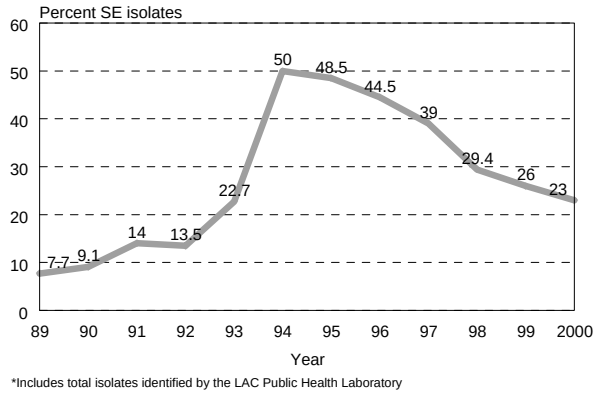
SALMONELLA SEROTYPE ENTERITIDIS IN LOS ANGELES COUNTY, 2000

In the past decade, *Salmonella* serotype Enteritidis (SE) rose steadily from the third most frequent serotype to become established as the most frequently isolated serotype in Los Angeles County (LAC). After rising to a peak in 1994 of 1126 cases, a case-control study of sporadic cases was conducted by the Acute Communicable Disease Control Unit (ACDC) and the California Department of Health Services (1).

Figure 1

Salmonella Enteritidis Proportion of Total Salmonella LAC, 1989-2000



*Includes total isolates identified by the LAC Public Health Laboratory

The case-control study showed a strong association between SE infection and consumption of eggs, especially raw or undercooked eggs. Eating in restaurants also was associated with increased risk of SE infection. The majority of cases occurred in young adults. Since 1994, when 50% of *Salmonella* isolates were SE, SE has gradually decreased proportionally each year, but still remains the most common serotype.

Figure 2

Salmonella Enteritidis Outbreaks

Los Angeles County 1991-2000

SE continues to be the most common *Salmonella* serotype identified from isolates submitted to the Public Health Laboratory. In 2000, SE comprised 231 of 989 (23%) of *Salmonella* isolates serotyped for LAC cases (Figure 1). Of all *Salmonella* isolates, SE represented 50% in 1994 and 26% in 1999 (Figure 1). In 2000, the overall incidence of SE was 2.5 cases/100,000 population compared to 10.7/100,000 for all *Salmonella*.

The highest frequency of SE cases occurred during April, when an outbreak due to unpasteurized orange juice occurred. The usual increase occurred in summer months similar to other *Salmonella* serotypes. SE isolates were identified from feces (89%), followed by

blood (6%), urine (3%), and other/unknown specimens (2%). There were 44 hospitalizations (19%). SE infection was a contributing cause of death in 3 persons with underlying disease (AIDS, cancer).

In 2000, 4/7 (57%) salmonellosis outbreaks were due to SE (Figure 2). One outbreak was part of a multi-state outbreak due to unpasteurized orange juice. The source was unknown for three outbreaks for which investigation was hampered by lack of cooperation by the cases (Table 1).

Table 1. Salmonella Enteritidis Outbreaks in Los Angeles County, 2000

Onset Month	Outbreak Setting	Number Ill	Culture Positive	Phage Type	Suspected Vehicle	Suspected Source
March	Multi -state sporadic cases	17	13	Untype -able	Orange juice	Imported unpasteurized juice
Sept.	Home (catered)	14	1	4	Unknown	Unknown
Oct.	Home	13	4	Untype -able	Unknown	Unknown
Nov.	Home	20	3	4	Unknown	Unknown

ACDC continues to monitor sporadic cases and outbreaks of SE and works with private industry groups and the state and federal governments. ACDC works toward the improvement of egg production, egg distribution processes and consumer education in order to decrease the risk of SE infection.

REFERENCE

1. Passero DJ, Reporter R, Mascola L, et al: Epidemic Salmonella enteritidis infection in Los Angeles County, California-The predominance of phage type 4. West J Med 1996;165:126-130.