**09-ID-34**

**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 malabsorbtion 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.

| | Coverage | |
|---|---|---|
| Source of data for case ascertainment | 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 by humans and machines to determine whether a specific illness should be reported.[2]

[2] "Human-based" criteria (described below under "A. Narrative") can be applied by medical care providers and laboratory staff based on clinical judgment and clinical diagnosis. Machine-based criteria (described below under

**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 symptomatic person with laboratory evidence of giardiasis, including finding cysts in stool on O&P exam, finding trophozoites in stool, duodenal fluid or on small bowel biopsy, detecting *G. lamblia* antigens in stool or intestinal fluid, or detecting *G. lamblia* nucleic acid by PCR in stool, intestinal fluid, tissue samples or biopsy specimens.

2. Any person with diarrhea, abdominal cramping, bloating, weight loss or malabsorbtion 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") can be applied using computerized algorithms that operate in electronic health record systems, including computerized records of laboratory test orders and laboratory test results; other clinical data systems (e.g., hospital discharge data systems serving multiple hospitals); or administrative data (e.g., healthcare provider billing data, vital records, and EMS data).

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

**Table VI-B.** Proposed Table of criteria to determine whether a case should be reported to public health authorities. Note: The following criteria are proposed for evaluation before general implementation. For purposes of currently implementing reporting the narrative description in VI-A, should be used.

| Criterion | Reporting | | |
|---|---|---|---|
| *Clinical Presentation* | | | |
| Diarrhea | | | O |
| Abdominal Cramps | | | O |
| Bloating | | | O |
| Weight loss | | | O |
| Malabsorbtion | | | O |
| Flatulence | | | C |
| Malaise | | | C |
| Nausea | | | C |
| Hospital record contains a diagnosis of giardiasis | S | | |
| *Laboratory findings* | | | |
| *Giardia* cysts in stool when examined for ova and parasites | | O | |
| *Giardia* trophozoites in stool, duodenal fluid or small bowel biopsy | | O | |
| *Giardia* antigen detected in stool by immunoassay | | O | |
| *Giardia* antigen detected in stool by a monoclonal antibody test | | O | |
| *Epidemiological risk factors* | | | |
| Contact of a 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 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)—in conjunction with all other "N" criteria in the same column—is required to report a case.
C = This finding corroborates (i.e., supports) the diagnosis of—or is associated with—giardiasis, but is not included in the case definition and is not required for classification.

**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).

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**Clinical description**

An illness caused by the protozoan *Giardia lamblia* and characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorbtion. 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 case that is laboratory confirmed

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**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.** Proposed table of criteria to determine whether a case is classified. Note: The following criteria are proposed for evaluation before general implementation. For purposes of current notification, the narrative description in VII-A, should be used.

| | Case Definition | |
|---|---|---|
| Criterion | Confirmed | Probable |
| *Clinical Presentation* | | |
| Diarrhea | C | O |
| Abdominal Cramps | C | O |
| Bloating | C | O |
| Weight loss | C | O |
| Malabsorbtion | C | O |
| Flatulence | C | C |
| Malaise | C | C |
| Nausea | C | C |
| Hospital record contains a diagnosis of giardiasis | | |
| *Laboratory findings* | | |
| *Giardia* cysts in stool when examined for ova and parasites | O | |
| *Giardia* trophozoites in stool, duodenal fluid or small bowel biopsy | O | |
| *Giardia* antigen detected in stool by immunoassay | O | |
| *Giardia* antigen detected in stool by a monoclonal antibody test | O | |
| *Epidemiological risk factors* | | |
| 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" criteria in each category in the same column (e.g., clinical presentation and laboratory findings)—is required to classify a case.
C = This finding corroborates (i.e., supports) the diagnosis of—or is associated with—giardiasis, but is not included in the case definition and is not required for classification.

## 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:**

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