

Hepatitis C Virus Infection

(Last revised August 18, 2011)

I. Identification

A. Clinical Description

Hepatitis C virus (HCV) infection is the most common chronic bloodborne infection in the United States. Symptoms of HCV infection may include anorexia, fatigue, abdominal pain, nausea, dark urine and jaundice. However, 80% persons who acquire HCV infection have no signs or symptoms. Among persons who acquire HCV infection, 15-45% resolve the infection and 55-85% remain chronically infected.

B. Reporting Criteria

Report all cases of HCV infection, as defined below in I.D. Wisconsin Case Definition section and II.B.3. Hepatitis C Reporting Algorithm.

C. Laboratory Criteria for Confirmation

- Anti-HCV positive (repeat reactive) by enzyme immunoassay (EIA) with a high signal to cut off (s/co) ratio or by chemiluminescence immunoassay (CIA) with a high s/co ratio (see CDC reference for signal to cut of ration <http://www.cdc.gov/hepatitis/hcv/LabTesting.htm>); OR
- Anti-HCV positive by recombinant immunoblot assay (RIBA); OR
- HCV RNA positive by reverse transcriptase (RT) polymerase chain reaction (PCR); OR
- Detectable viral load (e.g. HCV bDNA); OR
- Identified HCV genotype.
- CDC HCV Test Interpretation Chart: http://www.cdc.gov/hepatitis/hcv/PDFs/hcv_graph.pdf
- DPH HCV Laboratory Assays & Interpretation of HCV Test Results: <http://www.dhs.wisconsin.gov/communicable/hepatitis/PDFs/DPHInterpHCVTestResultsRev082011.pdf>

D. Wisconsin Case Definition

Acute Hepatitis C

- Acute illness with discrete onset of symptoms; or a documented anti-HCV seroconversion (from negative to positive); AND
- Serum alanine aminotransferase levels (ALT) >7 times the upper limit of normal; AND
- IgM anti-HAV negative; AND
- IgM anti-HBc negative (if done) or HBsAg negative; AND
- A positive anti-HCV EIA with high s/co ratio or by chemiluminescence immunoassay (CIA) with a high s/co ratio; or a positive supplemental antibody assay, e.g. RIBA or a positive confirmatory test that detects HCV RNA, e.g., PCR.

Confirmed Hepatitis C

- Anti-HCV positive (repeat reactive) by EIA test result with a high s/co ratio or by chemiluminescence immunoassay (CIA) with a high s/co ratio; OR
- Anti-HCV positive by RIBA; OR
- HCV RNA positive by PCR; OR
- Detectable viral load (e.g. HCV bDNA); OR
- Identified HCV genotype.

Probable Hepatitis C

- Anti-HCV positive (repeat reactive) by EIA without verification by a more specific assay (e.g. RIBA for anti-HCV or RT-PCR for HCV RNA).

II. Actions Required/Prevention Measures

A. WISCONSIN DISEASE SURVEILLANCE CATEGORY II:

REPORT TO THE LOCAL HEALTH DEPARTMENT within 72 hours of the identification of a case or suspected case. Public health intervention is expected.

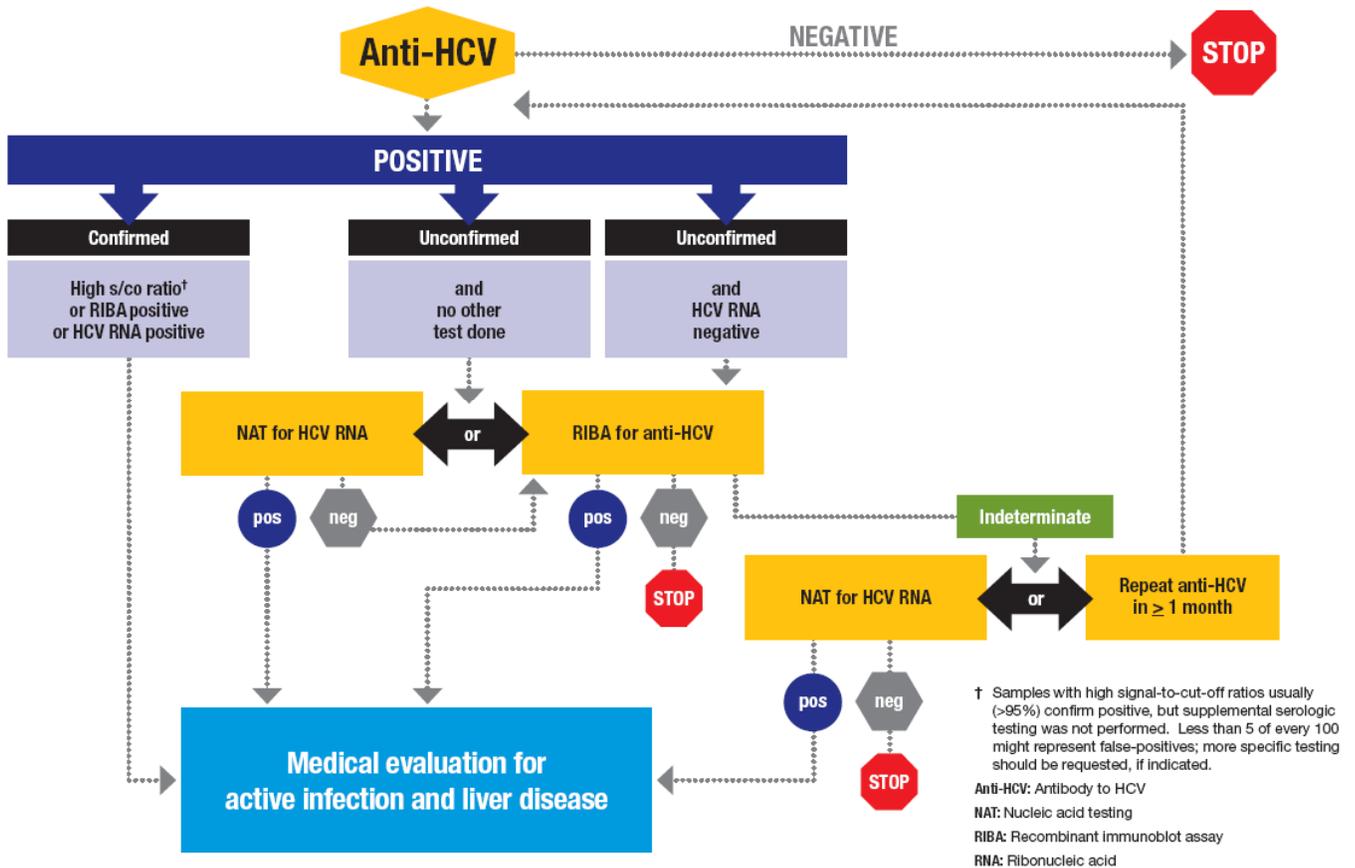
B. Epidemiology Reports Requested:

Submit Acute and Communicable Disease Report ([F44151](#)) or enter the report into the Wisconsin Electronic Disease Surveillance System (WEDSS).

Submit CDC –Viral Hepatitis Case Report (www.cdc.gov/hepatitis/PDFs/vhsp02.pdf) for acute cases only. It is only necessary to complete the demographic section and the section on acute hepatitis C.

Hepatitis C Testing Algorithm

Hepatitis C Virus (HCV) Infection Testing for Diagnosis



Source: Centers for Disease Control and Prevention (Available at http://www.cdc.gov/hepatitis/HCV/PDFs/hcv_flow.pdf)

Note:

1. The RIBA assay is not used routinely nor widely available in Wisconsin.
2. A single negative HCV RNA result cannot determine infection status, as persons may have intermittent viremia. Consider follow-up HCV RNA testing in 6 months.

C. Public Health Interventions

- Advise client on measures to protect the liver from further harm, e.g. by avoiding the use of alcohol, not sharing injection drug equipment, and obtaining hepatitis A and hepatitis B vaccine.
- Educate the client on how to protect others from exposure to HCV:
 - Not donating blood, body organs, tissues, or sperm.
 - Not letting anyone else use the client's razor, toothbrush, or other personal care items.
 - Covering open cuts or sores with a bandage until they have healed.
 - If currently injecting drugs, seeking help in trying to stop. If not stopping use, not ever share needles or works with anyone else.
 - If not in a long-term monogamous sexual relationship, practice safer sex -- use a latex barrier, such as a condom (or rubber) every time you have sex.
- Client referral (self-referral) is used for contacts of HCV cases. Encourage clients to recommend HCV counseling and testing to their needle sharing and sexual partners. HCV counseling and testing services may be accessed through primary health care providers, local health departments, AIDS Service Organizations, or STD clinics that offer HCV testing. The Wisconsin HIV/STD/Hepatitis Information and Referral Center (IRC) can provide information and assistance in locating HCV testing resources. Contact the IRC toll-free at 800-334-2437 or through the IRC website at www.irc-wisconsin.org
- Testing household contacts is not necessary unless they have had an identified blood exposure to the HCV infected person.
- An infant whose mother has HCV infection should be tested for anti-HCV no sooner than 18 months of age. If earlier diagnosis is desired, the infant may be tested for HCV RNA (PCR) at 1-2 months for age. An infected mother may breastfeed unless her nipples are cracked or bleeding.
- Refer the client to a medical provider for medical evaluation to assess liver function and need for treatment.

III. Contacts for Consultation

1. DPH Regional Staff: <http://www.dhs.wisconsin.gov/localhealth/index.htm>
2. BCD/AIDS/HIV Program/Hepatitis Program: 608-266-5819
3. WSLH/Hepatitis Serology: 608-262-2302

IV. Related References

- [Centers for Disease Control and Prevention. Recommendations for prevention and control of hepatitis C virus \(HCV\) infection and HCV-related chronic disease. MMWR 1998; 47\(No. RR. 19\):1-39](#)
- [Centers for Disease Control and Prevention. Guidelines for laboratory testing and result reporting of antibody to hepatitis C virus. MMWR 2003;52\(No. RR-3\):1-15](#)
- Centers for Disease Control and Prevention Viral Hepatitis website <http://www.cdc.gov/hepatitis>
- Wisconsin Hepatitis C Program Web site

V. Disease Trends

Summary Wisconsin HCV statistics are located on the DHS website