

# Hepatitis A

## Investigation Guideline

**CONTENT:**

**VERSION DATE:**

**Investigation Protocol:**

- Investigation Guideline 11/2012
- Hepatitis A Rapid Assessment Worksheet 06/2010

**Supporting Materials found in attachments:**

- Hepatitis A Questionnaire (Sample) 11/2012
- Sample Letter, Parent Notification 04/2009
- Sample Letter, Physician Total Antibody Result 06/2010
- Fact Sheet 11/2012

**Revision History:**

<b>Date</b>	<b>Replaced</b>	<b>Comments</b>
11/2012	09/2011	Added reporting form. Added description of data collection forms in Data Management section. Updated sample questionnaire and fact sheet.
02/2012	-	Removed reference to KS-EDSS and update case definition to CDC version 2012.
09/2011	06/2010	Replaced case definition with CDC version 2011. Addition of Notification section and interviewing survey tool. Edits to Managing Special Situations - Case Is a Food handler .
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

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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 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](http://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.

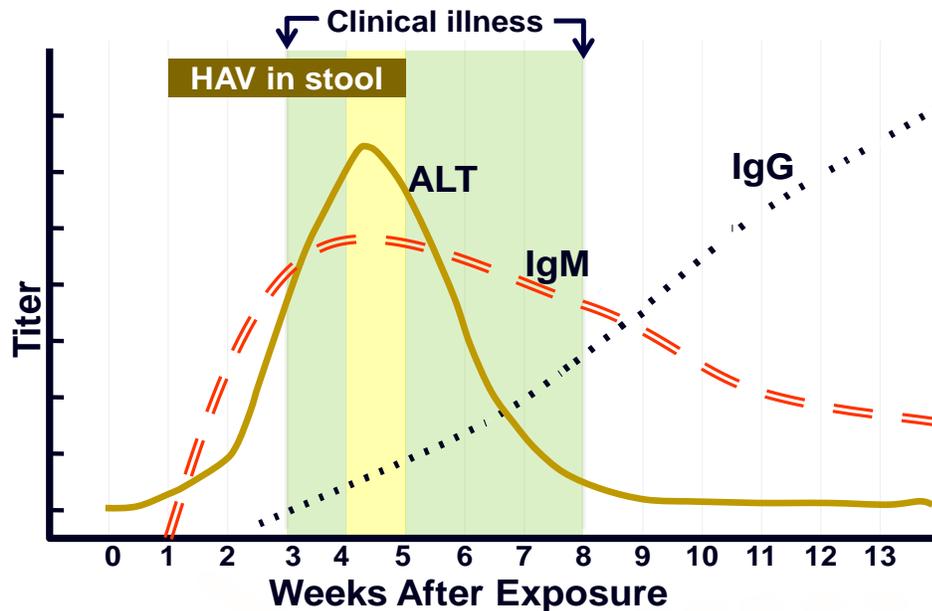
### G. Susceptibility and Resistance:

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

### H. Treatment:

No specific therapy is available. Supportive care.

# Events in HAV Infection



(Average incubation = 28-30 days; range 15-50 days.)

## NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

Viral hepatitis, including Hepatitis A, shall be designated as infectious or contagious in nature, and cases or suspect cases shall be reported within seven days:

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)
4. KDHE-BEPHI will contact the local public health jurisdiction by phone within one hour of receiving an IgM positive, hepatitis A report.

**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**

As a nationally notifiable condition, confirmed Hepatitis A cases require a STANDARD report to the Center of Disease Control and Prevention (CDC).

1. STANDARD reporting requires KDHE-BEPHI to file an electronic report for all cases regardless of classification within the next reporting cycle.
  - KDHE-BEPHI will file electronic reports weekly with CDC.
2. **Local public health jurisdiction** will report information requested on the supplemental form as soon as possible, ensuring that the electronic form is completed within 7 days of receiving a notification of a Hepatitis A report.

## 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) Report all [confirmed](#), [probable](#) and [suspect](#) cases to the KDHE at 1-877-427-7317 within 24 hours of the initial report.
- 2) 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.
- 3) Conduct [case investigation](#) to identify potential source of infection.
- 4) Conduct [contact investigation](#) to locate additional cases and/or contacts.
- 5) Identify whether the source of infection is major public health concern,
  - Outbreak, daycare, food-handler or direct patient care provider.
- 6) Report all potential outbreaks immediately to KDHE at 1-877-427-7317.
- 7) Initiate control and prevention measures to prevent spread of disease.
- 8) Complete and report information requested in the Kansas EpiTrax system.
- 9) As appropriate, use the [notification letter\(s\)](#) and the disease [fact sheet](#).

## STANDARD CASE INVESTIGATION AND CONTROL METHODS

[Rapid Assessment Worksheet](#) and [Hepatitis A Questionnaire](#) may assist with collecting info. The [Kansas Reporting Form](#) is for reporting in EpiTrax.

### Case Investigation

- 1) Contact the medical provider who reported or ordered the testing of the case.
  - Obtain the reason for testing and any lab reports on liver enzyme levels.
  - If hospitalized: obtain admission/progress notes and discharge summary.
  - Record any acute hepatitis symptoms or signs, especially:
    - **Onset date** of earliest acute symptom
    - Jaundice, If present, record **date of jaundice onset**
    - Elevated serum aminotransferase (especially record ALT>200 IU/L)
    - Clay-colored bowel movements or dark colored (tea/cola colored) urine
    - Nausea, vomiting, abdominal pain, fever, fatigue, joint pain
  - 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 the patient is symptomatic, highly suspected case and testing for anti-HAV IgM has not been done.
    - If the "Reason for Testing" and lack of acute symptoms indicate that the patient is not a case: report the findings 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:
  - The onset date used for the investigation into the source of exposure is the onset date of earliest symptom
    - If acute symptoms were present but onset date is unclear, use collection

- date of first abnormal serum aminotransferase)
- Review 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 the relationship to the case (household, sexual, playmate)
  - 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.
- 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).
  - If the case had contact with person(s) who have/had hepatitis, determine if the other “cases” have been reported to the state:
    - Search the state electronic surveillance for the possible case.
    - If found, record the previously reported record number in the record of the case you are investigating.
- 5) Highly suspected cases, that have not previously been reported should be investigated as a suspect case and [reported](#) to KDHE-BEPHI.
- 6) For suspected [outbreaks](#) refer to Managing Special Situations section.

### Contact Investigation

- 1) Inquire about case’s activities and occupations during the communicable period 2 weeks before illness onset until 1 week after jaundice onset or, with no evidence of jaundice, 14 days after onset of other acute symptoms.
  - Record dates, location, and activities of daycare association as attendee, employee or household contact to attendee or employee.
  - 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.
    - 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:
    - 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  $\geq 3$  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 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) 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.

- 1) School attendee cases should be excluded from school for 1 week following onset of jaundice or, with no jaundice, 14 days after onset of other symptoms.
- 2) The 2005 Kansas Food Code requires the exclusion of a food employee with jaundice (unless there is written medical documentation that jaundice is not caused by an infectious agent) and/or with a HAV diagnosis. (See [Table 1](#).)
- 3) Those co-workers of a case that refuse vaccine or IG - if indicated - are not allowed to handle food for 50 days from last day of contact with case.

Table 1. Managing a Food Handler with Association to Hepatitis A viral (HAV) infection					
Diagnosed with HAV?	Type of Symptom(s) present	Onset Date of Symptoms	Exposed to HAV †	Restriction or Exclusion ‡	Reinstatement of Employee to Full Duties
Yes / No	Jaundice	Within last 7 days		<b>Exclude</b> from all facilities.	Approval from regulatory authority after: 1. Jaundice has lasted more than 7 days; or 2. Written medical documentation from a medical provider that employee is free of HAV infection
Yes	Related symptoms but <u>no</u> jaundice	Within the last 14 days		<b>Exclude</b> from all facilities.	Approval from regulatory authority after: 1. Symptoms without jaundice have lasted more than 14 days; or 2. Written medical documentation from a medical provider that employee is free of HAV infection
Yes	None. (including <u>no</u> jaundice)			<b>Exclude</b> from all facilities.	Approval from regulatory authority after written medical documentation is provided from a medical provider that employee is free of HAV infection.
No	None.		Yes	<b>Exclude</b> from facilities that serve highly susceptible populations*. <b>Restrict</b> in other situations.	After one of the following is met: 1. Employee is protected or immune to HAV because of prior illness, vaccination or IG administration; or 2. More than 50 calendar days have passed since the employee was potentially exposed or since the employee's household contact became jaundiced.
(Refer to the <b>KDHE Foodborne Illness and Outbreak Investigation Manual</b> for additional information)					

† **Exposure** is defined as a food handler consuming or preparing food implicated in a foodborne outbreak of STEC or that was prepared by a person infected with STEC or a food handler who has a household contact that attended or worked at a setting where there was a foodborne outbreak of STEC or who was diagnosed with STEC.

‡ **Exclusion** is not allowing the employee to work at the food establishment. **Restriction** is not allowing the employee to work with food; to clean equipment, utensils or linens; or to un-wrap single-use articles in the food establishment.

\* A highly susceptible population is more likely to experience foodborne disease because they are immunocompromised or older adults and in a facility that provides health care or assisted living services, such as a hospital or nursing home; or preschool age children in a facility that provides custodial care, such as a daycare center.

### 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) Refer to the [Kansas Community Containment Toolbox](#) for templates.

## 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 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.

*\* 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 can be provided by the KDHE for contacts, after:
  - For vaccine: the contacts' insurance status is assessed and KDHE is notified at 1-877-427-7317 and approves prior to vaccine administration.
    - o 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.
    - o For IG requests, be prepared to provide the contact's weight.
    - o Note: KDHE will not provide IG for 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 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>.

## 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:
  - $\geq 2$  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 Record number,
    - 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., record number, 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)
  - All epidemiological data will be recorded and reported through the Kansas electronic surveillance system's outbreak module.
- 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) Coordinate with the public information officer (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:

*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) 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.
- 3) In outbreak settings with hepatitis A cases in  $\geq 3$  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 IG is given prior to admission

or 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-BEPHI, 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.
- 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-BEPHI 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.

### C. Report data via the state electronic surveillance system.

- Especially data that collected during the investigation that helps to confirm or classify a case

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

## 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, 2009.
- C. **Case Definitions:** CDC Division of Public Health Surveillance and Informatics, Available at: [www.cdc.gov/osels/ph\\_surveillance/nndss/casedef/case\\_definitions.htm](http://www.cdc.gov/osels/ph_surveillance/nndss/casedef/case_definitions.htm)
- D. **Quarantine and Isolation:** Kansas Community Containment Toolbox. [www.kdheks.gov/cphp/operating\\_guides.htm#coc](http://www.kdheks.gov/cphp/operating_guides.htm#coc)
- E. **Kansas Regulations/Statutes Related to Infectious Disease:** [www.kdheks.gov/epi/regulations.htm](http://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](http://www.kdheks.gov/epi/download/kansas_foodborne_illness_manual.pdf)
- G. **KDHE. Control of Enteric Disease Outbreaks in Child-Care Facilities, Manual 2011:** [www.kdheks.gov/epi/download/Enteric\\_Disease\\_in\\_Daycare\\_Centers.pdf](http://www.kdheks.gov/epi/download/Enteric_Disease_in_Daycare_Centers.pdf).
- H. **KDHE Foodborne Illness Resources:** [www.kdheks.gov/epi/foodborne.htm](http://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](http://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](http://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](http://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](http://www.cdc.gov/vaccines/pubs/surv-manual/default.htm) .
- M. **Additional Information (CDC):** [www.cdc.gov/health/default.htm](http://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 3<sup>rd</sup> row of chart)*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



# Supporting Materials

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.*