

Committee: Infectious

Title: Public Health Reporting and National Notification for Salmonellosis

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*¹

An estimated 1.4 million cases of *Salmonella* infection occur annually in the United States. About 400 people die each year from *Salmonella*, with infants, the elderly and the immune compromised being at greatest risk. *Salmonella* is a leading cause of foodborne disease with multiple outbreaks detected each year. Ongoing surveillance of *Salmonella* infections is needed to detect and control outbreaks as well as evaluate strategies to prevent *Salmonella* infections.

Justification

Salmonellosis meets 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 salmonellosis to public health authorities
- CDC requests **standard** notification of salmonellosis 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 salmonellosis to facilitate more timely, complete, and standardized local and national reporting of this condition.

¹ Much of the material in the background is directly quoted from the CDC’s salmonellosis Website. See the References for further information on this source.

IV. Goals of Surveillance

To provide information on the temporal, geographic, and demographic occurrence of salmonellosis to facilitate its prevention and control.

V. Methods for Surveillance

Surveillance for salmonellosis should use the sources of data and the extent of coverage listed in table V.

Table V. Recommended sources of data and extent of coverage for ascertaining cases of salmonellosis.

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 Reporting

Reporting refers to the process of healthcare providers or institutions (e.g., clinicians, clinical laboratories, hospitals) submitting basic information to governmental public health agencies about cases of illness that meet certain reporting requirements or criteria. Cases of illness may also be ascertained by the secondary analysis of administrative health data or clinical data. The purpose of this section is to provide those criteria to determine whether a specific illness should be reported.

A. Narrative description of criteria to determine whether a case should be reported to public health authorities

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

1. Any person with *Salmonella sp.* cultured from a clinical specimen.

2. Any person with diarrhea who is a contact of a confirmed case of *Salmonella* infection or a member of a risk group defined by the public health authorities during an outbreak.
3. A person whose healthcare record contains a diagnosis of salmonellosis.
4. A person whose death certificate lists salmonellosis as a cause of death or a significant condition contributing to death.

Other recommended reporting procedures

- All cases of salmonellosis should be reported.
Reporting should be on-going and routine.
- 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>		
Diarrhea		N
Healthcare record contains a diagnosis of disease due to salmonella	S	
Death certificate lists disease due to <i>Salmonella</i> as a cause of death or a significant condition contributing to death	S	
<i>Laboratory Evidence</i>		
Culture positive for <i>Salmonella sp.</i> from a clinical specimen	S	
<i>Epidemiological risk factors</i>		
Contact of a confirmed case of <i>Salmonella</i> infection		O
Member of a risk group as defined by public health authorities during an outbreak		O

Notes:

S = This criterion alone is Sufficient to identify a case for reporting.

N = All "N" criteria in the same column are Necessary to identify a case for reporting.

O = At least one of these "O" (Optional) criteria in each category (i.e., clinical evidence and laboratory evidence) in the same column—in conjunction with all "N" criteria in the same column—is required to identify a case for reporting. (These optional criteria are alternatives,

which means that a single column will have either no O criteria or multiple O criteria; no column should have only one O.)

C. Disease Specific Data Elements:

Disease-specific data elements to be included in the initial report are listed below.

Epidemiological Risk Factors

International travel in past 7 days
Food handler
Day care center attendee or worker
Nursing home resident or worker
Contact of a confirmed case of *Salmonella* infection

VII. Case Definition

A. Narrative description of criteria to determine whether a case should be classified as confirmed or probable (presumptive) is provided.

Clinical description

An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infections may occur, and the organism may cause extraintestinal infections.

Laboratory criteria for diagnosis

Isolation of *Salmonella* from a clinical specimen.

Case classification

Probable: a clinically compatible case that is epidemiologically linked to a confirmed case.

Confirmed: a case that meets the laboratory criteria for diagnosis. When available, O and H antigen serotype characterization should be reported.

Comment

For users of the legacy National Notifiable Diseases Surveillance System, laboratory-confirmed isolates are also reported via the Public Health Laboratory Information System (PHLIS), which is managed by the Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC. The National Electronic Disease Surveillance System (NEDSS) or NEDSS compatible systems will eventually replace PHLIS and

NETSS; users of NEDSS or compatible systems which report to CDC should not report via PHLIS.

Both asymptomatic infections and infections at sites other than the gastrointestinal tract, if laboratory confirmed, are considered confirmed cases that should be reported.

B. Classification Tables

Table VII-B lists the criteria that must be met for a case to be classified as confirmed or probable.

Table VII-B. Table of criteria to determine whether a case is classified.

Criterion	Case Definition	
	Confirmed	Probable
<i>Clinical Evidence</i>		
Diarrhea		N
<i>Laboratory Evidence</i>		
Culture positive for <i>Salmonella</i> sp. from a clinical specimen	S	
<i>Epidemiologic Evidence</i>		
Contact of a confirmed case of <i>Salmonella</i> infection		O
Member of a risk group as defined by public health authorities during an outbreak		O

Notes:

S = This criterion alone is Sufficient to classify a case.

N = All “N” criteria in the same column are Necessary to classify a case.

O = At least one of these “O” (Optional) criteria in each category (i.e., clinical evidence and laboratory evidence) in the same column—in conjunction with all “N” criteria in the same column—is required to classify a case.

VIII. Period of Surveillance

Surveillance should be on-going.

IX. Data sharing/release and print criteria

Notification to CDC for confirmed and probable cases of salmonellosis is recommended.

- Data will be used to determine the burden of illness due to *Salmonella*, assess the effectiveness over time of national control programs, and assess the progress toward national goals in salmonellosis control. Data may also be used to compare case numbers

with information from other foodborne disease surveillance systems. Electronic reports of salmonellosis cases in NNDSS are also summarized weekly in the MMWR Tables. Annual case data on salmonellosis is summarized in the yearly Summary of Notifiable Diseases.

- State-specific compiled data will continue to be published in the weekly and annual MMWR. In addition to those reports, the frequency of reports/feedback to the states and territories will be dependent on the current epidemiologic situation in the country. Frequency of cases, epidemiologic distribution, importation status transmission risk, and other factors will influence communications.
- State-specific compiled data will continue to be published in the weekly reports and annual MMWR Surveillance Summaries. All cases are verified with the states before publication.

X. References

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