Campylobacteriosis

Important Notice:
*All public health recommendations for routine investigations are based on "Control of Communicable Diseases Manual, 20th edition, 2015" (CCDM) unless otherwise stated. Use the CCDM as primary resource for case investigations that meet routine follow up. In cases of complicated situations or unique issues not addressed by this manual, please refer to the Administrative Rules of Montana (ARM) Chapter **37.114** or contact the designated subject matter expert at Communicable Disease Epidemiology section at the Montana DPHHS for further clarification.*

PROTOCOL CHECKLIST

- ☐ Confirm diagnosis, see case definition (see section 3.3 and 4.1)
- ☐ Submit specimen for confirmation and PFGE analysis (see section 4.2)
- ☐ Review background information on the disease and its epidemiology (see section 2)
- ☐ Prioritize reported cases for follow up, investigate and interview as appropriate (see section 1.2)
- ☐ Contact provider to gather more information, if necessary
- ☐ Notify state health department of case by entering available information into the Montana Infectious Disease Information System (MIDIS) within 7 days (see section 1.3)
- ☐ Retrieve campylobacteriosis reporting form (see SharePoint → CDEpi → CDEpi Disease Forms)
- ☐ Review for use, specific technical assistance guidance documents (see SharePoint →CDEpi →CDEpi Technical Guidance [Diseases A to Z] → campylobacteriosis → Guidance Documents)
- ☐ Interview patient, cover the following:
  - ☐ Review disease facts with patient (see section 2.2)
  - ☐ Educate patient on prevention (see section 6)
  - ☐ Ask about exposures to relevant risk factors (see section 4.3)
  - ☐ Determine if patient is employed in sensitive occupation (see section 5.1)
  - ☐ Identify symptomatic contacts (see section 4.4)
  - ☐ Implement control measures (see section 5.1)
  - ☐ Address patient's questions or concerns
- ☐ Follow-up on special situations, including outbreaks or infected persons in sensitive occupations (see section 5 and CCDM, review references and additional information or contact CDEpi at 406-444-0273)
- ☐ Enter additional data obtained from interview into MIDIS
- ☐ Attach any additional lab reports to case investigation in MIDIS (Manage Associations)
- ☐ When done with investigation, close case in MIDIS

1 DISEASE REPORTING

1.1 Provider notification to Public Health Authorities

Any person, including, but not limited to a physician, dentist, nurse, medical examiner, other health care practitioner, administrator of a health care facility or laboratory, public or private school administrator, or laboratory professional who knows or has reason to believe that a case exists of a reportable disease or condition defined in the Administrative Rules of Montana (ARM) **37.114.203** must immediately report to the local health officer.

1.2 Local Health Department Follow-up Responsibilities

Immediately after being notified of a case or a potential outbreak of a reportable condition, a local health officer must investigate and implement control measures as indicated by CCDM to prevent or control the transmission of disease per (ARM) **37.114.314**.

1.3 Local Health Department Reporting to State Public Health Authorities

Campylobacteriosis must be reported to the Montana Department of Public Health and Human Services (DPHHS) within seven days. The disease specific form does not need to be submitted to DPHHS as part of the disease investigation process. Local health officers are required to report information about a case to DPHHS within the timeframes established in (ARM) **37.114.204**.

2 THE DISEASE AND ITS EPIDEMIOLOGY

2.1 Public Health Significance in Montana:

Campylobacteriosis is a commonly reported enteric illness in Montana with about 200 cases reported annually. *Campylobacter jejuni* and sometimes *Campylobacter coli* are the usual causes of diarrhea in humans. This illness is more common during spring and summer months and is often associated with cattle and poultry exposure, but also exposure to domestic pets.

2.2 Clinical Description of Illness

Refer to CCDM for relevant disease information and its epidemiology.

3 CASE DEFINITION

3.1 Clinical Description

A diarrheal illness of variable severity.

3.2 Laboratory Criteria for Diagnosis

Suspect

Detection of *Campylobacter* spp. in a clinical specimen using non-culture based laboratory methods.

Confirmed

Isolation of *Campylobacter* spp. in a clinical specimen.

3.3 Case Classification

Suspect

A case that meets the suspect laboratory criteria for diagnosis.

Probable

A clinically compatible case that is epidemiologically linked to a confirmed case of campylobacteriosis.

Confirmed

A case that meets the confirmed laboratory criteria for diagnosis.

Comment(s)

The use of culture independent methods as standalone tests for the direct detection of *Campylobacter* in stool appears to be increasing. Data available about the performance characteristics of these assays indicates there is variability in the sensitivity, specificity and positive predictive value of these assays depending on the test (enzyme immunoassay (EIA) test format -lateral flow or -microplate) and manufacturer. It is therefore useful to collect information on which type of EIA test and manufacturer are used to diagnose a case. Culture confirmation of culture independent (e.g., EIA) test positive specimens is ideal.

4 ROUTINE CASE INVESTIGATION

In accordance with (ARM) **37.114.314** conduct an epidemiologic investigation to determine the source and possible transmission of infection. Refer to the CCDM regarding additional aspects related to investigation.

4.1 Confirm the Diagnosis

Review the clinical presentation and laboratory results to confirm the diagnosis. Consult with the CCDM and CSTE case definition (**http://wwwn.cdc.gov/nndss/script/casedefDefault.aspx**) to determine if this is a case.

4.2 Laboratory Requirements

An isolate of *Campylobacter* MUST be sent to MTPHL when possible for confirmation and PFGE analysis as identified in (ARM) **37.114.313.**

For more information on analysis and specimen collection please contact the laboratory conducting the test or the Montana Public Health Laboratory (MTPHL) at 1-800-821-7284. The MTPHL Laboratory Services Manual can be accessed at http://dphhs.mt.gov/publichealth/LaboratoryServices/PublicHealthLabTesting

4.3 Case Investigation

a. Contact the medical provider who ordered testing or is attending the case. Utilize the case reporting form to assist in obtaining the information necessary to complete a campylobacteriosis case report as outlined in (ARM) **37.114.205**.

b. Interview the patient to determine source of infection, risk factors, and transmission settings.

Ask about possible exposures in the 1 to 10 days before symptom onset. Consider occurrence, reservoir and routes of transmission when asking about risk factors and potential exposures. For many enteric illnesses, these include, but are not limited to:

- Animals (especially cattle, but also kittens and puppies)
- Water
- Food (including raw milk and undercooked meats, especially beef and poultry)
- Travel history
- Contact with any acquaintance or household member with a similar illness
- Contact with fecal matter (diapered children, healthcare workers, sexual contact)

4.4 Contact Investigation

Contacts are defined as household members, daycare attendees, sexual partners, group living workers and residents, and those that may have consumed food, water or other beverage or bathed in a recreational water body that is known to be a source of infection.

Based on identified activities, examine dates and locations during the period from illness onset until the resolution of symptoms to identify potential contacts.

Collect the name, age, and phone number of contacts with a similar illness. These persons should be investigated as probable cases, especially if food, water or raw milk may be implicated as the source. Most cases of campylobacteriosis are sporadic. Follow up per CCDM.

4.5 Environmental Evaluation

Conduct an environmental evaluation if an ongoing source of exposure is suspected, such as a recreational water venue, drinking water system, or child care facility.

5 CONTROL MEASURES

In accordance with (ARM) **37.114.501** utilize the control measures indicated in the CCDM for this disease. Contact DPHHS CDEpi for consultation and questions at 406-444-0273.

5.1 Case Management

Exclude symptomatic individuals from food handling and from direct care of hospitalized and institutionalized patients; release to return back to work in sensitive occupation when asymptomatic. If hospitalized, enteric precautions are recommended. Stress proper hand washing.

5.2 Contact Management

A symptomatic contact who meets the probable case definition should be investigated as a case (epi-linked).

5.3 Environmental Measures

An environmental evaluation is appropriate if a source of exposure is identified through inspection or more than one case is associated with a source, such as a drinking water system. Work with the local sanitarian and contact CDEpi with any questions at 406-444-0273.

5.4 Special Circumstances

Exclude children from daycare until 24 hours after diarrhea stops (ARM) **37.95.139**. Exclude ill food handlers from work until asymptomatic and refer to the CCDM for additional information.

6 ROUTINE PREVENTION

6.1 Immunization Recommendations

Not applicable.

6.2 Prevention Recommendations

- Practice good hand hygiene, especially when handling animals, (particularly cattle) and any contact with feces (including diapered children).
- Do not consume food that may be contaminated.
- Do not consume or recreate in water that might be contaminated.
- If unable to avoid using or drinking water that might be contaminated, then make the water safer to drink by boiling and/or using specialized filters.
- Avoid eating or drinking from cooking or eating utensils that might be contaminated.
- Avoid fecal exposure during sexual activity. This is a primary source of infection.

7 ESCALATION/ACTIVATION OF EMERGENCY OPERATIONAL PLANNING

Investigation guidelines are designed to assist local health jurisdictions in the steps and actions needed to report, investigate and control reported cases of communicable diseases. In the event individual case investigations or other reported cases lead to clusters and/or outbreaks, or investigations outside of a local health jurisdiction, local health jurisdictions need to contact DPHHS under the Administrative Rules of Montana 37.114.314 and 37.114.315 so DPHHS can consider emergency operational escalation or activation under the Communicable Disease Annex to the DPHHS Emergency Operation Plan.

8 REFERENCES AND ADDITIONAL INFORMATION

Important references:

A. Control of Communicable Diseases Manual, 20th edition, 2015" (CCDM) American Public Health Association http://www.apha.org/publications/bookstore/ccdmmobile.htm
B. CDC Campylobacteriosis (Campy) website http://www.cdc.gov/nczved/divisions/dfbmd/diseases/campylobacter/