

Hepatitis C

Last updated: 29 July 2019

Public Health Priority:

Routine

PHU response time:

Respond to newly acquired confirmed cases within 5 working days

Enter confirmed cases on NCIMS within 5 working days

Case management:

Determine likely source of infection of newly acquired cases

Contact management:

Nil

1. Reason for surveillance

To monitor the epidemiology of hepatitis C and so inform the development of better prevention strategies.

2. Case definition

Hepatitis C - newly acquired

A confirmed case requires:

- Laboratory definitive evidence, **or**
- Laboratory suggestive evidence **and** clinical evidence.

Laboratory definitive evidence

- Detection of anti-hepatitis C antibody from a person who has had a negative anti-HCV antibody test recorded within the past 24 months, or
- Detection of hepatitis C virus by nucleic acid testing from a person who has had a negative anti-HCV antibody test result within the past 24 months, or
- Detection of anti-HCV antibodies in a child aged 18 to 24 months, or
- Detection of hepatitis C virus by nucleic acid testing, in a child aged 1 to 24 months.

Laboratory suggestive evidence

Detection of anti-hepatitis C antibody or hepatitis C virus by nucleic acid testing.

Clinical evidence

Clinical hepatitis within the past 24 months (where other causes of acute hepatitis have been excluded) defined as:

- Jaundice, or
- Bilirubin in urine, or
- ALT seven times upper normal limit.

Epidemiological evidence

Not applicable.

Hepatitis C – Unspecified

A confirmed case requires laboratory definitive evidence AND that the case does not meet any of the criteria for a newly acquired case and is aged more than 24 months.

Laboratory definitive evidence

In a person with no prior evidence of hepatitis C Infection:

- Detection of anti-hepatitis C antibody, or
- Detection of hepatitis C virus by a nucleic acid testing.

Clinical evidence

Not applicable.

Epidemiological evidence

Not applicable.

Factors to be considered in case identification

Because there is currently no test (like an IgM) that is specific for recent infection, and most cases of HCV infection are asymptomatic, it can be very difficult to confirm whether a positive HCV antibody test represents new infection, or is indicative of long standing infection. Most reports of new cases will be based on clinical diagnoses. The only way to categorically determine new infection is to have a documented recent negative HCV antibody test. It is also important to remember that antibodies do not confer immunity and reinfection is possible.

In addition, false positive antibody tests (on a single test) can occur, particularly among persons with no risk factors for HCV infection. Positive antibodies in children <12 months old are likely to represent passive transfer of maternal antibody.

A positive PCR test is a marker for viraemia and thus current infectivity, but a single negative PCR does not rule out infection, as viraemia may be intermittent.

3. Notification criteria and procedure

Hepatitis C is to be notified by:

- Medical practitioners and hospital CEOs on provisional clinical diagnosis of acute viral hepatitis (ideal reporting by telephone on same day of diagnosis)
- Laboratories on serological confirmation (ideal reporting by routine mail).

Only confirmed cases should be entered onto NCIMS.

4. The disease

Infectious agent

The hepatitis C virus (HCV), a RNA virus.

Mode of transmission

HCV is transmitted through contact with contaminated blood, particularly sharing injecting equipment, or other personal items such as toothbrushes and razors. It is estimated that over 90% of all new HCV infections in Australia occur as a result of injecting drug use. Transmission has been documented from blood transfusion in Australia before 1990. The risk of HCV transmission by household contact has not been well defined, but the efficacy of transmission in this setting appears to be low.

HCV has not been well defined as a sexually transmissible disease, however a risk may increase for people with multiple partners. Mother-to-infant transmission at birth can be up to 10 percent. The risk is greater when the mother is simultaneously HIV infected or becomes infected with HCV during pregnancy. Specialist input should be sought regarding advice about caesarian section for HCV PCR positive expectant mothers.

Timeline

The typical incubation period is 14 to 180 days, but more commonly 40 to 60 days.

HCV PCR will become positive before HCV antibody, and so a case may be infective soon after infection and before HCV antibody appears.

Current evidence suggests viral persistence occurs indefinitely in at least 75% of cases. Spontaneous viral clearance tends to occur early, in the first 6-12 months of infection. Cases with spontaneous viral clearance will usually remain HCV antibody positive for life, but consistently HCV PCR negative. HCV antibody testing alone is thus not sufficient evidence for current infection. Reinfection is possible, as antibodies are not protective.

Clinical presentation

Most new infections with HCV are asymptomatic. Where symptoms do occur, usual clinical presentation is often insidious, with anorexia, vague abdominal discomfort, nausea and vomiting, progressing to jaundice less frequently than hepatitis B. Rarely fulminating fatal cases do occur.

5. Managing single notifications

Response times

Investigation

Within 5 working days of notification of a doctor reporting a newly acquired case begin follow-up investigation. Unspecified cases are followed up at the discretion of the PHU Director.

Data entry

Within 5 working days of notification enter confirmed newly acquired and confirmed unspecified cases on NCIMS.

Response procedure (newly acquired cases only)

The response to a notification will normally be carried out in collaboration with the case's health carers. But regardless of who does the follow-up, PHU staff should ensure that action has been taken to:

- Confirm the onset date and symptoms of the illness
- Confirm results of relevant pathology tests, or recommend the tests be done
- Find out if the case or relevant care-giver has been told what the diagnosis is before beginning the interview
- Seek the doctor's permission to contact the case or relevant care-giver
- Review case and contact management.

Case management

Case management is the responsibility of the treating doctor. PHU staff should assist if requested.

Investigation and treatment

Effective new treatments, called direct acting antivirals (DAAs), are now subsidised on the Pharmaceutical Benefits Scheme (PBS) for the treatment of adults with chronic hepatitis C. DAAs cure hepatitis C in over 95% of cases, with minimal side effects. Tablets need to be taken for only 8-12 weeks for most people. Successful hepatitis C treatment improves liver health by preventing further liver inflammation and cirrhosis. Following treatment some of the damage that has already occurred may repair. Once the virus has been cleared the treated person is no longer infectious for hepatitis C.

Following the introduction of DAAs on the PBS, NSW Health has set a goal for the elimination of hepatitis C by 2028. People living with hepatitis C are strongly recommended to see their general practitioner about hepatitis C treatment.

Education

The case or relevant care-giver should be informed about the nature of the infection and the mode of transmission. In particular, cases should be advised that their blood is likely to be infectious to others for life, unless there is evidence that the virus has cleared. A positive PCR test for virus correlates with infectivity, but PCR positivity can vary over time in HCV antibody-positive individuals.

Scrupulous attention to standard precautions is important. Surfaces contaminated with blood should be cleaned and properly disinfected. Objects potentially contaminated with blood (for example razors and toothbrushes) should not be shared with other people. Contaminated sharps should be stored in an approved sharps container. Any wound should be covered with an impermeable dressing.

Infected persons (among others) should not share injecting equipment with other people. Disposable needles should only be used once. Infected persons should not donate blood or body parts. Breast feeding by infected mothers is not contraindicated unless the nipple is cracked or bleeding.

Cases should be advised that the virus is rarely transmitted through sexual contact, but that such transmission cannot be excluded. Patients should be counselled about practising safe sex with new partners. Cases with only one long-term sex partner are usually advised that there is little benefit in changing their sex practices.

HCV antibody-positive persons who seek medical or dental care should be encouraged to declare their hepatitis C status to the health care provider.

Exposure investigation (newly acquired cases only)

Information regarding exposures during the six months before onset of the illness should be sought. Particular emphasis should be placed on the 6 to 9 weeks before onset. This should include information about:

- The use of shared injecting equipment
- Receipt of blood transfusion or other blood products
- A history of dental or surgical care, renal dialysis or other medical procedures
- A history of tattooing, ear or body piercing, or acupuncture
- Needle stick or similar injury
- Accidental exposure of skin, eyes, mucous membranes, or a wound to blood of another person
- Work in occupational settings with elevated risk of exposure (for example dental, laboratory, or mortuary work, or employment in facilities for mentally disabled persons)
- Residence in a facility for the mentally disabled
- Any history of incarceration
- Sexual contact (homosexual or heterosexual) with multiple sex partners and/or a sex partner who uses IV drugs.

Identification of a specific source of infection may be difficult, if not impossible.

Exposures among health care workers should be managed as per the HIV, Hepatitis B and Hepatitis C - Management of Health Care Workers Potentially Exposed policy. (www.health.nsw.gov.au/policies/PD/2005/PD2005_311.html).

Isolation and restriction

The risk of transmission of HCV in the child care setting is minimal. Standard precautions for hospitalised patients with newly acquired or unspecified HCV infections should be maintained.

Environmental evaluation

None required, except when a cluster of cases is reported.

Contact management

The management of contacts is usually the responsibility of the treating doctor, but PHU staff should ensure that contacts of newly acquired cases are protected and assist in the follow up of contacts of unspecified cases if requested.

Identification of contacts

Persons with significant opportunity for blood-borne exposure include:

- A newborn child of the case
- All persons sharing injecting equipment with the case.

Treatment

Passive immunisation

None passive immunisation with NIGH (normal immunoglobulin human) is not recommended, since there is no evidence that it is useful.

Active immunisation

None.

Antibiotic prophylaxis

None.

Education

Encourage case to advise contacts about the risk of infection.

Isolation and restriction

Nil.

6. Managing special situations

Cases among health care workers

If the case is a health care worker who performs exposure prone procedures, the case should be assessed and monitored in accordance with NSW Health Department Circular 99/88 (www.health.nsw.gov.au/policies/PD/2005/pdf/PD2005_162.pdf). HCV status must be ascertained, and if PCR positive, the case should not perform exposure prone procedures. Health care workers should be aware of the need for compliance with standard infection control precautions (www.health.nsw.gov.au/policies/pd/2007/pdf/PD2007_036.pdf#page=1)

Suspected iatrogenic infection

If more than 1 case occurs among patients of the same dental or health care provider, or tattooist or other skin penetration service provider, or other circumstances suggest the possibility of iatrogenic infection, notify the Communicable Diseases Branch (CDB) immediately.

Cases among recent blood donors

If the case has donated blood or plasma while infectious, the blood bank and the CDB should be notified immediately.

Suspected transfusion-acquired case

If transfused blood or blood products are suspected as the possible source of infection, the blood bank and the CDB should be notified immediately.