



CD Info



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CDInfo is a surveillance newsletter intended to promote prevention of morbidity and mortality by providing useful data and practical recommendations for clinicians, laboratorians, and infection control personnel who diagnose, treat or report infectious diseases in Chicago.

Foodborne disease outbreaks in Chicago, 2005—2009

A foodborne disease outbreak (FBDO) is defined as an incident in which two or more persons experience a similar illness and have no other exposures that could account for their illnesses other than consuming the same meal or food item, or consuming items from the same food service establishment. During 2005-2009, the Chicago Department of Public Health (CDPH) investigated and reported 69 FBDOs, an average of 14 per year (table).

The outbreaks accounted for 2,455 associated illnesses and 62 reported hospitalizations, but no reported deaths. More than half of this morbidity was attributable to two outbreaks that occurred in the summer of 2007 – a *Salmonella* serotype Heidelberg outbreak linked to a local festival and a norovirus outbreak affecting attendees of an international conference held at a local hotel. The *Salmonella* outbreak resulted in more than 800 illnesses, including 29 hospitalizations, and more than 500 individuals were affected in the norovirus outbreak.

Outbreaks occurred in all months of the year, with the highest total happening in March (n=10), and the fewest in April (n=1). A confirmed or probable etiologic agent was identified in 32 (46%) FBDOs, with norovirus (n=15) and *Salmonella* (n=10) being the most frequently implicated pathogens. The most common method of detecting FBDOs was through citizen complaints, which accounted for 50 (72%) of FBDOs. Nonetheless, healthcare providers' and microbiologists' prompt reporting of communicable diseases and of suspected outbreaks associated with a food item or establishment is a vital component of FBDO surveillance, detection, and control. For example:

- In July 2006, a hospital microbiologist reported a temporal cluster of two *E. coli* O157:H7 results. Interviews of the case-patients revealed that the only exposure in common that could have accounted for the illnesses was that both had consumed foods from the same restaurant in the week prior to onset. With this information, CDPH issued an alert to the medical community, and initiated outbreak control and food safety measures at the restaurant.
- In May 2007, a healthcare provider reported the hospitalization of an individual with neurological symptoms whose spouse was also ill and for whom consumption of pufferfish was the suspected cause. The diagnosis of tetrodotoxin poisoning was verified

Reported Foodborne Disease Outbreaks, Chicago, 2005-2009

Year	No. of Outbreaks	Ill Persons	Hospitalizations	Etiologic Agents
2005	11	123	3	Norovirus
2006	14	563	10	<i>C. perfringens</i> , <i>E. coli</i> O157:H7, Norovirus, <i>S. aureus</i> , <i>Salmonella</i>
2007	20	1,555	34	<i>C. perfringens</i> , <i>Campylobacter</i> , Norovirus, <i>Salmonella</i> , Tetrodotoxin
2008	14	129	7	Norovirus, <i>Salmonella</i> , multiple*
2009	10	85	8	Norovirus, <i>Salmonella</i>
Total	69	2,455	62	

**Cryptosporidium*, *Giardia*, *Shigella*

through testing of leftover fish from the patient's home. The investigation led to a recall of imported monkfish from an out-of-state distributor on the suspicion that some of the fish may have been mislabeled pufferfish.

To assist the CD Program in its efforts to prevent, identify, and control FBDOs, when evaluating patients with gastrointestinal illness and fever, healthcare providers are encouraged to:

- 1) consider contaminated food as a possible cause;
- 2) obtain stool specimens and test for common foodborne pathogens (*Salmonella*, *Shigella*, *Campylobacter*, and *E. coli* O157:H7) when a FBDO is suspected or for any unusual presentation or cluster of illnesses;
- 3) ask the patient whether he/she is aware of any friends, family, or acquaintances who have been ill with similar symptoms;
- 4) determine the patient's occupation and place of residence to identify job duties or residential settings that could represent a risk of transmission to others (e.g., food worker, day care attendee or employee, long-term care facility resident).

Any unusual case or cluster of illness, including suspected FBDOs, are reportable to CDPH even if an etiologic agent has not been identified. **Healthcare providers and hospital microbiologists should report clusters and cases in need of public health intervention to the CD Program as soon as possible at 312-746-5377, 312-746-5925, or by calling 311 and asking to speak to the Communicable Disease physician on call.**