



Hepatitis C Virus Investigation Guideline

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Revision History:

Date	Replaced	Comments
01/2020	11/2018	Updated to CDC 2020 Case Definition. Minor changes throughout to apply changes that occurred with the modified EpiTrax version in regards to data entry.
11/2018	05/2018	Included perinatal hepatitis C case definition, Laboratory Analysis, and Data Management.
05/2018	01/2016	Updated notification section.
01/2016	12/2014	Because of the CDC 2016 Definition, the following sections were updated: Case Definition, Laboratory Analysis, and Data Management.
12/2014	11/2013	Updated to CDC 2012 Case Definition. Added notification section and table of contents. More details added to Investigators Responsibilities and Data Management. Reformatted Standard Case Investigation section to assist with EpiTrax system data entry. Added references K.A.R. 28-1-23. Reformatted fact sheet
11/2013	08/2012	New procedures to focus efforts on investigating acute cases and newly reported Hepatitis C cases in individuals 25 years and younger, as well as individuals 65 years and older.
08/2012	09/2011	Case definition changed to CDC 2012 version. Added comment under case investigation on identifying symptoms of acute hepatitis / newly diagnosed cases for ALL reported cases. Added new reporting forms. Updated fact sheet.
02/2012	-	Removed references to KS-EDSS. Updated to CDC 2012 Case Definition.
09/2011	01/2010	Updated to CDC 2011 Case Definition. Added Notification Section. Edited Data Management (Closing of Chronic Cases) and Standard Investigation (placing highest priority on investigation of acute cases and chronic cases <35y.) Added physician letter.

Hepatitis C Virus

Disease Management and Investigative Guidelines

CASE DEFINITION (CDC, 2020)

Clinical Criteria for Public Health Surveillance (Acute):

One or more of the following:

- (a) Jaundice, **OR**
- (b) Peak elevated total bilirubin levels > 3.0 mg/dL, **OR**
- (c) Peak elevated serum alanine aminotransferase (ALT) levels >200 IU/L, **AND**
- (d) The absence of a more likely diagnosis
(evidence of acute or advanced liver disease due to pre-existing chronic HCV infection or other causes, such as alcohol exposure, other viral hepatitis, hemochromatosis, etc.)

Laboratory Criteria for Case Classification:

Confirmatory laboratory evidence:

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

Presumptive laboratory evidence:

- A positive test for antibodies to hepatitis C virus (anti-HCV) A positive test for antibodies to hepatitis C virus (anti-HCV)

Case Classification:

Acute, confirmed:

A case that meets clinical criteria and has confirmatory laboratory evidence, **OR**

A documented negative HCV antibody followed within 12 months by a positive HCV antibody test (anti-HCV test conversion) in the absence of a more likely diagnosis, **OR**

A documented negative HCV antibody **OR** negative hepatitis C virus detection test (in someone without a prior diagnosis of HCV infection) followed within 12 months by a positive hepatitis C virus detection test (HCV RNA test conversion) in the absence of a more likely diagnosis

Acute, probable

A case that meets clinical criteria and has presumptive laboratory evidence, **AND**

Does not have a hepatitis C virus detection test reported, **AND**

Has no documentation of anti-HCV or HCV RNA test conversion within 12 months.

Chronic, confirmed

A case that does not meet **OR** has no report of clinical criteria, **AND**

Has confirmatory laboratory evidence, **AND**

Has no documentation of anti-HCV or HCV RNA test conversion within 12 months.

Chronic, probable

A case that does not meet **OR** has no report of clinical criteria, **AND**

Has presumptive laboratory evidence, **AND**

Has no documentation of anti-HCV or RNA test conversion within 12 months, **AND**

Does not have an HCV RNA detection test reported.

Criteria to Distinguish a New Case from an Existing Case:

- A new **acute** case is an incident case that is over the age of 36 months and has not previously been reported as chronic hepatitis C or, if previously reported, has laboratory evidence of re-infection. Cases under the age of 36 months should be classified as Perinatal HCV unless the exposure mode is not perinatal (e.g., healthcare acquired).
 - A new **probable** case may be reclassified as confirmed if a positive HCV viral detection test is reported in the same reporting year (prior to CDC closing reporting for calendar year).
 - If evidence indicating resolution of infection is received after a confirmed acute or confirmed chronic case has been reported to CDC, the case report does not need to be modified as it was a confirmed case at the time of initial report.
 - For both **probable** acute and probable chronic cases, the presence of a negative HCV viral detection test result, in the absence of criteria that would allow for confirmation, indicates that a case should not be classified as probable acute or probable chronic and should not be reported to CDC.
 - A **confirmed acute** case may be classified as a **confirmed chronic** case if a positive HCV viral detection test is reported one year or longer after acute case onset. A confirmed acute case may not be reported as a probable chronic case.
 - Evidence for re-infection may include a case of confirmed chronic HCV infection that has at least two sequential negative HCV viral detection tests reported at least three months apart, indicative of treatment initiation and sustained virologic response, followed by a positive HCV viral detection test. (The timing between negative tests may change as standard of care for HCV treatment evolves.) Other evidence of reinfection may include a report of a new genotype on a case that has previously cleared a different genotype. Ensure that cases of HCV treatment failure are not classified as new cases of HCV infection to the extent that it can be determined.
 - Jurisdictions are also encouraged to track and classify possible re-infection cases that may have been previously reported to CDC as a confirmed or probable chronic HCV infection case. Jurisdictions tracking re-infection should also consider collecting data on prior treatment completion (when relevant and possible to document), treatment failure, change in reported genotype if that applies, and the known time frame for reinfection.
 - Kansas is not tracking resolved hepatitis C cases in which spontaneous clearance of infection or sustained viral response to treatment is suspected to have occurred before national notification or is known to have occurred after national notification.
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CASE DEFINITION – Perinatal (CDC, 2018)

Clinical Description for Public Health Surveillance (Perinatal):

No symptoms required. *Infants may range from asymptomatic to fulminant hepatitis.*

Laboratory Criteria for Case Classification (Perinatal):

- HCV RNA positive test between 2 to 36 months of age **OR**
- HCV genotype test between 2 to 36 months of age **OR**
- HCV antigen positive test between 2 to 36 months of age

Case Classification (Perinatal):

Confirmed: Positive HCV RNA, HCV antigen, or detectable HCV genotype at ≥ 2 months and ≤ 36 months of age and not known to exposed to HCV other than perinatal.

Classification of chronic cases by KDHE staff:

Because KDHE is not actively monitoring resolved hepatitis C cases in which spontaneous clearance of infection or sustained viral response to treatment has occurred, the following criteria will be used in classifying cases.

	Confirmed	Probable	Not a Case
HCV RNA or antigen detected with NO additional 'not detected' reports during the course of the active investigation.	X		
Antibody (S/CO or Total) with NO 'HCV RNA or antigen not detected' reports within the same MMWR year.		X	
Antibody (S/CO or Total) with a 'HCV RNA or antigen not detected' report within the same MMWR year.			X
Previously confirmed case that has a 'HCV RNA or antigen not detected' report after the investigation is closed.	If previously closed confirmed, stays confirmed*		

* This may occur if the doctor suspects there was a laboratory error or false positive and immediately rerun's the nucleic acid or antigen test.

LABORATORY ANALYSIS

KDHE laboratory limits testing resources to special clinics serving those at higher risk of acquiring HCV or sexually transmitted diseases.

- For additional information and/or questions, call (785) 296-1620.

Additional Notes on Processing Hepatitis Labs at the BEPHI

The majority of the laboratory reports received by the Bureau of Epidemiology and Public Health Informatics (BEPHI) deal with hepatitis diseases, and the majority of these are for Hepatitis C. A procedure is in place to ensure those reports requiring the local health departments most immediate attention are entered in a timely manner.

- Only those laboratory reports meeting set criteria will be entered into the state electronic disease surveillance system.
- Surveillance staff will only enter the anti-HCV laboratory reports into the state electronic surveillance system and assign them to counties of jurisdiction if the case is 25 years of age or younger or 65 years of age and older.
- The surveillance staff will not routinely enter anti-HCV positive labs individuals for between the ages of 25 years and 65 years.
- If a local health department requires entry of a laboratory report on a case between the ages of 25 years and 65 years – a request must be made directly to the KDHE surveillance staff.

EPIDEMIOLOGY

Hepatitis C virus (HCV) has a worldwide distribution. In the United States, an estimated 3.2 million people are chronically infected with 19,000 people infected each year (2006 estimates). The highest incidence of acute infection is among persons 20-39 years of age. Prevalence is higher among injection drug users, inmates, and those with hemophilia, on long-term hemodialysis or who have received blood or organ products prior to June 1992.

DISEASE OVERVIEW

A. Agent:

An enveloped RNA virus, genotypes (1- 6); type 1 most common in U.S.

B. Clinical Description:

Symptoms include fever, fatigue, dark urine (tea/cola colored), clay-colored stool, abdominal pain, appetite loss, nausea, vomiting, joint pain and/or jaundice, but nearly 80% of acutely infected people experience no symptoms. 75-85% of those infected, developed chronic infection usually diagnosed when anti-HCV is present and ALT levels remain elevated for more than 6 months. Of the chronically infected, 60-70% may develop liver disease, 5-20% may develop cirrhosis, and 1-5% may die of the consequences of chronic liver infection.

C. Reservoirs: Humans

D. Mode(s) of Transmission:

Transmitted primarily through large or repeated percutaneous exposures to infectious blood, such as injection drug use (currently the most common means of HCV transmission in the United States); receipt of donated blood, blood products, and organs (once a common means of transmission but now rare in the United States since blood screening became available in 1992); needle-stick injuries in healthcare settings; and birth to an HCV-infected mother.

HCV can also be spread infrequently through sex with an HCV-infected person (an inefficient means of transmission); sharing personal items contaminated with infectious blood, such as razors or toothbrushes (also inefficient vectors of transmission); and other healthcare procedures that involve invasive procedures, such as injections (usually recognized in the context of outbreaks).

E. Incubation Period:

Ranges from 2 weeks to 6 months; average 6-9 weeks.

F. Period of Communicability:

From one or more weeks prior to onset; may persist indefinitely with carrier state is common. Peak virus concentration correlates with ALT activity.

G. Susceptibility and Resistance:

Susceptibility is general; degree of immunity following infection is unknown.

H. Treatment

Acute HCV is not usually treated with medications but requires rest, adequate nutrition, and fluids. All chronic HCV patients should be immunized against Hepatitis A and Hepatitis B and additional treatment options should be discussed with a doctor who specializes in treating hepatitis.

NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

Suspected cases of Hepatitis C shall be reported within 24 hours, except if the reporting period ends on a weekend or state-approved holiday, the report shall be made by 5:00 p.m. on the next business day after the 24-hour period:

1. Health care providers and hospitals: report to the local public health jurisdiction
2. Local public health jurisdiction: report to KDHE-BEPHI (see below)
3. Laboratories: report to KDHE-BEPHI (see below)

**Kansas Department of Health and Environment (KDHE)
Bureau of Epidemiology and Public Health Informatics (BEPHI)**

Phone: 1-877-427-7317

Fax: 1-877-427-7318

Further responsibilities of state and local health departments to the CDC:

As a nationally notifiable condition, Hepatitis C cases require a ROUTINELY NOTIFIABLE report to the Center of Disease Control and Prevention (CDC).

1. ROUTINE reporting requires KDHE-BEPHI to file an electronic report for within the next reporting cycle.
 - KDHE-BEPHI will file electronic reports weekly with CDC.
2. **Local public health jurisdiction** will report information requested as soon as possible.

INVESTIGATOR RESPONSIBILITIES

- 1) [Report](#) all cases to the KDHE-BEPHI.
 - If the case has been **previously reported** to KDHE-BEPHI – no further follow-up is needed.
 - For all newly reported cases, continue with the following steps.
- 2) Contact medical provider to collect additional information and confirm diagnosis using the current [case definition](#).
 - Collect all information requested in [Step 1](#)) of case investigation.
 - Ensure that patient is aware of his/her diagnosis.
- 3) For the following, conduct a [case investigation](#) using the [Hepatitis C Report Form](#):
 - All **acute hepatitis infections**
 - All **newly diagnosed infections**
- 4) Follow-up with medical provider for all **perinatal cases**
- 5) As needed, conduct a [contact investigation](#) to identify additional cases.
- 6) Identify whether the source of infection is major public health concern.
- 7) Initiate control and prevention measures.
- 8) [Record](#) data, collected during the investigation, in the KS EpiTrax system under the data's associated [\[tab\]](#) in the case morbidity report (CMR).
- 9) As appropriate, use the disease [fact sheet](#) to notify individuals or groups.

STANDARD CASE INVESTIGATION AND CONTROL METHODS

- No additional follow-up is required for a previously reported chronic case.
- For other cases, the reason for testing will help identify acute and perinatal cases.
 - If an assigned “Chronic” case is determined to be an ACUTE case, the investigator should notify KDHE-BEPHI at 1-877-427-7317 to see if the case event should be changed to **Hepatitis C, Acute**.
- Risk assessments are required for **acute** and **newly diagnosed** * cases.

* When resources are limited, the priority should be to investigate **all** perinatal, acute cases and those chronic cases that are ≤ 25 years of age and ≥ 65 years of age.

Identification of newly diagnosed cases is IMPORTANT to recognizing outbreaks.

- **The physician sample fax, correctional facility fax, or a similar template should be used to investigate ALL cases. This includes cases the local investigator may not routinely follow-up with, for example cases between 26 and 64 years of age, in prison systems, or in federal healthcare systems.**

Case Investigation

1) **ALL CASES** (except for previously reported cases): Contact the medical provider who ordered testing of the patient and obtain the following information.

(Use the physician sample fax or correctional facility fax, as needed.)

- Collect patient’s demographics and contacting information (address, birth date, gender, race/ethnicity, primary language, and phone number(s))
- Record clinical information on [Clinical] Tab:
 - Onset date of earliest symptom for **acute cases only**.
 - Diagnosis date is the date of positive lab result
 - Hospitalizations, location, duration of stay, and reason
 - Death, including cause and date of death
 - Pregnancy status for females
- Record additional clinical information on [Investigation-Symptom] Tab
 - Reason for testing
 - Symptoms for acute cases only:
 - o jaundice (include jaundice onset date),
 - o dark urine, diarrhea, anorexia, abdominal pain, clay stools, fatigue, or other symptoms
 - Total Bilirubin levels for acute cases
 - ALT Liver enzymes levels (*with reference values and date of result*)
- For **chronic cases**: Record diagnosis year on [Investigation-Exposure] tab
- Examine laboratory testing reported on the [Laboratory]
 - o For probable HCV with only an anti-HCV antibody positive, determine if confirmation testing has been or will be ordered.
 - o If needed, obtain copies of lab reports needed for confirmation that have not been reported, scan, and attach to the CMR [Notes]
- Investigate epi-links among cases (clusters, household, co-workers, etc).
 - If the case had contact with person(s) who have/had Hepatitis C, determine if the other “cases” have been reported to the state:
 - o If found, record the previously reported record number in the record of the case you are investigating [Notes]
 - For suspected outbreak to Managing Special Situations Section.

Use dates that are within current MMWR year to allow proper reporting to CDC.

2) **Acute Cases and Newly Diagnosed Hepatitis C Cases**

Interview the patient to perform a risk assessment:

- Collect and record epidemiological information on **[Investigation]** tab:
 - Patient's occupation: medical/dental field, public safety officer, correctional facility association, group living arrangements and specifically list occupation
 - Examining occupation, record patient's potential contact with human blood, including frequency of direct contact.
 - Record any Place Exposure(s) by adding Exposure + Exposure
 - Review travel to identify where the infection was most likely imported from. (Indigenous / out-of-county, state, or U.S.)
- Review patient's activities under the **[Investigation-Exposure]** tab, including:
 - Contact with confirmed or suspect HCV case prior to onset.
 - Note the name and address of suspect case and his or her relationship to patient (sexual, household or other).
 - Investigate any [epi-linkage \(refer to step 1 above\)](#).
 - Number of male and female sex partners, the past 6 months.
 - Approximate number of sex partners during case's life.
 - Use any type of drugs or substances not legally prescribed?
 - If yes, were any injected.? Were any administered intranasally?
 - If yes, were any needles or equipment shared?
 - The last time substances were administered. (< or > 6 months)
 - Receipt of tattoo(s) or body piercing
 - If yes, what type of provider (commercial, private).
 - Was the procedure done in the last 6 months?
 - If yes, specify facility name and city.
 - Receipt of acupuncture or long-term hemodialysis.
 - Was the procedure done in the last 6 months?
 - If yes, specify facility name and city.
 - Ever received an organ transplant
 - If yes: year, organ, and facility, provider, and city where received.
 - Before 1992, received a blood transfusion.
 - Before 1987, received clotting factor concentrates.
 - Currently, use of blood monitoring equipment by finger-stick or lancet
 - If yes, was any testing equipment shared
 - In the past 6 months: any dental work or oral surgery, other surgery, or receipt of IV infusions or injections; specify facility name, provider name, city and procedure type.
 - Inquire on patient's last donation of blood products (***if the case was identified by a recent donation, ask about the donation prior to the most recent.***)
 - For any recent blood or plasma to that may not been identified by routine screening processes. Refer to [Managing Special Situations](#)
- Collect information on potential [contacts](#) that may require testing.
 - Investigate any [epi-linkage](#) or [outbreaks](#) as directed above under step 1.

3) **Perinatal Hepatitis C Cases**

- Notify physician to ensure proper testing occurs within appropriate time frame.
 - HCV RNA testing is recommended at 2 months to 36 months of age
 - Ideally specimen will be collected at infant's 1-year checkup when blood is being drawn for other routine tests.

Contact Investigation

- 1) Review the patient's occupation and activities that were collected during the case investigation and recorded on the **[Investigation]** tabs, especially during the period:
 - 2 weeks to 6 months prior to illness onset for acute cases identified with onset date,
 - 2 weeks to 12 months prior to test conversion for acute cases without onset, and
 - 6 months prior to first report for newly identified chronic cases.
- 2) At-risk contacts are defined as:
 - Individuals with mucosal or percutaneous exposure to blood of an infectious person (i.e., injecting drug users and accidental needle sticks),
 - Children born to HCV positive mothers.

Sexual and household contacts have a very limited risk of acquiring HCV ([infrequent modes of transmission](#)); post-exposure testing under normal circumstances is not recommended. (Refer to [Contact Management](#).)
- 3) If a risk of transmission exists, obtain the names and contact information of those who are considered at-risk contacts.
- 4) Create a line listing of contacts at-risk of developing disease. Refer to **[Contact]** tab.
- 5) Contact notification will be required for at-risk contacts in a manner that respects the privacy of the case and contacts.
- 6) Follow-up with at-risk contacts as instructed in [Contact Management](#).
- 7) At risk-contacts should be identified and referred for medical evaluation.

Isolation, Work and Daycare Restrictions

Persons should not be excluded from work, school, play, child care, or other settings based on 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.

There are no recommendations to restrict professional activities of healthcare workers with HCV infection. Those recommendations in place for all health-care workers should be followed: strict aseptic technique and standard precautions with appropriate hand washing, use of protective barriers, and proper use and disposal of needles and sharps.

- Refer to further guidance in the "SHEA Guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus, and/or Human Immunodeficiency Virus" (access at: www.ijstor.org/stable/10.1086/650298)

Hemodialysis settings do have hemodialysis-specific infection-control practices to prevent the transmission of HCV, refer to [Managing Special Situations](#).

- Source: www.cdc.gov/mmwr/PDF/RR/RR4719.pdf

Case Management

- 1) Provide information on preventing further harm to the liver, on the risks of transmitting HCV, and recommend medical evaluation for chronic liver disease and possible treatment (if needed, refer for Hepatitis A or B vaccination).
- 2) **For acute cases**, follow-up to determine if infection resolved or became chronic.
- 3) **For perinatal cases**, follow-up to determine outcome of PCR testing
 - If positive – provide information on hepatitis C infection and treatment options
- 4) For patients with long-term steady partners, recommend they discuss testing with their partner. If the partner tests positive, appropriate counseling and medical evaluation should occur.
- 5) Patients with identified risk factors of injection drug use and/or multiple sex partners should also be evaluated for Hepatitis B and HIV.

Contact Management

- 1) If a contact listing was created because of the high possibility of disease transmission, follow-up with the listed contacts.
- 2) There is no prophylaxis available for contacts; refer at-risk contacts for medical evaluation that includes appropriate testing, counseling and follow-up.
- 3) Provide education on avoiding further exposures and to ensure proper medical care is obtained and precautions taken if symptoms develop.
- 4) Children born to HCV positive mothers should be tested, as follows:
 - HCV RNA at 2 months of age (preferred), or
 - Anti-HCV (if used) should not be ordered until 18 months of age.
- 5) For additional guidance on persons for whom HCV testing is recommended (i.e., household contacts, non-injecting drug user contact) refer to the CDC's [Recommendations for Prevention and Control of HCV Infection and HCV-Related Chronic Disease](#). (MMWR 1998;47(RR-19): [pp. 20-30])
- 6) Report the final disposition of each contact investigated on the [Contact] tab.

Environmental Measures

If a health or long-term care facility or a facility that provides tattoo, piercing, cosmetic or alternative medical procedures is implicated in transmission, an inspection of the facility should be coordinated through the proper regulatory agency.

Contact KDHE at 1-877-427-7317 for assistance.

Education

- 1) Provide counseling on the importance of appropriate medical care.
- 2) Patients should be advised on the risk of transmitting HCV to others, specify:
 - Not to donate blood, semen, body organs or tissue.
 - Not to share personal items that may be contaminated with blood and cover all cuts and sores.
 - Never share fingerstick devices with another person, and when possible, blood glucose meters should not be shared. If meters must be shared, this can only occur if cleaned and disinfected after every use, per manufacturer's instructions.
 - Insulin pens and other medication cartridges and syringes should never be used for more than one person.
 - Drug users should be encouraged to stop using drugs and advised not to share needles, syringes or other drug paraphernalia.
 - Although sexual transmission is rare, condom use should be discussed and encouraged especially if there are multiple partners to consider.
- 3) Encourage patients on the necessity of protecting their liver; instruct to:
 - Avoid alcohol, as consumption aggravates HCV infection.
 - No new medicines, including over the counter, should be used without the consent of a physician.
 - Hepatitis A and B vaccines should be given.
- 4) HCV-positive women do NOT need to avoid pregnancy or breastfeeding.
- 5) Distribute and use fact sheets as necessary.
- 6) Refer to the CDC website (www.cdc.gov/hepatitis) for further information.

MANAGING SPECIAL SITUATIONS

A. Outbreak Investigation:

Outbreak Definition: The occurrence of ≥ 2 cases of Hepatitis C in association with a common exposure is considered an outbreak.

- Notify KDHE immediately, 1-877-427-7317.
- Active case finding will be an important part of any investigation.

Further guidance on investigating outbreaks including Hepatitis B cases that are suspected to be related to healthcare delivery can be found at:

www.cdc.gov/hepatitis/Outbreaks/index.htm.

B. Needle-stick and Similar Exposures:

- Refer to Kansas Regulation [28-1-23 Management of Occupational Exposures](#) and follow the facility's "Bloodborne Pathogen Exposure Protocol."
- Persons who suffer such injuries should have a baseline blood sample collected followed by testing again at 6 months.
- No prophylaxis is available.

C. Case Is a Recent Blood or Plasma Donor:

If the case has donated blood or plasma ≤ 3 months prior to onset of symptoms, notify KDHE at 1-877-427-7317 with the relevant information about the blood bank or plasma center and necessary identification information (e.g., date, identifiers, etc.) so that the agency that received the blood or plasma may be notified and any unused product can be recalled.

D. Chronic hemodialysis settings:

Hemodialysis-center precautions are more stringent than standard precautions; intensive efforts must be made to educate new staff and reeducate existing staff regarding hemodialysis-specific infection-control practices. Along with routine standard precautions for the care of all hemodialysis patients:

- Glove use is required when touching patients or hemodialysis equipment.
- Patients should have specific dialysis stations assigned to them, and chairs and beds should be cleaned after each use.
- Sharing among patients of ancillary supplies such as trays, blood pressure cuffs, clamps, scissors, and other non-disposable items should be avoided.
- Non-disposable items should be cleaned or disinfected between uses.
- Medications and supplies should not be shared among patients.
- Do not use medication carts.
- Medications should be prepared and distributed from a centralized area.
- Clean and contaminated areas should be separated (e.g., handling and storage of medications and hand washing should not be done in the same or an adjacent area where used equipment or blood samples are handled).
- Supplies, instruments, and medications are not shared among patients before thorough disinfection.

Appropriate use of hemodialysis-center precautions should prevent transmission of HCV among chronic hemodialysis patients, and isolation of HCV-positive patients is not necessary or recommended.

DATA MANAGEMENT AND REPORTING TO THE KDHE

- A.** Accept the case assigned to the LHD and record the date the LHD investigation was started on the [\[Administrative\]](#) tab.
- B.** Organize and collect data, using appropriate questionnaires, case listings (spreadsheets), and investigation forms, including:
- Acute Hepatitis C case: [Hepatitis C Form](#)
 - Chronic Hepatitis C case: [Hepatitis C Form](#) – especially:
 - Symptoms Section: reason for testing;
 - Pregnancy information is important for all female cases.
 - Chronic Hepatitis C case, [previously reported](#) – no investigation necessary:
 - If there is a discrepancy, with the spelling of the name or the DOB, the local investigator will need to investigate to identify if the case is a previously reported case or is actually a new case.
 - Investigators can collect and enter all required information directly into EpiTrax [\[Investigation\]](#), [\[Clinical\]](#), and [\[Demographics\]](#) tabs without using the paper forms.
 - During outbreak investigations, refer to guidance from a KDHE epidemiologist for appropriate collection tools.
- C.** Report data collected during the investigation via EpiTrax.
- Verify that all data requested on the applicable forms has been recorded on an appropriate EpiTrax [\[tab\]](#), or that actions are completed for a case lost to follow-up as outlined below.
 - Some data that cannot be reported on an EpiTrax [\[tab\]](#) may need to be recorded in [\[Notes\]](#) or scanned and attached to the record.
 - Paper report forms do not need to be sent to KDHE after the information is recorded in EpiTrax. The forms should be handled as directed by local administrative practices.
- D.** If a case is lost to follow-up, after the appropriate attempts have been made:
- Indicate ‘lost to follow-up’ on the [\[Administration\]](#) tab with the number of attempts to contact the case recorded.
 - Record **at least** the information that was collected from the medical records.
 - Cases identified because of blood or plasma donation: mark reason for testing as “Blood/organ donor screening” and symptomatic as “No”
 - Record a reason for ‘lost to follow-up’ in [\[Notes\]](#).
- E.** After the requirements listed under [Case Investigation](#) have been completed, record the “Date LHD investigation completed” field located on the [\[Administrative\]](#) tab.
- Record the date even if the local investigator’s [Case](#) or [Contact Management](#) for the contact is not “Complete”.
- F.** Once the entire investigation is completed, the LHD investigator will click the “Complete” button. This will trigger an alert to the LHD Administrator, so they can review the case before sending to the state.
- The LHD Administrator will then “Approve” or “Reject” the CMR.
 - Once a case is “Approved” by the LHD Administrator, BEPHI staff will review the case to ensure completion before closing the case.

Review the [EpiTrax User Guide, Case Routing](#) for further guidance

Note:

- Laboratory reports (without evidence of an acute infection) are entered as “Hepatitis C Infection, Chronic.”
 - Information from the investigation may result in changing the event to “Hepatitis C, Acute”.
- For cases reported as confirmed acute and greater than 12 months later are determined to have converted to chronic,
 - The initial “Hepatitis C, Acute” event will remain and
 - A second event “Hepatitis C Infection, Chronic” will be created (deep copy). The record number for the first event will be noted under the new event.
 - The “Hepatitis C Infection will be considered “confirmed” – no further investigation is needed if the Hepatitis C, Acute investigation was completed.
- Considering Hepatitis cases identified/reported in a previous reporting year that were not “confirmed” and were not reported to CDC as “probable” – if a lab results are received in the current year confirming the case, they will be reclassified as “Confirmed” and the **date of diagnosis** on the [Clinical] tab entered as the date the most recent lab was collected.
 - The Year of Diagnosis on the [Investigation-Exposure] tab can remain as the earliest year diagnosed.

ADDITIONAL INFORMATION / REFERENCES

- A. Treatment / Differential Diagnosis:** American Academy of Pediatrics. Red Book: Report of the Committee on Infectious Disease, 30th Edition. Illinois, Academy of Pediatrics, 2015.
- B. Epidemiology, Investigation and Control:** Heymann, D., ed., Control of Communicable Diseases Manual, Washington, DC, American Public Health Association, 2015.
- C. Case Definitions:** www.cdc.gov/nndss/
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- F. Additional Information (CDC):** www.cdc.gov/hepatitis

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