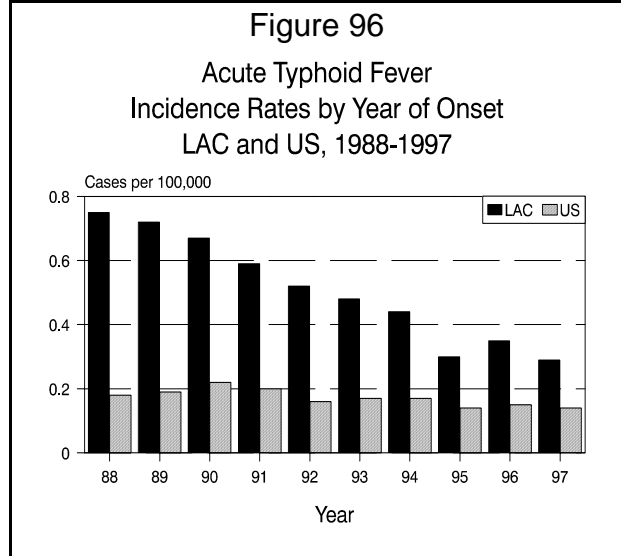


## TYPHOID FEVER, ACUTE

CRUDE DATA	
Number of Cases	26
Annual Incidence <sup>a</sup>	
LA County	0.29
California	0.26
United States	0.14
Age at Onset	
Mean	22
Median	20
Range	1-71 yrs
Case Fatality	
LA County	N/A
United States	N/A

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



### ETIOLOGY

*Salmonella typhi*, a gram-negative bacillus.

### DISEASE ABSTRACT

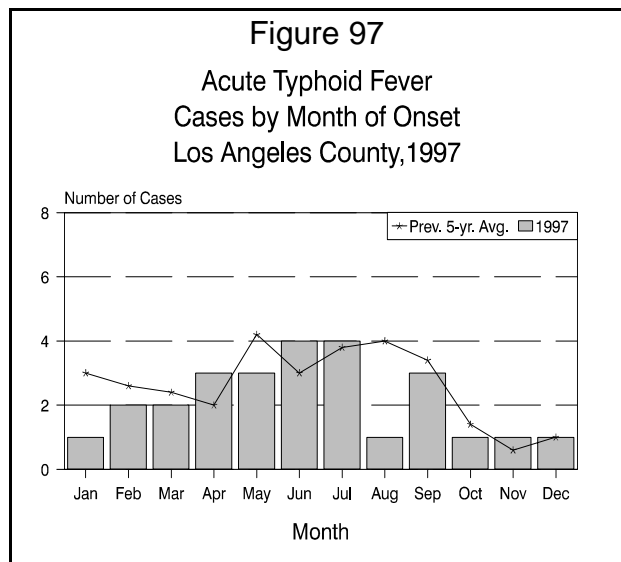
Acute typhoid fever is primarily a disease associated with recent immigration, travel, or contact with a previously unknown carrier.

### STRATIFIED DATA

**Trends:** The rate of reported typhoid fever cases has been steadily decreasing in the last ten years. Annual incidence declined from 0.75 per 100,000 population in 1988 to 0.29 in 1997 (Figure 96).

**Seasonality:** Late spring and summer months have the most cases, coinciding with holidays and school vacation (Figure 97).

**Age:** The 1- to 4-year-old and the 5- to 14-year-old age groups had the highest incidence rates, 0.47 and 0.55 per 100,000 population, respectively (Figure 98).



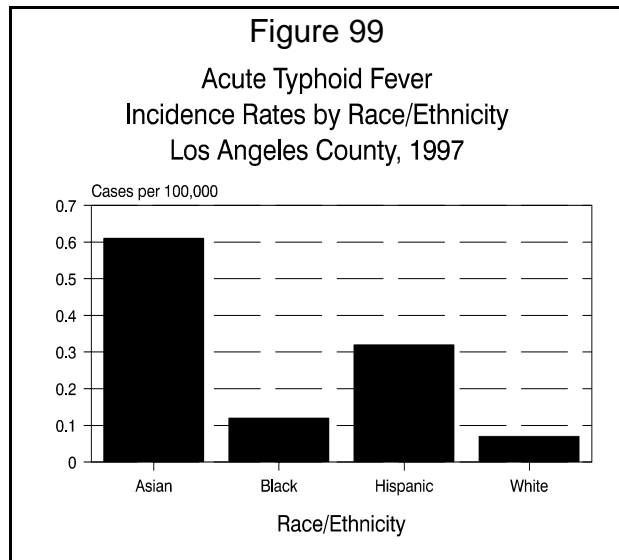
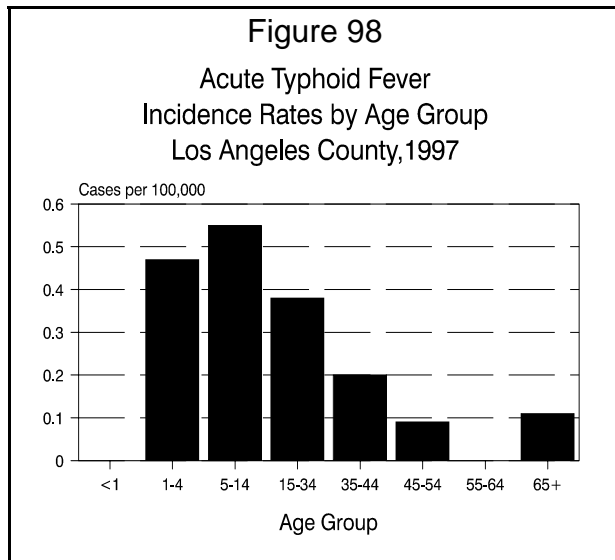
**Sex:** The male-to-female rate ratio was 2.8:1. Typically, a slight tendency for more frequent acute disease exists in males.

**Race/Ethnicity:** As in past years, acute typhoid fever continues to be seen primarily in Asians and Hispanics (Figure 99).

**Location:** Case location in LAC at the time of illness was not related to disease acquisition; nineteen (73%) cases were acquired outside the US.

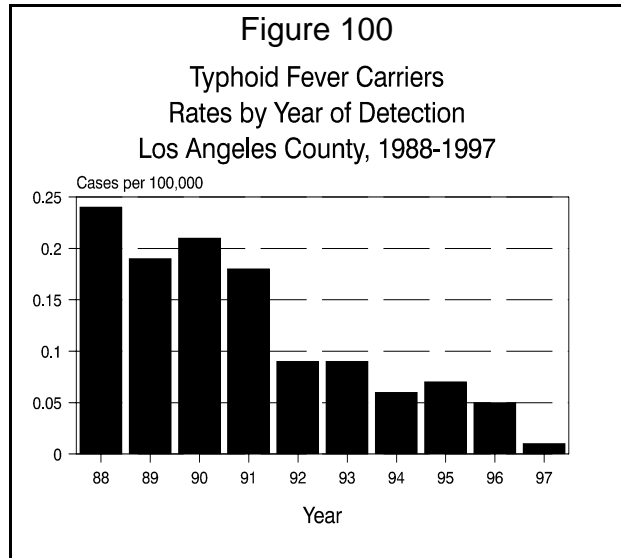
**PREVENTION:** Handwashing after using the toilet, before preparing or serving food, before and after caring for others is important in preventing the spread of typhoid. When traveling where sanitary practices are uncertain, foods should be thoroughly cooked and served hot; bottled water should be used 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:** Los Angeles County is considered the source county for seven cases (27%). 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 or visitors. The source was never determined for a 71-year-old Black male who died of rectal cancer. Of cases acquired outside the US, 11 (42%) acquired disease in Asia and 8 (31%) acquired disease in Mexico or Central America.



## TYPHOID FEVER, CARRIER

CRUDE DATA	
Number of Cases	1
Annual Incidence <sup>a</sup>	
LA County	0.01
United States	N/A
Age at Diagnosis	
Mean	69
Median	N/A
Range	N/A
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 is at its lowest level with only one new case reported.** In 1997, a total of 20 known carriers resided in LAC. Eighty percent of these carriers emigrated from a country with endemic typhoid fever.

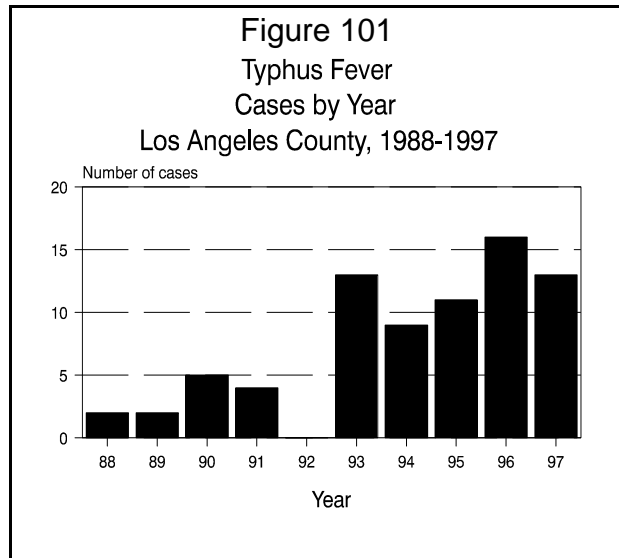
### COMMENTS

- ! In 1997, only one newly discovered carrier was reported, a decrease of 14% from the 1992-96 average (Figure 100).
- ! This case was 69 years old when the typhoid carrier state was diagnosed. Most patients do not remember the date of acute onset.
- ! The carrier state is more common among women.
- ! Each identified carrier is added to a typhoid carrier registry and visited semi-annually by a public health nurse to determine compliance with a signed typhoid carrier agreement. They are followed until they clear, die, or are transferred to another health jurisdiction.
- ! Ciprofloxacin was used to clear two carriers who received no other medical/surgical intervention.

## TYPHUS FEVER

CRUDE DATA	
Number of Cases	13
Annual Incidence <sup>a</sup>	
LA County	0.14
California	N/A
United States	N/A
Age at Onset	
Mean	44
Median	48
Range	6-70 yrs
Case Fatality	
LA County	0.0%
United States	N/A

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



## ETIOLOGY

Typhus fever (murine typhus, endemic typhus) is caused by a bacteria, *Rickettsia typhi*.

## DISEASE ABSTRACT

Since 1993, typhus fever reports have increased (Figure 101), following a fatal case that year that may have led to increased awareness of the disease. In 1997, thirteen cases of typhus fever were reported. Symptoms include high fever, severe headache, myalgias, and sometimes a fine maculopapular rash. Occasionally, other complications may occur. Fatalities are uncommon, occurring in less than one percent of cases. Cases occur throughout the year, but more often in summer and fall.

Typhus fever is endemic in the foothills of central LAC. In 1997, cases occurred in Alhambra (2), Bellflower (1), Foothill (2), Glendale (1), Northeast (5), and San Fernando (1) Health Districts. Ninety-two percent of reported cases were hospitalized for an average of 5.1 days.

## TRANSMISSION

Human infection most commonly occurs by introduction of infectious flea fecal matter into the bite site or adjacent areas which have been abraded by scratching. Typhus fever cannot be transmitted from person to person. All but one adult of the 1997 cases, who lived in an endemic area for typhus, recall flea bites or contact with animals (dogs, cats, opossums and rats) that carry fleas.

## COMMENTS

Each case of murine typhus is carefully interviewed regarding potential exposures. If possible, field

studies of the property where exposure occurred and surrounding areas in the neighborhood are conducted. Local residents are contacted and provided with education about typhus and prevention of the disease by controlling fleas and eliminating harborage for typhus infected animals that carry fleas.

The nonspecific clinical presentation and the lack of a definitive test during the acute phase of the illness make the early diagnosis of murine typhus difficult. Thus, diagnosis of murine typhus depends on the clinical acumen of the treating physician, and is often confirmed after the patient has recovered. Accurate reporting of typhus or suspect typhus cases is important to identify endemic areas in LAC which can be monitored for the presence of disease in the animal populations and to institute control measures. Treatment with antibiotics hastens recovery and lessens the chance of complications.