

09-ID-42

Committee: Infectious

Title: Public Health Reporting and National Notification for Meningococcal Disease

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

Background¹

During 1998–2007, 800–1,800 cases of meningococcal disease were reported annually in the United States. *Neisseria meningitidis* comprises 13 serogroups, three of which (B, C, and Y) are responsible for the vast majority of cases in the United States. A conjugate vaccine that protects against serogroups A, C, W-135 and Y was licensed in the United States in January 2005 for use in adolescents and adults aged 11–55 years and is recommended for adolescents aged 11–18 and other persons at increased risk for meningococcal disease. New meningococcal vaccines are in development that may be used in infants and/or protect against type B disease. Surveillance for meningococcal disease is needed to permit timely chemoprophylaxis of contacts and to monitor the effect of vaccination on the incidence of disease.

Justification

Meningococcal Disease 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 meningococcal disease to public health authorities
- CDC requests **standard** notification of meningococcal disease to federal authorities CDC has condition-specific policies and practices concerning the agency’s response to, and use of, notifications.

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

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

CSTE requests that its members adopt this standardized reporting definition and that CDC adopt the standardized notification criteria for meningococcal disease to facilitate more timely, complete, and standardized local reporting and national notification of this condition.

IV. Goals of Surveillance

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

V. Methods for Surveillance

Surveillance for meningococcal disease 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 meningococcal disease.

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 that should be used 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. An illness characterized by sepsis and purpura or a petechial rash.
2. A person found dead with a purpuric rash.
3. Any person with laboratory evidence of meningococcal infection, including a positive culture for *N. meningitidis* from CSF or blood; a PCR test positive for *N. meningitidis*-specific nucleic acid; a latex agglutination test positive for *N. meningitidis* in CSF or Gram-negative diplococci identified in CSF; or detection of *N. meningitidis* in formalin-fixed tissue by immunohistochemistry (IHC).
4. A person whose healthcare record contains a diagnosis of meningococcal disease.
5. A person whose death certificate lists meningococcal disease as a cause of death or a significant condition contributing to death.

Other recommended reporting procedures

- All cases of meningococcal disease 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>			
Petechial Rash	O		
Purpura	O	N	
Sepsis	N		
Death		N	
Healthcare record contains a diagnosis of meningococcal disease			S
Death certificate lists meningococcal disease as a cause of death or a significant condition contributing to death			S
<i>Laboratory Evidence</i>			

Isolation of <i>Neisseria meningitidis</i> from a normally sterile site			S
Evidence of <i>N. meningitidis</i> DNA using a validated polymerase chain reaction (PCR), obtained from a normally sterile site			S
<i>N. meningitidis</i> antigen identified by immunohistochemistry (IHC) on formalin-fixed tissue			S
<i>N. meningitidis</i> antigen identified in CSF by latex agglutination			S
Gram-negative diplococci in CSF			S
Gram-negative diplococci in peripheral blood smear			S

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

Immunization History

Date and type of Meningococcal Conjugate Vaccine (MCV4-D, MenACYW-CRM, or other meningococcal conjugate vaccine) received

Date of Meningococcal Polysaccharide Vaccine (MPSV4) received

International Travel in Past 30 days

Countries visited and dates

Contact with a Confirmed Case of Meningococcal Disease

VII. Case Definition for Case Classification

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

Suspected:

- Clinical purpura fulminans in the absence of a positive blood culture; or
- Gram-negative diplococci, not yet identified, isolated from a normally sterile body site (e.g., blood or CSF).

Probable:

- Detection of *N. meningitidis*-specific nucleic acid in a specimen obtained from a normally sterile body site (e.g., blood or CSF), using a validated polymerase chain reaction (PCR) assay; or
- Detection of *N. meningitidis* antigen
 - in formalin-fixed tissue by immunohistochemistry (IHC); or
 - in CSF by latex agglutination.

Confirmed:

- Isolation of *Neisseria meningitidis*
 - from a normally sterile body site (e.g., blood or cerebrospinal fluid, or, less commonly, synovial, pleural, or pericardial fluid); or
 - from purpuric lesions.

B. Classification Tables

Table VII-B lists the criteria that must be met for a case to be classified as confirmed, probable (presumptive), or suspected (possible).

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

Criterion	Case Definition			
	Confirmed	Probable	Suspected	
<i>Clinical Evidence</i>				
Purpura fulminans			N	
<i>Laboratory Evidence</i>				
Positive blood culture			A	
Isolation of <i>Neisseria meningitidis</i> from a normally sterile body site	S			
Isolation of <i>Neisseria meningitidis</i> from a purpuric lesion	S			
Detection of <i>N. meningitidis</i> -specific nucleic acid in a specimen obtained from a normally sterile body site using a validated polymerase chain reaction (PCR) assay		S		
Detection of <i>N. meningitidis</i> antigen in formalin-fixed tissue by immunohistochemistry (IHC)		S		
Detection of <i>N. meningitidis</i> antigen in CSF by latex agglutination		S		
Identification of Gram-negative diplococci from a normally sterile body site				S

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.

A = This criterion must be absent (i.e., NOT present) for the case to meet the classification criteria.

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 meningococcal disease is recommended.

- Data on reported *N meningitidis* cases are summarized monthly for NCIRD staff and distributed internally via the NCIRD monthly surveillance report for vaccine preventable diseases. Cases of *N meningitides* reported electronically through NNDSS are summarized weekly in the MMWR Notifiable Diseases Tables and yearly in the MMWR Surveillance Summaries. Aggregate data will be published in reports, the MMWR, and peer-reviewed journals as the public health need arises.
- State-specific compiled data will continue to be published in the weekly and annual MMWR. The frequency of other feedback to states and territories and of published reports will be dependent on the current epidemiologic situation and public health need.
- State-specific compiled data will continue to be published in the weekly reports and annual MMWR Surveillance Summaries. Aggregate data are included in PAHO and WHO annual reports. The frequency of additional publication of this data, in the MMWR and peer-reviewed journals, is dependent on disease epidemiology and public health need.
- Currently aggregate data on *N meningitides cases* reported to NNDSS are summarized in yearly reports to PAHO. No personal identifying or state specific information is re-released to PAHO, WHO, or other parties.

X. References

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