

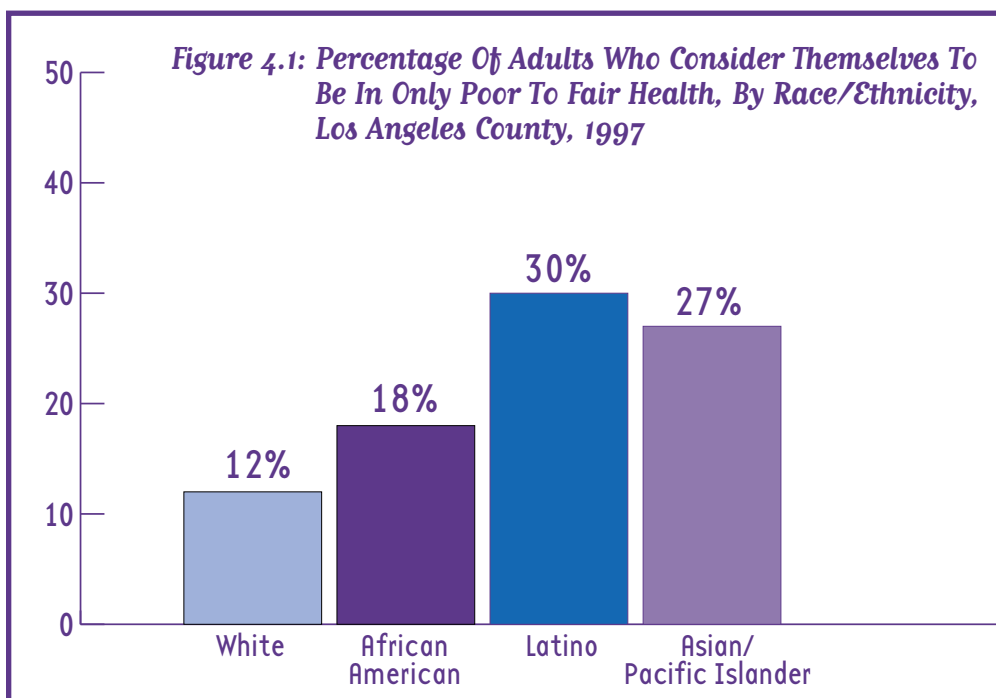
# HEALTH OUTCOMES

The health of Angelenos cannot be assessed without considering how Los Angeles County residents perceive their own health or illness and also examining the incidence of particular diseases. To that end, this chapter will address the following issues: self-perceived health status; burden of disease and injury; maternal and infant health; chronic disease; communicable disease; injury and violence; and, leading causes of mortality.

## Self-Perceived Health Status

How people view their own health is an important indicator of health status. As defined by the Institute of Medicine, health encompasses not only the absence of disease but also “a state of well-being and the capability to function in the face of changing circumstances.”<sup>1</sup>

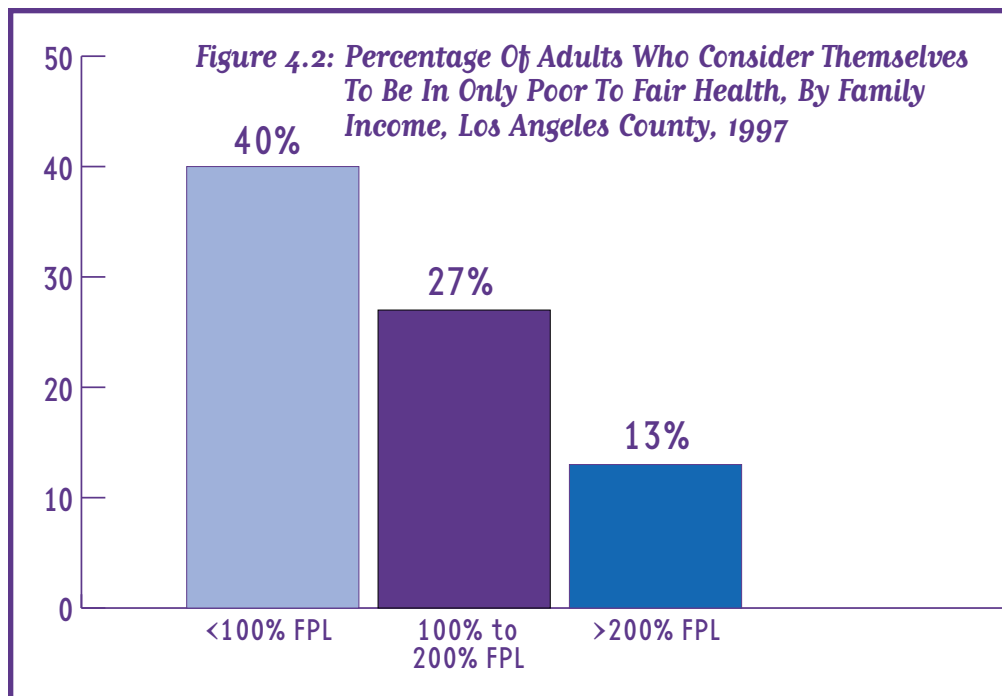
Although health status is strongly associated with the presence or absence of disease, health is by definition a subjective state. Moreover, this subjective state has important ramifications. For example, persons who consider themselves to be in poor health may be more likely to be depressed, to have impaired function, and to lead less productive and fulfilling lives. In addition, self-perceived health status is an important determinant of perceived need (and demand) for health care and other health-related services.



Source: 1997 LACHS.

- According to the 1997 Los Angeles County Health Survey (1997 LACHS), 52% of adults in the county consider their health to be very good to excellent, 27% consider their health to be good, and 21% consider their health to be poor to fair.
- The percentage that consider their health to be only poor to fair is highest among Latinos (30%) and Asians (27%), intermediate among African-Americans (18%), and lowest among whites (12%) (see Figure 4.1).
- The percentage that consider their health to be only poor to fair is higher among women (24%) than men (17%) (1997 LACHS).

→ The percentage that consider their health to be only poor to fair is higher among those with family incomes below 100% of the 1997 federal poverty level (40%) than among those with family incomes between 100% to 200% of the federal poverty level (27%) or greater than 200% of the federal poverty level (13%) (see Figure 4.2).<sup>2</sup>



Source: 1997 LACHS.

→ The percentage that consider their health to be only poor to fair is higher among those who are severely overweight (31%) and mildly to moderately overweight (21%) than among those who are not overweight (16%).<sup>3</sup>

## Self-Perceived Health Status—Data Sources

Los Angeles County Department of Health Services—Public Health  
Office of Health Assessment and Epidemiology  
1997 Los Angeles County Health Survey

California Department of Health Services  
Cancer Surveillance Section  
CATI Unit  
California Behavioral Risk Factor Survey

See Appendix for complete references on these and other data resources.

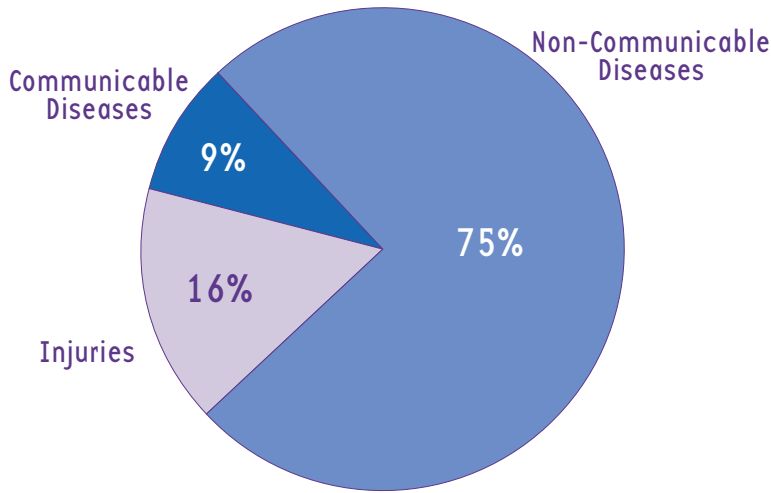
See page 83 for endnotes.

## Burden of Disease and Injury

Ongoing assessment of the burden of disease and injury in the population is essential for planning public health programs and health care services and for evaluating their effectiveness. In the past, disease and injury burden has most often been assessed by examining patterns of mortality in the general population and in various subpopulations such as racial/ethnic groups, age groups, and residents of particular locales. A major limitation of this approach, however, is that it does not account for illness and disability associated with conditions that do not typically cause death. For example, the important contributions of depression and other mental illness on overall disease burden would be greatly underestimated by looking only at mortality data. Similarly, the impact of chronic disabling conditions such as arthritis is not adequately reflected in mortality statistics.

To address this limitation, a new measure of disease and injury burden, referred to as the disability-adjusted life year (DALY), has recently been developed. The DALY is a

**Figure 4.3: Burden Of Disease And Injury Among Males, Los Angeles County, 1996**



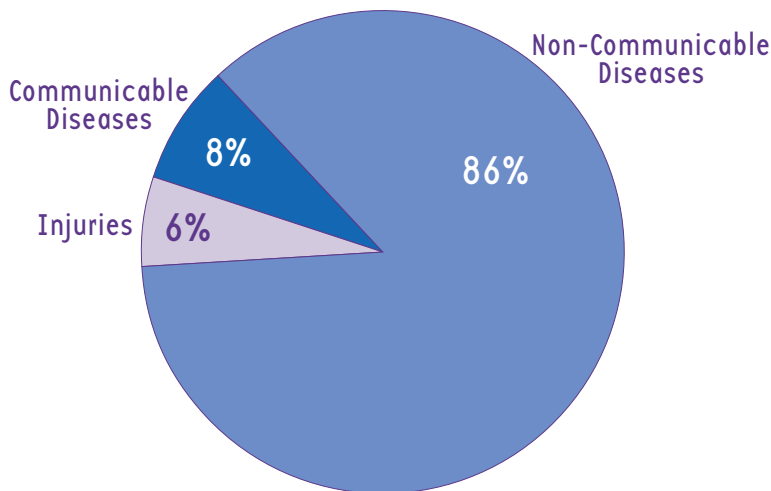
Source: 1997 Los Angeles County Mortality Statistics; supplemental data provided by the Harvard University Burden of Disease Unit.

and disability worldwide were respiratory infections, infections causing diarrhea and dehydration, and conditions arising during the birth period. By the year 2020, however, they project a dramatic shift in the leading causes of premature death and disability worldwide and that heart disease, depression and motor vehicle-related injuries will rise to the top of the list.

The Los Angeles County Department of Health Services is currently developing DALY estimates for the total county population and for the eight service planning areas (SPAs) using a modified version of the methodology employed by WHO and

the Harvard University Burden of Disease Unit. The preliminary results indicate that, in 1997, non-communicable diseases (such as cancer, heart disease, diabetes, and birth defects) accounted for 75% of the total disease and injury burden among males and 86% among females in the county (see Figures 4.3 and 4.4). Communicable (infectious) diseases accounted for 9% of the burden in males and 8% in females. Injuries accounted for the remaining 16% in males and 6% in females.

**Figure 4.4: Burden Of Disease And Injury Among Females, Los Angeles County, 1997**



Source: 1997 Los Angeles County Mortality Statistics; supplemental data provided by the Harvard University Burden of Disease Unit.

The leading cause of DALYs in men in 1997 was coronary heart disease, followed by homicide and other violence, alcohol dependence, drug overdose, and depression. In women, the leading cause of DALYs was also coronary heart disease, followed by alcohol dependence, diabetes, depression, and osteoarthritis.

Age-adjusted rates of premature death (YLLs), disability (YLDs), and overall disease/injury burden (DALYs) in the county population, show marked differences by gender and race/ethnicity. The rate of DALYs is higher in males (119 per 1,000) than females (94 per 1,000). This difference is attributable to a 50% higher rate of premature death among men (67 per 1,000) than women (44 per 1,000). The DALYs rate is highest among African-Americans (190 per 1,000), followed by American Indians/Alaska Natives (149 per 1,000), whites (113 per 1,000), Latinos (94 per 1,000), and Asians/Pacific Islanders (77 per 1,000).

A more detailed report recently released by the Los Angeles County Department of Health Services includes DALYs estimates for the eight SPAs and information on the leading causes of premature death and disability in each of these areas.<sup>5</sup>

### Burden of Disease—Data Sources

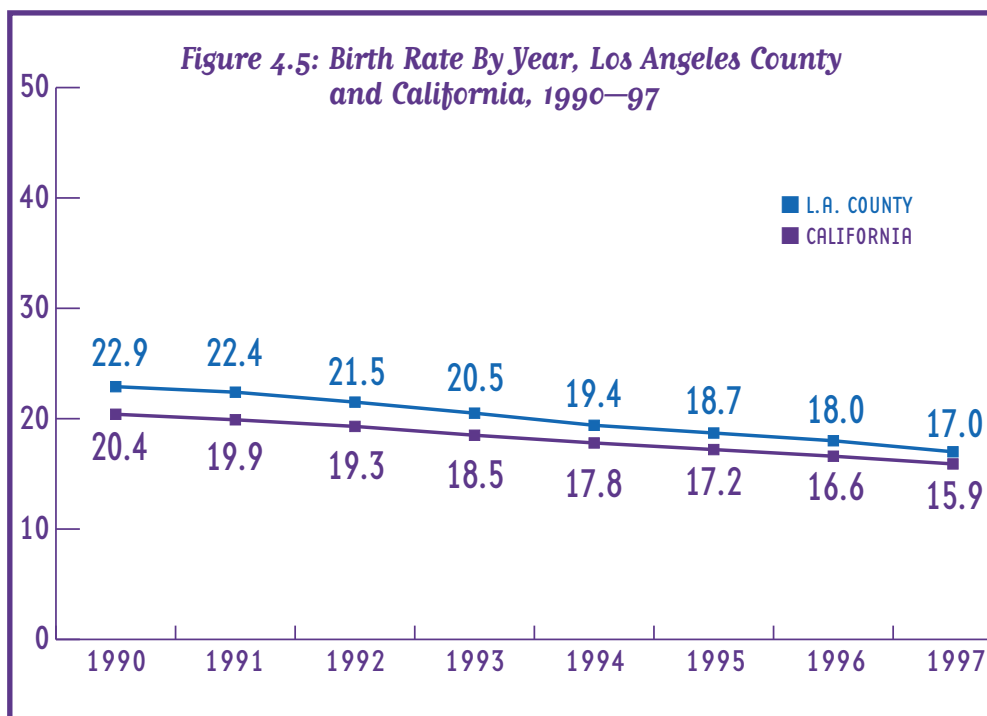
1. Los Angeles County Department of Health Services—Public Health  
Office of Health Assessment and Epidemiology  
Epidemiology Unit

2. Harvard University School of Public Health  
Center for Population and Development Studies  
Burden of Disease Unit

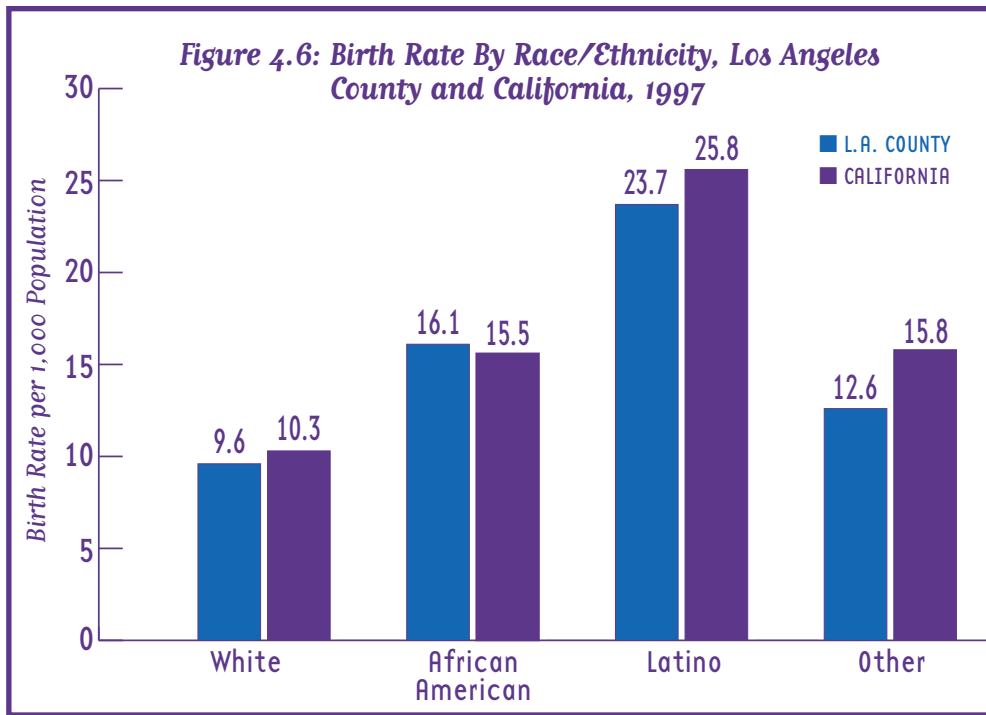
*See Appendix for complete references on these and other data resources.  
See page 83 for endnotes.*

### Maternal and Infant Health

Los Angeles County and California, especially in the 1990s, have seen significant improvements in the amount of early prenatal care received and in the reduction of infant mortality, a testament to the results that can be achieved when focused interventions are applied. Maternal and infant health is considered an index of overall health within a community. Thus, improvement in the health of mothers and infants is an important priority and opportunity for elevating a community's health status. Indicators most often used to assess maternal and infant health are receipt



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.

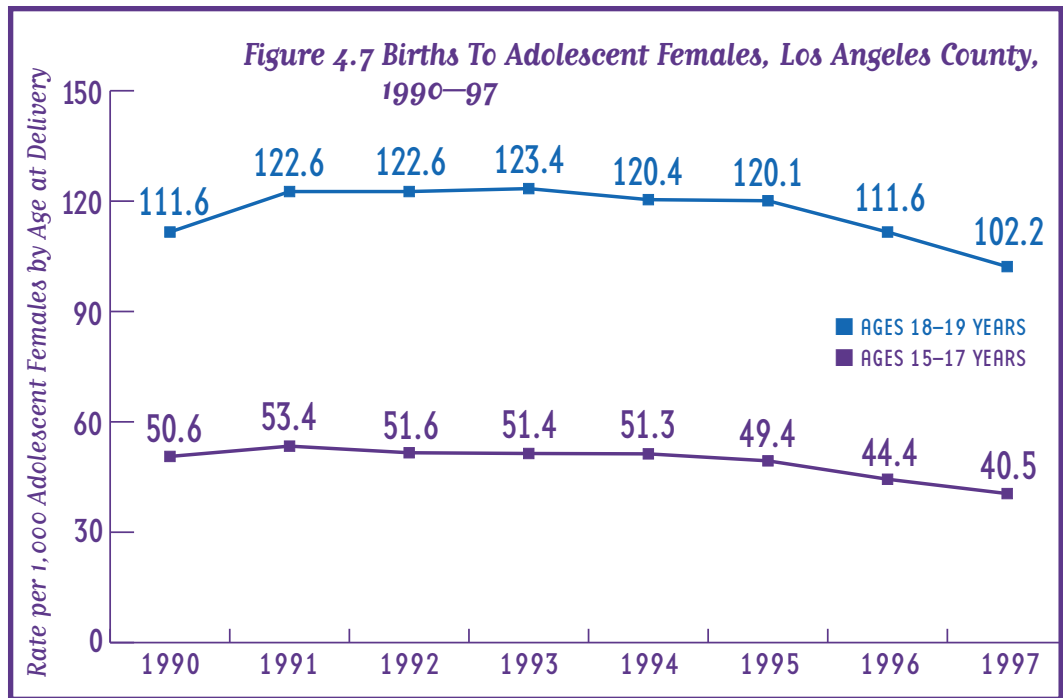
and adequacy of prenatal care, incidence of low birth weight babies, and infant mortality. These indicators are interrelated and are sensitive to a wide range of social, biological, health and environmental factors.<sup>6</sup> Ultimately these traditional maternal and infant health indicators are important barometers of children's health and their chances of a healthier survival.

### Birth Rate

- There was a decline in the birth rate for Los Angeles County and California from 1990 to 1997 (see Figure 4.5).
- The total number of live births in 1997 in Los Angeles County (162,036) made up approximately 31% of the total live births in the state of California (524,174).
- Los Angeles County's birth rate (17.0 per 1,000 residents) was slightly higher than that of the state's (15.9 per 1,000 residents) in 1997 (see Figure 4.5).
- The 1997 birth rate in Los Angeles County was highest for Latinos (23.7 per 1,000 residents) followed by African-Americans (16.1 per 1,000 residents), Asians (12.6 per 1,000 residents) and whites (9.6 per 1,000 residents) (see Figure 4.6).
- In 1997 an estimated 35% of live births to mothers ages 20 or older occurred in women with less than a high school education. This percentage has remained relatively unchanged from 1990 to 1997.

## Teen Births

The United States has the highest teenage pregnancy rate among developed countries. An estimated one million teenagers become pregnant each year; 95% of those pregnancies are unintended and almost one-third end in abortions.<sup>7</sup> Health departments, in conjunction with local community partnerships and organizations, have implemented comprehensive, integrated youth programs to help prevent teen pregnancies and related problems.



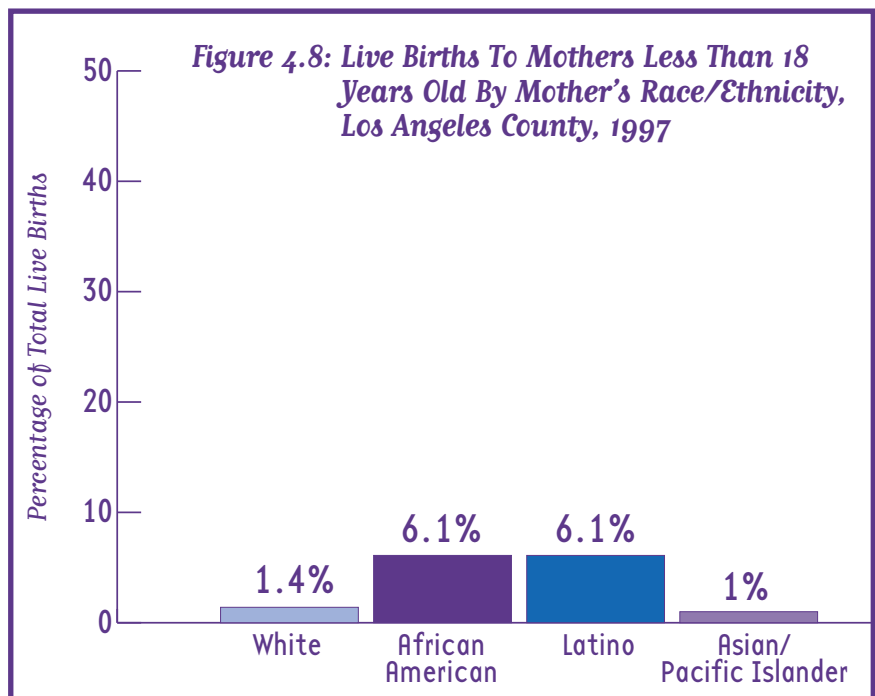
Source: Los Angeles County Department Of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.

- In 1997, the Los Angeles County teen birth rate was higher than the rate statewide, 15.2 and 13.6 births per 1,000 females under age 17, respectively; however, both geographic areas have experienced a decline in births to teens (see Table 4.1 and Figure 4.7).
- The highest proportion of births to teens in 1997 occurred among Latinos and African-Americans (6.1%), followed by whites (1.4%) and Asians (1.0%) (see Figure 4.8).

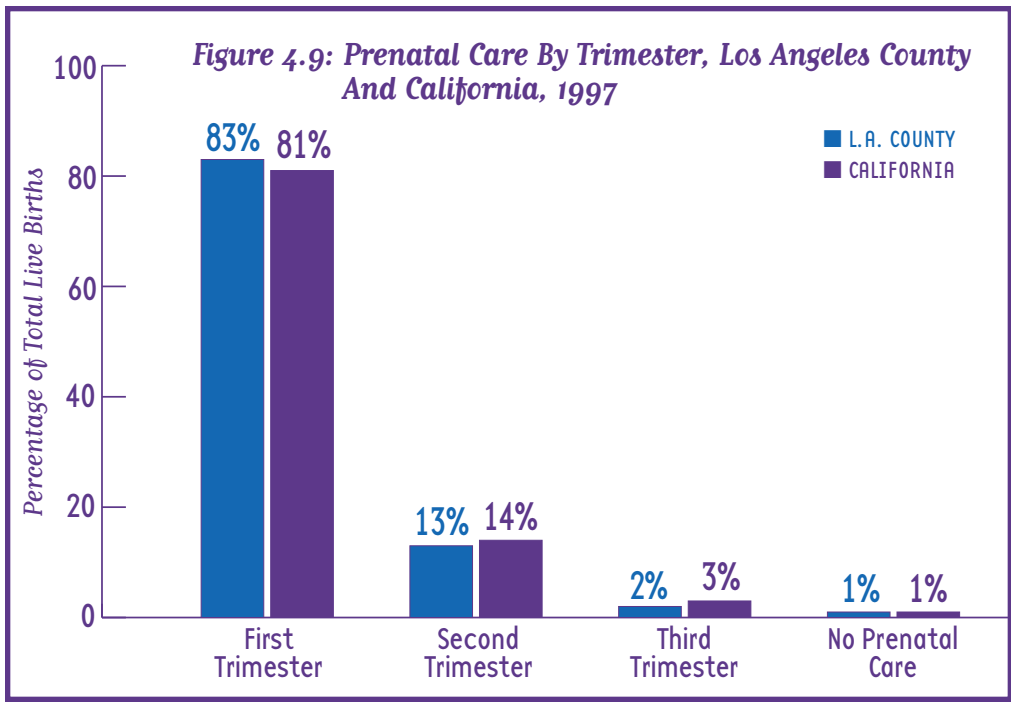
## Prenatal Care

Prenatal care is widely acknowledged as the most cost-effective way to improve the outcome of pregnancy for all women and infants, particularly when it is received early in a pregnancy.

- The percentage of mothers who received prenatal care in the first trimester was 83% for Los Angeles County and 81% for California in 1997 (see Figure 4.9).
- In 1997, the proportion of mothers in Los Angeles County, who received no prenatal care or received care only during the third trimester was 2% and 1%, respectively (see Figure 4.9).
- The percentage of women receiving first trimester prenatal care has



Source: Los Angeles County department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.

increased steadily from 1990 to 1997 for both Los Angeles County and California (see Figure 4.10).

- Fifty percent of the women who gave birth in 1997 received prenatal care paid for by Medi-Cal (see Figure 4.11).
- Los Angeles County and California did not meet the Healthy People 2000 goal of 90% of mothers receiving first trimester prenatal care in 1997.
- African-Americans and Hispanics have the lowest proportion of births that receive adequate prenatal care as defined by the

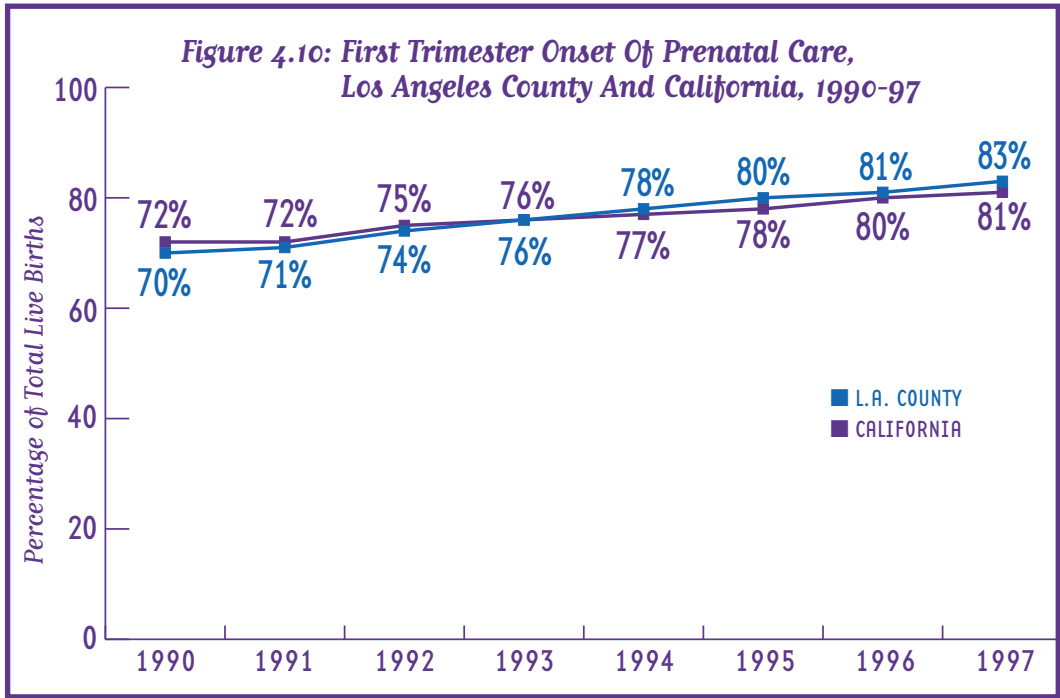
Kessner Index, a combined measure of the adequacy and amount of prenatal care received.

**Low Birth Weight**

Low birth weight is one of the leading causes of infant mortality. Infants who weigh less than 5.5 pounds (2,500 grams) at birth are considered low birth weight. Low birth weight infants are nearly twice as likely as normal weight infants to exhibit severe developmental delays throughout childhood.<sup>8</sup> Factors associated with low birth weight

include teen pregnancy, unintended or unwanted pregnancy, lack of prenatal care, poor nutrition during pregnancy, maternal smoking, substance abuse, and stress.

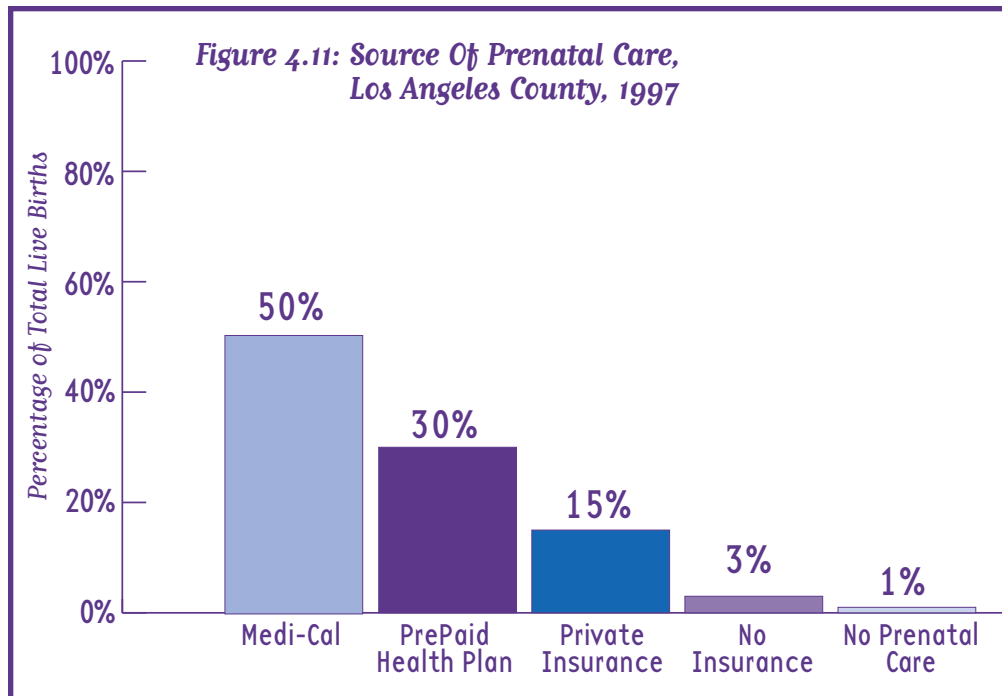
- In 1997, low birth weight infants constituted 6% of all births for both Los Angeles County and California.



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.



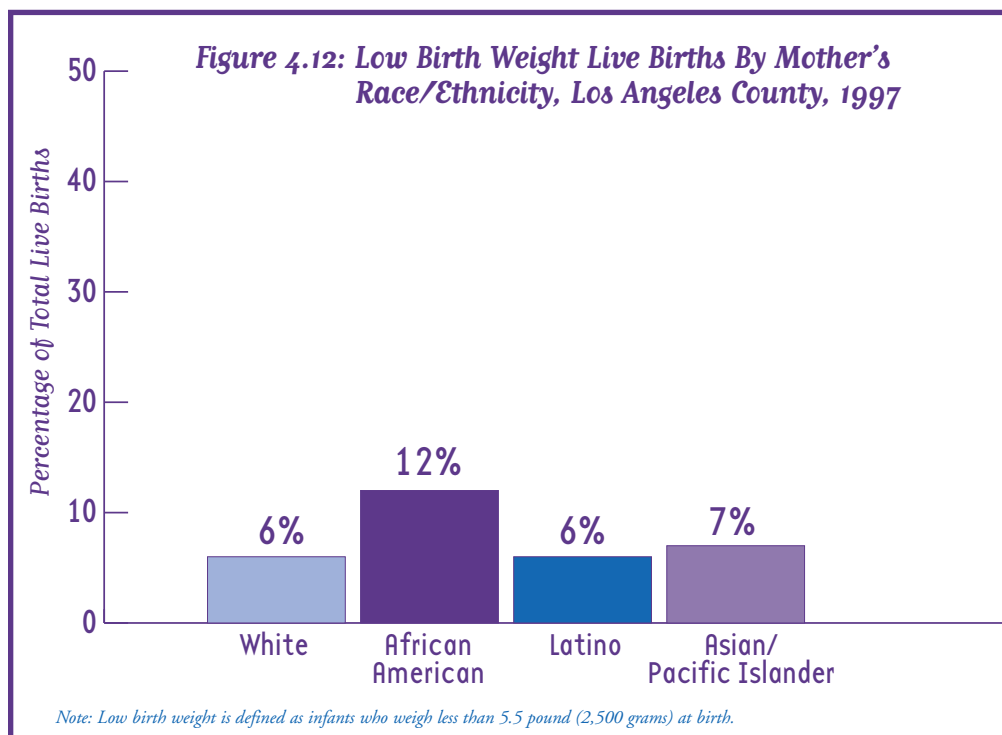
- Both Los Angeles County and California's proportions of low birth weight infants exceeded the *Healthy People 2000* goal of 5% in 1997.
- African-Americans (12%) had the highest proportion of low birth weight infants in Los Angeles County, followed by Asians (7%), whites (6%), and Latinos (6%) in 1997 (see Figure 4.11).
- From 1990 to 1997, the proportion of low birth weight births remained relatively unchanged.



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.

### Infant Mortality

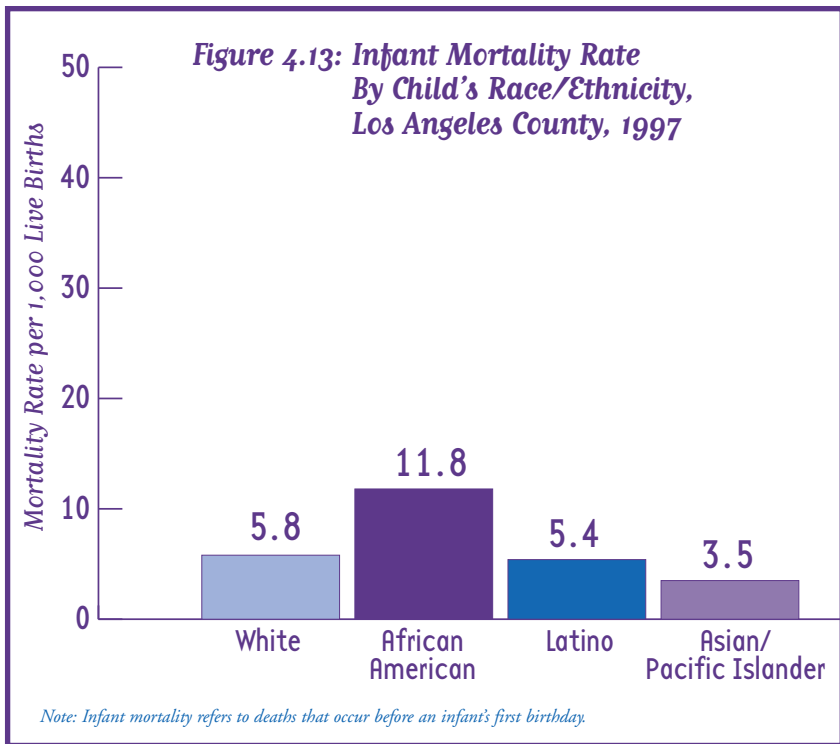
- Infant mortality rates in Los Angeles County were comparable to those of California in 1997, with 5.9 infant deaths per 1,000 live births. Both geographic areas also had lower rates than the *Healthy People 2000* goal of 7.0 infant deaths per 1,000 live births.
- African-Americans had the highest infant mortality rate of any racial group with 11.8 infant deaths per 1,000 live births in 1997 (see Figure 4.13).
- The infant mortality rate for both Los Angeles County and California declined from 1990 to 1997 (see Figure 4.14).



Note: Low birth weight is defined as infants who weigh less than 5.5 pound (2,500 grams) at birth.

Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.



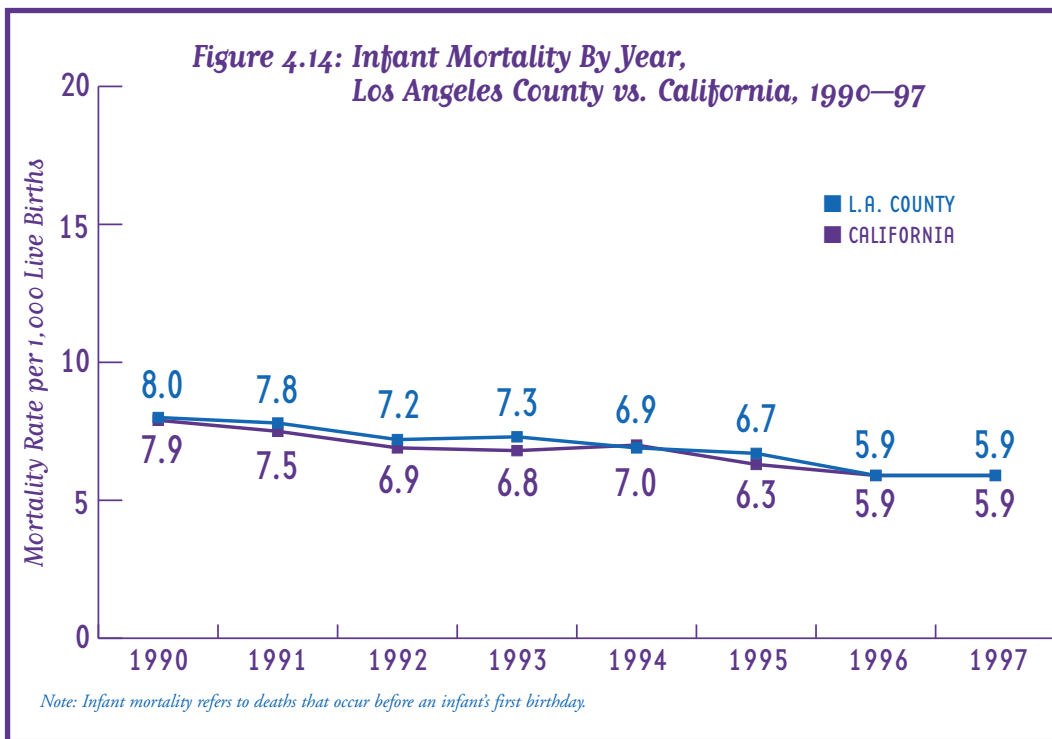


Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.

### Maternal and Infant Health—Data Sources

1. Los Angeles County Department of Health Services—Public Health  
MCAH Assessment and Planning Unit (MAP)
2. Los Angeles County Department of Health Services—Public Health  
Data Collection and Analysis Unit
3. Los Angeles County Department of Health Services—Public Health  
Office of Health Assessment and Epidemiology  
1997 Los Angeles County Health Survey
4. California State Department of Finance  
Demographic Research Unit
5. California Department of Health Services  
Office of Health Information and Research  
Center for Health Statistics

See Appendix for complete references on these and other data resources.  
See page 83 for endnotes.



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, Los Angeles County, 1997.

## Chronic Disease

Heart disease, cancer, diabetes, and stroke are major causes of mortality in the United States and other industrialized nations. In addition, these and other chronic conditions, such as arthritis and depression, are leading causes of disability and diminished quality of life. Measuring the incidence and prevalence of these conditions in the population represents a significant challenge. The 1997 Los Angeles County Health Survey (1997 LACHS) is a random-digit-dial telephone survey of 8,004 households in the county intended to provide health information on Los Angeles County residents currently living with several of these chronic conditions. Additionally, data on the incidence of various forms of cancer is available from the Cancer Surveillance Program at the University of Southern California School of Medicine. The impact of many of these conditions on life expectancy will be described at the end of this chapter.

**Table 4.2: Chronic Disease, Adults, 18 Years And Older**

	L.A. County <sup>1</sup>	California <sup>2</sup>
<b>Heart disease</b>		
Total	5%	*
White	6%	*
African-American	6%	*
Latino	3%	*
Asian	6%	*
<b>Diabetes</b>		
Total	6%	6%
White	5%	5%
African-American	9%	7%
Latino	6%	7%
Asian	5%	*
<b>Hypertension</b>		
Total	16%	21%
White	17%	22%
African-American	28%	27%
Latino	12%	14%
Asian	14%	*

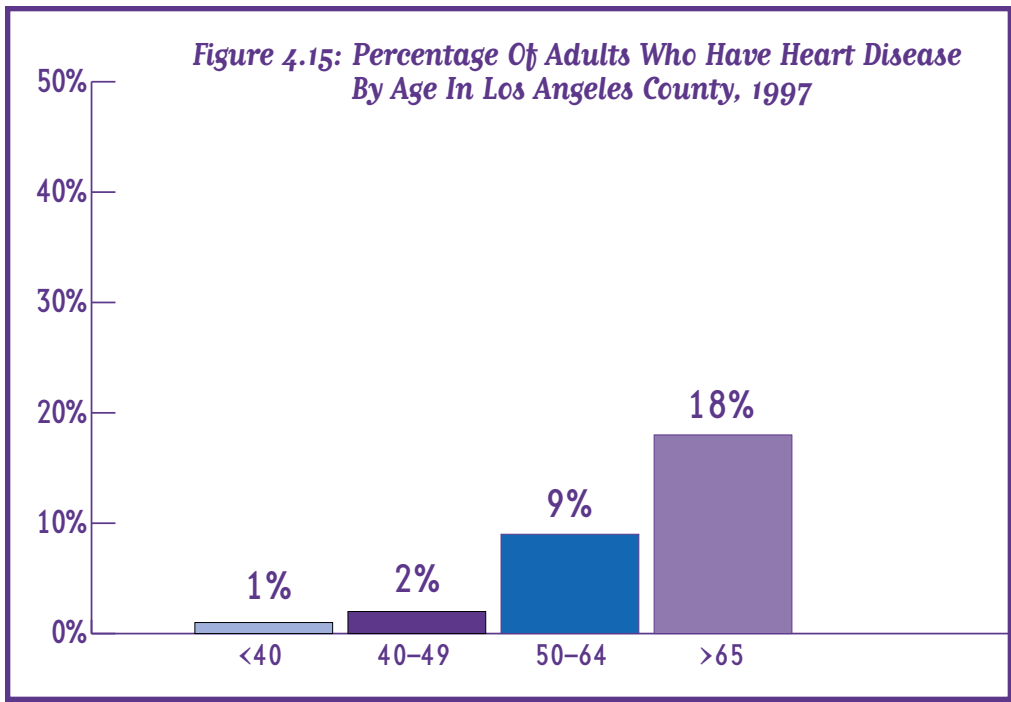
\* Data not available

1. 1997 LACHS.

2. California Behavioral Risk Factor Survey, 1998.

## Heart Disease

Although deaths from heart disease have declined in the United States and many other industrialized countries over the past 30 years, heart disease remains the leading cause of death in the United States. Risk factors for heart disease that can be addressed through prevention programs include smoking, obesity, lack of physical activity, personal stress, diabetes, high blood pressure, and high serum cholesterol levels.



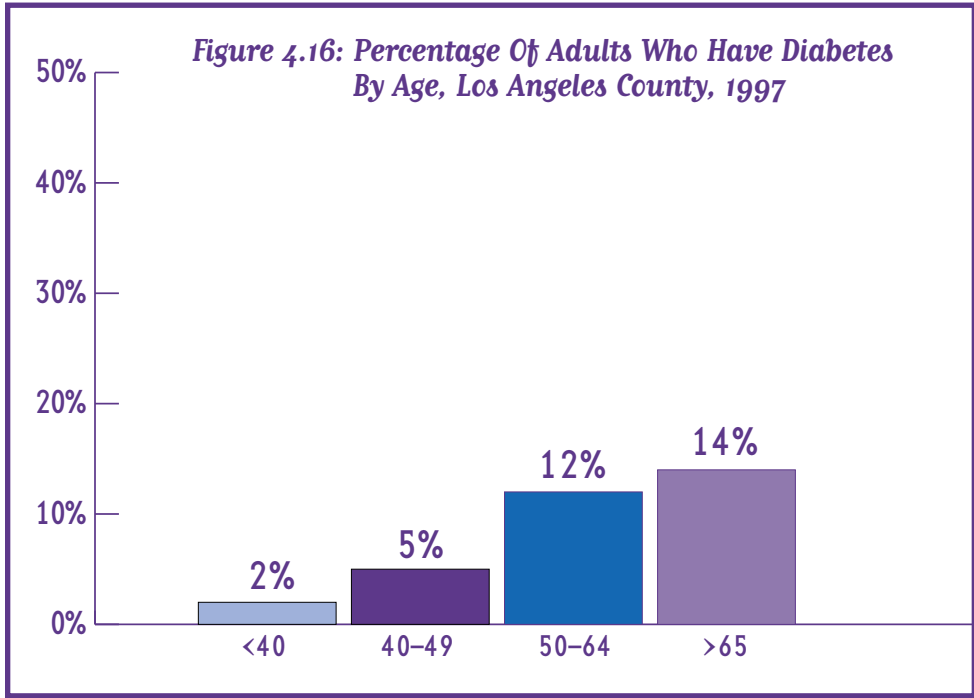
Source: 1997 LACHS, Los Angeles County Department of Health Services.

- An estimated 5% of the county adult population report having heart disease.
- The percentage that reports heart disease increases with age, from 1% among those under 40 to 18% among those 65 and older (see Figure 4.15).
- Of those who report having heart disease, 77% report currently being treated by a physician for this condition (1997 LACHS).

**Diabetes**

Diabetes was the seventh leading cause of death in the United States in 1995. In addition, diabetes is the leading cause of kidney failure and blindness among adults in the United States, and an important cause of heart disease, neurologic disease (e.g., loss of sensation and weakness), and peripheral vascular disease (e.g., stroke, poor circulation, and loss of limbs).

- An estimated 6% of the county adult population (18 and older) report having diabetes (1997). Similarly, 6% of the California population report having been diagnosed with diabetes (see Table 4.2). The estimated prevalence of diabetes



Source: 1997 LACHS, Los Angeles County Department of Health Services.

nationally is 4.8%.<sup>9</sup> *The Healthy People 2000* goal is to reduce the prevalence of diabetes nationally to 2.5%.<sup>10</sup>

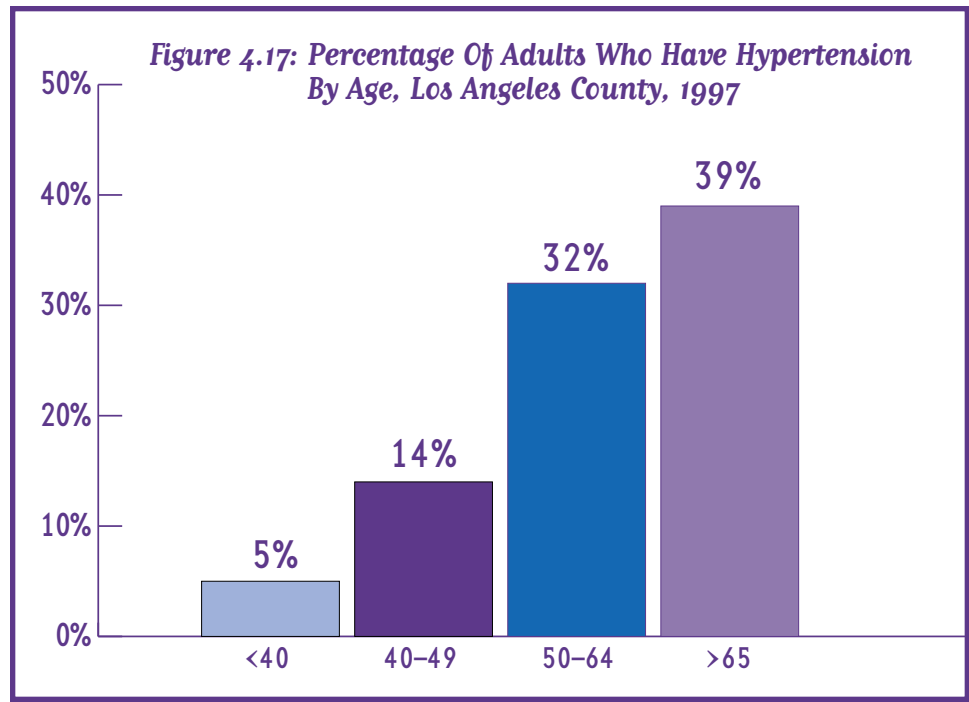
- The percentage of people who report diabetes increases with age, from 2% among those 40 years old to 14% among those 65 years and older (see Figure 4.16).
- Of those who report having diabetes, 86% report currently being treated by a physician for this condition (1997 LACHS).

## Hypertension

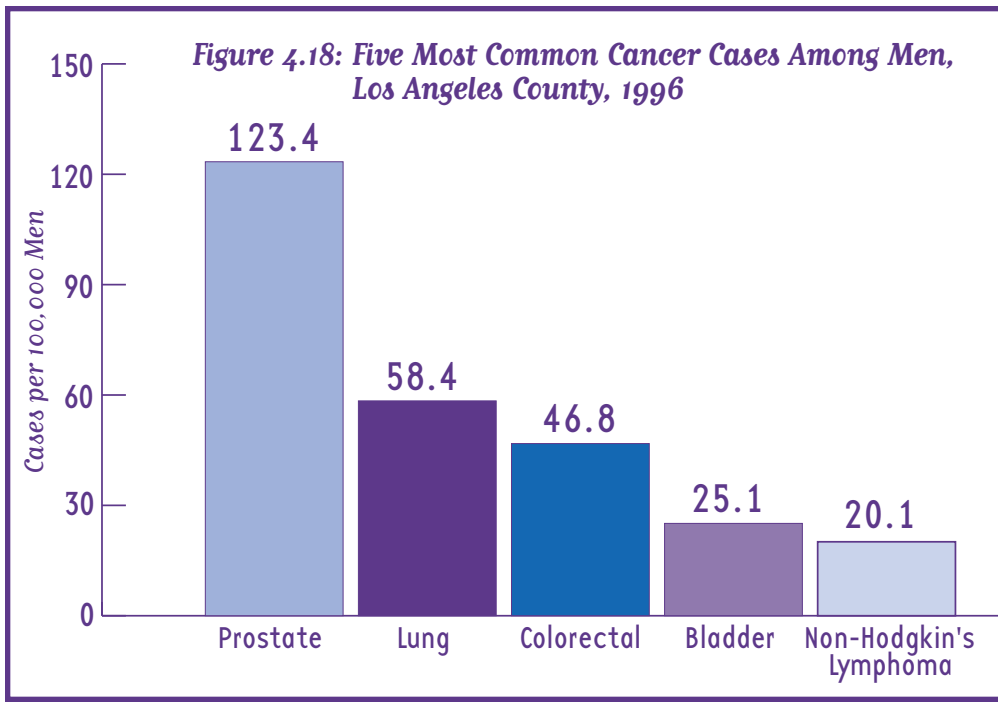
During 1988-94, hypertension, or high blood pressure, affected nearly 25% of adults 20 years and older in the United States.<sup>11</sup> *The Healthy People 2000* goal is for 50% of persons with hypertension (40% of hypertensive men) to be successfully controlling their hypertension.<sup>12</sup> Hypertension is a leading cause of heart disease and stroke. Early diagnosis and treatment of hypertension is critically important in preventing these complications.

- An estimated 16% of the county adult population report having hypertension or high blood pressure compared to 21% of the population in California (see Table 4.2).
- In Los Angeles County, the percentage that reports hypertension or high blood pressure is 28% among African-Americans, 17% among whites, 14% among Asians, and 12% among Latinos (see Table 4.2).
- The percentage that reports hypertension or high blood pressure increases with age, from 5% among those younger than 40 to 39% among those 65 and older (see Figure 4.17).
- Of those who report having hypertension, 75% report currently being treated by a physician for this condition. However, the data do not indicate whether this treatment has been effective in controlling their hypertension (1997 LACHS).

The prevalence estimates reported for the chronic conditions listed above are limited in the following ways. First, participants in the 1997 LACHS were asked if they had any of these conditions, but were not asked if they had ever been diagnosed with the condition by a health care provider. As a result, some reports may reflect symptoms or self-perceived health problems that are caused by other unrelated diseases or other factors. Second, some chronic conditions such as diabetes and hypertension may be underreported because they remain unrecognized for long periods of time, especially in persons who do not utilize or have access to health care services.

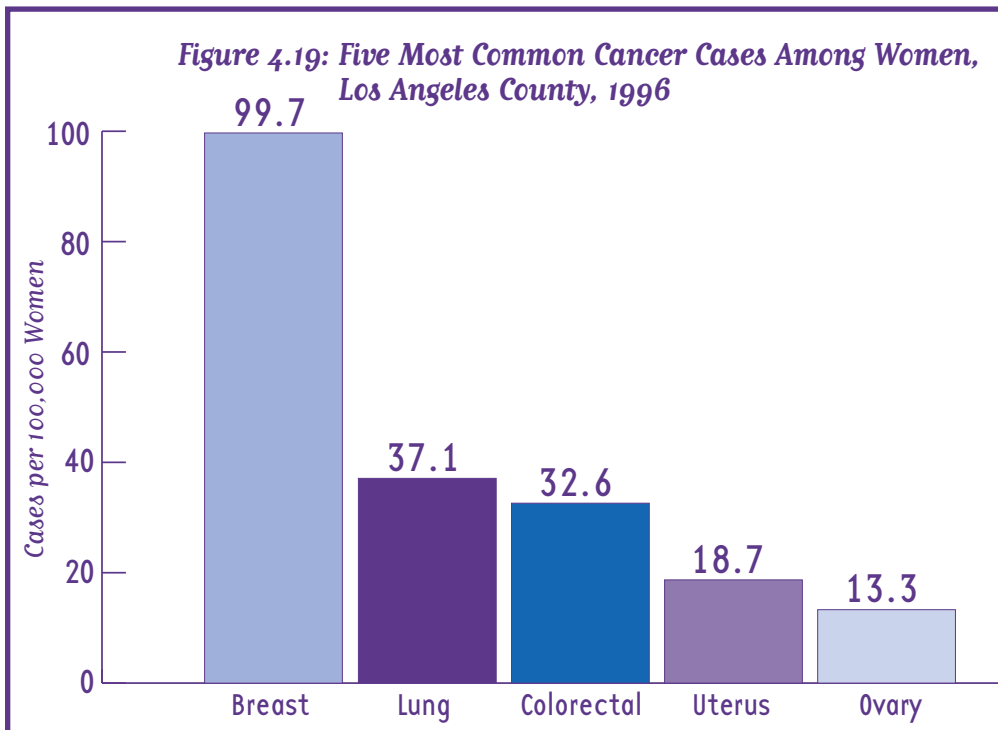


Source: 1997 LACHS, Los Angeles County Department of Health Services.



Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999, and from *Cancer in California: 1988–1996*, California Department of Health Services, Cancer Surveillance Sect., March 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.

→ The most frequently diagnosed cancer in Los Angeles County men in 1996 was prostate cancer (123 per 100,000 men), followed by lung cancer (58 per 100,000), colorectal cancer (47 per 100,000), bladder cancer (25 per 100,000), and non-Hodgkin's lymphoma (20 per 100,000) (see Figure 4.18).



Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999, and from *Cancer in California: 1988–1996*, California Department of Health Services, Cancer Surveillance Sect., March 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.

## Cancer

Cancer is the second leading cause of death in the United States, accounting for 23% of all deaths in 1994. Many of these cancer deaths are preventable. For example, eliminating cigarette smoking could prevent an estimated 85% of all lung cancer deaths. Many other cancer deaths could be prevented through more widespread use of screening procedures, such as mammography and pap smears, that facilitate early diagnosis and treatment.

The Cancer Surveillance Program, University of Southern California School of Medicine, reports these key findings:

→ The most frequently diagnosed cancer in Los Angeles County women in 1996 was breast cancer (100 per 100,000 women), followed by lung cancer (37 per 100,000), colorectal cancer (33 per 100,000), uterine cancer (19 per 100,000), and ovarian cancer (13 per 100,000) (see Figure 4.19).

→ The prostate and lung cancer incidence rates among African-American men were higher compared to rates among men in other racial/ethnic groups (see Table 4.2b).

**Table 4.2b: Incidence Of Cancer**

	L.A. County	California
Male (cases per 100,000 men)		
Prostate	123.4	122.7
White	131.2	120.6
African-American	198.5	199.9
Latino	87.5	93.6
Asian/Pacific Islander	57.8	64.4
Lung	58.4	62.1
White	65.3	67.3
African-American	107.2	100.5
Latino	29.1	32.2
Asian/Pacific Islander	43.7	48.2
Female (cases per 100,000 women)		
Breast	99.7	107.8
White	123.3	121.6
African-American	99.6	99.0
Latino	63.6	68.5
Asian/Pacific Islander	73.6	72.7
Lung	37.1	41.2
White	48.1	48.6
African-American	44.0	45.6
Latino	16.5	18.1
Asian/Pacific Islander	20.9	20.9

Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988-1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999, and from *Cancer in California: 1988-1996*, California Department of Health Services, Cancer Surveillance Sect., March 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.

→ The breast and lung cancer incidence rates among white women were higher compared to rates among women in other racial/ethnic groups (see Table 4.2b).

## Chronic Disease—Data Sources

### 1. Los Angeles County Department of Health Services—Public Health

Office of Health Assessment and Epidemiology

1997 Los Angeles County Health Survey

### 2. Los Angeles County Cancer Surveillance Program

University of Southern California

Department of Preventive Medicine

### 3. California Department of Health Services

Cancer Surveillance Section

CATI Unit

California Behavioral Risk Factor Survey

### 4. California Department of Health Services

Cancer Surveillance Section

Cancer Control Branch

Division of Chronic Disease and Injury Control

See Appendix for complete references on these and other data resources.

See page 83 for endnotes.

## Communicable Disease

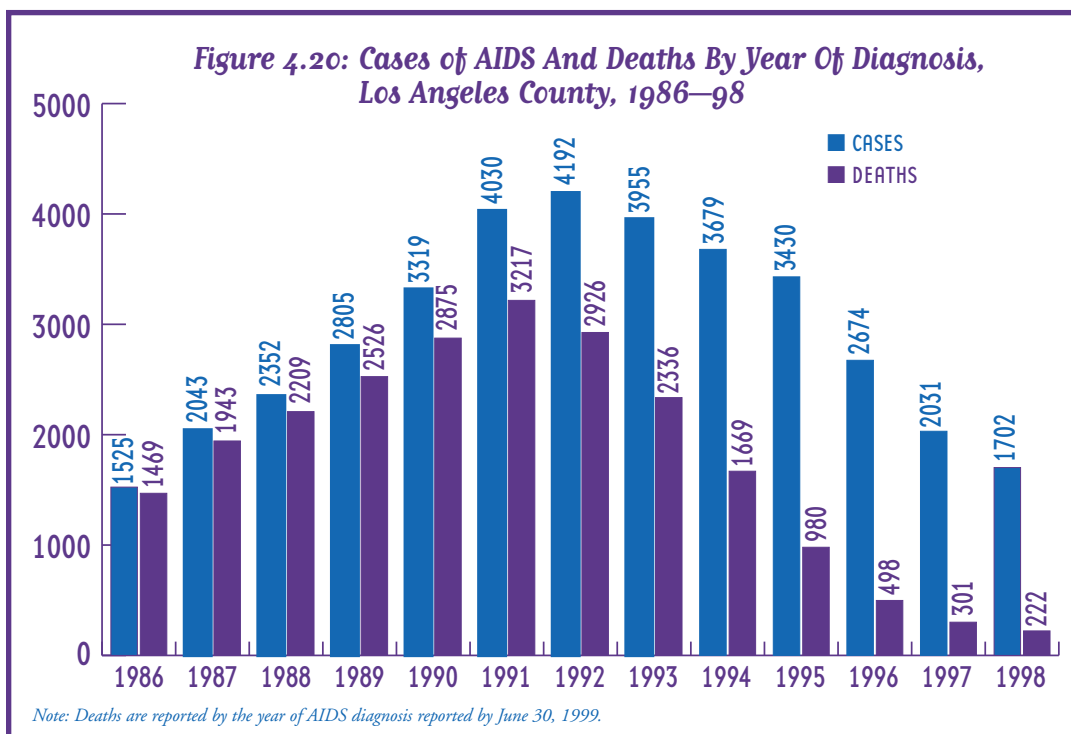
Health care providers, laboratories, and others are required by state law to report to local health officials data on communicable diseases in Los Angeles. Over 80 such diseases and conditions are reported to health officials. These data form the basis for case investigation, outbreak control, and intervention activities targeted to individuals and populations at greatest risk. However the value of the data is limited by the underreporting of cases, incomplete information, and reporting lag time (difference between identification of disease or onset of disease and report date), which tend to lower the overall reported rates. Certain facilities, such as public STD clinics, may be more likely to report communicable diseases; thus, the populations served there may be over-represented compared to populations served elsewhere.

Overall, the rates of many communicable diseases have decreased in the past 50 to 75 years due to improvements in sanitation, housing, and food handling. Such improvements include more stringent infection control practices, widespread immunization of the population, use of antibiotics, and other disease control activities.

## HIV/AIDS

Recent advances in the medical treatment of HIV infection and AIDS resulted in more than a 50% drop in AIDS-related deaths in Los Angeles County from 1996 to 1997. Furthermore, there were 31% fewer new AIDS cases reported between 1996 and 1997 in Los Angeles County. The availability of more effective treatment has made it increasingly important that HIV-infected persons be diagnosed and linked to medical care and other support services as soon as possible after infection (see Figure 4.20).

Since the AIDS epidemic was first recognized in 1981, more than 38,000 Los Angeles County residents have developed AIDS, and, of these, more than 24,000 have died. Los Angeles County accounts for 35% of AIDS cases reported in California and nearly 6% of all cases reported nationally. The number of persons who become infected



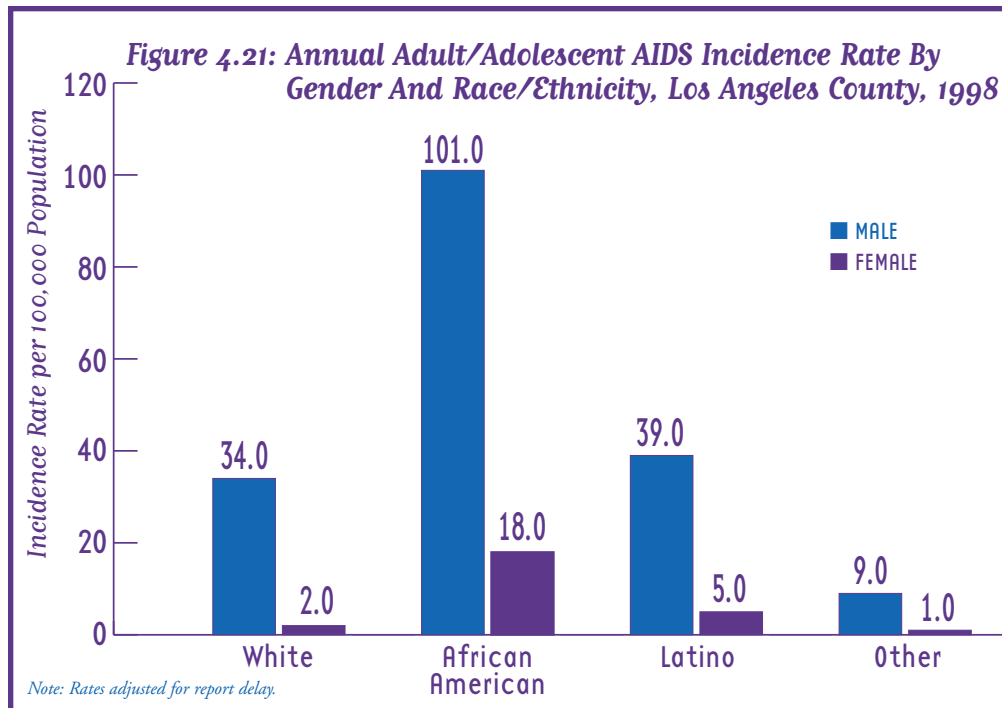
Source: Los Angeles County Department of Health Services, HIV Epidemiology Program.



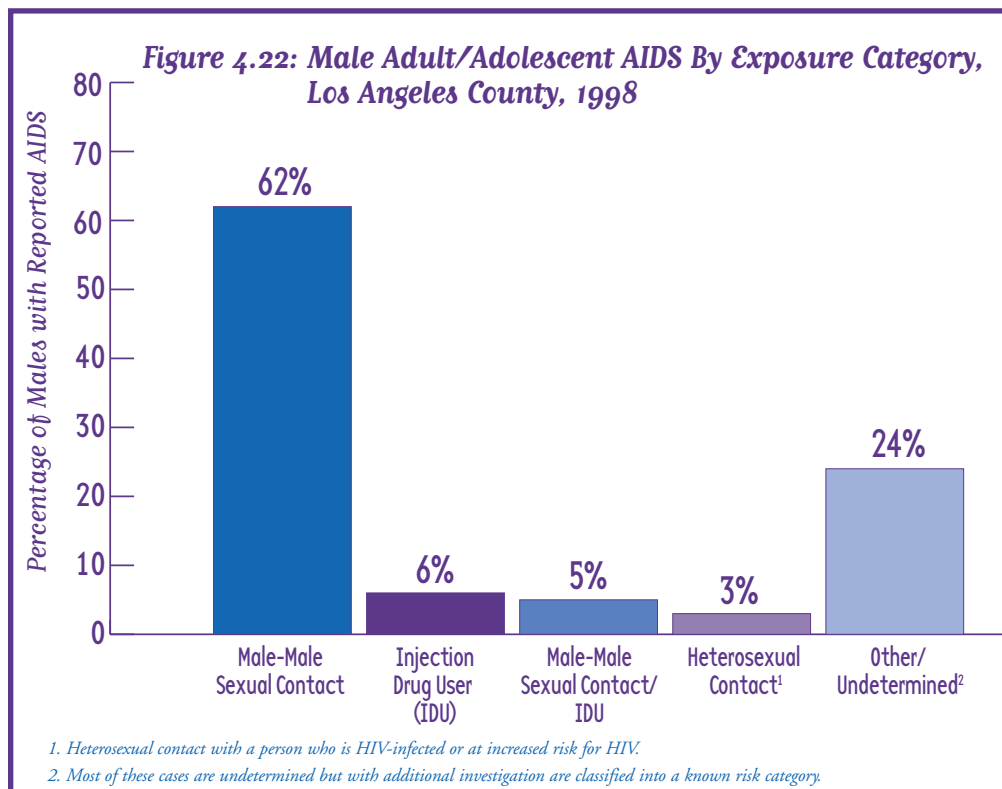
each year is unknown. Despite widespread HIV prevention efforts, there is evidence that HIV is continuing to spread at alarmingly high rates in some communities in the county.

→ Among all racial/ethnic and gender groups, AIDS rates were the highest among African-Americans in 1998. The rate among African-American men (101.0 per 100,000) was almost three times that among white (34.0 per 100,000) and Latino men (39.0 per 100,000) in 1998. The rate among African-American women (18.0 per 100,000) was more than three times the rate among Latinas (5.0 per 100,000) and nine times the rate among white women (2.0 per 100,000) (see Figure 4.21).

→ Male-male sexual contact was the most commonly reported (62%) HIV exposure category among men infected with AIDS in 1998 (see Figure 4.22).



Source: Los Angeles County Department of Health Services, HIV Epidemiology Program, Advanced HIV Disease (AIDS) Quarterly Surveillance Summary, Issued January 15, 2000.



Source: Los Angeles County Department of Health Services, HIV Epidemiology Program Advanced HIV Disease (AIDS) Quarterly Surveillance Summary, Issued January 15, 2000.

**Table 4.3: Communicable Diseases, 1997**

	<b>L.A. County</b>	<b>California</b>	<b>HP 2000</b>
AIDS Incidence Rate (cases per 100,000 persons) <sup>1</sup>	21.0	16.1	43.0
Males	36.9	28.3	*
Females	5.3	3.9	13.0
White	20.3	13.3	*
Latino	18.4	15.2	76.0
African-American	59.1	50.5	136.0
Other	4.6	4.0	*
Maternal HIV infection rate, 1994 (per 10,000 live births) <sup>2</sup>	9.0	7.3	10.0
Gonorrhea (cases per 100,000) <sup>3</sup>	64.4	54.7	100.0
White	25.1	14.7	*
Latino	31.5	27.1	*
African-American	452.5	253.4	650.0
Asian/Pacific Islander	6.1	6.1	*
15-19	249.2	207.7	375.0
20-24	236.9	203.3	*
25-29	146.3	120.5	*
30-34	98.1	79.8	*
Chlamydia (cases per 100,000) <sup>3</sup>	254.3	208.5	*
White	74.9	44.7	*
Latino	331.1	205.9	*
African-American	808.6	411.5	*
Asian/Pacific Islander	58.8	51.7	*
15-19	1351.2	1113.7	*
20-24	1328.2	1027.5	*
25-29	543.0	410.1	*
30-34	233.8	174.0	*
Primary & Secondary Syphilis (per 100,000) <sup>3</sup>	1.2	1.2	4.0
White	0.3	0.4	*
Latino	0.9	1.5	*
African-American	7.4	6.8	*
Asian/Pacific Islander	0.0	0.2	*
15-19	1.2	1.2	*
20-24	1.3	1.9	*
25-29	3.1	2.8	*
30-34	2.0	2.1	*
Congenital Syphilis (per 100,000 live births) <sup>3</sup>	48.1	32.3	40.0
White	6.9	8.1	*
Latino	44.2	37.5	50.0
African-American	241.8	138.4	175.0
Asian/Pacific Islander	0	17.6	*
Tuberculosis (cases per 100,000) <sup>3</sup>	14.9	11.8	3.5
White	4.4	2.9	*
Latino	14.8	13.7	5.0
African-American	22.7	17.8	10.0
Asian/Pacific Islander	37.2	45.1	15.0
Males	19.3	14.4	*
Females	10.8	9.1	*

1. AIDS cases reported in Los Angeles County for the first 9 months of 1997 as of Sept. 30, 1998.

2. As estimated through the CDC Anonymous Survey in Childbearing Women (SCW) using leftover heel-stick blood taken from newborn infants in participating states.

3. Estimates of race-, gender-, and age-specific rates have been adjusted to account for the proportions of cases with missing data assuming that each subcategory's proportions of the known and unknown cases are equivalent.

Source: California HIV/AIDS Update, Office of AIDS, April 1992. HIV Seroprevalence in California Childbearing Women, 1994. Los Angeles County Department of Health Services, STD Program, TB Control Program, HIV Epidemiology Program. Advanced HIV Disease (AIDS) Quarterly Surveillance Summary, Issued January 15, 1998. California Department of Health Services, Office of AIDS, STD Control Branch, Division of Communicable Disease Control.

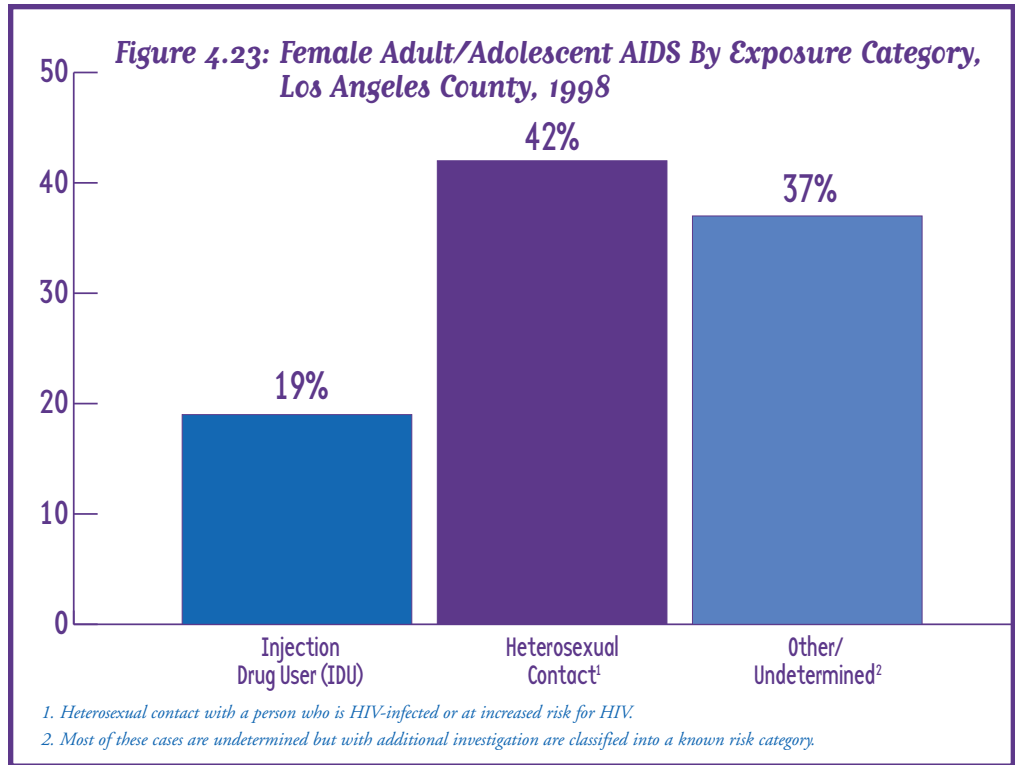
→ Heterosexual contact was the most commonly reported (42%) HIV exposure category among women infected with AIDS in 1998 (see Figure 4.23).

### Other Sexually Transmitted Diseases

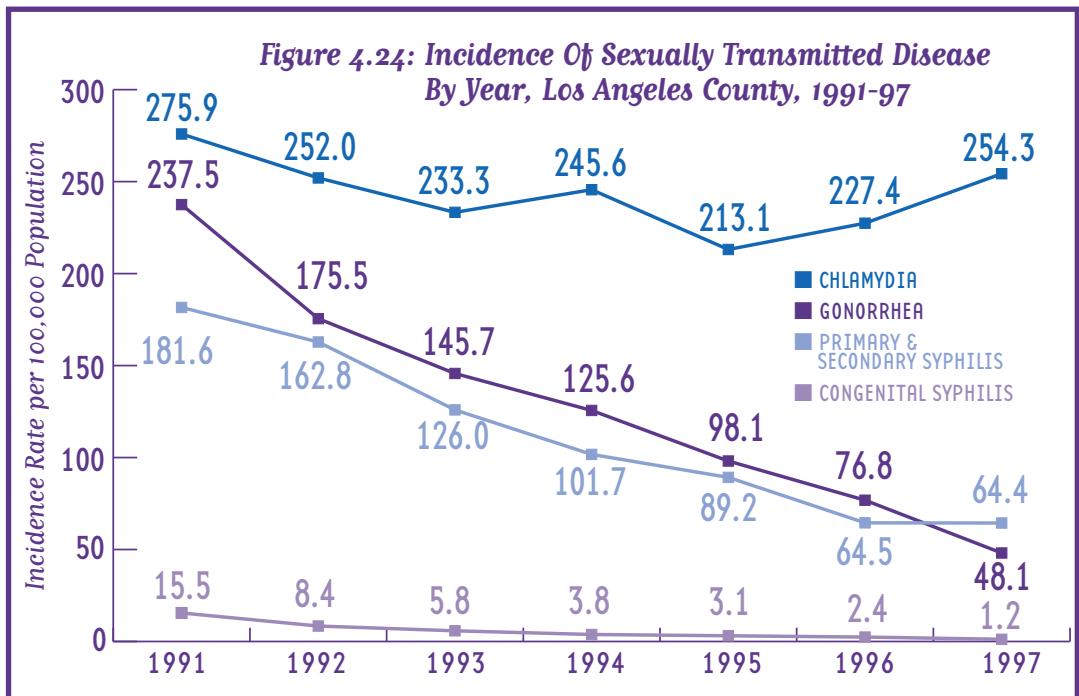
Sexually transmitted diseases (STDs) are among the most commonly reported infections in Los Angeles County and can result in serious health consequences for those infected. The incidence of most STDs is highest among 15 to 24 year olds. Chlamydia is the most frequently reported infection in Los Angeles County and can cause pelvic inflammatory disease (PID), infertility, and tubal pregnancy in women and sterility in men. Over the past decade, chlamydia rates in Los Angeles County have remained relatively constant at high levels, while gonorrhea and syphilis rates have declined significantly.

However, a recent outbreak of syphilis among men who have sex with men in Los Angeles County (April 2000) illustrates the ongoing importance of monitoring sexually transmitted diseases in the population. The increase in syphilis cases among this group is also an alert about the persistent risk for the spread of HIV infection due to unsafe sexual practices.

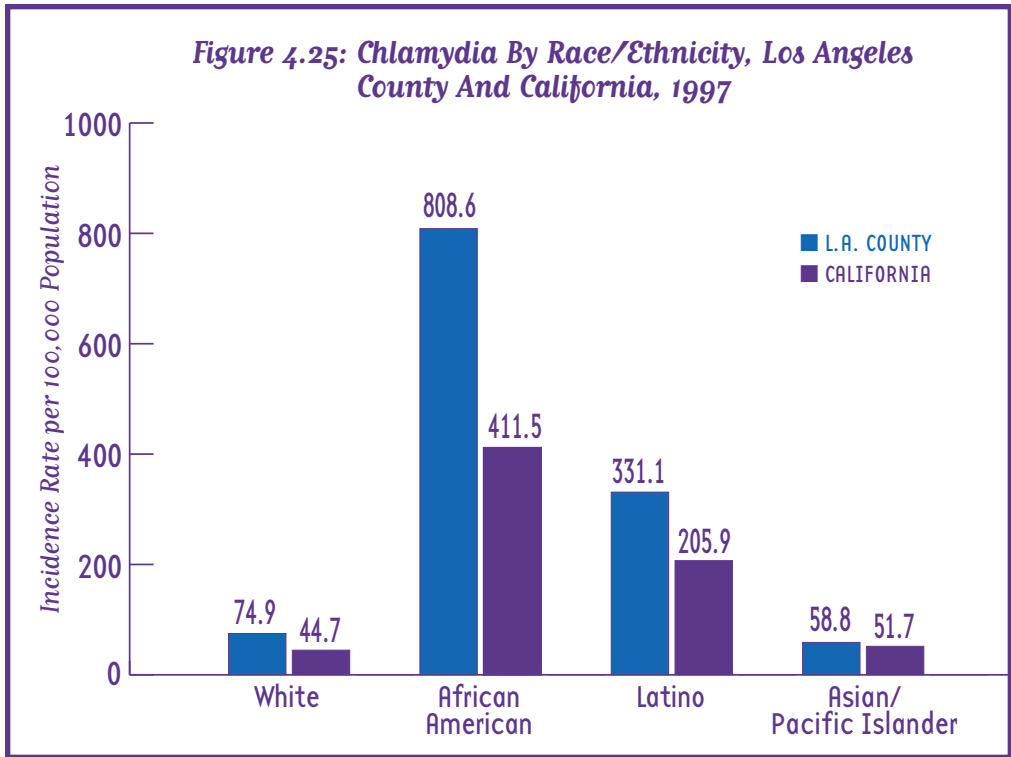
Genital herpes and human papillomavirus (HPV) infections are extremely common but are not reportable to the health department. Recent national studies indicate that approximately 20% of the total adolescent and adult population is infected with the virus that causes genital herpes. At least 5.5



Source: Los Angeles County Department of Health Services, HIV Epidemiology Program Advanced HIV Disease (AIDS) Quarterly Surveillance Summary, Issued January 15, 2000.



Source: Los Angeles County Department of Health Services, STD Program.



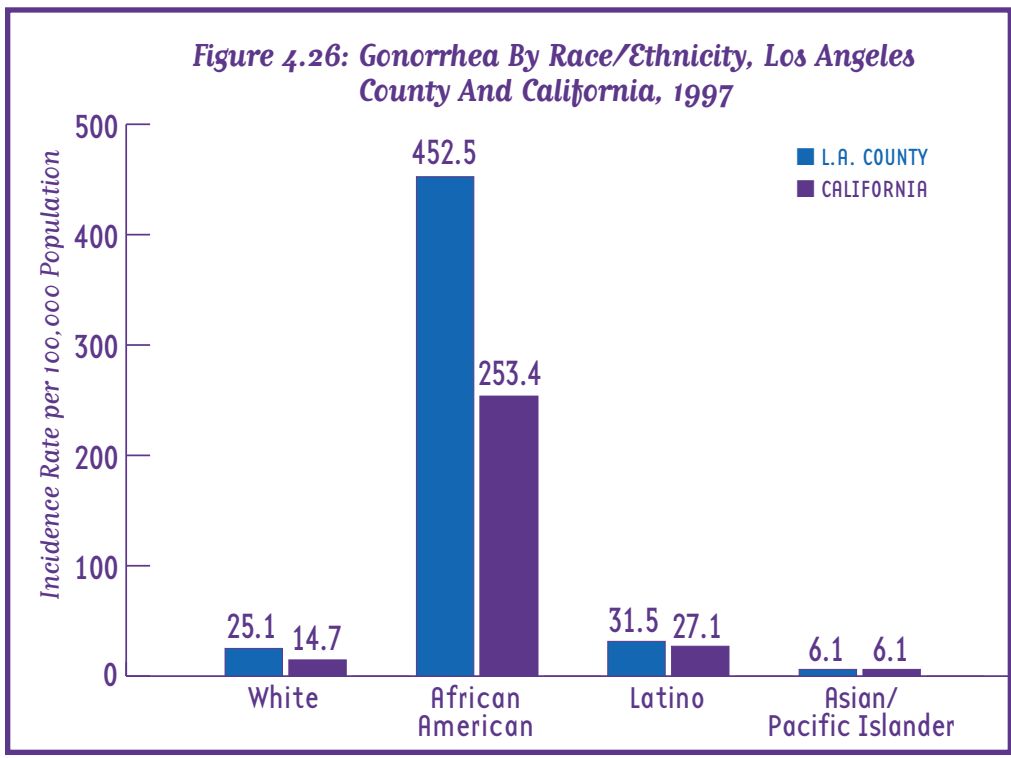
Source: Los Angeles County Department of Health Services, STD Program. California Department of Health Services, STD Control Branch.

million people in the United States become infected annually with HPV, which can cause genital warts and cervical cancer. The importance of STD prevention, detection, and treatment efforts is further underscored by recent evidence indicating that having an STD increases the risk of acquiring or transmitting HIV infection.

The data presented on sexually transmitted diseases, like most reportable communicable disease data, is subject to biases of reporting. For example, public clinics tend to have more complete STD reporting,

thus populations that use these clinics may be over-represented in the findings. Please use caution when interpreting the results.

→ Since the early 1990s, the reported incidence of gonorrhea, syphilis, and congenital syphilis has been on a steady decline. Since 1995, the incidence rate of chlamydia has been steadily increasing (see Figure 4.24).



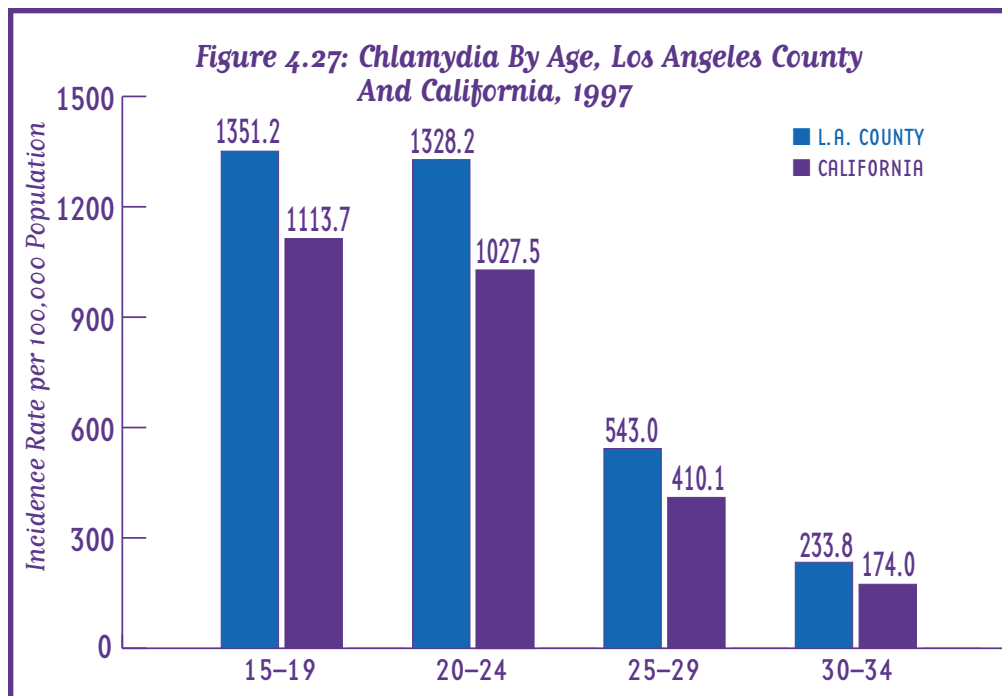
Source: Los Angeles County Department of Health Services, STD Program. California Department of Health Services, STD Control Branch.

→ The reported incidence of chlamydia, gonorrhea, syphilis and congenital syphilis is highest among African-Americans (see Figures 4.25 and 4.26).

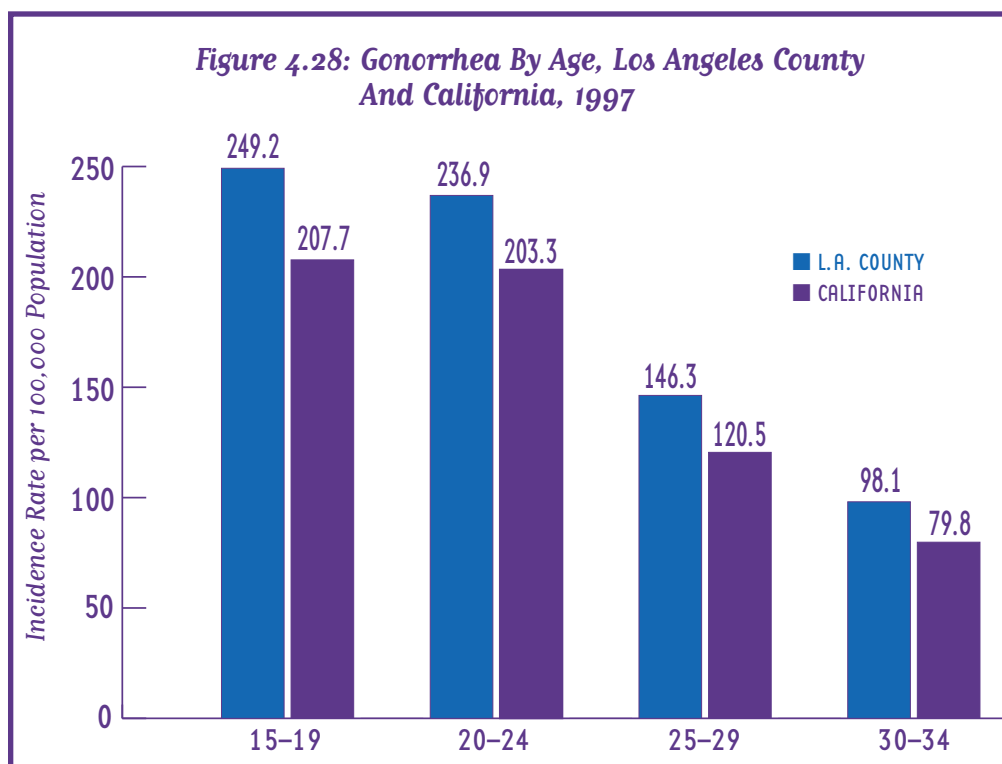
→ The reported incidence of all STDs is highest in 15 to 24 year olds (see Figures 4.27 and 4.28).

### Tuberculosis

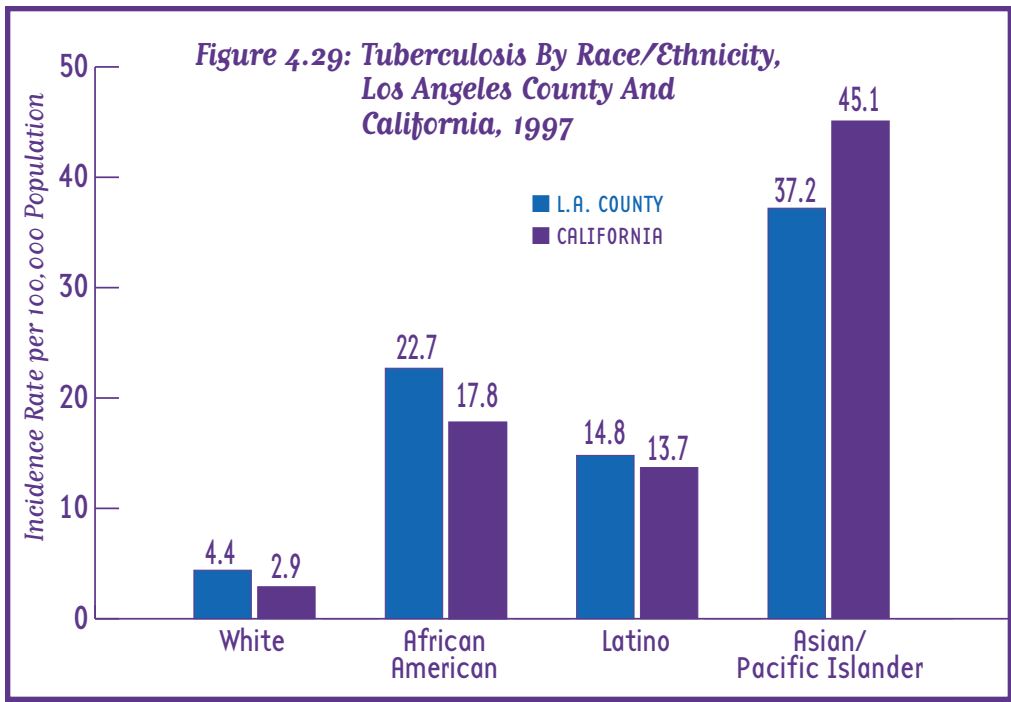
Once all but eradicated in the United States, Tuberculosis (TB) today poses a renewed threat due to the emergence of new drug-resistant strains. Public health interventions to control TB in the United States are very effective. However, a combination of factors led to an increase in cases in the late 1980s and early 1990s. The AIDS epidemic has led to an increase in the number of immuno-compromised individuals at increased risk for infections in general. In addition, decreased attention to the disease, decreasing funding for control and intervention activities, and homelessness have contributed to the rise in the incidence. Drug-resistant strains of TB have developed due to incomplete, interrupted, or inappropriately managed treatment of the disease. The increase in cases reported during 1989 through 1992 has now reversed, and for the five years between 1993 and 1998, the number of cases has decreased.



Source: Los Angeles County Department of Health Services, STD Program. California Department of Health Services, STD Control Branch.



Source: Los Angeles County Department of Health Services, STD Program. California Department of Health Services, STD Control Branch.



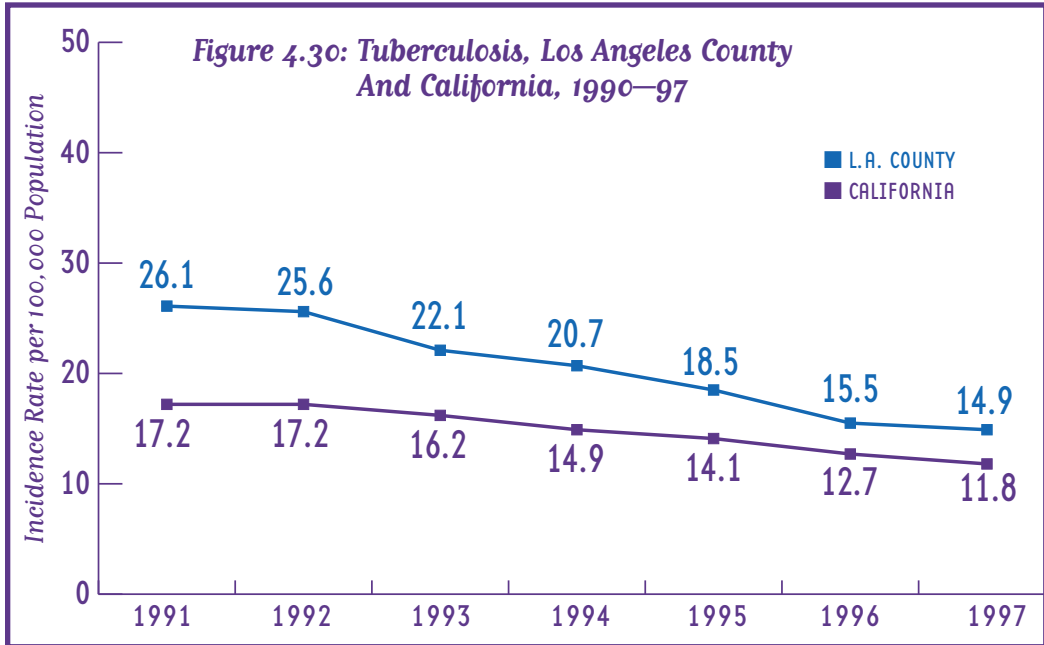
Source: Los Angeles Department of Health Services, TB Control Program. California Department of Health Services, Division of Communicable Disease Control.

→ The 1997 incidence rates of TB in Los Angeles County were highest in Asian (37.2 per 100,000) and African-American (22.7 per 100,000) populations (see Figure 4.29). Of the total cases, 66% were male and 34% were female.

Rates of TB are highest in foreign-born, homeless, and HIV-infected populations in Los Angeles County and throughout the United States. Two-thirds of all Los Angeles County cases reported in 1997 were born outside the United States. The largest proportion of

foreign-born cases was among individuals born in Mexico (38%) followed by the Philippines (16%).

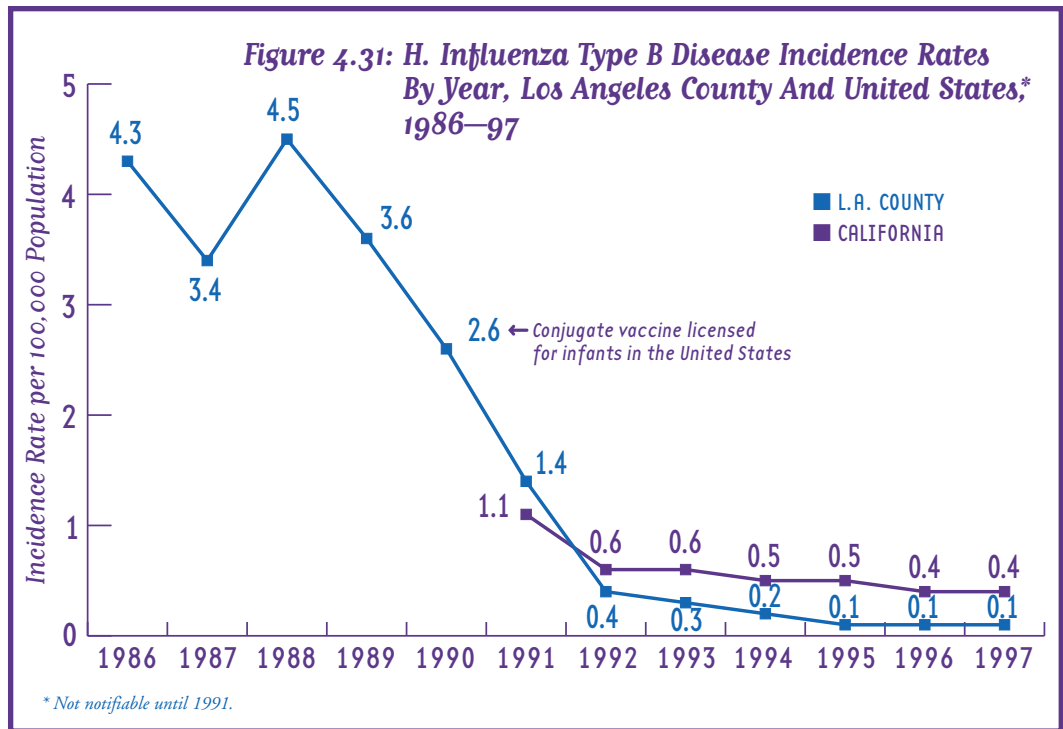
- Approximately 9% of all TB cases reported in 1997 were homeless individuals.
- The number of cases decreased by 4% between 1996 and 1997 in Los Angeles County (see Figure 4.30).
- In 1997, Los Angeles County accounted for 32% of all TB cases in California and for 6.4% of all cases in the United States.



Source: Los Angeles Department of Health Services, TB Control Program. California Department of Health Services, Division of Communicable Disease Control.

## Other Communicable Diseases

The availability of safe and effective vaccines has led to the rapid decline in the incidence of many common diseases of childhood in recent decades. Vaccines to protect children from hepatitis B, diphtheria, tetanus, pertussis, measles, mumps, rubella, H. influenzae type b (Hib), polio, and varicella are recommended for all children by 18 months of age.



Source: Los Angeles County Department of Health Services, Immunization Program

- The incidence of vaccine-preventable diseases is at record low levels in the United States and Los Angeles County. However, vaccine-preventable diseases persist both in the United States and other parts of the world. For example, an epidemic of measles occurred in the United States during 1989 to 1991, when almost 6,500 cases (50.5 per 100,000) of measles and 37 measles-related deaths were reported in Los Angeles County. By comparison, only four cases (0.4 per 100,000) were reported in the county in 1997.
- The incidence rate of pertussis in Los Angeles County has declined 18-fold from seven cases per 100,000 population in 1960 to 0.4 cases per 100,000 in 1997.
- Hib was the leading cause of bacterial meningitis among children under five years of age before the introduction of an effective vaccine in 1990. In 1997, the incidence rate of Hib disease was 0.1 cases per 100,000 compared with 2.6 cases per 100,000 in 1990 (see Figure 4.31). The widespread use of conjugate Hib vaccines has dramatically reduced invasive disease caused by this organism.
- The Los Angeles County hepatitis A incidence rate was 16.4 cases per 100,000 in 1997, a 10% increase from 1996. Hepatitis A vaccine was introduced in 1995 and has recently been recommended for all children in high prevalence areas including the state of California.
- There was an increase in hepatitis A transmission among men who have sex with men (MSWM) in 1997 in Los Angeles County. An indirect indicator of hepatitis A activity among MSWM is the rate among white males aged 25 to 44 in the Hollywood-Wilshire Health district, where a large gay male population resides. In this subgroup the 1997 rate of 323 per 100,000 population is twice the 1996 rate of 151 per 100,000 population. MSWM represent a high-risk group for whom the hepatitis A vaccine has been strongly recommended.
- The hepatitis B incidence rate in 1997 (1.2 per 100,000 population) decreased by 57% from 1996 (2.8 per 100,000). Hepatitis B has been declining since the



late 1980s due to an increased emphasis on HIV/AIDS prevention efforts including reduction of high-risk behaviors such as needle sharing and unprotected sex, prophylaxis (preventive treatment) of the newborns of chronic carrier mothers, and use of hepatitis B vaccine. In addition, universal precautions in occupational settings have contributed to a decline in the transmission of hepatitis B as well as other blood-borne pathogens.

- Hepatitis C is a disease predominantly transmitted by blood-to-blood contact. It is often mild in its acute stage, but chronic liver disease occurs in the majority of infections. The epidemiology of hepatitis C virus is still being determined. The two primary risk groups for hepatitis C are injection drug users and people who received blood transfusions prior to 1992. Risk of hepatitis C infection from blood transfusions is currently very low because of routine screening of blood donors for hepatitis C. Liver failure due to chronic hepatitis C infection is the most frequent reasons for liver transplantation among adults in the United States.
- The prevalence of hepatitis C infection in Los Angeles County is not known. Nationally, an estimated 3.9 million persons (1.8%) have been infected with hepatitis C.

### **Enteric Disease**

Enteric diseases by definition affect the gastrointestinal system and typically cause stomach upset, diarrhea, and/or vomiting. Transmission most commonly occurs through contaminated food and poor hygiene. In recent years, there has been an increased emphasis on improvement of surveillance and education regarding food-handling practices. The rates of selected enteric diseases are reported below. These rates are minimum estimates for the population because many cases of enteric disease go unreported.

- The rate of *Campylobacter* infection in Los Angeles County was 16.8 per 100,000 population in 1997.
- The rate of *Giardia* infection was 8.5 per 100,000 in 1997.
- The rate of *Shigella* infection was 9.4 per 100,000 in 1997.
- The rate of *Salmonella* infection was 18.5 per 100,000 in 1997.

### **Communicable Diseases—Data Sources**

1. Los Angeles County Department of Health Services, HIV Epidemiology Program

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2. Los Angeles County Department of Health Services—Public Health  
Sexually Transmitted Disease Program

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3. Los Angeles County Department of Health Services—Public Health  
Acute Communicable Disease Control Unit

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4. Los Angeles County Department of Health Services—Public Health  
Tuberculosis Control Program

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5. California Department of Health Services, Office of AIDS, Case Registry

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6. California Department of Health Services  
Sexually Transmitted Disease Control Branch

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7. California Department of Health Services  
Division of Communicable Disease Control  
Tuberculosis Control Branch

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*See Appendix for complete references on these and other data resources.  
See page 83 for endnotes.*

## Injury and Violence

Unintentional and intentional injuries combined are important contributors to overall mortality and diminished quality of life. Injuries are also a financial burden to society in the form of lost productivity and the costs of medical services.<sup>13</sup> Statistics show that injuries in Los Angeles County are the leading cause of death among people under 45 years of age (see Leading Causes of Mortality), and they are the primary reason for high hospitalization rates among children and youth less than 25 years of age.<sup>14</sup> Therefore, injuries are a very important indicator of the health status of the population, and an important factor in determining the burden of disease or illness in Los Angeles County. For the purposes of developing public health strategies, the size and diversity of the Los Angeles County population offer an opportunity to study injury patterns within specific population groups.

→ As shown in Figure 4.32, intentional injuries account for over-half (54%) of all injury deaths to Los Angeles County residents, and the remaining 46% of injury deaths are due to unintentional injuries.

→ Together, homicide and suicide make up 51% of all injury mortality in Los Angeles County (see Figure 4.33). In 1996, homicide contributed 32% to all injury deaths for a total of 1,439 deaths. Unintentional motor-vehicle-related crashes accounted for 21% of all injury deaths.

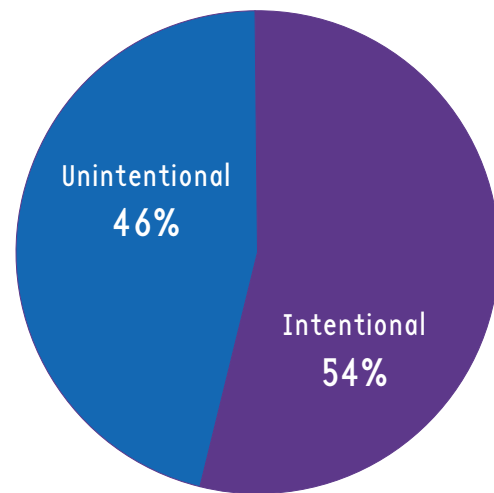
→ According to 1997 mortality statistics, injuries in Los Angeles County account for 6.7% of all mortality. In 1996, the risk for death was three times higher in men (71.0 deaths per 100,000 men) than women (22.6 deaths per 100,000 women) (see Figure 4.34).

→ In Los Angeles county, the rate of death from injury is highest among African-Americans (91.0 deaths per 100,000), followed by whites (49.5) and Latinos (40.4) (see Figure 4.34).

## Unintentional Injuries

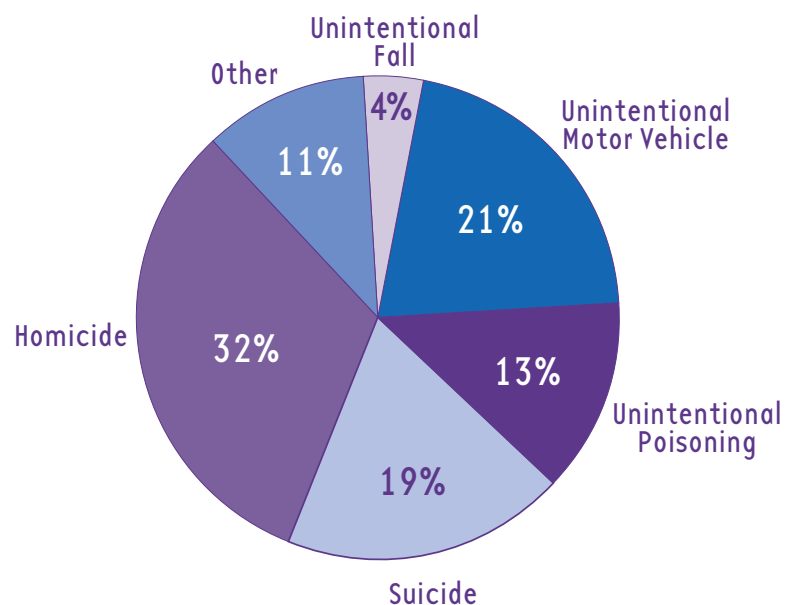
Unintentional injuries are fatal or non-fatal bodily injuries that occur, by definition, without intent. Unintentional injuries have been reduced through prevention efforts which have made products and systems safer, for example, leg-

**Figure 4.32: Overall Injury Mortality, Los Angeles County, 1996**

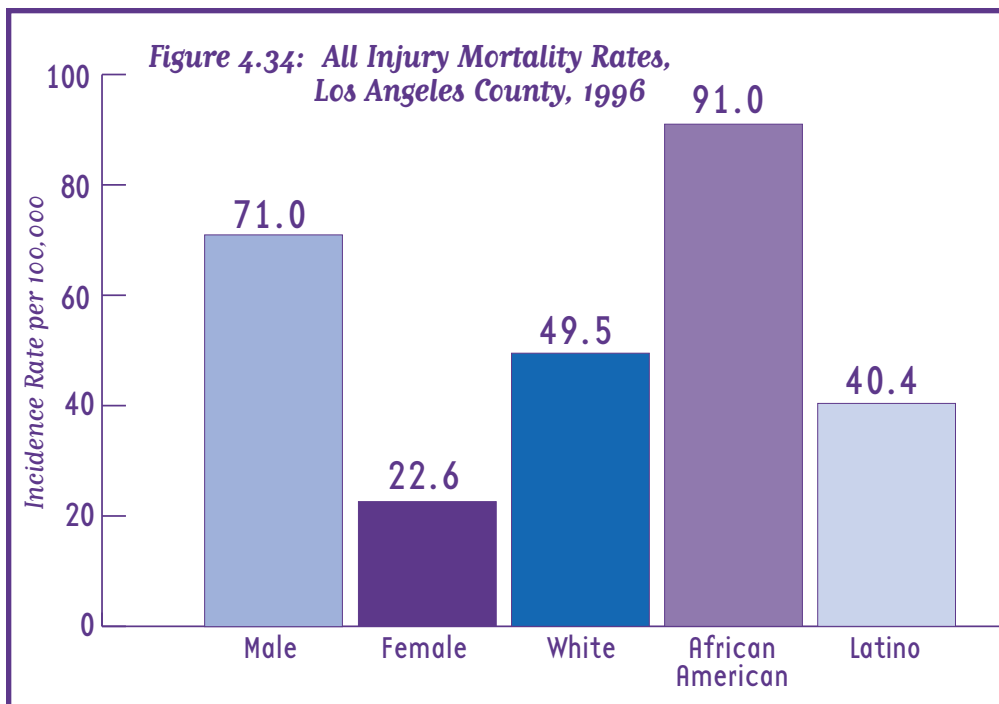


Source: 1996 PHIS File, Data Collection and Analysis, Los Angeles County Department of Health Services.

**Figure 4.33: Overall Injury Mortality By Cause, Los Angeles County, 1996**



Source: 1996 California Department of Health Services, Death Statistical Master File compiled by the Injury Surveillance and Epidemiology Section, EPIC, in Injury Tables, California, 1996: Deaths and Nonfatal Hospitalizations.



Source: 1996 PHIS File, Data Collection and Analysis, Los Angeles County Department of Health Services.

isolation requiring the use of seat belts in all vehicles, and the installation of driver-side air bags have reduced the incidence of death and injury due to motor vehicle crashes. Further, by assessing risk and measuring outcomes in affected populations, it is possible to develop new strategies for preventing specific injuries. Some summary statistics on unintentional injuries in Los Angeles County follow.

→ Mortality due to unintentional injury in Los Angeles County is lower than in California.

**Table 4.4: Unintentional Injury Rates Per 100,000 Population**

	L.A. County <sup>1</sup>	California <sup>2</sup>	HP 2000 <sup>4</sup>
<b>Unintentional injury mortality</b>			
Total	21.7	29.7	29.3
Male	30.4	40.9	*
Female	13.1	18.4	*
<b>Hospitalizations among children and youth (ages 0-24) due to unintentional injuries</b>			
Total	353.0 <sup>3</sup>	277.8 <sup>3</sup>	754.0
<b>Motor vehicle-related injury mortality</b>			
Total	9.9	13.4	14.2
Male	13.5	18.2	*
Female	6.3	8.6	*
<b>Fall-related injury mortality</b>			
Total	2.4	3.4	2.3
65+ years	11.1	22.7	*

1. 1996 Los Angeles County data obtained from Vital Record, Public Health Information Services, unless otherwise noted.

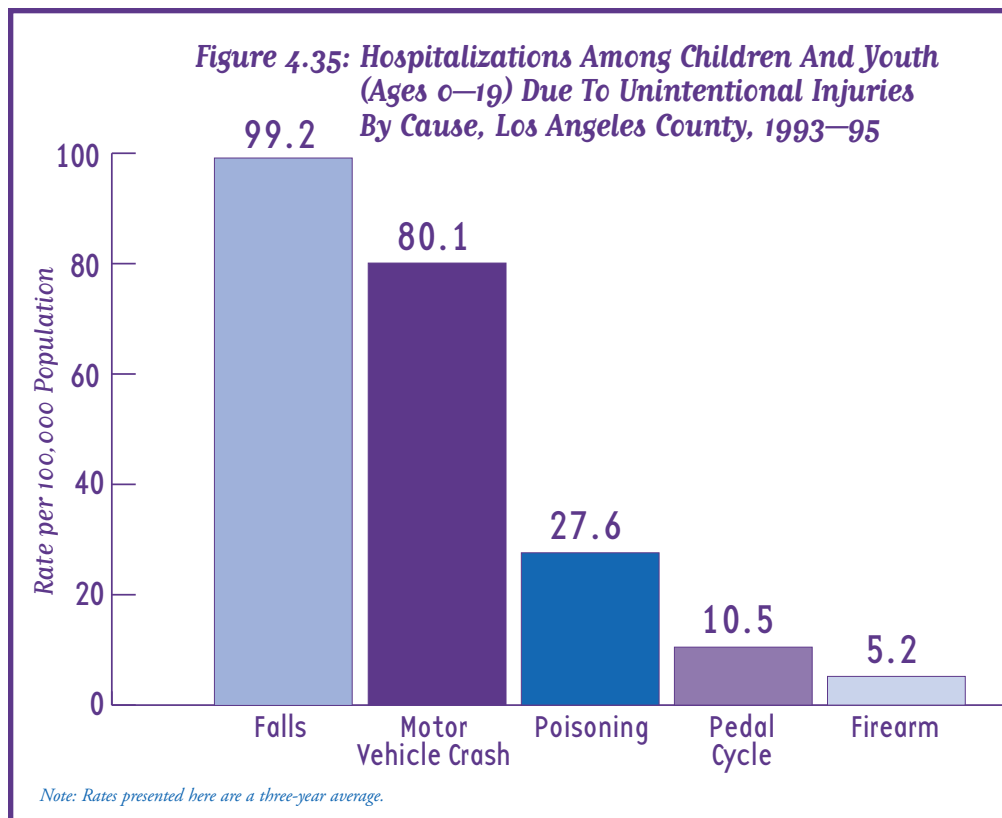
2. 1996 state data obtained from Death Statistical Master Files 1989-1996, Center for Health Statistics, California Department of Health Services, unless otherwise noted.

3. 1995 data from Perinatal Indicators, MCAH Program, Los Angeles County, 1996.

4. Age-adjusted rate per 100,000 to the 1940 census population.

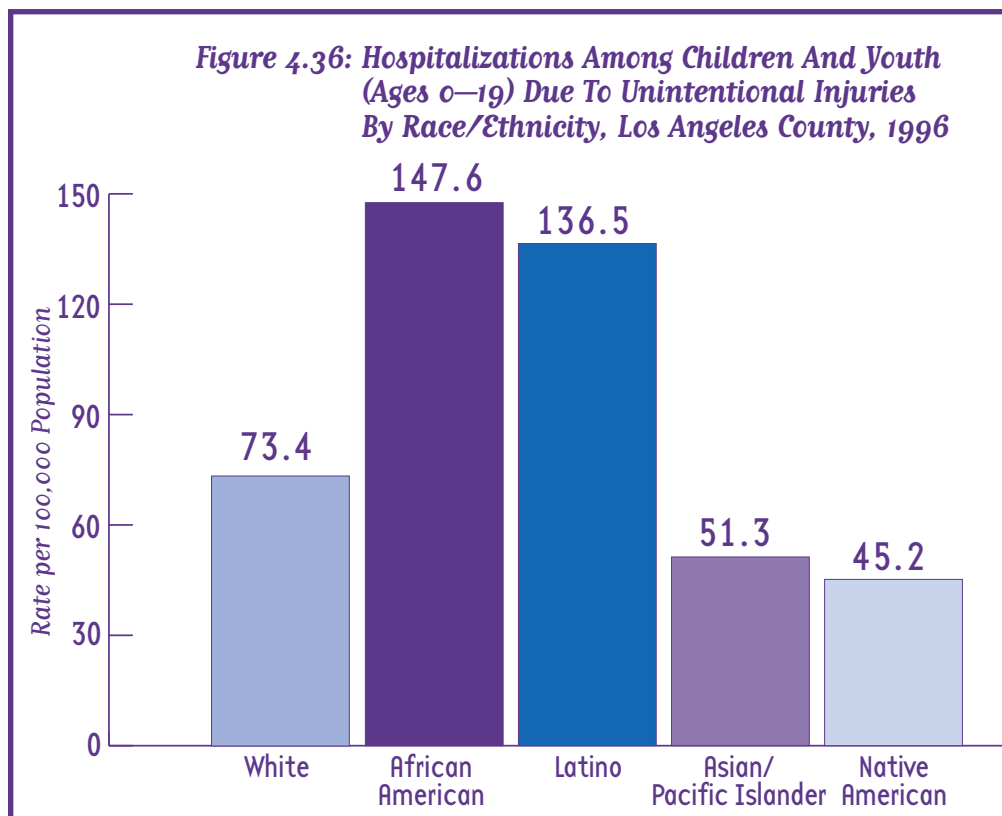
\* Data not available.

- In 1996, elderly populations (age 65 and older) experienced higher rates of fall-related injury mortality (11.1 deaths per 100,000) than any other age group (see Table 4.4).
- Men in Los Angeles County experience higher rates of mortality due to unintentional injury (30.4 deaths per 100,000) compared to women (13.1) (Table 4.4).
- In Los Angeles County, the highest rates of unintentional injury hospitalizations among children and youth (under age 20) are falls (99.2 hospitalizations per 100,000) and motor vehicle crashes (80.1 hospitalizations per 100,000) (see Figure 4.35).

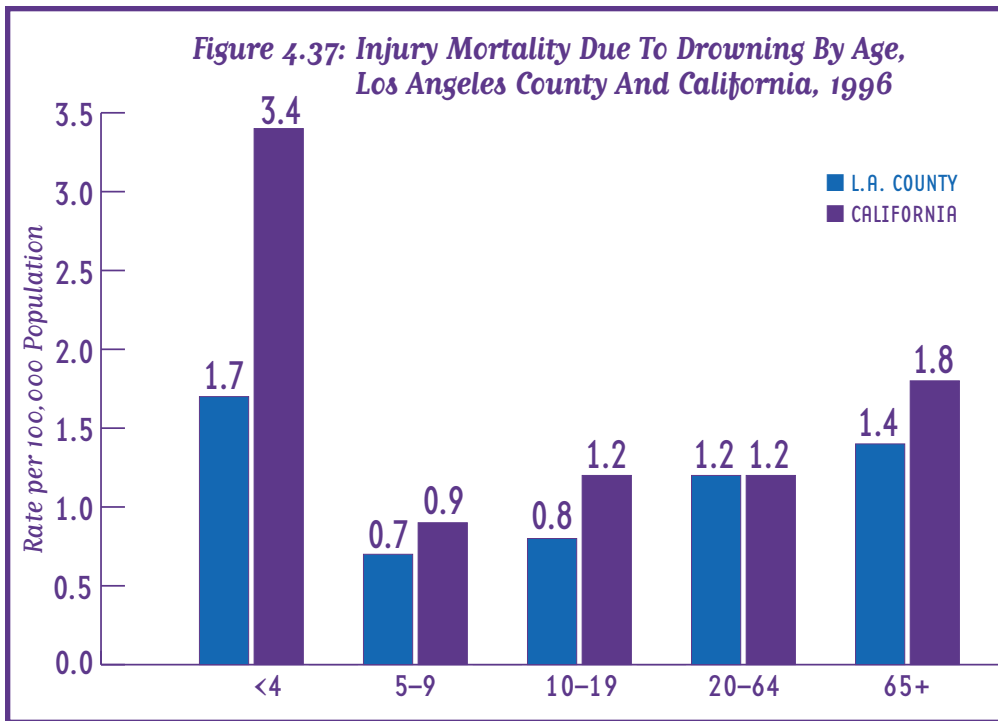


Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, 1996.

- Rates of hospitalization due to unintentional injuries are higher among African-American (147.6 hospitalizations per 100,000) and Latino (136.5 hospitalizations per 100,000) youth than youth in other ethnic groups (see Figure 4.36).



Source: Los Angeles County Department of Health Services, MCAH Program, Perinatal Indicators, 1996.

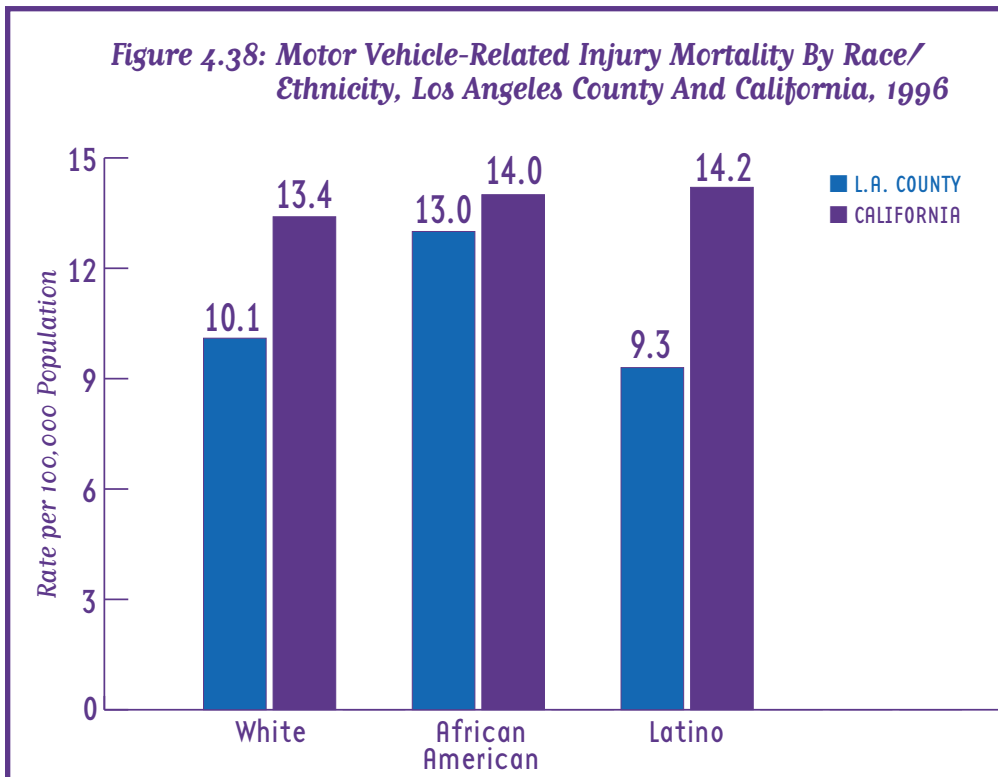


Source: 1996 PHIS File, Data Collection and Analysis, Los Angeles County Department of Health Services and 1996 Death Statistical Master File, Center of Health Statistics, Department of Health Services, California.

→ Children under four years of age have the highest rate of mortality due to unintentional drowning (1.7 deaths per 100,000 children in Los Angeles and 3.4 deaths per 100,000 in all of California) (see Figure 4.37).

→ Motor vehicle-related injury mortality rates are lower in Los Angeles County for all major ethnic groups compared to the overall population in California (see Figure 4.38).

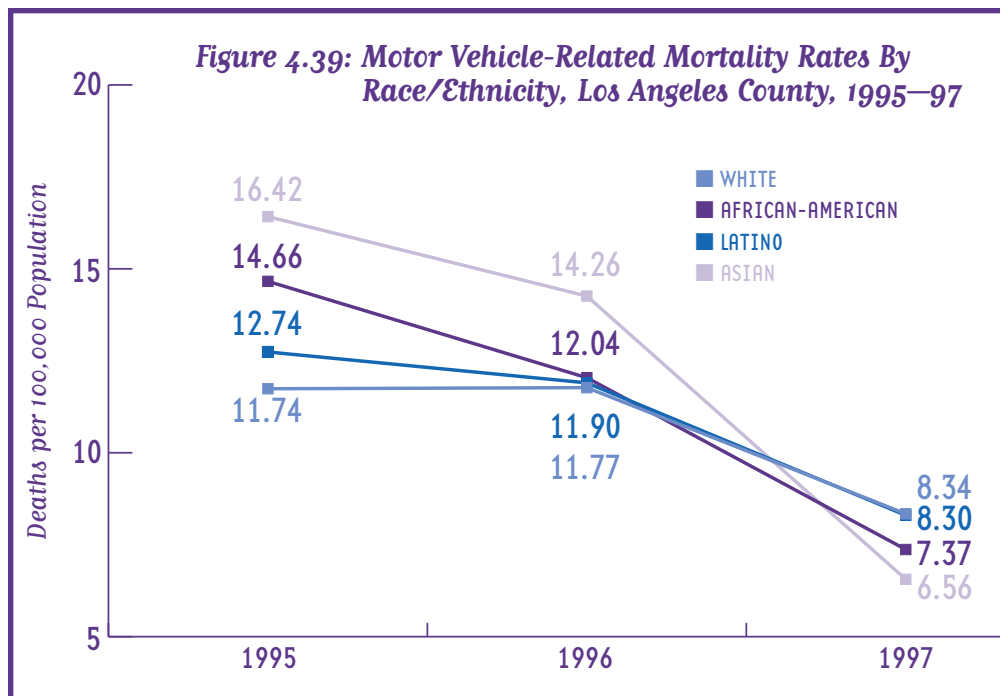
→ Between 1995 and 1997, all racial/ethnic groups showed a decline in mortality rates for motor vehicle-related deaths (see Figure 4.39).



Source: 1996 PHIS File, Data Collection and Analysis, Los Angeles County Department of Health Services, and 1996 Death Statistical Master File, Center of Health Statistics, Department of Health Services, California.

## Intentional Injuries

Intentional injuries are classified as such based on the intent to cause harm to another person or to oneself. Intentional injuries stem from youth violence, family and intimate violence, acts of crime, mental illness, and the availability of weapons. In Los Angeles County, homicide is the leading cause of injury death (see Figure 4.33). Violence-related death and injury is a public health problem that affects the health and well being of all Angelenos. Patterns of death and injury can focus violence and



Source: Injury and Violence Prevention Program, Los Angeles County Department of Health Services. Rates adjusted to the 1940 population.

**Table 4.5: Intentional Injury**

		L.A. County <sup>1</sup>	California <sup>2</sup>	HP 2000 <sup>4</sup>
Homicide (Age-adjusted rate per 100,000) <sup>4</sup>	Total	16.5	10.2	7.2
	Male	27.4	16.7	*
	Female	4.8	3.2	*
Assault arrests <sup>6</sup> (Rate per 100,000)	Total	387.5	364.5	*
	Male	659.1	615.9	*
	Female	116.0	112.1	*
Forcible rape arrests <sup>6</sup> (Rate per 100,000)	Total	20.2	19.7	—
Nonfatal hospitalized injuries due to firearms <sup>5</sup> (Rate per 100,000)	Total	31.0	17.4	*
Child abuse cases investigated, 1994 <sup>6</sup>	Total	12,103.0	*	*
Child abuse deaths, 1993 <sup>6</sup>	Total	41.0	*	*
Suicide (Age-adjusted rate per 100,000) <sup>4</sup>	Total	9.4	9.8	10.5
	Male	14.8	15.5	*
	Female	4.3	4.3	*
Deaths due to suicide among children and youth, ages 0–24 (Rate per 100,000)	Total	3.8 <sup>3</sup>	4.1 <sup>3</sup>	*
Deaths due to suicide among children and youth, ages 15–19 (Rate per 100,000)	Total	8.1 <sup>3</sup>	*	8.2

1. 1996 Los Angeles County data obtained from Vital Record, Public Health Information Services, unless otherwise noted.

2. 1996 Vital Statistics of California, Center of Health Statistics, California Department of Health Services.

3. Three-year average, 1994–1996, from Perinatal Indicators, MCAH Program, Los Angeles County, 1996.

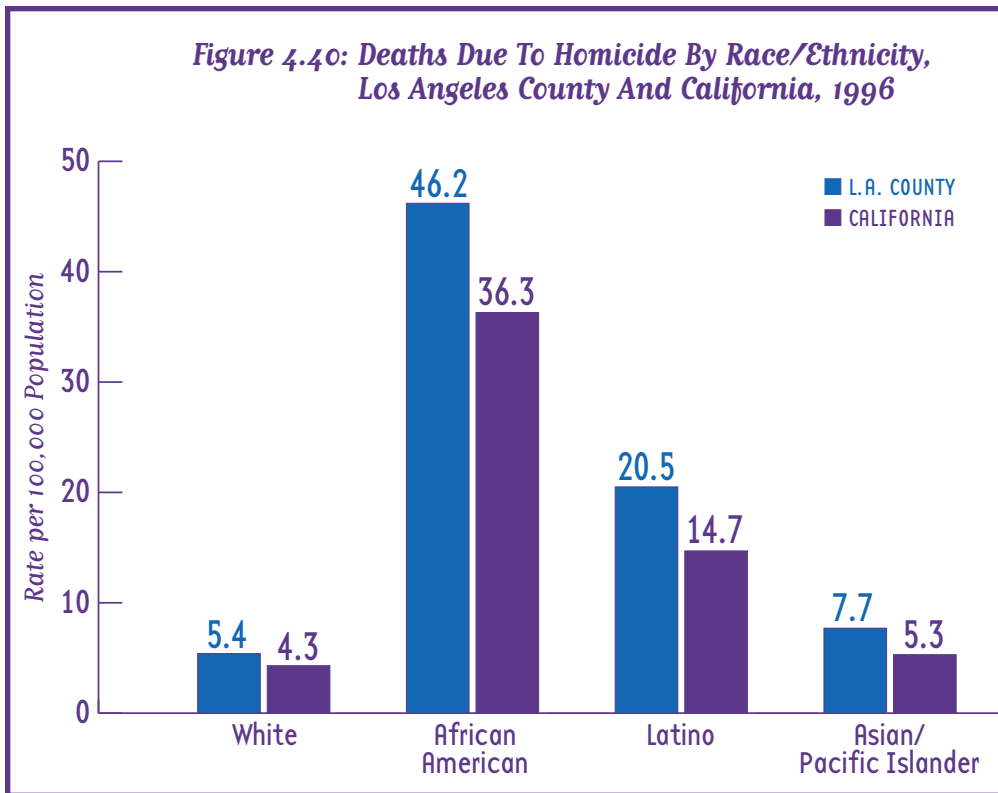
4. Age-adjusted rate per 100,000 to the 1940 census population.

5. 1996 California Office of Statewide Health Planning and Development (OSHPD) Hospital Discharge Data compiled by Injury Surveillance and Epidemiology Section, EPIC, in Injury Tables, California, 1996: Deaths and Nonfatal Hospitalizations. Note: Nonfatal hospitalizations due to firearms include only unintentional, self-inflicted, and assault injuries; does not include firearm injuries from police action.

6. State of California, Department of Justice, Criminal Justice Statistics Center, 1996.

\* Data not available

**Figure 4.40: Deaths Due To Homicide By Race/Ethnicity, Los Angeles County And California, 1996**



Source: 1996 PHIS File, Data Collection and Analysis, Los Angeles County Department of Health Services and 1996 Vital Statistics of California, Center of Health Statistics, California Department of Health Services.

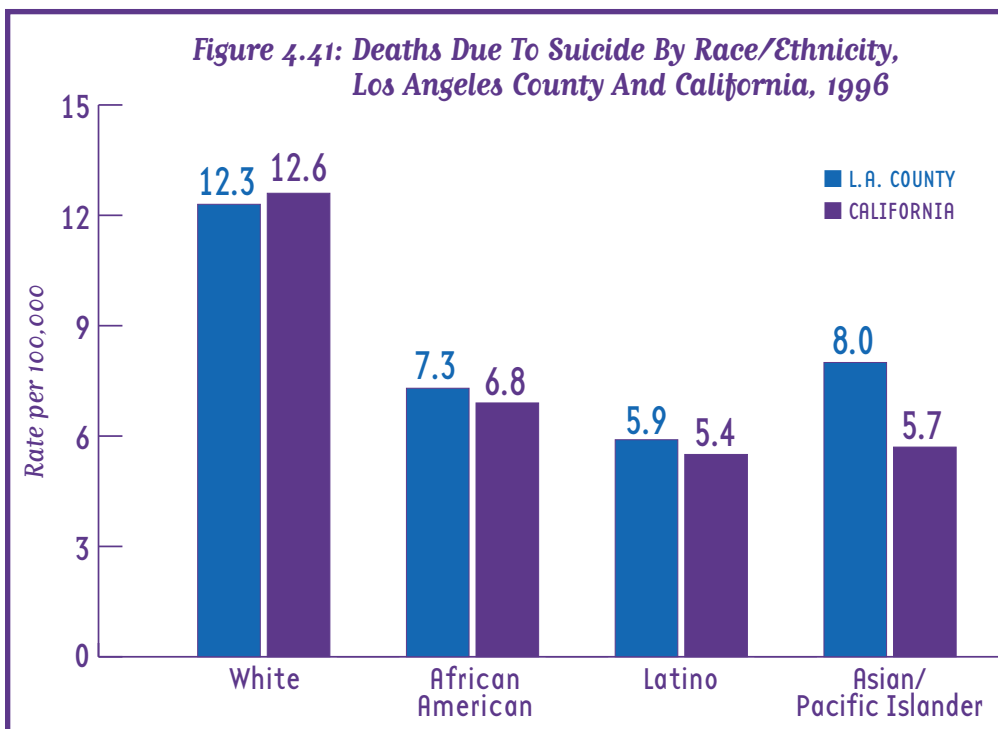
injury prevention programs by highlighting those populations at risk. Some summary statistics on intentional injuries in Los Angeles County follow.

→ Men in Los Angeles County experience higher rates of homicide (27.4 deaths per 100,000), and suicide (14.8) compared to women (4.8) and (4.3), respectively (see Table 4.5).

→ The rates for nonfatal injuries requiring hospitalization from firearms in Los Angeles County (31.0 injuries per 100,000) are almost twice the rate of California's (17.4) (see Table 4.7). Firearms are used in 89% of all intentional injuries.<sup>15</sup>

→ According to 1996 data, the age-adjusted homicide rate in Los Angeles County (16.5 deaths per 100,000) is over one and a half times higher than that of California (10.2 deaths per 100,000) and twice as high as the Healthy People 2000 goal of 7.2 homicide deaths per 100,000 (see Table 4.6).

**Figure 4.41: Deaths Due To Suicide By Race/Ethnicity, Los Angeles County And California, 1996**



Source: 1996 PHIS File, Data Collection and Analysis, Los Angeles County Department of Health Services and 1996 Vital Statistics of California, Center of Health Statistics, California Department of Health Services.

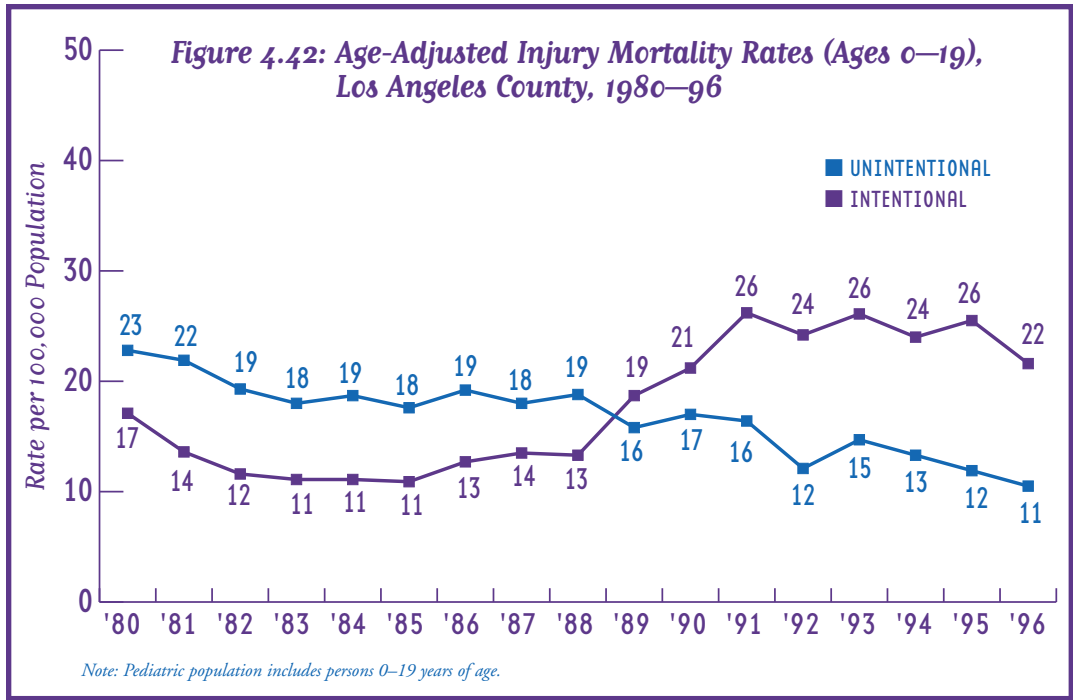
→ In 1997, homicide accounted for 31% of all injury deaths in Los Angeles County. For persons, age 15 to 24, homicide accounted for 48% of all causes of death. For people older than 45, mortality rates due to suicide are higher than homicide (see Table 4.9).

→ In 1996, the Los Angeles Police Department recorded 49,009 domestic violence calls, with 8,484 arrests and 22 homicides.<sup>16</sup>



→ In 1996, the African-American population had a higher homicide rate than other ethnic and racial groups in Los Angeles (46.2 deaths per 100,000) and California (36.3 deaths per 100,000) (see Figure 4.40).

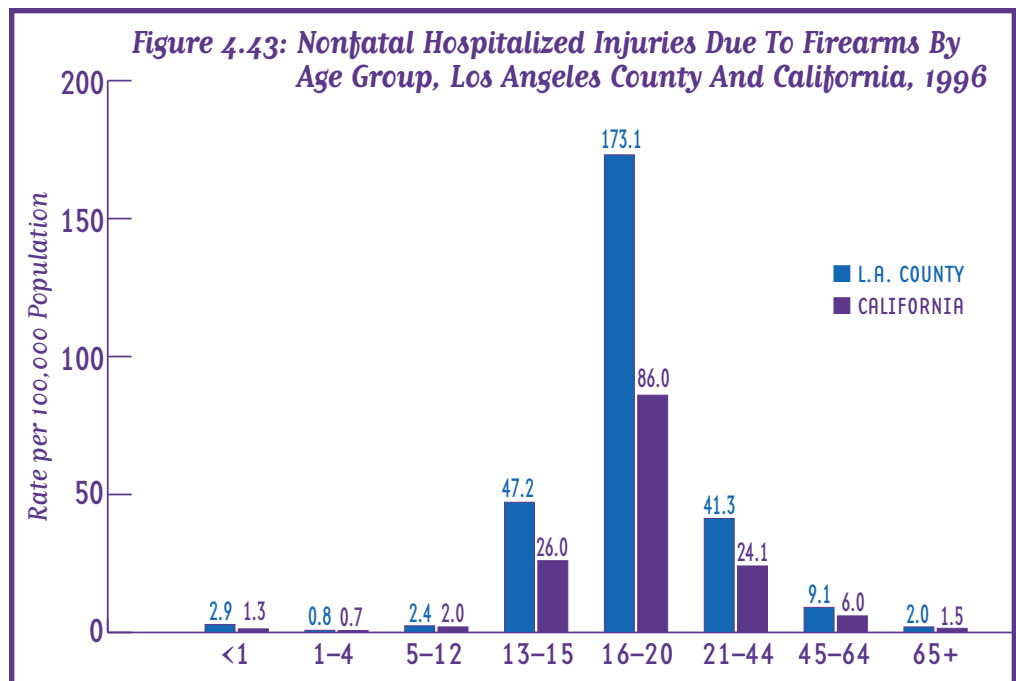
→ In Los Angeles County, suicide rates are higher in white populations (12.3 deaths per 100,000) than in other racial and ethnic groups. In contrast, the Latino population had the lowest mortality due to suicide (5.9) (see Figure 4.41).



Source: Injury and Violence Prevention Program, Los Angeles County Department of Health Services.

→ In Los Angeles County, unintentional injury death rates among children and youth (age 0 to 19) have decreased while intentional injuries in this age group have increased. Between 1980 and 1996, unintentional injury deaths decreased 54% from 22.8 to 10.5 per 100,000. In contrast, intentional injury deaths increased 26% from 17.1 to 21.6 per 100,000 during the same time period. The decrease in unintentional injury mortality is due to a decline in unintentional motor vehicle-related injuries, while the increase in intentional injury deaths is attributed to an increase in homicide rates (see Figure 4.42).

→ In 1996, youth ages 16 to 20 had the highest rate of nonfatal hospitalized injuries due to firearms in both Los Angeles County (173.1 deaths per 100,000) and California (86.0) (see Figure 4.43).



Source: 1996 California Office of Statewide Health Planning and Development (OSHPD) Hospital Discharge Dataset. Note: Nonfatal hospitalizations due to firearms include only unintentional, self-inflicted, and assault injuries.

## Injury and Violence Data Sources

1. Injury and Violence Prevention Program, Los Angeles County DHS—Public Health

2. MCAH Assessment and Planning Unit (MAP), Los Angeles County DHS—Public Health

3. Injury Surveillance and Epidemiology Section  
Epidemiology and Prevention for Injury Control Branch  
California Department of Health Services

4. Data Collection and Analysis Unit  
Los Angeles County DHS—Public Health

5. Office of Health Information and Research  
Center for Health Statistics  
California Department of Health Services

*See Appendix for complete references on these and other data resources.*

*See page 83 for endnotes.*

## Leading Causes of Mortality

**Table 4.6: Mortality**

<b>Age-Adjusted Mortality Rates, 1997</b>	<b>L.A. County (n)<sup>1,2,3</sup></b>	<b>California<sup>2,4</sup></b>	<b>HP 2000<sup>2</sup></b>
All causes	402.3 (60,070)	424.0	*
Heart disease	114.4 (19,852)	111.9	100.0
Cancer	102.3 (13,504)	111.3	130.0
All other causes	60.0 (8,819)	*	*
Cerebrovascular disease	23.0 (4,166)	25.6	20.0
Influenza and pneumonia	15.5 (3,346)	16.8	*
Chronic obstructive pulmonary disease	17.4 (2,863)	20.9	25.0
Unintentional injury	19.1 (2,030)	23.8	29.3
Diabetes	12.9 (1,746)	11.6	34.0
Homicide	14.4 (1,247)	9.3	7.2
Chronic liver disease	9.4 (1,041)	9.2	6.0
Suicide	7.5 (776)	9.6	10.5
AIDS/HIV related	6.4 (680)	5.2	*

\* Data not available.

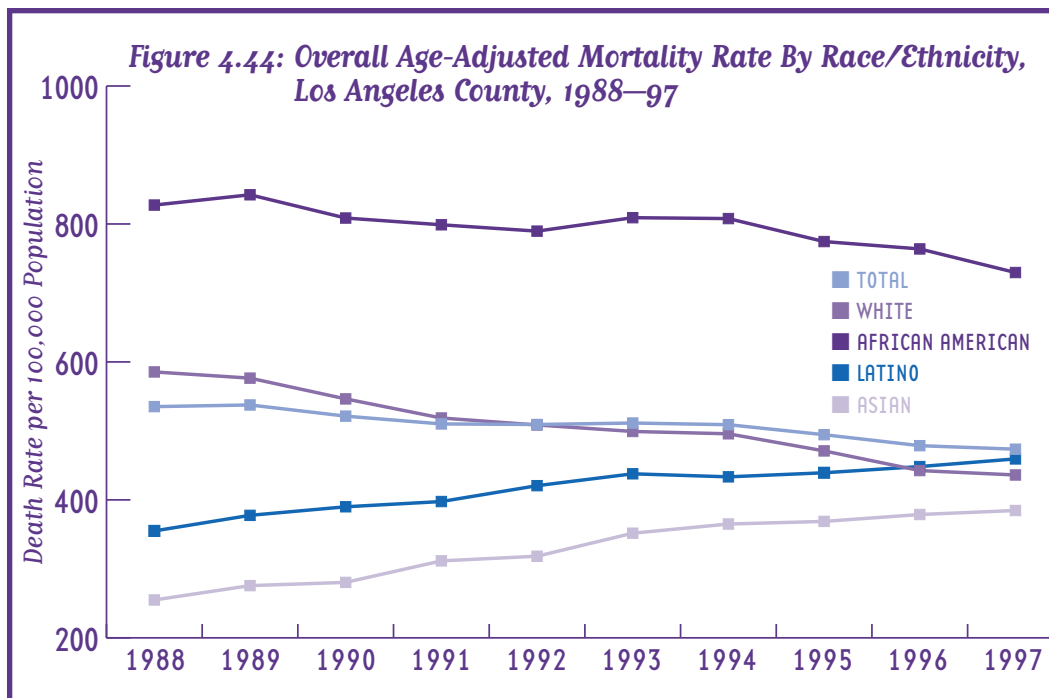
1. Includes Long Beach and Pasadena.

2. Age-adjusted rate per 100,000 to the 1940 census population.

3. 1997 PHIS File, Data Collection and Analysis Unit, Los Angeles County Department of Health Services.

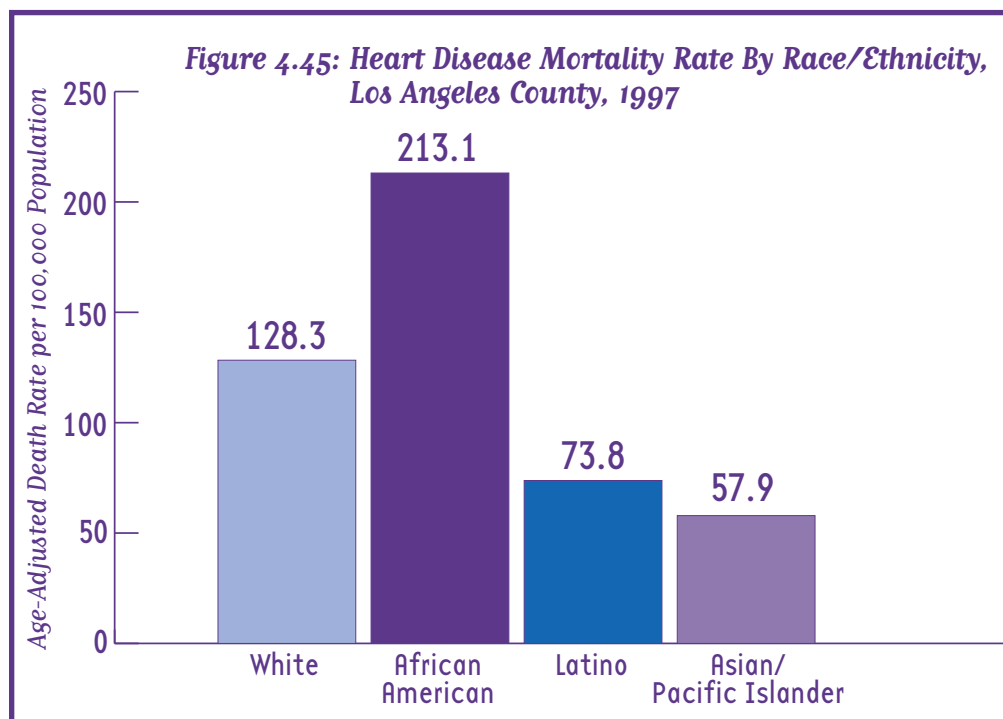
4. 1996 California Death Statistical Master File, Center of Health Statistics, Department of Health Services, California.

Over the last half century the United States has observed a decline in mortality rates. In the early 1900s, the major causes of mortality in this country were attributed to communicable diseases such as measles, polio, and tuberculosis. In this century, the picture has changed dramatically; chronic diseases such as heart disease and cancer are now inarguably the leading causes of death. This transition is related not only to advances in medicine and technology, but also to significant improvements in the social and physical environments, including sanitation, and general hygiene practices. In addition, behavioral practices, for example, tobacco use, diet and activity patterns are recognized as important contributors to the leading causes of mortality in the United States (see Table 4.6).<sup>17</sup>



Source: Los Angeles County Department of Health Services, Data Collection and Analysis Unit. Rates are standardized to the 1940 U.S. population.

Traditionally, mortality has been used as the principal measure of health status in populations. In particular, public health has used mortality data to identify problem areas and to assess longevity among various population groups. Mortality statistics are especially useful for identifying groups that bear a disproportionate burden of death or disease. Despite the overall decline in mortality rates, disparities between certain population groups persist. For example, diabetes-related deaths are highest among African-American populations,<sup>18</sup> and homicide mortality is highest in young adults, ages 15 to 24.<sup>19</sup>



Source: PHIS Data File, Data Collection and Analysis Unit, Los Angeles County Department of Health Services.

→ From 1988 through 1995, the overall mortality rate declined in Los Angeles County. The mortality rate was highest among African-Americans throughout this period (see Figure 4.44).

→ Heart disease is the leading cause of death among

**Table 4.7: Cancer Mortality**

<b>Age-Adjusted Mortality Rates, 1996</b>	<b>L.A. County<sup>1</sup></b>	<b>California<sup>2</sup></b>	<b>HP 2000<sup>3</sup></b>	
All cancer deaths (Deaths per 100,000 persons)	144.4	147.2	*	
Lung cancer deaths (Deaths per 100,000 persons)	37.0	40.4	42.0	
Breast cancer deaths (Deaths per 100,000 women)	22.2	23.1	20.6	
Cervical cancer deaths (Deaths per 100,000 women)	3.1	2.5	1.3	
	African-American	4.2	4.2	3.0
	Latino	3.8	2.9	2.0
Prostate cancer deaths (Deaths per 100,000 men)	21.1	21.2	*	
Colorectal cancer deaths (Deaths per 100,000 persons)	14.0	14.3	13.2	

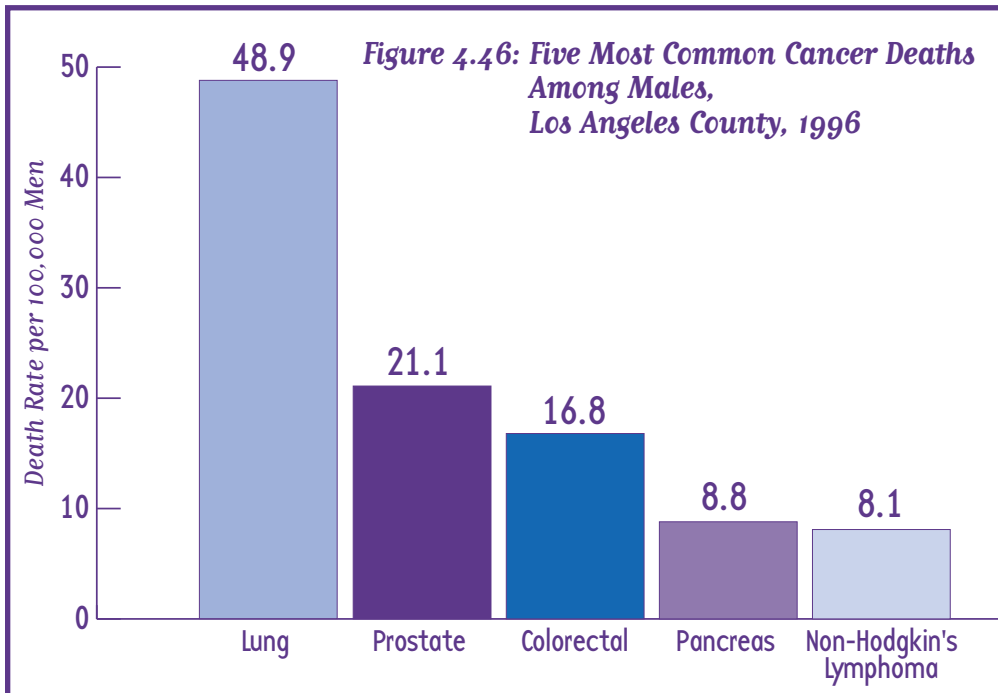
*\*HP 2000 objectives not estimated.*

*1. 1996 data obtained from Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.*

*2. 1996 data obtained from Cancer in California: 1988–1996, California Department of Health Services, Cancer Surveillance Section, April, 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.*

*3. HP 2000 death rates shown are age-adjusted to the 1940 U.S. population.*

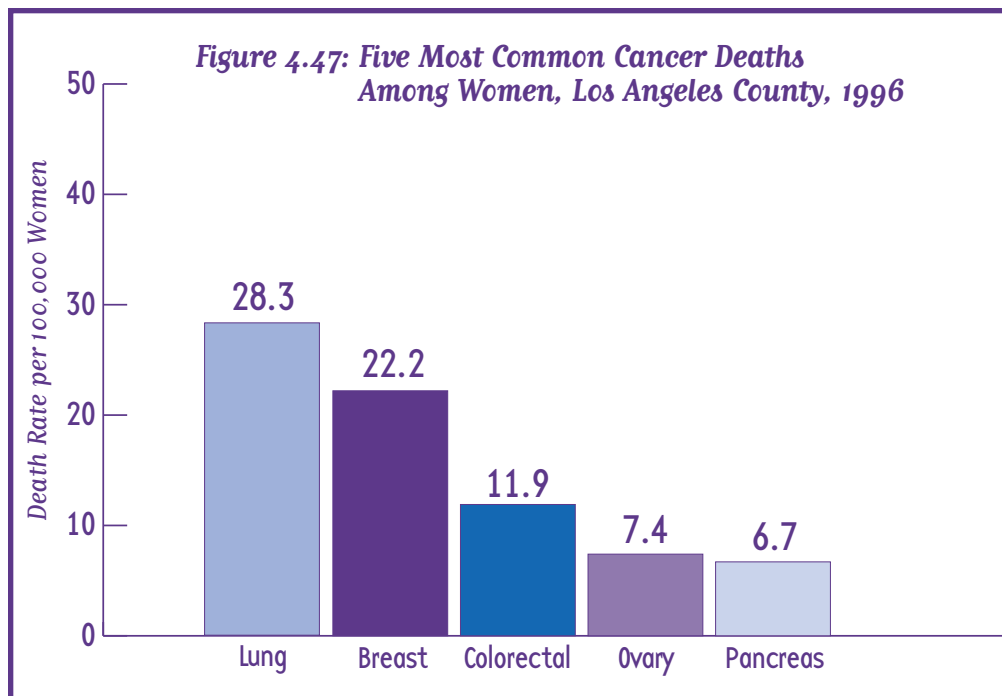
all Los Angeles County residents. African-Americans experience the highest rate of mortality from heart disease in Los Angeles County, 218.1 deaths per 100,000 (see Figure 4.45).



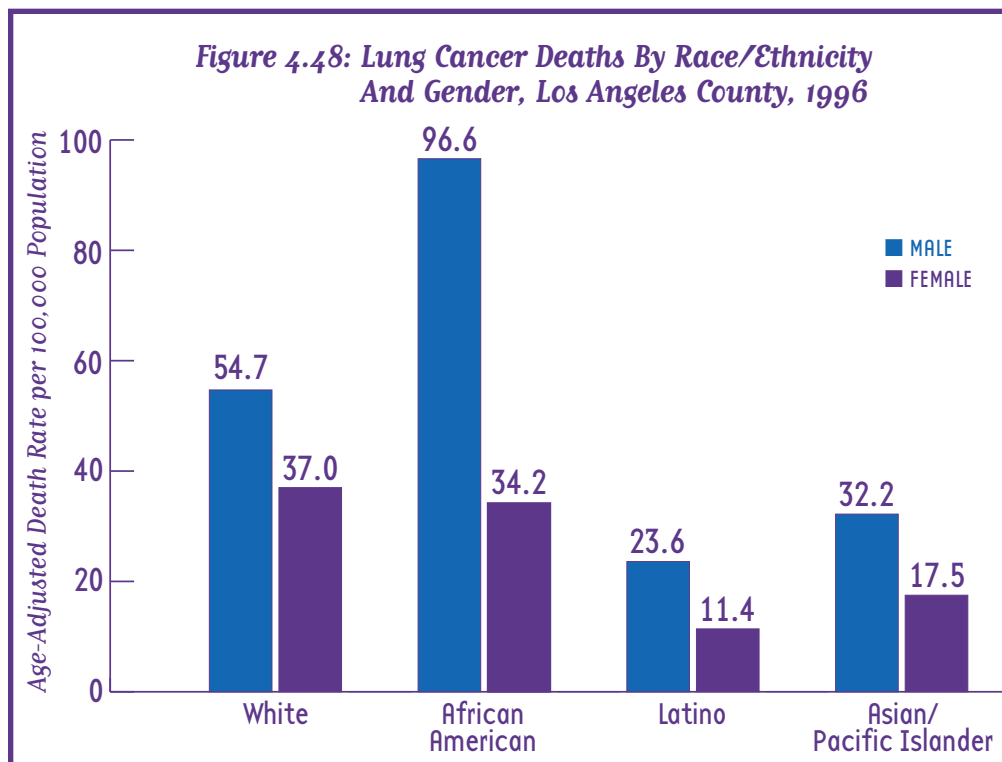
Source: 1996 data obtained from Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.

→ Overall, cancer is the second leading cause of death in both California and Los Angeles County (see Table 4.7). However, it is important to examine type-specific since different types of cancer have multiple etiologies and because they affect gender and racial/ethnic groups differently. According to 1996 data, the most common form of cancer mortality for both men and women was lung cancer, 48.9 and 28.3 deaths per 100,000 men and women, respectively (see Figures 4.46 and 4.47).

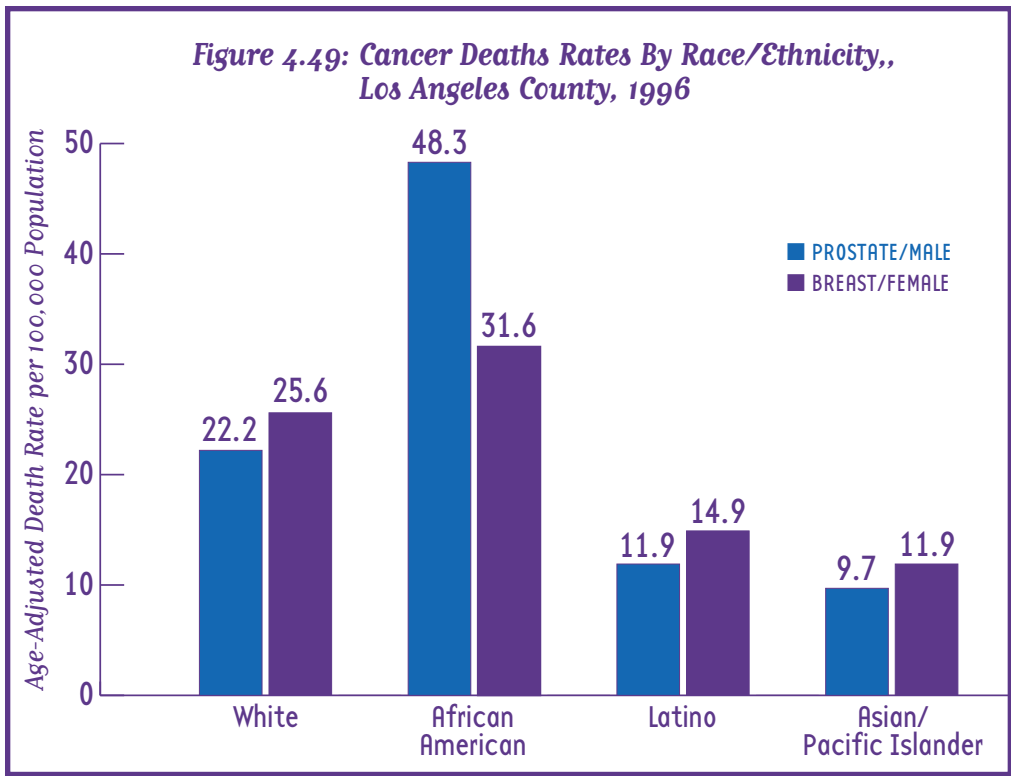
→ Men in Los Angeles County have higher rates of death from lung cancer than women. Lung cancer death rates are highest among African-American men (see Figure 4.48).



Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.



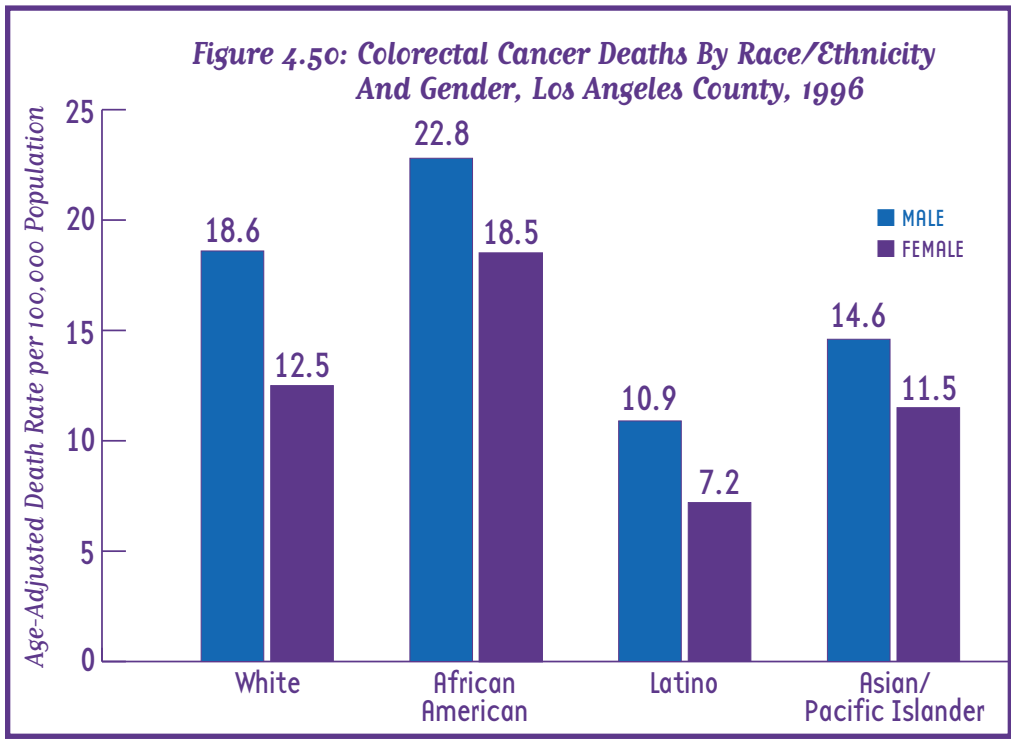
Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999.



Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.

→ In Los Angeles County, African-American women had higher death rates than any other racial or ethnic group from breast cancer. African-American men had the highest rate of prostate cancer (see Figure 4.49).

→ Rates of death from colorectal cancer are lower in women than in men (see Figure 4.50).



Source: 1996 data obtained from *Cancer in Los Angeles County: Incidence and Mortality by Race/Ethnicity 1988–1996*, Los Angeles County Cancer Surveillance Program, University of Southern California, 1999. All incidence rates were age-adjusted and standardized to the 1970 Census population.

**Table 4.8: Age-Adjusted Mortality Rates (per 100,000) By Gender And Race/Ethnicity, Los Angeles County, 1997**

All Causes	402.3	Chronic Obstructive Pulmonary Disease*17.4	Homicide	14.4
Males	500.3	Males	Males	25.0
Females	317.2	Females	Females	3.2
Whites	438.2	Whites	Whites	5.8
African-American	727.2	African-American	African-American	48.1
Latino	290.4	Latino	Latino	15.3
Asian/Pacific Islander	227.7	Asian/Pacific Islander	Asian/Pacific Islander	4.1
Heart Disease	114.4	Influenza/Pneumonia	Unintentional Injury	19.1
Males	150.0	Males	Males	27.3
Females	84.8	Females	Females	11.0
Whites	128.3	Whites	Whites	21.9
African-American	213.1	African-American	African-American	27.0
Latino	73.8	Latino	Latino	16.9
Asian/Pacific Islander	57.9	Asian/Pacific Islander	Asian/Pacific Islander	11.4
Cerebrovascular Stroke	23.0	Diabetes Disease	All Other Causes	60.0
Males	24.5	Males	Males	67.3
Females	21.7	Females	Females	53.8
Whites	21.7	Whites	Whites	64.1
African-American	43.8	African-American	African-American	112.2
Latino	17.4	Latino	Latino	46.9
Asian/Pacific Islander	20.0	Asian/Pacific Islander	Asian/Pacific Islander	31.7
Cancer	102.3	AIDS		
Males	116.5	Males		
Females	92.1	Females		
Whites	119.7	Whites		
African-American	175.1	African-American		
Latino	63.8	Latino		
Asian/Pacific Islander	65.5	Asian/Pacific Islander		
Liver Disease	9.4	Suicide		
Males	13.7	Males		
Females	5.4	Females		
Whites	9.4	Whites		
African-American	8.9	African-American		
Latino	12.8	Latino		
Asian/Pacific Islander	2.7	Asian/Pacific Islander		

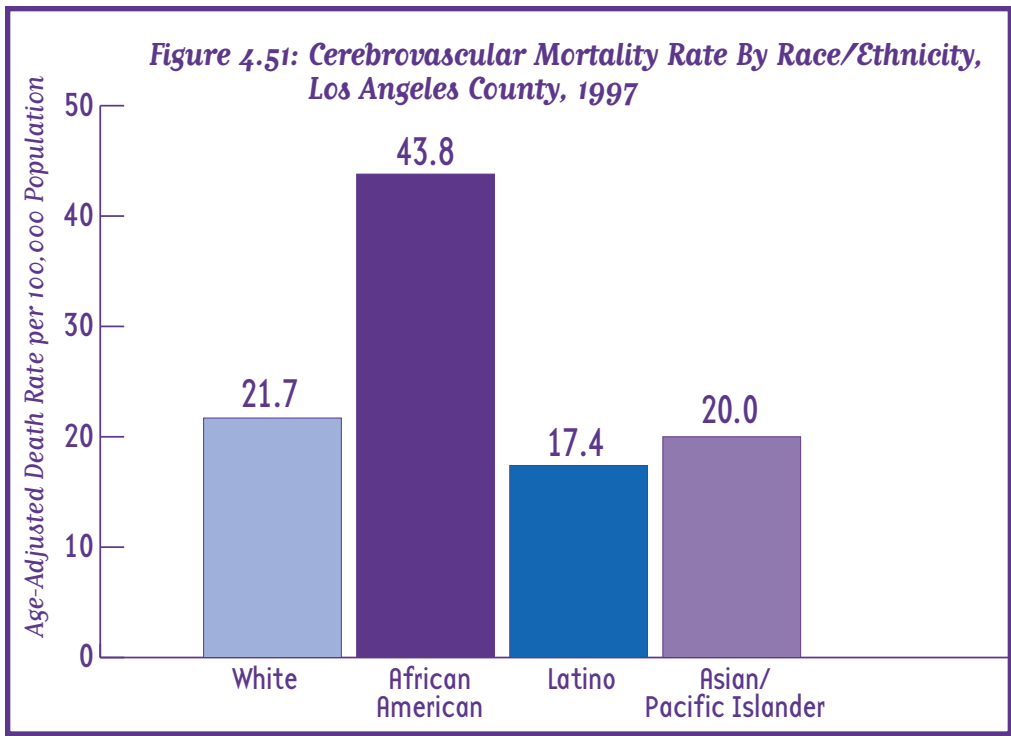
*Note: Age-adjusted rate per 100,000 to the 1940 population. Heart disease (390-398, 402, 404-429), stroke (430-438), cancer (140-208), COPD (490-496), influenza/pneumonia (480-487), chronic liver disease (571), diabetes (250), unintentional injury (E800-E949), suicide (E950-E959), homicide (E960-E978), AIDS (040-044), and all other causes (remaining codes).*

\*COPD

Source: Department of Health Services, Los Angeles County, Data Collection and Analysis Unit.

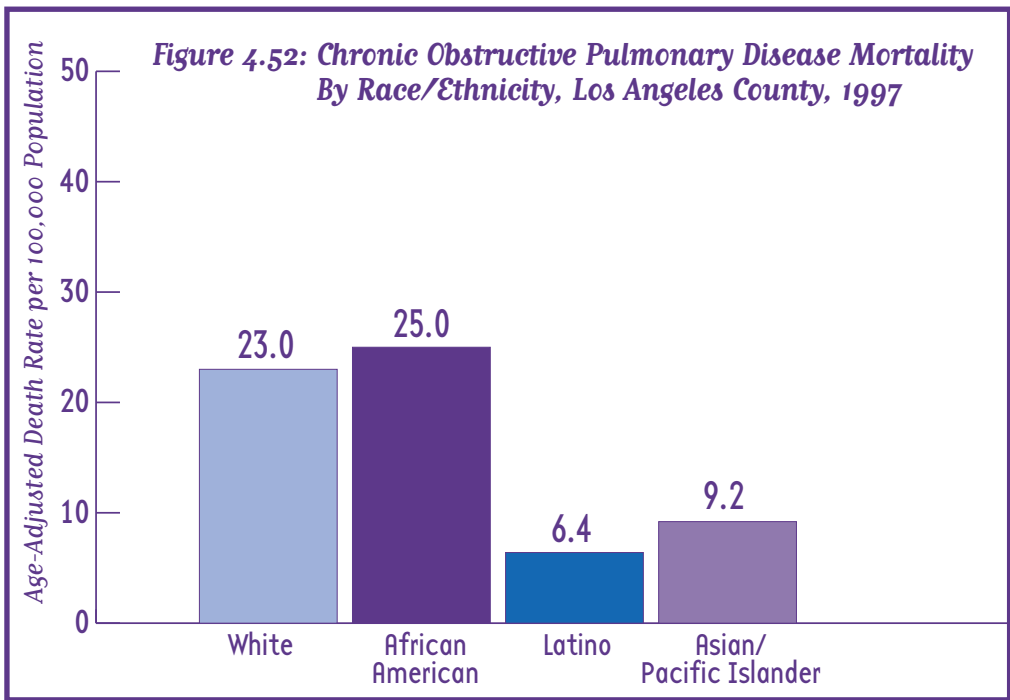
- Mortality due to influenza and pneumonia was highest among African-American (21.1 deaths per 100,000) and white (16.8) population groups in 1997 (see Table 4.8).
- In Los Angeles County, death due to chronic liver disease was highest among Latinos (12.8 deaths per 100,000). Also, women have a lower mortality rate due to chronic liver disease than do men (5.4 vs. 13.7 per 100,000) (see Table 4.8).



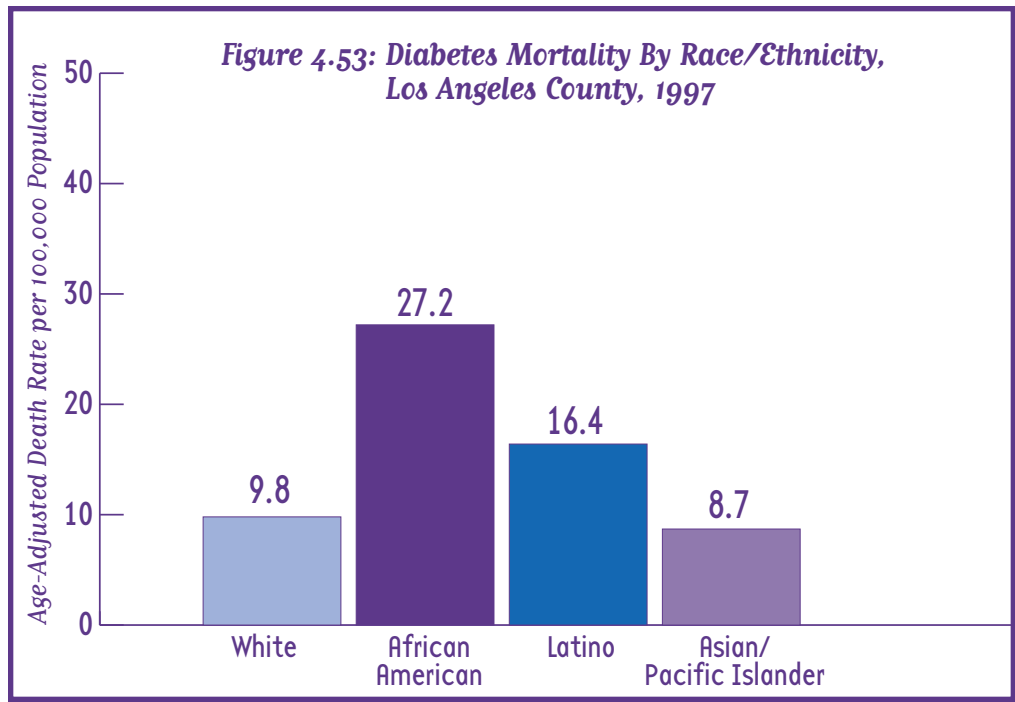


Source: Department of Health Services, Los Angeles County, Data Collection and Analysis Unit, PHIS Data File.

- In 1997, the African-American population in Los Angeles County had a significantly higher mortality rate (43.8 deaths per 100,000 people) from cerebrovascular disease (stroke) than did other ethnic groups (see Figure 4.51).
- In 1997, African-Americans (25.0 deaths per 100,000) and whites (23.0) had higher mortality rates from chronic obstructive pulmonary disease (COPD) than did other ethnic groups (see Figure 4.52).

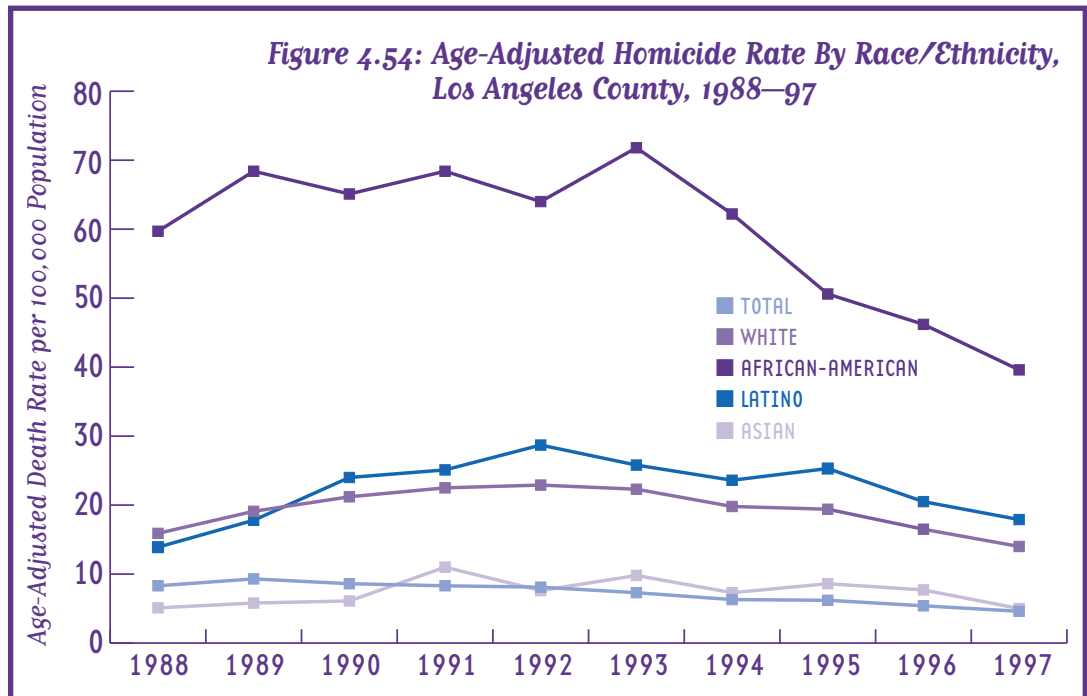


Source: Department of Health Services, Los Angeles County, Data Collection and Analysis Unit, PHIS Data File.

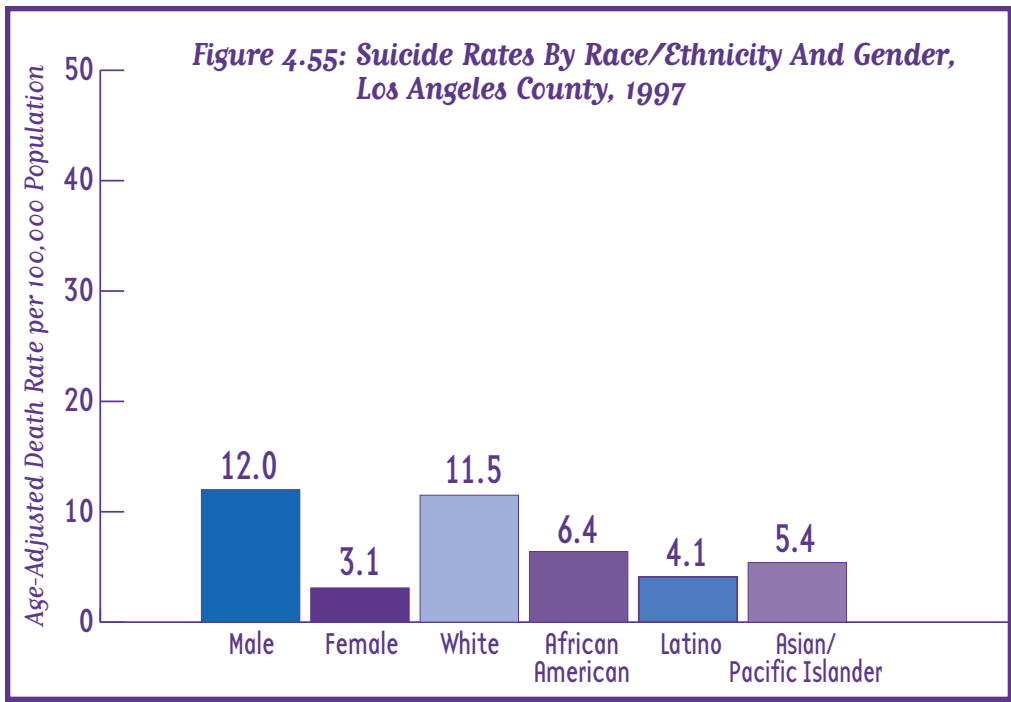


Source: Department of Health Services, Los Angeles County, Data Collection and Analysis Unit, PHIS Data File.

- In 1997, the diabetes mortality rate was highest among African-Americans (27.2 deaths per 100,000), followed by Latinos (16.4 deaths per 100,000) (see Figure 4.53).
- From 1988 through 1997, the homicide rate remained highest among African-Americans although the rate declined by 45% in this population from 1993 to 1997 (see Figure 4.54).

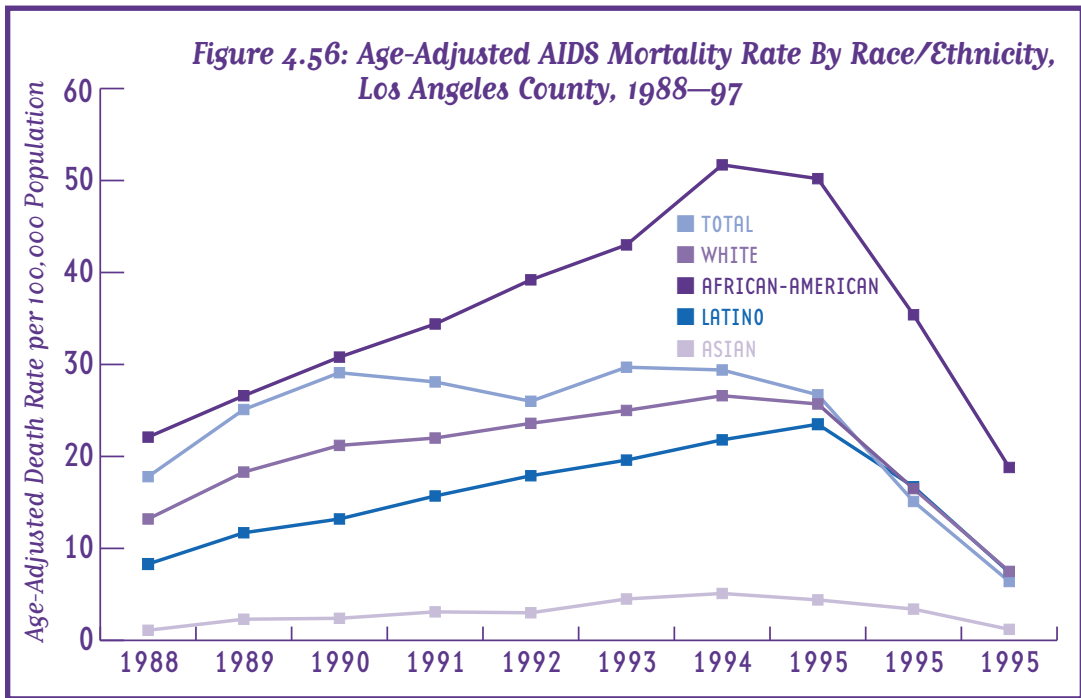


Source: Los Angeles County Department of Health Services, Data Collection and Analysis Unit. Rates are standardized to the 1940 U.S. population.



Source: Department of Health Services, Los Angeles County, Data Collection and Analysis Unit, PHIS Data File.

- In 1997, the suicide rate was higher among men (12.0 deaths per 100,000) than women (3.1 deaths per 100,000), and was higher in whites (11.5 deaths per 100,000) than in Asians (5.4), African-Americans (6.4), or Latinos (4.1) (see Figure 4.55).
- After years of increasing AIDS mortality rates, trend data show that the death rate from AIDS in Los Angeles County has started to decline. The death rate from AIDS has sharply declined since 1994 (see Figure 4.56). This sharp decline is largely due to improved treatments for HIV, which prolong the life of infected individuals.



Source: Los Angeles County Department of Health Services, Data Collection and Analysis Unit. Rates are standardized to the 1940 U.S. population.

**Table 4.9: Cause-Specific Mortality By Age, Los Angeles County, 1997**

Age	Cause of Death	Number	Rate	Age	Cause of Death	Number	Rate
<b>0-4</b>	Unintentional injury	65	8.8	<b>45-64</b>	Cancer	3,552	238.1
	Homicide	31	4.2		Heart disease	2,844	190.6
	Heart Disease	26	3.5		Stroke	477	32.0
	Cancer	26	3.5		Liver disease	471	31.6
	Pneumonia/influenza	17	2.3		Unintentional injury	442	29.6
	Cerebrovascular disease	5	0.7		Diabetes	409	27.4
	COPD	2	0.3		COPD	328	22.0
	AIDS	2	0.3		Suicide	219	14.7
	Chronic liver disease	1	0.1		AIDS	208	13.9
	All other causes	978	132.8		Pneumonia/influenza	156	10.5
	Total	1,153	156.6		Homicide	127	8.5
<b>5-14</b>	Unintentional Injury	66	5.4	All other causes	1,296	86.9	
	Cancer	41	3.3	Total	10,529	705.7	
	Homicide	20	1.6	<b>65-74</b>	Cancer	3,730	735.0
	Heart disease	13	1.1		Heart disease	3,678	724.8
	Suicide	7	0.6		Stroke	706	139.1
	COPD	5	0.4		COPD	678	133.6
	AIDS	2	0.2		Diabetes	502	98.9
	Cerebrovascular disease	1	0.1		Pneumonia/influenza	438	86.3
	Pneumonia/influenza	1	0.1		Liver disease	196	38.6
	All other causes	57	4.6		Unintentional injury	155	30.5
	Total	213	17.3		Suicide	70	13.8
<b>15-24</b>	Homicide	496	34.3		Homicide	18	3.6
	Unintentional injury	255	17.6		AIDS	14	2.8
	Suicide	94	6.5	All other causes	1,261	248.5	
	Cancer	73	5.1	Total	11,446	2,255.6	
	Heart disease	29	2.0	<b>75+</b>	Heart disease	12,812	3,629.5
	AIDS	10	0.7		Cancer	5,409	1,532.3
	Cerebrovascular disease	7	0.5		Stroke	2,840	804.5
	Pneumonia/influenza	6	0.4		Pneumonia/influenza	2,690	762.0
	COPD	5	0.4		COPD	1,799	509.6
	Chronic liver disease	2	0.1		Diabetes	746	211.3
	All other causes	124	8.6		Unintentional injury	298	84.4
Total	1,106	76.5	Liver disease		138	39.1	
<b>25-44</b>	Unintentional injury	749	24.2		Suicide	87	24.6
	Cancer	673	21.7		Homicide	12	3.4
	Homicide	540	17.4		AIDS	2	0.6
	Heart disease	450	14.5	All other cause	4,430	1,255.0	
	AIDS	442	14.3	Total	31,263	8,856.4	
	Suicide	299	9.6				
	Liver disease	232	7.5				
	Stroke	130	4.2				
	Diabetes	84	2.7				
	COPD	46	1.5				
	Pneumonia/influenza	38	1.2				
	All other causes	673	21.7				
	Total	4,356	140.5				

*1. Rate per 100,000 population in specific age group. Deaths where age is not known are not included in the table.*

Age-specific mortality rates are shown in Table 4.9. The following summarizes some of the key findings.

- In 1997, the major cause of death for children under five years of age was unintentional injury (8.8 deaths per 100,000). Unintentional injuries include falls, burns, poisonings, drownings, and motor vehicle-related injuries.
- For young adults ages 15 to 24, homicide is the leading cause of death (34.3 deaths per 100,000) in Los Angeles. The rate for homicide is almost twice as high as the mortality rate associated with unintentional injury (17.6) and nearly five times higher than the rate of suicide (6.5).
- Mortality due to chronic conditions becomes significantly higher after age 45. Among people 45 to 64 years of age, cancer (238.19 deaths per 100,000) remains the leading cause of death, followed closely by heart disease (190.6 per 100,000).

## Leading Causes of Mortality Data Sources

Data Collection and Analysis Unit, Los Angeles County DHS—Public Health

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Injury and Violence Prevention Program, Los Angeles County DHS—Public Health

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Los Angeles County Cancer Surveillance Program

Department of Preventive Medicine

University of Southern California

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Cancer Surveillance Section, Cancer Control Branch

Division of Chronic Disease and Injury Control

California Department of Health Services

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Office of Health Information and Research

Center for Health Statistics, California Department of Health Services

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Monthly Vital Statistics Report Series, Division of Vital Statistics

Centers for Disease Control and Prevention

National Center for Health Statistics

United States Department of Health and Human Services

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### Endnotes

1. *Committee on Using Performance Monitoring to Improve Community Health. Improving health in the community: A role for performance monitoring.* Institute of Medicine, National Academy Press, 1997.
2. For a family of four, the 1997 federal poverty level was \$16,050 per year.
3. Mild to moderate overweight is defined as a Body Mass Index (BMI) of >25.0; severe overweight is defined as a BMI of >30.0.
4. Murray, CJL, Lopez, AD, eds. *The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected 2020.* Cambridge: Harvard University Press, 1996.
5. Los Angeles County Department of Health Services and the UCLA Center for Health Policy Research. *The Burden of Diseases in Los Angeles County: A Study of the Patterns of Morbidity and Mortality in the County Population.* January 2000.
6. Bird, ST, Bauman, KE, et al. State-level infant, neonatal and postneonatal mortality: the contribution of selected structural socioeconomic variables. *Int J Health Serv* 1998; 28(1):13–27.
7. Ventura SJ, Curtin, SC. Recent trends in teen births in the United States. *Stat Bull Metrop Insur Co* 1999; 80(1):2–12.
8. Knoches, Am, Doyle, LW. Long-term outcome of infants born preterm. *Baillieres Clin Obstet Gynaecol* 1993; 7(3):633–51.
9. 1997 California Behavioral Risk Factor Surveillance System. Cancer Surveillance Section. California Department of Health Services.
10. National Center for Health Statistics. *Healthy People 2000 Review*, 1997.
11. Centers for Disease Control and Prevention. 1988–1994 National Health and Nutrition Examination Survey. National Center for Health Statistics.
12. See note 10 above.
13. Rice, DP, and MacKenzie, EJ. *Cost of Injury in the United States: Report to Congress.* San Francisco, CA: Institute for Health and Aging, University of California and Injury Prevention Center, The Johns Hopkins University, 1989.
14. 1996 California Office of Statewide Health Planning and Development (OSHPD) Hospital Discharge Dataset.
15. See note 14 above.
16. *Domestic Violence Survey of Los Angeles County Female Employees.* Los Angeles County Commission for Women, 1998.
17. McGinnis, M, Foegen, WH. Actual causes of death in the United States. *JAMA* 1993;270(18):2207–12.
18. Center for Disease Control and Prevention. *Diabetes Surveillance*, 1997. Atlanta, GA. Department of Health and Human Services, 1997.
19. PHIS Data File, Data Collection and Analysis Unit, Los Angeles County Department of Health Services.

## APPENDIX: HEALTH DATA RESOURCES

Acute Communicable Disease Control Unit  
Los Angeles County Department of Health Services—Public Health  
(213) 240-7941

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AIDS Case Registry  
Office of AIDS  
California Department of Health Services  
(916) 322-1065

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Alcohol and Drug Program Administration  
Los Angeles County Department of Health Services—Public Health  
(213) 744-6585

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Burden of Disease Unit  
Center for Population and Development Studies  
Harvard School of Public Health  
(617) 495-8498

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California Cancer Registry  
California Department of Health Services  
(916) 779-0300

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Cancer Prevention and Nutrition Program  
Research Unit  
California Department of Health Services  
(916) 323-4586

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Cancer Surveillance Program, Los Angeles County  
Department of Preventive Medicine  
University of Southern California  
(213) 342-2300

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Cancer Surveillance Section  
Division of Chronic Disease and Injury Control  
California Department of Health Services  
(916) 327-4663

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CATI Unit  
California Behavioral Risk Factor Survey  
Cancer Surveillance Section  
California Department of Health Services  
(916) 327-4643

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Centers for Disease Control and Prevention  
Epidemiology Program Office  
MMWR Series  
U.S. Department of Health Services  
(800) 311-3435  
<http://www2.cdc.gov/mmwr/>

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Centers for Disease Control and Prevention  
Lead Poisoning Prevention Program  
Division of Environmental Hazards and Health Effects  
National Center for Environmental Health  
U.S. Department of Health and Human Services  
(770) 488-7330  
<http://www.cdc.gov/nceh/programs/lead/lead.htm>

Centers for Disease Control and Prevention  
National Center for Health Statistics  
Division of Vital Statistics  
Monthly Vital Statistics Report Series  
U.S. Department of Health Services  
(301) 436-8500

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Children's Planning Council  
Los Angeles County  
(213) 893-0421

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Criminal Justice Statistics Center  
California Department of Justice  
(916) 227-3509

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Demographic Research Unit  
California State Department of Finance  
(916) 322-4651

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Education, California Department of  
(916) 327-0219

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Education, Office of  
Los Angeles County  
(562) 922-6111  
<http://www.lacoe.edu>

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Environmental Health  
Los Angeles County Department of Health Services  
(888) 700-9995  
<http://www.lapublichealth.org>

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Family Health Programs/ Maternal & Child Health  
Los Angeles County Department of Health Services—Public Health  
(213) 639-6400  
<http://www.lapublichealth.org>

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Health Assessment and Epidemiology, Office of  
Health Assessment, Epidemiology & Data Collection and Analysis Units  
Los Angeles County Department of Health Service—Public Health  
(213) 240-7785  
<http://www.lapublichealth.org>

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Health Insurance Policy Program  
Center for Health and Public Policy Studies  
University of California, Berkeley  
(510) 643-1675

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Health Information and Research, Office of  
Center for Health Statistics  
California Department of Health Services  
(916) 445-6355  
<http://www.dhs.cahwnet.gov>

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HIV Epidemiology Program, AIDS Case Registry  
Los Angeles County Department of Health Services—Public Health  
(213) 351-8196  
<http://www.lapublichealth.org>

# APPENDIX

Injury Surveillance and Epidemiology Section  
Epidemiology and Prevention for Injury Control Branch  
California Department of Health Services  
(916) 323-3642

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Injury and Violence Prevention Program  
Los Angeles County Department of Health Services—Public Health  
(213) 351-5224

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Lead Programs  
Epidemiology Information  
Los Angeles County Department of Health Services—Public Health  
(213) 738-2816

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Maternal and Child Health Branch  
California Department of Health Services  
(916) 657-0324

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Mental Health, Department of  
Los Angeles County  
(800) 854-7771

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Nutrition Program  
Los Angeles County Department of Health Services—Public Health  
(213) 250-8621

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Sexually Transmitted Disease Control Branch  
California Department of Health Services  
(916) 324-3187

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Sexually Transmitted Disease Program  
Los Angeles County Department of Health Services—Public Health  
(213) 744-3070

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South Coast Air Quality Management District (SQAQMD)  
(909) 396-2000

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Statewide Health Planning & Development, Office of  
Healthcare Information Division  
(916) 322-2814  
<http://www.oshpd.state.ca.us>

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Tobacco Control Program  
Los Angeles County Department of Health Services  
(213) 351-7786

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Tobacco Control Section  
California Department of Health Services  
(916) 324-6099

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Tuberculosis Control Branch  
Division of Communicable Disease Control  
California Department of Health Services  
(510) 540-2973

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Tuberculosis Control Program  
Los Angeles County Department of Health Services—Public Health  
(213) 744-6160

UCLA Center for Health Policy Research  
(310) 825-5491

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UCLA Drug Abuse Research Center  
Neuropsychiatric Institute  
(310) 445-0874

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United Way of Greater Los Angeles  
(213) 630-2819

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U.S. Census Bureau  
United States Department of Commerce  
(301) 457-3030