

PERTUSSIS (WHOOPING COUGH)

CRUDE DATA	
Number of Cases	32
Annual Incidence ^a	
LA County	0.4
California	1.5
United States	2.5
Age at Onset	
Mean	6 mos
Median	3 mos
Range	<1 mo-4 yrs
Case Fatality	
LA County	0.0%
United States	N/A

^aCases per 100,000 population.

ETIOLOGY

Bordetella pertussis, a fastidious, gram-negative, pleomorphic bacilli.

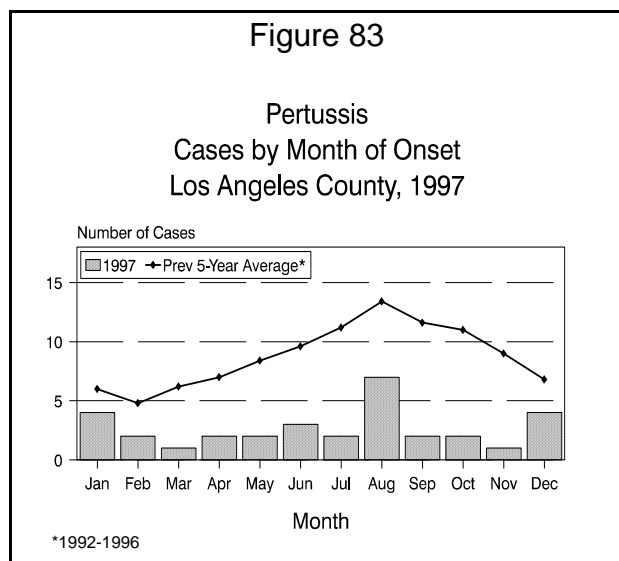
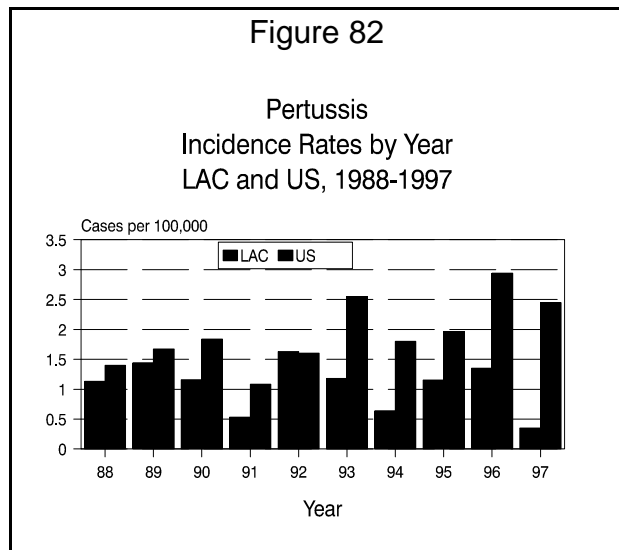
DISEASE ABSTRACT

The incidence rate of pertussis in LAC fell to an all time low in 1997. The pertussis rate was highest among infants. Age-adjusted rates were highest among Blacks. The only complication reported this year was pneumonia; no deaths were reported. Seventy-two percent (23) of the cases were confirmed with a nasopharyngeal swab culture positive for *Bordetella pertussis*. The other 28% (n=9) met the clinical criteria for pertussis: a cough lasting at least two weeks with one of the following: paroxysms of coughing, inspiratory “whoop,” or post-tussive vomiting, without other apparent causes.

STRATIFIED DATA

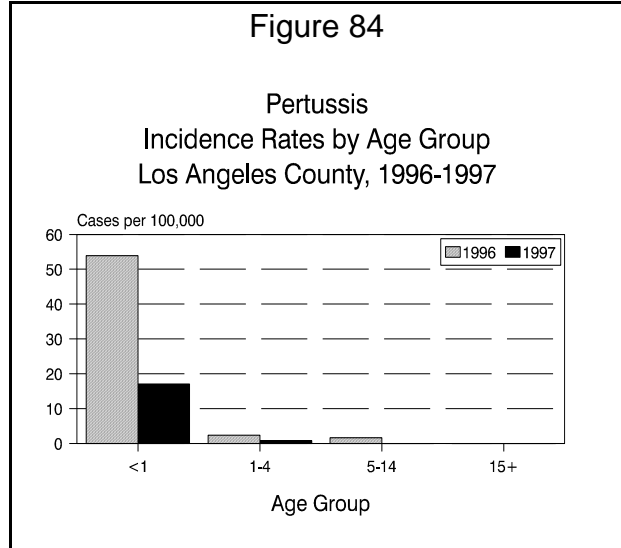
Trends: The incidence of pertussis in 1997 was 0.4 per 100,000 population. This is the lowest rate ever reported in LAC (Figure 82). This is a dramatic fall (71%) from the previous year’s rate of 1.4 cases per 100,000.

Seasonality: Cases were spread throughout the year with increased activity during summer and winter. The mean five-year trend (1992-



1996) also shows an increase during summer months (Figure 83).

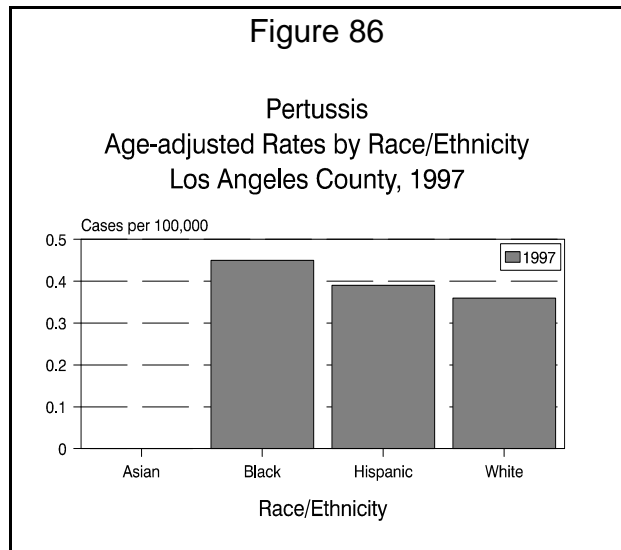
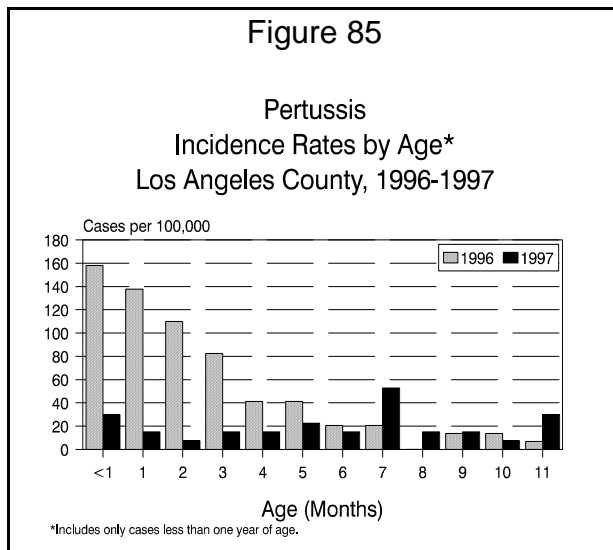
Age: The age-specific incidence rate among children less than one year of age was 17.1 per 100,000 population compared to 0.8 per 100,000 among children aged 1-4. No cases were reported in anyone older than 4 years of age (Figure 84). Seventy-five percent of the cases occurred in infants less than 6 months old. However, the usual pattern of increased incidence in infants was not seen. Traditionally, the highest incidence is seen in infants less than one month with a steady decrease in incidence until six months of age. This is illustrated by the 1996 incidence rates in Figure 85. In 1997, age-specific incidence did not vary among children less than one year.



Sex: The male-to-female rate ratio was 1:2.6. Morbidity for this disease is usually slightly higher in females than males. The reason for the gender discrepancy seen in 1997 is unknown.

Race/Ethnicity: The age-adjusted incidence rate for pertussis was highest for Blacks (0.5 per 100,000 population) followed by Hispanics (0.4 per 100,000) (Figure 86). The greatest number of cases was reported among Hispanics (n=23), followed by Whites (n=6) and Blacks (n=3).

Location: The highest rates were in the Hollywood-Wilshire (0.8 per 100,000 population) and East Valley (0.7 per 100,000) Health Districts.



COMMENTS

Complications/Hospitalization: Infants are at the highest risk for complications from pertussis. Pneumonia developed in 5 (16%) cases in 1997. Of these, 4 were less than a year old. No cases developed the serious complications of seizures or encephalopathy. Eighty-five percent of infants were hospitalized. Only one of the 24 hospitalized cases was over 12 months of age. The average hospital stay was 7 days (range 1-21 days). There were no deaths reported.

Vaccination Status: Pertussis-containing vaccine should be given at 2 months, 4 months, 6 months, 15-18 months, and 4-6 years of age. Twelve of the cases (38%) were less than two months of age and too young for the first vaccine dose. Twelve cases (60%) of those two months of age and older were up to date for their age. The remaining eight cases (40%) were either unimmunized or incompletely immunized.

Adolescent/Adult Cases: Immunity conferred by the pertussis component of the DTP vaccine decreases over time with little or no protection 5 to 10 years following the last dose. Thus, adolescents and adults can serve as a reservoir for the disease. Adults and adolescents with pertussis often go undiagnosed because they are more likely to have mild or atypical disease and physicians may not consider the diagnosis in non-pediatric patients. Unimmunized or incompletely immunized infants are often infected by undiagnosed adult cases.