

Hepatitis A

Investigation Guideline

CONTENT:

VERSION DATE:

Investigation Protocol:

- Investigation Guideline 06/2010

Investigation Forms / Documentation Worksheets:

- Hepatitis A Rapid Assessment Worksheet 06/2010
- General Investigation Form(s) 06/2008
- Hepatitis A Supplemental Form 04/2009

Supporting Materials found in attachments:

- Sample Letter, Parent Notification 04/2009
- Sample Letter, Physician Total Antibody Result 06/2010
- Fact Sheet 04/2009

Revision History:

Date	Replaced	Comments
06/2010	04/2009	Format changes to Investigation Protocol. Additional guidance on handling Hepatitis A Total antibody results, including addition of form letter to ordering providers. Clarification of onset date. Addition of VAERS guidance, chart of events and rapid assessment form.
04/2009	10/2008	Updated supplemental form, sample letter, and fact sheet

Hepatitis A

Disease Management and Investigation Guidelines

CASE DEFINITION (CDC 2000)

Clinical Description for Public Health Surveillance:

- An acute illness with a) discrete onset of symptoms (such as nausea, vomiting, abdominal pain and diarrhea) and b) jaundice or elevated serum aminotransferase levels.

Laboratory Criteria for Case Classification:

- Immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV)

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).
- Probable: A case with no clinical information that is laboratory confirmed only. (KDHE definition for data management)

LABORATORY ANALYSIS

Specimens are not required to be sent to the State Public Health Laboratory (KHEL), but they are equipped to test for hepatitis A. Prior to testing, the Bureau of Surveillance and Epidemiology (BSE) 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
 - Persons who test positive more than 1 year after infection have been reported
 - False positive result, which are most likely to occur in a patients:
 - With no symptoms of acute hepatitis.
 - Who are older

For additional information concerning collection or transport, call the KHEL at (785) 296-1620 or refer to guidance at www.kdheks.gov/labs/lab_ref_guide.htm,

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 from infected children. Attack rates among 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 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. Virus can be shed during relapses.

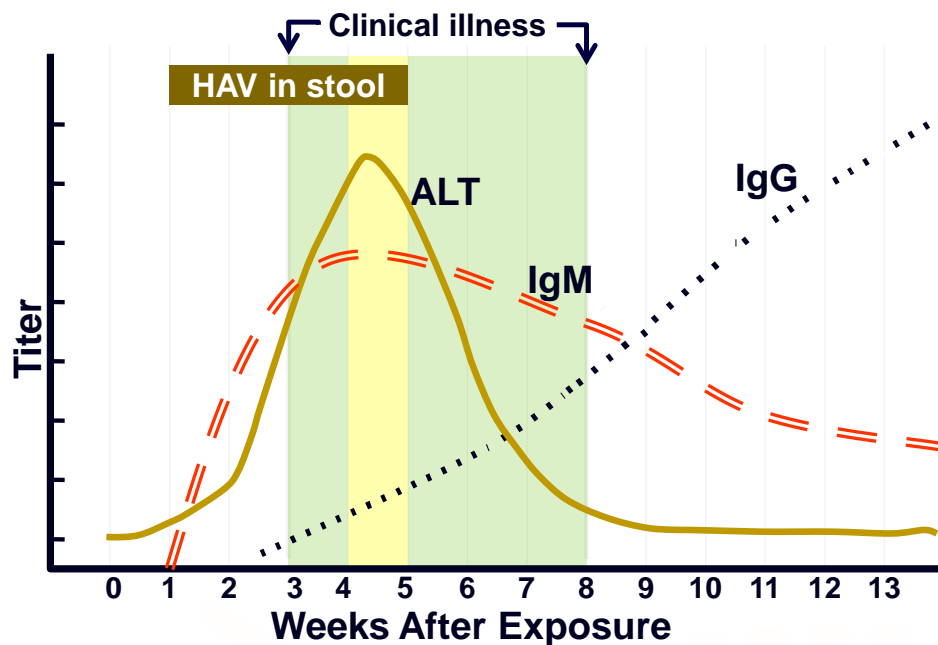
G. Susceptibility and Resistance:

Susceptibility is general. Immunity after infection probably lasts for life.

H. Treatment:

No specific therapy is available. Supportive care.

Events in HAV Infection



INVESTIGATOR RESPONSIBILITIES

Note: Begin investigation as soon as possible. Control measures must be completed within 2 weeks of a contact's last exposure to an infectious case.

- 1) Use current [case definition](#), to confirm diagnosis with the medical provider.
 - If a total anti-HAV result was obtained, the Hepatitis A Total Antibody form letter may be useful in contacting the medical provider.
- 2) Conduct [case investigation](#) to identify potential source of infection.
- 3) Conduct [contact investigation](#) to locate additional cases and/or contacts.
- 4) Identify whether the source of infection is major public health concern,
 - Outbreak, daycare, food-handler or direct patient care provider.
- 5) Initiate control and prevention measures to prevent spread of disease.
- 6) Report all confirmed, probable and suspect cases to the KDHE at 1-877-427-7317 within 24 hours of the initial report.
- 7) Report all suspect outbreaks immediately to KDHE at 1-877-427-7317.
- 8) Complete and report all information requested on the [General Investigation Form](#) and [Hepatitis A Supplemental Form](#).
 - Use the [rapid assessment worksheet](#) to assist with initial investigation.
 - For food associations, also use the [Enteric Supplemental Form](#).
- 9) As appropriate, use the notification letter(s) and the disease fact sheet to notify the case, contacts and other individuals or groups.

Note: The [Hepatitis A Rapid Assessment Worksheet](#) is a tool provided to the local investigator to assist with the initial investigation.

STANDARD CASE INVESTIGATION AND CONTROL METHODS

The [Hepatitis A Rapid Assessment Worksheet](#) may be helpful during initial steps.

Case Investigation

- 1) Contact the medical provider who reported or ordered testing of the case.
 - Obtain information from the provider or medical chart.
 - Obtain the reason for testing.
 - If the patient is pregnant, obtain the due date.
 - If patient hospitalized, obtain medical records, including admission notes, progress notes, lab report(s), and discharge summary.
 - Record any acute hepatitis symptoms or signs, especially:
 - Jaundice (If present, record **date of jaundice onset**)
 - Elevated serum aminotransferase (i.e. AST or SGOT; ALT or SGPT).
 - Clay-colored bowel movements or dark colored urine
 - Nausea, vomiting, abdominal pain, fever, fatigue, joint pain
 - With no jaundice, **onset date** of earliest acute symptom or, if unavailable, **collection date** of first elevated aminotransferase serum
 - Collect case's demographic data and contacting information (birth date, county, sex, race/ethnicity, address, phone number(s))
 - Record hospitalizations: reason, location and duration of stay
 - Record outcomes: survived or date of death
 - **For positive total Hepatitis A antibody tests:**
 - Further testing is required if patient is a symptomatic, highly suspected case and testing for anti-HAV IgM has not been done.
 - If the "Reason for Testing" indicates that the patient is not a case, report findings, classify as "not a case" and end the investigation.
- 2) Through a credible immunization registry or medical record: obtain information on history of hepatitis A vaccine or immune globulin receipt.
- 3) Interview the case to determine source, risk factors and transmission settings:
 - Onset date used for the investigation is date of jaundice onset or, if no jaundice is present, use the onset date of earliest reported symptom
 - If acute symptoms were present without jaundice but the onset date is unclear, use the collection date of first abnormal aminotransferase serum)
 - Activities 2-6 weeks prior to onset date:
 - Number of male and female sex partners.
 - Injection of non-prescribed drugs or use of non-injected street drugs
 - Travel history, include dates and places
 - Exposed to a jaundiced person or a diagnosed or suspected case
 - o List the name and address of contact or suspect case.
 - o Note relationship (non-sexual household member, sex partner, child cared for by case, babysitter of case, playmate or other).
 - Attended or worked at a daycare
 - If no other risks identified, consider restaurant / public gatherings and/or food history 2-6 weeks prior to onset. Use the Enteric Supplemental Form, and consider "Shellfish" as an "Other Food Item".

- Inquire if anyone in household has travelled outside of the U.S. or Canada in 3 months before symptom onset.
 - Collect information from case for the [Contact Investigation](#). (See below).
- 4) Investigate epi-links among cases (clusters, household, co-workers, etc).
- Determine if possible sources have been previously reported to the state; use the name and birth date of possible sources to search the KS-EDSS.
 - Highly suspected sources, that have not previously been reported should be investigated as a suspect case and reported.
 - For suspected [outbreaks](#) refer to Managing Special Situations section.

Contact Investigation

- 1) Inquire about case's activities and occupations during the communicable period two weeks before illness onset until one week after jaundice onset or, with no evidence of jaundice, 14 days after onset of other symptoms.
 - Record any daycare association (including nursery school or baby-sitting group), either as attendee, employee or household contact to attendee or employee. Include dates, location and activities.
 - Record occupations and any other at-risk activities, i.e. food handling, childcare and direct patient care with dates, descriptions, and locations.
- 2) Consider case's occupation and activities, identify the following contacts:
 - Close personal contacts:
 - Household and sexual contacts
 - Persons who have shared illicit drugs with an infectious case.
 - Persons with other types of ongoing, close personal contact evaluated on a case-by-case basis (e.g., regular babysitting of infectious child).
 - 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:
 - All direct caregivers and room/classmates of the case in a daycare with only children who are toilet trained or who are all over 2 years of age.
 - All employees and attendees of a daycare with non-toilet trained attendees, if one or more employee or child is infected or if household contacts of two or more separate attendees are infected.
 - All employees, attendees and household contacts of diapered attendees of a daycare in which outbreak recognition is delayed by ≥ 3 weeks.
 - Individuals who work the same shift in a daycare kitchen with an infectious food handler are also considered contacts.
 - 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:
 - At-risk contacts of a case **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 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) Identify and create a line listing of primary contacts
 - 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)
 - 4) Follow-up symptomatic contacts as suspect cases. A contact meeting the clinical case definition is considered a confirmed.
 - 5) Institute control measures for food employee contacts as indicated under [Isolation, Work and Daycare Restrictions](#).
 - 6) 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:

- Each infected person shall be excluded from food handling, patient care, and any occupation involving the care of young children and the elderly until 14 days after the onset of illness.
- 2) School attendee cases should be excluded from school for 1 week following onset of jaundice or, with no evidence of jaundice, 14 days after onset of other symptoms.
 - 3) The 2005 Kansas Food Code (see [Table1](#)) requires the exclusion of a food employee who is jaundiced with the onset of jaundice within the last 7 calendar days (unless there is written medical documentation that jaundice is not caused by HAV or other fecal-orally transmitted infection); diagnosed with HAV within 14 calendar days from onset of any illness symptoms, or within 7 calendar days from onset of jaundice; or diagnosed with HAV without developing symptoms.
 - 4) Co-workers of a case that refuse hepatitis A vaccine or IG - if indicated - are not allowed to handle food for 50 days from last day of contact with case.

Case Management

- 1) Educate case on measures to avoid disease transmission
- 2) Follow-up to assure compliance with recommended restrictions especially if a case is involved in the care of young children, the elderly or patients, or in food handling
- 3) If necessary, refer to the [Kansas Community Containment Toolbox](#) for templates concerning isolation measures.

Contact Management

- 1) 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) (0.02 ml/kg), as soon as possible *.
 - For health 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 can not 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.

* 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.
- 2) Hepatitis A vaccine and IG are provided by the KDHE for contacts*.
 - Contacts' insurance status should be assessed prior to vaccine administration. KDHE will reimburse adult vaccine if the contact has no insurance or is unable to pay for the vaccine.
 - To request vaccine and/or IG contact the Epidemiologist-on-call at 1-877-427-7317. (For IG, be prepared to provide contact's weight.)
 - KDHE will not provide IG for any pre-exposure prophylaxis. If IG is required before travel, it must be ordered through a private provider.
- 3) Provide education on avoiding further exposures and to ensure proper medical care is obtained and precautions taken if symptoms develop.
- 4) Any food handler that has been exposed to HAV and has been placed on restriction 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.
- 5) Symptomatic contact: Considered a confirmed case; initiate any work or daycare restrictions. Encourage to seek medical evaluation.
- 6) Follow-up of contacts may be needed to assure no disease transmission.
- 7) Report the number of susceptible contacts who received the recommendation for vaccination(s) or IG.
- 8) Report any adverse event that occurs after the administration of a vaccine to Vaccine Adverse Events Reporting System at <http://vaers.hhs.gov/index>.

Case Management

- 1) Educate case on measures to avoid disease transmission
- 2) Follow-up to assure compliance with recommended restrictions especially if a case is involved in the care of young children, the elderly or patients, or in food handling
- 3) If necessary, refer to the [Kansas Community Containment Toolbox](#) for templates concerning isolation measures.

Contact Management

- 1) 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) (0.02 ml/kg), as soon as possible *.
 - For health 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 can not 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.

* 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.
- 2) Hepatitis A vaccine and IG are provided by the KDHE for contacts*.
 - Contacts' insurance status should be assessed prior to vaccine administration. KDHE will reimburse adult vaccine if the contact has no insurance or is unable to pay for the vaccine.
 - To request vaccine and/or IG contact the Epidemiologist-on-call at 1-877-427-7317. (For IG, be prepared to provide contact's weight.)
 - KDHE will not provide IG for any pre-exposure prophylaxis. If IG is required before travel, it must be ordered through a private provider.
- 3) Provide education on avoiding further exposures and to ensure proper medical care is obtained and precautions taken if symptoms develop.
- 4) Any food handler that has been exposed to HAV and has been placed on restriction 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.
- 5) Symptomatic contact: Considered a confirmed case; initiate any work or daycare restrictions. Encourage to seek medical evaluation.
- 6) Follow-up of contacts may be needed to assure no disease transmission.
- 7) Report the number of susceptible contacts who received the recommendation for vaccination(s) or IG.

Environmental Measures

- 1) 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 on the following activities:
 - Inspection of the facility.
 - Collection of food, drink or water samples
- 2) Consult Section 5 of [KDHE Foodborne Illness and Outbreak Investigation Manual, March 2008 Edition](#) for further assistance.

Education

- 1) Advise cases and contacts on measures to avoid future exposures.
 - Instruct patient and family members on measures to prevent fecal-oral transmission.
 - Emphasis on 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:

- 1) 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 foodhandler.
- 2) 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.
- 3) Notify KDHE immediately, 1-877-427-7317.
- 4) Consult [KDHE Foodborne Illness and Outbreak Investigation Manual](#) for outbreaks involving food.
- 5) Organize and maintain all data related to outbreak:
 - Construct and maintain **Case Listing** which includes:
 - o KS-EDSS ID,
 - o Name, DOB (or age) and any other specific demographics,
 - o Symptoms; onset date and time; recovery date and time
 - o Source of exposure (i.e., case ID, setting, classroom),
 - o Specimen collection date,
 - o Lab results,
 - o Case status (i.e., confirmed, probable, suspect)

- Construct and maintain a **Contact Listing** which includes:
 - o Name, DOB (or age) and contact information
 - o Type of exposure
 - o Evaluation for illness and immunity (note referrals or pending labs)
 - o Any food handling, childcare or health care associations
 - o Any exclusions or restrictions
 - o Any prophylaxis or reason for no receipt
 - o Results of follow-up after 50 days 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)
- 6) 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. (infectious/exposure period(s), incubation period(s))
- 7) 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.
- 8) 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).
- 9) Contact investigation and prophylaxis may require extensive resources and planning depending on the number of at-risk contacts.
- 10) Media attention can become intense. Coordinate with the local public information officer (PIO) and/or KDHE PIO.

B. Daycare Worker or Attendee:

For one case, proceed with the following activities:

- 1) Coordinate the following activities with the local daycare inspector.
- 2) Interview the operator and inspect attendance records to identify any suspect cases among staff, attendees or household contacts of attendees.
- 3) 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:

- 1) 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.
- 2) Contact KDHE; refer to recommendations for “Managing Special Situation – Outbreak Investigations”.
- 3) Unvaccinated 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.
- 4) In outbreak settings with hepatitis A cases in ≥ 3 families, PEP should also be considered for members of households that have attendees in diapers.
 - 5) Affected facilities should be discouraged from accepting new children for 50 days after onset of the last case, unless IG is given prior to admission or the child has been vaccinated. Transferring children to other facilities should also be discouraged during this period.
 - 6) 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

B. Case Is a Food handler or Restaurant Is Implicated:

If one case or suspect case is identified among staff or if >1 case or suspected case is associated with the facility, a thorough inspection of the establishment is indicated. For a suspected outbreak or potential outbreak situation, notify the KDHE and refer to the “[Outbreak Investigation](#)” section.

- 1) Coordinate the following activities with the local food facility inspector and the Kansas Department of Agriculture (KDA) as needed.
 - KDA Division of Food safety and Lodging regulates grocery stores, convenience stores, restaurants, schools, senior meal sites, mobile food units, lodging facilities, food wholesalers and warehouses, food processors and food manufacturers.
 - Refer to *Section II* of the [KDHE Foodborne Illness and Outbreak Investigation Manual](#) for further assistance on additional facilities.
- 2) Interview the manager and identify possible case(s) among staff:
 - All food handlers at the establishment should be evaluated to determine whether any have, or recently have had, hepatitis A.
 - Co-workers who are considered contacts and are susceptible to HAV should receive appropriate prophylaxis or be restricted or excluded from work for 50 days.
 - The disease investigator and food service manager should monitor other food handlers at risk for hepatitis A for one incubation period (i.e., 50 days) after the last exposure to the index case.
 - If other food handlers are found to be infected, the risk to patrons should be carefully evaluated.
- 3) The risk to patrons is determined by the following:
 - (1) The 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 more than one 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.
- 4) The need for prophylaxis patrons is determined based on risk of exposure and if the patrons can be identified and treated within 2 weeks of exposure.
 - 5) 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.
- 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:

- 1) 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.
 - Coordinate investigation efforts through nursing home administrator.
 - Consider food and medication handling practices.
 - 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:

- 1) Consult with the State epidemiology staff when the investigation implicates that a community drinking water system.

DATA MANAGEMENT AND REPORTING TO THE KDHE

- A.** Laboratory reports received by KDHE-BSE staff
- Positive Hepatitis A IgM laboratory reports are processed within one hour of receipt at the KDHE. Local Health Departments will be notified by phone of each new Hepatitis A IgM+ case.
 - Positive Hepatitis A total antibody reports are processed within two days of receipt at KDHE. Total antibody reports will not result in a phone call to local health departments.
- B.** Local Health Departments organize, collect and report data utilizing the
- General Investigation Form(s);
 - Hepatitis A Supplemental Form and, if used,
 - Enteric Disease Supplemental Form (for cases needing food history).
- C.** Local Health Departments report data electronically via KS-EDSS or by fax:
- At a minimum, data collected during the investigation that helps to confirm or classify a case.
 - All information collected on the General Investigation and supplemental form(s).

ADDITIONAL INFORMATION / REFERENCES

- A. **Treatment / Differential Diagnosis:** American Academy of Pediatrics. 2009 Red Book: Report of the Committee on Infectious Disease, 28th Edition. Illinois, Academy of Pediatrics, 2009.
- B. **Epidemiology, Investigation and Control:** Heymann. D., ed., Control of Communicable Diseases Manual, 19th Edition. Washington, DC, American Public Health Association, 2008.
- C. **Case Definitions:** CDC Division of Public Health Surveillance and Informatics, Available at: www.cdc.gov/ncphi/diss/nndss/casedef/case_definitions.htm
- D. **Quarantine and Isolation:** Kansas Community Containment Toolbox. www.kdheks.gov/cphp/download/CDCSOG_Attachment1.0.0.pdf
- E. **Kansas Regulations/Statutes Related to Infectious Disease:** www.kdheks.gov/epi/regulations.htm
- F. **KDHE Foodborne Illness and Outbreak Investigation Manual:** Available at: www.kdheks.gov/epi/download/kansas_foodborne_illness_manual.pdf
- G. **KDHE Control of Enteric Disease Outbreaks in Childcare Facilities:** www.kdheks.gov/epi/download/Enteric_Disease_in_Day_care_centersver4.pdf
- H. **KDHE Foodborne Illness Resources:** www.kdheks.gov/epi/foodborne.htm
- I. **Prevention of Hepatitis A Through Active or Passive Immunization, CDC 2006:** www.cdc.gov/mmwr/preview/mmwrhtml/rr5507a1.htm
- J. **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
- K. **Pink Book:** Epidemiology and Prevention of Vaccine-Preventable Diseases. Available at: www.cdc.gov/vaccines/pubs/pinkbook/default.htm
- L. **Manual for the Surveillance of Vaccine-Preventable Diseases:** Available at: www.cdc.gov/vaccines/pubs/surv-manual/default.htm .
- M. **Additional Information (CDC):** www.cdc.gov/health/default.htm

Hepatitis A Rapid Assessment Form for the Local Investigator

(Please refer to the Disease investigation Guideline for additional guidance.)

SYMPTOMS(S)	Unk.	No	Yes	Onset Date	Listing of Acute Symptoms:
Acute hepatitis symptoms?					
Jaundice					

LABORATORY TESTING				Collection Date	Results
Elevated Liver Enzymes					
Total IgM/IgG					Positive / Negative / Indeterminate
Serology IgM					Positive / Negative / Indeterminate

COMPLICATIONS				Date(s)	Location(s)
Hospitalized					
Died					
Other				If yes, specify:	

TRAVEL / VISITOR HISTORY				Date Arrive	Date Depart	Location (To / From)
Out of USA						
Out of State						
Out of County						

INITIAL EPI INFORMATION				Date(s)	Location(s)
Food handler					
Daycare / nursery association					
Contact w/ Hep A case					
Household contact of any of above					

Collect additional information, as requested, on the Hep A Supplemental Form Epidemiologic Information section.

Hepatitis A Vaccination History				Date(s)	Type	Manufacturer	Lot
Dose 1							
Dose 2							
If not vaccinated, reason:							

ACTIVITIES DURING INFECTIOUS PERIOD

(Mark onset date (day 0) on 3rd row of chart)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Kansas Disease Investigation Guidelines

General Investigation Form

Investigation Information		
Case Type: <input type="checkbox"/> Human Case <input type="checkbox"/> Non-human Case	Disease Name: _____	
Classification: <input type="checkbox"/> Suspect <input type="checkbox"/> Probable <input type="checkbox"/> Confirmed	KS-EDSS Investigation ID: _____	
Outbreak: <input type="checkbox"/> Yes <input type="checkbox"/> No	Outbreak Name: _____	Outbreak #: _____
Onset Date: _____	Diagnosis Date: _____	Report Date: _____
Assigned to (Investigator): _____	Patient Died: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient Information		
Name Type: <input type="checkbox"/> Default/Common <input type="checkbox"/> Legal <input type="checkbox"/> Maiden <input type="checkbox"/> Nickname		
Last: _____	First: _____	Middle: _____
Street: _____	City/State: _____	Zip: _____
Evening Phone #: _____	Daytime Phone #: _____	
Sex: <input type="checkbox"/> Failure to Report <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Other <input type="checkbox"/> Transexual <input type="checkbox"/> Unknown		
Race: <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> White <input type="checkbox"/> Unknown		
Hispanic / Latino Ethnicity: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Date of Birth: _____	Age: _____	Age Unit: <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years
Parent Information (if under 18)		
Last: _____	First: _____	Middle: _____
Street: _____	City/State: _____	Zip: _____
Evening Phone #: _____	Daytime Phone #: _____	
Work / Occupation or School / Grade		
Worksites / School: _____		
Occupations / Grade: _____		
Travel History		
1st	Destination: _____	Depart Date: _____ Return Date: _____
2nd	Destination: _____	Depart Date: _____ Return Date: _____
3rd	Destination: _____	Depart Date: _____ Return Date: _____
4th	Destination: _____	Depart Date: _____ Return Date: _____

Supplemental Laboratory Report Form

Lab Reports

Laboratory Name: _____

Lab Report Date: _____

Ordering Provider Name: _____

Phone: _____

Facility: _____

Specimen Accession Number: _____

Specimen Collection Date: _____

Organism Name: _____

Organism Species: _____

Organism Serogroup: _____

Organism Serotype: _____

PFGE Results

Pattern 1 KS: _____

Other State: _____

CDC: _____

Pattern 2 KS: _____

Other State: _____

CDC: _____

Pattern 3 KS: _____

Other State: _____

CDC: _____

Additional Results Information

Reported Test Name:

Coded Result:

Text Result:

Numeric Result:

Comments:

Supplemental Contact Form

Contacts

Last: _____ **First:** _____ **Middle:** _____

Street: _____ **City/State:** _____ **Zip:** _____

Evening Phone #: _____ **Daytime Phone #:** _____ **E-mail:** _____

Sex: Failure to Report Female Male Other Transexual Unknown

Race: American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White Unknown

Hispanic / Latino Ethnicity: Yes No

Date of Birth: _____ **Age:** _____ **Age Unit:** Days Weeks Months Years

Worksites / School: _____

Occupations / Grade: _____

Exposure Information

Contact Type: Household Sexual Other: _____ **Partner / Cluster Code:** _____

Date of First Exposure: _____ **Date of Last Exposure:** _____ **Frequency:** _____

Nature of Exposure: _____ **Comments:** _____

Testing and Treatment Information

Clinic Code: _____ **Examination Date:** _____

Examination Test: _____ **Examination Result:** _____

Prophylaxis/empiric treatment date: _____ **Drug / Dosage:** _____

Provider (Name / Facility): _____

Disposition and Diagnosis Information

Initiation Date: _____ **Disposition Date:** _____ **Disposition:** _____

Diagnosis: _____ **Referral Type:** Patient Provider **Post-test Counseled :** Yes No

Currently Assigned To: _____ **Follow-up Date:** _____

Risk Factors

Pregnant: Yes No **If Yes, # of Weeks:** _____

Risk factors for complications in contact: None Pregnant Woman HIV Seropositive Unimmunized Index case is a super-spreader

Child younger than 5 Age > 65 Otherwise immunosuppressed (s/p transplant, high dose steroids, etc)

Supplemental Laboratory Report Form

Lab Reports

Laboratory Name: _____

Lab Report Date: _____

Ordering Provider Name: _____

Phone: _____

Facility: _____

Specimen Accession Number: _____

Specimen Collection Date: _____

Organism Name: _____

Organism Species: _____

Organism Serogroup: _____

Organism Serotype: _____

PFGE Results

Pattern 1 KS: _____

Other State: _____

CDC: _____

Pattern 2 KS: _____

Other State: _____

CDC: _____

Pattern 3 KS: _____

Other State: _____

CDC: _____

Additional Results Information

Reported Test Name:

Coded Result:

Text Result:

Numeric Result:

Comments:

Supplemental Contact Form

Contacts

Last: _____ **First:** _____ **Middle:** _____

Street: _____ **City/State:** _____ **Zip:** _____

Evening Phone #: _____ **Daytime Phone #:** _____ **E-mail:** _____

Sex: Failure to Report Female Male Other Transexual Unknown

Race: American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White Unknown

Hispanic / Latino Ethnicity: Yes No

Date of Birth: _____ **Age:** _____ **Age Unit:** Days Weeks Months Years

Worksites / School: _____

Occupations / Grade: _____

Exposure Information

Contact Type: Household Sexual Other: _____ **Partner / Cluster Code:** _____

Date of First Exposure: _____ **Date of Last Exposure:** _____ **Frequency:** _____

Nature of Exposure: _____ **Comments:** _____

Testing and Treatment Information

Clinic Code: _____ **Examination Date:** _____

Examination Test: _____ **Examination Result:** _____

Prophylaxis/empiric treatment date: _____ **Drug / Dosage:** _____

Provider (Name / Facility): _____

Disposition and Diagnosis Information

Initiation Date: _____ **Disposition Date:** _____ **Disposition:** _____

Diagnosis: _____ **Referral Type:** Patient Provider **Post-test Counseled :** Yes No

Currently Assigned To: _____ **Follow-up Date:** _____

Risk Factors

Pregnant: Yes No **If Yes, # of Weeks:** _____

Risk factors for complications in contact: None Pregnant Woman HIV Seropositive Unimmunized Index case is a super-spreader

Child younger than 5 Age > 65 Otherwise immunosuppressed (s/p transplant, high dose steroids, etc)

Hepatitis A Supplemental Form

Kansas Department of Health and Environment

Epidemiologic Case History

* indicates required fields

Case Type* <i>Human Case Non Human Case</i>	Classification* <i>Confirmed Not a Case Probable Suspect Deleted Unknown</i>
--	---

Supplemental Form Status <i>Not Done Form Complete Form in Progress Form Approved Form Sent to CDC</i>
--

Report Date* <small>mm/dd/yyyy</small>
--

Date Investigation Started <small>mm/dd/yyyy</small>
--

Patient Demographic Information

* indicates required fields

Last Name*	First Name*	Middle Name	Name Type*	Age
-------------------	--------------------	--------------------	-------------------	------------

Age Unit <i>Days Weeks Unknown Months Years</i>	Date of Birth <small>mm/dd/yyyy</small>
---	---

Race* <small>(Check all that apply)</small>				
<i>American Indian or Alaska Native</i>	<i>Asian</i>	<i>Black or African American</i>		
<i>Native Hawaiian or Other Pacific Islander</i>	<i>White</i>	<i>Unknown</i>		

Ethnicity* <i>Hispanic or Latino Not Hispanic or Latino Unknown</i>

Sex* <i>Failure to Report Female Male Other Transexual Unknown</i>

Street Address

City	County	State	Zip
-------------	---------------	--------------	------------

Evening Phone <small>###-###-####</small>	Daytime Phone <small>###-###-####</small>
---	---

Occupation

Person Providing Report

Name of Reporting Facility*

Clinical and Diagnostic Data

Reason for Testing:

(Check all that apply)

Symptoms of acute hepatitis
Screening of asymptomatic patient with reported risk factors
*Screening of asymptomatic patient with no risk factors
(e.g., patient requested)*
Prenatal screening
Other _____
Evaluation of elevated liver enzymes
Blood / organ donor screening
Follow-up testing for previous marker of viral hepatitis
Unknown

Clinical Data	Was the patient	Was the patient pregnant?	Due date:
	Was the patient jaundiced?		mm/dd/yyyy
Is the patient symptomatic?	Yes No Unknown	Yes No Unknown	
<i>Yes No Unknown</i>	<i>Yes No Unknown</i>	<i>Yes No Unknown</i>	

Was the patient hospitalized for hepatitis?	Death	If Death, Date
<i>Yes No Unknown</i>	<i>Yes No Unknown</i>	mm/dd/yyyy

Epidemiologic Information

During the 2 - 6 weeks prior to onset of symptoms:

Did the patient eat raw shellfish?	Was the patient a food handler?	Was the patient a contact of a person with confirmed or suspected hepatitis A virus infection?
<i>Yes No Unknown</i>	<i>Yes No Unknown</i>	<i>Yes No Unknown</i>

Case ID of epi-linked case	If yes, was the contact:
	<i>Household member (non-sexual) Sex partner Child cared for by this patient</i> <i>Babysitter of this patient Playmate Other (specify) _____</i>

Was the patient a child or employee in a day care center, nursery, or preschool?	Was the patient a household contact of a child or employee in a day care center, nursery, or preschool?
<i>Yes No Unknown</i>	<i>Yes No Unknown</i>

If yes for either of those, was there an identified hepatitis A case in the child care facility?	Name of facility:
<i>Yes No Unknown</i>	

Please ask both of the following questions regardless of the patient's gender. In the 2-6 weeks before symptom onset:

How many male sex partners did the patient have?	How many female sex partners did the patient have?
<i>0 1 2-5 >5 Unknown</i>	<i>0 1 2-5 >5 Unknown</i>

What was the patient's sexual preference?
<i>Hetrosexual Homosexual Unknown Bisexual</i>

Did the patient inject drugs not prescribed by a doctor?	Did the patient use street drugs, but not inject?
<i>Yes No Unknown</i>	<i>Yes No Unknown</i>

Did the patient travel outside of the U.S.A. or Canada in the 2-6 weeks before symptom onset?
<i>Yes No Unknown</i>

If so, where?
<i>South/Central America Africa Caribbean Middle East Asia/South Pacific Australia Other Unknown</i>

Duration of stay:
<i>1-3 days 4-7 days > 7 days Unknown</i>

Is the patient suspected as being part of a common-source outbreak?
<i>Yes No Unknown</i>

If Yes, was the outbreak:
<i>Foodborne - assoc. with an infected food handler</i>
<i>Foodborne - NOT assoc. with an infected food handler (specify food item) _____</i>
<i>Waterborne</i>
<i>Source not identified</i>

Vaccination History

Has the patient ever received the hepatitis A vaccine? <i>Yes No Unknown</i>		If Yes, how many doses of hepatitis A vaccine did the patient receive? <i>One Dose Two or More Doses</i>
If Yes, what year was the last dose received? <i>YYYY</i>	Has the patient ever received immune globulin? <i>Yes No Unknown</i>	If Yes, when was the last dose received? <i>mm_YYYY</i>

Supporting Materials

- Sample Letter, Parent Notification
- Sample Letter, Physician for Total Antibody
- Fact Sheet

Supporting Materials are available under attachments:

CLICK HERE TO VIEW ATTACHMENTS

Then double click on the document to open.

Other Options to view attachments:

Go to <View>; <Navigation Pane>; <Attachments>

– OR –

Click on the “Paper Clip” icon on the right.