

Hepatitis A

BASIC EPIDEMIOLOGY

Infectious Agent

Hepatitis A virus (HAV), a picornavirus

Transmission

Hepatitis A virus is transmitted from person to person through the fecal-oral route. Common source outbreaks are rare but have been linked to contaminated water, food contaminated by infected persons where the food was not properly cooked or handled after cooking, raw or undercooked mollusks harvested from contaminated waters, and contaminated produce.

Incubation Period

Average of 28-30 days (range 15-50 days)

Communicability

Persons with HAV shed the most virus during the 1-2 weeks prior to symptom onset. In most cases, persons are no longer infectious after the first week of jaundice, although not all patients experience jaundice.

Clinical Illness

The clinical course of illness is indistinguishable from the other types of acute viral hepatitis. The illness typically has an abrupt onset of fever, malaise, anorexia, nausea, abdominal discomfort, jaundice and dark urine. Clinical illness does not usually last longer than two months.

Up to 70% of illness in children younger than 6 years old is likely to be asymptomatic. In older children and adults, infection is usually symptomatic, with up to 70% having jaundice.

Unlike some of the other viral hepatitis infections, hepatitis A does not create a chronic carrier state. Some patients, however, may have prolonged symptoms or relapse up to six months, during which the virus may be shed.

DEFINITIONS

Clinical Case Definition

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, abdominal pain, or dark urine), **AND**

- Jaundice or elevated total bilirubin levels ≥ 3.0 mg/dL, **OR**
- Elevated serum alanine aminotransferase (ALT) > 200 IU/L **AND**
- The absence of a more likely diagnosis

Laboratory Criteria for Diagnosis

- Immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV IgM) positive **OR**
- Nucleic acid amplification test (NNAT; such as Polymerase Chain Reaction [PCR] or genotyping) for hepatitis A virus RNA positive

Case Classification

- **Confirmed:**
 - A case that meets the clinical case definition and is laboratory confirmed **OR**

- A case that meets the clinical case definition and occurs in a person who has an epidemiological link with a person who has laboratory-confirmed hepatitis A contact (i.e., household or sexual) with an infected person during the 15-50 days before the onset of symptoms) **AND** a case that is not otherwise ruled out by IgM anti-HAV or NAAT for hepatitis A virus testing performed in a public health laboratory
- **Probable:** No probable case definition for Hepatitis A

SURVEILLANCE AND CASE INVESTIGATION

Case Investigation

Local and regional health departments should promptly investigate all reports of acute Hepatitis A. Investigations should include an interview of the case or a surrogate to get a detailed exposure history. Please use DSHS Hepatitis A Case Investigation form available on the DSHS website: <https://www.dshs.texas.gov/idcu/investigation.aspx>

Case Investigation Checklist

- Confirm laboratory results meet the case definition.
- Review medical records or speak to an infection preventionist or physician to verify demographics, symptoms, underlying health conditions, and course of illness.
- Complete the Hepatitis A Case Investigation form by interviewing the case (or surrogate) to identify close contacts, risk factors and other pertinent information.
 - During the interview provide education on control measure including proper hand hygiene.
- Ensure appropriate control measures are implemented (see Control Measures below).
- Exclude children and cases that are food-handlers from work, if within 7 days of symptom onset.
- Refer household and sexual contacts who are still within 2 weeks of exposure to their healthcare providers for appropriate chemoprophylaxis.
 - See Prophylaxis Guidance.
- Send the completed Hepatitis A Case Track form to DSHS.
- All confirmed acute HAV case investigations must be entered and submitted for notification in the NEDSS Base System (NBS). Please refer to the *NBS Data Entry Guidelines* for disease specific entry rules.
- In the event of a death, copies of the hospital discharge summary, death certificate, and autopsy report should also be faxed to DSHS EAIDU.

Control Measures

- Routine hand washing with soap and warm water especially:
 - Before preparing, handling or eating any food
 - After going to the bathroom
 - After changing a diaper
 - After caring for someone with diarrhea
- Get the hepatitis A vaccine as recommended.
- Post-exposure prophylaxis is available for at risk close contacts. See Prophylaxis Guidance.
- Patients infected with hepatitis A should adhere to strict hand hygiene for the first two weeks of symptoms and up to 1 week after the onset of jaundice and should not handle food for other people for 1 week after onset of jaundice.

Persons at Risk for Infection with HAV

- Close contacts of HAV-infected persons*
 - Household contacts
 - Caretakers
 - Sexual contacts
 - Consideration to persons with other types of ongoing, close personal contact (e.g. a

regular babysitter)

- *Excludes health-care personnel using appropriate personal protective equipment
- Persons with occupational risk
 - Persons working with nonhuman primates
 - Persons working with HAV in a research laboratory
- People experiencing homelessness
- People using illicit drugs
- Men who have sex with men (MSM)

Prophylaxis Guidance

- Household, caretakers, and sexual contacts should be identified immediately and those that are unvaccinated should be offered post-exposure prophylaxis with immune globulin (IG) or vaccine as follows:
 - For healthy persons ≥ 12 months years of age and have not previously completed the 2-dose HepA vaccine series should receive a single dose of HepA vaccine within 2 weeks of exposure. In addition to HepA vaccine, IG (0.1 mL/kg) may be administered to persons aged >40 years depending on providers' risk assessment.
 - Provider risk assessment can be found in the CDC MMWR v. 67, no. 43
 - For long-term immunity, the HepA vaccine series should be completed with a second dose at least 6 months after the first dose; the second dose is not necessary for PEP.
 - For persons ≥ 12 months who are immunocompromised and persons diagnosed with chronic liver disease and have not previously completed the 2-dose HepA vaccine series should receive both IG and HepA vaccine simultaneously in a different anatomical site as soon as possible after exposure and within 2 weeks of exposure.
 - For infants aged <12 months and persons for whom vaccine is contraindicated (who are allergic to a vaccine component) should receive IG instead of vaccine as soon as possible after exposure and within 2 weeks after exposure.
 - The updated recommended dosage of IG is 0.1 mL/kg and there is no maximum dosage for hepatitis A prophylaxis.
 - Vaccine can be used if IG cannot be obtained (if the persons are not immunocompromised, have chronic liver disease, or contraindication to vaccine)
 - IG and the Hepatitis A vaccine can be given concomitantly regardless of manufacturer.
 - Contact DSHS EAIDU if vaccine or IG is needed
- Contacts who have received one dose of hepatitis A vaccine at least one month prior to exposure do not need post-exposure prophylaxis.
- The patient should be educated on enteric precautions, which should be undertaken the first two weeks of symptoms and up to 1 week after the onset of jaundice.
- Generally, IG and vaccine are not recommended for school or work contacts with the following exceptions:
 - At day care centers, IG and/or vaccine should be offered if a day care attendee or employee is IgM-positive or if two household contacts of an employee or attendee are IgM-positive.
 - If a food-handler is diagnosed with hepatitis A, the other food handlers should be offered IG and/or vaccine. Patrons generally do not need prophylaxis although it may be considered if the food-handler prepared food that was not heated, had diarrhea, and IG and vaccine can be provided within 2 weeks of exposure.

Treatment

There is no specific treatment available for hepatitis A infection.

Exclusion

Food-handlers and school children should be kept out of work or school for 7 days after the onset of symptoms.

MANAGING SPECIAL SITUATIONS

Child-care centers

- Vaccinate or provide IG to unvaccinated staff and attendees if
 - One or more cases of hepatitis A is recognized in children, **OR**
 - cases are recognized in two or more households of center attendees
- If one or more cases of hepatitis A infection occurs among employees, PEP should be considered based on the duties, hygienic practices and presence of symptoms at work.
- If the daycare does not provide care to children in diapers, then vaccine/IG only needs to be given to care contacts of an index-case patient.
- Post-exposure prophylaxis should also be considered for household contacts of daycare attendees that have children in diapers.
- When an outbreak occurs (i.e. hepatitis A cases in three or more families), PEP should also be considered for members of households that have diaper-wearing children attending the center.

Food handler exposures

- If a food-handler is diagnosed with hepatitis A, the other food handlers should be offered IG and/or vaccine.
- Patrons generally do not need prophylaxis although it may be considered if the food-handler prepared food that was not heated, had diarrhea or poor hygienic practices, and IG and vaccine can be provided within 2 weeks of exposure.
- In settings in which repeated exposures to HAV might have occurred (e.g. institutional cafeterias), consideration of PEP use is warranted.
- PEP in this scenario should generally consist of vaccination for all age groups, though IG may be considered for exposed persons (patrons during the time the food handler was symptomatic and worked) who are immunocompromised or have chronic liver disease.
- Refer to MMWR; V. 67, No. 43, Supplement 1 for additional information.

Other settings (e.g. correctional facility, homeless shelter, psychiatric facility, group home)

- PEP should be considered for all previously unvaccinated residents and employees when a confirmed case of hepatitis A occurs in a setting where close personal contact occurs regularly and hygiene standards are difficult to maintain
 - In a setting containing multiple enclosed units or sections (e.g. prison ward), PEP administration should be limited only to persons in the area where there is exposure risk.

Common source exposures

- Common source outbreaks are generally identified too late for PEP to be effective, but it should be considered if still within the two-week PEP window.
- The common source should be removed from circulation.

The Hepatitis A Communication Toolkit can be used if health alerts, press releases, exposure notifications, etc. are needed to manage Hepatitis A outbreaks/exposures. Ask the VPD Team for the Toolkit.

Outbreaks

If an outbreak of hepatitis A is suspected, notify EAIDU at **(800) 252-8239** or **(512) 776-7676**.

REPORTING AND DATA ENTRY REQUIREMENTS

Provider, School & Child-Care Facilities, and General Public Reporting Requirements

Confirmed and clinically suspected cases are required to be reported **within 1 work day** to the local or regional health department or to DSHS EAIDU at **(800) 252-8239** or **(512) 776-7676**.

Local and Regional Reporting and Follow-up Responsibilities

Local and regional health departments should:

- Enter the case into NBS and submit an NBS notification on all **confirmed** cases to DSHS within 30 days of receiving a report of confirmed case.
 - Please refer to the *NBS Data Entry Guidelines* for disease-specific entry rules.
 - A notification can be sent as soon as the case criteria have been met. Additional information from the investigation may be entered upon completing the investigation.
- Fax, send a secure email, or mail a completed investigation form within 30 days of completing the investigation.
 - **In the event of a death, copies of the hospital discharge summary, death certificate, and autopsy report should also be sent to DSHS EAIDU.**
 - Investigation forms may be faxed to **512-776-7616**, securely emailed to VPDTexas@dshs.texas.gov or mailed to:

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

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

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

LABORATORY PROCEDURES

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

FLOW CHART

See next page.

REVISION HISTORY

January 2021

- Updated vaccine requirements to coincide with updated CDC guidelines for post-exposure prophylaxis (see Prophylaxis Guidelines)
- Updated case definition
- Updated Managing Special Situations

FLOW CHART

**Hepatitis A (HAV):
Case Status Classification**

