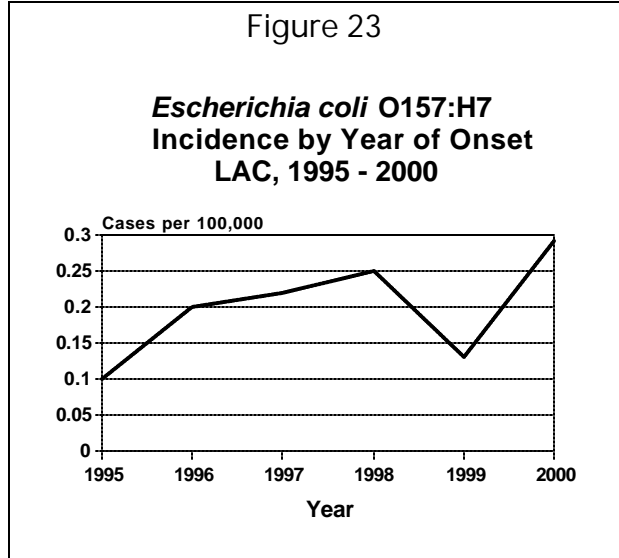


ESCHERICHIA COLI O157:H7

CRUDE DATA	
Number of Cases	27
Annual Incidence ^a	
LA County	0.3
California ^b	0.9
United States ^b	1.7
Age at Onset	
Mean	23 years
Median	10 years
Range	1 - 79 years
Case Fatality	
LA County	0.0%
United States	N/A



^aCases per 100,000 population.

^bNational Electronic Telecommunications System for Surveillance.

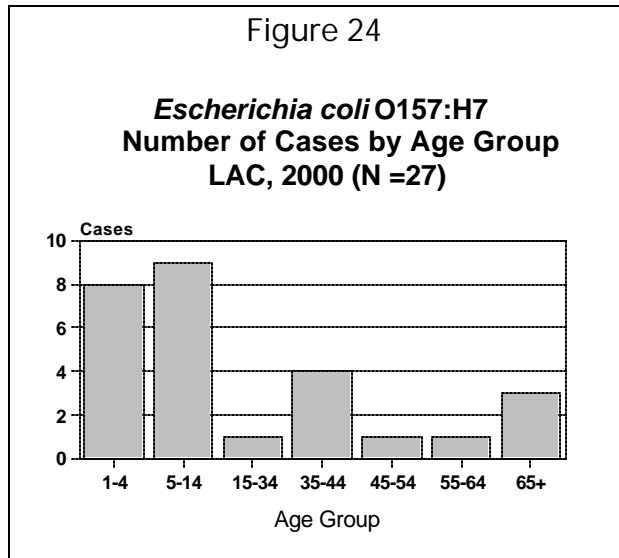
ETIOLOGY

Escherichia coli O157:H7 is a specific serotype of *Escherichia coli* bacteria that produces Shiga-toxins (STEC). Abdominal cramps and watery diarrhea that can turn to bloody diarrhea are typical symptoms, while fever is uncommon. The common modes of transmission are person-to-person (e.g., day-care settings) and foodborne (for example, undercooked ground beef, unpasteurized juice or milk, and vegetables eaten raw—such as sprouts and lettuce).

Children under 5 are at highest risk for a clinical complication known as hemolytic uremic syndrome (HUS) which consists of hemolytic anemia, thrombocytopenia, and acute renal dysfunction. Adults may get thrombotic thrombocytopenic purpura (TTP) after infection.

DISEASE ABSTRACT

- ? The 27 cases in 2000 represent the largest annual number of *E. coli* O157:H7 cases reported in LAC since reporting began in 1993.
- ? No outbreaks were identified in LAC in 2000.
- ? Nearly 2/3rds of cases occurred in children aged 1-14 years.



STRATIFIED DATA

Trends: The incidence rate for 2000 is 0.29 cases per 100,000 which is the highest rate seen in LAC since mandatory reporting began in 1995 (Figure 23).

Seasonality: As in previous years, the greatest number of cases was observed in July, with 7 cases in 2000 (Figure 24).

Age: The median age was 10 years (mean 23; range 1 - 70). Seventeen cases (63%) occurred in children aged under 15 years (Figure 25).

Sex: Of cases, 14 (52%) were male.

Race/Ethnicity: The highest number of cases was seen among Whites (14), followed by Hispanics (5), Asians (1), and Blacks (1), Other (1), and Unknown (5).

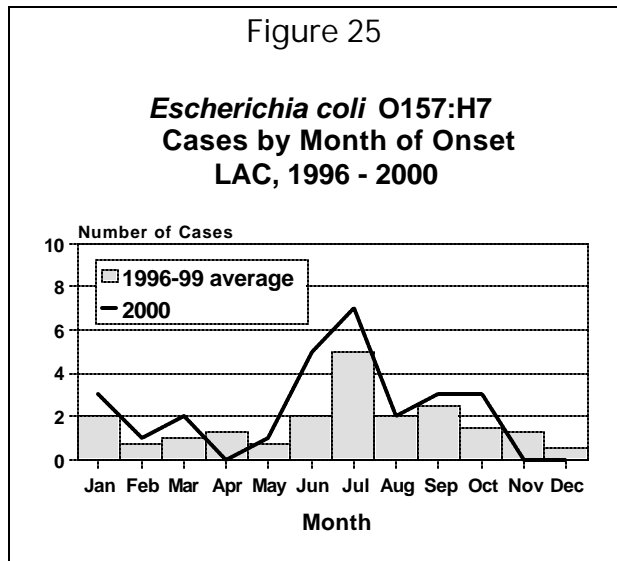
Location: Among Service Planning Areas, SPA 2 had 10 cases, SPA 7 had 6 cases, SPA 5 had 4 cases, SPAs 3 and 4 each had 2 cases, SPAs 6 and 8 had 1 case each, and SPA 1 had 0 cases. Among health districts, Glendale had the greatest number of cases (7). West had 4 cases and San Antonio had 3 cases.

COMMENTS

E. coli O157:H7 was first recognized as an important human pathogen causing foodborne illness in 1982. In 1994, LAC requested laboratories and health care providers to voluntarily report suspected *E. coli* O157:H7 cases. Mandatory reporting of *E. coli* O157:H7 cases in California was instituted in July 1995.

There were 4 cases of HUS without *E. coli* O157:H7 infection. No organism was isolated from them. However, there were 3 cases reported with both confirmed *E. coli* O157:H7 infection and HUS and one diagnosed with TTP and *E. coli* O157:H7 infection.

The reason for the increase in cases in 2000 is not known, but may include better reporting by physicians. In 2000, the most common reported exposures were ground beef 41%, cider 41%, lettuce 50%, fast food 41%, and other restaurants 37%. The mean duration of illness for all ages was 7 days (range 2-19 days). Reported cases had symptoms of diarrhea 96%, bloody diarrhea 89%, abdominal cramps 89%, fever 52% (mean temperature=100.7), vomiting 52%, and nausea 48%. Three cases were on antibiotics a week prior to onset. Sixty-three percent were hospitalized. The mean hospital stay for children aged 0-5 years was 6.4 days, while that for children aged 6 years and older was 5 days. There were no deaths.



There were no outbreaks within LAC; however, there were 3 cases associated with 2 multi-state outbreaks during the summer months identified by matching pulsed-field gel electrophoresis (PFGE) patterns. No source was identified in either outbreak.

Collaborative efforts among physicians, laboratories and the health department are important for enhancement of surveillance activities. Physicians should consider *E. coli* O157:H7 in their diagnoses by asking about consumption of high-risk foods, attendance at day-care centers or farms, and exposure to other individuals with diarrhea. It is important that physicians request testing for *E. coli* O157:H7 on all bloody stools. Laboratory-based reporting through PulseNet has been notable in detecting clusters of *E. coli* O157:H7.

Preventative measures should be implemented on a continual basis. The public needs increased education regarding food handling practices, proper hygiene and high-risk foods. Collection of detailed food histories and strengthening of national processing regulations to decrease food contamination should be targeted.

ADDITIONAL RESOURCES

Foodborne and Diarrheal Diseases Branch at:
<http://www.cdc.gov/ncidod/dbmd/foodborn.htm>

Outbreak Response and Surveillance Unit at:
<http://www.cdc.gov/ncidod/dbmd/outbreak/>

FoodNet at:
<http://www.cdc.gov/foodnet/>

Center for Food Safety and Applied Nutrition at:
<http://vm.cfsan.fda.gov/list.html>

Gateway to Government Food Safety Information at:
www.FoodSafety.gov

Acute Communicable Disease Control website at:
<http://lapublichealth.org/acd/procs/b73/b73index.htm>