

Policy and guidelines

REVISED SURVEILLANCE CASE DEFINITIONS

The Case Definitions Working Group (CDWG) is a subcommittee of the Communicable Diseases Network Australia (CDNA). Membership is comprised of representatives from all states and territories, the Australian Government Department of Health and Ageing, the Public Health Laboratory Network, OzFoodNet, the Kirby Institute, the National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases and other communicable disease experts. CDWG develops and revises surveillance case definitions for all diseases reported to the National Notifiable Diseases Surveillance System. Surveillance case definitions incorporate laboratory, clinical and epidemiological elements as appropriate.

The following case definitions have been reviewed by CDWG and endorsed by CDNA.

These case definitions will be implemented from 1 January 2013 and supersede any previous versions.

Hepatitis A

(Effective 1 January 2013)

Reporting

Both confirmed cases and probable cases should be notified.

Confirmed case

A confirmed case requires either laboratory definitive evidence OR laboratory suggestive evidence AND clinical evidence OR laboratory suggestive evidence AND epidemiological evidence

Probable case

A probable case requires clinical evidence AND epidemiological evidence.

Laboratory definitive evidence

Detection of hepatitis A virus by nucleic acid testing.

Laboratory suggestive evidence

Detection of hepatitis A-specific IgM, in the absence of recent vaccination.

Clinical evidence

Child less than 5 years of age

OR

Acute illness with discrete onset of at least two of the following signs and symptoms: fever; malaise; abdominal discomfort; loss of appetite; nausea

AND

Jaundice or dark urine or abnormal liver function tests that reflect viral hepatitis.

Epidemiological evidence

Contact between two people involving a plausible mode of transmission at a time when:

- a one of them is likely to be infectious (from two weeks before the onset of jaundice to a week after onset of jaundice)

AND

- b the other has an illness that started within 15 to 50 days (average 28–30) after this contact

AND

at least one case in the chain of epidemiologically linked cases (which may involve many cases) is laboratory confirmed.

Hepatitis A

(Effective 1 January 2013)

<p>Hepatitis A changes</p>	<p>Confirmed case</p> <p>Added 'either' and 'OR Laboratory suggestive evidence AND clinical evidence OR laboratory suggestive evidence AND epidemiological evidence.'</p> <p>Laboratory definitive evidence</p> <p>Removed 'Detection of anti-hepatitis A IgM, in the absence of recent vaccination.'</p> <p>Laboratory definitive evidence</p> <p>Added 'Detection of hepatitis A virus by nucleic acid testing.'</p> <p>Laboratory suggestive evidence</p> <p>Added 'Detection of hepatitis A-specific IgM, in the absence of recent vaccination.'</p> <p>Clinical evidence</p> <p>Changed to 'Child less than 5 years of age OR Acute illness with discrete onset of at least two of the following signs and symptoms: fever; malaise; abdominal discomfort; loss of appetite; nausea AND jaundice or dark urine or abnormal liver function tests that reflect viral hepatitis'.</p>
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Barmah Forest virus infection

(Effective 1 January 2013)

Reporting

Only confirmed cases should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of Barmah Forest virus

OR

Detection of Barmah Forest virus by nucleic acid testing

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to Barmah Forest virus

OR

Detection of Barmah Forest virus-specific IgM in the absence of Ross River virus IgM unless Barmah Forest virus IgG is also detected.

OR

Detection of Barmah Forest virus-specific IgM in the presence of Barmah Forest virus IgG.

<p>Barmah Forest virus infection changes</p>	<p>An assessment of notifications of Ross River virus and Barmah Forest virus infection found significant numbers of dual notifications in both jurisdictional and national data sets. It was agreed that the case definitions for Ross River virus and Barmah Forest virus infection should be made more specific.</p> <p>Add to the end of point 4 under Laboratory definitive evidence 'in the absence of IgM to Ross River virus unless Barmah Forest virus IgG is also detected'.</p> <p>Add point 5 under Laboratory definitive evidence 'Detection of Barmah Forest virus IgM in the presence of Barmah Forest virus IgG'.</p> <p>Classifying cases with IgM to both RRV and BFV but IgG to neither as RRV cases was considered, as the cross-reactivity problem is thought to be mainly due to false positive BFV IgM in patients with genuine RRV IgM, rather than vice versa. However it was decided that this would complicate the case definitions too much for little gain as there are likely to be relatively few such situations.</p>
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Yellow fever

(Effective 1 January 2013)

Reporting

Only a confirmed case should be notified.

Confirmed case

A confirmed case requires either laboratory definitive evidence AND clinical evidence OR laboratory suggestive evidence AND clinical evidence AND epidemiological evidence.

Laboratory definitive evidence

Isolation of yellow fever virus

OR

Detection of yellow fever virus by nucleic acid testing

OR

Seroconversion or a four-fold or greater rise in yellow fever virus-specific serum IgM or IgG levels between acute and convalescent serum samples in the absence of vaccination in the preceding 3 weeks

OR

Detection of yellow fever virus antigen in tissues by immunohistochemistry.

Laboratory suggestive evidence

Yellow fever virus-specific IgM detected in the absence of IgM to other relevant flaviviruses, in the absence of vaccination in the preceding 3 months

Confirmation of laboratory results by a second arbovirus reference laboratory is required in the absence of travel history to areas with known endemic or epidemic activity.

Clinical evidence

A clinically compatible illness.

Epidemiological evidence

History of travel to a yellow fever endemic country in the week preceding onset of illness.

Yellow fever changes	<p>The yellow fever case definition was changed to exclude vaccine-related cases from being reported.</p> <p>At the end of laboratory definitive evidence, point 3 'in the absence of vaccination in the preceding 3 weeks' was added.</p> <p>At the end of laboratory suggestive evidence 'in the absence of vaccination in the preceding 3 months' was added.</p> <p>A note 'Confirmation of laboratory results by a second arbovirus reference laboratory is required in the absence of travel history to areas with known endemic or epidemic activity' was also added.</p>
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Dengue virus infection

(Effective 1 January 2013)

Reporting

Both confirmed cases and probable cases should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

Isolation of dengue virus

OR

Detection of dengue virus by nucleic acid testing

OR

Detection of dengue non-structural protein 1 (NS1) antigen in blood

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to dengue virus, proven by neutralisation or another specific test

OR

Detection of dengue virus-specific IgM in cerebrospinal fluid, in the absence of IgM to Murray Valley encephalitis, West Nile virus /Kunjin, or Japanese encephalitis viruses

Confirmation of the laboratory result by a second arbovirus reference laboratory is required if the infection was locally acquired and occurred in an area of Australia without known local transmission of dengue fever since 1990 (i.e. anywhere outside north Queensland).

Clinical evidence

A clinically compatible illness (e.g. fever, headache, arthralgia, myalgia, rash, nausea, and vomiting, with possible progression to severe plasma leakage, severe haemorrhage, or severe organ impairment – CNS, liver, heart or other).

Probable case

A probable case requires laboratory suggestive evidence AND clinical evidence AND epidemiological evidence

Laboratory suggestive evidence

Detection of dengue virus-specific IgM in blood.

Clinical evidence

As for a confirmed case

Epidemiological evidence

A plausible explanation, e.g. travel to a country with known dengue activity OR exposure in Australia where local transmission has been documented within the previous month.

Dengue virus infection

(Effective 1 January 2013)

Dengue changes	<p>A probable case category was added.</p> <p>IgM in blood was changed from definitive to suggestive evidence requiring clinical evidence and epidemiological evidence to become a probable case. This is more consistent with the PHLN case definition and resolves the issue of false positive serum IgM 'locally acquired' cases in Queensland, both in north Queensland when there is no known outbreak and in other areas of Queensland where <i>Aedes aegypti</i> is present.</p> <p>New criterion added under definitive evidence 'Detection of dengue non-structural protein 1 (NS1) antigen in blood' point 3.</p> <p>Point 4 under laboratory definitive evidence has been re-worded to 'IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to dengue virus, proven by neutralisation or another specific test.'</p> <p>Point 5 under laboratory definitive evidence has been re-worded to 'Detection of dengue virus-specific IgM in cerebrospinal fluid, in the absence of IgM to Murray Valley encephalitis, West Nile /Kunjin, or Japanese encephalitis viruses'</p> <p>Note requiring second reference laboratory testing in area 'without known previous local transmission' amended to make clear that this relates to transmission since 1990.</p> <p>Clinical evidence amended to be consistent with the new WHO classification (p11). http://whqlibdoc.who.int/publications/2009/9789241547871_eng.pdf</p> <p>Epidemiological evidence criterion added: 'A plausible explanation, e.g. travel to a country with known dengue activity OR exposure in Australia where local transmission has been documented within the previous month.'</p>
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Ross River virus infection

(Effective 1 January 2013)

Reporting

Only confirmed cases should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of Ross River virus

OR

Detection of Ross River virus by nucleic acid testing

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to Ross River virus

OR

Detection of Ross River virus-specific IgM in the absence of IgM to Barmah Forest virus unless Ross River virus IgG is also detected.

OR

Detection of Ross River virus-specific IgM in the presence of Ross River virus IgG.

<p>Ross River virus infection changes</p>	<p>An assessment of notifications of Ross River virus and Barmah Forest virus infection found significant numbers of dual notifications in both jurisdictional and national data sets. It was agreed that the case definitions for Ross River virus and Barmah Forest virus infection should be made more specific.</p> <p>Add to the end of point 4 under Laboratory definitive evidence 'in the absence of IgM to Barmah Forest virus, unless Ross River virus IgG is also detected'.</p> <p>Add point 5, 'Detection of Ross River virus-specific IgM in the presence of Ross River virus IgG'.</p> <p>Classifying cases with IgM to both RRV and BFV but IgG to neither as RRV cases was considered, as the cross-reactivity problem is thought to be mainly due to false positive BFV IgM in patients with genuine RRV IgM, rather than vice versa. However it was decided that this would complicate the case definitions too much for little gain as there are likely to be relatively few such situations.</p>
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Leprosy

(Effective 1 January 2013)

Reporting

Only a confirmed case should be notified.

Confirmed case

A confirmed case requires either laboratory definitive evidence OR laboratory suggestive evidence AND clinical evidence.

Laboratory definitive evidence

Detection of *Mycobacterium leprae* by nucleic acid testing from the ear lobe or other relevant specimens.

Laboratory suggestive evidence

Demonstration of characteristic acid fast bacilli in slit skin smears and biopsies prepared from the ear lobe or other relevant sites

OR

Histopathological report from skin or nerve biopsy compatible with leprosy (Hansen's disease) examined by an anatomical pathologist or specialist microbiologist experienced in leprosy diagnosis.

Clinical evidence

Compatible nerve conduction studies

OR

Peripheral nerve enlargement

OR

Loss of neurological function not attributable to trauma or other disease process

OR

Hypopigmented or reddish skin lesions with definite loss of sensation.

Leprosy changes	<p>In Reporting, changed 'only' confirmed cases to 'a' confirmed case.</p> <ul style="list-style-type: none"> • Changed Confirmed case to 'either laboratory definitive evidence OR laboratory suggestive evidence AND clinical evidence'. • Changed 'Laboratory definitive evidence to Laboratory suggestive evidence'. • Redefined 'Laboratory definitive evidence – Detection of <i>Mycobacterium leprae</i> by nucleic acid testing from the ear lobe or other relevant specimens'.
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Note

International reporting to the World Health Organization (WHO) is based on the WHO working definition: A person showing one or more of the following features, and who as yet has to complete a full course of treatment:

- hypopigmented or reddish skin lesions with definite loss of sensation
- involvement of the peripheral nerves, as demonstrated by definite thickening with loss of sensation
- skin smear positive for acid-fast bacilli definition.

The difference in surveillance case definitions should be noted when reporting to the WHO.

Legionellosis

(Effective 1 January 2013)

Reporting

Both confirmed cases and probable cases should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

Isolation of *Legionella*

OR

Detection of *Legionella* urinary antigen

OR

Seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to *Legionella*.

Clinical evidence for confirmed cases

Fever

OR

Cough

OR

Pneumonia

Probable case

A probable case requires laboratory suggestive evidence AND clinical evidence.

Laboratory suggestive evidence

Single high antibody titre to *Legionella*

OR

Detection of *Legionella* by nucleic acid testing

OR

Detection of *Legionella* by direct fluorescence assay.

Clinical evidence for probable cases

Fever AND Cough

OR

Pneumonia

<p>Legionellosis changes</p>	<p>Confirmed case</p> <p>Under Laboratory definitive evidence, Point 12, 'Presence of <i>Legionella</i> urinary antigen' has changed to 'Detection of <i>Legionella</i> urinary antigen'.</p> <p>Under Clinical evidence, 'Fever AND Cough AND Pneumonia' has changed to 'Fever OR Cough OR Pneumonia'.</p> <p>Probable case</p> <p>Under Clinical evidence for probable cases, 'Radiological evidence of pneumonia' has changed to 'Fever AND Cough OR Pneumonia.'</p>
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