

Hepatitis C Best Practice Guidelines For Local Health Departments

LHDs are responsible for investigating and reporting all physician reported cases of acute hepatitis C (HCV).

For clients known to have HCV or for those testing positive for HCV, the following should be provided:

- ◆ HCV education and risk reduction information to prevent additional liver damage
- ◆ Control measures to prevent the spread of HCV to others;
- ◆ Hepatitis A and hepatitis B vaccine (Twinrix®);
- ◆ Referral for medical evaluation and support (if available in your area)

Screening and Testing for HCV Infection

HCV testing recommendations (CDC)

HCV testing is recommended for anyone at increased risk for HCV infection, including:

- ◆ Persons who have ever injected illegal drugs, including those who injected only once many years ago
- ◆ Recipients of blood transfusions or solid organ transplants before July 1992
- ◆ Recipients of clotting factor concentrates made before 1987
- ◆ Patients who have ever received long-term hemodialysis treatment
- ◆ Patients with signs or symptoms of liver disease (abnormal liver enzyme tests)
- ◆ Children born to HCV-positive mothers (to avoid detecting maternal antibody, these children should not be tested before age 18 months)
- ◆ All persons with HIV infection
- ◆ Persons with known exposures to HCV, such as
 - healthcare or public safety workers after needlesticks involving HCV-positive blood
 - recipients of blood or organs from a donor who later tested positive for HCV

Blood tests used to detect HCV infection include the following:

1. Screening tests for antibody to HCV (anti-HCV)

- ◆ Enzyme immunoassay (EIA)...may be reported as a signal-to-cut-off ratio* (s/co)
- ◆ Enhanced chemiluminescence immunoassay (CIA)...may be reported as a signal-to-cut-off ratio (s/co)

2. Recombinant immunoblot assay (RIBA)
3. Qualitative tests to detect presence or absence of virus (HCV RNA polymerase chain reaction {PCR})
4. Quantitative tests to detect the amount (titer) of virus (HCV RNA PCR)

* The recommended anti-HCV testing algorithm has been expanded to include an option that uses the signal-to-cut-off (s/co) ratios of screening-test-positive results. This can serve as an alternative to a supplemental test in some circumstances, minimizing the number of specimens that require supplemental testing and providing a result that has a high probability of reflecting the person's true antibody status. Implementation of these recommendations will provide more reliable results for physicians and their patients, so that further counseling and clinical evaluation are limited to those confirmed to have been infected with HCV. (<http://www.cdc.gov/hepatitis/HCV/LabTesting.htm#section1>)

HCV EDUCATION and RISK REDUCTION INFORMATION

Persons with HCV infection should be educated on the topics below as appropriate to their personal circumstances.

TO PREVENT ADDITIONAL LIVER DAMAGE

- ◆ Avoid alcohol. Alcohol use can accelerate cirrhosis and end-stage liver disease
- ◆ Do not start any new medicines, over-the-counter drugs, herbal medicines, or supplements without checking with a health professional
- ◆ Get vaccinated against hepatitis A and hepatitis B.

TO PREVENT SPREAD OF HCV

- ◆ Do not donate blood, body organs, other tissues or semen.
- ◆ Do not share items that may be contaminated with infectious blood, such as toothbrushes, dental appliances, razors, or other personal care articles.
- ◆ Cover cuts and sores on the skin to keep from spreading infectious blood or secretions.
- Practice safe sex if not monogamous.
- ◆ HCV is not spread by sneezing, hugging, coughing, food or water, sharing eating utensils or drinking glasses or casual contact. Persons with HCV infection should not be excluded from work, school, play, child-care or other settings on the basis of their HCV infection status.

Messages for Specific Situations

INTRAVENOUS DRUG USE EXPOSURE

60-90% of IDUs are infected within 5 years of beginning injecting use.

Testing Recommendation

◆ Test if ever injected illegal drugs, even once or a few times many years ago.

Message

- ◆ Stop using and injecting drugs or reduce use.
- ◆ Consider substance abuse treatment.

If continuing to use drugs:

- ◆ Never reuse or “share” syringes, needles, water or any drug preparation equipment.
- ◆ If this is not possible, first flush out the used equipment with water, then with undiluted household bleach, then with clean water.
- ◆ Use only sterile syringes obtained from a reliable source to prepare and inject drugs.
- ◆ If possible, use sterile water to prepare drugs; otherwise use clean water from a reliable source (such as fresh tapwater).
- ◆ Use a new or disinfected container (“cooker”) and a new filter (“cotton”) to prepare drugs.
- ◆ Clean the injection site with a new alcohol swab before injection.
- ◆ Safely dispose of syringes and needles after one use in a hard container such as a detergent bottle or a biohazard container.

OCCUPATIONAL EXPOSURE

The risk of anti-HCV seroconversion after a needlestick injury is 1.8%

Testing Recommendation

For the source:

- ◆ Perform baseline testing for anti-HCV

For the person exposed:

- ◆ Perform baseline testing for anti-HCV and ALT activity **AND**
- ◆ Follow-up testing for anti-HCV (eg; 4-6 months) and ALT activity

If earlier diagnosis of HCV infection is desired, testing for HCV RNA may be performed at 4-6 weeks.

No guidelines currently exist for administration of antiviral therapy during the acute phase of HCV infection. However, recent data indicate that such antiviral therapy might be beneficial when started early in the course of HCV infection. When HCV infection is identified early, the person should be referred for medical management to a specialist knowledgeable in this area.

Message

- ◆ During the post-exposure follow-up period, do not donate blood, plasma, organs, tissue or semen. There is no need to modify sexual practices, or refrain from becoming pregnant or breastfeeding.
- ◆ If the health care worker becomes infected, antiviral therapy may be beneficial when started early in the course of HCV.
- ◆ If chronically infected, follow all recommended infection control practices, including standard precautions and appropriate use of hand washing, protective barriers, and care in the use and disposal of needles and other sharp instruments.
- ◆ There are no recommendations regarding restricting the professional activities of health care workers with HCV infection.

PERINATAL EXPOSURE

Transmission can occur if mother is HCV RNA positive at time of birth.

The risk of exposure is 5-6% (range: 0%-25%). The risk increases to 14% (range: 5%-36%) if mother is HIV-positive.

There is no evidence that transmission is related to mode of delivery. Therefore cesarean delivery to prevent HCV transmission is not recommended.

Breastfeeding does not appear to transmit HCV. Therefore, HCV positive mothers can breastfeed unless their nipples are cracked or bleeding.

Testing Recommendation

- ◆ Test infant for anti-HCV no sooner than 18 months of age.
- ◆ If earlier diagnosis of HCV infection is desired, test for HCV RNA at 1-2 months of age.
- ◆ Infected infants should be further evaluated for the presence of chronic liver disease.
- ◆ Refer children with persistently elevated ALT levels for medical management.

SEXUAL EXPOSURE

The risk of exposure is 1.5% (range: 0%-4.4%) among long-term partners, and 3% among partners of hemophiliacs coinfecting with HIV and HCV.

Male to female transmission may be more efficient than female to male.

Testing Recommendation

- ◆ Test current (within the last six months) sex partners

Message

- ◆ Risk of transmission is low but not absent
- ◆ Always practice safe sex; use a condom
- ◆ Refer infected partners for medical evaluation.

Hepatitis A and Hepatitis B Vaccination

Vaccination recommendation

Persons with HCV infection should receive hepatitis A and hepatitis B vaccines to prevent additional liver damage and/or complications.

HCV Surveillance

Hepatitis C virus infection, acute

2007 CDC Case definition

Clinical case definition

An acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis, such as anorexia, nausea, vomiting, abdominal discomfort, etc. **AND EITHER,**

- ◆ Jaundice **OR**
- ◆ Serum alanine aminotransferase (ALT) levels >400 IU/L

Laboratory Criteria for diagnosis

One or more of the following three criteria:

1. Antibodies to hepatitis C virus (anti-HCV) screening test positive with a signal to cut off ratio predictive of a true positive as determined for the particular assay as defined by CDC, **OR**
2. Hepatitis C Virus Recombinant Immunoblot Assay (HCV RIBA), **OR**
3. Nucleic Acid Test (NAT) for HCV RNA positive

AND, meets the following two criteria:

1. IgM antibody to hepatitis A virus (IgM anti-HAV) negative , **AND**
2. IgM antibody to hepatitis B core antigen (IgM anti-HBc) negative

Case Classification

Confirmed: a case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis C.

Acute Hepatitis C

Background

Acute HCV infection is very difficult to detect and is rarely recognized as a clinical phenomenon. Between 60-70% of persons with HCV infection are asymptomatic. Additionally, current laboratory tests do not distinguish between current or past HCV infection, nearly 10% of acute HCV cases will be anti-HCV negative because they have not yet seroconverted, and a negative HCV RNA test result does not exclude the possibility of HCV infection (CDC 2003). Persons who do have symptoms usually present with jaundice, anorexia, malaise, and abdominal pain 6-7 weeks (range: 2 to 12 weeks) after exposure. Among some patients, symptoms can precede anti-HCV seroconversion and a follow-up antibody test may be needed to make the diagnosis. Detection of recent HCV infection is also rare and most likely to occur among persons who are repeatedly tested for HCV infection, such as donors of blood products or health care workers who have been significantly exposed to a HCV-positive source.

Why follow-up of acute HCV infection is important

Priority for follow-up should be given to patients who may have an acute or recent HCV infection for several reasons:

- ◆ At risk contacts can be identified and referred for counseling and testing.
- ◆ Recently infected persons are more likely to respond to treatment. Persons with acute disease can be monitored for spontaneous viral clearance and, if this does not occur, they can be evaluated for possible treatment.
- ◆ Data on acute HCV infection can be used to identify outbreaks, monitor trends in HCV incidence, and determine risk factors for infection (CDC, 2002).

Elements of acute HCV Case Investigation

Case investigations of suspected acute HCV infection should include the following (CDC, 2002):

1. Determination of clinical features (if any).
 - ◆ Symptomatic ?
 - ◆ Jaundiced ?
 - ◆ ALT level greater than 400 IU/L ?

If possible, evaluate medical history for evidence of past infection and/or risk factors for infection. Evaluate current medical condition to determine if symptoms, elevated ALT can be attributed to another medical condition.

2. Determination of diagnostic test results

- ◆ Anti-HCV positive by EIA with s/co ratio or confirmed by RIBA
- ◆ HCV (viral load) positive by more specific assay such as RT-PCR or HCV RNA
- ◆ IgM anti-HAV negative
- ◆ IgM anti-HBc negative

Assessment of risk factors

All cases of acute HCV infection should be interviewed to identify risk factors(s) for infection during the 2 weeks to 6 months prior to illness onset. If the person has no risk factors for HCV infection, determine whether she/he received any therapeutic injections or had invasive medical procedures performed in the 2 weeks to 6 months prior to infection.

Frequently Asked Questions

1. What is the expectation from the Branch regarding HCV testing in local health department clinics ?
A: HCV testing is encouraged in any local health department that has the resources to offer testing, as well as resources for referral and follow-up of positive results.
2. Is funding available from the Branch to cover HCV testing ?
A: At this time, there are no Branch funds available for HCV testing.
3. Is there an established protocol for HCV screening/testing ?
A: There is no established Branch protocol for HCV testing. There are protocols in use at health departments in the state that offer HCV testing.
4. What is the cost of a HCV test ?
A: The cost of an anti-HCV screening test varies. LHDs are encouraged to negotiate these costs directly with commercial labs.
5. Do most health departments test for HCV ?
A: Most health departments do not have the resources to test for HCV.
6. When will the SLPH be equipped to provide HCV testing?
A: The SLPH currently has no plans to provide HCV testing.

7. Why isn't chronic hepatitis C a reportable disease in our state?
 - A. Because there is no specific lab test to differentiate acute from chronic HCV, each reported case or positive lab result would require investigation. Currently, there are not enough resources at the state or local level to investigate the thousands of positive HCV lab results that are received.

8. Are there any free HCV materials for LHDs to provide to clients ?
 - A: Packets of HCV information, a resource guide, videos, posters, and other materials can be obtained from the state by contacting Susan Thompson, RN at 919-733-9601 or at susan.thompson@dhhs.nc.gov.

9. Are there any good websites with reliable HCV information ?
 - A: Yes.
 - The CDC's viral hepatitis website.....www.CDC.gov/hepatitis
 - The HCV Advocate website...www.HCVadvocate.org
 - The VA websitewww.hepatitis.va.gov
 - The American Association for the Study of Liver Disease website...www.aasld.org