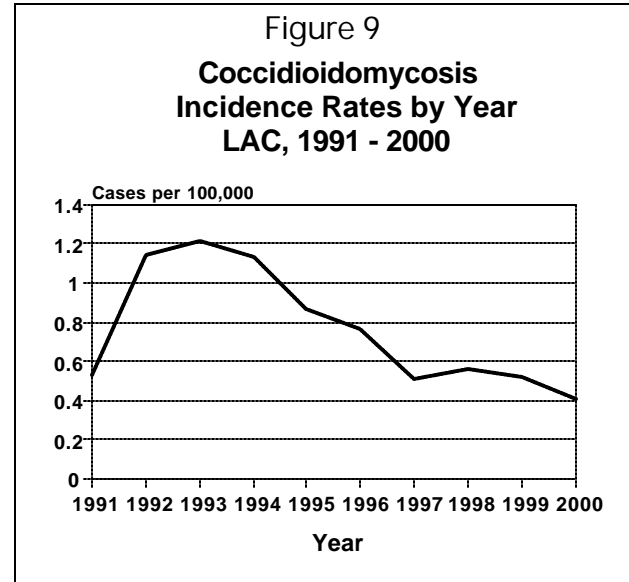


COCCIDIOIDOMYCOSIS

CRUDE DATA	
Number of Cases	38
Annual Incidence ^a	
LA County	0.41
California ^b	2.42
United States	N/A
Age at Onset	
Mean	48 years
Median	43 years
Range	7 - 88 years
Case Fatality	
LA County	16%
United States	N/A

^a Cases per 100,000 population.

^b California Department of Health Services Surveillance and Statistics Section.



ETIOLOGY

Coccidioidomycosis, or “San Joaquin Valley Fever,” is a fungal disease commonly transmitted through the inhalation of infective spores from *Coccidioides immitis* carried in dust. Environmental conditions conducive to an increased occurrence of coccidioidomycosis are as follows: arid to semi-arid regions, dust storms, low altitude, hot summers, warm winters, and sandy, alkaline soils. It is endemic in the southwestern United States as well as parts of Mexico and South America.

Most infected individuals exhibit no symptoms or have a mild respiratory illness; however, about 1% of those infected develop a severe illness—such as pneumonia, meningitis, or dissemination (when the fungus spreads to many parts of the body). Because of the wide range of clinical presentations, only the most severe cases are usually reported to the health department.

Laboratory diagnosis is by microscopic examination, culture, or serologic testing. Blacks, Hispanics, American Indians, Filipinos, males, pregnant women, children aged less than 5 years, elderly, and immunocompromised individuals are at high risk for severe disease.

DISEASE ABSTRACT

- The incidence rate for coccidioidomycosis dropped to its lowest point in 10 years in LAC.
- As in past years, the elderly, males, Blacks, and residents of the Antelope Valley and San Fernando Valley are at higher risk for severe disease.
- Adult men, aged 65 years and older, accounted for nearly one-quarter of all cases reported.

STRATIFIED DATA

Trends: The incidence rate continued to decrease from 1.2 cases per 100,000 population in 1993 to 0.4 in 2000 (Figure 9).

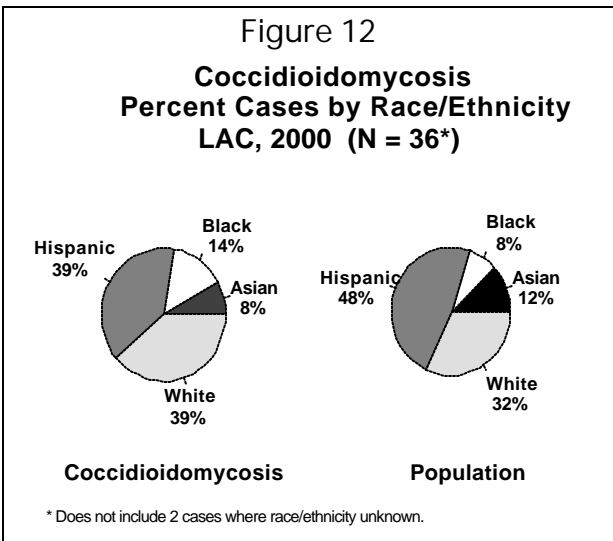
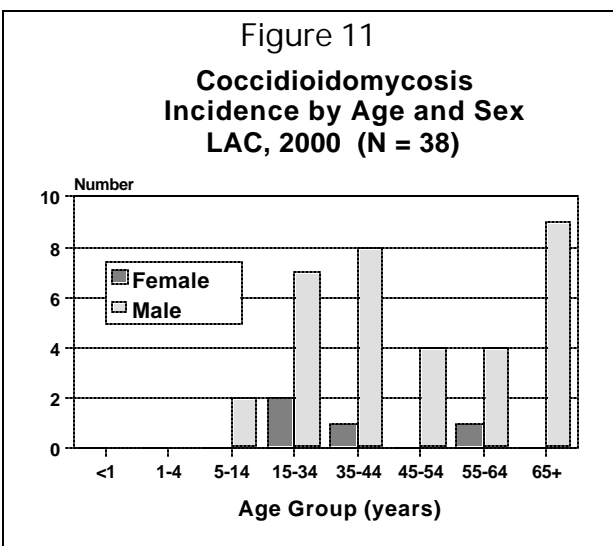
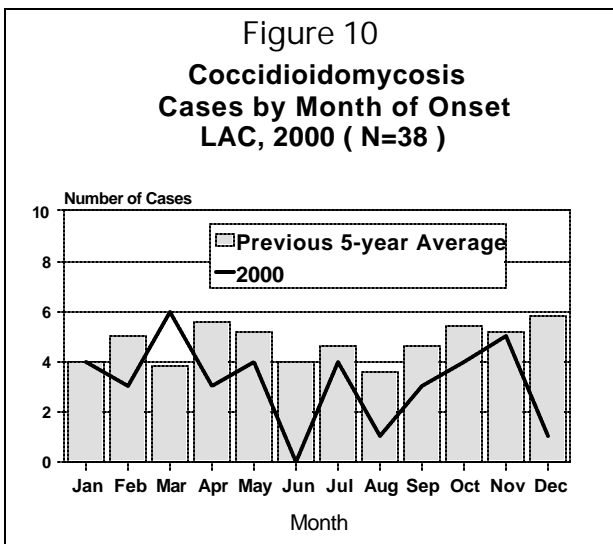
Seasonality: In 2000, the 2 months with the highest number of cases were March (6 cases) and November (5 cases). March was the only month where the number of cases surpassed the previous five-year average (Figure 10). Although not reflected in LAC's cases, cases commonly occur in the summer after a rainy winter or spring especially after wind and dust storms. Perhaps because of LAC's temperate climate, the fluctuation of cases per month is not great.

Age: For 2000, cases once again were most frequent in the older age groups, with 24% of all cases among adults aged 65 years and older. There were no cases reported in children, aged less than 7 years (Figure 11).

Sex: The male-to-female rate ratio was 8:1. The mean age for males was 49 years and for females it was 41 years. The gender difference is likely due to occupational and recreational dust exposure of males although this is not clearly evident from the information collected. The most commonly reported occupations were construction worker (3) and student (2). Also, 2 cases were unemployed and 4 were retired. No female cases reported being pregnant.

Race/Ethnicity: A higher incidence of coccidioidomycosis was observed among Blacks compared to the other race/ethnic groups, although the rates were unstable due to small numbers. Whites and Hispanics had the highest number of cases (14), but Blacks and Whites were proportionately more affected than were Hispanics or Asians (Figure 12). Of the 4 cases with disseminated disease, 2 were Hispanic, 1 was Asian, and 1 was White.

Location: Among Service Planning Areas, SPA 2 (San Fernando Valley) had the highest number of coccidioidomycosis (13) with West Valley Health District contributing 6 of those cases. SPA 1 (Antelope Valley Health District) had 7 cases; SPA 7

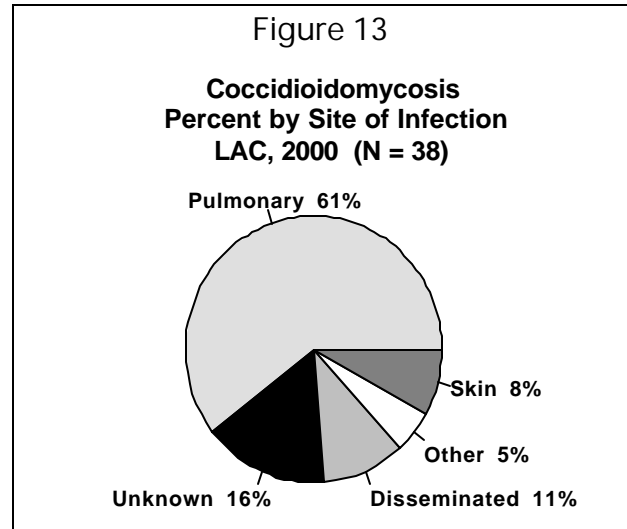


had 5 cases; SPAs 3 and 4 had 4 cases each; SPAs 5 and 6 had 2 cases each; and SPA 8 had 1 case.

Travel: Although coccidioidomycosis is endemic to Southern California, 7 cases also reported travel within four weeks prior to onset of illness to other highly endemic areas: 3 reported travel to the central San Joaquin Valley of California and 4 to endemic areas outside California—such as Arizona and Mexico.

Underlying Disease: Of 9 cases with known underlying disease, 3 were diabetic, 2 had chronic obstructive pulmonary disease, and 1 case each had an organ transplant, HIV, history of chronic heart failure, or juvenile arthritis.

Severity of Disease: Of the cases reported in 2000, sites of infection were reported as 61% primary pulmonary, 11% disseminated, and 8% had skin involvement; in 16% of the cases, infection site was unknown (Figure 13). Sixty-six percent (25) of cases were culture-confirmed, with the remaining cases diagnosed by serology. Of the 32 cases where information was available, 88% (28) were hospitalized. Six cases died. The 2000 case-fatality rate (16%) doubled from last year but was similar to previous years.



PREVENTION

There is no safe and effective vaccine or drug to prevent coccidioidomycosis. Prevention lies mainly in dust control such as planting grass in dusty areas, putting oil on roadways, wetting down soil, air conditioning homes, and wearing masks or respirators. Other options may be to warn individuals who are at high risk for severe disease not to travel to endemic areas when conditions (dusty) are most dangerous for exposure.

COMMENTS

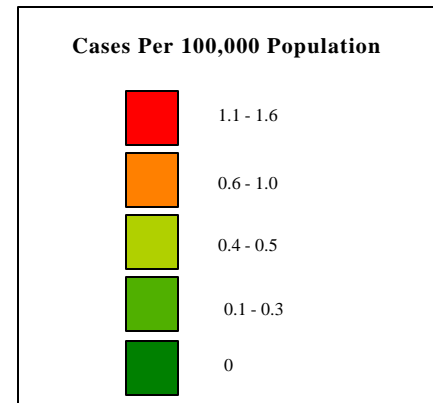
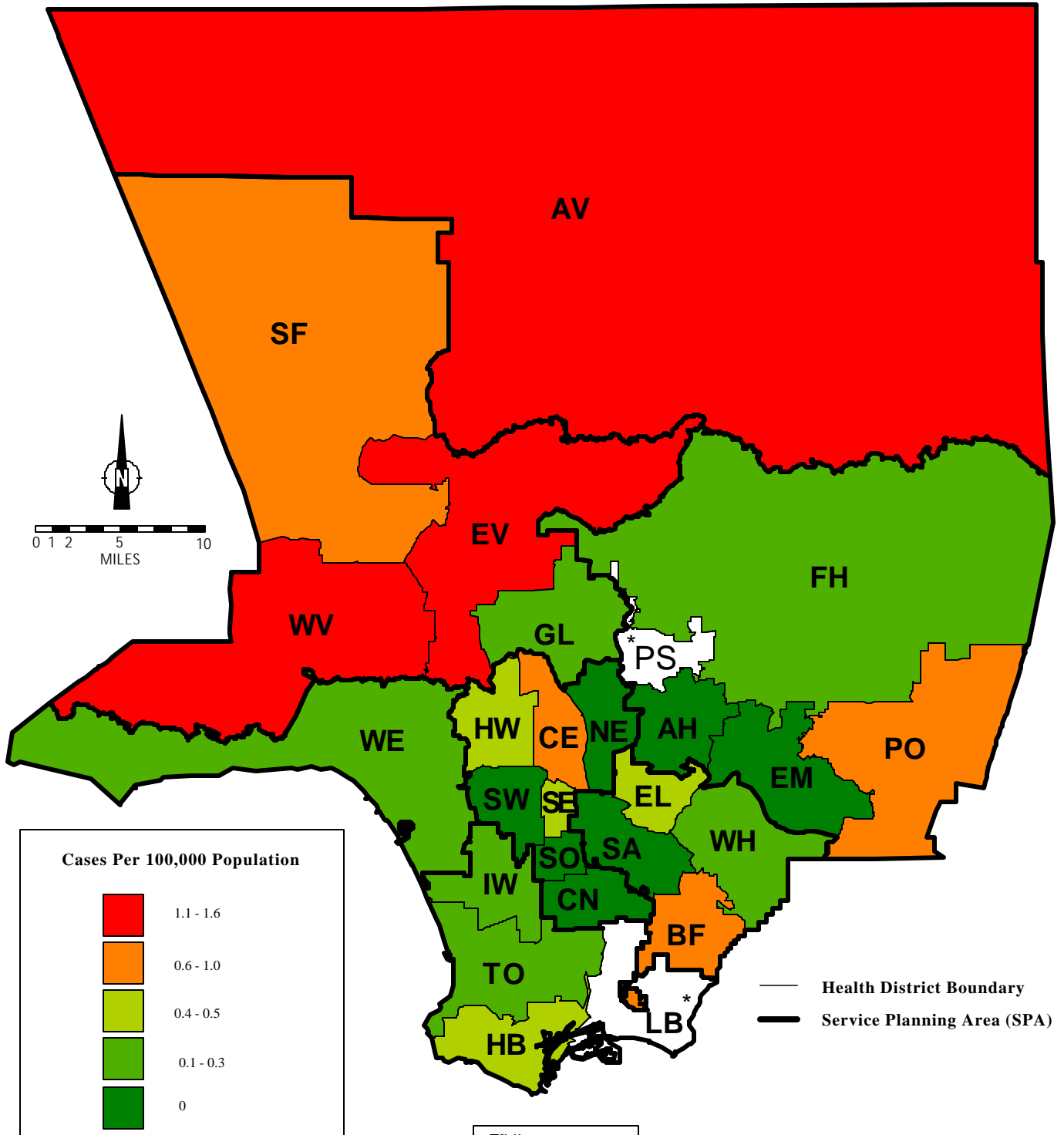
A documented peak occurred in 1992 to 1994 probably as a result of a 5-year drought ending with a heavy rainfall in 1991, 1992, and 1993. Also, there was increased media attention and reporting because of a Simi Valley outbreak and increased dust exposure related to the Northridge earthquake in 1994. Although the reasons are unclear, Kern County, which has the majority of the cases in California, also essentially observed the same decreasing trend as LAC.

Although the rate was low, the cost of coccidioidomycosis, in terms of disease severity, hospitalization, and mortality, was substantial.

ADDITIONAL RESOURCES

- American Public Health Association. *Control of Communicable Diseases Manual*, Seventeenth edition. Chin J, editor. Washington, DC:American Public Health Association, 2000.
- Centers for Disease Control and Prevention website: http://www.cdc.gov/ncidod/dbmd/diseaseinfo/coccidioidomycosis_t.htm
- Kirkland TN, Fierer J. Coccidioidomycosis: a reemerging infectious disease. *Emerg Infect Dis* 1996; 2:192-9.
- Acute Communicable Disease Control website: <http://lapublichealth.org/acd/procs/b73/b73index.htm>

MAP 3. Coccidioidomycosis Rates by Health District, Los Angeles County, 2000*



— Health District Boundary
 — Service Planning Area (SPA)

*Excludes Long Beach and Pasadena Data.

