

Death from All Causes

Sidewalk memorial for 15-year-old Tamellia Cobbs, Oakland's 97th homicide victim in 2002.



Rates of Death from All Causes

Why is it Important?

Mortality rates are a valuable tool for measuring our progress in fighting disease and improving health. In the early 1900s, the predominant health threats in the United States were diseases associated with poor hygiene and sanitation, poor nutrition, poor maternal and infant health and unsafe working conditions. With the success of biomedical innovations such as vaccinations and antibiotics, and the development of health education campaigns, the impact of these diseases has decreased significantly over the last 50 years.¹⁻⁵ Life expectancy at birth has changed from 47.3 in 1900 to 76.9 in 2000.⁶

In general, recent declines in many leading causes of death reflect the influence of healthier life styles, greater use of preventive care, public health efforts, and advances in medicine.⁷⁻¹¹ Despite these successes, the rates of some diseases have continued to increase. For example, the prevalence of diagnosed diabetes, increased 33% from 1990 to 1998.¹²

Today, five chronic diseases account for over two-thirds of all deaths in the U.S.—heart disease, cancer, stroke, chronic obstructive pulmonary disease, and diabetes. Heart disease and cancer combined account for more than half of all deaths.¹³

Research has linked chronic disease to a number of causes, particularly unhealthy behaviors. Among the behaviors most clearly associated with chronic diseases are tobacco and alcohol use, poor diet, and lack of exercise. In turn, health behaviors are strongly influenced by social factors, such as income, education level, stress, workplace conditions, violence and exposure to environmental toxins.¹⁴

Despite overall declines in mortality, racial and ethnic disparities as well as gender disparities in mortality persist.¹⁵⁻¹⁸ Low-income groups, African Americans and men continue to have higher mortality rates. Future progress in improving health status will require comprehensive interventions that address individual behaviors, neighborhood environments and public policy.

A profile of mortality for the residents of Alameda County by sex, age, and race/ethnicity provides us with a picture of the burden of disease and injury and can serve to guide related prevention efforts.

What is Alameda County's Status?

The average number of deaths in Alameda County was 9,791 per year for the three-year period 1998 to 2000.^a The average age-adjusted death rate from all causes was 785.5 per 100,000 population.¹⁰ This rate was significantly higher than those in San Francisco and Santa Clara Counties. Alameda County's death rate is only slightly higher than the rate in Contra Costa County or California as a whole.^b

Annual age-adjusted death rates from all causes declined significantly from 916.0 deaths per 100,000 in 1990 to 789.2 per 100,000 in 2000. This pattern reflects a similar state and nationwide trend.^{7-8,10}

During the period 1999-2000, 51.1% of those who died were female and 48.9% were male. The death rate for males was 946.7 per 100,000, 40% higher than the female rate of 675.2 per 100,000. The higher rate of death for males despite their lower number of deaths is due in part to the fact that there are fewer males in the elderly population. Male death rates were higher than female death rates in every age group.

Figure 3A.1

Death from All Causes: Selected Counties and California
Age-Adjusted Rates, 1998-2000 Average

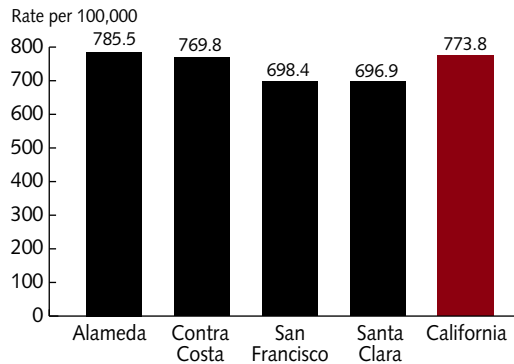


Figure 3A.2

Death from All Causes in Alameda County
Age-Adjusted Rates, 1990-2000

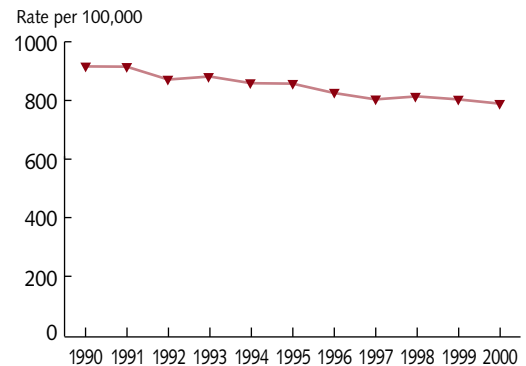


Figure 3A.3

Death from All Causes in Alameda County
Age-Adjusted Rates by Sex, 1999-2000 Average

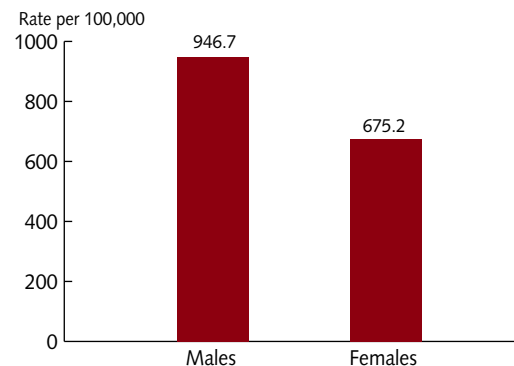
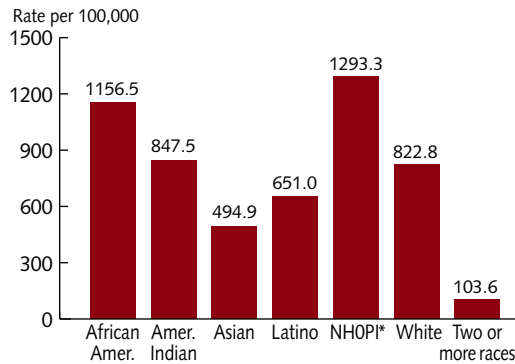


Figure 3A.4

Death from All Causes in Alameda County
Age-Adjusted Rates by Race/Ethnicity, 2000

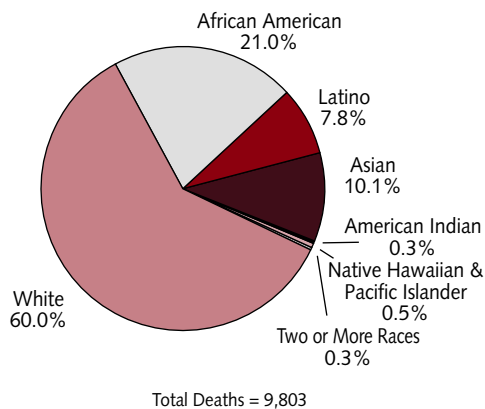


*Native Hawaiian/Other Pacific Islander

Due to new classification of racial groups in 2000, death rates are presented here for only one year and are therefore subject to more variation compared to a multi-year average. The death rate for African Americans was 1156.5 per 100,000, and for Native Hawaiians/Pacific Islanders it was 1293.3. Both rates were significantly higher than rates for Whites, Latinos, Asians, and those of multiple races. Similarly, the White rate was significantly higher than rates for Latinos, Asians and those of multiple races. It is important to note that death rates for American Indians, Native Hawaiians/Pacific Islanders and those of multiple races may not be reliable due to small numbers of deaths in relatively small populations.

Figure 3A.5

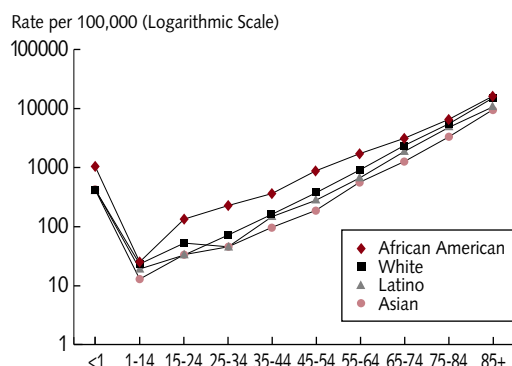
Death from All Causes by Race/Ethnicity
Alameda County, 2000



Sixty percent of those who died in 2000 were White, followed by African American (21.0%), Asian (10.1%), and Latino (7.8%). Native Hawaiians/Pacific Islanders, American Indians, and those of multiple race made up approximately 1% of all deaths.

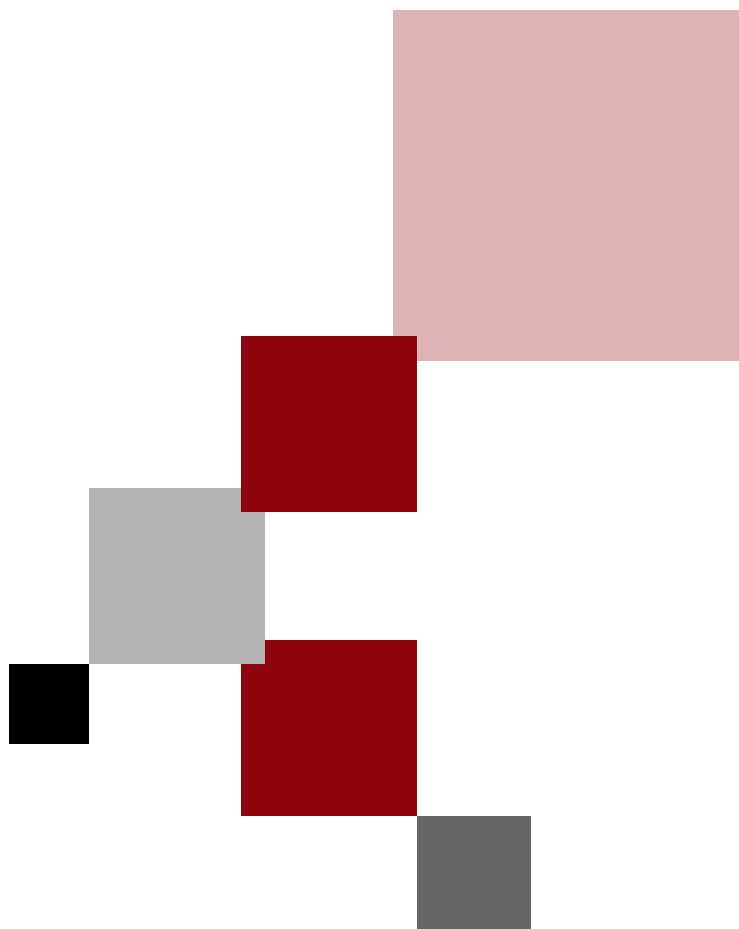
Figure 3A.6

Age-Specific Death Rates from All Causes
by Race/Ethnicity, Alameda County, 2000



Another way of comparing mortality is through an age-specific death rate. In the chart below, the death rate for each age and racial group in Alameda County is shown for the year 2000.^c

The age-specific death rates for African Americans were higher than rates in any other racial/ethnic groups at every age interval. The gap was largest among infants, teens over age 15, and young adults. Age-specific death rates were lowest among Asians in most age groups.



Leading Causes of Death

What are they?

Generally, leading causes of death are presented in terms of the top ten causes, and deaths are ranked according to the most frequently occurring causes.¹⁹ When ranking cause of death for smaller groups that experience relatively few deaths (such as age or racial groups) only the top three to five most common causes are presented.^d

Why are they important?

Cause-of-death ranking is a useful way to examine the relative burden of mortality from specific

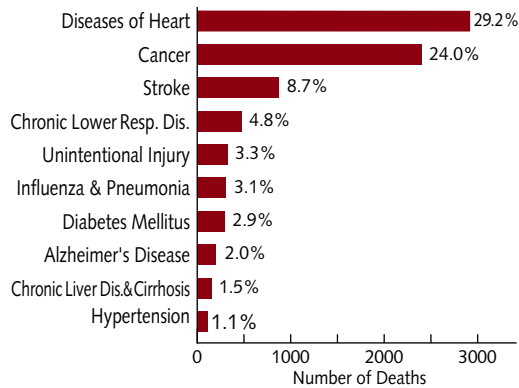
causes. From the standpoint of prevention, it is helpful to understand the most common causes of death and how they vary in different age, race, and sex subgroups. This type of data informs resource allocation, program planning, and provision of services.

What is Alameda County's Status?

Of the county's average annual 9,807 deaths during 1999-2000, 81% were attributable to the 10 leading causes of death.

Figure 3B.1

Leading Causes of Death
Alameda County, 1999-2000
(Average Annual Deaths = 9,807)

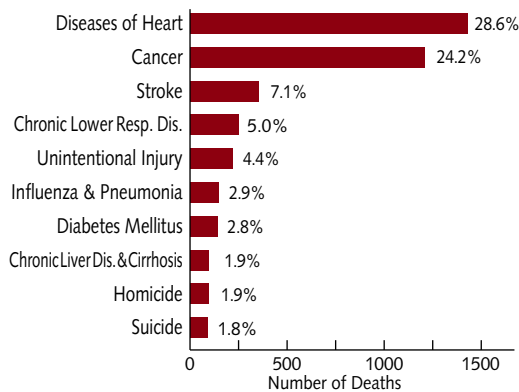


The three most common causes of death were diseases of the heart, cancer, and stroke. These three chronic diseases accounted for 62% of all deaths. Chronic lower respiratory disease and unintentional injury ranked fourth and fifth, respectively, followed by influenza & pneumonia, and diabetes mellitus. Alzheimer's disease, chronic liver disease & cirrhosis, and hypertension, which did not rank among the 10 leading causes in previous years, ranked among the 10 leading causes in 1999-2000.

The rank order of the three leading causes (heart disease, cancer and stroke) was not affected by the introduction of ICD-10,²⁰ the new disease classification system. However, some changes in the ranking occurred for the fourth to tenth leading causes, due in part to the introduction of ICD-10 and to actual change in causes of death.

Figure 3B.2

Leading Causes of Death Among Males
Alameda County, 1999-2000
(Average Annual Deaths = 4,794)



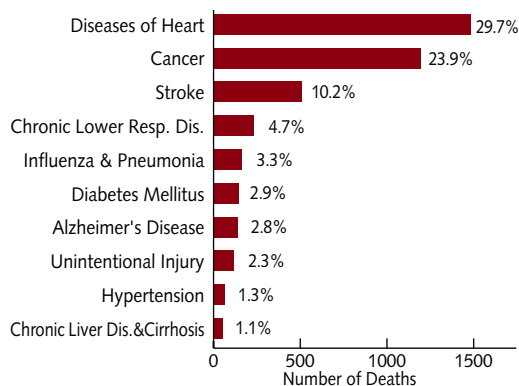
Leading Causes of Death by Sex

The four leading causes of death—heart disease, cancer, stroke and chronic lower respiratory disease—were the same for both males and females. These four causes of death accounted for 65% of deaths among males and 69% of deaths among females.

For males, unintentional injury was the fifth leading cause of death, followed by influenza & pneumonia, diabetes, chronic liver disease & cirrhosis, homicide and suicide. All injury (unintentional, homicide and suicide) accounted for 8.1% of all male deaths.

Figure 3B.3

Leading Causes of Death Among Females
Alameda County, 1999-2000
(Average Annual Deaths = 5,013)



For females, influenza & pneumonia was the fifth leading cause of death, followed by diabetes, Alzheimer's, unintentional injury, hypertension, and chronic liver disease & cirrhosis.

Leading Causes of Death by Race/Ethnicity

Diseases of the heart, cancer, and stroke were the three leading causes of death for all racial/ethnic groups except American Indians and those of multiple races. For Asians, however, cancer ranked first and heart disease second.

For American Indians, heart disease was the leading cause, followed by chronic liver disease & cirrhosis, and cancer. For the multiple race group, heart disease was the leading cause of death, followed by unintentional injury, certain conditions originating in the perinatal period, and cancer.

It is important to note that the total number of deaths for American Indians, Native Hawaiians/Pacific Islanders, and those of multiple races was small (31, 52, & 33, respectively). Therefore, ranking may shift based on a single death.

Diabetes was the fourth leading cause of death for African Americans and the fifth for Latinos. Homicide was the fifth leading cause of death for African Americans. Unintentional injury was the fourth leading cause of death for Asians and Latinos.

Figure 3B.4

Leading Causes of Death by Race/Ethnicity
Alameda County, 2000

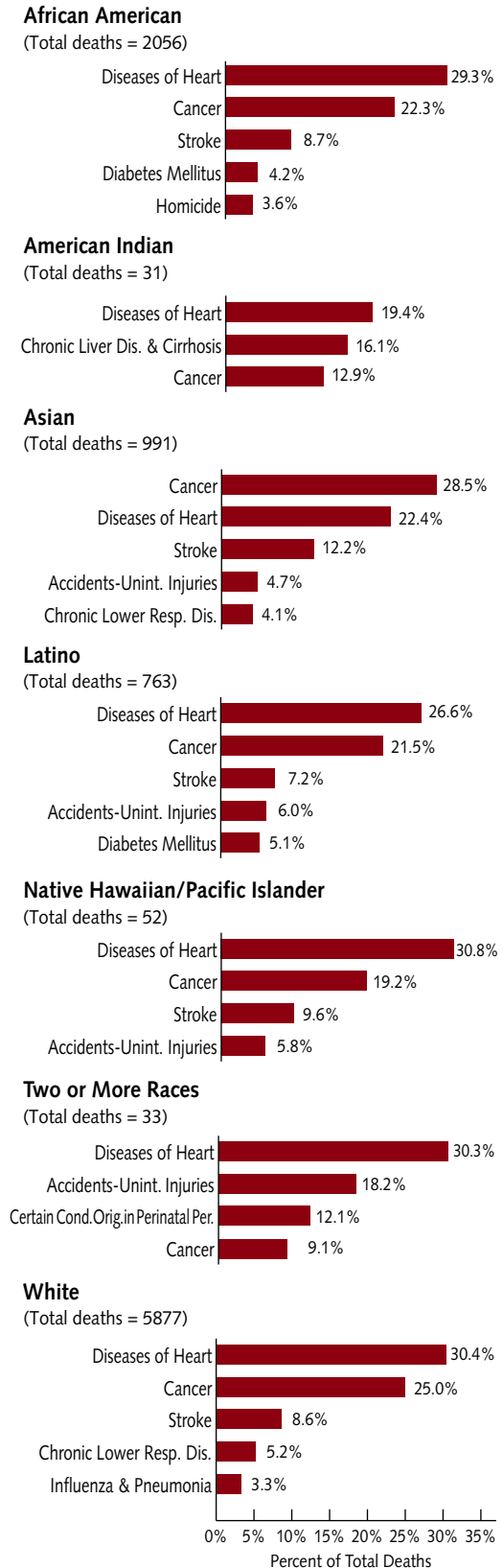
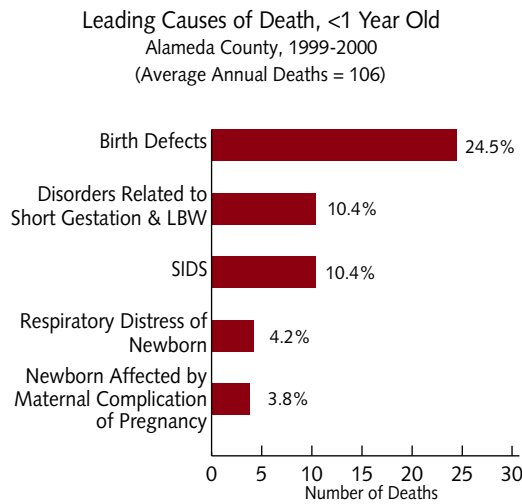


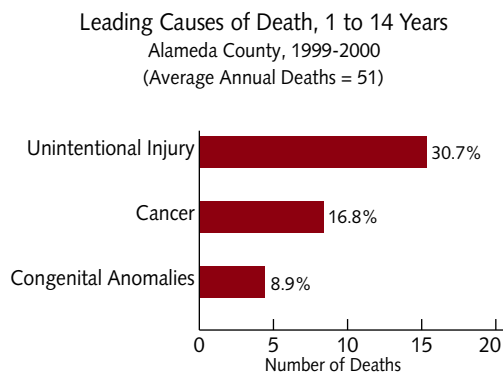
Figure 3B.5



Leading Causes of Death by Age Group

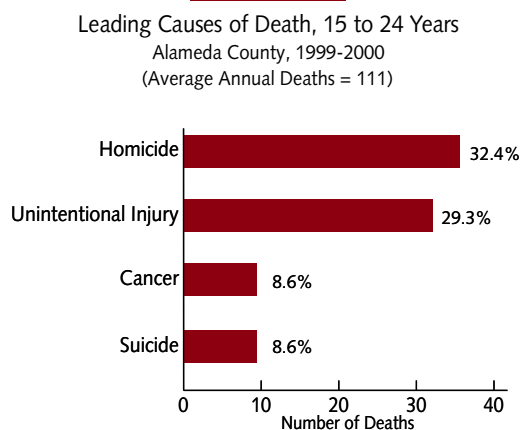
Birth defects were the leading cause of death among babies under 1 year of age, accounting for nearly one-fourth of deaths in this age group. Low birth weight (LBW) and sudden infant death syndrome (SIDS) tied as second leading cause, each one responsible for 10.4% of all infant deaths. Respiratory distress syndrome was the fourth leading cause of death, followed by maternal complication of pregnancy.

Figure 3B.6



Unintentional injury was the leading cause of death among children 1-14 years of age, accounting for 30.7% of all deaths in this age group. Of unintentional injury deaths, 58.1% were from motor vehicle crashes. Cancer ranked second, accounting for 16.8% of deaths among children, and congenital anomalies ranked third, accounting for 8.9% of deaths. While there are very few cancer deaths among children, the predominant cancer sites in this age group were brain and blood, or blood-forming organs (e.g. leukemia and lymphoma).

Figure 3B.7



Three of the four leading causes of death among youth 15 to 24 years of age were due to injuries, both intentional and unintentional, and accounted for over 70% of all deaths in this age group.

Homicide was the leading cause of death, accounting for 32.4% of deaths. Unintentional injury ranked second, accounting for 29.3% of deaths, followed by cancer (8.6%) and suicide (8.6%). Of the unintentional injury deaths, 64.6% were due to motor vehicle accidents. The predominant cancer sites in this age group were blood and blood forming organs.

Unintentional injury was the leading cause of death among adults 25-34 years of age, accounting for 20.2% of deaths in this age group. Homicide ranked second, accounting for 16.2% of deaths, followed by cancer (12.7%), suicide (9.5%), and HIV diseases (8.5%). Thirty-four percent of unintentional injury deaths were due to motor vehicle crashes. The most common cancer sites in this age group were breast and blood or blood-forming organs.

Cancer was the leading cause of death among adults 35-44 years of age, accounting for 21.9% of deaths in this age group. Unintentional injury ranked second, accounting for 14.5% of deaths, followed by diseases of the heart (13.3%), suicide (7.0%), and HIV diseases (6.9%). The most common cancer sites in this age group were breast, lung, and blood or blood forming organs.

It is noteworthy that suicide ranks among the five leading causes of death in the 15-24 and 25-34 age groups, as well as in the 35-44 age group.

Cancer was the leading cause of death among adults 45-54 years of age, accounting for 30.7% of deaths in this age group. Diseases of the heart ranked second, accounting for 20.1% of deaths, followed by unintentional injury (8.2%), chronic liver disease and cirrhosis (5.1%), and HIV diseases (4.3%).

Cancer and heart disease combined accounted for over half of all deaths in this age group. Motor vehicle crashes were responsible for 30% of unintentional injury deaths. The most common cancer sites in this age group were breast and lung, followed by colon, blood or blood forming organs. Chronic liver disease and cirrhosis are conditions largely due to alcohol dependence.

Figure 3B.8

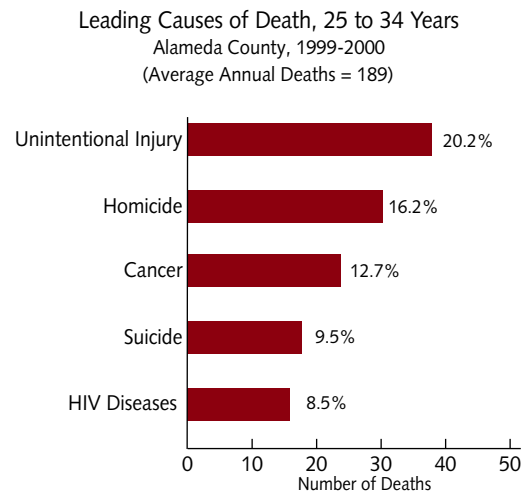


Figure 3B.9

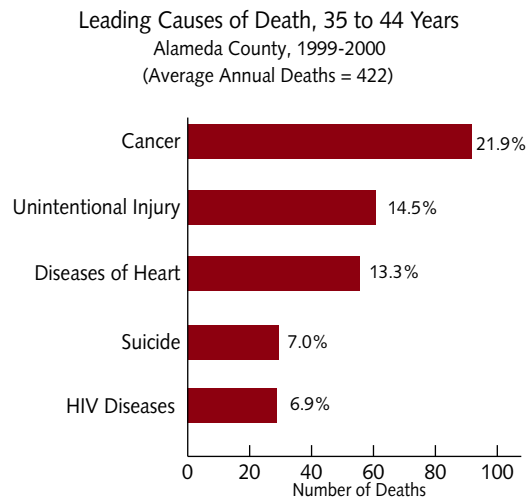


Figure 3B.10

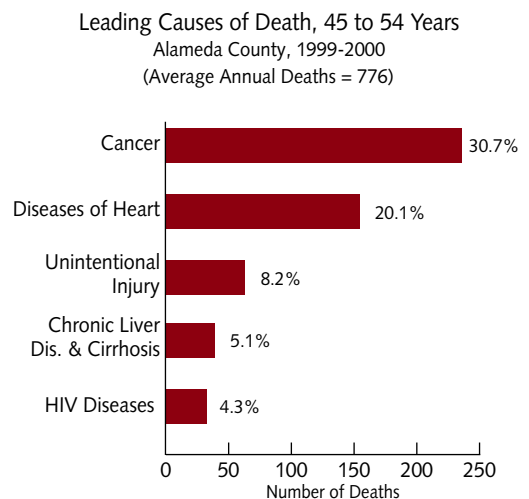
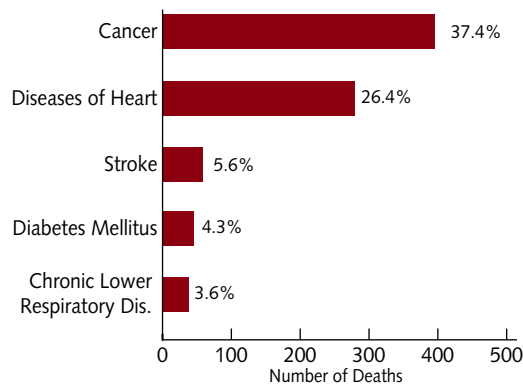


Figure 3B.11

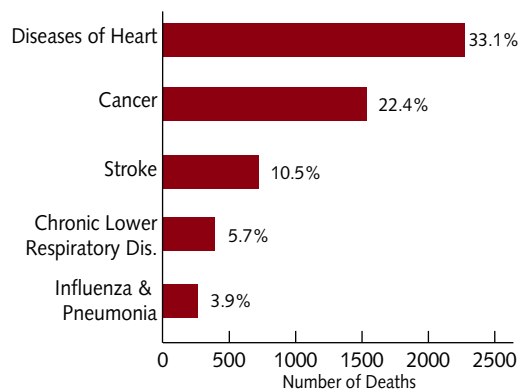
Leading Causes of Death, 55 to 64 Years
Alameda County, 1999-2000
(Average Annual Deaths = 1,058)



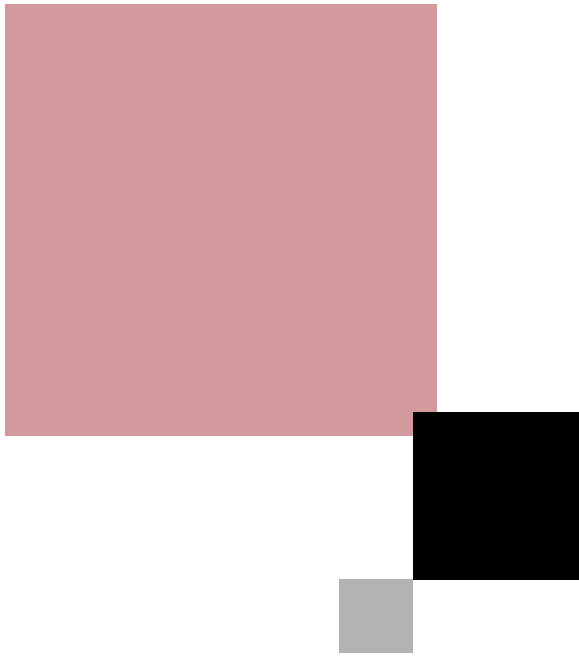
Chronic conditions comprised the 5 leading causes of death for adults aged 55-64. Cancer was the leading cause of death, accounting for 37.4% of deaths in this age group. Diseases of the heart ranked second, accounting for 26.4% of deaths. Stroke and diabetes emerge as leading causes of death in this age group, in addition to chronic lower respiratory disease. This latter condition is due predominantly to chronic obstructive pulmonary disease and emphysema.

Figure 3B.12

Leading Causes of Death, 65 Years & Over
Alameda County, 1999-2000
(Average Annual Deaths = 7,096)



Over 70% of all deaths in Alameda County were among those 65 years of age and older. Heart disease was the leading cause of death, accounting for 33.1% of deaths in this age group. Cancer ranked second, accounting for 22.4% of deaths, followed by stroke (10.5%), chronic lower respiratory disease (5.7%), and influenza & pneumonia (3.9%). Four of the five leading causes of death in this age group are due to chronic conditions. The fifth, influenza & pneumonia, is due to infections that affect the more frail elderly population.



Causes of Premature Death

What is it?

According to the National Vital Statistics System, the average life expectancy at birth in 2000 was 79.5 years for females and 74.1 years for males.²¹ Death before this age is considered premature, especially the death of young people. In addition to being tragic, early death represents a loss to society in terms of lost years of productivity. These “unlived” years are summarized in a measure called “Years of Potential Life Lost.”^{6, 22}

Why is it important?

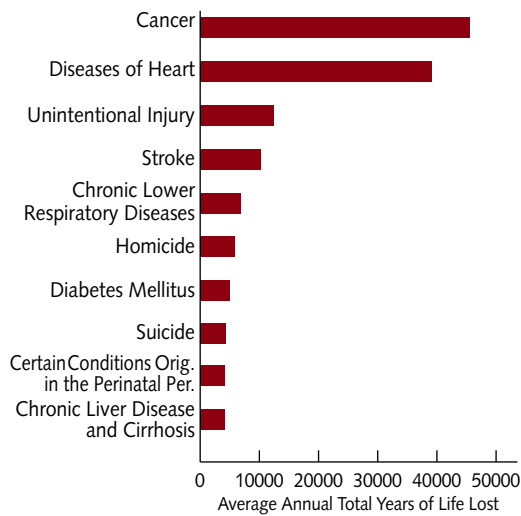
This measure provides another way to measure population health. By taking into account the

years of life lost due to early death, we can begin to focus on strategies for prevention. Premature death is usually caused by motor vehicle crashes and other unintentional injuries, homicide, suicide, drug and alcohol poisoning, and tobacco use. Many deaths due to the major chronic diseases such as cancer, heart disease, stroke, and diabetes are premature as well because they are attributable to lifestyle behaviors and are therefore preventable.²³⁻²⁵

As with other health indicators, racial and ethnic disparities are seen in measures of premature death. For instance, nationally in 1998, years of potential life lost were two times higher among African American women than White women and over three times higher than Asian/Pacific Islander women.⁶ These disparities reflect the earlier ages at which African American women died.

Figure 3C.1

Leading Causes of Premature Death
Alameda County, 1999-2000 Average



What is Alameda County’s status?

The most notable difference between leading causes of death, in general, and leading causes of *premature* death is that intentional injury—homicide and suicide—rank among the top ten causes of years of life lost.

The leading cause of premature death, as measured by total number of years of life lost, was cancer, followed by heart disease, unintentional injury, stroke, and chronic lower respiratory diseases. Homicide ranked sixth in years of life lost, followed by diabetes, suicide, certain conditions originating in the perinatal period, and chronic liver disease & cirrhosis.

The major cancer contributing years of life lost was lung cancer, followed by breast cancer. Coronary heart disease was the major cause contributing years of life lost to diseases of the heart, and motor vehicle crash was the major cause contributing years of life lost to unintentional injury. The most common chronic lower respiratory diseases were chronic obstructive pulmonary disease and emphysema. Deaths classified as ‘certain conditions originating in the perinatal period’ are deaths to newborns. These were predominantly due to low birth weight and other conditions relating to short gestation, respiratory distress, and maternal complications. Chronic liver disease and cirrhosis were largely the result of alcohol dependence.

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Endnotes

^a 9,791 is the total number of deaths in Alameda County's vital records system and reflects the 1998-2000 annual average. This number is lower than the 9,835 deaths in the state of California statistical master files because Alameda County cleans the data to remove deaths from other jurisdictions, duplicates, etc. Throughout this report, death rates presented in the regional section (comparison with other Bay Area counties and California) are based on the California County

Health Profiles 2002 in order to maintain comparability. The County Profiles report used counts that are slightly higher than what we have used, and it also used 1999 population estimates whereas we used Census 2000 population estimates. These discrepancies have had minimal impact on the age-adjusted death rates.

^b It is important to note that the age-adjusted rates published in this report are not comparable to rates published in past reports because we are age-adjusting to a new standard population, the 2000 US Standard Million.²⁶ Most rates are markedly higher, especially for those diseases associated with aging, such as heart disease, because the U.S. population has aged. Compared to the previous standards, the 2000 standard has a larger proportion of the total population in the older age groups. Therefore we expect higher death rates.

^c The logarithmic scale on the vertical axis is used for a more complete description of the relationship between the rates among different racial/ethnic groups. It allows us to observe differences between younger age groups that would not appear on the usual arithmetic scale. This is because the death rates range vastly from 13 per 100,000 in the 1-14 age group to over 16,000 per 100,000 in the age group 85 and older. Thus, even substantial differences in the younger age groups are not apparent on the arithmetic scale.

^d A list of 50 'rankable' causes has been recommended by the National Center for Health Statistics for use with ICD-10. These are broad disease categories that are groupings of the 113 more specific 'selected' causes of death.¹⁹