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 overrepresented compared to populations served elsewhere.

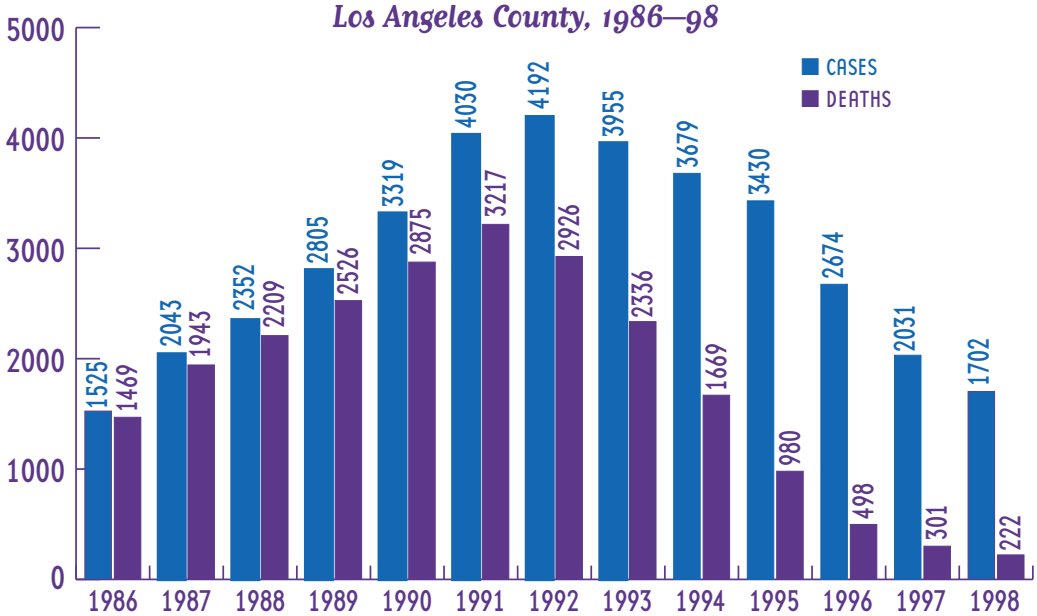
Overall, the rates of many communicable diseases have decreased in the past 50 to 75 years due to improvements in sanitation, housing, and food handling. Such improvements include more stringent infection control practices, widespread immunization of the population, use of antibiotics, and other disease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

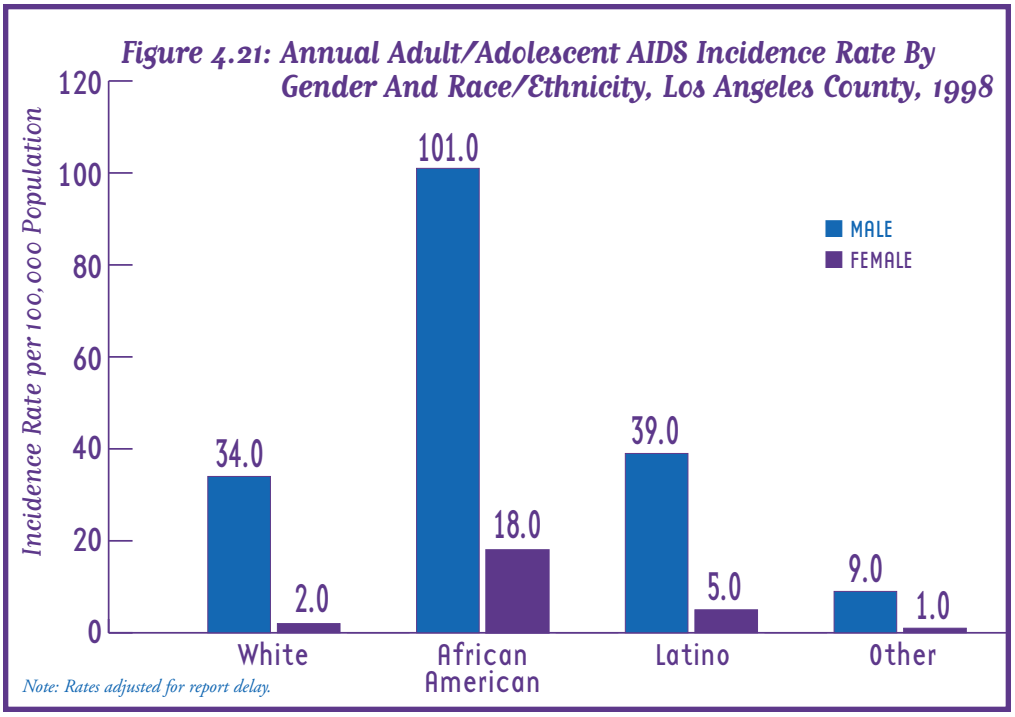
Figure 4.20: Cases of AIDS And Deaths By Year Of Diagnosis, Los Angeles County, 1986—98



Note: Deaths are reported by the year of AIDS diagnosis reported by June 30, 1999.

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

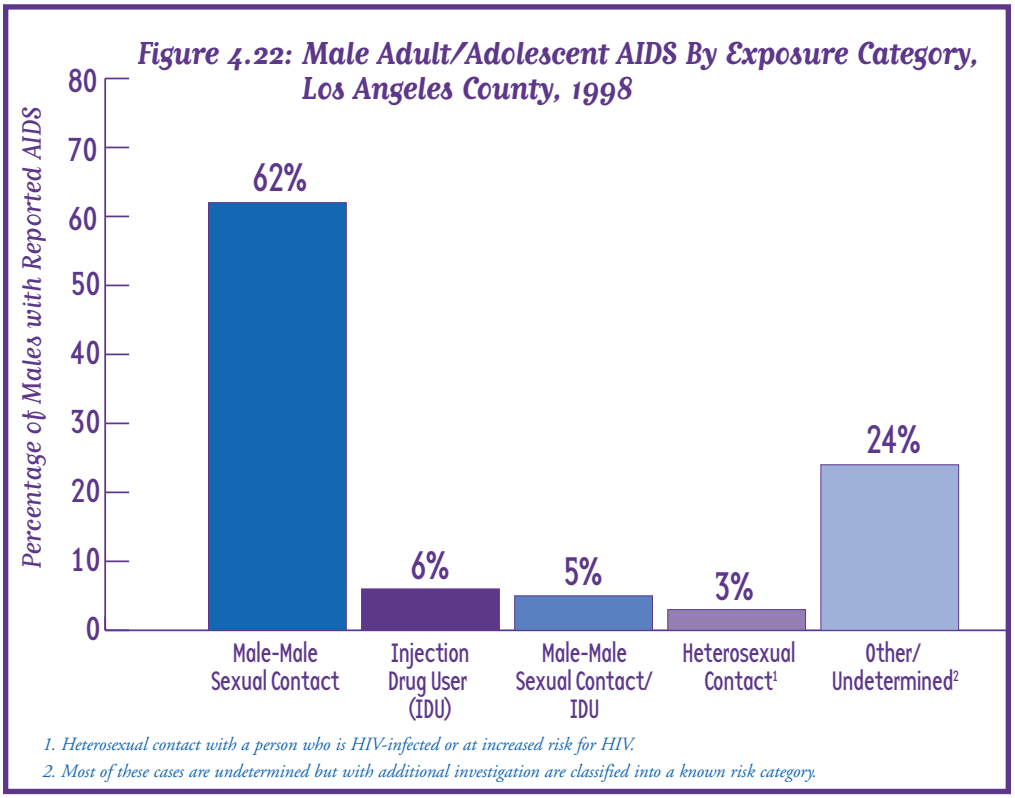
each year is unknown. Despite widespread HIV prevention efforts, there is evidence that HIV is continuing to spread at alarmingly high rates in some communities in the county.



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

➜ 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.

Table 4.3: Communicable Diseases, 1997

	L.A. County	California	HP 2000
AIDS Incidence Rate (cases per 100,000 persons)[1]	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)[2]	9.0	7.3	10.0
Gonorrhea (cases per 100,000)[3]	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)[3]	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)[3]	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)[3]	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)[3]	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	*

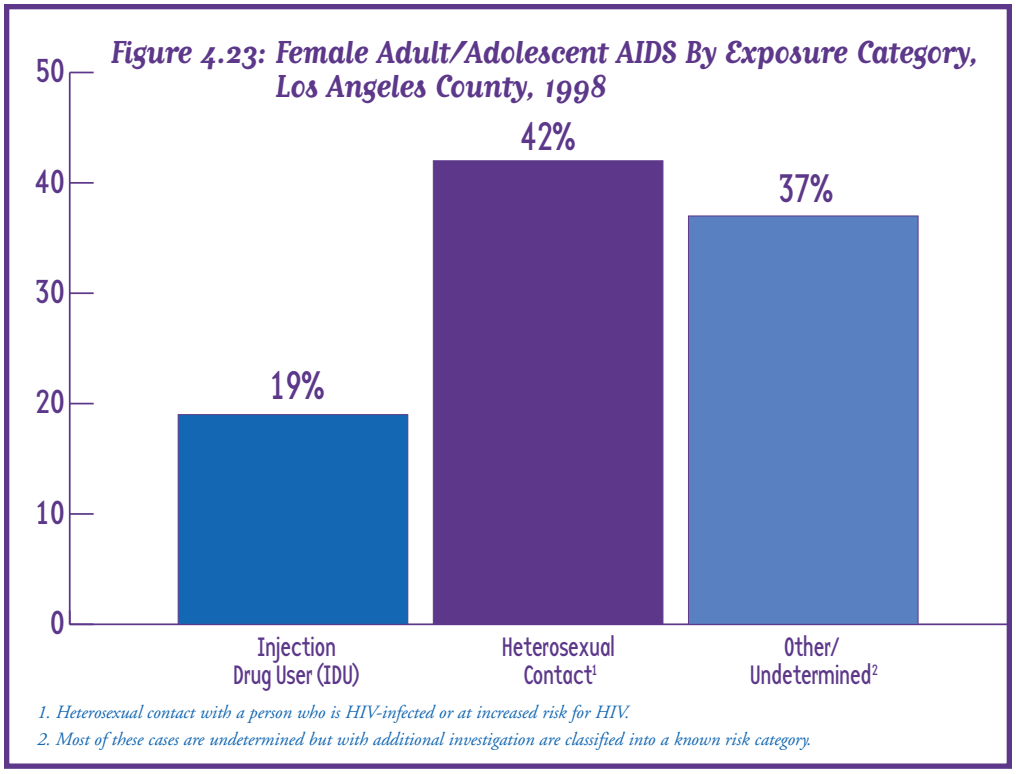
1. AIDS cases reported in Los Angeles County for the first 9 months of 1997 as of Sept. 30, 1998.

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).



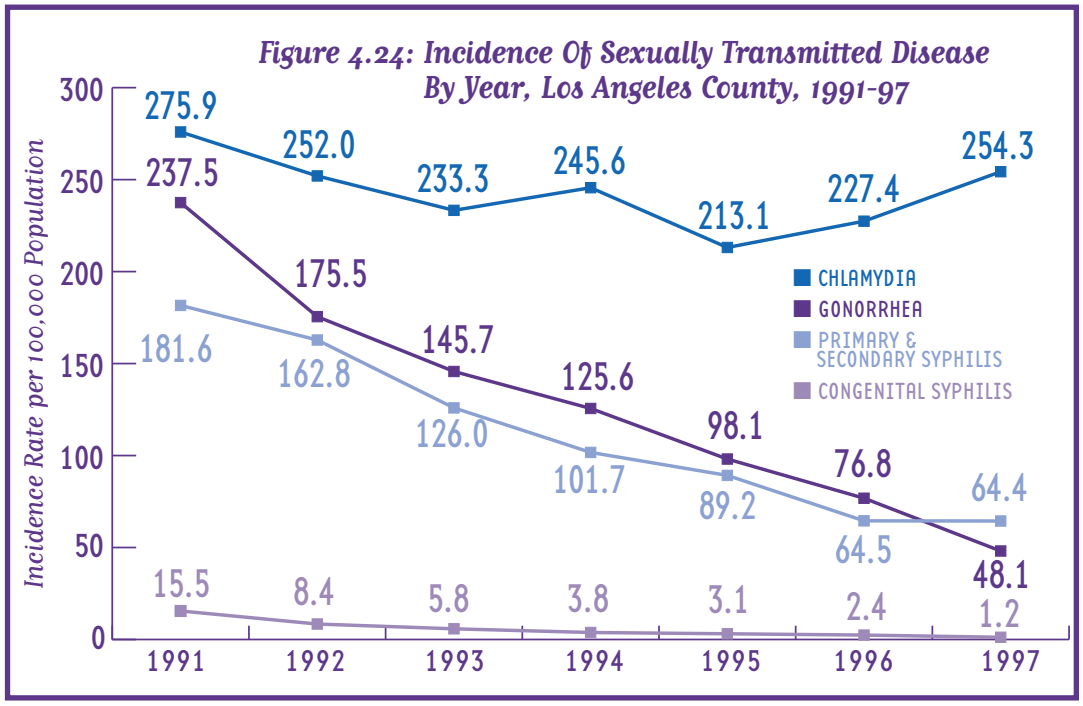
Source: Los Angeles County Department of Health Services, HIV Epidemiology Program Advanced HIV Disease (AIDS) Quarterly Surveillance Summary, Issued January 15, 2000.

Other Sexually Transmitted Diseases

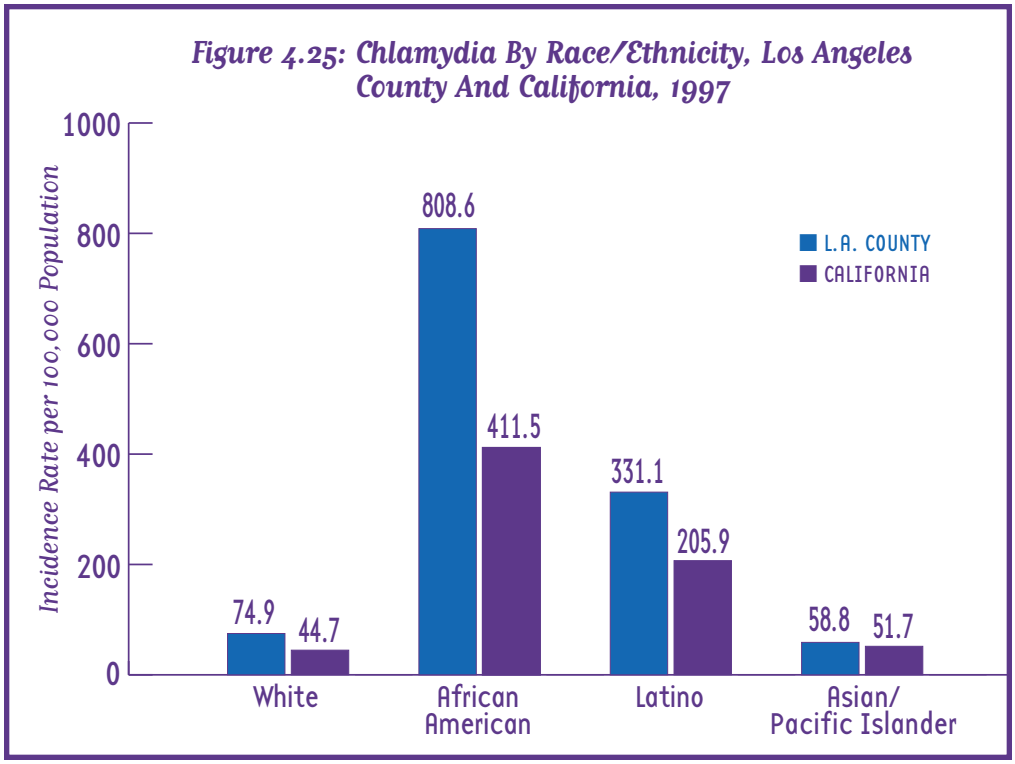
Sexually transmitted diseases (STDs) are among the most commonly reported infections in Los Angeles County and can result in serious health consequences for those infected. The incidence of most STDs is highest among 15 to 24 year olds. Chlamydia is the most frequently reported infection in Los Angeles 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, STD Program.

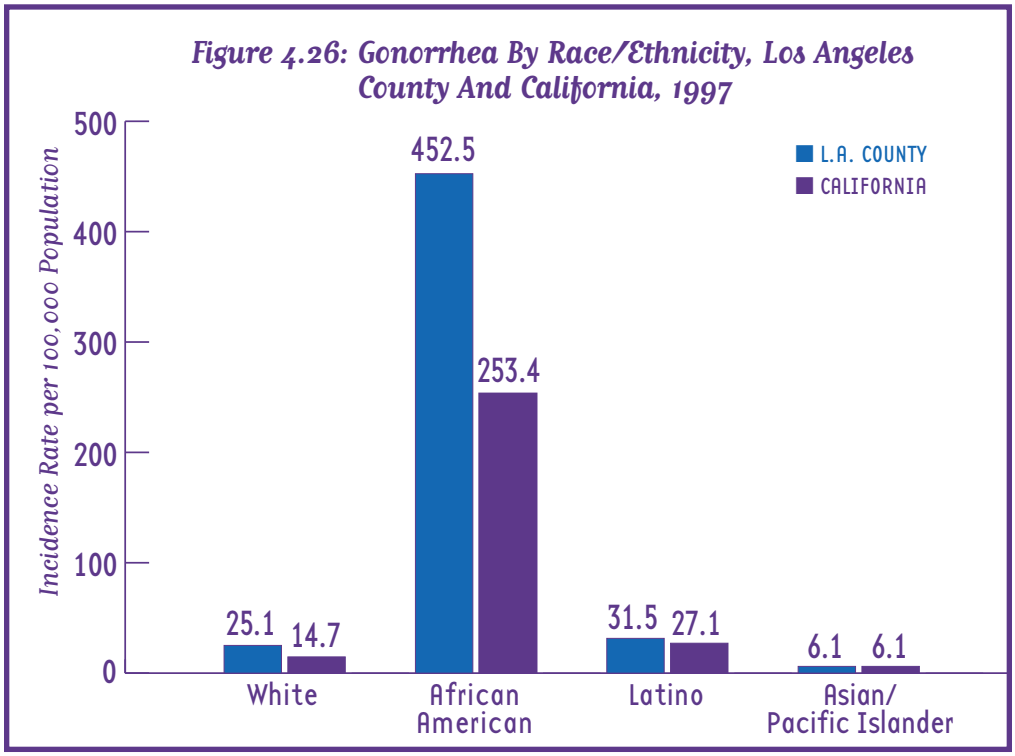


Source: Los Angeles County Department of Health Services, STD Program. California Department of Health Services, STD Control Branch.

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).

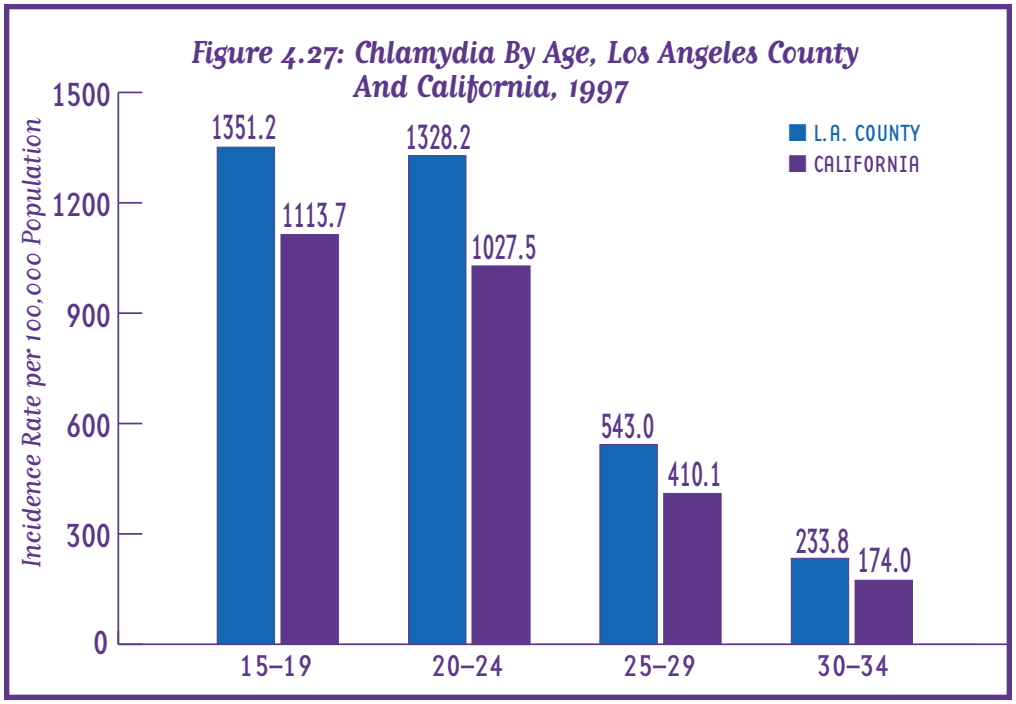


Figure 4.27: Chlamydia By Age, Los Angeles County And California, 1997

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

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.

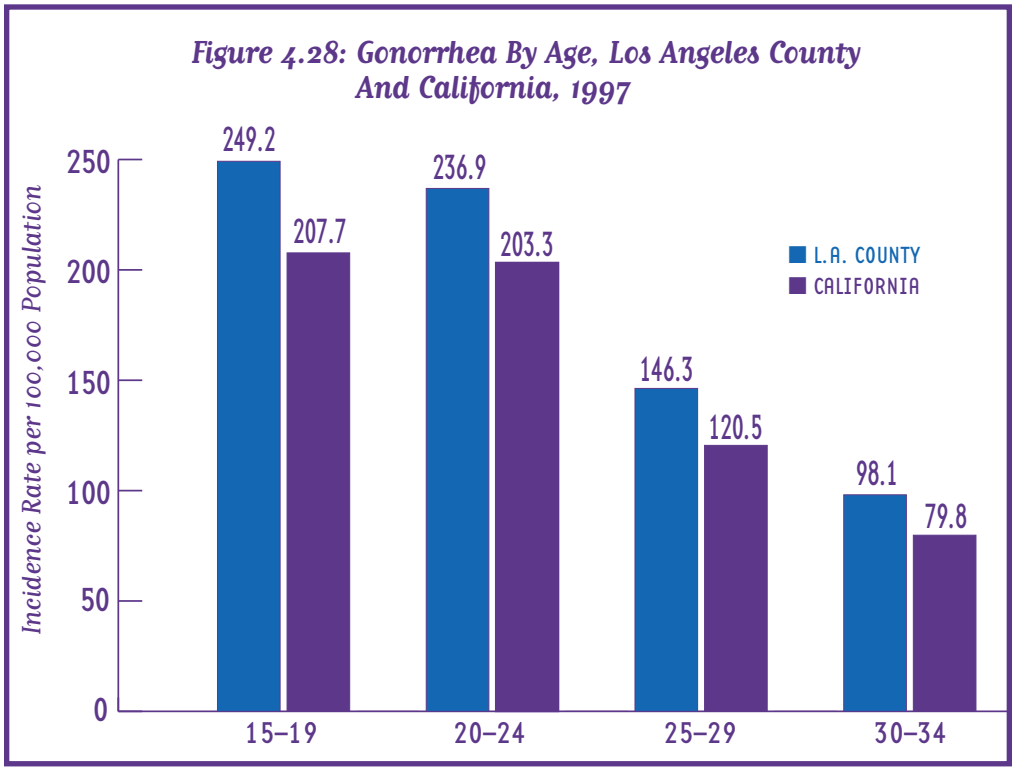
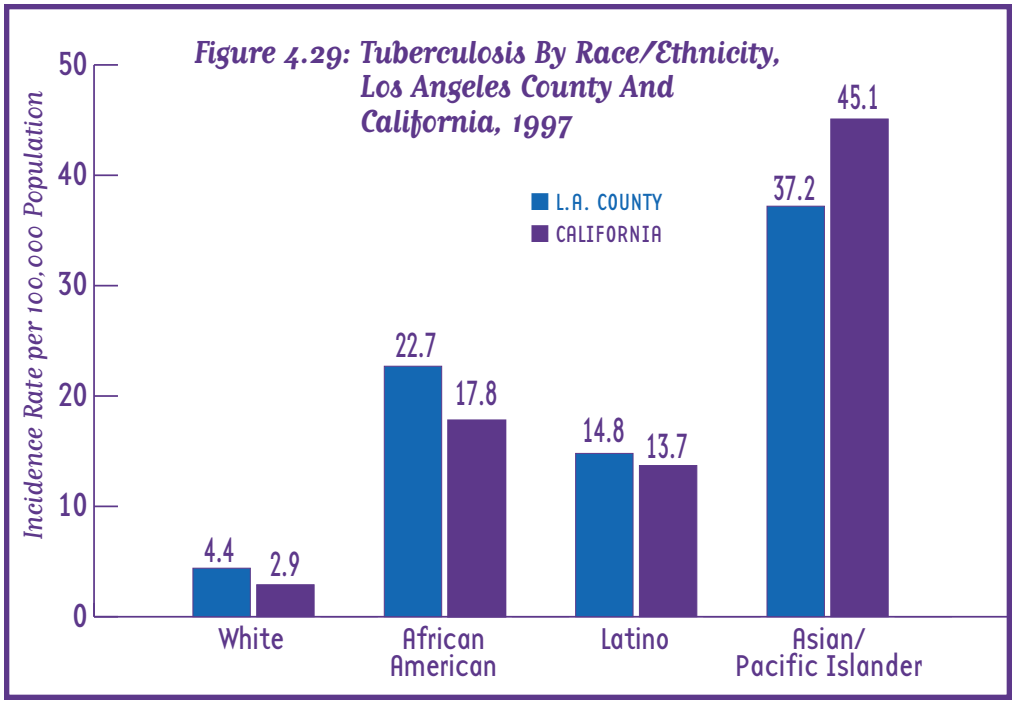


Figure 4.28: Gonorrhea By Age, Los Angeles County And California, 1997

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.

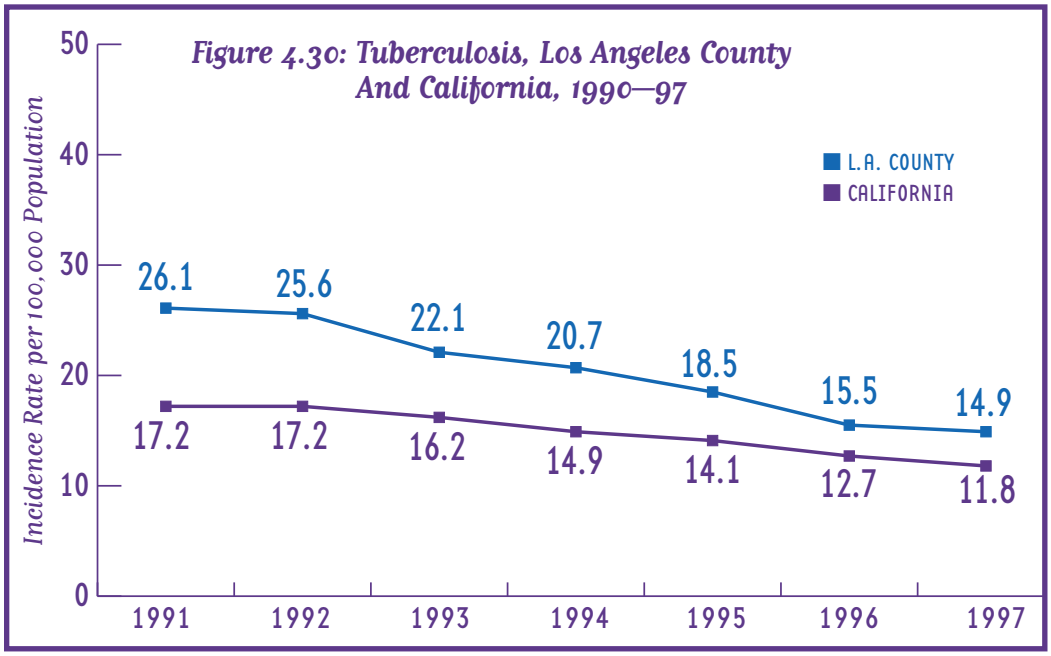
➜ The 1997 incidence rates of TB in Los Angeles County were highest in Asian (37.2 per 100,000) and African-American (22.7 per 100,000) populations (see Figure 4.29). Of the total cases, 66% were male and 34% were female.

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.

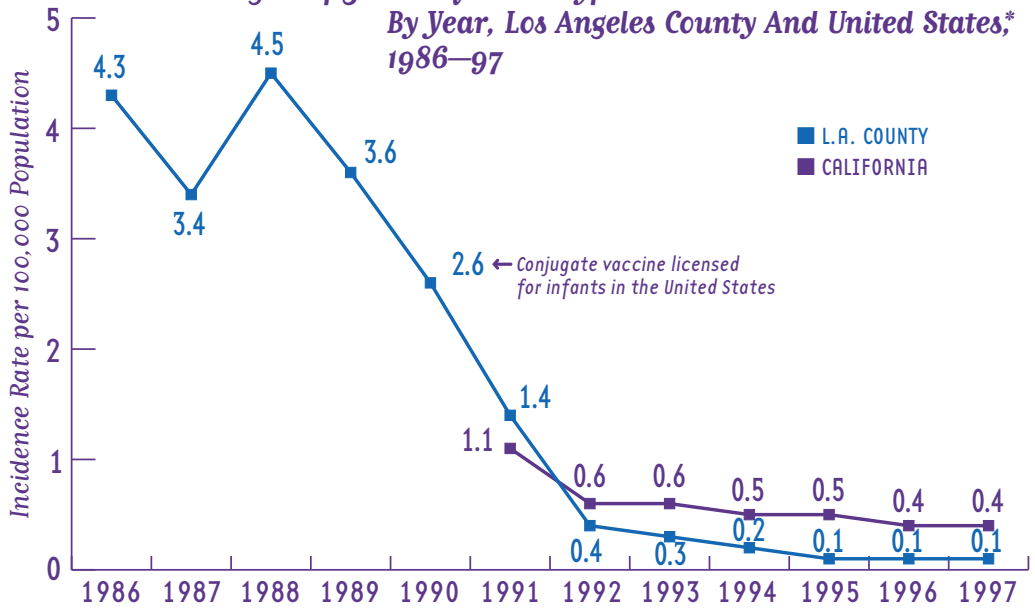


Source: Los Angeles Department of Health Services, TB Control Program. California Department of Health Services, Division of Communicable Disease Control.

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.

Figure 4.31: H. Influenza Type B Disease Incidence Rates By Year, Los Angeles County And United States, 1986—97*



* Not notifiable until 1991.

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
2. Los Angeles County Department of Health Services—Public Health
   Sexually Transmitted Disease Program
3. Los Angeles County Department of Health Services—Public Health
   Acute Communicable Disease Control Unit
4. Los Angeles County Department of Health Services—Public Health
   Tuberculosis Control Program
5. California Department of Health Services, Office of AIDS, Case Registry
6. California Department of Health Services
   Sexually Transmitted Disease Control Branch
7. California Department of Health Services
   Division of Communicable Disease Control
   Tuberculosis Control Branch

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