**Escherichia coli O157:H7 - Additional Information**

**Surveillance**

CDC currently has six surveillance systems for obtaining information about *E. coli* O157:H7. They serve different purposes and provide information on various features of the organism's epidemiology.

- **Public Health Laboratory Information System (PHLIS)**
  PHLIS is a passive, laboratory-based surveillance system that collects data about many infections, including *E. coli* O157:H7. Reporting is limited to illnesses that are confirmed by culture and verified at the state public health laboratory. After verification, information about the infection is reported electronically to CDC by the state [http://www.cdc.gov/ncidod/dbmd/phlisdata](http://www.cdc.gov/ncidod/dbmd/phlisdata).

- **National Electronic Telecommunications System for Surveillance (NETSS)**
  NETSS is a passive, physician-based surveillance system that captures both laboratory-confirmed and clinically suspected cases of all nationally notifiable diseases, including *E. coli* O157:H7. The number of illnesses reported through NETSS tends to be higher than the number reported through PHLIS because NETSS does not require confirmation by the state public health laboratory. More information on NETSS can be found at [http://www.cdc.gov/epo/dphsi/netss.htm](http://www.cdc.gov/epo/dphsi/netss.htm).
  
  *E. coli* O157:H7 infections and other surveillance data collected by NETSS is published weekly in the CDC Morbidity and Mortality Report (MMWR) and can be found at [http://www2.cdc.gov/mmwr](http://www2.cdc.gov/mmwr).

  The MMWR also publishes an annual summary of the NETSS *E. coli* O157:H7 surveillance data; this information can be found at [http://www2.cdc.gov/mmwr/summary.html](http://www2.cdc.gov/mmwr/summary.html).

- **FoodNet**
  The Foodborne Diseases Active Surveillance Network (FoodNet) is an active surveillance system for identifying and characterizing culture-confirmed infections that may be foodborne, including *E. coli* O157:H7. FoodNet workers regularly contact more than 300 laboratories for confirmed cases of foodborne infections in several states encompassing a population of more than 25 million persons. In addition to monitoring the number of *E. coli* O157:H7 infections, investigators monitor laboratory
techniques for isolation of bacteria, perform case-control studies of ill persons to determine foods associated with illness, and administer questionnaires to people living in FoodNet sites to better understand trends in the eating habits of Americans. Annual FoodNet reports that include data about *E. coli* O157:H7 can be found at http://www.cdc.gov/foodnet/annuals.htm.

More information on FoodNet can be found at http://www.cdc.gov/foodnet.

- **National Molecular Subtyping Network for Foodborne Diseases Surveillance (PulseNet)**
  PulseNet is a national network of public health laboratories that perform pulsed-field gel electrophoresis (PFGE), a type of DNA "fingerprinting", on certain foodborne bacteria, including *E. coli* O157:H7. PFGE "fingerprint" patterns are submitted electronically to CDC and can be compared rapidly with others in a large database. This system can help determine if individual infections are related or if an outbreak is occurring. PulseNet is not a surveillance system itself but a laboratory subtyping method used in surveillance. More information on PulseNet can be found at http://www.cdc.gov/pulsenet.

- **National Antimicrobial Resistance Monitoring System (NARMS)**
  NARMS is a passive surveillance system that monitors antimicrobial resistance of *E. coli* O157:H7 and selected other bacteria that cause human illness. NARMS is a collaboration between CDC, 16 state and local health departments, the Food and Drug Administration (FDA), and the United States Agricultural Department (USDA). More information on NARMS can be found at http://www.cdc.gov/narms.

- **Foodborne Outbreak Detection Unit**
  CDC monitors outbreaks of foodborne disease, including outbreaks caused by *Shigella*. Each year, state and territorial epidemiologists voluntarily (passively) report the results of outbreak investigations to CDC. While outbreaks account for a small percentage of the total number of illnesses that occur each year, these investigations provide valuable information about sources of foodborne infection and often highlight important prevention opportunities. The latest summaries of foodborne outbreaks can be found at http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/ss4901a1.htm.

Annual summaries of *E. coli* O157:H7 outbreaks are reported to the Council of State and Territorial Epidemiologists.
MMWR Articles

Outbreaks of *Escherichia coli* O157:H7 Infections Among Children Associated With Farm Visits --- Pennsylvania and Washington, 2000 *MMWR April 20, 2001 / Vol. 50 / No. 15*

Outbreak of *Escherichia coli* O157:H7 and Campylobacter Among Attendees of the Washington County Fair --- New York, 1999 *MMWR September 17, 1999/ Vol. 48 / No. 36*

Outbreaks of *Escherichia coli* O157:H7 Infection and Cryptosporidiosis Associated with Drinking Unpasteurized Apple Cider - Connecticut and New York, October 1996 *MMWR January 10, 1997 / Vol. 46 / No. 1*

Outbreak of *E. coli* O157:H7 Infections Associated with Drinking Unpasteurized Commercial Apple Juice - October 1996 *MMWR November 9, 1996 / Vol. 45 / No. 44*

Outbreak of Acute Gastroenteritis Attributable to *Escherichia coli* Serotype O104:H21 - Helena, Montana, 1994 *MMWR July 14, 1995 / Vol. 44 / No. 27*

Enhanced Detection of Sporadic *Escherichia coli* O157:H7 Infections - New Jersey, July 1994 *MMWR June 9, 1995 / Vol. 44 / No. 22*

*Escherichia coli* O157:H7 Outbreak at a Summer Camp - Virginia, 1994 *MMWR June 9, 1995 / Vol. 44 / No. 22*

References


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