HEPATITIS A

Case definition

CONFIRMED CASE
Laboratory confirmation of infection in the absence of recent vaccination¹:
• detection of immunoglobulin M (IgM) antibody to hepatitis A virus (anti HAV) AND acute clinical illness
  OR
• detection of immunoglobulin M (IgM) antibody AND an epidemiologic link to a person with laboratory-confirmed hepatitis A infection.

PROBABLE CASE
Acute clinical illness in a person without laboratory confirmation of infection who is epidemiologically linked to a confirmed case.

Causative agent
Hepatitis a virus (HAV), an RNA picornavirus

Source
Humans and some non-human primates

Incubation
15-50 days with an average of 30 days

Transmission
The Hepatitis A virus is transmitted via the fecal-oral route, which can occur from direct person-to-person contact, from contamination of the environment or objects, or through contaminated food or water, including shellfish from contaminated water. Transmission though infected blood or blood products has also been reported.

Communicability
The infectious period is typically 2 weeks before the onset of illness to 1 week after the onset of jaundice. The risk becomes minimal following this time period; however, HAV can be detected in the stool for up to six months in some infants and children. Viral shedding can also be greatly prolonged in immunocompromised individuals.

¹2-4 weeks after Hepatitis A immunization
Symptoms
Characterized by discrete onset of symptoms, including fever, malaise, anorexia, nausea and abdominal pain followed by jaundice or elevated aminotransferase levels within a few days. Usually asymptomatic in children, may be asymptomatic in adults.

Diagnostic testing
Hepatitis A serology is used for two purposes, either to determine immunity (HAV IgG) or diagnose acute infections (HAV IgM).

Determination of immunity (HAV IgG): routine pre-immunization serology is not cost effective in NS, where the population is unlikely to have been previously infected by HAV. Pre immunization serology can be considered in older Canadians, people from endemic areas or those with a past history of jaundice [Canadian Immunization Guide phac-aspc.gc.ca/publicat/cig-gci].

Acute infection (HAV IgM): HAV IgM should only be ordered when evaluating patients for acute infection. To ensure that the appropriate test is performed, the clinician MUST clearly indicate whether they are looking for a diagnosis of an acute infection (IgM) or immunity (IgG).

Failure to indicate which test may delay testing and lead to erroneous results.

Treatment
Supportive therapy.

PUBLIC HEALTH MANAGEMENT & RESPONSE

Case management
The investigator should initiate the investigation immediately upon receipt of the report using the following steps:

• Contact the primary care provider to obtain clinical information on the case, if reported via a primary care provider.

• Interview the client, review clinical information, determine food history and activities, employment and possible source of exposure.

• Educate the client and/or family about Hepatitis A disease transmission and prevention measures and provide access to resources (website, general information etc.)

• Identify contact[s] who have had exposure to the case during the period of communicability.
• If the case identifies drinking water or recreational water as a potential source, consult with the Medical Officer of Health (MOH) to determine if a request for assistance from Nova Scotia Environment is warranted. The MOH may request an inspection/investigation be conducted at the site to identify potential sources. If needed, this can be facilitated through the Environmental Health Consultant with the Department of Health and Wellness.

• If the case identifies a local food establishment as a potential source, consult the MOH to determine if a request for assistance from Nova Scotia Agriculture is warranted. The MOH may request an inspection/investigation be conducted at the site to identify potential sources. If needed, this can be facilitated through the Environmental Health Consultant with the Department of Health and Wellness.

• Document the information on the appropriate forms and ensure the case is entered into ANDS.

As part of the case follow-up please note the following change as per the requirements of Canadian Blood Services (CBS);

• Advise the client that they cannot donate blood for a period of six months after complete recovery or as per the requirements of CBS².

Exclusion

Exclude cases in the risk groups below.

<table>
<thead>
<tr>
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<tr>
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<td>Children &lt; 5 years attending child care etc.</td>
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²as per CBS standards if the donor had Hepatitis A after age 11 they are deferred for 6 months after complete recovery. If testing is done at the time of diagnosis the donor must present serological documentation of IgM anti-hepatitis A. If testing is done months or years after illness must have IgG anti-hepatitis A. In all cases, donor must provide documentation of negative tests for HBsAg, Anti-HBc and Anti-HCV.
Contact tracing
A contact is a person who has had exposure to a case during the period of communicability and at risk of infection by the fecal-oral route by either person-to-person contact or the ingestion of contaminated food or water. Contacts include:

- Household contacts (those living in the same residence)
- Close contacts include sexual contact and persons who have contact that may be fecal-oral (i.e., sharing meals the case cooked, sharing needles and other items used for injecting or non-injecting drugs with the case, or any activity that may involve hand to mouth contact with the case)

Initiate contact tracing
- During the interview with the case, identify contact(s).
- Contact all household and close contacts of the case and determine the need for prophylaxis.
- Determine if any of the household or close contacts fall into a special risk group.
- If a contact is a child who attends a child care setting, confirming the HAV status of the child may assist in determining if there may be additional cases at the child care setting.
- If the contact is a resident or staff of an institution/Long Term Care Facility, in close personal contact with the index case, they should receive Hepatitis A vaccine or immune globulin as appropriate.

Prophylaxis
- The Hepatitis A vaccine should be administered as soon as possible and preferably within 14 days post exposure, followed by a second dose 6-36 months later (depending on the product) for household and close contacts of the case older than 1 year. The vaccine should still be considered regardless of the time interval since exposure. The vaccine is publicly funded and provided to household and close contacts. Ensure the product is appropriate for age. Post vaccination serology testing is not recommended.
- Immune globulin (Ig) is the recommended immunoprophylaxis for infants (less than one year) and for those in whom the vaccine is contraindicated. Immunocompromised people should receive the Ig in addition to the Hepatitis A vaccine since they may not respond fully to the vaccine.
- If the client is a food handler, other food handlers in the same institution should be offered the Hepatitis A vaccine or Ig as appropriate.
- Administration of the Hepatitis A vaccine or Ig to patrons of the food establishment may be considered when:
  - The infected food handler handled food at a time when they were most likely infectious AND
The food handler had diarrhea or lack of proper hand washing is suspected AND
• Post exposure prophylaxis can be administered within 2 weeks of exposure.

• Post exposure prophylaxis is not necessary for health care workers in contact with a case or contacts in the workplace or in schools unless an outbreak is suspected.

**NOTE: Do not give live virus vaccine** [i.e. Measles Mumps Rubella or Varicella vaccine] for 3 months after the administration of Ig. If a live virus vaccine was given within 2 weeks prior to Ig administration, the vaccine should be repeated in 3 months. Please refer to the [Canadian Immunization Guide](#) for more information.

Determine if children who are contacts are HAV positive. If a contact attends a child care setting confirming the HAV status of the child will assist in determining if there may be additional cases at the child care setting.

**EXCLUSION CRITERIA FOR CASE CONTACT(S) IN SPECIAL RISK GROUPS:**

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| Food handlers                                   | **Symptomatic:** exclude until one week after onset of jaundice or if not jaundiced until one week after onset of symptoms.  
**Asymptomatic:** Consult with MOH to assess on a case-by-case basis. |
| Health care, child care or other staff who have contact with susceptible persons | **Symptomatic:** exclude until one week after onset of jaundice or if not jaundices until one week after onset of symptoms.  
**Asymptomatic:** Consult with MOH to assess on a case-by-case basis. |
| Children < 5 years attending child care etc.    | **Symptomatic:** exclude until one week after onset of jaundice or if not jaundiced until one week after onset of symptoms.  
**Asymptomatic:** Consult with MOH to assess on a case-by-case basis. |
Special considerations

- Routine immunization is recommended for persons at risk of HAV infection older than 1 year of age, including:
  - Individuals with Chronic Liver Disease (publicly funded)
  - Injecting and non-injecting drug users (publicly funded)
  - Men who have sex with men (publicly funded)
  - Persons travelling to locations where HAV infection is endemic [not publicly funded].

- Encourage proper hand hygiene
  - before preparing and consuming food
  - after using the toilet
  - after diaper changes

- Avoid eating raw shellfish.

- Consume only shellfish purchased from a licensed source. Do not harvest shellfish in areas closed to harvesting by the Department of Fisheries and Oceans.

- Before travelling to a country where Hepatitis A is common, consult a travel clinic.

- Child care settings:
  - Review the importance of measures to minimize the possibility of fecal–oral transmission, including proper hand hygiene following every diaper change and prior to consuming food.
  - See above for exclusion of staff and children.
  - If one or more HAV cases are associated with a child care setting, or if cases are recognized in 2 or more households of the center attendees, vaccine or immune globulin should be administered to the staff and attendees of the setting. [see Prophylaxis].
  - In settings that provide care only to children who do not wear diapers, vaccine or immune globulin should be administered to only class room contacts of the case.
  - In the event of an outbreak, vaccine or immune globulin should be considered for members of household with children in diapers who attend that child care setting.

During an outbreak, the MOH and/or facility management may recommend closure of a facility temporarily. If the facility is closed, it is important for parents to keep ill children at home and not send the ill child to an alternative child care location.

Please refer to the “Guidelines for Communicable Disease Control for Child Care Programs and Home Day Care Agencies”, November 2013 novascotia.ca/dhw/cdpc/documents/Guidelines_CDPC_Child_care_Setting.pdf
**Education**

Inform the contact[s] and/or family to see a health care provider and contact PHS if they develop symptoms of Hepatitis A within 15-50 days of exposure.

**Surveillance forms**

[link](novascotia.ca/dhw/populationhealth/surveillanceguidelines/NS_Notifiable_Disease_Surveillance_Case_Report_Form.pdf)

[link](novascotia.ca/dhw/populationhealth/surveillanceguidelines/Enteric_Case_Report_Form.pdf)

[link](novascotia.ca/dhw/populationhealth/surveillanceguidelines/Hepatitis_A_Case_Report_Form.pdf)

**General Information Sheet**

**REFERENCES**


