

Position Statement Template

Submission Date: 3/28/2005

Committee: Infectious Diseases
05-ID-09

Title: Serotype specific national reporting for salmonellosis

Statement of the Problem:

Salmonellosis constitutes a major foodborne disease, with an estimated 1.4 million cases occurring each year in the United States (1). Currently, salmonellosis is listed among the nationally notifiable diseases to be reported through the National Notifiable Diseases Surveillance System (NNDSS). However, the case definition and reporting through NNDSS does not include serotype characterization. *Salmonella* O and H antigen serotyping has been used as an international standard for subtyping since the 1950s and has been consistently performed by most state public health laboratories in the United States for decades. The epidemiology of *Salmonella* infections is based on serotype characterization; serotypes have biologic relevance in that different serotypes have different pathogenicity, natural reservoirs, and natural history. Thus, public health interventions and control of salmonellosis depend on serotype characterization.

A laboratory-based national surveillance system, the Public Health Laboratory Information System (PHLIS), has been used to capture the serotype for *Salmonella* isolates that are reported through public health laboratories.

With the advent of the National Electronic Diseases Surveillance System (NEDSS) and compatible systems, there is an opportunity to integrate and enhance surveillance activities. A foodborne and diarrheal diseases program area module has been developed for NEDSS which includes salmonellosis. This module is planned to collect information for the National Notifiable Diseases Surveillance System and for PHLIS. Information about specific *Salmonella* serotypes may be collected in NEDSS or compatible systems to allow more complete analysis of salmonellosis surveillance by serotype.

Statement of the desired action(s) to be taken:

Adopt serotype-specific reporting of laboratory confirmed salmonellosis cases.

Public Health Impact:

Reporting *Salmonella* serotypes through NEDSS or compatible systems will enhance surveillance integration and efficiency, taking the place of the Public Health Laboratory Information System. Complete, accurate and timely data from surveillance of *Salmonella* serotypes will allow enhanced estimates of the burden of disease, outbreak detection, and evaluation of *Salmonella* control programs.

1. Mead PS, Slutsker L, Dietz V, et al. Food-related illness and death in the United States. *Emerg Infect Dis* 1999;5:607-25.

Salmonellosis

2005 Proposed Case Definition

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. NEDSS or compatible systems will eventually replace PHLIS; 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.

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Appendix 1

List of 50 *Salmonella* serotypes most frequently reported to the Public Health Laboratory Information System, in order of frequency. This list is to be included in the NEDSS Foodborne and Diarrheal Diseases Program Area Module in the laboratory section. Other serotypes of *Salmonella* (of which there are >2,400) are to be written as indicated in the "Other serotype (written in)" option.

Salmonella Serotype	SNOMED Code	Salmonella Serotype	SNOMED Code
Typhimurium	L-17354	Mbandaka	L-17599
Enteritidis	L-18128	Derby	L-17342
Newport	L-17725	Panama	L-18143
Heidelberg	L-17379	Sandiego	L-17340
Javiana	L-18151	Brandenburg	L-17368
Typhimurium var. 5- (Formerly var. Copenhagen)	L-1735A	Paratyphi B	L-17309
Montevideo	L-1735A	Miami	L-18102
Oranienburg	L-17542	Senftenberg	L-18921
Muenchen	L-17721	Litchfield	L-17745
Saintpaul	L-17335	Paratyphi A	L-17201
Infantis	L-17570	Norwich	L-17531
Thompson	L-17550	Schwarzengrund	L-17328
Paratyphi B var. L(+) tartate+ (Formerly Java)	L-1730A	Manhattan	L-17722
Braenderup	L-17532	Dublin	L-18131
Agona	L-17343	Reading	L-17336
Hadar	L-17771	Rubislaw	L-19041
Typhi	L-18122	Bovismorbificans	L-17753
Mississippi	L-19304	Adelaide	L-1A506
Berta	L-18127	Kentucky	L-17923
Poona	L-19221	Weltevreden	L-18575
S. I 4,[5],12:i:-	unassigned	Pomona	L-1A255
Anatum	L-18532	Uganda	L-18566
Hartford	L-17579	Virchow	L-17569
Stanley	L-17325	Ohio	L-17514
Bareilly	L-17576	Other serotype (written in)	See below

Appendix 2

Codes associated with *Salmonella* infections

SNOMED (see NCI website at: <http://ncitterms.nci.nih.gov/NCIBrowser/Startup.do>)

SNOMED codes are available for many of the >2400 serotypes (see above). Codes are subject to change and should be updated accordingly.

ICD-10 (see <http://www3.who.int/icd/vol1htm2003/fr-icd.htm>)

A01 Typhoid and paratyphoid fevers

A01.0 Typhoid fever

Infection due to *Salmonella typhi*

A01.1 Paratyphoid fever A

A01.2 Paratyphoid fever B

A01.3 Paratyphoid fever C

A01.4 Paratyphoid fever, unspecified

Infection due to *Salmonella paratyphi* NOS

A02 Other salmonella infections

Includes: infection or foodborne intoxication due to any *Salmonella* species other than *S. typhi* and *S. paratyphi*

A02.0 Salmonella enteritis

Salmonellosis

A02.1 Salmonella septicaemia

A02.2 Localized salmonella infections

Salmonella:

· arthritis+ (M01.3*)

· meningitis+ (G01*)

· osteomyelitis+ (M90.2*)

· pneumonia+ (J17.0*)

· renal tubulo-interstitial disease+ (N16.0*)

A02.8 Other specified salmonella infections

A02.9 Salmonella infection, unspecified

LOINC codes*

COMPONENT	LOINC_NUM	Short Common Name
SALMONELLA SP IDENTIFIED	20953-6	Salmonella Tiss Cult
SALMONELLA SP IDENTIFIED	20955-1	Salmonella Stl Cult
SALMONELLA SP IDENTIFIED	17563-8	Salmonella XXX Cult
SALMONELLA ENTERITIDIS	23602-6	S enteritid Stl QI Cult
SALMONELLA ENTERITIDIS	34891-2	S enteritid XXX QI Cult
SALMONELLA SP SEROTYPE	20951-0	Salmonella Sertyp Islt Aggl

* Other LOINC codes may be applicable. Codes are subject to change and should be updated accordingly.