	1998: # (%)	1997: # (%)	1997 Rank
1. Heart Disease	189 (27.9)	203 (28.9)	1
2. Cancer	150 (22.1)	158 (22.5)	2
3. Stroke	62 (9.1)	73 (10.4)	3
4. Pneumonia/Influenza	37 (5.4)	29 (4.1)	5
5. Unintentional Injury	31 (4.6)	13 (1.9)	8
6. Hereditary & Degenerative Diseases of the Nervous System*	20 (2.9)	-	-
7. Chronic Obstructive Pulmonary Diseases (COPD)	19 (2.8)	40 (5.7)	4
8. Suicide	15 (2.2)	12 (1.7)	9
9. Diabetes	13 (1.9)	15 (2.1)	7
10. Mental Disorders	12 (1.8)	-	-
11. AIDS	8 (1.2)	13 (1.9)	8
12. Cirrhosis	12 1.8)	17 (2.4)	6
13. Homicide	4 (0.6)	10 (1.4)	10
All Other Causes	106 (15.6)	136(19.9)	
Total Deaths	**678 (100%)**	**702 (100%)**	

Source: Berkeley Public Health Division, Epidemiology and Health Statistics, Mortality Data, 1997-1998
**Includes: Parkinson's and Alzheimer's diseases.*

The chart above lists the leading causes of death accounting for over 80% of all deaths in Berkeley in 1998. The top three causes of death remained the same as in 1997, although the absolute numbers decreased. Heart disease, cancer and stroke accounted for 59% of all deaths in 1998 as compared with 62% for 1997.

In the following tables we examine the leading causes of death by race/ethnicity. The top three causes of death (heart disease, cancer and stroke) remain the same for both African Americans and Whites although they are ranked differently. Cancer is the leading cause of death for Whites in Berkeley and heart disease is the leading cause of death for African Americans.

For the first time since 1997, AIDS is no longer among the ten leading causes of death for Berkeley as a whole. However AIDS is the 8th leading cause of death among African Americans. While diabetes is the 5th leading cause of death among African Americans, it is the 10th leading cause of death for Whites. Finally, suicide is the 7th leading cause of death among Whites in Berkeley.

Leading Causes of Death Among Whites
City of Berkeley, 1996-1998

Condition	# (%)
Cancer	265 (23.7)
Coronary Heart Disease	256 (22.9)
Stroke	90 (8.0)
Pneumonia/Influenza	53 (4.7)
COPD	51 (4.6)
Unintentional Injuries	41 (3.7)
Suicide	30 (2.7)
Degenerative Diseases Of Nervous System	29 (2.6)
Cirrhosis of Liver	19 (1.7)
Diabetes Mellitus	12 (1.1)
All Other Causes	272

Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Data;1996-1998.

Leading Causes of DeathAmong African Americans
City of Berkeley, 1996-1998

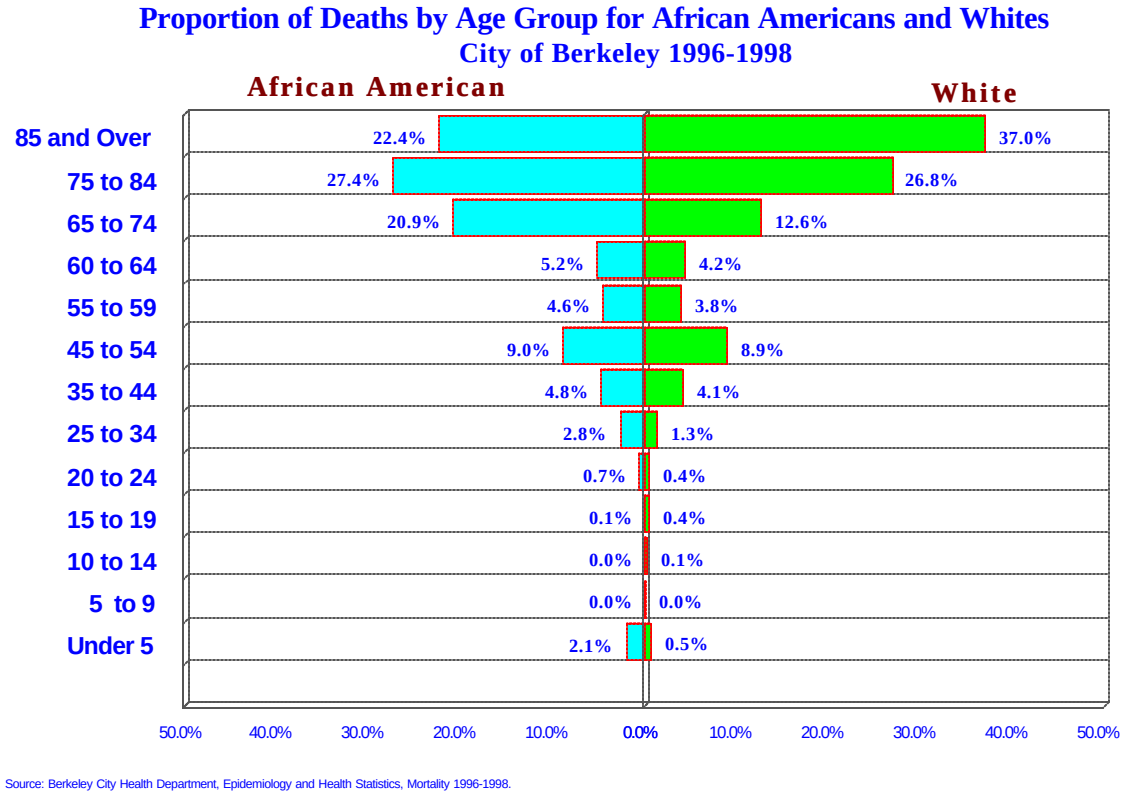
Condition	# (%)
Coronary Heart Disease	178 (24.3)
Cancer	162 (22.1)
Stroke	77 (10.5)
Pneumonia/Influenza	31 (4.2)
Diabetes Mellitus	27 (3.7)
COPD	19 (2.6)
Unintentional Injuries	18 (2.4)
AIDS	14 (2.0)
Cirrhosis of Liver	14 (2.0)
Homicide	13 (1.8)
All Other Causes	180

Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Data;1996-1998.

In absolute numbers, for this three-year period, there were 2,064 total deaths in Berkeley. Of this total, African Americans account for approximately 35% despite being only 13% of the total population.

Premature Mortality

Now, to directly address the gap in life expectancy between African Americans and Whites, the following graph illustrates the age distribution at death by race.



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality 1996-1998.

As is evident in the graph, African Americans die at significantly younger ages than do Whites in Berkeley. For African Americans, 50% of deaths occur before the age of 75, whereas for Whites, 36% of deaths occur before the age of 75. Mortality is also significantly higher for African Americans between the ages of 25 to 34 and under the age of 5.

A more sensitive indicator of the effect of mortality on a population is a measure called Years of Potential Life Lost (YPLL). It is a measure of premature mortality or death before the age of 75 in the United States. Deaths of young people signify more years of potential life lost than do deaths of elderly persons. When the leading causes of YPLL are ranked for 1998, they differ significantly from the leading causes of death at any age.

According to 1998 data, the next chart shows that suicide has the most impact in terms of lost years of productive life from a single cause. In 1993, AIDS was the leading cause of YPLL and in 1998, it is ranked 10th. When all cancers are grouped, however, cancer is by far the most significant contributor to early death (before age 75) in Berkeley.

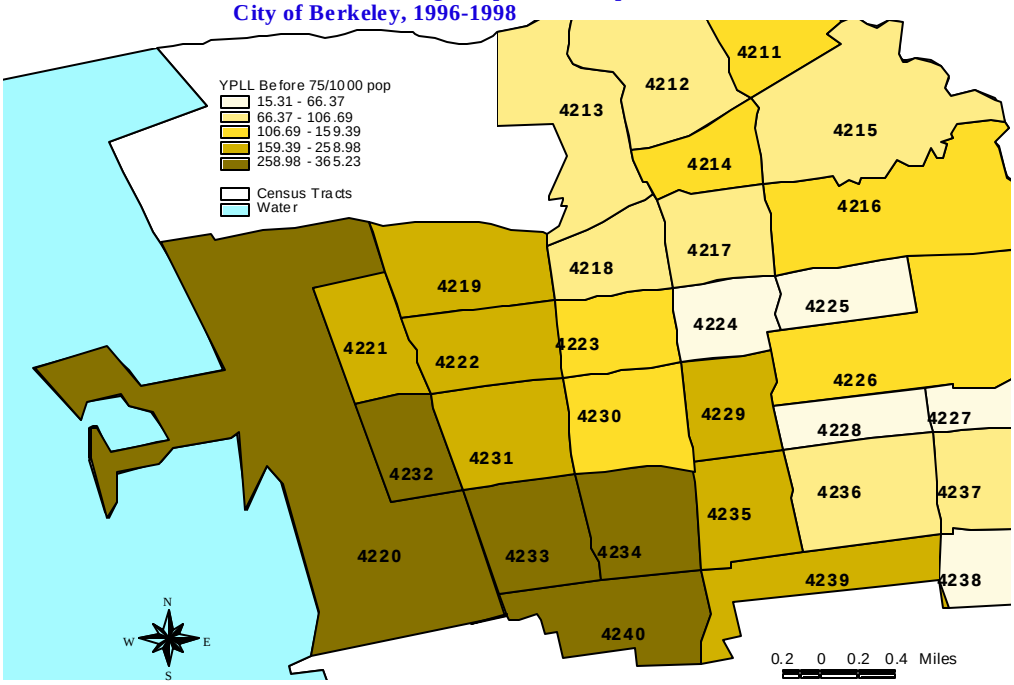
Ten Leading Conditions of Years of Life Lost Before Age 75
City of Berkeley, 1993 and 1998

Condition	1998 Rank	1993 Rank
Suicide	1	3
Unintentional Poisoning	2	9
Lung Cancer	3	4
Myocardial Infarction	4	8
Breast Cancer	5	7
Homicide	6	6
Coronary Atherosclerosis	7	.
Liver Cirrhosis	8	.
Pancreas Cancer	9	.
AIDS	10	1
Conditions Originating in the Perinatal Period	.	2
Motor Vehicle Traffic Injury	.	5
Colon Cancer	.	10

Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Data; 1998.

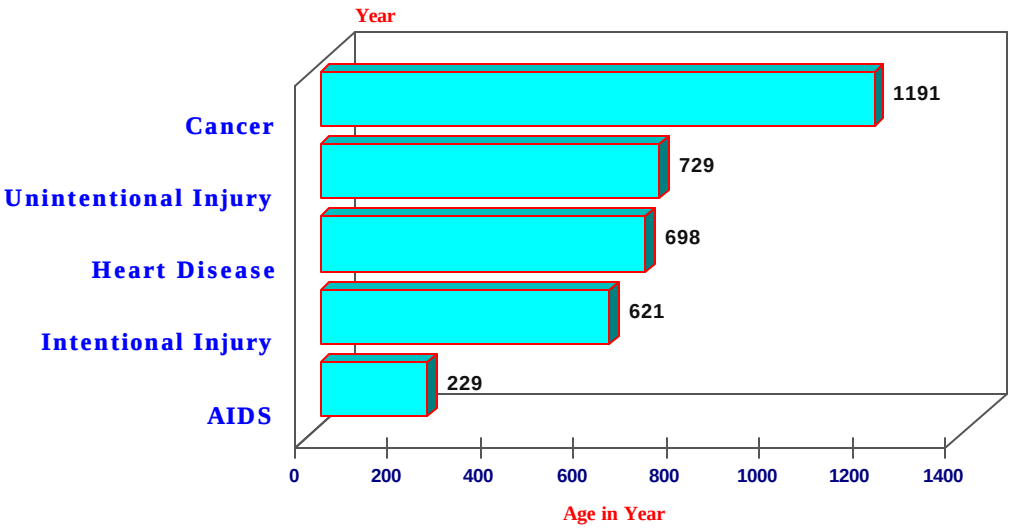
The following map represents the number of Years of Potential Life Lost Before Age 75 per 1000 people in each census tract. As you can see by the heavily shaded regions, census tracts in South and West Berkeley have the highest number of premature deaths each year. This data is consistent with previous analysis and reports showing a high concentration of population at risk for premature mortality in this geographical area.

Years of Potential Life Lost Before Age 75 per 1000 Population
City of Berkeley, 1996-1998



As previously discussed, when all cancers are grouped, cancer is by far the most significant contributor to early death. It is the second leading cause of death for all Berkeley residents and the number one cause of death for Whites. Approximately one out of four deaths occurring in a given year in Berkeley is caused by cancer. This graph also shows the significant difference in YPLL between cancer and AIDS. As mentioned earlier, in 1993, AIDS was the leading cause of YPLL and in 5 years has dropped to the 5th leading cause when all cancer deaths are grouped together.

Years of Potential Life Lost Before Age 75 for Grouped Conditions
City of Berkeley, 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1995-1999

The following two tables examine the leading causes of YPLL among African Americans and Whites in Berkeley. In 1993, AIDS was the leading cause of premature mortality among all Berkeley residents. In 1998, AIDS declined to the 10th cause of premature mortality for all Berkeley residents. However, for African Americans in 1998, AIDS is still the second leading cause of YPLL lost after homicide.

Leading Conditions of Years of Potential Life Lost Before Age 75
Among African Americans
City of Berkeley, 1996-1998 Average

Condition	1996-1998
Homicide	1
AIDS	2
Lung Cancer	3
Alcoholic Cirrhosis of Liver	4
Pneumonia and Influenza	5
Diabetes Mellitus	6
Perinatal Conditions	7
Female Breast Cancer	8
Myocardial Infarction	9
Hypertensive Heart Disease	10

Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Data;1996-1998.

Leading Conditions of Years of Potential Life Lost Before Age 75
Among Whites
City of Berkeley, 1996-1998 Average

Condition	1996-1998
Suicide	1
Unintentional Poisoning	2
Alcoholic Cirrhosis of Liver	3
Lung Cancer	4
AIDS	5
Female Breast Cancer	6
Myocardial Infarction	7
Coronary Atherosclerosis	8
Motor Vehicle Traffic Injury	9
Cardiovascular Disease	10

Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Data;1996-1998.

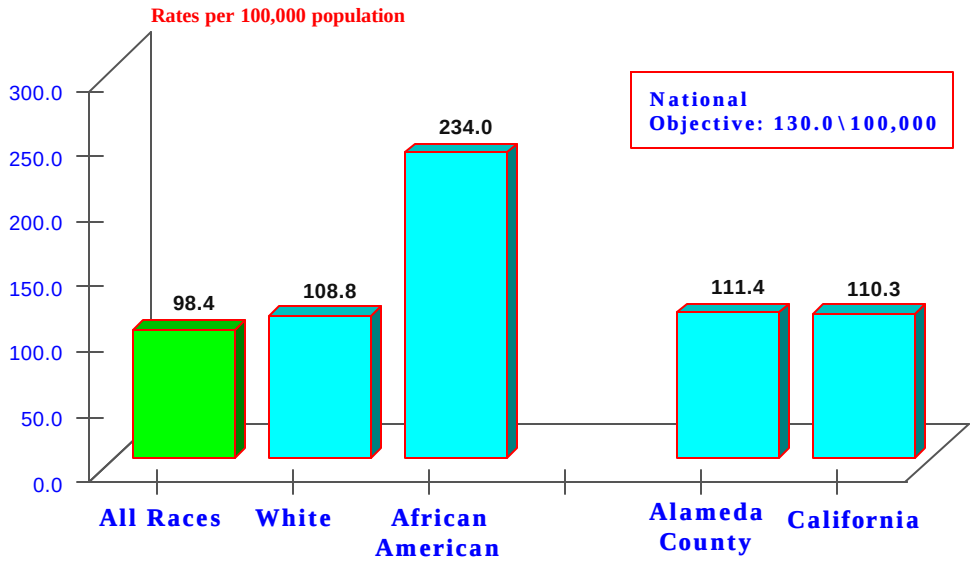
Specific Causes of Death

This section provides more in depth analysis of 6 broad categories of diseases as they contribute to mortality in Berkeley including cancer, heart disease, stroke, HIV/AIDS, unintentional injury, and intentional injury.

1. Cancer

The age-adjusted mortality rate for all cancers among all Berkeley residents is 98.4/100,000 population, just below the Alameda County (111.4/100,000) and California (110.3/100,000) rates and far below the National Objective of 130/100,000. However, when we look at the rates by race/ethnicity, the cancer age-adjusted mortality rate among African Americans (234/100,000) is more than twice that of Whites (108.8/100,000).

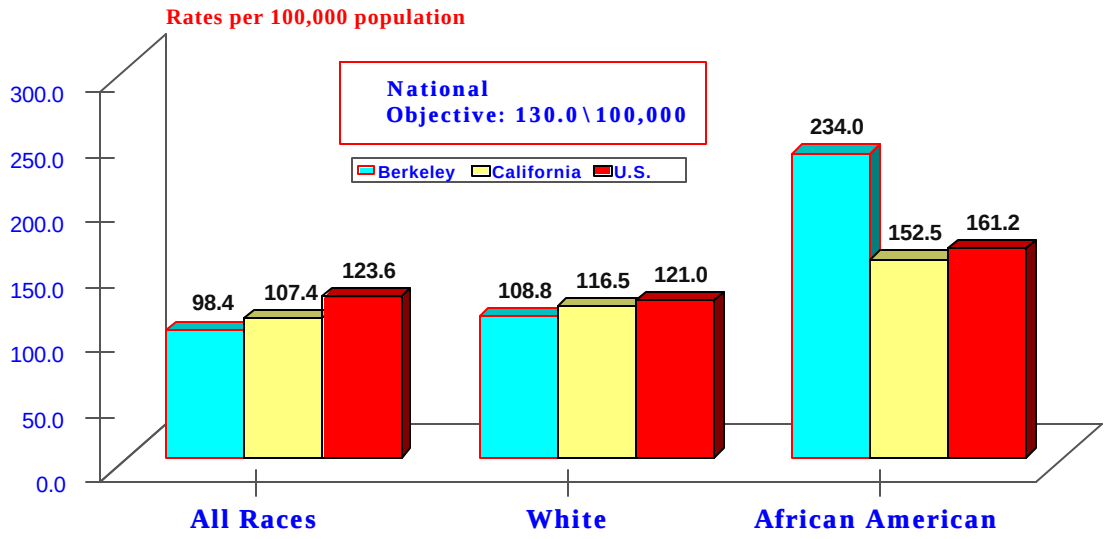
Cancer Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998.

However, the risk of dying from any form of cancer varies according to race: African Americans are more than 2 times as likely to die from any form of cancer as Whites. The median age at moment of death from cancer also differs by race: 69 years for African Americans and 76 years for Whites. In the graph below, the cancer age-adjusted mortality rate for Whites and for all races in Berkeley has met the national objective of 130 per 100,000. However, for African Americans, the rate is 234 per 100,000, far short of the national objective and significantly higher than for African Americans in California and the U.S.

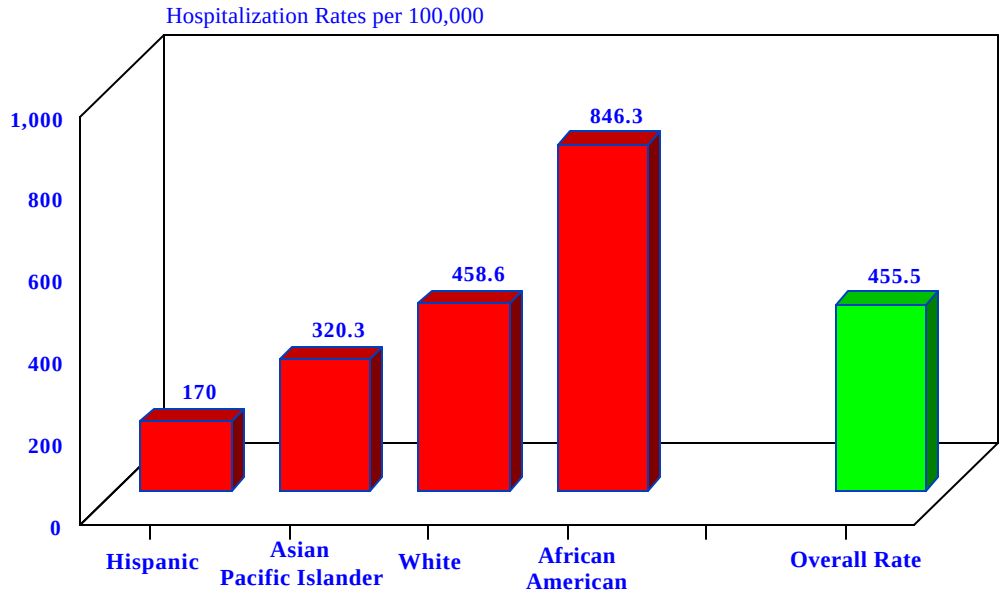
Cancer Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998,National Vitals Statistics Report, NCHS, CDHS.

The rates of hospitalization for cancers also vary by race/ethnicity as is shown in the graph below. While the overall hospitalization rate is 455.5/100,000, African Americans are hospitalized for cancer at rates higher than any other racial or ethnic group.

Cancer Hospitalization Rates By Race/Ethnicity
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999

The following chart describes the five leading types of cancer deaths. Lung cancer is the leading cause of cancer-related mortality in Berkeley. Due in part to its low survival rate, lung cancer accounts for nearly one out of every five cancer deaths in a given year. The median age at moment of death is exactly the same for both African Americans and Whites (70.5 years). While the crude mortality rate for 1998 is higher for women (35.0/100,000) as compared with men (23.3/100,000), the difference is not statistically significant. However, the proportion of lung cancer deaths has increased among women from 1996 (42%) to 1998 (61%), and decreased among men from 58% to 39% during the same period of time; this difference is statistically significant for White women (29% in 1996 and 70.6% in 1998).

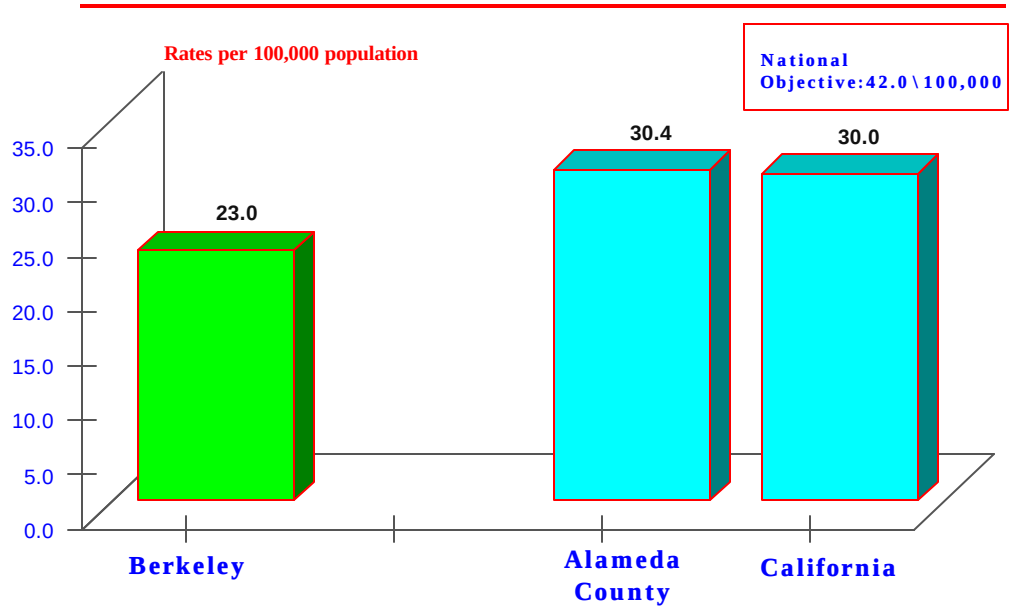
Five Leading Cancer Deaths
City of Berkeley, 1998

Cause of Death	No. of Deaths	Rank
Lung Cancer	31	1
Breast Cancer	22	2
Colon Cancer	14	3
Pancreas Cancer	11	4
Uterine Cancer	7	5
All Other Cancers	65	
Total Cancer Deaths	150	

Source: Berkeley Public Health Division, Epidemiology and Health Statistics, Mortality Data, 1998.

In the graph below, the overall lung cancer age adjusted mortality rate in the City of Berkeley (23.0/100,000) is lower than that of Alameda County and the State of California and has already met the 2000 National Objective of 42.0/100,000.

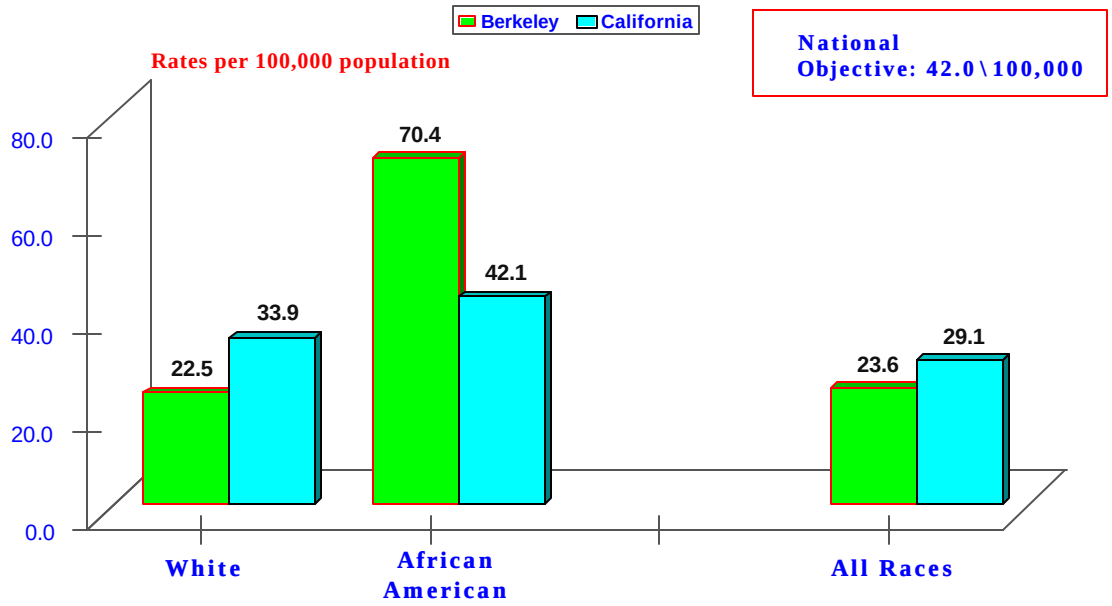
Lung Cancer Age Adjusted Mortality Rate
City of Berkeley, 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998.

The age adjusted mortality rate for lung cancer is 3 times higher among African Americans (70.4/100,000) than for Whites (22.5/100,000) in Berkeley. When the data is compared to California rates, Whites in Berkeley fare better than Whites in California and all races as a group. African Americans in Berkeley have significantly higher deaths in comparison to African Americans in California and all races, both in Berkeley and in California. According to the following graph, African Americans have not met the National Objective of 42.0/100,000.

Lung Cancer Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1996-1998 Average

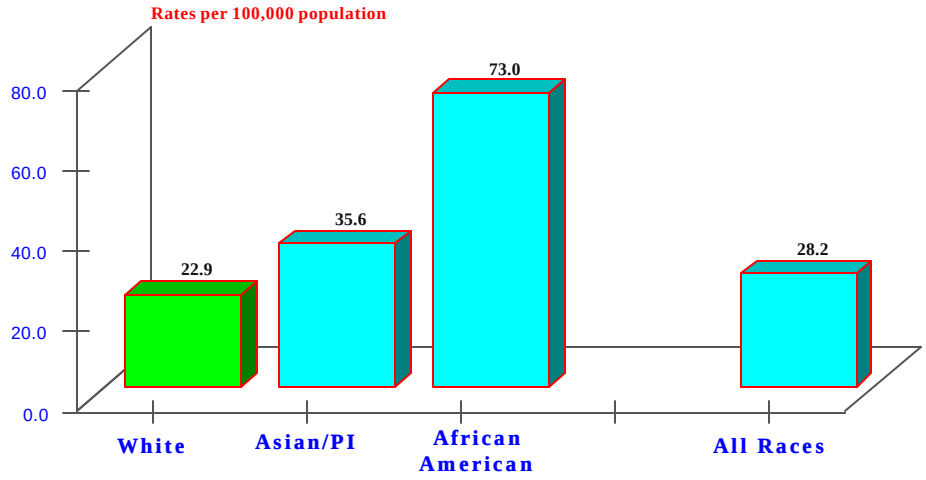


Note: California data is from 1998.

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1996-1998, CDHS.

As seen in the graph below, the risk of hospitalization for lung cancer is 3 times higher for African Americans than it is for Whites. Women of all races also have a statistically higher rate of hospitalization for lung cancer (40.2/100,000) than do males (15.9/100,000).

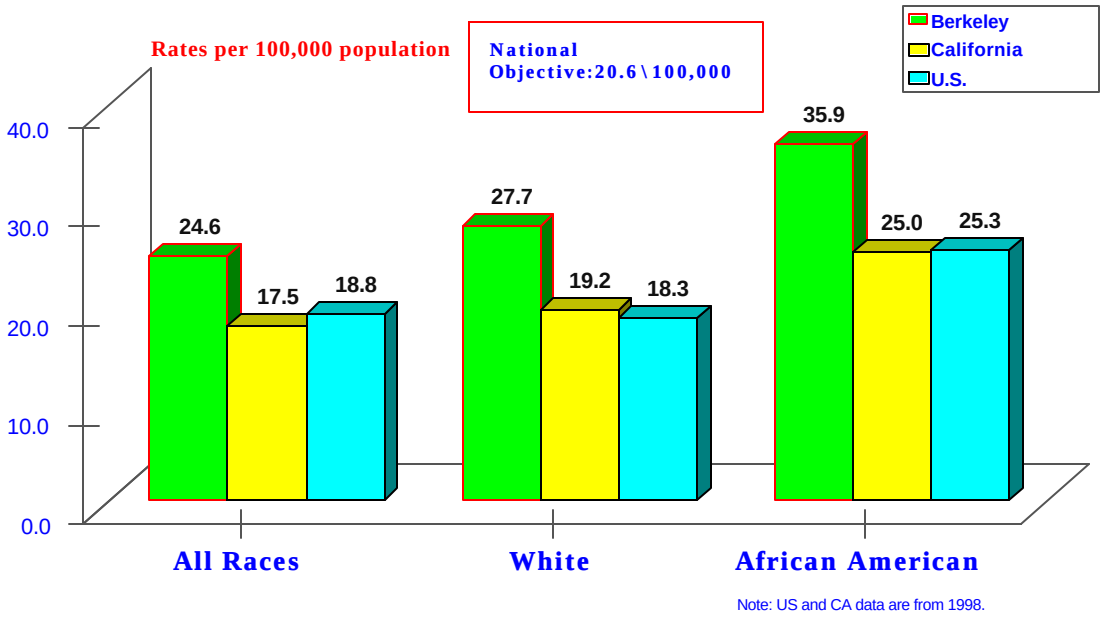
Lung Cancer Hospitalization Rates by Race/Ethnicity
City of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999.

Breast cancer is the most common cancer related death and the third leading cause of all deaths among women in Berkeley. One out of 19 deaths among women is due to breast cancer. Breast cancer is also the main cause of early death among women in Berkeley, and the age adjusted rate for all races (26.7/100,000) remains higher than that of Alameda County, the State of California and the 2000 National Objective. In the graph below, when separated by racial categories, the age adjusted mortality rates of African American and White women in Berkeley are greater than comparable state and national data; however African American women in Berkeley experience much higher death rates than White women and significantly higher death rates than African American women in California and the U.S.

Female Breast Cancer Age Adjusted Mortality Rate
City of Berkeley, 1996-1998 Average

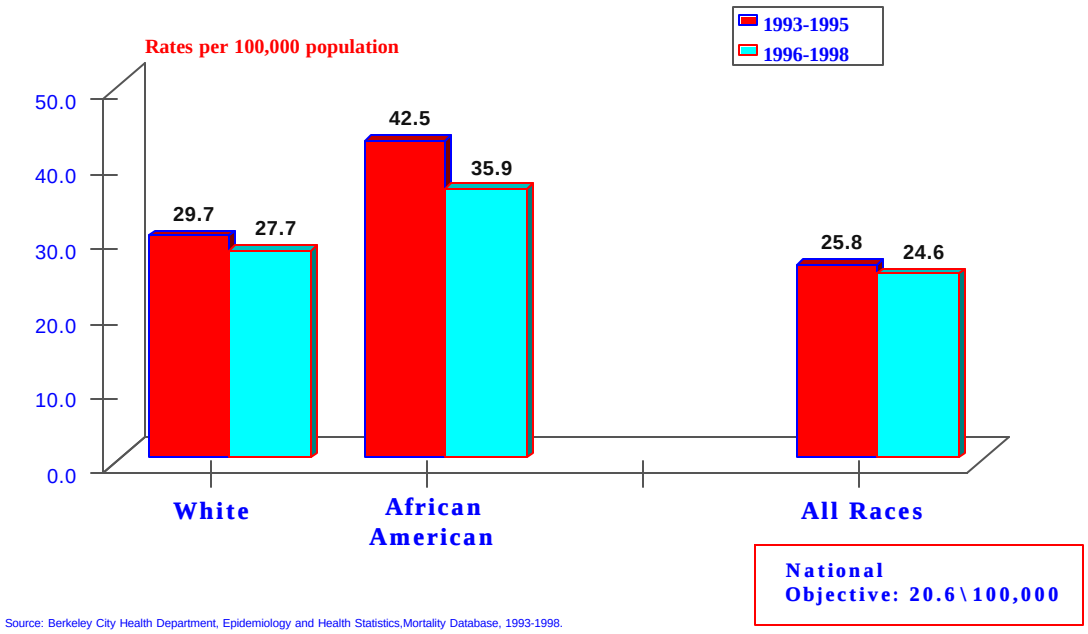


Note: US and CA data are from 1998.

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998, National Vital Statistics Report, NCHS, CDHS.

While the age adjusted mortality rate decreased 15% from 1993 to 1998 for African Americans and 7% for Whites, the disparity remains nearly the same: the age adjusted mortality rate for African American women is 1.4 times higher than that of White women for 1993-1995 and 1.3 times higher for 1996-1998. In addition, the median age at moment of death for breast cancer among African American women is 67 years compared to 76 years for White women.

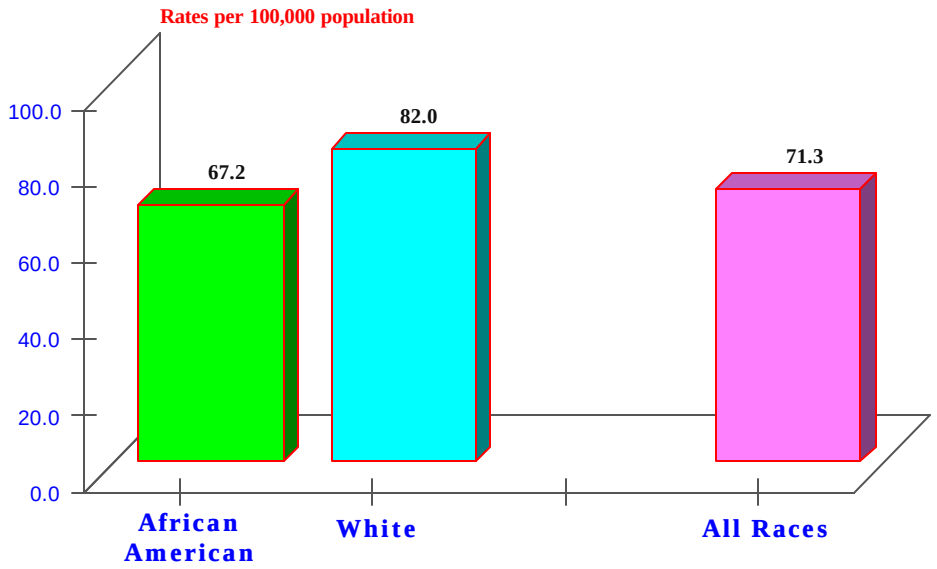
Breast Cancer Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1993-1995 and 1996-1998 Averages



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1993-1998.

The hospitalization rates for breast cancer in the following graph show that White females are hospitalized at a rate 18% higher than African Americans. The age at hospitalization also differs between the two races: 48% of White females are hospitalized before the age of 60 and 86% of African Americans after the age of 60. The incidence rate of breast cancer in Berkeley (new breast cancer diagnosis) also differs by race: White females are diagnosed with breast cancer at a rate 1.5 times higher than African American females and at a rate 2.5 times higher than Asians. One out of every 500 White females is diagnosed with breast cancer every year in Berkeley, as compared to one out of every 800 African American females. This data, while not conclusive, suggest that the higher mortality from breast cancer for African American women may be related to a delay in the diagnosis and/or treatment of this type of cancer.

Breast Cancer Hospitalization Rates by Race/Ethnicity
City of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999.

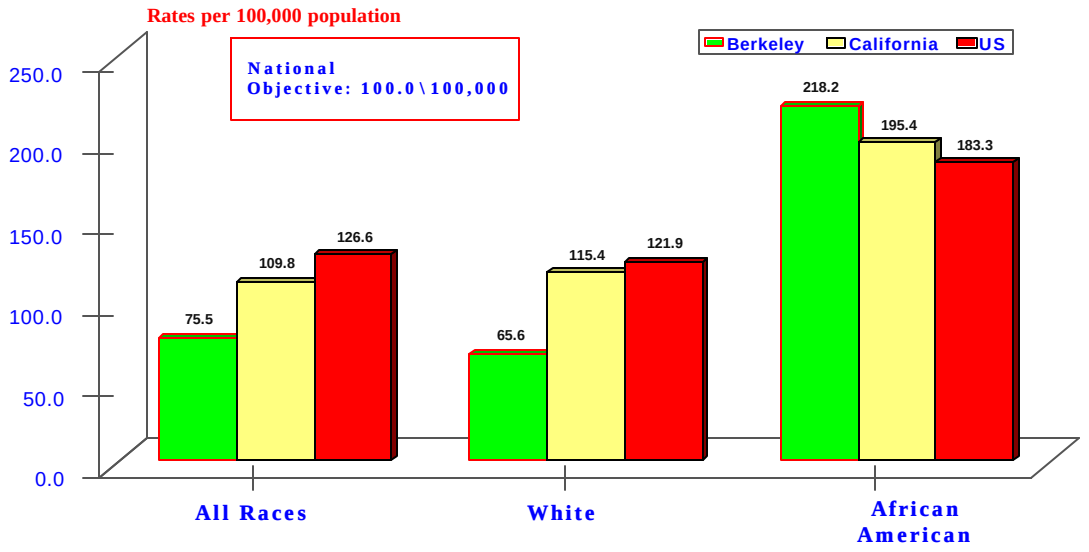
2. Coronary Heart Disease

Coronary heart disease is the leading cause of death to Berkeley residents in both 1997 and 1998. Many of these deaths could be prevented through lifestyle changes in diet, exercise and smoking.

The median age at moment of death for coronary heart disease varies by race/ethnicity. Among both Whites and Asian/Pacific Islanders in Berkeley the median age is 84 years, it is 79.5 years for Hispanics and 78 years for African Americans. These differences are statistically significant. The overall age adjusted mortality rate for coronary heart disease in the City of Berkeley (75.5/100,000) met the 2000 National Objective of 100.0/100,000.

The age adjusted mortality rate for coronary heart disease for African Americans in Berkeley is more than 3 times that of Whites in Berkeley and more than 2 times that of the total population in the State of California, as shown in the graph below.

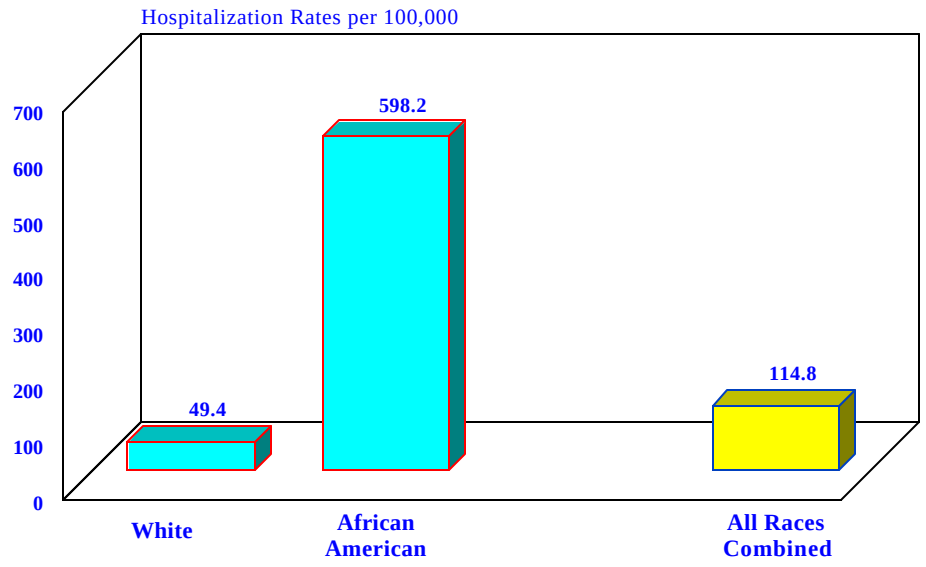
Coronary Heart Disease Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998, National Vital Statistics Reports, NCHS, CDHS.

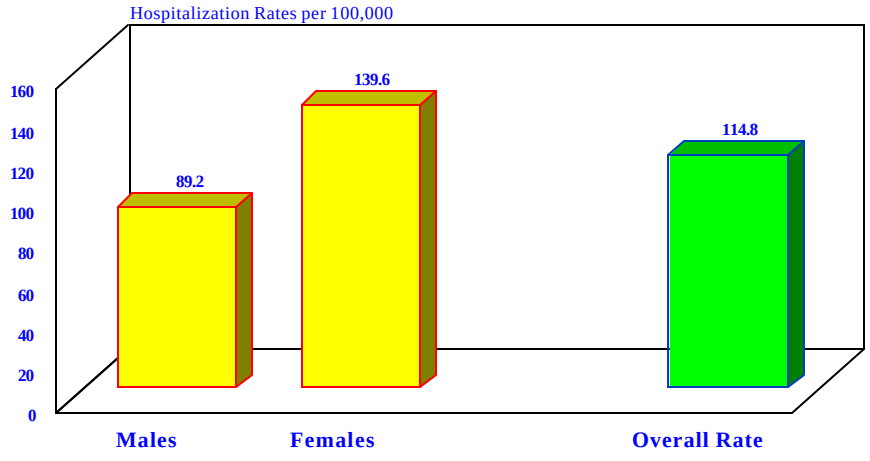
In the following graph, the risk of hospitalization for hypertensive heart disease is 12 times higher for African Americans than for Whites. The difference between the two rates is statistically significant.

Hypertensive Heart Disease Hospitalization Rates By Race/Ethnicity
City Of Berkeley, 1999



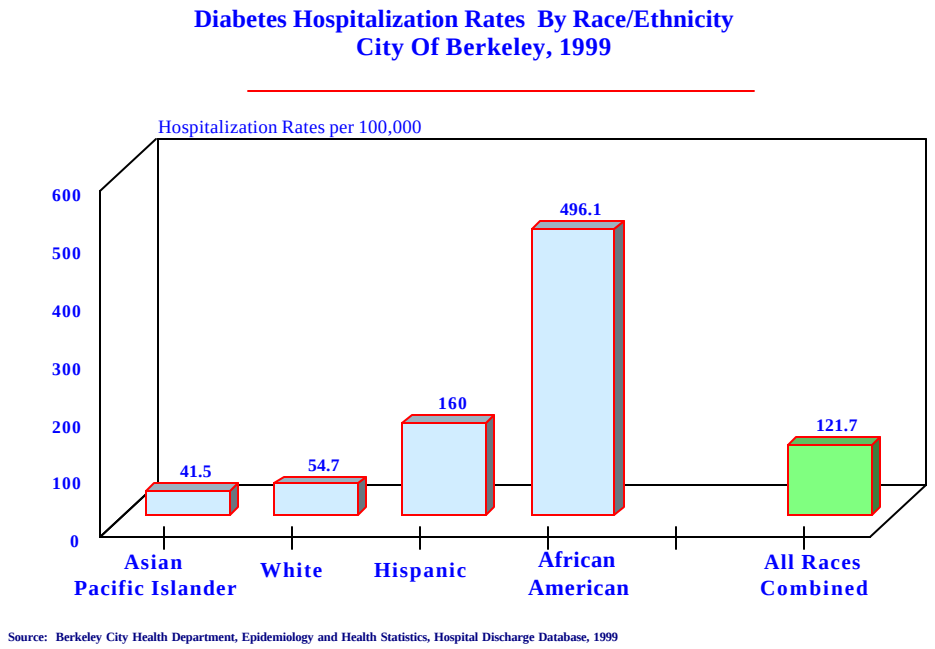
Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999

Hypertensive Heart Disease Hospitalization Rates By Gender
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999

The rate of hospitalization among females for hypertensive heart disease is 36% higher than the rate for males. This number is statistically significant.



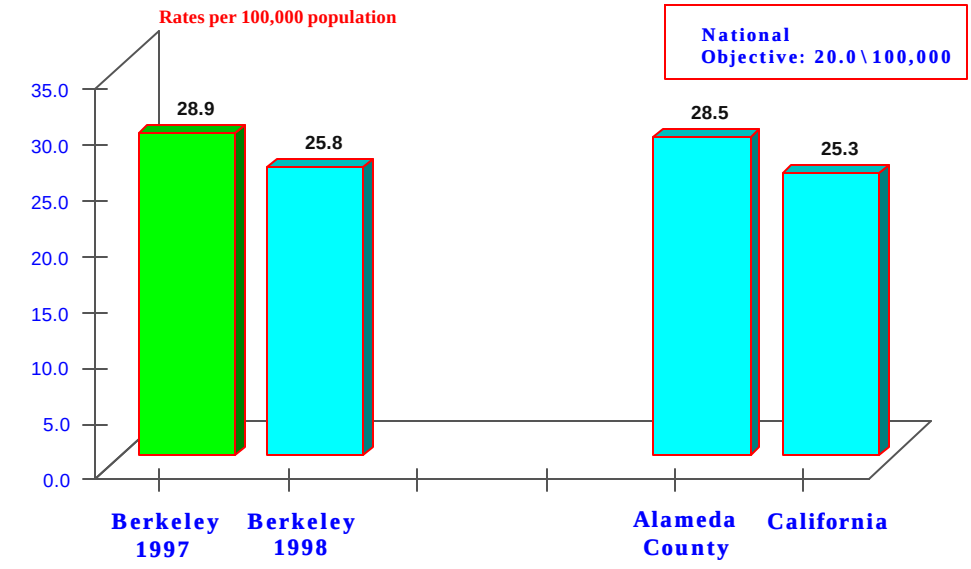
The rate of hospitalization for diabetes is 121.7/100,000 for all persons in Berkeley. However, there are considerable differences by race/ethnicity. The highest hospitalization rates are among African Americans (496.1/100,000), approximately 10 times the rate for Asians and Whites. The rate of hospitalization of Hispanics (160/100,000) is approximately 3 times that of Whites and Asian/Pacific Islander.

3. Cerebrovascular Disease

Cerebrovascular disease or stroke is one of the top 3 leading causes of death for Berkeley residents. Nationwide it is a leading cause of serious, long-term disability. Again, many stroke deaths can be prevented by changes in diet, exercise and smoking.

The following graphs show how the age adjusted mortality rate in Berkeley decreased from 1997 to 1998 (not statistically significant). Berkeley has yet to meet the 2000 National Objective for stroke of 20.0/100,000.

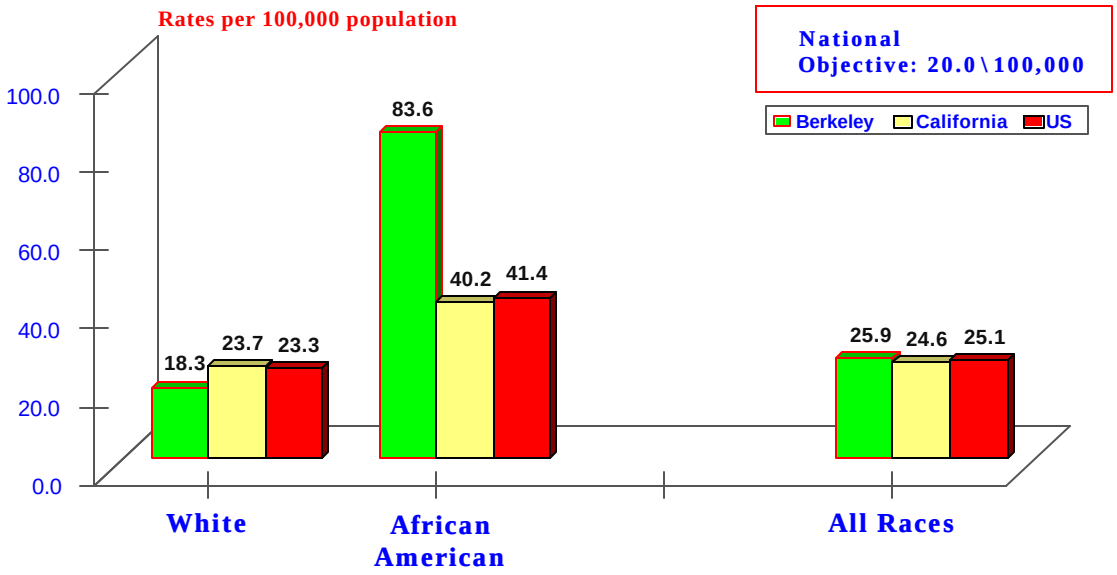
Cerebrovascular Disease Age Adjusted Mortality Rates
City of Berkeley, 1997 and 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1997-1998.

As shown in the following graph, the risk of dying from stroke is almost 5 times higher for African Americans than it is for Whites. On average, African Americans die of stroke 7 years earlier than do Whites.

Cerebrovascular Disease Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1996-1998 Average

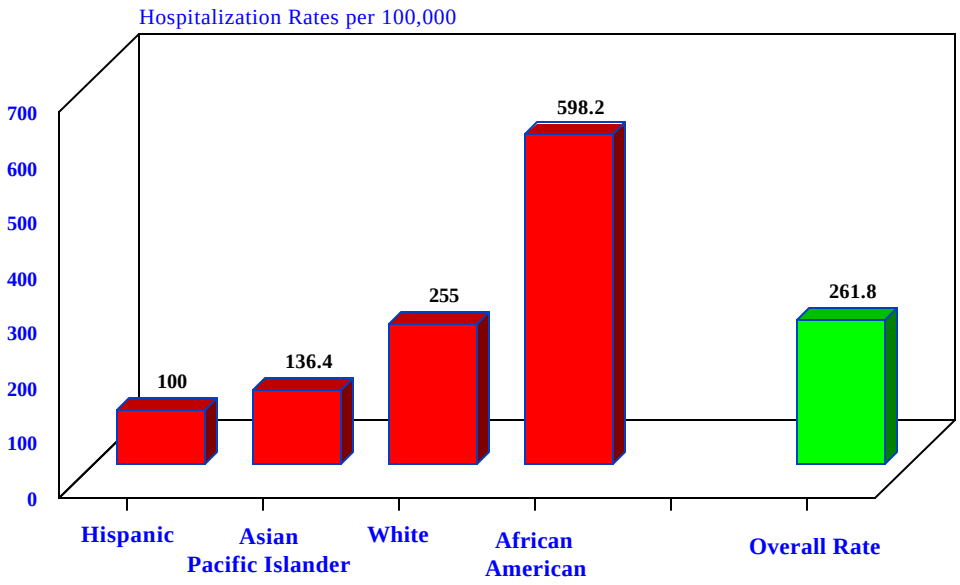


Note: Califronia and US data are from 1998.

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1996-1998, National Vital Statistics Report, NCHS, CDHS.

Hospitalization rates for stroke were significantly higher for African Americans (598.2/100,000) than for any other race/ethnicity. Hispanics (100/100,000) and Asian/Pacific Islanders (136.4/100,000) had significantly lower rates than any other ethnic group. In 1999, African Americans were almost six times (5.98) more likely than Hispanics to be hospitalized for stroke, 4.39 times more likely than Asian/Pacific Islanders and 2.35 times more likely than Whites in Berkeley.

Cerebrovascular Disease Hospitalization Rates By Race/Ethnicity
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999

4. HIV/AIDS

As previously mentioned, AIDS is the second leading cause of premature mortality among African Americans and the 5th cause of premature mortality for Whites in Berkeley. The median age at moment of death due to AIDS is 44 years for African Americans and 45 years for Whites. The age adjusted mortality rate for African Americans (29.7/100,000) is 4 times higher than for Whites (7.4/100,000).

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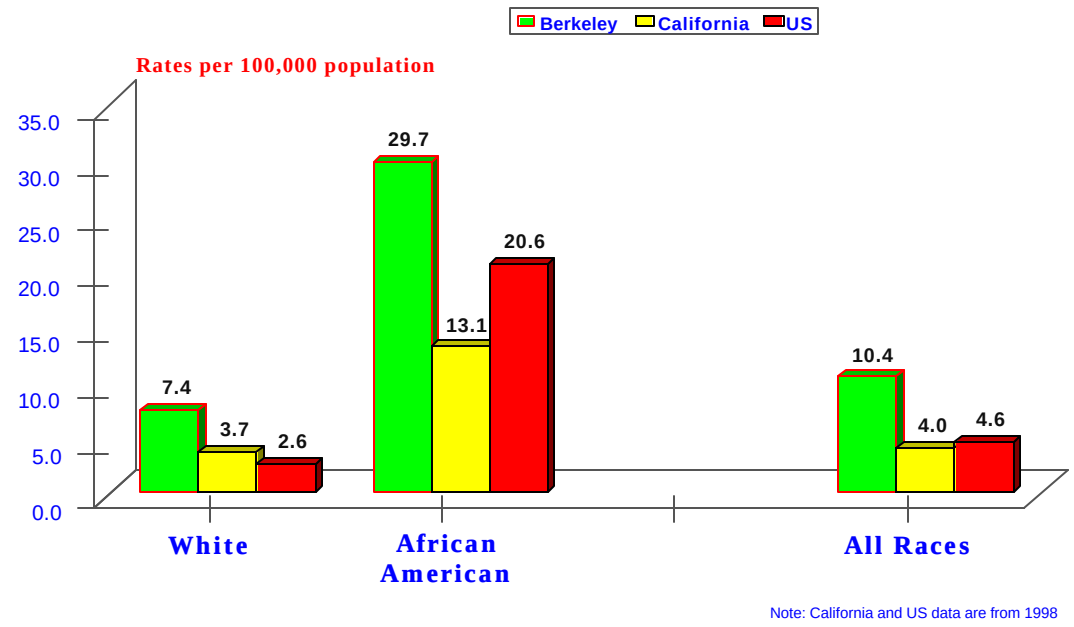
AIDS Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1996-1998 Average



Note: California and US data are from 1998

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1996-1998, National Vital Statistics Reports, NCHS, CDHS.

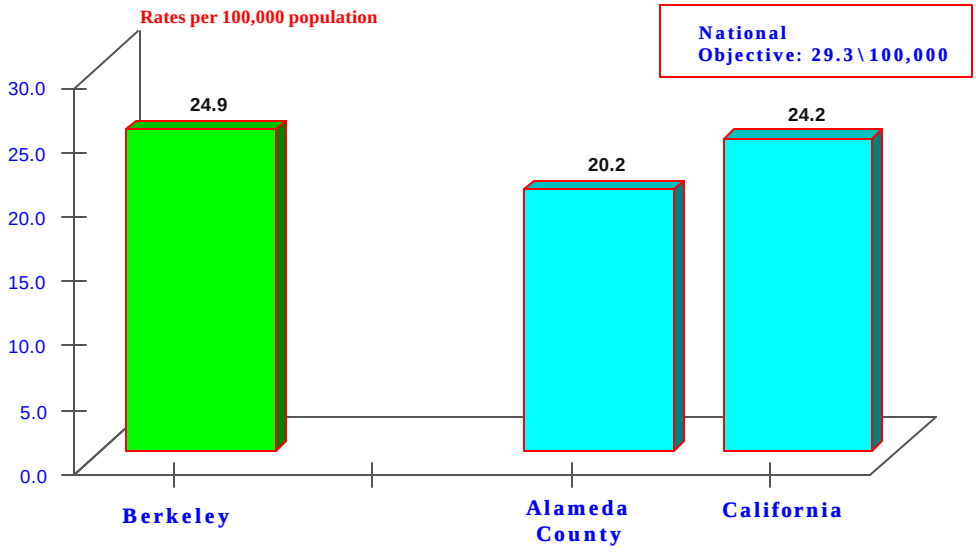
HIV/AIDS continues to be a significant issue of concern for Berkeley. The epidemic is changing, reflected in the demographics of newly infected in Berkeley and in the nation. New infections of HIV are increasing in African Americans, Hispanic/Latinos, women and intravenous drug users (IDU). Because this is an area of serious concern, a following report will be devoted solely to HIV/AIDS in Berkeley.

5. Unintentional Injury

Unintentional injuries include all injuries caused by an unanticipated event, such as falls, poisonings, motor vehicle injuries, bicycle injuries, burns, drowning and unintentional shootings. Unintentional injuries are generally preventable but are the 5th leading cause of death in Berkeley for 1998. They seriously affect the quality of life of residents in a community through premature death and disability.

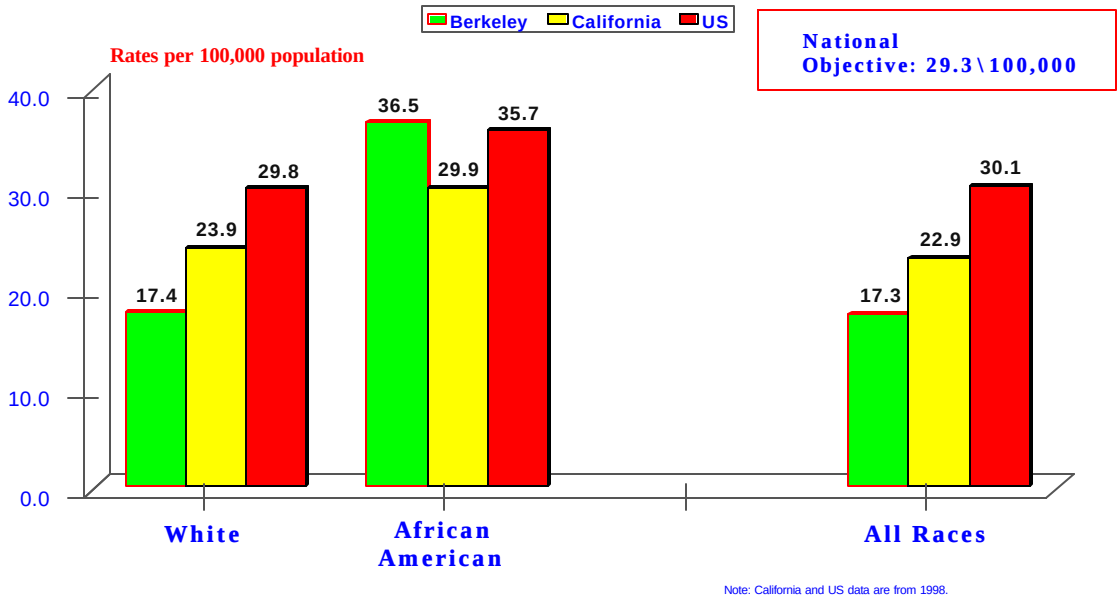
The age adjusted mortality rate for unintentional injuries in Berkeley is 24.9 per 100,000 population. The overall age adjusted mortality rate for the City of Berkeley (24.9/100,000) met the 2000 National Objective of 29.3/100,000.

Unintentional Injury Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1998



Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1998.

Unintentional Injury Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1996-1998 Average



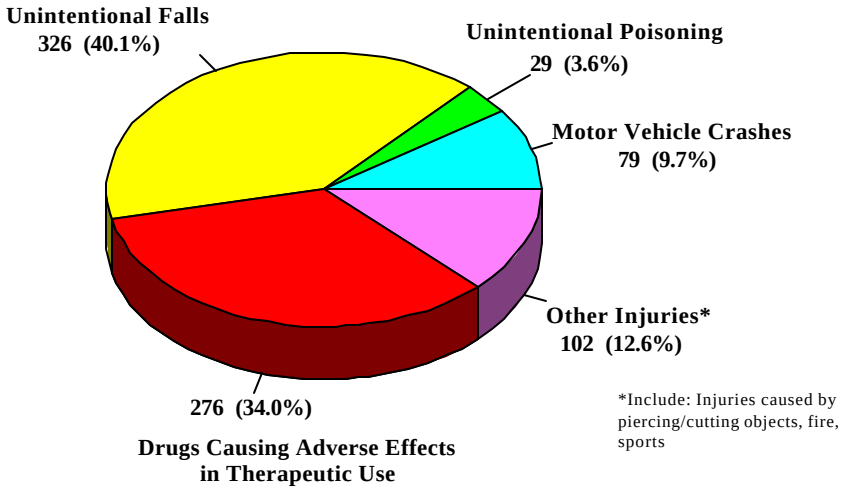
Note: California and US data are from 1998.

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1996-1998, National Vital Statistics Report, NCHS, CDHS.

In the above graph, the age adjusted mortality rate for African Americans (36.5/100,000) is 2 times higher than the rate for Whites (17.4/100,000). The median age at moment of death for unintentional injuries is 47 years for African Americans and 51.8 for Whites.

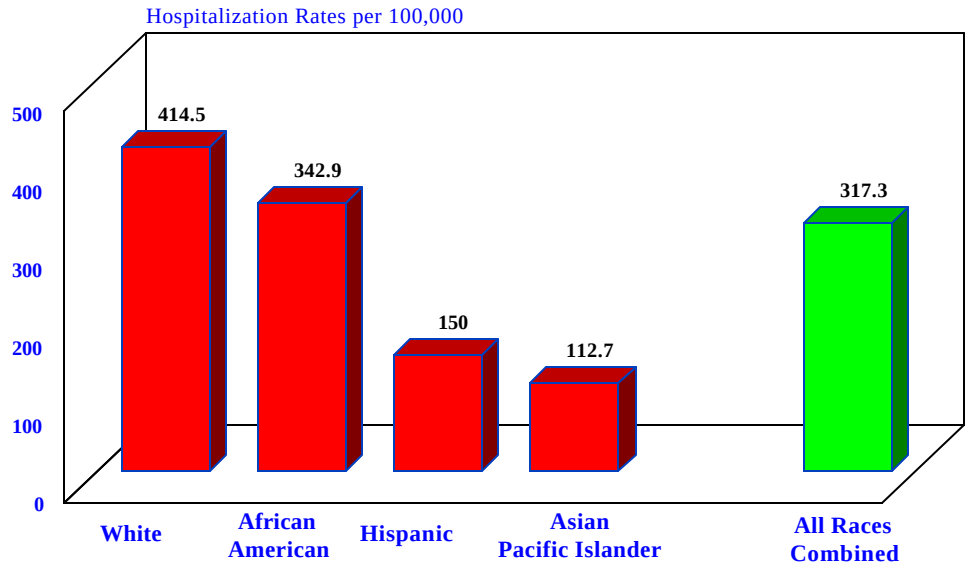
In 1999, 40% of the hospitalizations due to unintentional injuries were because of falls affecting primarily persons over the age of 65 years. The second leading cause of hospitalizations due to unintentional injury was due to the use of therapeutic drugs that caused an adverse effect (34%). Motor vehicle injuries are the cause of 10% of unintentional injuries to Berkeley residents.

Unintentional Injury Hospitalizations
City of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database 1999; OSHPD

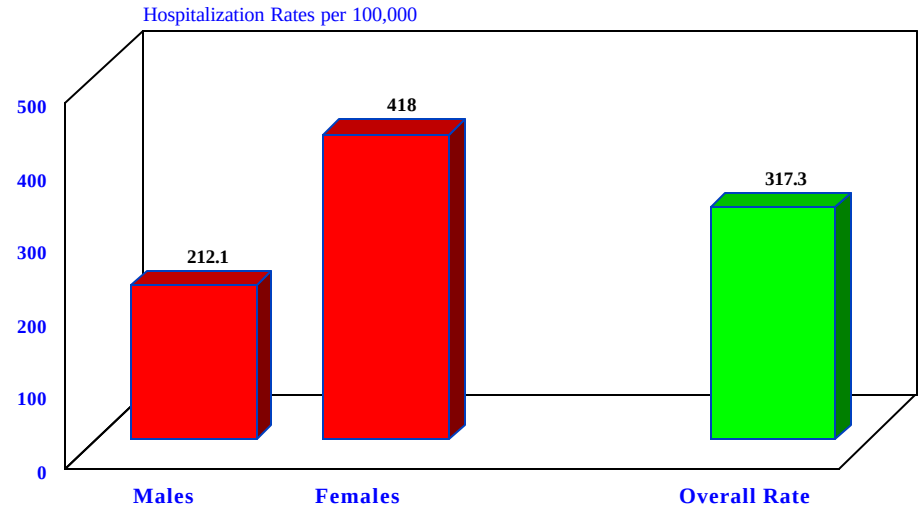
Unintentional Fall Hospitalization Rates By Race/Ethnicity
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD.

The above graph shows the hospitalization rate due to falls for 1999 was statistically higher for Whites (414.5/100,000) and African Americans (342.9/100,000) than for any other racial or ethnic group. When gender is compared, as seen in the following graph, females had a statistically significant higher rate of unintentional fall hospitalizations (418/100,000) than males (212.1/100,000).

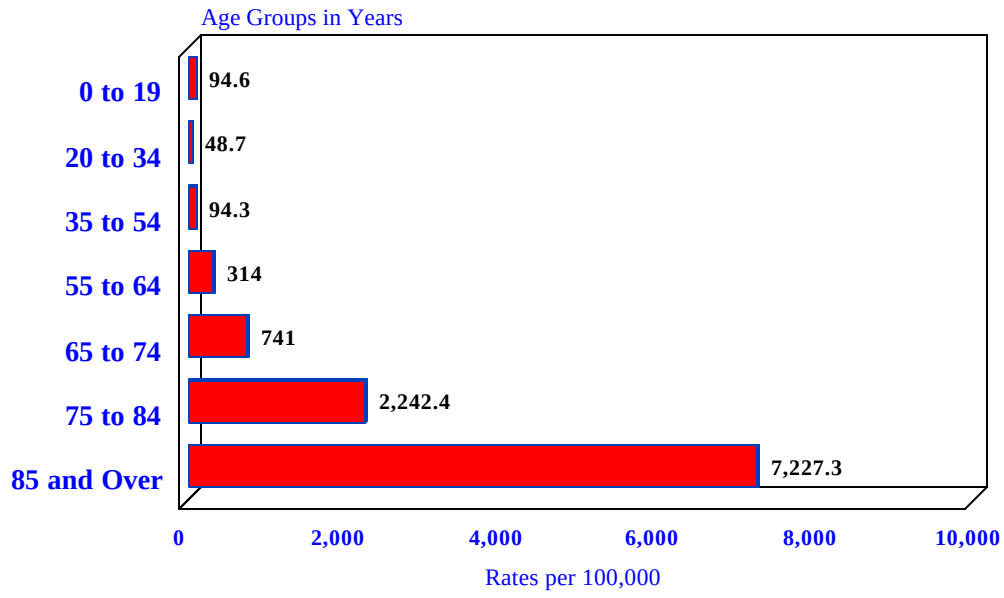
Unintentional Fall Hospitalization Rates By Gender
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD.

The graph below shows that the risk of hospitalization for unintentional falls is strongly correlated with age (r=0.8, p value <0.01). Among seniors 65 years and over, the combined rate of hospitalization for unintentional falls was 2,251/100,000. In other words, 1 out of every 44 seniors over the age of 65 experience an unintentional fall hospitalization. The rate increases dramatically over the age of 85.

Unintentional Fall Hospitalization Rates By Age Groups
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD

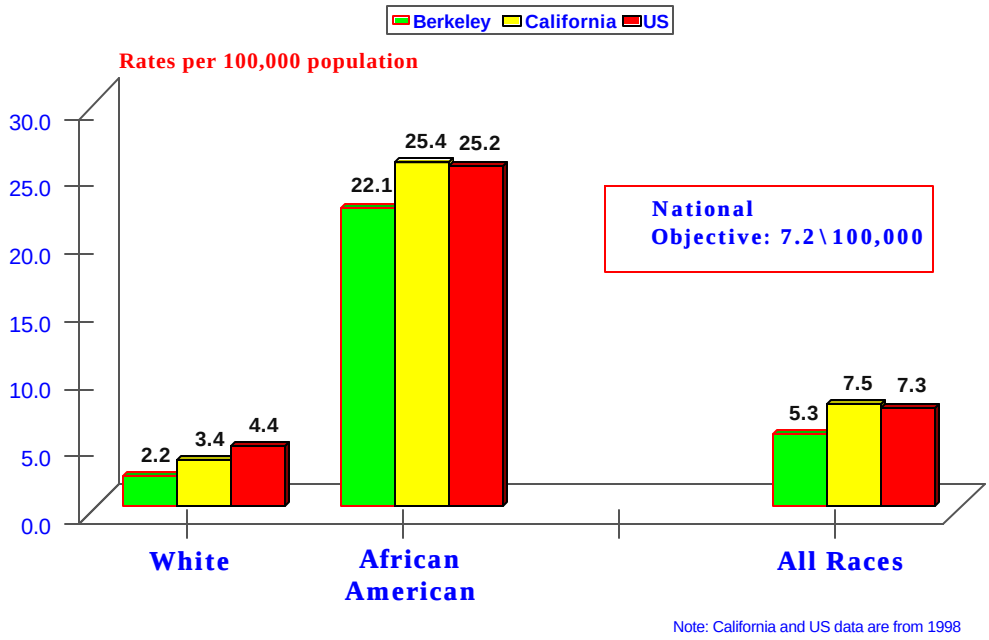
6. Intentional Injury

Intentional injuries are those injuries purposely inflicted including both homicide and suicide. Homicide is the leading cause of premature mortality for African Americans in Berkeley.

The risk of dying due to injuries intentionally inflicted by another person is 13.5 times higher for African Americans than it is for Whites. The median age at the moment of homicide is also significantly different for African Americans (28 years) than it is for Whites (50 years).

The overall homicide age-adjusted mortality rate for the City of Berkeley is 5.3/100,000, well below that of the State of California (10.3/100,000) and met the Year 2000 National Objective of 7.2 homicides per 100,000 population. However, as shown in the graph below, the homicide age-adjusted mortality rate for African Americans is 22.1 per 100,000 and just 2.2 per 100,000 for Whites in Berkeley. The age adjusted homicide rate for African Americans in Berkeley is lower than that for African Americans in California and the US.

Homicide Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1996-1998 Average

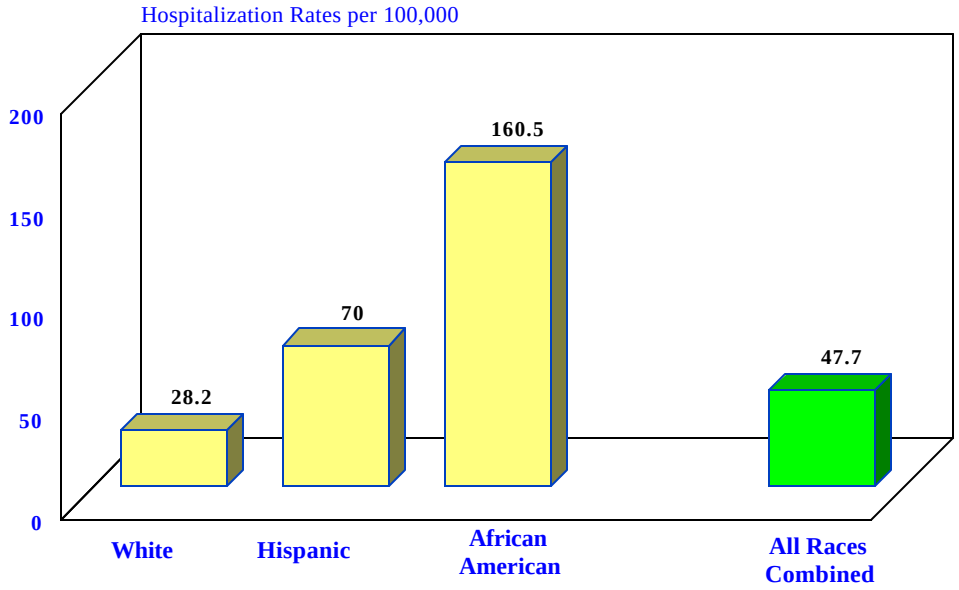


Note: California and US data are from 1998

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1996-1998, National Vital Statistics Reports, NCHS, CDHS.

While the overall hospitalization rate due to homicide and intentional injury for all races in Berkeley was 47.7/100,000, the following graph shows that the 1999 hospitalization rate for homicide and injury purposely inflicted by another person was statistically higher for African Americans (160.5/100,000) and Hispanics (70.0/100,000) than for Whites (28.2/100,000). Due to the small number of cases, the rate for Asian/Pacific Islanders was statistically unreliable and not reported here.

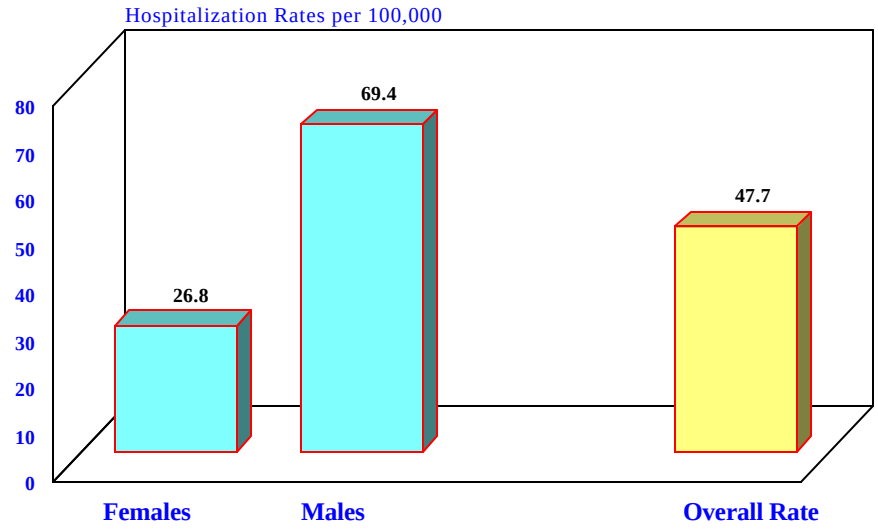
Homicide and Injury Purposely Inflicted by Other Person
Hospitalization Rates By Race/Ethnicity
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD.

Forty-seven percent (47%) of hospitalizations for injuries purposely inflicted by another person were among young people between the ages of 14 and 29 years old. Seventy-one percent (71%) were male. In fact, men in Berkeley are hospitalized from intentional injuries at a rate 3 times higher than women as shown in the following graph. While many of the intentional injury hospitalizations experienced by women may be due to intimate partner violence (domestic violence), unfortunately the hospitalization database does not provide information about the relationship between the injured person and the person who caused the injury.

Homicide and Injury Purposely Inflicted by Other Person
Hospitalization Rates By Gender
City Of Berkeley, 1999

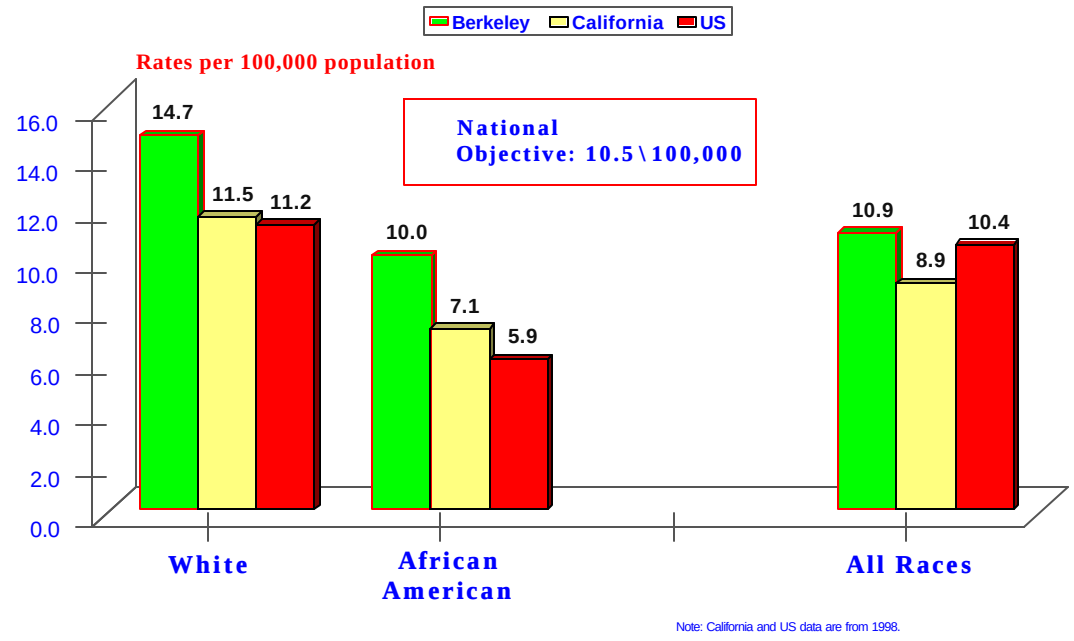


Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD.

Another cause of intentional injury is suicide. In the United States, more people die from suicide than from homicide. In 1998, 30,575 Americans took their own lives, an average of 84 each day. This number is almost twice the 17,893 homicides that occurred that year. Nationally, the highest suicide rates of any age group occur among people ages 65 and older. And while females attempt suicide more often than do males, males are at least two times more likely to die from suicide.

In Berkeley, from 1996-1998, there have been 30 successful suicide attempts. It is the leading cause of premature mortality for Whites and the 8th leading cause of death overall. In addition, Whites committed 67% of suicides. The graph below shows that Whites have the highest age-adjusted death rates for suicide (14.7/100,000). In fact, approximately 1 out of every 5,000 Whites in Berkeley commits suicide in a given year. The median age at the moment of suicide for Whites is 49 years. While the 2000 National Objective of 10.5/100,000 for suicide has been met for African Americans it has not for Whites. Hanging and firearms accounted for 53.6% of the suicide cases in Berkeley with firearms more commonly used by males (23%) than by females (13%).

Suicide Age Adjusted Mortality Rates by Race/Ethnicity
City of Berkeley, 1996-1998 Average



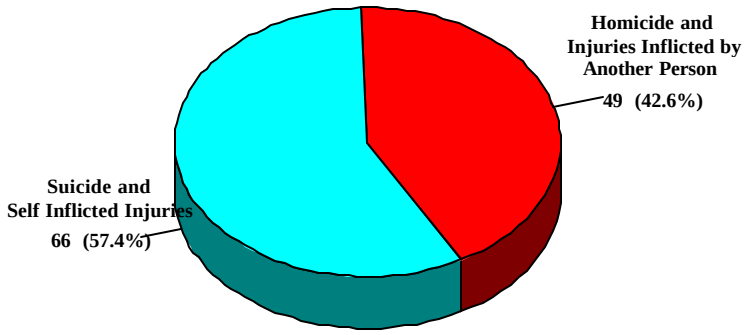
Note: California and US data are from 1998.

Source: Berkeley City Health Department, Epidemiology and Health Statistics,Mortality Database, 1996-1998, National Vital Statistics Reports, NCHS, CDHS.

Attempted suicide accounted for 57.4% of intentional injury hospitalizations for Berkeley residents in 1999 (see pie chart below). Approximately 67% of these hospitalizations were Whites, 18% were under the age of 19 years and 41% were between 20 and 39 years old. Women accounted for 67% of self-inflicted injury hospitalizations or attempted suicide.

In contrast, for attempted homicide hospitalizations, 39% were under the age of 25 years, 45% were African Americans and 71% were male.

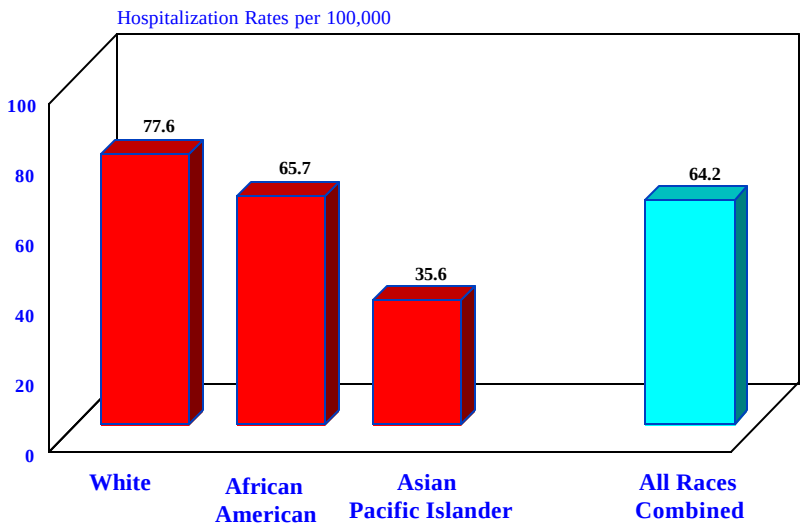
Intentional Injury Hospitalizations
City of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database 1999; OSHPD

The rate of hospitalization for suicide attempts and self inflicted injuries is 15% higher for Whites than African Americans and significantly higher than Asians as demonstrated in the following graph.

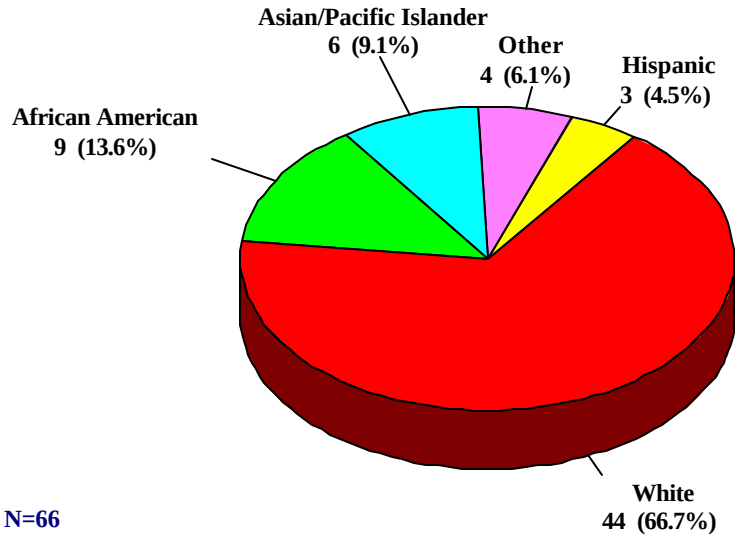
Suicide and Self Inflicted Injury Hospitalization Rates By Race/Ethnicity
City Of Berkeley, 1999



Source:Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD

The following pie chart shows the number of self-inflicted injury hospitalizations (suicide attempts) by race/ethnicity in Berkeley in 1999.

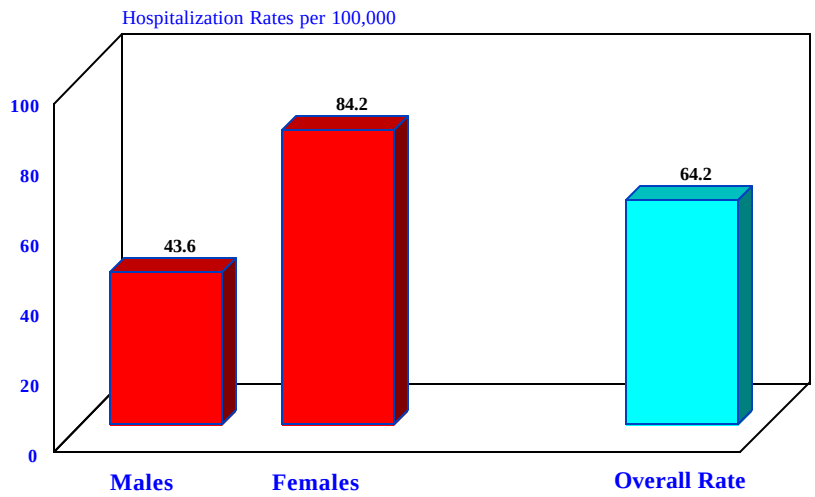
Suicide and Self Inflicted Injury Hospitalizations by Race/Ethnicity
City of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database 1999; OSHPD

The graph below shows the 1999 self-inflicted hospitalization rates (suicide attempts) in Berkeley by gender. Women in Berkeley were hospitalized due to self-inflicted injuries at a rate 2 times higher than that of men. In fact, almost 1 out of every 1,000 women in Berkeley is hospitalized for self-inflicted injuries in a given year.

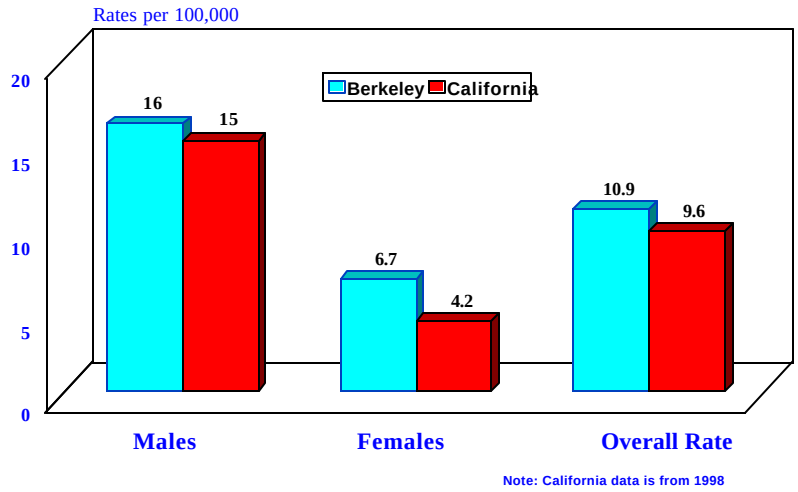
Suicide and Self Inflicted Injury Hospitalization Rates By Gender
City Of Berkeley, 1999



Source: Berkeley City Health Department, Epidemiology and Health Statistics, Hospital Discharge Database, 1999, OSHPD.

As previously mentioned above, while more women are hospitalized than men, men died from their self-inflicted injuries at a rate 2 times higher than women due, at least in part, to the use of firearms as the most common method of suicide among men.

Suicide Age Adjusted Mortality Rate By Gender
City Of Berkeley, 1996-1998



Note: California data is from 1998

Source: Berkeley City Health Department, Epidemiology and Health Statistics, Mortality Database, 1996-1998, CDHS..

Technical Notes:

DATA SOURCES

The Berkeley Public Health Division, Epidemiology and Health Statistics, Automated Vital Statistics System (AVSS) was the source for the mortality data used in this report. Death indicators were calculated using death records from 1996 through 1999 for residents of the City of Berkeley only, regardless of the place of death. Death records are based on complete counts.

The California Department of Finance, Demographic Research Unit and the US Census Bureau, were the source of population data. Estimates from 1996 and 1998 were used to calculate rates. The demographic section of this report contains data from the 1990 and 2000 Census.

The California Office of Statewide Health Planning and Development (OSHPD) was the source of the inpatient hospital discharge database. This database contains all hospital discharges occurring in the calendar year of 1999 for Berkeley residents, regardless of hospital. Disease definitions are based on the International Classification of Diseases, 9th Revision Clinical Modification (ICD-9-CM Codes).

DEFINITIONS:

Rates: The number of events divided by the population at risk. Measures the probability or risk that the event occurs during a specific period of time in the population.

Relative Standard Error (RSE): Measures rate variability. In this report, a rate is considered statistically unreliable when the RSE is greater than 30%. Unreliable rates are not presented in this report.

Crude Mortality Rate: the number of all deaths in one year divided by the estimated population at risk per 1,000. The crude death rate represents the actual risk of dying from all causes or one specific cause in a giving year

Age-Adjusted Mortality Rate*:* Crude mortality rates are highly affected by the age distribution of a population. For example, a population that is older will naturally have a higher mortality rate. In order to eliminate the age effect and compare across different populations, years and geographical areas, rates are age-adjusted using a standard population (in this report the 1940 US standard population is used).

Injuries: Physical infliction induced by an external cause. In this report we use two classifications of injuries:

> *Intentional*: Includes those injuries or deaths caused by a person with the intention to kill or injure (homicides and suicides).
> *Unintentional*: Includes those injuries or deaths caused by an unanticipated event (motor vehicle crashes, falls, etc.).

RACE/ETHNICITY

The following race/ethnic groups and their definitions are used in this report:

Asian/Pacific Islander: Includes Chinese, Japanese, Vietnamese, Cambodian, Thai, Laotian, Asian Indian, Filipino, Asian Unspecified, Hawaiian, Guamanian, Samoan, and other Pacific Islander-of non Hispanic Origin.

African-American: Includes Blacks, non-Hispanics.

Hispanic: Includes Mexican/Mexican-American/Chicano, Puerto Rican, Cuban, Central/South American, other Spanish/Hispanic (born outside U.S.), other Spanish/Hispanic (born in the U.S) of any race.

Native-American: Includes American Indian, Eskimo, and Aleut.

White: Includes Whites, non-Hispanics.

Other/Unknown: Includes unspecified or unknown race/ethnicity.

ICD-9 Codes Used For Leading Causes of Death

For the definition of the ten leading causes of death, we use the standard diagnostic categories of the International Classification of Diseases, Ninth Revision, 1975 (ICD-9):

All Causes of Death	000-E999
All Cancers	140-208
Female Breast Cancer	74
Lung Cancer	162.2-162.9
Ischemic Heart Disease	410-414
Cerebrovascular Disease	430-438
COPD	490-496
Motor Vehicle Crashes	E810-E825
Unintentional Injuries	E800-E949
Homicides	E960-E969
Suicides	E950-E959
Diseases of heart	390-398, 402, 404-429
Coronary Heart Disease	402, 410-414, 429.2
Pneumonia and Influenza	480-487
Diabetes Mellitus	250
Prostate Cancer	185