Hepatitis A Virus Investigation Guideline

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  • Fact Sheet
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Attachments can be accessed through the Adobe Reader’s navigation panel for attachments. Throughout this document attachment links are indicated by this symbol: when the link is activated in Adobe Reader it will open the attachments navigation panel. The link may not work when using PDF readers other than Adobe or when opening the document in a web browser.

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# Revision History:

<table>
<thead>
<tr>
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<th>Comments</th>
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<tbody>
<tr>
<td>07/2018</td>
<td>05/2018</td>
<td>Update Contact Management – IG dosage.</td>
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<tr>
<td>05/2018</td>
<td>01/2016</td>
<td>Updated notification section with revised regulations. Edits to case investigation and fact sheet. Modified overall format.</td>
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<tr>
<td>01/2016</td>
<td>12/2014</td>
<td>Because of the CDC 2016 Definition, the following sections were updated: Case Definition, Laboratory Analysis, and Data Management.</td>
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<tr>
<td>11/2013</td>
<td>08/2012</td>
<td>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.</td>
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<tr>
<td>08/2012</td>
<td>09/2011</td>
<td>Case definition changed to CDC 2012 version. Added comment under case investigation on identifying symptoms of acute hepatitis / newly diagnosed cases for <strong>ALL</strong> reported cases. Added new reporting forms. Updated fact sheet.</td>
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<tr>
<td>02/2012</td>
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<td>Removed references to KS-EDSS. Updated to CDC 2012 Case Definition.</td>
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<tr>
<td>09/2011</td>
<td>01/2010</td>
<td>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 &lt;35y.) Added physician letter.</td>
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CASE DEFINITION (CDC 2012)  
Clinical Description for Public Health Surveillance:  
- 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 aminotransferase (alanine aminotransferase or aspartate aminotransferase) levels.

Laboratory Criteria for Case Classification:  
- Immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV) positive

Case Classification:  
- Confirmed:  
  - Case that meets the clinical case definition and is laboratory confirmed or  
  - Case that meets the clinical case definition and occurs in a person who has an epidemiologic link with a person who has laboratory confirmed hepatitis A (i.e., household or sexual contact of an infected person during the 15-50 days before the onset of symptoms)

KDHE definitions for data management:  
- Probable: A case with no clinical information that is IgM positive only.
- Suspect:  
  - A laboratory report with a positive total Hepatitis A Immunoglobulin (total anti-HAV) with no further clinical information.
  - A clinical compatible case without epi-link or laboratory confirmation

LABORATORY ANALYSIS  
Specimens are not required to be sent to the State Public Health Laboratory (KHEL), but they can test for hepatitis A. Prior to testing, the Bureau of Epidemiology and Public Health Informatics (BEPHI) must be contacted at 1-877-427-7317.

- Specimen: Blood, 3-5 ml in clot separator tubes, or the separated serum
- Timing of specimen collection, during acute phase of illness:  
  - IgM Anti-HAV is detected 5-10 days before onset of illness and can be detected up to 6 months after illness onset.
  - Total Anti-HAV antibody is detected early on in illness onset and will be detected for the rest of the patient’s life. Positive Total Anti-HAV tests may represent either recent or remote hepatitis A infection. If signs of acute hepatitis are present, IgM Anti-HAV tests should be ordered.
- Positive lab results in asymptomatic individuals could indicate:  
  - Asymptomatic acute infection, as jaundice will occur in:  
    - < 10% of children < 6 years  
    - 40%-50% of children age 6–14 years  
    - 70%-80% of persons >14 years  
  - Previous hepatitis A infection with prolonged IgM anti-HAV  
    - Testing positive more than 1 year after infection has been reported
  - False positive result, which are most likely to occur in a patient with no symptoms of acute hepatitis and those who are older.

- For additional information on collection or transport, call KHEL at (785) 296-1620.
EPIDEMIOLOGY

Hepatitis A has a worldwide distribution. In countries where sanitation is poor, infection occurs at an early age; adults are usually immune, and outbreaks are rare. In developed countries, disease transmission can occur in daycare settings with diapered children and among household and sexual contacts of acute cases. At-risk groups include injection drug users, men who have sex with men (MSM), and travelers visiting endemic countries. 15%–30% secondary attack rates have been reported in households, with higher rates of transmission occurring in households with infected children. Attack rates among of patrons exposed to HAV-infected food handlers are generally low.

DISEASE OVERVIEW

A. Agent:
Hepatitis A virus, an RNA virus in the picornavirus family.

B. Clinical Description:
Abrupt onset, with fever, malaise, anorexia, nausea, abdominal discomfort and, sometimes, diarrhea. Jaundice, dark urine and clay-colored stool follow a few days later. Infections range from asymptomatic to disabling illness that may last several months but is seldom fatal and not chronic. Typically, symptom severity increases with age and duration of infection is several weeks. Prolonged, relapsing symptoms may occur for up to 6 months to 1 year in about 15% of cases. Clinically indistinguishable from other types of hepatitis and must be diagnosed with laboratory tests.

C. Reservoirs: Humans

D. Mode(s) of Transmission:
Direct and indirect person-to-person spread via the fecal-oral route. Rarely, blood-borne transmission can occur during the viremic phase of the disease.

E. Incubation Period:
Range 15-50 days; average 28-30 days.

F. Period of Communicability:
Most infectious from 1-2 weeks before symptom onset (jaundice or elevated liver enzymes) to about 2 weeks after non-jaundice symptom onset or one week after onset of jaundice. The greatest amount of viral shedding occurs 2 weeks prior to symptom onset. Up to 10% of persons with hepatitis A may experience a biochemical and/or clinical relapse during the 6 months after acute illness, and virus can be shed in stool during relapses.

G. Susceptibility and Resistance:
Susceptibility is general. Immunity after infection probably lasts for life.

H. Treatment
No specific therapy is available. Supportive care.
(Average incubation = 28-30 days; range 15-50 days.)

NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

Suspected cases of Hepatitis A (IgM antibody positive results only) 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, ensuring that the electronic form is completed within 3 days.
INVESTIGATOR RESPONSIBILITIES

Note: Begin investigation as soon as possible. Control measures must be started within 3 days of receiving a report of acute Hepatitis A.

1) **Report** all Hepatitis A cases to the KDHE-BEPHI.

2) Contact medical provider to collect additional information and confirm diagnosis using current **case definition**. For all diagnosed cases:
   - Collect all information requested in **Step 1** of case investigation.
   - Ensure that case/proxy is aware of the diagnosis.

3) Continue the **case investigation** within 1 day of notification of a case and complete the investigation within 3 days of the notification.

4) Conduct **contact investigation** to identify at-risk contacts and other cases.

5) Identify whether the source of infection is a **major public health concern** and report concerns immediately to KDHE at 1-877-427-7317
   - Food handler, daycare, or a direct patient care provider involved.
   - Immunoglobulin will be needed for prophylaxis
   - Outbreak

6) Initiate any needed control and prevention measures.
   - The earlier prophylaxis is administered the more effective it is at preventing illness. At >2 weeks after exposure, illness may not be prevented, but vaccination can still protect against future exposures.

7) **Record** data, collected during the investigation, in the KS EpiTrax system under the data’s associated [tab] in the case morbidity report (CMR).

8) As appropriate, use the **notification letter(s)** and the disease **fact sheet** to notify the case, contacts and other individuals or groups.

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<thead>
<tr>
<th>Form Name</th>
<th>Purpose</th>
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<tr>
<td><strong>Rapid Assessment – Hepatitis A</strong></td>
<td>To assist with screening of suspect Hepatitis A patients and collection of initial information important to case investigation.</td>
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<tr>
<td><strong>Hepatitis A Sample Questionnaire</strong></td>
<td>Shown to be useful in the investigation of past outbreaks of Hepatitis A; can be modified to meet the needs of the investigator.</td>
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<tr>
<td><strong>KDHE Hepatitis A Supplemental Reporting Form</strong></td>
<td>Contains all data requested in the EpiTrax surveillance system. For official reporting to the KDHE. (Data collected is reported electronically.)</td>
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STANDARD CASE INVESTIGATION AND CONTROL METHODS

Case Investigation

1) Contact the medical provider who ordered testing of the patient and obtain the following information.
   • Obtain clinical information on:
     - **Reason for testing.** [Investigation-Symptoms]
     - **Liver enzymes** levels at diagnosis *(ALT and AST with reference values of upper limit of normal and **date of result**).* [Investigation-Symptoms]
     - Earliest acute symptom **onset** and **diagnosis date** on the [Clinical] tab.
     - Jaundice, if noted: record date of **jaundice onset.** [Investigation-Symptoms]
     - Any **symptoms**: jaundice, dark urine, diarrhea, anorexia, abdominal pain, clay stools, fatigue, nausea, vomiting, or other symptoms. [Investigation-Symptoms]
     - Examine laboratory testing. [Laboratory]
       o If needed, obtain copies of lab reports needed for confirmation that have not been reported, scan, and attach to the CMR. [Notes]
       o For positive total Hepatitis A antibody tests, further testing is required only if the patient is a symptomatic, acute hepatitis case with no testing for anti-HAV IgM performed; but if the "Reason for Testing" and lack of acute symptoms indicate that the patient is not an acute case, end the investigation.
   • Collect patient’s demographics and contacting information (address, birth date, gender, race/ethnicity, primary language, and phone number(s)). [Demographic]
   • Through a credible immunization registry or medical record: obtain information on history of hepatitis A vaccine or immune globulin receipt. [Investigation-Vaccination]
   • Record **hospitalizations**: location, duration of stay, and reason. [Clinical]
     - After saving the record, indicate whether the reason for hospitalization was for Hepatitis A. This question will only appear after the CMR is saved.
   • Record outcomes: survived or death (with cause and **date of death**). [Clinical]
     - After saving the record, indicate whether the reason for death was for Hepatitis A. This question will only appear after the CMR is saved.
   • Record pregnancy status. [Clinical]

2) Interview the patient to perform a risk assessment:
   **Note:** The **onset date** to use for the investigation into the source of exposure is the onset date of earliest symptom *(If onset date is unclear, use the collection date of first abnormal serum aminotransferase.)*
   • Review activities 2-6 weeks prior to onset date, recording information on the following: [Investigation-Exposure]
     - Contact with confirmed or suspect HAV case.
       o Note the name and address of suspect case and his or her relationship to patient (sexual, household or other).
       o Investigate any **epi-linkage (refer to step 3).**
     - Number of male and female sex partners, the past 2-6 weeks.
     - The use any type of substances illegally.
       → If yes, were any injected.
- Travel outside of the USA or Canada; specify countries.
- Travel of those residing in the household during the 2-6 weeks prior to onset who travelled outside of the USA or Canada during the 3 months prior to symptom onset.

- Review travel associations to identify where the infection was most likely imported from. (Indigenous / out-of-county, state, or U.S.) [Epidemiological]

- Record epidemiological information for:
  - Patient's occupation: medical/dental field, public safety officer, correctional facility association, group living arrangements and specifically list the occupation. [Epidemiological]
  - Examining occupation, record patient's potential contact with human blood, including frequency of direct contact. [Epidemiological]
  - Record any Place Exposure(s) (where illness could have been acquired). [Epidemiological]

- Collect information from case for the Contact Investigation. (See below).

3) 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:
     - Search EpiTrax for the possible case.
     - 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.

Contact Investigation

1) Review the patient's occupation and activities that were collected during the case investigation and recorded on the [Epidemiological] and [Investigation-Exposure] tab, especially during the communicable period of 2 weeks before illness onset until 1 week after jaundice onset or, with no evidence of jaundice, 14 days after onset of any acute symptoms. Special attention should consider:
   - Daycare association as attendee, employee or household contact to attendee or employee (note dates, location, and activities).
   - Occupations and any other at-risk activities, i.e. food handling, childcare and direct patient care with dates, descriptions, and locations.

2) At-risk contacts are defined as:
   - Close personal contacts:
     - Household and sexual contacts.
     - Persons who have shared illicit drugs with an infectious case.
     - Other types of ongoing, close contact are evaluated case-by-case.
   - High-risk contacts: those more likely to experience adverse outcomes from infection (i.e., elderly) and whose daycare association, occupation, or personal activities could result in further transmission of the virus.
   - Daycare / Childcare Facility Contacts:
     - Daycare serving only children who are toilet trained or who are all over 2 years of age: Only consider the direct caregivers and room/classmates of the case
     - Include all employees and attendees of a daycare if one of the
following conditions occur:
(1) Non-toilet trained attendees,
(2) Additional employee or child attendee is found to be infected, or
(3) Household contacts of two or more separate attendees are infected.
- Include all employees, attendees, and household contacts of diapered attendees of a daycare in which outbreak recognition is delayed by ≥3 weeks.
- Contacts of infected food handlers at daycares:
  (1) Individuals who work the same shift in a daycare kitchen with an infectious food handler are also considered contacts.
  (2) Daycare attendees and employees who eat food prepared by an infected food handler, especially if the food handler handled ready-to-eat foods with bare hands or worked while experiencing diarrhea.

- Schools, Hospital/Long-Term Care Facilities and Other Work Setting:
  - Investigate contacts only when there is epidemiological evidence of transmission in the school, healthcare facility, or work setting.
  - At-risk contacts are those who share similar exposure activities with case (e.g. common source food/drink) or those who received oral hygiene care or oral medication from the index case.

- Food Service Contacts:
  - Co-workers who work the same shift as the infected food handler.
  - Patrons of the establishment of an infected food handler if (1) the food handler worked while infectious and (2) had poor personal hygiene or diarrhea while working and (3) had the opportunity to have bare-hand contact with ready-to-eat food or if facility’s sanitation practices are deficient and the employee worked while infectious.

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. [Contact]
- Collect information on each primary contact’s hepatitis A immunization status, age, and any symptoms of hepatitis.
- Collect information on the contact’s occupation.
- Note any daycare attendance. (Include facility name and location.)
- Note any high-risk contacts (food-handler, daycare attendee).

5) Follow-up symptomatic contacts as suspect cases. A contact meeting the clinical case definition is considered a confirmed.

6) Institute control measures for food employee contacts as indicated under Isolation, Work and Daycare Restrictions.

7) Follow-up with household and close contacts (especially high-risk contacts) as recommended under Contact Management.
Isolation, Work and Daycare Restrictions

**K.A.R 28-1-6 for Hepatitis A virus:**

**Control of Cases**
- For each person hospitalized with a case, contact precautions shall be followed for the duration of the acute illness.
- Each person with a case shall be excluded from working as a food employee, health care worker, and attending or working in a childcare facility for 14 days following the onset of illness or seven days following the onset of jaundice.

**Control of Contacts**
- Each susceptible contact shall be excluded from working as a food employee, health care worker, and attending or working in a child care facility for 28 days from last exposure to an infectious case unless a prophylactic dose of immune globulin (IG) or a hepatitis A vaccine is administered within 14 days of exposure to a person with an infectious case.

**Case Management**

1) Educate the patient on measures to avoid disease transmission.

2) If there is concern that the patient will not follow enteric precautions and may put others at risk of developing disease, consider restrictions or exclusion from at-risk settings that may not be specified in K.A.R. 28-1-6.

3) Follow-up to assure compliance with recommended restrictions or exclusions especially if a case is involved in the care of young children, healthcare, or food handling.

**Contact Management**

1) If a contact listing was created because of the high possibility of disease transmission, follow-up with the listed contacts. [Contact]

2) Protection or prophylaxis: Contacts who are not immune to hepatitis A should be administered a single dose of single-antigen hepatitis A vaccine or immune globulin (IG) (0.10 ml/kg\(^1\)), as soon as possible\(^2\).
   - For healthy persons ages 12 months - 40 years, single-antigen hepatitis A vaccine at the age-appropriate dose is preferred.
   - For persons >40 years, IG is preferred; vaccine can be used if IG cannot be obtained.
   - For children aged <12 months, immunocompromised persons, persons who have had chronic liver disease diagnosed, and persons for whom vaccine is contraindicated, IG should be used.

\(^1\) Verify dosage using package insert; it was previously updated on July 2017.

\(^2\) The earlier prophylaxis is administered the more effective it is at preventing illness. At >2 weeks after exposure, illness may not be prevented, but vaccination can still protect against future exposures.
3) Hepatitis A vaccine and IG can be provided by the KDHE for contacts, after:
   • For vaccine: the contact's insurance status is assessed and KDHE is notified at 1-877-427-7317 and approves prior to vaccine administration.
     – KDHE will reimburse or provide adult vaccine only if the contact has no insurance or is unable to pay for the vaccine.
   • For IG: A request for IG is sent to and approved at 1-877-427-7317.
     – For IG requests, be prepared to provide the contact's weight.
     – Note: KDHE will not provide IG for pre-exposure prophylaxis. If IG is required before travel, it must be ordered through a private provider.

4) Provide education on avoiding further exposures and to ensure proper medical care is obtained and precautions taken if symptoms develop.

5) Any food handler that has been exposed to HAV and has been placed on restrictions at work must receive additional instruction on:
   • Specific requirements of working while under restrictions;
   • Hepatitis A symptoms and preventing the transmission of infection;
   • Proper hand washing procedures; and
   • Protecting ready-to-eat food from contamination by bare hand contact.

6) Symptomatic contact: Considered a confirmed case; initiate any work or daycare restrictions. Encourage to seek medical evaluation.

7) Follow-up of contacts may be needed to assure no disease transmission.

8) Report the number of susceptible contacts who received vaccination(s) or IG.

9) Report any adverse event that occurs after the administration of a vaccine to Vaccine Adverse Events Reporting System at http://vaers.hhs.gov/index

10) Report the final disposition of each contact investigated. [Contact]

Environmental Measures

None, unless a commercial food service facility, daycare center, health care facility or public water supply is implicated. In which case, coordinate with the proper regulatory agency.

Education

1) Advise cases and contacts on measures to avoid future exposures.
   • Instruct patient and family members on measures to prevent fecal-oral transmission.
   • Emphasize hand washing, cleaning fingernails and personal hygiene, especially after defecation and diaper changing and before food handling.
   • Contacts should be knowledgeable of signs and symptoms of hepatitis A in children and adults and understand that persons may be infected and infectious to other without any associated illness.

2) Use the "Public Health Fact Sheet on Hepatitis A" to assist with education.
MANAGING SPECIAL SITUATIONS

A. Outbreak Investigation:

Outbreak Definition: The occurrence of ≥ 2 cases of Hepatitis A 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 A cases can be found at: [www.cdc.gov/hepatitis/Outbreaks/index.htm](http://www.cdc.gov/hepatitis/Outbreaks/index.htm).

- Consider an outbreak when the expected number of cases has been exceeded or there is linkage of multiple cases by space and time.
  - Most outbreaks are community-based and involve identified risk groups, including: daycare staff and attendees, men having sex with men, and IV drug users.
  - Common source outbreaks also occur, often involving contamination of food or beverage by an infected food handler.
- A foodborne disease outbreak is defined in the following ways:
  - > 2 individuals (from different households) who experience a similar illness after eating a common food or food from a common place.
  - An unexplained, unexpected increase of a similar illness and food is a likely source.
- Notify KDHE immediately, 1-877-427-7317.
- Organize and maintain all data related to outbreak:
  - Construct and maintain Case Listing which includes:
    - Record number,
    - Name, DOB (or age) and any other specific demographics,
    - Symptoms; onset date and time; recovery date and time
    - Source of exposure (i.e., record number, setting, classroom),
    - Specimen collection date and lab results,
    - Case status (i.e., confirmed, probable, suspect)
  - Construct and maintain a Contact Listing which includes:
    - Name, DOB (or age) and contact information
    - Type of exposure
    - Evaluation for illness and immunity (note referrals or pending labs)
    - Any food handling, childcare or health care associations
    - Any exclusions or restrictions
    - Any prophylaxis or reason for no receipt
    - Results of follow-up after 50 days post-exposure of those not receiving prophylaxis
  - Use tracking tools (logbooks, chalkboards or databases) to record actions needed for each suspected case (i.e., deliver stool kit, call)
  - All epidemiological data will be recorded and reported through EpiTrax.
- Identify population(s) at risk of infection based on the scope and spread of the outbreak; use the information collected in case investigations to define:
  - Person: who is or is at-risk of becoming ill (age, gender, occupations).
- **Place**: where are the cases or contacts (i.e. classrooms, address) and to what settings or activities are they associated.
- **Time**: when did it start and is it still going on.

**Enhance surveillance and perform active case finding:**
- Maintain active surveillance with medical providers serving the affected communities for two incubation periods from last confirmed case.

**Outbreak control:**
- Target efforts on those population(s) identified as at risk.
- Establish protocols for control measures necessary for all likely situations (i.e., exposure in child care center, school).

**Contact investigation and prophylaxis** may require extensive resources and planning, depending on the number of at-risk contacts.

- Coordinate with the public information officer (PIO).

**B. Daycare Worker or Attendee:**

For one case, proceed with the following activities:

- Coordinate the following activities with the local daycare inspector.
- Interview the operator and inspect attendance records to identify any suspect cases among staff, attendees or household contacts of attendees.
- Ensure restrictions and/or exclusions for cases are initiated as outlined under “Isolation, Work and Daycare Restrictions”.

If >1 case among attendees/workers or in >2 households of center attendees:

*Illness among adult staff members or household contacts is often the first indication of daycare outbreaks since many HAV in young children is asymptomatic. In the absence of plausible alternative hypotheses, two or more reported cases from different households linked to the same facility should be investigated as an outbreak associated with a daycare facility.*

1) Contact KDHE; refer to recommendations for “Managing Special Situation – Outbreak Investigations”.

2) Susceptible staff members and attendees should receive PEP:
   - Centers that do not provide care to children who wear diapers may have PEP administered to only classroom contacts of the index case.
   - Centers that do provide care to children in diapers should have PEP administered to all staff members and attendees.

3) In outbreak settings with hepatitis A cases in >3 families, PEP should also be considered for members of households that have attendees in diapers.

4) Affected facilities should be discouraged from accepting new children for 50 days after onset of the last case, unless the child has been vaccinated. Transferring children to other facilities should also be discouraged during this period.

5) Conduct ongoing surveillance for hepatitis-like illness among households connected to the facility for 50 days after onset of the last case.

**Note:** All children in a child care facility, family day care home or preschool or child care program operated by a school are required to have hepatitis A immunizations. Reference K.A.R. 28-1-20 for immunization requirements for the current year; on-line at: [www.kdheks.gov/immunize/schoolInfo.htm](http://www.kdheks.gov/immunize/schoolInfo.htm)
B. Case Is a Food handler or Restaurant Is Implicated:

1) Contact the Kansas Department of Agriculture (KDA) Division of Food Safety and Lodging at (785) 296-5600.

2) The assigned local food facility inspector will perform the following:
   - Interview the manager to identify other possible cases among staff or patrons within the past 6 weeks.
   - Inquire into any recent complaints from other patrons.
   - Execute any work restrictions for ill food handlers.
   - Report findings to KDHE (or local health department, if requested).

3) The local health department will perform or coordinate the following:
   - Collection of serum samples from any staff or patrons with history of jaundice illness within the past 2 weeks.
   - Ensure proper work restrictions have been executed.
   - If needed, approve reinstatement of food handler(s) to full duties after necessary conditions have been met.

In addition, with a food handler case or >1 case associated to the facility:

1) An assigned local food inspector will also perform the following:
   - A thorough inspection of the establishment.
   - Evaluation of all food handlers for current or recent hepatitis A.
   - Instruct the facility operator to call the health department if new cases occur in staff members within the 6 weeks after the last exposure to the index case.

2) The local health department will also perform or coordinate the following:
   - Work with the assigned local food inspector to evaluate the risk to patrons if food handlers are/were infectious.
     - The risk to patrons is determined by the following:
       1) A food handler worked while infectious,
       2) Had the opportunity to have bare-hand contact with ready-to-eat food, and
       3) Had poor personal hygiene or diarrhea

   Note: Past and current inspection reports of a facility’s sanitation practices may be used to evaluate the personal hygiene of workers.

   In settings, in which >1 employee is infected or if repeated patron exposures to HAV might have occurred, such as institutional cafeterias, stronger consideration of PEP use might be warranted.

   - Initiate a patron contact investigation if warranted based risk.
   - Assure that vaccine and IG are available for appropriate prophylaxis.
     - Co-workers who work the same shift as an infected food handler require prophylaxis.
     - Patron prophylaxis depends on risk of exposure and if the patrons can be identified and treated within 2 weeks of exposure.
   - Initiate an outbreak investigation and notify KDHE-BEPI, if:
     - The associated cases are from different households, or
     - There are additional cases within the six-week period.
   - Consult with the Local Health Officer and the state epidemiology staff before going public to allow for the review of any press release.
C. Public Gathering Implicated:
   1) Sources may include food contaminated by a food handler or an
      contaminated food source.
   2) Conduct active case finding; ask about recent illness among food handlers.
   3) If a food establishment or distributor is implicated as the source of infection
      refer above to “Managing Special Situations – Case Is a Food handler or
      Restaurant Is Implicated” or
   4) If an outbreak is suspected refer “Managing Special Situations – Outbreak
      Investigations”.

D. Health Care Setting:
   Nursing home: Crowded communal living conditions and age-related risk
   factors including incontinence may allow transmission of enteric pathogens.
   The elderly are also at risk for more severe illness from hepatitis infections.
   1) Coordinate investigation efforts through nursing home administrator.
   2) Consider food and medication handling practices.
   3) Kansas Department of Aging should be notified if a nursing home, adult
      care, or long-term care facility is involved in an outbreak.

E. Residential Facility or Institutional Outbreaks:
   1) Special measures may be required, including separate housing for cases
      and new admissions, and vigorous program of supervised hand washing
   2) Groups that include non-toilet trained or young children, those who are
      mentally deficient and those without an adequate water or hand washing
      facilities are the most difficult to control.
   3) Coordinate efforts with institutional medical staff and appropriate regulatory
      agency. (For example, the State Department of Corrections should be
      notified of outbreaks involving state prisons.)
   4) Refer to “Managing Special Situations – Outbreak Investigations”.

F. Community Water Source Implicated:
   Consult with the State epidemiology staff when the investigation implicates that
   a community drinking water system.
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:
   - The Hepatitis A Form can be used to collect and enter required information.
   - Investigators can collect and enter all required information directly into EpiTrax [Investigation], [Clinical], [Demographics], and [Epidemiological] tabs without using the paper forms.
   - During outbreak investigations, refer to guidance from a KDHE epidemiologist for appropriate collection tools.

C. Report data collected in 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 to contact the case 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.
   - Record a reason for ‘lost to follow-up’ in [Notes].

E. After the steps 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 on the [Administrative] tab. This will trigger an alert to the LHD Administrator to review the case.
   - 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.
Forms to assist with Data Collection

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rapid Assessment – Hepatitis A</strong></td>
<td>To assist with screening of suspect Hepatitis A patients and collection of initial information important to case investigation.</td>
</tr>
<tr>
<td><strong>Hepatitis A Sample Questionnaire</strong></td>
<td>Shown to be useful in the investigation of past outbreaks of Hepatitis A; can be modified to meet the needs of the investigator.</td>
</tr>
<tr>
<td><strong>KDHE Hepatitis A Supplemental Reporting Form</strong></td>
<td>Contains all data requested in the EpiTrax surveillance system. For official reporting to the KDHE. (Data collected is reported electronically.)</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION / REFERENCES**


**C. Case Definitions:** [www.cdc.gov/nndss/](http://www.cdc.gov/nndss/)

**D. Prevention of Hepatitis A Through Active or Passive Immunization, CDC 2006:** [www.cdc.gov/mmwr/preview/mmwrhtml/rr5507a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5507a1.htm)

**E. Update: Prevention of Hepatitis A After Exposure to Hepatitis A Virus and in International Travelers. Updated Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2007:** [www.cdc.gov/mmwr/PDF/wk/mm5641.pdf](http://www.cdc.gov/mmwr/PDF/wk/mm5641.pdf)

**F. Pink Book:** Epidemiology and Prevention of Vaccine-Preventable Diseases. Available at: [www.cdc.gov/vaccines/pubs/pinkbook/default.htm](http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm)

**G. Manual for the Surveillance of Vaccine-Preventable Diseases:** Available at: [www.cdc.gov/vaccines/pubs/surv-manual/default.htm](http://www.cdc.gov/vaccines/pubs/surv-manual/default.htm)

**H. KDHE Viral Hepatitis:** [www.kdheks.gov/sti_hiv/hepatitis.htm](http://www.kdheks.gov/sti_hiv/hepatitis.htm)

**I. Additional Information (CDC):** [www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis)

**ATTACHMENTS**

To view attachments in the electronic version:

1. Go to <View>; <Navigation Pane>; <Attachments> – OR – Click on the “Paper Clip” icon at the left.
2. Double click on the document to open.