



Guidance Document

March 15, 2012

Recommendations from the Bureau of Epidemiology for Interview and Investigation of Reported Cases of Enteric Infections

Purpose

The purpose of these recommendations is to allow county health departments (CHDs) to prioritize cases of selected diseases for follow-up, and thus allow them to reduce the time and effort they spend on individual reported cases of reportable enteric diseases without compromising their public health impact.

Scope

The scope of these recommendations is reported cases of infections due to the following microorganisms:

Campylobacter species
Cryptosporidium parvum
Giardia lamblia
Salmonella species
Shigella species

Not included are infections due to *Cyclospora cayatenensis*, Shiga toxin-producing *Escherichia coli* (such as *E. coli* O157:H7), or *Salmonella* Typhi.

Summary recommendation:

Individual cases of each of these diseases should be prioritized for follow-up in this order:

Group 1. Cases in people where information available at the time of the initial case-report indicates they are part of an outbreak or are in a sensitive situation, as defined in 64D-3.

Group 2. Cases in people whose case-report is received while they are likely to still be symptomatic and infectious (see Table 1 and notes below).

Group 3. All other reported cases.

Assumptions and Rationale:

These recommendations are based on certain key assumptions:

- Responding to reported cases of these enteric infections is part of an overall public health effort to prevent significant enteric illness, which also includes regulatory and educational approaches.
- The goals of investigation, interview, and/or counseling are:
 - (1) to determine whether the person with the reported case may have put or be putting others at risk in a sensitive situation;
 - (2) to determine whether the person with the reported case may be part of a recognized or unrecognized outbreak, as a trigger to further investigation; and
 - (3) to convey a highly focused, brief educational intervention to a person who is still symptomatic (or their parent or guardian) about how to avoid infecting others.
- County Health Departments can reduce time and effort either by making case interviews shorter and simpler or by reducing the number of people who need to be interviewed, or both. The process of locating people for interview can be very time-consuming.
- People with these enteric infections are most infectious to others while they are symptomatic. Most transmission occurs early in peoples' gastrointestinal illnesses, before the nature of the illness is recognized, not from people who are convalescing and no longer have diarrhea.

Current practice in many counties includes educating infected people, or their parents, about how they got infected and how they can avoid getting infected in future. Many clients appreciate receiving this information. However, this is not and should not be a high-priority public health activity. It is not a sufficient reason, in itself, to devote staff time to locating and interviewing people with reported cases of these diseases.

Because people are most infectious while they are ill with diarrhea, the recommended priority is to intervene with people who still have diarrhea. If a person with a reported case is already free of diarrhea by the time CHD staff get ready to contact him/her, and is not in a sensitive situation, there is little value in doing an interview or an educational intervention.

Although persons known to be in a sensitive situation are placed in Group 1, some such persons will be missed if interviews are not done routinely on Group 3 case reports. Few of those who are missed in this way will still be symptomatic, however. Table 1 below shows the number of days from the earliest date associated with each case during which there is a reasonable expectation that the person would still be infectious, and thus an interview would be likely to yield public health benefit.

CHD staff can and do detect some outbreaks and sensitive situations before they contact individual reported patients. For example, some case reports will include the information that the person is in a sensitive situation. People who report cases (e.g., physicians or infection preventionists) should be asked to provide this information each time an individual case report is taken. Some people self-report that they are part of outbreaks, and some outbreaks are reported to or come to a CHD's attention in other ways. CHD staff may be notified by the Bureau of Laboratories or a central office epidemiologist that laboratory results from particular cases indicate that they are part of a cluster defined by serotype, PFGE, or other organism

characteristics. CHD staff should review reported cases of each disease (by street address, report source, race, ethnicity, similar names, onset or report date, age group, etc.) in order to detect apparent clusters, which would put the reported cases that are part of that cluster in Group 1.

Recommended priority order and actions:

Group 1. The report appears (before any interviewing is done) to be for a person in a sensitive situation (as defined in F.A.C. section 64D-3, see below), to be part of an outbreak (regardless of how long it has been since event date), or to be part of a laboratory-defined cluster.

Action: Locate and interview case, to accomplish the three goals of an interview listed above. Take needed follow-up action. If the case is part of a laboratory cluster, follow laboratory cluster protocol. Enter all available information in Merlin and report the case.

Group 2. The report is received early enough that the person is very likely still symptomatic (see Table 1).

Action: Locate and interview case, to accomplish the three goals of an interview listed above. Take needed follow-up action. Enter all available information in Merlin and report the case.

Group 3. The report is received late enough that the person is very likely no longer symptomatic, and the person is not in Group 1.

Action: Mail or e-mail information about the disease and its prevention to case or guardian, if address is available, following local protocols. Personal contact and interview are not necessary. Enter all available information in Merlin and report the case.

Table 1 below shows the number of days since earliest known date (event date) when interview attempts should be made routinely. Use the column that corresponds to the earliest known date for each case. For example, if the earliest date you have for a campylobacteriosis case is specimen collection on September 23, you would interview up to 4 days later, September 27. If the earliest date for a giardiasis case is onset on September 10, you would interview up to 14 days later, or September 24.

The values for usual duration of illness are drawn from the American Public Health Association (APHA) Control of Communicable Diseases Manual, where available, or from the Mandell textbook Principles and Practice of Infectious Diseases, using the outer limit of the usual duration of illness. We calculated the median number of days from onset date to specimen collection date, lab report date, or diagnosis date using data recorded in Merlin for reported confirmed cases of these diseases in 2011. We then added one day to each of these median values to allow for some dispersion around the median value, and subtracted these from the usual duration of illness to obtain the numbers in the fourth through sixth columns below.

Table 1: Time (in days) from earliest known date associated with a case report when interview attempts should be made routinely.

Agent	Usual duration of illness (in days)	# of days from onset date	# of days from diagnosis date	# of days from specimen collection date	# of days from lab report date
<i>Campylobacter</i> species	6	6	1	4	1
<i>Cryptosporidium parvum</i>	14	14	8	9	7
<i>Giardia lamblia</i>	14	14	1	5	2
<i>Salmonella</i> species	6	6	1	4	1
<i>Shigella</i> species	9	9	6	8	4

References:

Control of Communicable Diseases Manual, David L. Heymann, MD, Editor, 19th Edition. American Public Health Association, Washington, DC, 2008.

Principles and Practice of Infectious Diseases, Sixth Edition. Gerald L. Mandell, John E. Bennett and Raphael Dolin, Editors. Elsevier, Philadelphia, PA, 2005.

Text from 64D-3.028, Florida Administrative Code:

(22) “Sensitive Situation” – A setting in which the presence of a case would increase significantly the probability of spread of the diagnosed or suspected disease or condition and would, therefore, constitute a public health hazard. Examples of such settings are: schools, child-care facilities, hospitals and other patient-care facilities, food storage, food processing establishments or food outlets.

From 64D-3.037, F.A.C.:

(3) The State Health Officer, or the county health department director or administrator or their designee, shall have the authority to designate a setting as a sensitive situation as defined in subsection 64D-3.028(22), F.A.C., and to initiate or terminate conditions to control the spread of disease in such settings.

Bureau of Epidemiology
Richard S. Hopkins, MD, MSPH and Leah Eisenstein, MPH.