Hepatitis A

Epidemiology in New Zealand

The incidence of hepatitis A in New Zealand has decreased sharply since the 1960s, and currently about half the cases notified have a history of overseas travel.

More detailed epidemiological information is available on the Institute of Environmental Science and Research (ESR) surveillance website at www.surv.esr.cri.nz.

Further information on foodborne illness is available at www.foodsafety.govt.nz and www.mpi.govt.nz.

Case definition

Clinical description

Following a prodrome of fever, malaise, anorexia, nausea or abdominal discomfort, there is jaundice, elevated serum aminotransferase levels and sometimes an enlarged tender liver. Children are often asymptomatic and occasionally present with atypical symptoms, including diarrhoea, cough, coryza or arthralgia. Jaundice is very unusual in children younger than 4 years, and 90 percent of cases in the 4–6 years age group are anicteric.

Laboratory test for diagnosis

Laboratory confirmation requires positive hepatitis A-specific IgM in serum (in the absence of recent vaccination).

Case classification

- **Under investigation:** A case that has been notified, but information is not yet available to classify it as probable or confirmed.
- **Probable:** A clinically compatible illness that is epidemiologically linked to a confirmed case.
- **Confirmed:** A clinically compatible illness that is laboratory confirmed.
- **Not a case:** A case that has been investigated and subsequently found not to meet the case definition.
Spread of infection

Incubation period
15–50 days, commonly 28–30 days.

Mode of transmission
Mainly person to person by the faecal-oral route.

Common-source outbreaks have been reported from contaminated water or food; foodborne outbreaks have been linked to an infected food handler, raw or undercooked shellfish harvested from contaminated water, and contaminated produce such as lettuce or berries. Transmission by injected drug use is occasionally reported. Blood or blood-product transfusion related transmission (associated with a viraemic donor) is rare. Hepatitis A virus remains viable in the environment for long periods.

Period of communicability
Maximum infectivity is during the 1–2 weeks before and the first few days after the onset of jaundice. Most cases are probably non-infectious after the first week of jaundice although prolonged viral excretion (up to 6 months) has been documented in infants and children.

Notification procedure
Attending medical practitioners or laboratories must immediately notify the local medical officer of health of suspected cases. Notification should not await confirmation.

Management of case

Investigation
Obtain a history of travel (including overseas visitors within the incubation period), prior vaccination, possible contacts, consumption of shellfish or other suspect food (for example, overseas food), and blood or blood-product transfusion. Injecting drug users and men who have sex with men may be at higher risk of infection.

Ensure laboratory confirmation by serology has been attempted.

Restriction
In health care facilities, only standard precautions are indicated for the majority of patients with hepatitis A. Infants, young children and incontinent patients require contact isolation precautions until at least 1 week after the onset of jaundice (or symptoms) or for the duration of hospitalisation.

Patients in high-risk groups (see the exclusion and clearance criteria in Appendix 2: Enteric Disease) should stay away from work or school for at least 1 week from onset of
jaundice or symptoms. In the case of schoolchildren, discuss with the school about availability of hand-cleaning facilities.

Treatment
Supportive. The disease is often asymptomatic in children but is fulminant in about 1 percent of adult cases.

Counselling
Advise the case and their caregivers of the nature of the infection and its mode of transmission.

Educate about hand hygiene and advise not to prepare or handle food for others until no longer considered infectious.

Management of contacts
Identify contacts (household, sexual and other) for counselling about immunisation and/or immunoglobulin as appropriate. Contacts should be advised about possible symptoms, incubation period and the need to seek medical attention if unwell within the maximum incubation period of 50 days.

Definition
1. Contact with a case during the latter half of the incubation period and until 1 week after onset of jaundice, including:
   a. all household and sexual contacts
   b. staff and children in close contact with the case at an early childhood service.
      (Assessment of ‘close contact’ in an early childhood service will take into consideration: involvement with nappy changing, toilet hygiene practices and whether there has been more than one case associated with the service.)
2. Those exposed to hepatitis A-contaminated food or water in a common-source outbreak.
3. Exposure to potentially contaminated food via an infected food handler (refer to ‘Special situations’ below).

Investigation
Laboratory screening of contacts is not usually indicated (see comment under ‘Vaccination’ below). Consider blood tests for any contact with compatible symptoms.

Restriction
Nil unless symptoms develop.
**Prophylaxis**

There is reasonably broad international consensus that vaccine is effective for preventing secondary cases in healthy contacts, and it now tends to be the preferred option as opposed to immunoglobulin. Immunoglobulin may have higher efficacy, but this needs to be balanced against the advantages of vaccination, including ease of administration, duration of effect and the lack of interaction with live vaccines.

**Vaccination**

Age-appropriate vaccine is recommended for all close contacts over the age of 1 year. If time allows, consider pre-vaccine serology if there is a history or likelihood of previous hepatitis A vaccination or infection (for example, previous residence in an endemic country). Post-exposure prophylaxis (PEP) with vaccine should be offered to contacts as soon as possible, and within 2 weeks of last exposure to an infectious case. The efficacy of vaccine when administered > 2 weeks after exposure has not been established.

**Immunoglobulin**

Where vaccine is contraindicated (or not immediately available), normal human immunoglobulin (NHIG) may be offered to a close contact who may have a reduced response to vaccine or has risk factors for severe disease. The dose of NHIG is 0.03 mL/kg given by intramuscular injection. PEP with NHIG should be offered to contacts as soon as possible, and within 2 weeks of last exposure to an infectious case. NHIG is available from the New Zealand Blood Service.

Close contacts under 1 year of age will require NHIG.

For further information refer to the medicine data sheets or the New Zealand Blood Service website (www.nzblood.co.nz).

**Special situations**

**Early childhood service and other institutional outbreaks**

If an outbreak occurs in an early childhood service, vaccination (and/or immunoglobulin if appropriate) may be indicated for all previously unimmunised staff and children at the service and unimmunised new staff and children for up to 6 weeks after the last case has been identified, including cases in the household of attendees. The number of infected cases should determine the extent of intervention.

Vaccination and/or immunoglobulin may also be indicated for adults and children at a school, hospital or custodial-care institution where an outbreak of hepatitis A is occurring. For sporadic cases in hospitals, schools or work settings, PEP is not routinely indicated, but careful hygiene practices should be maintained.
Contacts of an infected food handler
If a food handler is diagnosed with hepatitis A, vaccine (or immunoglobulin) should be given to other food handlers at the same premises. Vaccination of patrons is usually not needed but can be considered under the following conditions:
1. while infectious, the case directly handled uncooked foods or foods after cooking, and had diarrhoea or poor hygiene practices
2. vaccine (or immunoglobulin) may be given within 2 weeks of exposure.

Other control measures

Identification of source
Check for other cases in the community. Investigate potential food and water sources of infection only if there is a cluster of cases or an apparent epidemiological link.

If indicated, check water supply for microbiological contamination and compliance with the latest New Zealand drinking-water standards (Ministry of Health 2008). Liaise with the local territorial authority staff to investigate potential water sources of infection.

Disinfection
Clean and disinfect surfaces and articles soiled with stools. For further details, refer to Appendix 1: Disinfection.

Health education
If there is a cluster of cases, consider a media release and direct communication with local parents, early childhood services, schools and health professionals to encourage early reporting of symptoms. In communications with doctors, include recommendations regarding diagnosis, treatment and infection control.

In early childhood services or other institutional situations, ensure satisfactory facilities and practices regarding hand cleaning; nappy changing; toilet use and toilet training; preparation and handling of food; and cleaning of sleeping areas, toys and other surfaces.

Reporting
Ensure complete case information is entered into EpiSurv.

Liaise with the environmental health officer of the local territorial authority where food premises are thought to be involved. Liaise with the Ministry for Primary Industries if a contaminated commercial food source is thought to be involved.

If a cluster of cases occurs, contact the Ministry of Health Communicable Diseases Team and outbreak liaison staff at ESR, and complete the Outbreak Report Form.
References and further information


