

Hepatitis C, Acute rev Apr 2017

BASIC EPIDEMIOLOGY

Infectious Agent

Hepatitis C virus (HCV), a single-stranded RNA virus, is the causative agent.

Transmission

- Transfusion of contaminated blood or blood products
- Sharing or reusing non-sterilized needles, syringes, razors, toothbrushes, manicure equipment, or any other items which may contain the blood or body fluid of an infected person
- Percutaneous or mucous membrane exposure to blood or body fluids of an infected person
- Sexual activity with an infected person, especially among HIV- infected partners
- Tattooing and/or body piercing
- Perinatally (either in utero or at delivery)

Incubation Period

The incubation period is 2 weeks to 6 months with an average of 4 to 12 weeks.

Communicability

The blood of infected persons is infective many weeks before the onset of symptoms and remains infective through the acute clinical course of the disease and during the chronic carrier state, which may persist for life.

Clinical Illness

The clinical course of acute hepatitis C is indistinguishable from that of other types of acute viral hepatitis. Most infections are asymptomatic with symptoms of acute hepatitis C infection only present approximately 20% to 30% of the time. Chronic hepatitis will subsequently develop in 75% to 85% of acute HCV infected individuals.

DEFINITIONS

Clinical Case Definition

- **Acute:** An acute illness with discrete onset of symptoms* consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), and a) jaundice or b) abnormal serum alanine aminotransferase levels (ALT level >400 IU/L).

*A documented negative HCV laboratory test result of any type (antibody, antigen, NAT/PCR) followed within 12 months by a positive test result of any type does not require an acute clinical presentation to meet the surveillance case definition.

Laboratory Confirmation

- Nucleic acid test (NAT) or PCR test for HCV RNA positive (including qualitative, quantitative or genotype testing) **OR**
- A positive test indicating presence of hepatitis C viral antigen (HCV antigen)*

* When and if a test for HCV antigen(s) is approved by FDA and available

Case Classification

- **Confirmed:**
 - A case that meets clinical criteria and is laboratory confirmed **OR**
 - A documented negative HCV test result (antibody/anti-HCV, antigen, or NAT/PCR) followed within 12 months by a positive result of any of these tests (test conversion – does not require acute clinical presentation).
- **Probable:**
 - A case that meets 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 evidence of test conversion within 12 months or has no report of test conversion.

SURVEILLANCE AND CASE INVESTIGATION

Local and regional health departments should investigate all reports of acute hepatitis C. Most reports of hepatitis C do not require in-depth investigations beyond verifying the case definition and establishing risk factors in acute cases. However, if healthcare transmission is suspected, then a more thorough investigation must be done and EAIDB should be notified at (800) 252-8239 or (512) 776-7676.

Case Investigation Checklist

- ☐ Confirm laboratory results meet the case definition.
 - Most HCV results reported through electronic laboratory reports (ELRs) will not have enough information to meet the case definition for acute cases. If time and resources allow, then health departments should attempt to determine likelihood of cases being acute.
- ☐ If the case is found to be acute:
 - Review medical records or speak to an Infection Preventionist or healthcare provider to verify case definition, identify underlying health conditions and describe course of illness.
 - The Viral Hepatitis Case Tracking Form should be used to assess risk factors and record information collected during the investigation and the information should be entered into NBS. Complete forms may be faxed to 512-776-7616.
 - If the case is 12 months or younger, a follow-up test should be done after 12 months of age to confirm the diagnosis.
- ☐ If an acute case is a healthcare worker, a recent blood donor, a transplant recipient, a pregnant woman, or suspected to be a healthcare acquired infection see Managing Special Situations.
- ☐ All confirmed and probable case investigations must be entered and submitted for notification in the NEDSS Base System (NBS). Please refer to the *NBS Data Entry Guidelines* for disease specific entry rules.

MANAGING SPECIAL SITUATIONS

Case is a Health Care Worker (HCW)

If the case is a dentist, physician, nurse, or other health care worker (HCW) with potential for exposing patients by blood or other body fluids:

- The HCW should be discouraged from working until the acute clinical illness has resolved.
- Upon returning to work, special precautions should be practiced until the HCW is no longer infectious, including:
 - Wearing gloves for all procedures during which the hands will be in contact with the patients' mucosal surfaces or broken skin
 - Avoiding situations involving sharps that could lead to exposures of susceptible individuals to blood or objects contaminated with blood of the case
 - Careful and frequent hand washing

Case is a Recent Blood Donor

If the case has donated blood or plasma within the 8 weeks prior to onset of symptoms, the agency that received the blood or plasma should be notified so that any unused product can be recalled.

Case is a Recent Transfusion Recipient

If transfused blood or blood products are suspected as the possible source of infection, the blood bank or other agency that provided the implicated lot should be notified so that aliquots of the blood still on hand (or the donors themselves) can be retested for HCV. Lot numbers for tracking are usually available through the blood bank at the hospital where the units were transfused.

Case is a Pregnant Woman

According to CDC approximately 6 out of every 100 infants born to HCV-infected mothers will become infected with HCV. Likelihood of transmission is increased if the mother is viremic at the time of delivery or is coinfecting with HIV. There is no prophylaxis treatment available to prevent transmission during birth. Infants born to infected mothers should be tested after 18 months of age because maternal antibodies to HCV may persist until this time. If a diagnosis is desired before 18 months testing for HCV RNA may be done at or after the first well child visit at 1-2 months. HOWEVER follow up HCV RNA testing is recommended at a later visit regardless of the first results. There is no evidence that breastfeeding can result in HCV transmission from mother to child, however, nursing mothers with cracked or bleeding nipples should consider abstaining from breastfeeding due to the possibility of bloodborne transmission.

Health Care Associated Infection is Suspected

If 2 or more iatrogenic (health care associated) cases occur in a hospital, patients of the same dental or health care provider, residential care facility, or nonhospital health care facility (e.g., dialysis center) and the cases have no other identified plausible source of infection, or if other circumstances suggest the possibility of iatrogenic infection, notify EAIDB at (800) 252-8239 or (512) 776-7676.

Possible Common-Source Outbreaks

Report immediately to EAIDB at (800) 252-8239 or (512) 776-7676.

REPORTING AND DATA ENTRY REQUIREMENTS

Provider, School, Child-Care Facility, and General Public Reporting Requirements

Clinically suspected acute hepatitis C cases are required to be reported **within 1 week** to the local or regional health department or to DSHS EAIDB at **(800) 252-8239 or (512) 776-7676**.

Local and Regional Reporting and Follow-up Responsibilities

Local and regional health departments should:

- Enter the case into NBS and submit an NBS notification on all **confirmed and probable** cases to DSHS within 30 days of receiving a report of confirmed case.
 - Please refer to the *NBS Data Entry Guidelines* for disease-specific entry rules.
 - A notification can be sent as soon as the case criteria have been met. Additional information from the investigation may be entered upon completing the investigation.
- If investigation forms are requested, they may be faxed to 512-776-7616 or mailed to:

Infectious Disease Control Unit
Texas Department of State Health Services
Mail Code: 1960
PO Box 149347
Austin, TX 78714-9347

When an outbreak is investigated, local and regional health departments should:

- Report outbreaks within 24 hours of identification to the regional DSHS office or to EAIDB at **512-776-7676**.

LABORATORY PROCEDURES

Testing for hepatitis C is widely available from most hospital and commercial laboratories. If hepatitis C testing is needed through the DSHS State Laboratory, please contact the EAIDB at **(800) 252-8239 or (512) 776-7676**.

UPDATES

April 2017

- Updated laboratory criteria.
- Updated case definition to reflect new case criteria including the addition of “probable” case classification.
- Updated Basic Epidemiology information to reflect latest information from CDC including probability of symptom manifestation and probability of progression to Chronic Hepatitis C infection.
- Added information for Acute HCV infected pregnant women to the “Managing Special Situations” section.