

Committee: Infectious

Title: Public Health Reporting and National Notification for Giardiasis

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

Giardia lamblia (also known as *G. intestinalis* and *G. duodenalis*) is a parasite that is a common cause of diarrhea both in the US and worldwide. While illness ranges from acute, watery diarrhea to chronic diarrhea with malabsorption leading to weight loss, many infections are asymptomatic. *Giardia* infection is transmitted by the fecal-oral route and results from the ingestion of *Giardia* cysts through the consumption of fecally contaminated food or water or through person-to-person (or, to a lesser extent, animal-to-person) transmission. Fecal contamination of surface water by beavers and other animals might be a source of infection. Other known risk factors include child care attendance, anal contact during sex, and travel to developing countries. Ongoing surveillance is needed to detect outbreaks and monitor the effectiveness of control strategies.

Justification

Giardiasis meets the following criteria for a nationally 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 giardiasis to public health authorities
- CDC requests **standard** notification of giardiasis to federal authorities.
CDC has condition-specific policies and practices concerning the agency’s response to, and use of, notifications. Reports of both sporadic cases and outbreaks of giardiasis are used to evaluate national trends in the incidence and source of infections. Investigations into outbreaks are undertaken to understand the transmission of this parasite and make recommendations to prevent its spread.

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

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

CSTE requests that CDC adopt this standardized reporting definition for giardiasis 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, and demographic occurrence of giardiasis to facilitate its prevention and control.

V. Methods for Surveillance:

Surveillance for giardiasis should use the sources of data and the extent of coverage listed in Table V below.

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

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		
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. Any person with laboratory evidence of giardiasis, including
 - a) *Giardia* cysts in stool on ova and parasites exam,
 - b) *Giardia* trophozoites in stool, duodenal fluid or small bowel biopsy,
 - c) *G. lamblia* antigen detected in stool or intestinal fluid by immunoassay,
 - d) *Giardia* antigen detected in stool or intestinal fluid by monoclonal antibody test, or
 - e) *G. lamblia* detected by nucleic acid by PCR in stool, intestinal fluid, tissue samples or biopsy specimens.
2. Any person with diarrhea, abdominal cramping, bloating, weight loss or malabsorption who is a contact of a laboratory confirmed case of giardiasis or is a member of a risk group as defined by the public health authorities during an outbreak.
3. A person whose healthcare record contains a diagnosis of giardiasis.

Other recommended reporting procedures

- All cases of giardiasis 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			O
Abdominal Cramps			O
Bloating			O
Weight loss			O
Malabsorption			O
Hospital record contains a diagnosis of giardiasis	S		
<i>Laboratory Evidence</i>			
<i>Giardia</i> cysts in stool when examined for ova and parasites		O	

<i>Giardia</i> trophozoites in stool, duodenal fluid or small bowel biopsy		O	
<i>Giardia</i> antigen detected in stool or intestinal fluid by immunoassay		O	
<i>Giardia</i> antigen detected in stool or intestinal fluid by a monoclonal antibody test		O	
<i>G. lamblia</i> detected by nucleic acid by PCR in stool, intestinal fluid, tissue samples or biopsy specimens		O	
<i>Epidemiologic Evidence</i>			
Contact of a laboratory confirmed case of giardiasis			O
Member of a risk group defined by the public health authorities during an outbreak			O

Notes:

S = This criterion alone is Sufficient 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 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

Daycare Center Attendee or staff member

International Travel in past month

Contact with surface water in past month

Consumption of untreated water (either recreational or drinking) in past month

MSM

Contact with sick pets

Fecal exposure during sexual activity

VII. Case Definition for Case Classification:

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

Clinical description

An illness caused by the protozoan *Giardia lamblia* and characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorption. Infected persons may be asymptomatic.

Laboratory criteria for diagnosis

- Demonstration of *G. lamblia* cysts in stool, or
- Demonstration of *G. lamblia* trophozoites in stool, duodenal fluid, or small-bowel biopsy, or
- Demonstration of *G. lamblia* antigen in stool by a specific immunodiagnostic test (e.g., enzyme-linked immunosorbent assay)

Case classification

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

Confirmed: a person with laboratory confirmed *Giardia* infection.

B. Classification Tables:

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

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

Criterion	Case Definition	
	Confirmed	Probable
<i>Clinical Presentation</i>		
Diarrhea		O
Abdominal Cramps		O
Bloating		O
Weight loss		O
Malabsorbtion		O
<i>Laboratory findings</i>		
<i>Giardia</i> cysts in stool when examined for ova and parasites	O	
<i>Giardia</i> trophozoites in stool, duodenal fluid or small bowel biopsy	O	
<i>Giardia</i> antigen detected in stool by immunoassay	O	
<i>Giardia</i> antigen detected in stool by a monoclonal antibody test	O	
<i>Epidemiological risk factors</i>		
Contact of a confirmed case of giardiasis		O
Member of a risk group defined by the public health authorities during an outbreak		O

Notes:

O = At least one of these “O” (Optional) criteria in each category (i.e., clinical evidence and laboratory evidence) 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 of confirmed and probable cases is recommended.

- Data are reported to NNDSS and summarized weekly in the MMWR. Case counts of giardiasis are also published annually in the MMWR Summary of Notifiable Diseases and biennially in the MMWR Surveillance Summaries for cryptosporidiosis and giardiasis.
- State-specific data are published weekly in the MMWR and annually in the MMWR Summary of Notifiable Diseases. Data on giardiasis are also published biennially in the MMWR Surveillance Summaries for cryptosporidiosis and giardiasis.
- Summary data on cases of giardiasis are published biennially in the MMWR Surveillance Summaries and may be included in MMWR or journal articles.

X. References:

Centers for Disease Control and Prevention (CDC). Case definitions for infectious conditions under public health surveillance. MMWR 1997; 46(No. RR-10):1–57. Available from: <http://www.cdc.gov/mmwr/>

Centers for Disease Control and Prevention (CDC). National notifiable diseases surveillance system: case definitions. Atlanta: CDC. Available from: <http://www.cdc.gov/ncphi/disss/nndss/casedef/index.htm> Last updated: 2008 Jan 9. Accessed:

Council of State and Territorial Epidemiologists (CSTE). CSTE official list of nationally notifiable conditions. CSTE position statement 07-EC-02. Atlanta: CSTE; June 2007. Available from: <http://www.cste.org>.

Council of State and Territorial Epidemiologists (CSTE). Criteria for inclusion of conditions on CSTE nationally notifiable condition list and for categorization as immediately or routinely notifiable. CSTE position statement 08-EC-02. Atlanta: CSTE; June 2008. Available from: <http://www.cste.org>.

Council of State and Territorial Epidemiologists (CSTE). Adding Giardiasis as a Nationally Notifiable Disease. 01-ID-08. Atlanta: CSTE; June 2001. Available from: <http://www.cste.org>.

Council of State and Territorial Epidemiologists (CSTE). Data Release Guidelines of the Council of State & Territorial Epidemiologists for the National Public Health System. Atlanta: CSTE; June 1996.

Council of State and Territorial Epidemiologists, Centers for Disease Control and Prevention. CDC-CSTE Intergovernmental Data Release Guidelines Working Group (DRGWG) Report: CDC-ATSDR Data Release Guidelines and Procedures for Re-release of State-Provided Data. Atlanta: CSTE; 2005. Available from: <http://www.cste.org/pdffiles/2005/drgwgreport.pdf> or <http://www.cdc.gov/od/foia/policies/drgwg.pdf>.

Heymann DL, editor. Control of communicable diseases manual. 18th edition. Washington: American Public Health Association; 2004.

Hill DR. Giardia lamblia. In: Mandell GL, Bennett JE, Dolin R, editors. Principles and Practice of Infectious Diseases, 6th edition. Philadelphia: Churchill Livingstone; 2005.

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