

HEPATITIS A

**Federal Bureau of Prisons
Clinical Guidance**

NOVEMBER 2019

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WHAT'S NEW IN THIS DOCUMENT?

The following changes were made in the NOVEMBER 2019 version of this guidance:

- **LAB TESTS FOR ACUTE HEPATITIS A:** Lab tests for work-up of acute hepatitis A should include anti-HBs.
- **HEPATITIS A VACCINATION:** The CDC is now recommending that persons who have experienced homelessness be vaccinated for hepatitis A.
- **HEPATITIS A SCREENING FORM:** An intake screening questionnaire for facilities that are located in states experiencing community outbreaks of hepatitis A is now included as [Appendix 2](#). The CDC has an updated website that lists outbreak states for easy reference: <https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>
- **INFECTION PREVENTION AND CONTROL MEASURES:** In housing units where a case of hepatitis A has been identified, in addition to a contact investigation and post-exposure prophylaxis, general infection prevention and control measures should be implemented. This includes emphasizing hand hygiene with soap and water (especially after using the bathroom) and cleaning and disinfecting high-touch surfaces (especially bathrooms). Disinfection should be with either a bleach solution or an EPA disinfectant effective against norovirus (see [TABLE 4](#) for information on disinfectants).
- **MASS VACCINATION CONSIDERATIONS:** In the context of a community outbreak of hepatitis A, if a recommendation is made for all staff and inmates to be vaccinated, priority should be given to those inmates with risk factors for hepatitis A and those with underlying liver disease, and staff and inmates who are food service workers.
- **POST-EXPOSURE PROPHYLAXIS:** For those persons who are immunocompromised or who have chronic liver disease, immune globulin (IG) should be administered simultaneously with hepatitis A vaccine. IG should also be considered for persons age > 40 (in consultation with public health authorities).
- **HEPATITIS A CONTACT INVESTIGATION CHECKLIST:** The following changes were made to the checklist ([Appendix 1](#)):
 - ▶ **STOP MOVEMENT OUT** for identified inmate contacts for 50 days after the last case of hepatitis A is identified (see *Task 8*).
 - ▶ **REGIONAL/CENTRAL OFFICE WILL MAKE NOTIFICATIONS** on identified inmate contacts who have left the facility (see *Task 8*).
 - ▶ **EMPHASIZE HAND WASHING AND DISINFECTION** on housing units where the case resided (see *Task 10*).

The following changes were made in the NOVEMBER 2018 version of this guidance:

- **TESTING:** Due to false positive tests in asymptomatic persons, testing for hepatitis A IgM should only be performed if hepatitis A is a suspected diagnosis.
- **VACCINATION:** Specific guidance on hepatitis A vaccination can be found in the BOP *Clinical Guidance on Immunization*.

- **RESPONSE TO COMMUNITY OUTBREAKS:** It is recommended that new inmate intakes in facilities that are located in states experiencing hepatitis A outbreaks be screened for hepatitis A risk factors. Screening is recommended for all inmate intakes except those who are arriving via BOP intra-system transfer. Recommendations for facilities to implement intake screening with a hepatitis A screening questionnaire will be made by the BOP Medical Director. Inmates who have resided for the previous 60 days in states with community outbreaks of hepatitis A and who have additional hepatitis A risk should be:

- ▶ Evaluated for symptoms of hepatitis A
- ▶ Educated about the need to report hepatitis A symptoms to Health Services
- ▶ Excluded from food service work for the 60 days following intake

VACCINATION CONSIDERATIONS: In addition, in the context of a community outbreak of hepatitis A, vaccination for all staff and inmates may be an appropriate strategy for preventing hepatitis A in a BOP facility. A decision regarding mass vaccination will be made only in consultation with a Central Office Infection Prevention and Control and the BOP Medical Director.

- **POST-EXPOSURE PROPHYLAXIS:** A single adult dose of hepatitis A vaccine (either VAQTA® or HAVRIX®) is recommended to be administered within 2 weeks post-exposure. Those inmates with other risk factors for hepatitis A should be scheduled for a second dose of vaccine in 6 months to complete the series. The use of TWINRIX® (combined hepatitis A and hepatitis B vaccine) is **NOT** recommended for post-exposure prophylaxis.
- **TIMELINE CALCULATOR:** A *Hepatitis A Timeline Calculator* is now available to calculate the exposure time for the hepatitis A case, the infectious period for the hepatitis A case, and the incubation period for the contacts. The calculator can be accessed at: https://www.bop.gov/resources/health_care_mngmt.jsp.
- **HEPATITIS A CONTACT INVESTIGATION CHECKLIST:** Minor revisions and updates have been made to the checklist ([Appendix 1](#)).

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1. PURPOSE

The Federal Bureau of Prisons (BOP) *Hepatitis A Clinical Guidance* provides recommendations for the medical management of federal inmates with hepatitis A virus (HAV) infection, and for prevention for those who are at risk of HAV infection.

2. BACKGROUND

Throughout 2017–2019, multiple states have reported outbreaks of hepatitis A associated with issues of homelessness and transient housing, as well as injection and non-injection drug use. Outbreaks of hepatitis A have also been reported in correctional systems, requiring large contact investigations and vaccination of contacts.

➔ **Identification of an inmate with acute hepatitis A is an URGENT situation that requires immediate response and identification of contacts.**

➔ See [Appendix 1](#), *Hepatitis A Contact Investigation Checklist*.

3. TRANSMISSION

- **HAV is transmitted fecal-orally and is acquired either by person-to-person contact or by the ingestion of contaminated food or water.** Individuals at increased risk of acquiring HAV infection include the groups listed in **TABLE 1** below.

TABLE 1. PERSONS AT INCREASED RISK FOR HAV INFECTION

- | |
|--|
| <ul style="list-style-type: none">• Persons with recent travel to countries with high rates of hepatitis A• Men who have sex with other men• Users of illicit injection or non-injection drugs• Persons with clotting disorders who require clotting-factor concentrates• Individuals who are close personal contacts of HAV-infected persons• Persons who are homeless or in transient housing, in context of a community HAV outbreak |
|--|

- **INFECTIOUS PERIOD** extends from two weeks before the onset of hepatitis symptoms until two weeks after symptom onset.
 - ➔ *Those persons who have acute Hepatitis A are most contagious during the two weeks prior to the onset of jaundice.*
- **TRANSMISSION** can readily occur through close personal contact such as sexual exposure or by sharing contaminated communal surfaces such as toilets. The presence of **DIARRHEA** increases contagiousness.
- **HAV REMAINS VIABLE** in the environment for weeks to months in areas not cleaned and appropriately disinfected.
 - ➔ See [TABLE 4](#) in Section 8 for information on disinfection.

4. NATURAL HISTORY

- **The INCUBATION PERIOD is the period of time from infection with HAV until the onset of hepatitis symptoms.**
 - ➔ *The average incubation period for hepatitis A is 28 days (ranging from 15—50 days).*
- **Hepatitis A disease varies in severity from ASYMPTOMATIC INFECTION to a SEVERE DISEASE lasting several months:**
 - ▶ **INITIAL, PRODROMAL SYMPTOMS** include fatigue, malaise, nausea, vomiting, anorexia, fever, and right upper quadrant abdominal pain.
 - ▶ **AFTER 3–7 DAYS**, patients often develop dark urine, light-colored stools, jaundice, and pruritus.
 - ▶ The prodromal symptoms usually subside with the **ONSET OF JAUNDICE**, which typically peaks within 2 weeks.
 - ▶ In symptomatic patients, **LABORATORY FINDINGS** are notable for significant elevations of serum direct bilirubin, total bilirubin, and serum ALT and AST.
- **HAV infection usually leads to an acute, self-limited illness, and only RARELY to fulminant hepatic failure:**
 - ▶ The risk of hepatic failure is significantly increased for those with underlying liver disease, particularly for those with chronic hepatitis C infection.
 - ▶ Of those with acute hepatitis A, approximately 85% have a full clinical and biochemical recovery within 3 months; nearly all have a complete recovery in 6 months.
 - ▶ In recent outbreaks, there has been an unusually high hospitalization rate (60%).
 - ▶ Natural lifelong immunity develops following resolution of acute hepatitis A.
- **The prevalence of PREVIOUSLY ACQUIRED HAV INFECTION is largely associated with the inmate's community of origin or the inmate's own high-risk behaviors.** American Indians, Alaskan Natives, and persons from Latin America, Africa, the Middle East, China, and Southeast Asia come from communities with endemic HAV infection, where infection by early adulthood is common.

5. DIAGNOSIS

- Individuals who present with symptoms of acute hepatitis should be tested for **ALT, AST, IgM anti-HAV, HBsAg, IgM anti-HBc, anti-HBs, and anti-HCV** (with follow-up testing for **HCV RNA**, if positive).
- Two serologic tests for hepatitis A are commercially available: **ANTI-HAV IgM** and **TOTAL ANTI-HAV**. Testing for anti-HAV IgG is **NOT** commercially available.
 - ▶ **IgM ANTI-HAV** becomes detectable 5–10 days before the onset of symptoms and can persist for up to six months. **IgG ANTI-HAV** appears shortly after IgM in the course of infection. It remains detectable for the person’s lifetime and confers lifelong protection against the disease.
 - ▶ A positive for **TOTAL ANTI-HAV** result in patient serum or plasma alone cannot differentiate acute from prior hepatitis A infection or from prior vaccination. The test can be used to assess immune status in naturally infected and vaccinated individuals. **TABLE 2** below outlines interpretation of serologic tests for hepatitis A.

TABLE 2. INTERPRETATION OF SEROLOGIC TESTS FOR HEPATITIS A

LABORATORY FINDINGS		INTERPRETATION
Total anti-HAV	IgM anti-HAV*	
Positive	Positive	Current or recent hepatitis A infection.
Positive	Not done	Either a previous or current hepatitis A infection; cannot differentiate acute from remote hepatitis A infection or prior vaccination.
Positive	Negative	Previous hepatitis A infection or prior vaccination. No current or recent infection with HAV
Negative	Negative	No previous or current hepatitis A infection; susceptible to infection.

* False positive IgM anti-HAV test results have been reported among persons with no recent history of acute hepatitis or recent exposure to hepatitis A. **IgM testing is recommended ONLY when a person has symptoms of acute hepatitis.**

6. TREATMENT

No effective antiviral therapies are available for acute hepatitis A. Therefore, treatment efforts are largely supportive. Fulminant, acute hepatitis A may be complicated by protracted nausea and vomiting, dehydration, high fever, impaired consciousness, and liver failure (the latter requiring hospitalization).

- ➔ **Any inmate with acute HAV infection should be evaluated DAILY** by a health care provider for signs and symptoms of liver failure, i.e., changes in mental status, vomiting, and dehydration.

7. PREVENTION

➔ See the BOP Clinical Guidance on Immunization for detailed information about hepatitis A vaccination.

- **INDICATIONS:** Hepatitis A vaccine should be considered for certain high-risk inmates, as indicated in **TABLE 3** below. Hepatitis A vaccine is **NOT** routinely indicated for inmate workers who are plumbers or food service workers.

TABLE 3. RISK GROUPS RECOMMENDED FOR HEPATITIS A VACCINATION IN THE BOP

- | |
|---|
| <ul style="list-style-type: none">• Men who have sex with other men• Users of illicit injection or non-injection drugs• Persons with liver disease or cirrhosis, including chronic hepatitis C (HCV RNA+) and hepatitis B (HBsAg+)• Persons with clotting disorders who require clotting-factor concentrates• Persons who have experienced homelessness |
|---|

- **PRE-VACCINATION SEROLOGIC TESTING** is **NOT** indicated routinely for high-risk inmates. It may be indicated for foreign-born inmates, Alaskan natives, and American Indians who typically have high rates of hepatitis A immunity.
- **DECISIONS ABOUT PRE-VACCINATION TESTING** should be based upon the prevalence of hepatitis A immunity in the population, whether the testing will interfere with the vaccination process, and the cost of the testing compared to the cost of vaccination.

PREVENTION IN STATES WITH ONGOING OUTBREAKS OF HEPATITIS A

➔ Currently there are outbreaks of hepatitis A in multiple states. Facilities located in those states may need to institute additional hepatitis A preventive measures.

In facilities that are located in states experiencing community outbreaks of hepatitis A, it is recommended that all new inmate intakes (except those who are arriving via BOP intra-system transfer) be screened for hepatitis A risk factors with the screening questionnaire in [Appendix 2](#).

➔ The CDC maintains a website indicating states where hepatitis A outbreaks are occurring: <https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>.

➔ Inmates with the risk factors for hepatitis A indicated in in [TABLE 3](#) above should be routinely vaccinated.

Inmates who have resided in states with community outbreaks of hepatitis A during the previous 60 days and who have additional hepatitis A risk should be:

- Evaluated for symptoms of hepatitis A
- Educated about the need to report hepatitis A symptoms to Health Services
- Excluded from food service work for the 60 days following intake

VACCINATION CONSIDERATIONS DURING COMMUNITY OUTBREAKS: In the context of a community outbreak of hepatitis A, vaccination for all staff and inmates may be an appropriate strategy for preventing hepatitis A in a BOP facility.

- A decision regarding **MASS VACCINATION** will be made only in consultation with a Central Office Infection Prevention and Control Officer, the Chief of Occupational and Employee Health, and the BOP Medical Director.
- In this situation, the **HIGHEST PRIORITY FOR VACCINATION** are inmates with risk factors for hepatitis (see [TABLE 3](#) above), inmates with underlying liver disease, and staff and inmate food service workers.
- Inmates with **RISK FACTORS** for hepatitis A (as indicated in [TABLE 3](#)) should be scheduled for a **SECOND DOSE** in 6 months to complete the series.

8. INFECTION CONTROL

REPORTING

Cases of suspected hepatitis A should be reported to the Regional/Central Office and to the local public health authority.

ISOLATION

- Any inmate with **SYMPTOMS SUGGESTIVE OF ACUTE HEPATITIS A** infection should be **ISOLATED**.
- An inmate **DIAGNOSED WITH ACUTE HEPATITIS A** should be considered **CONTAGIOUS** and placed in contact isolation until the end of the **INFECTIOUS PERIOD**, in accordance with the guidance in **TABLE 4** below.
 - **IF JAUNDICE IS NOT PRESENT:** Isolation is continued until two weeks after the onset of symptoms.
 - **IF JAUNDICE IS PRESENT:** Isolation is continued until one week after the onset of jaundice.

TABLE 4. GUIDANCE ON HEPATITIS A ISOLATION: CONTACT ENTERIC PRECAUTIONS

- **ISOLATE** the inmate in a single cell with a separate sink and toilet.
- **COUNSEL** the inmate regarding the importance of hand washing.
- Utilize **STANDARD PRECAUTIONS** and **CONTACT ENTERIC PRECAUTIONS** to prevent fecal-oral transmission to others entering the inmate's cell. This includes using gloves, gowns, and other personal protective equipment if contact with the inmate's body fluids is anticipated, e.g., changing soiled linens, cleaning toilets, etc.
- **HAND HYGIENE** should be with soap and water, **NOT** alcohol-based hand rub (because it does not kill hepatitis A).
- **REGULAR AND TERMINAL CLEANING OF THE CELL** should include routine cleaning followed by disinfection with a 1:10 bleach solution (1½ cups of bleach to 1 gallon of water) **OR** with an EPA disinfectant effective against norovirus, (List G) available at: https://www.epa.gov/sites/productin/files/2018-04/documents/list_g_disinfectant_list_3_15_18.pdf

CONTACT INVESTIGATIONS

- See [Appendix 1](#) for a detailed **CHECKLIST** for conducting a hepatitis A contact investigation.
- **PURPOSE:** The purpose of the contact investigation is to identify those who were **CLOSE CONTACTS** of the index case **DURING THE INFECTIOUS PERIOD**, and to provide them with **PROPHYLAXIS**.
- **PROCESS:** A contact investigation—in consultation with local or state public health authorities—should be initiated promptly for any inmate with acute hepatitis A who was incarcerated during their infectious period.
 - **To be effective, post-exposure prophylaxis of contacts must occur within TWO WEEKS of exposure.** See next section on [Post-Exposure Prophylaxis](#).
- **INFECTIOUS PERIOD:** For acute hepatitis A, the index case should be assumed to have been communicable for the time period extending from two weeks before symptom onset until two weeks after symptom onset (or until one week after the onset of jaundice, if jaundice is present).
 - *If the inmate has been a **FOOD HANDLER** during the infectious period, consult with the health department and the Regional/Central Office regarding identification and management of contacts.*

POST-EXPOSURE PROPHYLAXIS

TABLE 5 below lists susceptible contacts of an index case of hepatitis A who are candidates for post-exposure prophylaxis.

TABLE 5. CANDIDATES FOR HEPATITIS A POST-EXPOSURE PROPHYLAXIS

- | |
|---|
| <ul style="list-style-type: none">• Cellmate(s) and others with close contact• Sexual contacts• Persons sharing toilet facilities• Persons who shared injection or non-injection drugs |
|---|

- **ELIGIBILITY:** Of the candidates listed in **TABLE 5**, persons eligible for post-exposure prophylaxis are those who have been exposed to HAV—unless they previously have been vaccinated or previously had hepatitis A, or have a documented history of a positive total anti-HAV test.
- **TIMING IS KEY:** Post-exposure prophylaxis with hepatitis A vaccine should be administered as soon as possible, and within the two weeks following the exposure. Testing of exposed contacts for immunity is **NOT** routinely indicated if they have not previously been tested with total anti-HAV.

(Post-Exposure Prophylaxis discussion continues on next page.)

- **POST-EXPOSURE PROPHYLAXIS:**

- ▶ **Immunocompetent adults:** It is recommended that a single adult dose of hepatitis A vaccine (either VAQTA® or HAVRIX®) be administered within 2 weeks post-exposure. For long-term immunity, those inmates with risk factors for hepatitis A (as listed in [TABLE 3](#)) should be scheduled for a second dose of vaccine in 6 months to complete the series.
 - ➔ *TWINRIX® (combined hepatitis A and hepatitis B vaccine) is **NOT** recommended for post-exposure vaccination.*
- ▶ **Persons who are immunocompromised or have chronic liver disease:** Administer both IG (0.1 mL/kg) and HepA vaccine simultaneously in different anatomic sites (e.g., separate limbs) as soon as possible after exposure.
- ▶ **Persons age > 40:** The CDC recommends that, in addition to HepA vaccine, IG (0.1 mL/kg) should be considered for persons age > 40 years, depending on the provider's risk assessment. Consult with public health authorities to determine if IG is indicated for inmates or staff age > 40 years.

DEFINITIONS

CONTACT ENTERIC PRECAUTIONS are implemented to prevent transmission of infectious agents that are spread by direct or indirect contact with the patient or the patient's environment when a person has acute gastrointestinal illness. Gloves and gown are worn when contact with body fluids is anticipated. Hand hygiene should be with soap and water, **NOT** alcohol-based hand rub. Disinfection of surfaces generally requires a bleach solution or an EPA disinfectant effective against norovirus, as noted on List G at:

https://www.epa.gov/sites/production/files/2018-04/documents/list_g_disinfectant_list_3_15_18.pdf

HEPATITIS A is an acute viral hepatitis caused by a highly infectious RNA virus, and transmitted primarily by the fecal-oral route and close personal contact. Acute hepatitis A has a mild to fulminant clinical presentation. In rare cases, it can lead to death, usually in patients with underlying illness. Prior infection with hepatitis A confers life-long immunity.

HAV is the hepatitis A virus.

IgG ANTI-HAV are antibodies to HAV that confer immunity.

IgM ANTI-HAV is the antibody subclass to HAV that develops with acute symptomatic and subclinical infection. False-positive IgM anti-HAV serologies can occur, particularly in persons who are tested who do not have current symptoms of acute hepatitis A.

INCUBATION PERIOD is the period of time between infection and the onset of symptoms. For acute hepatitis A, the average incubation period is 28 days (range: 15–50 days).

INDEX CASE is the first case of a contagious disease in a group or population that serves to call attention to the presence of the disease.

INFECTIOUS PERIOD is the period of time when infection can be transmitted. For acute hepatitis A, individuals should be assumed to have been communicable starting two weeks before symptom onset, and continuing to be communicable until two weeks after symptom onset (if jaundice occurs, one week after jaundice onset).

STANDARD PRECAUTIONS are protective measures to be used for all patient/inmate contacts and situations in which infections can be transmitted by contaminated blood and body fluids. Standard Precautions include all of the following:

- The wearing of gloves and other personal protective equipment that provide an impervious barrier when soiling is likely.
- Procedures for protective handling (i.e., using puncture-resistant devices and leak-proof protection) of contaminated materials and equipment.
- Routine cleaning of all contaminated surfaces and equipment.

TOTAL ANTI-HAV are total antibodies to HAV, including both the IgG and the IgM antibody subclasses.

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APPENDIX 1. HEPATITIS A CONTACT INVESTIGATION CHECKLIST

Below is a THREE-PAGE list of tasks involved in conducting a contact investigation related to a case of hepatitis A. These tasks may overlap in time and in order of implementation.

→ Any inmate identified with suspected hepatitis A should be promptly isolated using CONTACT ENTERIC PRECAUTIONS. (See TABLE 4.)

→ A HEPATITIS A TIMELINE CALCULATOR to determine the exposure, infectious, and incubation periods is available at: https://www.bop.gov/resources/health_care_mngmt.jsp.

✓	CONTACT INVESTIGATION TASKS (PAGE 1 OF 3)
1.	<p>Clinically assess the inmate with possible hepatitis A to confirm the diagnosis. Assess for signs and symptoms of hepatitis A. (Symptoms often include: fever, malaise, anorexia, nausea, and abdominal discomfort, followed within a few days by jaundice.) Obtain ALT, AST, IgM anti-HAV, HBsAg, IgM anti-HBc, anti-HBs, and anti-HCV (with follow-up testing for HCV RNA, if positive).</p> <p>Symptoms: _____ Date of symptom onset: ___/___/___</p> <p>Lab confirmation: IgM anti-HAV = _____</p>
2.	<p>Communicate with appropriate officials:</p> <ul style="list-style-type: none"> • Notify facility administration about need to conduct a hepatitis A contact investigation. • Report the hepatitis A case to local public health authorities per state law. • Report the hepatitis A case to the Regional and Central Office.
3.a.	<p>Establish the need for a hepatitis A contact investigation:</p> <p>FIRST, determine WHEN the inmate with hepatitis A was infectious. The infectious period was from ___/___/___ to ___/___/___. (Infectious period = 2 weeks <u>before</u> the onset of hepatitis symptoms until 2 weeks <u>after</u> the onset of symptoms (one week after onset of jaundice if jaundice is present)).</p> <p>THEN, determine whether the person was in a BOP facility during the infectious period.</p> <p><input type="checkbox"/> No (The investigation is the responsibility of the public health authority). <input type="checkbox"/> Yes (A BOP investigation is necessary.)</p>
3.b.	<p>Attempt to identify the source of the inmate's hepatitis A infection:</p> <p>FIRST, determine the time period when the inmate could have been infected. The exposure period was from ___/___/___ to ___/___/___. (Exposure period = 50 days <u>before</u> onset of hepatitis symptoms until 15 days <u>before</u> symptom onset.)</p> <p>THEN, identify possible ways the inmate with hepatitis A (index case) may have become infected during the incubation period.</p> <p><input type="checkbox"/> Had close contact with a person with confirmed or suspected acute hepatitis A? <input type="checkbox"/> No <input type="checkbox"/> YES: The contact was a: <input type="checkbox"/> sexual partner <input type="checkbox"/> cell-mate <input type="checkbox"/> dorm-mate</p> <p><input type="checkbox"/> Shared injection or non-injection drugs? <input type="checkbox"/> No <input type="checkbox"/> YES</p> <p><input type="checkbox"/> Had sexual partners? <input type="checkbox"/> No <input type="checkbox"/> YES (# _____)</p> <p><input type="checkbox"/> History of homelessness or transient housing? <input type="checkbox"/> No <input type="checkbox"/> YES</p> <p><input type="checkbox"/> Had the following work assignments: _____</p>

✓	CONTACT INVESTIGATION TASKS (PAGE 2 OF 3)
4.	<p>Determine the incubation period for contacts to the person with hepatitis A (time period between exposure and potential development of symptoms): The incubation period is from ___ / ___ / ___ to ___ / ___ / ___ <i>(Incubation period = 10 days <u>after</u> exposure began until 50 days <u>after</u> exposure ended.)</i></p>
5.	<p>Convene a team to conduct the hepatitis A contact investigation. The team should consist of health services and correctional staff in consultation with Regional/Central office Infection prevention and control staff.</p> <ul style="list-style-type: none"> • Identify a team leader, and the roles and responsibilities of the team members. • Develop investigational priorities. Plan for the isolation of the case(s), the clinical management of the case(s), and the identification and follow-up of exposed contacts.
6.	<p>Investigate the possibility of a food-borne outbreak:</p> <p>a. Was the inmate diagnosed with hepatitis A employed in food services? <input type="checkbox"/> No <input type="checkbox"/> YES <i>(If YES, consult the local health department regarding the need for a food-borne outbreak investigation.)</i></p> <p>b. Was the inmate part of a recognized food-borne outbreak? <input type="checkbox"/> No <input type="checkbox"/> YES</p> <p>c. Interview food handlers (employees and inmates) regarding their history of hepatitis symptoms (15—50 days preceding symptom onset for the hepatitis A case).</p> <p>d. Obtain IgM-anti-HAV for any food-handlers who report hepatitis symptoms.</p> <p>e. If food-borne transmission of hepatitis A is suspected, then promptly involve the public health authority and Regional/Central Office in planning the investigation.</p>
7.	<p>Identify contacts who were exposed to the person with hepatitis A during the infectious period. “Contacts” include cellmates, close personal contacts, injection and non-injection drug use contacts, sexual contacts, and persons sharing bathroom facilities.</p> <p>a. Obtain the following information about the index case during the infectious period: housing, work, school and recreation locations.</p> <p>b. Start and maintain a line list of contacts.</p> <p>c. Tour exposure sites where the hepatitis A (index) case was housed, worked, or went to school during the infectious period. Determine the number of inmates that were housed together; characterize the housing arrangements and the toilet facilities for the likelihood of transmission; and determine the availability of data regarding the inmates who were in contact with the hepatitis A case.</p>
8.	<p>Halt movement out for identified contacts.</p> <p>a. Halt movement out for all identified contacts by placing a Medical Hold in both SENTRY and BEMR. Movement will be stopped until 50 days after the last case of Hepatitis A is identified.</p> <p>b. Regional/Central Office will make notifications regarding identified contacts who were exposed during case infectious period and have left the facility.</p>

✓	CONTACT INVESTIGATION TASKS (PAGE 3 OF 3)
9.	<p>Administer post-exposure prophylaxis to eligible contacts.</p> <p>a. Identify close contacts who are not previously vaccinated and have no history of hepatitis A or prior positive total anti-HAV lab result.</p> <p>b. Offer these contacts post-exposure vaccination.</p> <ul style="list-style-type: none"> • They should be administered a dose of single-antigen hepatitis A vaccine. (The use of TWINRIX®, combined hepatitis A and hepatitis B vaccine, is NOT recommended post-exposure). • Post-exposure hepatitis A vaccine should be administered as soon as possible and within two weeks after the exposure. • Inmates with additional risk factors for hepatitis A (TABLE 3) should be scheduled for a second dose of vaccine in 6 months to complete the series. <p>c. Contacts who are immunocompromised or have chronic liver disease should also be administered immune globulin (IG). Administer IG (0.1mL/kg) and vaccine simultaneously in different anatomic sites (e.g., separate limbs) as soon as possible after exposure. IG should also be considered for contacts age > 40 (in consultation with public health authorities).</p>
10.	<p>Emphasize hand washing and disinfection on housing units where the case resided. This includes emphasizing hand hygiene with soap and water (especially after using the bathroom) and cleaning and disinfecting high-touch surfaces (especially bathrooms). Disinfection should be with either a bleach solution or an EPA disinfectant effective against norovirus (see TABLE 4).</p>
11.	<p>Continue to observe for more cases for two full (50-day) incubation periods. If more cases are identified, the entire process begins again. Clinicians should maintain a high index of suspicion for hepatitis A during this time period. Staff and inmates should be educated to report hepatitis A symptoms.</p>

APPENDIX 2. HEPATITIS A SCREENING QUESTIONNAIRE FOR NEW INTAKES

A sample one-page **INTAKE SCREENING QUESTIONNAIRE** for facilities located in states that are experiencing community outbreaks of hepatitis A appears on the following page.

The CDC maintains a website listing states experiencing community outbreaks, available at:
<https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>

HEPATITIS A SCREENING QUESTIONNAIRE FOR NEW INMATES

U.S. DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF PRISONS

Use this form for new inmate intakes in outbreak states. The CDC identifies current outbreak states at this website: <https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm> .

<input type="checkbox"/> Yes <input type="checkbox"/> No	1. In the last 60 days (2 months), have you lived in a state with a Hepatitis A outbreak? (provide list from above website)		
If yes, where? _____ If No to question 1, then STOP here.			
2. In the last 60 days (2 months), have you:			
<input type="checkbox"/> Yes <input type="checkbox"/> No	a. Used injection or non-injection drugs?		
<input type="checkbox"/> Yes <input type="checkbox"/> No	b. Been homeless or had to move from place to place?		
<input type="checkbox"/> Yes <input type="checkbox"/> No	c. Known anyone who was diagnosed with hepatitis A?		
If No to all questions 2a-c, then STOP here.			
3. Do you have any of the following symptoms?		Date of Onset:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	a. Fever		
<input type="checkbox"/> Yes <input type="checkbox"/> No	b. Unusually tired		
<input type="checkbox"/> Yes <input type="checkbox"/> No	c. Poor appetite		
<input type="checkbox"/> Yes <input type="checkbox"/> No	d. Nausea		
<input type="checkbox"/> Yes <input type="checkbox"/> No	e. Abdominal discomfort		
<input type="checkbox"/> Yes <input type="checkbox"/> No	f. Jaundice (yellow skin or eyes)		
<input type="checkbox"/> Yes <input type="checkbox"/> No	g. Dark urine		
<input type="checkbox"/> Yes <input type="checkbox"/> No	h. Pale colored stool		
If symptoms suggest acute hepatitis A infection, or if jaundiced, isolate immediately with Contact Enteric Precautions. Report to Regional/Central Office Infection Prevention & Control. Perform diagnostic work-up for acute hepatitis A in accordance with BOP Clinical Guidance on Hepatitis A.			
Completed?	4. Implement the following for all inmates with risk factors in 2 a–c above.		
<input type="checkbox"/> Yes <input type="checkbox"/> No	a. Educate inmate that there is a hepatitis A outbreak in the community and that if they develop any of the above symptoms, they should report to Health Services.		
<input type="checkbox"/> Yes <input type="checkbox"/> No	b. Do NOT assign inmate to Food Service work for at least 60 days after intake.		
Inmate Name:		Reg. No.:	
Institution:			
Provider Signature:		Date:	
Provider Printed Name:			