

Table of Contents

1.0	INTRODUCTION	2
1.1	AUTHORITY	2
1.2	RATIONALE FOR HAV FOLLOW-UP	2
1.3	GOALS	2
2.0	DEFINITIONS	3
3.0	HEPATITIS A VIRUS	4
3.1	CLINICAL DESCRIPTION	4
3.2	EPIDEMIOLOGY	4
3.3	RISK FACTORS	5
3.4	TRANSMISSION	5
4.0	LABORATORY AND TESTING INFORMATION	6
4.1	HEPATITIS A TESTING	6
4.2	PRE-VACCINATION TESTING	6
4.3	POST-VACCINATION TESTING AND BOOSTERS	7
4.4	INVESTIGATION OF ACUTE HEPATITIS	7
5.0	CASE INVESTIGATION AND MANAGEMENT	9
5.1	SUMMARY OF CASE MANAGEMENT	9
5.2	CASE INTERVIEW	10
5.3	EXCLUSION OF CASES	
5.4	FOOD HANDLERS	10
5.5	TRANSFUSION TRANSMISSION	11
6.0	CONTACT MANAGEMENT	11
6.1	IDENTIFY CONTACTS	11
6.2	CONTACT MANAGEMENT	12
6.3	EXCLUSION OF CONTACTS	13
6.4	IMMUNOPROPHYLAXIS FOR CONTACTS	13
7.0	OUTBREAK MANAGEMENT	14
7.1	DAYCARE CENTRES	14
7.2	INSTITUTIONAL SETTINGS	15
7.3	PREVENTION EDUCATION	15
8.0	PUBLIC HEALTH REPORTING	15
APPEN	DIX A: Hepatitis A Follow-Up Form	17
Referen	nces	

This document is best viewed online. There are embedded hyperlinks that appear as underlined words in print versions.



1.0 INTRODUCTION

This guideline aims to meet the needs of BC health care professionals who are following-up individuals with newly identified hepatitis A virus (HAV) infection or those who have a probable HAV infection.

To meet the needs of the Regional Health Authorities (RHAs) and the communities they serve, this document presents information in a flexible way, to encourage client engagement with the health care system. Public health is responsible for the follow-up case investigation and collaborating with primary care providers where appropriate.

1.1 Authority

Infection with HAV is a reportable condition under the Public Health Act (2008) and the *Reporting Information Affecting Public Health Regulation*.

BC Public Health Act (2008) is available at: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_08028_01

1.2 Rationale for HAV follow-up

Follow-up of newly identified HAV infections can contribute to positive outcomes for the individual, their partners, their families and the community. Clients who test positive for HAV can be engaged into care to support:

- Transmission prevention
- Site assessments and prevention recommendations
- Follow-up clinical care
- Immunizations
- If appropriate, STI screening
- If appropriate, engagement into counselling and care related to risk factors and comorbid conditions

1.3 Goals

To support public health personnel and primary care providers to reduce cases and transmission of HAV.

Using principles of health equity (e.g., trauma informed practice and culturally informed care) to:

- 1. Provide targeted immunization of all:
 - High-risk groups, as specified in the Immunization Program
- 2. Public Health measures:
 - Passive surveillance of hepatitis A to help guide vaccination recommendations
 - Rapid response to identified hepatitis A outbreaks



- · Exclusion of cases and contacts from high-risk occupations
- Provide post-exposure immunoprophylaxis as indicated for contacts of known hepatitis A cases
- 3. Increasing public awareness regarding:
 - The use of hepatitis A vaccine prior to travel
 - Promotion of good personal hygiene and adequate living standards as the most important measures for prevention of hepatitis A
 - Further risks and recommendations related to case management
- 4. Educate and counsel infected individuals and their contacts about:
 - · Coinfection with human immunodeficiency virus (HIV) and other types of hepatitis
 - Immunization for hepatitis B and other vaccines where appropriate
 - Transmission prevention
 - Liver health (e.g., alcohol)

2.0 **DEFINITIONS**

Alanine aminotransferase (ALT)/Aspartate Aminotransferase (AST) - Enzymes produced by the liver. Increased levels indicate inflammation of the liver, but do not always correlate with the severity of the disease process.

Case – Defined here for the purpose of surveillance reporting of confirmed and probable HAV infections.

Confirmed Case
 Laboratory confirmation of infection in the absence of recent vaccination

Laboratory confirmation

Detection of immunoglobulin M antibody to hepatitis A virus (anti-HAV IgM)

AND

Acute illness with discrete onset of symptoms and jaundice or elevated serum aminotransferase levels

OR

An epidemiologic link to a person with laboratory confirmed hepatitis A infection

• Probable Case

Acute illness in a person who is epidemiologically linked to a confirmed case

Contact - A person who has exposure to a case during the time the case is infectious. The contact may acquire infection by the fecal-oral route, by either person-to-person contact or ingestion of contaminated food or water.

Documentation – Recording of results and follow-up care provided to those testing for HAV. Guidelines may vary by RHA and agency.



Hepatitis A Outbreak - An outbreak of hepatitis A occurs when two or more epidemiologically–linked cases occur within two incubation periods (i.e., 100 days) within a community or closed setting

Post-exposure prophylaxis (immunoprophylaxis) – Administration of hepatitis A vaccine and/or immune globulin (Ig) as soon as possible after a known exposure to an individual with confirmed acute HAV infection. Hepatitis A Ig provides immediate, short-term protection against hepatitis A infection.

3.0 HEPATITIS A VIRUS

Hepatitis A is a RNA picornavirus virus that can cause acute liver disease. HAV is excreted in bile and shed in the feces of an infected person. It is transmissible via contaminated food and water or through a HAV infected person's blood and/or body fluids.

3.1 Clinical Description

Hepatitis A infection is an acute, self-limited illness. Chronic infection with hepatitis A does not occur. On average, symptoms can take around 28 days to appear (range 15-50 days). Symptoms can include fever, fatigue, malaise, jaundice, anorexia, abdominal discomfort, nausea and vomiting, dark urine and grey-coloured stools, to a severely disabling disease lasting several months.

The severity of hepatitis A virus infection generally increases with age. Children younger than 6 years of age often have no symptoms or present with mild disease without jaundice. Among older children and adults, infection is usually symptomatic (70% or more have symptoms) and typically lasts several weeks. About 25% of adult cases in Canada are hospitalized, but deaths are rarely reported. Prolonged or relapsing disease, lasting as long as 6 months, can occur. Fulminant hepatitis is rare, but is more common in people coinfected with another hepatitis virus and with underlying liver disease.

The clinical features of hepatitis viruses can be non-specific with respect to other viral diseases affecting the liver, making it difficult to diagnosis without lab results.

3.2 Epidemiology

In 2016, there were a total of 22 cases reported with a rate of 0.5 per 100,000. This follows a trend of decreasing numbers over time from 1000 cases reported in 1992, largely as a result of targeted immunization. Similar numbers of cases were reported in males and females. There were no cases reported in children less than 5 years of age, however, young children may have asymptomatic infection and thus not be identified.

Less than 40 cases per year have been reported since 2008, with the exception of 2011 when an outbreak occurred on Central Vancouver Island. A cluster of hepatitis A cases associated with the consumption of a frozen berry blend was identified in 2012. A large proportion of hepatitis A cases continue to be identified in persons who were not immunized prior to travel to countries where hepatitis A is endemic. BC provides publicly funded hepatitis A vaccine to high risk groups, a strategy consistent across most of Canada.

For current statistics, see the BCCDC '<u>Reportable Disease Dashboard</u>' and '<u>Annual Summaries of</u> <u>Reportable Diseases</u>'.



3.3 Risk Factors

In BC and Canada, the majority of HAV cases have a history of travel to or immigration from HAV endemic countries, and many have been associated with the consumption of contaminated frozen fruit in recent years. While many reported cases do not have any identifiable risk factors, common risk factors associated with the acquisition of acute HAV infection include:

- Travel to HAV endemic countries (refer to http://apps.who.int/ithmap/)
- Contact with someone who has HAV infection
- Household contact of a diapered child attending a daycare centre
- Residence in communities at risk of HAV outbreaks or where HAV is endemic
- Household or close contacts of children adopted from hepatitis A endemic countries
- Males who have sexual contact with other males
- Individuals who engage in illicit drug use (injecting or non-injecting)
- Individuals at occupational risk of exposure (e.g., research on HAV or hepatitis A vaccine, and people handling non-human primates)
- Living in a correctional facility or residential/institutional settings
- Individuals receiving repeated replacement of plasma-derived clotting factors

Indigenous children (includes anyone self-identifying as First Nations, Metis or Inuit) aged 6 months to 18 years living in or out of community (on or off reserve) may be more vulnerable to HAV infection because of longstanding inequities related to the social determinants of health¹. In 2012, BC introduced a 2 dose hepatitis A program for Indigenous children related to historical outbreaks of HAV infection in several First Nations communities. Infants, toddlers and children in this age group are often asymptomatic and can spread the illness undetected, while the majority of Indigenous people over 35 years of age have most likely already been exposed to HAV and are immune.

3.4 Transmission

HAV is transmitted through the fecal-oral route. HAV transmission through infected blood or blood products is also possible, however the concentration of HAV virus in the serum is significantly less than it is in the feces. The most common mode of transmission is through oral ingestion of food or water contaminated with infected feces. It can also occur through close physical or household contact with an infected person that results in oral ingestion of contaminated feces. Hepatitis A is not transmitted through casual contact with an infectious person.

The incubation period is 15 to 50 days, with an average of 28 days. The shedding of HAV in the feces can begin 10-12 days after infection. The period of infectivity for hepatitis A is the latter half of the incubation period (usually 14 days), continuing for 14 days after symptom onset or 7 days after the onset of jaundice, whichever is longer. Prolonged viral excretion up to 6 months has been documented in infants and children.

¹ Refer to Part I: Envisioning a Healthy British Columbia, Social Determinants of Health: <u>http://www.health.gov.bc.ca/library/publications/year/2007/conversation_on_health/</u>



4.0 LABORATORY AND TESTING INFORMATION

HAV serology is done at the BCCDC Public Health Laboratory (PHL) and in private and hospital laboratories. Serum is sent to the BCCDC PHL from outside laboratories for confirmatory testing and to identify false positive results. BCCDC verifies all anti-HAV IgM reactive specimens from other laboratories because false positives can be found on initial screening.

Practitioner Alert!

Please ensure that your local laboratory is sending anti-HAV IgM reactive specimens to the BCCDC PHL, indicating that they are "acute hepatitis A". Once confirmed, all anti-HAV IgM reactive specimens are then forwarded by BCCDC PHL to the National Microbiology Laboratory (NML) for further genotyping by PCR and DNA sequencing, which can assist in the evaluation of potential outbreaks.

Refer to the <u>BCCDC eLab Handbook</u> and website for information on requisitions, testing, and sample collection and processing instructions.

4.1 Hepatitis A Testing

Hepatitis A serology testing is available for determination of acute infection or immune status (refer to <u>Table 4-1</u>). For anti-HAV IgM reactive specimens, the BCCDC PHL reflexively performs an anti-HAV total and supplemental anti-HAV IgM testing on a different platform to confirm acute infection. If the anti-HAV Total is non-reactive, then the initially reactive anti-HAV IgM should be considered a "false positive".

HAV Serologic Marker	Term	Clinical Correlation
Anti-HAV IgM	Immunoglobulin M (IgM) antibody to HAV	 Requires confirmation with clinical history and can indicate: Recent acute infection with HAV Recent immunization with hepatitis A vaccine* False-positive test result Remote resolved infection with HAV (can remain detectable for years after acute infection)
Anti-HAV Total	IgM + IgG antibody to HAV	 In the absence of a reactive anti-HAV IgM result, can indicate: Prior immunization Resolved infection (immune status)

Table 4-1. Hepatitis A serology testing

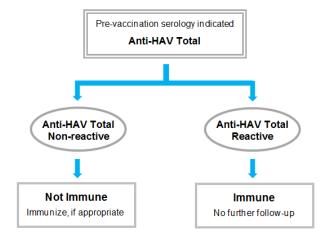
* Around 5% of people immunized with hepatitis A vaccine will develop a reactive anti-HAV IgM

4.2 **Pre-vaccination Testing**

Pre-vaccination testing is **only** indicated for certain populations where there may be higher levels of preexisting immunity (Figure 4-1). Refer to the <u>BCCDC Immunization Program Manual, Part 2 –</u> <u>Immunization of Special Populations</u> for further information.



Figure 4-1. HAV pre-vaccination testing



4.3 Post-vaccination Testing and Boosters

HAV laboratory testing is designed to detect natural infection. Anti-HAV tests have poor sensitivity and may not be able to detect low, but protective levels of vaccine-induced antibody. While a reactive anti-HAV Total result reflects immunity to HAV, a negative test after vaccination does not always indicate that an individual is susceptible. As well, almost 100% of immune competent vaccine recipients will develop protective antibody concentrations after receiving 2 doses of hepatitis A vaccine.

Individuals who are anti-HCV positive respond well to hepatitis A vaccine and do not require post-vaccination testing. Refer to the <u>BCCDC Immunization Program Manual, Part 2 – Immunization of Special Populations</u> for further information.

Practitioner Alert!

There are *no* indications for post-vaccination serology following hepatitis A vaccination.

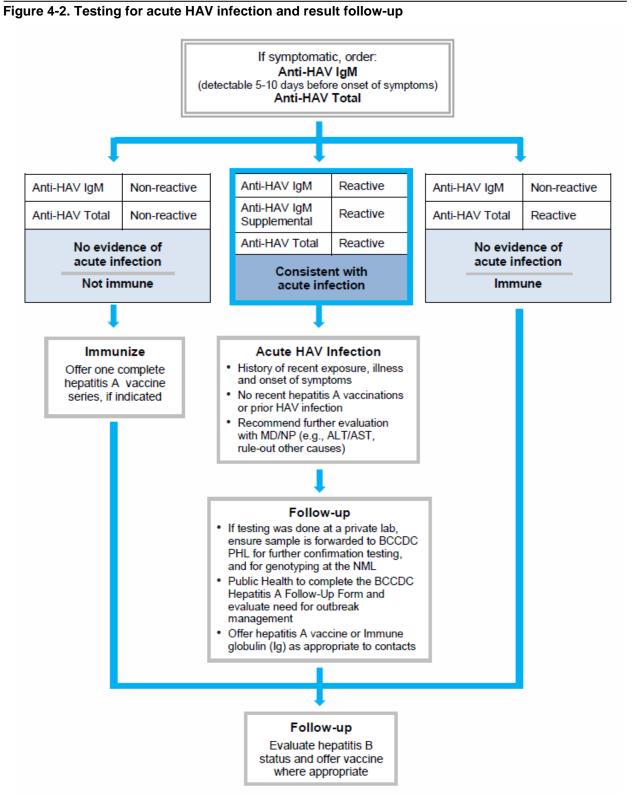
There are *no* indications for hepatitis A vaccine boosters following administration of a complete series.

4.4 Investigation of Acute Hepatitis

Order the following initial screening tests: anti-HAV IgM, anti-HAV Total, HBsAg, anti-HBc Total (may be in window period), anti-HCV and ALT. If these initial tests are negative, test for HCV RNA. Although rare in Canada, consider testing for HEV. Consider other infectious (e.g., cytomegalovirus, Epstein-Barr virus, enteroviruses) and non-infectious causes, including hepatotoxic drugs, herbal medicines, autoimmune hepatitis, Wilson's disease or other vascular causes.

Acute/recent infection should be confirmed with a clinical history and <u>serum aminotransferase levels</u> or by repeating anti-HAV IgM after one week. If appropriate, refer individual to a physician/NP for further follow-up (refer to Figure 4-2).





* For the BCCDC Hepatitis A Follow-up Form, see http://www.bccdc.ca/health-professionals/professional-resources/surveillance-forms



5.0 CASE INVESTIGATION AND MANAGEMENT

If possible, confirm the diagnosis with the attending physician/NP before contacting the client. Individuals with acute hepatitis A infection should be referred to a physician or nurse practitioner for further evaluation. The BCCDC '<u>Hepatitis A Follow-up Form</u>' may be used to guide the case investigation (<u>www.bccdc.ca/health-professionals/professional-resources/surveillance-forms</u>).

Practitioner Alert!

Report hepatitis A outbreaks to BCCDC as soon as possible.

If a public announcement regarding hepatitis A is to be made, practitioners are encouraged to notify the BCCDC. The decision to issue a media alert often has provincial, and sometimes national or international, implications. In some instances a joint provincial-regional public advisory may be required.

To speak with the physician responsible for hepatitis A, during work hours, phone: 604-707-2510 and after-hours, phone: 604-875-2161.

5.1 Summary of Case Management

This section describes a suggested practice for follow-up of individuals who are newly diagnosed with HAV infection, to be carried out by public health personnel with the assistance of a primary health care provider where possible. Refer to local agency guidelines for further guidance.

Case Identification

- Lab notification received confirming HAV infection (refer to <u>Section 4.0</u>)
- Review clinical and laboratory criteria, exposure risks and medical history to determine if this is an acute HAV case

Reporting

- Use the electronic public health information system available in your RHA to report <u>confirmed cases</u> of HAV infection
- If reporting a new acute HAV, complete the <u>BCCDC 'Acute Hepatitis A Follow-up Form'</u>

Case Management

- Connect client with primary care provider to arrange for further clinical evaluation
- As per the local Medical Health Officer's (MHO) direction, discuss any exclusion recommendations
- Identify contacts (refer to Section 6.0)
- Review transmission information and prevention
- Advise the case of their period of infectivity (refer to Figure 6-1)
- Review process for contact follow-up and if applicable, outbreak management (refer to Section 7.0)
- Engage into care. Offer further clinical support, information and support relevant to identified risk factors.

Counsel the case regarding ways to prevent transmission to others and ways to expedite recovery. Refer to the <u>Hepatitis A Health File (www.healthlinkbc.ca/healthlinkbc.files/hepatitis-vaccine</u>).



5.2 Case interview

Give a rationale as to why the case report information is being collected to provide reassurance regarding privacy and confidentiality. Advise the case of their estimated period of infectivity and the process involved with contact tracing. Provide education on ways to prevent transmission and to expedite recovery.

Recommended information to consider includes:

- Obtain a history of the illness from the case, including date of onset of symptoms
- Calculate the infectious period for the case
- Determine the occupation of the case. The following groups are of particular concern due to the increased risk of transmission to others:
 - Food handlers
 - o Daycare workers
 - o Health care providers
- Determine if the case prepared food for others or shared common food with others while in the infectious period
- In order to determine the degree of risk posed to others, question the case about hand washing practices (i.e., prior to preparing food or eating and after using the bathroom)
- Ascertain source of infection. This could be person-to-person, food, or waterborne (refer to Section 3.3).
- Determine if the case donated or received blood product in the two months prior to the acute infection (refer to <u>Section 5.4</u>)
- Identify contacts of the case

5.3 Exclusion of cases

Each case should be reviewed by Public Health and the local MHO to determine appropriateness of excluding the case from work and any related outbreak management.

The period of infectivity must be established (refer to <u>Figure 6-1</u>). For 14 days prior to the onset of illness, to 14 days after presentation of first symptoms or 7 days after the onset of jaundice (whichever is longer), it is recommended that the MHO:

- Exclude the case from occupations involving the handling of food or drink, and
- Consider the exclusion of health care workers when the nature of their health care work poses a risk of hepatitis A transmission

The MHO should also consider the exclusion of children and adults with hepatitis A from a child care facility during the period of infectivity, or until hepatitis A vaccine and/or immune globulin (Ig) has been provided to all the children and staff at the centre.

Also refer to Section 6.2 Exclusion of contacts.

5.4 Food handlers

If the case is a food handler, the MHO may consider issuing a media release to alert patrons of a food establishment of the need for hepatitis A vaccine and/or Ig for those situations in which:



- The person was infectious while working, AND
- Handled foods prior to consumption which were not cooked after handling, AND
- The food handler's practices were not hygienic, OR the food handler had diarrhea, AND
- The contacts can be identified and receive immunoprophylaxis within 14 days of the last exposure to the case while the case was in the infectious period

Consultation with <u>BCCDC</u> is recommended.

5.5 Transfusion Transmission

If risk factors indicate the possibility of a transfusion transmissible infection, where the client has been a donor or recipient, follow the reporting process for <u>Transfusion Transmissible Infection</u> in the <u>BCCDC</u> <u>CDC Manual, Chapter 1: Communicable Disease Control</u>.

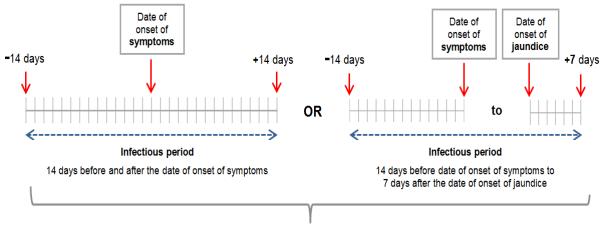
6.0 CONTACT MANAGEMENT

The following information applies to immune competent individuals. Consultation with a physician specializing in infectious diseases is recommended to manage immunocompromised individuals. If a <u>probable case</u> is not in a high risk group for hepatitis B or hepatitis C, and if <u>immunoprophylaxis</u> of contacts must be undertaken immediately because of time constraints, presume hepatitis A until the diagnosis is lab confirmed.

6.1 Identify contacts

For contact tracing purposes, the period of infectivity is established by determining the longest period of time from the latter half of the incubation period (usually 14 days), to 14 days after presentation of first symptoms, or 7 days to the onset of jaundice, whichever is longer (refer to Figure 6-1).





Whichever is longer determines period of infectivity



6.2 Contact Management

Contacts with <u>symptoms</u> suggestive of hepatitis A infection should be tested as soon as possible. Provide information about enteric precautions, disease transmission, and symptoms. Begin further contact tracing as needed. Advise contacts to seek medical attention and to be tested if symptoms develop.

The following contacts should be prioritized for follow-up:

- <u>Symptoms</u> of HAV infection
- Household contact
- Close non-household contact
- Sexual partners
- · Contacts who shared illicit drugs (via snorting, smoking or injection equipment)
- If the case is a food handler, other food handlers at the same establishment at risk of HAV infection as determined by Public Health
- Patrons of eating establishments who ate food handled by an infected food handler (refer to Section 5.2)

Refer contacts to the Hepatitis A Health File (www.healthlinkbc.ca/healthlinkbc-files/hepatitis-vaccine)

6.2.1 Health Care Workers

Health care workers who followed routine infection control practices when in contact with an infected patient, do not require administration of hepatitis A vaccine and/or Ig.

Remind health care workers of the importance of routine infection control practices when there is a possibility of contamination from any body fluid. Use a point of care risk assessment to determine the need for personal protective equipment (e.g., glove and gowns):

- Wear gloves:
 - o If in contact with any body fluids or contaminated materials
 - When discarding contaminated articles
 - When bagging contaminated articles to send for cleaning, and avoid touching your body
- Wash hands after removal of gloves and when in contact with the case, or potentially contaminated articles
- Wear a gown if there is a potential for any contact with body fluids or contaminated materials with your clothing
- Clean and disinfect area using a hospital grade disinfectant with a drug identification number (DIN), ensuring contact time is met

Refer health care workers to agency infection control practitioner for further educational support.

6.2.2 Workplace contacts

The use of hepatitis A vaccine and/or Ig is not indicated for workers in contact with a case in offices or factories, unless there is evidence of possible transmission of hepatitis A virus by the fecal-oral route.

6.2.3 School contacts

The use of hepatitis A vaccine and/or Ig is not indicated in schools for pupils or teachers in contact with a case, unless there is evidence of classroom or school transmission.



6.2.4 Internationally adopted children

Household contacts with an international adoptee from a country of high or intermediate endemicity (refer to <u>http://apps.who.int/ithmap/</u>) should receive a complete hepatitis A series within the first **60 days** following arrival of the adoptee in Canada. The first dose of hepatitis A vaccine should be received series as soon as adoption is planned, ideally within **2 weeks** before the arrival of the adoptee.

6.3 Exclusion of contacts

The MHO may consider excluding a contact from food or drink handling duties until it is demonstrated that the contact has received hepatitis A vaccine and/or Ig, or the contact has demonstrable anti-HAV Total and no anti-HAV IgM. The decision to exclude individuals who do not have evidence of immunity, or who are unable to receive the vaccine and/or Ig within **14 days** of last exposure, should be determined on a case-by-case basis. The MHO may take into consideration the health and hygiene status of the contact. This can include whether the contact is asymptomatic, has received and is following proper hygiene advice, is only handling food that requires cooking, and has received information about the symptoms associated with infection, the incubation period, and what to do if he/she experiences symptoms.

Also refer to Section 5.2 Exclusion of cases.

6.4 Immunoprophylaxis for contacts

Hepatitis A vaccine and/or Ig should be given as soon as possible after a known exposure to a confirmed case, and no later than **14 days** after the exposure.

Provide **one dose** of hepatitis A vaccine and/or Ig to contacts if either can be administered within **14 days** after the last exposure to the case, while the case was in the infectious period (Table 7-1). Hepatitis A Ig should be considered in addition to vaccine if the contact is immunosuppressed or \geq 60 years (NACI 2016).

If there is documentation of a full hepatitis A series or documentation of lab-confirmed immunity related to prior HAV infection, no further post-exposure prophylaxis (PEP) is indicated. Do not delay the administration of PEP to wait for pending lab results.



Immunoprophylactic Agent	Post-Exposure Indication	Notes
Hepatitis A vaccine	 Preferred immunoprophylaxis agent 	 Post-exposure prophylaxis with one dose of hepatitis A vaccine alone is recommended for contacts of a case of hepatitis A If a contact has received only one dose of hepatitis A vaccine more than 6 months previously, provide a second dose
Hepatitis A Immune Globulin (Ig) and Hepatitis A vaccine	 Susceptible individuals with chronic liver disease* Immunocompromised persons who may not fully respond to vaccine 	 NACI notes hepatitis A Ig can be considered in addition to hepatitis A vaccine for susceptible persons aged ≥ 60 years who are household or close contacts of a case of hepatitis A, though does not routinely recommend it
Hepatitis A Ig	 Infants < 6 months of age When vaccine is contraindicated 	

Table 7-1. Post-exposure prophylaxis

* Refer to the <u>BCCDC Immunization Program Manual</u>, Part 2 – Immunization of Special Populations for further information

Studies show that inactivated hepatitis A vaccination of infants 6-12 months of age is immunogenic and safe. (NACI 2016) The immune response after a two dose schedule is comparable to that achieved at an older age. Infants born to mothers previously infected have lower antibody levels after the first vaccine dose, but the booster vaccination elicits a robust anamnestic response. Canada has very low rates of anti-HAV seropositivity due to natural infection among women of reproductive age, thus maternal antibody interference is unlikely to be an issue.

7.0 OUTBREAK MANAGEMENT

The following sections below are specific to the management of hepatitis A outbreak scenarios.

7.1 Daycare Centres

An exception to the provision of vaccine and/or Ig to daycare centre staff and children is to restrict use to staff and children who are confined to a single section of a larger facility, provided the risk is **completely** contained in that section and no other cases have occurred in any other area of that facility.

Daycare centres that accept diapered children

Provide hepatitis A vaccine and/or Ig to:

- All child attendees and staff when one case occurs in an attendee or staff member **OR** when cases are identified in at least two of the households of the child attendees
- Consider the use of hepatitis A vaccine and/or Ig for household contacts of diapered daycare centre attendees when cases have occurred in three or more households of child attendees or when the outbreak is recognized more than 3 weeks after the onset of the index case
- Newly hired staff or children newly admitted to the centre during the six week time period following identification of that last case



Supervised hand washing should be implemented for the children.

Daycare centres not caring for diapered children

If a case occurs in a staff member or child attendee, provide hepatitis A vaccine and/or Ig for previously unimmunized staff members in contact with the index case and for unimmunized children in the same room as the index case. In daycare facilities, careful hand washing is important, particularly after changing diapers and before preparing or serving food. Supervised hand washing should be implemented for the children.

7.2 Institutional settings

Provide hepatitis A vaccine and/or Ig to residents and staff in facilities for developmentally challenged individuals and inmates and staff in correctional facilities when an outbreak occurs.

For confirmed hepatitis A cases, routine precautions and a point of care risk assessment are recommended during the first 2 weeks of illness and no more than 1 week after onset of jaundice. Consider prolonged routine precautions and point of care risk assessments for an outbreak in the neonatal intensive care setting.

7.3 Prevention education

Emphasize the importance of personal hygiene (e.g., handwashing after using the bathroom, before preparing meals and before eating). Advise travellers going to countries of high or intermediate endemicity (refer to <u>http://apps.who.int/ithmap/</u>) about careful selection of food and drink to avoid potentially contaminated sources of infection. Refer to the Health Files for travellers:

- https://www.healthlinkbc.ca/healthlinkbc-files/travel-immunizations-adults
- https://www.healthlinkbc.ca/healthlinkbc-files/hepatitis-vaccine
- <u>http://www.bccdc.ca/health-info/health-your-environment/travel-health</u>

Refer to the <u>BCCDC Immunization Manual, Part 4 – Biological Products</u>, under Hepatitis A Vaccine for a list of groups for whom hepatitis A vaccine is recommended.

8.0 PUBLIC HEALTH REPORTING

Individuals with acute HAV infection are an important population whose risks represent current transmission and acquisition risk factors (e.g., travel out of country or within BC). The documentation and attribution of 'acute' HAV cases can support case management by gathering acquisition risk factors. From this information, the linkage to care can be facilitated by the provision of timely education and service referrals.



Practitioner Alert!

Report hepatitis A outbreaks to BCCDC as soon as possible.

If a public announcement regarding hepatitis A is to be made, practitioners are encouraged to notify the BCCDC. The decision to issue a media alert often has provincial, and sometimes national or international, implications. In some instances, a joint provincial-regional public advisory may be required.

To speak with the physician responsible for hepatitis A, during work hours, phone: 604-707-2510 and after-hours, phone: 604-875-2161.

Report confirmed and probable cases of hepatitis A in the electronic public health information system (PHIS) used for reportable disease notification in your Health Authority. Fax the completed '<u>Hepatitis A</u> <u>Follow-Up Form</u>' to BCCDC (contact information is noted on the form), if the electronic PHIS is not used in your jurisdiction.



APPENDIX A: Hepatitis A Follow-Up Form

Date Case Contacted (YYYY/MM/DD):	Form Completed By:	Email Address:	Email Address:						
Attending Physician:	Phone # attending:	Discussed with attending:	∋yes □ no						
□ Lab results (HAV IgM) as attached or (specify):									
Date Collected (YYYY/MM/DD):									
This case is: Confirmed Clinical									
A. Demographic Information									
Case Surname: Fir	st Name:	Initial:							
PHN:	Birth date (YYYY/MM/DD):		Age:						
Gender:	Ethnicity:								
□ Male □ Female									
Parent/Guardian name (If Applicable):	Parent/Guardian name (If Applicable):								
Address: Phone # (Include Area Code):									
Cell #:									
	email:								
Type of residence:									
□ Private home □ Institution □ On Reserve									
Occupation:									
Place of work/address/phone #									
Family Physician attending (details as above) Or if different from above:									
Surname:	First Name:	Initial:							
City: F	Phone # (Include Area Code):								



B. Case Details							
Check ($$) if applicable: If not ($$) then = not present:							
Symptoms:	Onset Date Resolution Date						
Abdominal Pain							
Nausea							
Diarrhea							
□ Other:							
History of prior hepatitis A infection □ yes □	no If yes, Date (YYYY/MM/DD):						
Prior immunization for hepatitis A 🛛 yes 🗆	no If yes, Date (YYYY/MM/DD):						
	Ilate Infectious Period ** 7 days after jaundice onset or 14 days after first symptom, whichever is longer To (YYYY/MM/DD):						
C. Exposure Information/Risk Fac	ctors						
Exposure (incubation) Period: (max 50 days to							
From (YYYY/MM/DD): To (YYYY/MM/DD):							
Check box if applicable. Indicate DNA, "did not ask", beside box if applicable							
Check box if applicable. Indicate DNA, "did ne							
Check box if applicable. Indicate DNA, "did no Known contact of hepatitis A case	ot ask", beside box if applicable						
Check box if applicable. Indicate DNA, "did no Known contact of hepatitis A case Name of case:	ot ask", beside box if applicable Telephone #:						
Check box if applicable. Indicate DNA, "did no Known contact of hepatitis A case Name of case: Place of contact:	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone:						
Check box if applicable. Indicate DNA, "did not on the second	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD):						
Check box if applicable. Indicate DNA, "did not in the second	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD):						
Check box if applicable. Indicate DNA, "did not in the second	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD): IgG:						
Check box if applicable. Indicate DNA, "did not on the section of	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD): IgG: es/place/details of travel:						
Check box if applicable. Indicate DNA, "did not Known contact of hepatitis A case Name of case: Place of contact: Post exposure prophylaxis given Name and Lot # (if known): Vaccine: Domestic International Domestic International Occupational Exposure:	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD): IgG: es/place/details of travel: Details:						
Check box if applicable. Indicate DNA, "did not Known contact of hepatitis A case Name of case: Place of contact: Place of contact: Post exposure prophylaxis given Name and Lot # (if known): Vaccine: Domestic International Domestic International Occupational Exposure: Raw or Cooked Shellfish:	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD): IgG: es/place/details of travel: Details: Details:						
Check box if applicable. Indicate DNA, "did not Known contact of hepatitis A case Name of case: Place of contact: Place of contact: Post exposure prophylaxis given Name and Lot # (if known): Vaccine: Domestic Domestic International Occupational Exposure: Raw or Cooked Shellfish: Child Daycare Attendee:	ot ask", beside box if applicable Telephone #: Contact's physician name/telephone: If yes, Date (YYYY/MM/DD): IgG: es/place/details of travel: Details: Details: Specify:						



The following questions are of a sensitive nature and should be asked if no alternative exposure is
identified:

 High risk sexual activity (oral-anal sex) Injection drug use Other street drug use/indicate if shared 		Specify:			
		Specify drug & if "rig"/needle shared: Specify:			
Name:		YYY/MM/DD):	Items eaten:		



D. Contact	Informatio	n						
	tious Period (see		late Infe	ectious Period**	page 2)			
From (YYYY/MM/DD):				To (YYYY/MM/DD):				
Name of Contact	Relationship	Age	Sex	Telephone #	Date of Contact (YYYY/MM/DD)	Symptoms?	Date Vaccine Given	Lot#
Household								
Place of Work								
Contacts for whom case has prepared food								



BC Centre for Disease Control AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY

Name of Contact	Relationship	Age	Sex	Telephone #	Date of Contact (YYYY/MM/DD)	Symptoms?	Date Vaccine Given	Lot#
Child Day Care contacts								
Additional/ Other Contacts (sexual partners, share drugs/cigarettes, etc)								

Case initials _____

Please use additional pages if needed.



References

Advisory Committee on Immunization Practices (ACIP). Prevention of Hepatitis A Through Active or Passive Immunization. May 19, 2006; 55(RR07):1-23. Available from: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5507a1.htm

Advisory Committee on Immunization Practices (ACIP). Updated recommendations for use of hepatitis A vaccine in close contacts of newly arriving international adoptees. September 18, 2009; 58(36):1006-1007. Available from: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5836a4.htm

BCCDC Communicable Disease Prevention and Control Services. British Columbia annual summary of reportable diseases. 2016. Available from: <u>http://www.bccdc.ca/health-professionals/data-reports/annual-summaries-of-reportable-diseases</u>

BC Ministry of Health. Summary of input on the conversation on health. Conversation on Health. 2007. Available from: <u>http://www.health.gov.bc.ca/library/publications/year/2007/conversation_on_health/</u>

Buxton JA, Kim J-H. Hepatitis A and hepatitis B vaccination in persons with chronic hepatitis C infection: A review of evidence and current recommendations. Canadian Journal of Infectious Diseases and Medical Microbiology, 2008;19(2):197-202.

Cabaj J, Buxton J, Tang W. Hepatitis A Update British Columbia 2012-2013. Internal BCCDC Report. Available from: <u>http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Statistics%20and%20Reports/Hepatitis/BCCDC20122</u>013HepatitisAReportv4_formatted.pdf

Committee on Infectious Diseases, American Academy of Pediatrics. Red book: Report of the Committee on Infectious Diseases, 2015. Available from: <u>https://redbook.solutions.aap.org/book.aspx?bookid=1484</u>

Heymann, D. Control of Communicable Diseases Manual. 20th edition, American Public Health Association, Washington D.C., 2014.

National Advisory Committee on Immunization (NACI). NACI update on the recommended use of hepatitis A vaccine. Ottawa, ON. 2016. Available from: <u>http://www.healthycanadians.gc.ca/publications/healthy-living-vie-saine/hepatitis-a-vaccine-update-recommended-use-2016-mise-a-jour-recommandations-hepatite-a-vaccin/index-eng.php</u>

Omura J, Buxton J. Cost analysis of a universal infant hepatitis A vaccine program in British Columbia. Vancouver, BC. 2013.

Swinkels H, Kuo M, Embree G, Stone J, Trerise S, Brisdon S, Louie K, Asplin R, Stiller A, Abraham T, Gill I, Rice G, Andonov A, Henry B, Buxton JA. Established surveillance, loyalty cards and collaboration allow early identification of a hepatitis A outbreak in British Columbia, Canada 2012. Eurosurveillance. 2014; 19(18). Available from: <u>http://www.eurosurveillance.org/content/10.2807/1560-7917.ES2014.19.18.20792</u>