

Hepatitis C

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 require 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 the 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)
- 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
- Notify state health department of case by entering available information into the Montana Infectious Disease Information System (MIDIS) within 7 days, per (ARM) [37.114.204](#) (see section 1.3)
- Retrieve HCV form per the Montana Communicable Disease Reporting Reference for Local Public Health Jurisdictions (see SharePoint → CDEpi → CDEpi Disease Forms → Hepatitis form (acute) or MT CDEpi General report form 2013 (chronic))
- Review for use, HCV guidance documents (see SharePoint → CDEpi → CDEpi Technical Guidance (Diseases A to Z) → Hepatitis C, acute, chronic → Guidance Documents)
- Interview patient, cover the following:
 - Review disease facts with patient (see section 2.2)
 - Identify contacts (see section 4.4)
 - Ask about exposures to relevant risk factors (see section 4.3)
 - Educate and counsel patient on prevention and living with HCV (see section 6)
 - Implement control measures (see section 5)
 - Address patient’s questions or concerns
- Follow-up on special situations, including outbreaks or exposure at a health care facility (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 all HCV lab reports to case investigation in MIDIS
- 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, the local health officer must investigate and implement control measures as indicated by “control the transmission of disease” per ARM [37.114.314](#).

1.3 Local Health Department Reporting to State Public Health Authorities

Hepatitis C virus cases must be reported to the Montana Department of Public Health and Human Services (DPHHS) within 7 days (ARM [37.114.204](#)). The hepatitis c virus case report form does not need to be submitted to DPHHS as part of the disease investigation process. Reports should be submitted through MIDIS.

2 THE DISEASE AND ITS EPIDEMIOLOGY

2.1 Public Health Significance in Montana:

Hepatitis C virus (HCV) disease is the second most commonly reported communicable disease in Montana. More than 1,000 chronic HCV cases were reported in each of the last 2 years. Fewer than 20 acute HCV cases are reported each year. However, approximately 70–80% of people who are newly infected do not have symptoms. In addition, approximately 75–85% of persons infected with HCV develop chronic disease, which can lead to cirrhosis of the liver and liver cancer.

2.2 Clinical Description of Illness

Refer to the CCDM for relevant hepatitis C virus disease information and its epidemiology.

3 CASE DEFINITION

3.1 Clinical Description

Acute hepatitis C

An acute illness with a discrete onset of any sign or symptom* consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), AND either a) jaundice, OR b) elevated serum alanine aminotransferase (ALT) levels >200IU/L.

*A documented negative HCV antibody, HCV antigen, or HCV NAT laboratory test result

followed within 12 months by a positive test result of any of these tests does not require an acute clinical presentation to meet the surveillance case definition.

Chronic hepatitis C

Most HCV-infected persons are asymptomatic; however, many develop chronic liver disease, which can range from mild to severe.

3.2 Laboratory Criteria for Diagnosis

Acute hepatitis C

- A positive test for antibodies to hepatitis C virus (anti-HCV)
- Hepatitis C virus detection test:
 - Nucleic Acid Test (NAT) for HCV RNA positive (including qualitative, quantitative, or genotype testing)
 - A positive test indicating presence of hepatitis C viral antigen(s) (HCV antigen)

Chronic hepatitis C

- A positive test for antibodies to hepatitis C virus (anti-HCV)
- Hepatitis C virus detection test:
 - Nucleic Acid Test (NAT) for HCV RNA positive (including qualitative, quantitative, or genotype testing)
 - A positive test indicating presence of hepatitis C viral antigen(s) (HCV antigen)

3.3 Case Classification

Acute hepatitis C

Probable

- A case that meets the clinical criteria and has a positive anti-HCV antibody test, but has no reports of a positive HCV NAT or positive HCV antigen tests, AND
- Does not have test conversion within 12 months or has no report of test conversion.

Confirmed

- A case that meets the clinical criteria and has a positive hepatitis C virus detection test (HCV NAT or HCV antigen), OR
- A documented negative HCV antibody, HCV antigen, or NAT laboratory test result followed within 12 months by a positive result of any of these tests (test conversion).

Chronic hepatitis C, (past or present infection)

Probable

- A case that does not meet the case definition or has no report of clinical criteria, AND
- Does not have test conversion within 12 months or has no report of test conversion, AND
- Has a positive anti-HCV antibody test, but no report of a positive HCV NAT or positive HCV antigen test.

Confirmed

- A case that does not meet the case definition or has no report of clinical criteria, AND
- Does not have test conversion within 12 months or has no report of test conversion, AND
- Has a positive HCV NAT or HCV antigen test.

4 ROUTINE CASE INVESTIGATION

In accordance with ARM [37.114.314](#) conduct an epidemiologic investigation to determine the source of 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 (section 3) to determine if this is a case.

4.2 Laboratory Requirements

A specimen does NOT need to be sent to MTPHL for confirmation 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://www.dphhs.mt.gov/publichealth/lab/diagnostictesting.shtml>

4.3 Case Investigation

- Contact the medical provider who ordered testing or is attending the case. Utilize the case reporting form (MIDIS or SharePoint) to assist in obtaining the information necessary to complete a hepatitis C case report as outlined in ARM [37.114.205](#).
- Contact and interview the patient to determine source, risk factors, and transmission settings.
 - i. **Acute hepatitis C**

Ask about possible exposures 2 weeks to 6 months prior to onset of symptoms (“Acute Hepatitis C” tab in MIDIS investigation or page 2 of acute HCV case report form).
Exposure information should include:

 - Contact with a person with confirmed or suspected HCV infection
 - Parenteral drug use
 - Receipt of donated blood, blood products, and organs
 - Occupational or other needle stick injuries in a health care setting
 - Birth to an HCV infected mother
 - Other parenteral exposures within 6 months of symptom onset (e.g., medical or dental exposures, receive tattoo or piercing, etc.)
 - High-risk sexual contact (e.g., multiple partners, anal sex, history of STDs, etc.)

ii. **Chronic hepatitis C**

Ask about possible exposures outlined for acute hepatitis C (above) beyond the 2 weeks to 6 months timeframe. For example, patients should be asked if they ever had a parenteral exposure, rather than restricting it to within the 6-month window.

4.4 Contact Investigation

Contacts are persons who have had percutaneous exposure to HCV-infected blood, children born to HCV-infected mothers, and person who received HCV-infected blood products. Using the risk history information collected during the case investigation, identify contacts by eliciting the name, age, sex, and locatable information of contacts from patients. Notify, counsel, and refer identified contacts for HCV testing. Identifying contacts or the source of infection of persons diagnosed with chronic hepatitis C virus can be difficult, and sometimes impossible. When resources permit, pursue contacts when there is a good likelihood of identifying other hepatitis C cases.

4.5 Environmental Evaluation

Usually none. Notify CDEpi (406-444-0273) if health care-associated HCV infection is suspected.

5 CONTROL MEASURES

Implement the control measures outlined in ARM [37.114.542](#) and 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

Counsel the patient (see Section 6). Refer HCV-positive persons for medical evaluation for infection status, the presence of chronic liver disease, including assessment of liver function tests, evaluation for severity of liver disease and possible treatment, and determination of the need for hepatitis A and hepatitis B vaccination.

Patients should NOT be excluded from work, school, play, daycare, or other settings on the basis of their HCV infection status. There is no evidence of HCV transmission from food handlers, teachers, or other service providers in the absence of blood-to-blood contact.

5.2 Contact Management

Acute hepatitis C

The local health officer must identify, notify, and refer at-risk contacts for testing. If the patient is unwilling to identify contacts, they should be encouraged to notify their contacts.

Chronic hepatitis C

The local health officer is encouraged to notify and refer contacts for HCV testing, or encourage the patient to do so.

5.3 Environmental Measures

Apply Universal Precautions. Ensure that surfaces and objects contaminated with blood are properly disinfected.

5.4 Special Circumstances

Notify CDEpi if health care-associated transmission is suspected. Notify CDEpi and blood bank if patient recently received or donated blood.

6 ROUTINE PREVENTION

6.1 Immunization Recommendations

- not applicable

6.2 Prevention and Counseling Recommendations

Prevention

- Stop using and injecting drugs
- If you continue to use; never reuse or “share” syringes, needles, water, or drug preparation equipment
- Risk of sexual transmission is low, but is greater for persons with multiple partners, anal sex, history of STDs, etc.

Counseling

- HCV-positive persons should be advised to avoid alcohol because it can accelerate cirrhosis and end-stage liver disease.
- Viral hepatitis patients should also check with a health professional before taking any new prescription pills, over-the-counter drugs (such as non-aspirin pain relievers), or supplements, as these can potentially damage the liver.
- Patients should be informed about the low but present risk for transmission with sex partners.
- Sharing personal items that might have blood on them, such as toothbrushes or razors, can pose a risk to others.
- Cuts and sores on the skin should be covered to keep from spreading infectious blood or secretions.
- Donating blood, organs, tissue, or semen can spread HCV to others.
- HCV is not spread by sneezing, hugging, holding hands, coughing, sharing eating utensils or drinking glasses, or through food or water.
- Patients may benefit from a joining support group.

7 ESCALATION/ACTIVATION OF EMERGENCY OPERATIONAL PLANNING

Investigation guidelines are designed to assist local health jurisdictions investigate, report, and control cases of communicable diseases. If the case investigation reveals an outbreak or clusters of cases, or involves other jurisdictions, the local health jurisdiction must contact DPHHS per ARM 37.114.314 and ARM 37.114.315. DPHHS

will consider escalation from day-to-day activities or activation of response teams as outlined in 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
- B. Hepatitis C FAQs for Health Professionals
<http://www.cdc.gov/hepatitis/HCV/HCVfaq.htm>
- C. Recommended Testing Sequence for Identifying Current Hepatitis C Virus (HCV) Infection
http://www.cdc.gov/hepatitis/HCV/PDFs/hcv_flow.pdf
- D. Interpretation of Results of Tests for Hepatitis C Virus (HCV) Infection and Further Actions
http://www.cdc.gov/hepatitis/HCV/PDFs/hcv_graph.pdf