

MENINGOCOCCAL DISEASE

CRUDE DATA	
Number of Cases	53
Annual Incidence ^a	
LA County	0.57
California	0.99
United States	0.83
Age at Onset	
Mean	28 years
Median	22 years
Range	2 weeks - 98 years
Case Fatality	
LA County	11%
United States	N/A

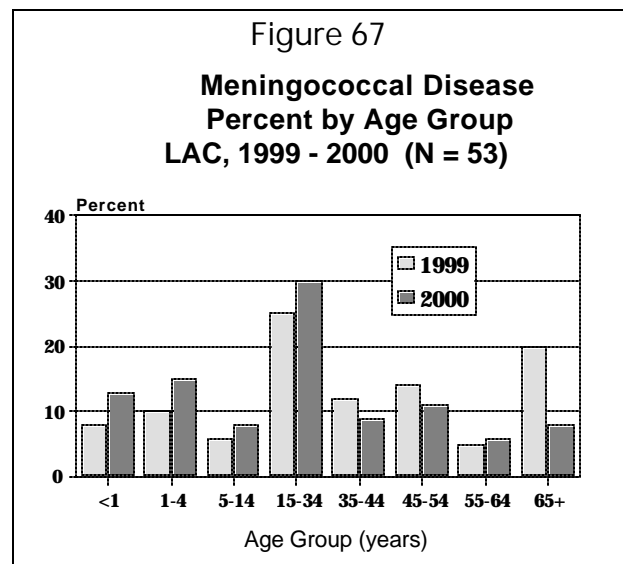
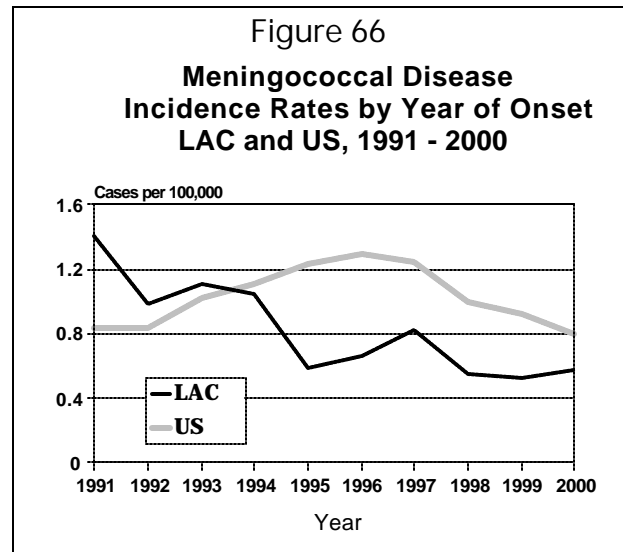
^a Cases per 100,000 population.

ETIOLOGY

Meningococcal disease, occurring most often as meningococcal meningitis or meningococemia, is transmitted through direct or droplet contact with nose or throat secretions of a person infected with the *Neisseria meningitidis* bacterium. Common symptoms include sudden onset of fever, headache, nausea and vomiting, stiff neck and lethargy, which can progress to overwhelming sepsis, shock and death within hours. Meningococcal disease affects all age groups but occurs most often in infants. Serogroups A, C, Y and W-135 are vaccine-preventable. Serogroups B, C and Y are the serogroups commonly seen in the US.

DISEASE ABSTRACT

- Meningococcal disease incidence remained low in LAC.
- There were no secondary cases or outbreaks.
- Serogroup W-135, last seen in 1996, reappeared, while serogroup B predominated.



STRATIFIED DATA

Trends: The number of cases remained low (Figure 66). Serogroup B surpassed Y as the predominant serogroup identified.

Seasonality: Cases were highest during winter and early spring. Over half occurred in the first four months of the year (Figure 67).

Age: Most cases occurred in those aged 15-34 years (30%, n = 16), followed by cases in children aged 1 - 4 years (13%, n = 8) and in infants (11%, n=7). Among those aged 65 years and older, there was a decrease from 20% (n = 10) of all cases in 1999 to only 8% (n = 4) in 2000. Changes among other age groups were not as marked (Figure 68).

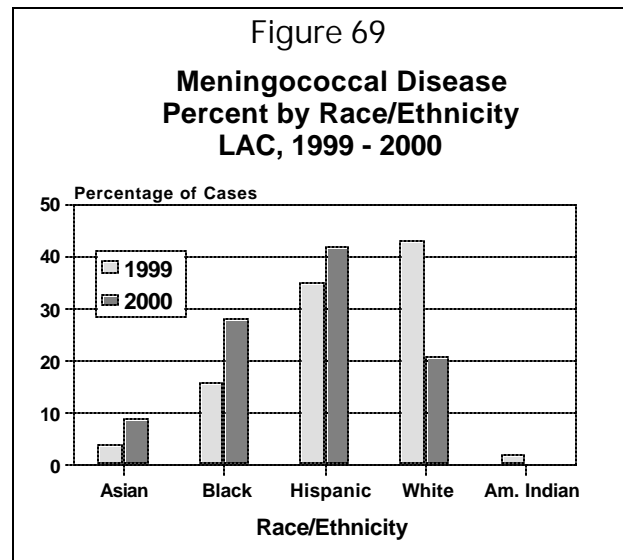
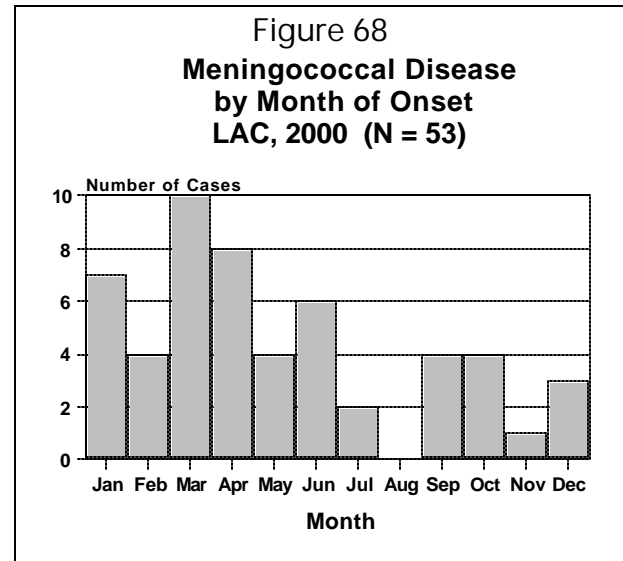
Sex: The male-to-female rate ratio was 1.8:1.

Race/Ethnicity: The number of cases increased among all ethnic groups except Whites where there was a decrease from 43% (n=21) of all cases in 1999 to only 21% (n=11) in 2000. Most cases occurred in Hispanics (42%, n=22) (Figure 69).

Location: The percentage of the cases was highest in the Inglewood Health District(19%, n=10), followed by the West Valley (11%, n=6) and Pomona (9%, n=5)(Map 9).

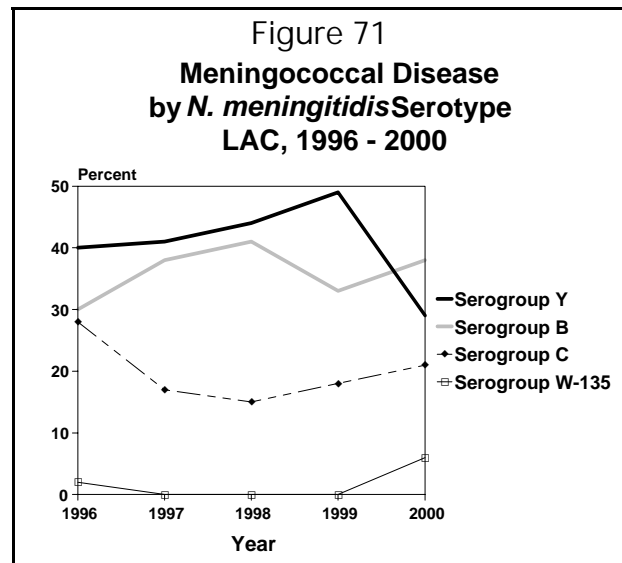
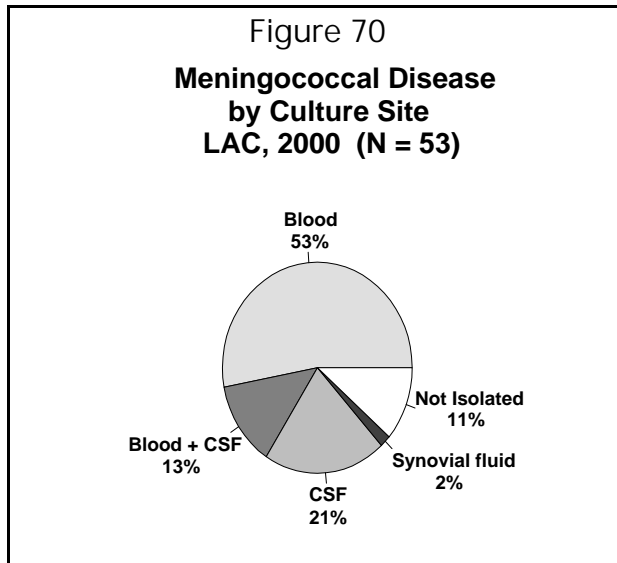
COMMENTS

In 2000, *N. meningitidis* was isolated from 47 cases (89%): 28 (60%) from blood, 11 (23%) from cerebrospinal fluid, 7 (15%) from both, and 1 (2%) from synovial fluid (Figure 70). Serogroup identification was made in 64% of cases. Serogroup B (n=13) increased to 38% from 33%. Serogroup C (n=7) increased to 21% from 18%, serogroup Y (n=10) decreased from 49% to 29%, and the remaining 12% (n=4) were evenly divided between serogroup W-135 and those that were non-groupable (Figure 71). Since 1999, following CDC studies indicating that freshman college students are at modestly increased risk for meningococcal disease, interest in meningococcal disease among college students has continued. In 2000 there were 12 cases in young adults of college age



(18-30 years), including 2 college students attending different universities. Of the 2 college students, one had serogroup B and lived in a dormitory and the other (a fatality) had serogroup C and lived in an apartment. Among the non-college cases, 7 case isolates were available for serogrouping: 2 serogroup B, 3 (including one fatality) serogroup C, 1 serogroup Y, and 1 non-groupable.

In 2000, the serogroups of more than half of the cases in which a serogroup was identified, including cases among those aged 18-30 years, were included in the available meningococcal vaccine.



ADDITIONAL RESOURCES

Centers for Disease Control and Prevention. Prevention and control of meningococcal disease and college students: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2000;49 (RR-7):1-20.

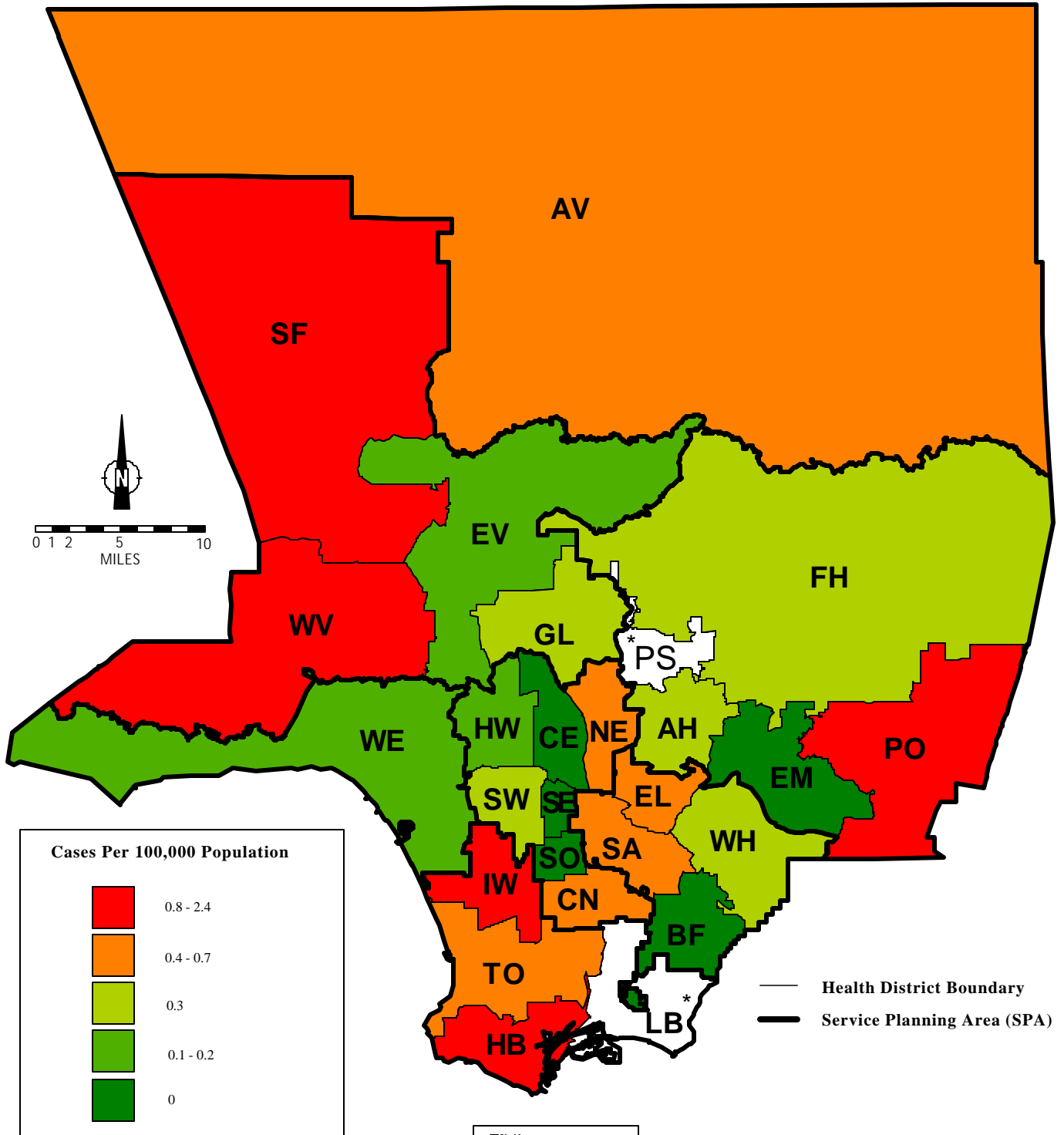
Centers for Disease Control and Prevention. Control and prevention of meningococcal disease and control and prevention of serogroup C meningococcal disease: evaluation and management of suspected outbreaks: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 1997;46(RR-5):1-21.

Riedo FX, Plikaytis BD, Broome CV. Epidemiology and prevention of meningococcal disease. *Pediatr Infect Dis J* 1995;14:643-57.

Rosenstein NE, Perkins BA, Stephens DS, Popovic T, Hughes JM. Meningococcal disease. *N Engl J Med* 2001;344:1378-88.

Acute Communicable Disease Control website:
<http://lapublichealth.org/acd/procs/b73/b73index.htm>

MAP 9. Meningococcal Disease Rates by Health District, Los Angeles County, 2000*



*Excludes Long Beach and Pasadena Data.

