

10-ID-13

Committee: Infectious Disease

Title: Public Health Reporting and National Notification for Foodborne Outbreaks

I. Statement of the Problem

CSTE position statement 07-EC-02 recognized the need to develop an official list of nationally notifiable conditions and a standardized reporting definition for each condition on the official list. The position statement also specified that each definition had to comply with American Health Information Community recommended standards to support “automated case reporting from electronic health records or other clinical care information systems.” In July 2008, CSTE identified sixty-eight conditions warranting inclusion on the official list, each of which now requires a standardized reporting definition.

II. Background and Justification

Background

An estimated 76 million cases of foodborne disease occur each year in the United States. The great majority of these cases are mild and cause symptoms for only a day or two. Some cases are more serious, and CDC estimates that there are 325,000 hospitalizations and 5,000 deaths related to foodborne diseases each year. The most severe cases tend to occur in the very old, the very young, those who have an illness already that reduces their immune system function, and in healthy people exposed to a very high dose of an organism. More than 1000 foodborne outbreaks are reported each year. More than half of these outbreaks and more than half of the cases are due to bacterial pathogens. *Salmonella sp.* are the most frequently recognized cause of outbreaks and account for the largest number of cases due to a single pathogen. *Listeria monocytogenes* accounts for the greatest number of deaths. Viral pathogens, predominantly norovirus, account for a third of the outbreaks. Chemical causes account for 10% of outbreaks and 2% of cases. Parasites cause 1% of outbreaks and 1% of cases.

The centralization and internationalization of the food supply in the US presents important challenges for public health. Contaminated food from a single farm or a single production facility can cause outbreaks thousands of miles away or in multiple states simultaneously. Food produced outside the US may be contaminated with unusual pathogens. Ongoing surveillance of foodborne outbreaks is necessary to facilitate early recognition, investigation and control efforts. Surveillance data are also used to develop and evaluation prevention strategies.

Justification

Foodborne outbreaks meet the following criteria for a nationally and **standard** notifiable condition, as specified in CSTE position statement 08-EC-02:

- A majority of state and territorial jurisdictions—or jurisdictions comprising a majority of the US population—have laws or regulations requiring **standard** reporting of foodborne outbreaks to public health authorities
- CDC requests **standard** notification of foodborne outbreaks to federal authorities
- CDC has condition-specific policies and practices concerning the agency’s response to, and use of, notifications.

III. Statement of the desired action(s) to be taken

CSTE requests that CDC adopt this standardized reporting definition for foodborne outbreaks to facilitate more timely, complete, and standardized local and national reporting of this condition.

IV. Goals of Surveillance

To provide information on the temporal, geographic, demographic and etiologic occurrence of foodborne outbreaks to facilitate their prevention and control.

V. Methods for Surveillance:

Surveillance for foodborne outbreaks should use the sources of data for case identification and the extent of coverage listed in Table V.

Table V. Recommended sources of data for case identification and extent of coverage for ascertaining foodborne outbreaks.

Source of data for case ascertainment	Coverage	
	Population-wide	Sentinel sites
clinician reporting	X	
laboratory reporting	X	
reporting by other entities (e.g., hospitals, veterinarians, pharmacies)	X	
death certificates	X	
hospital discharge or outpatient records	X	
extracts from electronic medical records	X	
telephone survey		
school-based survey		
other _____		

VI. Criteria for Case Identification

A. Narrative: A description of suggested criteria for case ascertainment of foodborne outbreaks.

Report any illness to public health authorities that meets any of the following criteria:

1. Two or more people with illness with similar symptoms after exposure to a shared meal, eating at the same restaurant (or venue) or eating the same food item. Diarrhea and vomiting are the two most common symptoms, but any food-related illness should be reported.
2. A single case of botulism linked to a food item.
3. A single case of toxin-mediated illness (by a marine and/or phytotoxin) or chemical poisoning where contamination of food is suspected by the treating physician.
4. Any outbreak of infectious disease, chemical poisoning or toxin-mediated illness where food is implicated as the source by an epidemiological investigation.

Other recommended reporting procedures

- All foodborne outbreaks should be reported.
- Reporting should be limited to situations in which there are at least two illnesses indicative of an outbreak except, as indicated above, for botulism, toxin-mediated illness or chemical poisoning linked to a food.
- Frequency of reporting should follow the state health department's routine schedule.

B. Table of criteria to determine whether a case should be reported to public health authorities:

Table VI-B. Table of criteria to determine whether a case should be reported to public health authorities. Requirements for reporting are established under State and Territorial laws and/or regulations and may differ from jurisdiction to jurisdiction. These criteria are suggested as a standard approach to identifying cases of this condition for purposes of reporting, but reporting should follow State and Territorial law/regulation if any conflicts occur between these criteria and those laws/regulations.

Criterion	Reporting	
<i>Clinical Evidence</i>		
Healthcare record contains a diagnosis of foodborne disease		S
Death certificate lists foodborne disease as a cause of death or a		S

significant condition contributing to death		
<i>Epidemiological Evidence</i>		
Two or more people with illness with similar symptoms after exposure to a shared meal, eating at the same restaurant (or venue) or eating the same food item.	O	
Any outbreak of infectious disease, chemical poisoning or toxin-mediated illness where food is implicated as the source by an epidemiological investigation.	O	

Notes:

S = This criterion alone is sufficient to report a case

O = At least one of these “O” criteria in each category in the same column (e.g., clinical presentation and laboratory findings) is required to report a case.

C. Disease Specific Data Elements:

Disease-specific data elements to be included in the initial report to the appropriate local or state public health jurisdiction are listed below.

Clinical Factors

- Reported symptoms of illnesses
- Demographic distributions (age groups and genders) of ill persons
- Date of illness onset for first and last ill
- Incubation period(s)
- Suspected or confirmed etiologic agent (if information available)

Epidemiological Risk Factors

- Implicated (suspected or confirmed) food vehicle(s) (if information available)
- Where implicated food vehicle(s) was prepared and eaten
- Dates of initial and last exposure
- Contributing factors

VII. Case Definition for Case Classification:

A. Narrative: Description of criteria to determine how a case should be classified.

Clinical description

Symptoms of illness depend upon the etiologic agent. Please see Appendix B, “Guidelines for Confirmation of Foodborne-Disease Outbreaks” in the http://www.cdc.gov/outbreaknet/references_resources/guide_confirming_diagnosis.html.

Laboratory criteria for diagnosis

Diagnostic laboratory criteria depend upon the etiologic agent. Please see Appendix B, “Guidelines for Confirmation of Foodborne-Disease Outbreaks” in the http://www.cdc.gov/outbreaknet/references_resources/guide_confirming_diagnosis.html.

Definition

An incident in which two or more persons experience a similar illness after ingestion of a common food, and epidemiologic analysis implicates the food as the source of the illness.

Comment

There are two exceptions: one case of botulism or chemical poisoning linked to a food item constitutes a notifiable outbreak.

B. Classification Tables:

Table VII-B. Criteria for case classification of a foodborne outbreak.

	Case Definition
Criterion	Confirmed
<i>Epidemiological evidence</i>	
Two or more people with illness with similar symptoms after exposure to a shared meal, eating at the same restaurant (or venue) or eating the same food item.	S
A single case of botulism linked to a food item	S
A single case of toxin-mediated illness (by a marine and/or phytotoxin) or chemical poisoning where contamination of food is suspected by the treating physician.	S
Any outbreak of infectious disease, chemical poisoning or toxin-mediated illness where food is implicated as the source by an epidemiological investigation.	S

Notes:

S = This criterion alone is sufficient to report a case.

VIII. Period of Surveillance

Surveillance should be ongoing.

IX. Data sharing/release and print criteria

- Notification to CDC of confirmed cases of foodborne disease outbreaks (preferably using the CDC National Outbreak Reporting System) is recommended.

- Analyses of reported data will be provided annually in surveillance summaries published in the Morbidity Mortality Weekly Report, and additional ad-hoc analyses will be provided regularly in a variety of peer-reviewed journals, meetings and conferences. The Foodborne Outbreak Online Database (FOOD)—a database of reported outbreaks—is available online to states, territories and the public on the CDC website; this database will be updated at least annually.

X. References

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