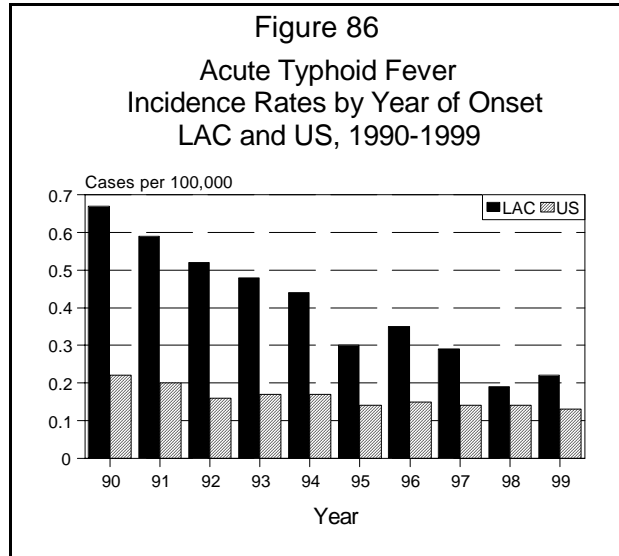


## TYPHOID FEVER, ACUTE

CRUDE DATA	
Number of Cases	20
Annual Incidence <sup>a</sup>	
LA County	0.22
California	0.21
United States	0.13
Age at Onset	
Mean	20
Median	18
Range	1-40 yrs
Case Fatality	
LA County	0
United States	N/A

<sup>a</sup>Cases per 100,000 population.



### ETIOLOGY

*Salmonella typhi*, a gram-negative bacillus.

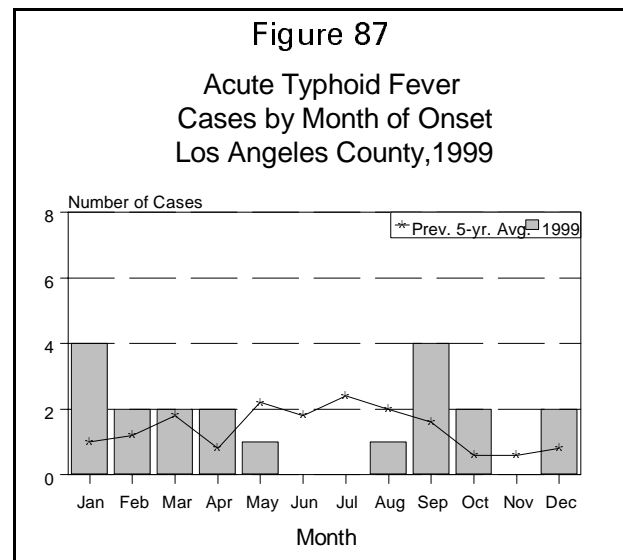
### DISEASE ABSTRACT

Acute typhoid fever is primarily a disease associated with recent immigration, travel, or contact with a previously unknown carrier.

### STRATIFIED DATA

**Trends:** The rate of reported typhoid fever cases has been steadily decreasing in the last ten years. Annual incidence declined from 0.67 per 100,000 population in 1990 to 0.22 in 1999; however, there was a slight increase in incidence from 0.19 to 0.22 between 1998 and 1999 (Figure 86).

**Seasonality:** Late spring and summer months have the most cases, coinciding with travel to endemic countries over holidays and school vacation. No common factors were found for the increase in cases in January and September 1999 (Figure 87).



**Age:** The 5- to 14-year-old and the 15- to 34-year-old age groups had the highest incidence rates, 0.58 and 0.29 per 100,000 population, respectively (Figure 88).

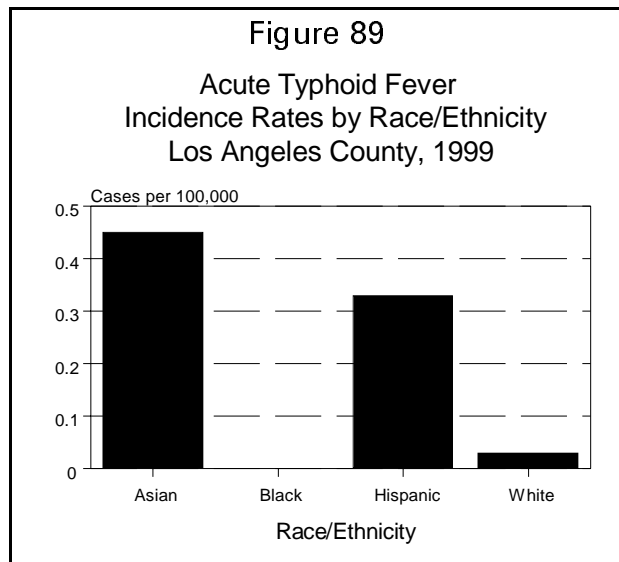
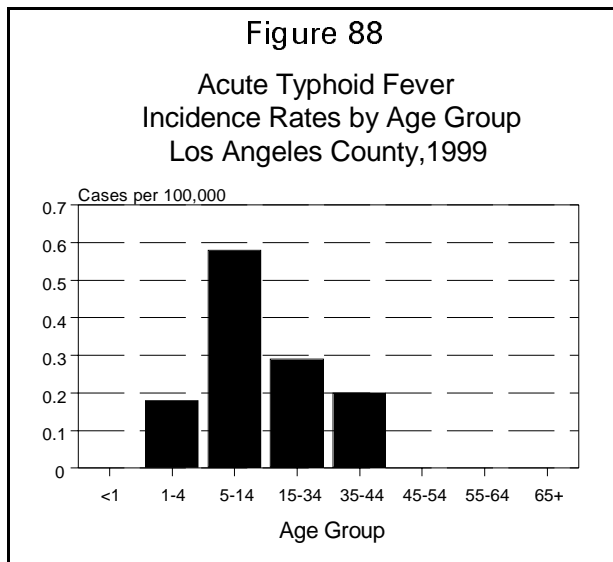
**Sex:** The male-to-female rate ratio was 1:1.2. Typically, a slight tendency for more frequent acute disease exists in males; however, this year the ratio is about equal.

**Race/Ethnicity:** As in past years, acute typhoid fever continues to be seen primarily in Asians and Hispanics (Figure 89).

**Location:** Case location in LAC at the time of illness was not related to disease acquisition; fourteen (70%) cases are assumed to have acquired disease outside the US.

**PREVENTION:** Handwashing after using the toilet, before preparing or serving food, and before and after caring for others is important in preventing the spread of typhoid. When traveling where sanitary practices are uncertain, foods should be thoroughly cooked and served hot; bottled water should be used for drinking as well as for brushing teeth and making ice. Vaccination should be considered when traveling in areas off the usual tourist itineraries.

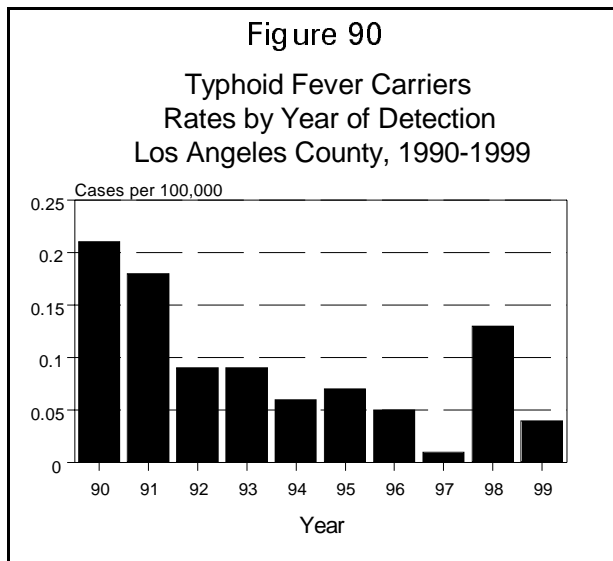
**COMMENTS:** Six cases (30%) did not have a history of foreign travel and are presumed to have become infected in LAC. Two of these cases were linked to a previously unknown carrier in the family who had lived in an endemic country. Four other cases had ties to an endemic country but denied recent travel and a source could not be found. Of the 14 cases acquired outside the US, 6 (43%) acquired disease in Asia and 8 (57%) acquired disease in Mexico or Central America.



## TYPHOID FEVER, CARRIER

CRUDE DATA	
Number of Cases	4
Annual Incidence <sup>a</sup>	
LA County	0.04
United States	N/A
Age at Diagnosis	
Mean	32.5
Median	31
Range	23-35
Case Fatality	
LA County	0.0%
United States	N/A

<sup>a</sup>Cases per 100,000 population.



### ETIOLOGY

*Salmonella typhi*, a gram-negative bacillus.

### DISEASE ABSTRACT

The number of newly identified typhoid carriers rose from a low level of only one new carrier in 1997 to a seven-year high of 12 carriers in 1998 and dropped again to only four carriers in 1999. In 1999, a **total** of 18 known carriers resided in LAC; fourteen (78%) emigrated from a country with endemic typhoid fever. Of the four carriers born in the US, the youngest is 20 years old and was infected during birth to a previously unknown carrier; the others are ages 96, 85, and 77.

### COMMENTS

- In 1999, all new carriers are Hispanic. Two were found as previously unknown sources for acute typhoid cases.
- Most patients do not remember the date of acute onset.
- The carrier state is more common among women. All four of the new carriers this year are female. Of the 18 carriers under long-term surveillance, 83% (15) are female.
- Each newly identified carrier is added to the typhoid carrier registry and visited semi-annually by a public health nurse to determine compliance with a signed typhoid carrier agreement.
- Treatment with ciprofloxacin successfully cleared two carrier.