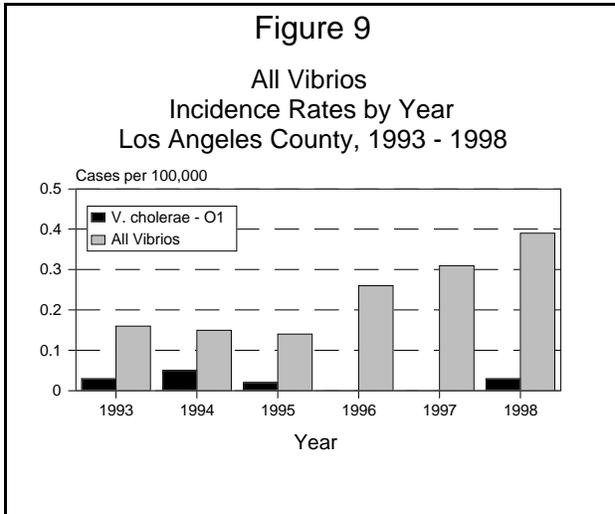


CHOLERA AND OTHER VIBRIOSES

CRUDE DATA	
Number of Cases	36
Annual Incidence ^a	
LA County	0.39
California	N/A
United States	N/A
Case Fatality	
LA County	3.6%
United States	N/A

^acases per 100,000 population.



ETIOLOGY

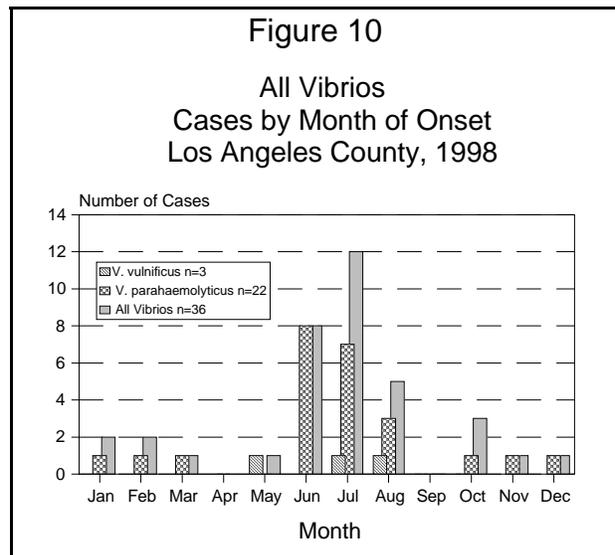
The genus *Vibrio* consists of gram-negative, curved, motile rods, and contains about a dozen species known to cause illness in man. The most notable *Vibrio* species reported in Los Angeles County (LAC) in 1998 were *V. parahaemolyticus* (22), *V. cholera*- O1 (3), and *V. vulnificus* (3).

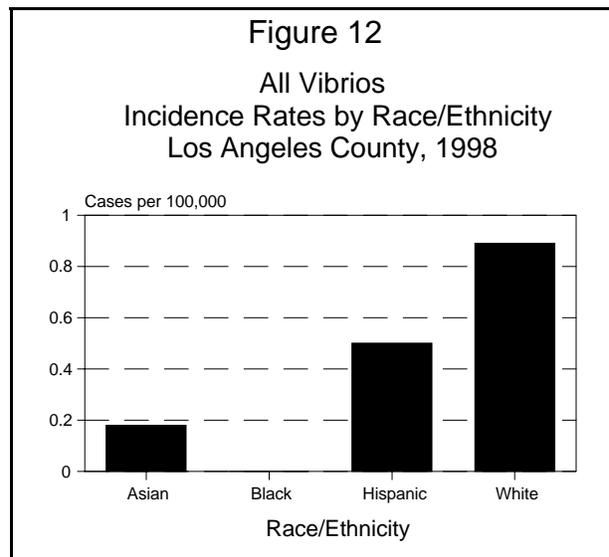
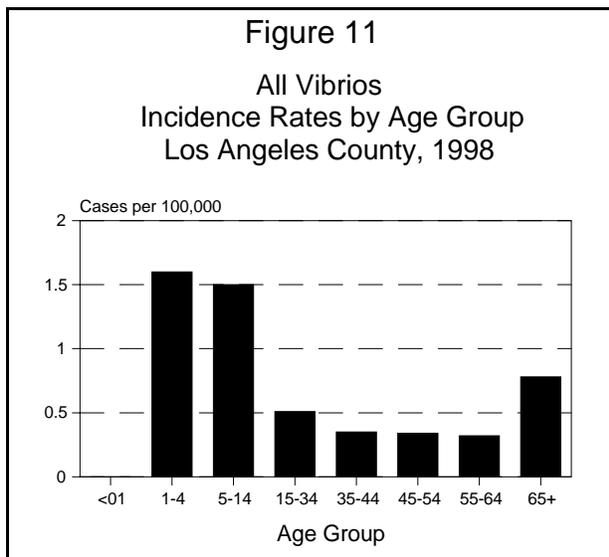
DISEASE ABSTRACT

There were three cases of cholera in LAC in 1998 compared to none for the previous two years (Figure 9). The number of reported *V. parahaemolyticus* cases increased again in 1998, accounting for 61% of the total *Vibrio* cases.

STRATIFIED DATA

Seasonality: The majority of cases occurred in the summer months (Figure 10). Recent changes in weather patterns, which have been occurring in the last few years, have increased ocean water temperatures and may have played a role in the increased number of *Vibrio* cases in general and *V. parahaemolyticus* cases specifically.





Age: Only three (8%) of 36 cases were under 15 years of age, in contrast to other bacterial causes of gastroenteritis. The majority (64%) of cases were in the 15- to 44-year-old age range. Incidence rates are shown in Figure 11.

Sex: Twenty-five (69%) of the cases were male.

Race/Ethnicity: Twelve (33%) of the cases were White, 21 (58%) were Hispanic, two (6%) were Asian, and no Black cases occurred. Incidence rates are shown in Figure 12.

**Table 1. Vibrio Cases by Species* and Demographic Characteristics
Los Angeles County, 1998**

Species	Number Reported	Average Age (Range)	Seasonal Clustering	Notable Risk Factors
<i>V. parahaemolyticus</i>	22	37 (8-68)	Summer	Seafood (17), oysters (14)
<i>V. cholerae</i> -O1	3	33 (32-36)	Summer, Fall	Seafood (3), travel (2)
<i>V. vulnificus</i> **	3	50 (40-66)	Summer	Seafood (3), oysters (1)
<i>V. alginolyticus</i>	1	9	Summer	Otitis externa
<i>V. cholera</i> non-O1	2	35 (31-40)	Summer, Winter	Seafood (1), oysters (1)
<i>V. mimicus</i>	1	31	Fall	
<i>V. fluvialis</i>	3	51 (19-69)	Winter, Summer	Fishing (1)

* One case, unknown species.

** Non-oyster *V. vulnificus* cases had potential for oyster cross-contamination.

PREVENTION

Risk from vibrioses can be prevented or reduced by avoiding seawater contamination of food (especially raw fish and shellfish) or drink (Table 1). *V. vulnificus* is a particular risk for persons with pre-existing liver disease, frequently leading to soft tissue invasion, limb amputation, and death. Males may be more at risk for infection because of their tendency to engage in behaviors such as drinking alcohol and eating raw seafood, especially oysters.

COMMENTS

In August 1997, the California Department of Health Services issued a warning about eating raw oysters, mussels, and clams harvested off the coasts of British Columbia and Washington State due to the risk of infection with *V. parahaemolyticus*. This came after a temporary closing of all oyster harvesting in British Columbia and a temporary ban on the sale of raw and undercooked shellfish in all restaurants in the Vancouver and Richmond municipalities. Over 100 cases of vibrioses were identified in British Columbia alone. In 1998 there were reports of contaminated oyster bed from Washington, Oregon, and Texas. In 1998, 14 of 22 (64%) cases of *V. parahaemolyticus* was found to be associated with oyster consumption.