

Surveillance Case Definitions for the Australian National Notifiable Diseases Surveillance System

As of 1 January 2017

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Anthrax

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires either:

Laboratory definitive evidence

OR

Laboratory suggestive evidence AND clinical evidence.

Laboratory definitive evidence

Isolation of *Bacillus anthracis*-like organisms or spores confirmed by a reference laboratory.

Laboratory suggestive evidence

Detection of *Bacillus anthracis* by microscopic examination of stained smears

OR

Detection of *Bacillus anthracis* by nucleic acid testing.

Clinical evidence

Cutaneous: skin lesion evolving over 1-6 days from a papular through a vesicular stage, to a depressed black eschar invariably accompanied by oedema that may be mild to extensive

OR

Gastrointestinal: abdominal distress characterised by nausea, vomiting, anorexia and followed by fever

OR

Rapid onset of hypoxia, dyspnoea and high temperature, with radiological evidence of mediastinal widening

OR

Meningeal: acute onset of high fever, convulsions, loss of consciousness and meningeal signs and symptoms.

Australian bat lyssavirus

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of Australian bat lyssavirus confirmed by sequence analysis

OR

Detection of Australian bat lyssavirus by nucleic acid testing.

Avian Influenza in humans

Reporting

Both **confirmed cases** and **probable cases** should be notified. Suspected cases shouldn't be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence

Laboratory definitive evidence

Isolation of an Avian Influenza (AI) virus

OR

Detection of AI by nucleic acid testing using two different targets, e.g. primers specific for influenza A and AI haemagglutinin (genetic sequencing should be employed to confirm diagnosis);

OR

A fourfold or greater rise in antibody titre to the AI virus detected in the outbreak (or AI virus suspected of causing the human infection), based on testing of an acute serum specimen (collected 7 days or less after symptom onset) and a convalescent serum specimen. The convalescent neutralizing antibody titre must also be 80 or higher.

OR

An antibody titre to the AI virus detected in the outbreak (or AI virus suspected of causing the human infection) of 80 or greater in a single serum specimen collected at day 14 or later after symptom onset. The result should be confirmed in at least two different serological assays (i.e. haemagglutinin-inhibition, microneutralisation, positive Western blot, etc).

Note: Tests must be conducted in a national, regional or international influenza laboratory whose Avian Influenza in Humans (AIH) test results are accepted by WHO as confirmatory

Clinical evidence

An acute illness characterised by:

- a. Fever (>38°C) or history of fever AND one or more of; cough OR rhinorrhoea OR myalgia OR headache OR dyspnoea OR diarrhoea;

OR

- b. Conjunctivitis

OR

- c. infiltrates or evidence of an acute pneumonia on chest radiograph plus evidence of acute respiratory insufficiency (hypoxaemia, severe tachypnoea).

Probable case

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

Laboratory suggestive evidence

Confirmation of an influenza A infection but insufficient laboratory evidence for AIH infection.

Clinical evidence

As with **confirmed case**

Epidemiological evidence

One or more of the following exposures in the 10 days prior to symptom onset:

- a. Close contact (within 1 metre) with a person (e.g. caring for, speaking with, or touching) who is a probable, or confirmed AIH case;
- b. Exposure (e.g. handling, slaughtering, defeathering, butchering, preparation for consumption) to poultry or wild birds or their remains or to environments contaminated by their faeces in an area where AI infections in animals or humans have been suspected or confirmed in the last month;
- c. Consumption of raw or undercooked poultry products in an area where AI infections in animals or humans have been suspected or confirmed in the last month;
- d. Close contact with a confirmed AI infected animal other than poultry or wild birds (e.g. cat or pig);
- e. Handling samples (animal or human) suspected of containing AI virus in a laboratory or other setting.

Suspected case

A suspected case requires clinical evidence AND epidemiological evidence

Clinical evidence for suspected case

As with **confirmed case**

Epidemiological evidence

As with **probable case**

Note: For overseas exposures, an AI-affected area is defined as a region within a country with confirmed outbreaks of AI strains in birds or detected in humans in the last month (seek advice from the National Incident Room when in doubt). With respect to the H5N1 AI outbreak that commenced in Asia in 2003, information regarding H5-affected countries is available at: <http://gamaps.server.who.int/mapLibrary/>. With respect to the H7N9 outbreak that commenced in eastern China in 2013, information regarding H7-affected countries is available at: http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/

Barmah Forest virus infection

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Probable case

A probable case requires laboratory suggestive 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 IgG antibody level (e.g. fourfold or greater rise in titre) to Barmah Forest virus.

Laboratory suggestive evidence

Detection of Barmah Forest virus IgM AND Barmah Forest virus IgG EXCEPT if Barmah Forest IgG is known to have been detected in a specimen collected greater than 3 months earlier.

Botulism

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

Isolation of *Clostridium botulinum*

OR

Detection of *Clostridium botulinum* toxin in blood or faeces.

Clinical evidence

A clinically compatible illness (e.g. diplopia, blurred vision, muscle weakness, paralysis, death).

Brucellosis

Reporting

Both **confirmed** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

1. Isolation of *Brucella* species

OR

2. Detection of *Brucella* species by nucleic acid testing from a blood sample

OR

3. IgG seroconversion or a significant increase in IgG antibody level (e.g. fourfold or greater rise) to *Brucella*.

Probable case

A probable case requires laboratory suggestive and clinical evidence.

Laboratory suggestive evidence

1. A single high agglutination titre to *Brucella*

OR

2. Detection of *Brucella* species by nucleic acid testing from a normally sterile site other than blood.

Clinical evidence

A clinically compatible illness.

Campylobacteriosis

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation or detection of *Campylobacter* species.

Chikungunya virus infection

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence.

Laboratory definitive evidence

1. Isolation of chikungunya virus

OR

2. Detection of chikungunya virus by nucleic acid testing

OR

3. Seroconversion or a significant rise in antibody level or a fourfold or greater rise in titre to chikungunya virus, in the absence of a corresponding change in antibody levels to Ross River virus and Barmah Forest virus

OR

4. Detection of chikungunya virus-specific IgM, in the absence of IgM to Ross River virus and Barmah Forest virus.

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.

Chlamydial infection (excluding eye infection)

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of *Chlamydia trachomatis*

OR

Detection of *Chlamydia trachomatis* by nucleic acid testing

OR

Detection of *Chlamydia trachomatis* antigen.

Cholera

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of toxigenic *Vibrio cholerae* O1 or O139.

Creutzfeldt–Jakob disease (CJD)

Reporting

Both **confirmed cases** and **probable cases** should be notified. This includes sporadic, accidental and familial cases (Note: a “confirmed” case is equivalent to the ANCJDR classification of “definite”).

Confirmed case

A confirmed case requires laboratory definitive evidence.

Laboratory definitive evidence

Neuropathological confirmation of CJD supplemented by immunochemical detection of protease-resistant PrP by western blot OR immunocytochemistry.

Probable case

A probable case requires clinical evidence AND either electroencephalogram (EEG) or laboratory suggestive evidence.

Laboratory suggestive evidence

Positive 14-3-3 protein CSF test.

Clinical evidence

Progressive dementia of less than two years duration;

AND

At least 2 of the following clinical features:

- myoclonus
- visual or cerebellar signs
- pyramidal/extrapyramidal signs
- akinetic mutism.

Variant Creutzfeldt–Jakob disease (vCJD)

Reporting

Both **confirmed cases** and **probable cases** should be notified (Note: a “confirmed” case is equivalent to the ANCJDR classification of “definite”).

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

Neuropathological confirmation of vCJD.

Clinical evidence

Progressive neuropsychiatric disorder.

Probable case

A probable case requires clinical definitive evidence

OR

Clinical suggestive evidence AND laboratory suggestive evidence.

Clinical definitive evidence

1. Progressive neuropsychiatric disorder AND duration of illness greater than six months AND routine investigations do not suggest an alternative diagnosis AND no history of potential iatrogenic exposure AND no evidence of a familial form of TSE.

AND

1. Four of the following symptoms:
 - a. Early psychiatric symptoms
 - b. Persistent painful sensory symptoms
 - c. Ataxia
 - d. Myoclonus or chorea or dystonia
 - e. Dementia

AND

2. Bilateral pulvinar high signals on magnetic resonance imaging (MRI) scans

AND

3. Electroencephalogram (EEG) which does not exhibit the typical appearance of classic CJD.

Clinical suggestive evidence

1. Progressive neuropsychiatric disorder AND duration of illness greater than six months AND routine investigations do not suggest an alternative diagnosis AND no history of potential iatrogenic exposure AND no evidence of a familial form of TSE.

Laboratory suggestive evidence

1. A PrP^{SC} positive tonsil biopsy.

Cryptosporidiosis

Reporting

Only confirmed cases should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Detection of *Cryptosporidium*.

Dengue virus infection

Reporting

Both **confirmed** cases and **probable** cases should be notified.

Confirmed case

A confirmed case requires:

Laboratory definitive evidence AND clinical evidence

Laboratory definitive evidence¹

Isolation of dengue virus

OR

Detection of dengue virus by nucleic acid testing

OR

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

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

Clinical evidence

A clinically compatible illness (e.g. fever, headache, arthralgia, myalgia, rash, nausea/vomiting)

Probable case

A probable case requires:

Laboratory suggestive evidence AND clinical evidence AND epidemiological evidence

OR

Clinical evidence AND household epidemiological evidence

Laboratory suggestive evidence

Detection of NS1 antigen in blood by a rapid antigen test²

OR

Detection of dengue virus-specific IgM in blood

¹ Confirmation of the laboratory result by an arbovirus reference laboratory is required if the infection was acquired in Australia but outside a dengue-receptive area as defined in the Dengue National Guideline for Public Health Units.

² Unless dengue NS1 antigen by EIA is negative

Clinical evidence

As for confirmed case

Epidemiological evidence

Exposure, between 3 and 14 days prior to onset, in

EITHER

a country with known dengue activity

OR

a dengue-receptive area³ in Australia WHERE a locally-acquired or imported case has been documented with onset within a month

Household epidemiological evidence

Living in the same house⁴ as a locally-acquired case in a dengue-receptive area³ of Australia within a month of the onset in the case.

AND

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

³ As defined in the Dengue CDNA National Guideline for Public Health Units.

⁴ The case must have spent all the exposure period (from 14 days prior to onset to 3 days prior to onset) living in the same house as the epi-linked confirmed case.

Diphtheria

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 toxigenic* *Corynebacterium diphtheriae* or toxigenic* *C. ulcerans* from site of clinical evidence.

Clinical evidence – confirmed case

Upper respiratory tract infection

OR

Skin lesion

Probable case

A probable case requires:

Laboratory suggestive evidence AND clinical evidence

OR

Clinical evidence AND epidemiological evidence.

Laboratory suggestive evidence

Isolation of *C. diphtheriae* or *C. ulcerans* from a respiratory tract specimen (toxin production unknown).

Clinical evidence – probable case

Upper respiratory tract infection with an adherent membrane of the nose, pharynx, tonsils or larynx

Epidemiological evidence

An epidemiological link is established when there is:

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

- a. one of them is likely to be infectious (usually 2 weeks or less and seldom more than 4 weeks after onset of symptoms)

AND

- b. the other has an illness which starts within approximately 2-5 days after this contact

AND

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

*as indicated by detection of toxin gene by nucleic acid testing

Donovanosis

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

Demonstration of intracellular Donovan bodies on smears or biopsy specimens taken from a lesion
OR

Detection of *Calymmatobacterium granulomatis* by nucleic acid testing of a specimen taken from a lesion.

Clinical evidence

Clinically compatible illness involving genital ulceration.

Probable case

A probable case requires clinical evidence AND epidemiological evidence.

Clinical evidence

As with confirmed case.

Epidemiological evidence

A compatible sexual risk history in a person from an endemic area

OR

A compatible sexual risk history involving sexual contact with someone from an endemic area.

Flavivirus infection (unspecified) including Zika virus case definition

This document contains the case definitions for Flavivirus infection - unspecified (including Zika virus infection) which is nationally notifiable within Australia. This definition should be used to determine whether a case should be notified.

Australian national notifiable diseases case definitions - Flavivirus infection (unspecified)

Note

1. It is recognised that some cases of human infection cannot be attributed to a single flavivirus. This may either be because the serology shows specific antibody to more than one virus, specific antibody cannot be assigned based on the tests available in Australian reference laboratories, or a flavivirus is detected that cannot be identified.
2. Confirmation by a second arbovirus reference laboratory is required if the case cannot be attributed to known flaviviruses.
3. Occasional human infections occur due to other known flaviviruses, such as Kokobera, Alfuy, Edge Hill and Stratford viruses.

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires **laboratory definitive evidence AND clinical evidence.**

Laboratory definitive evidence

1. Isolation of a flavivirus that cannot be identified in Australian reference laboratories or which is identified as one of the flaviviruses not otherwise classified
OR
2. Detection of a flavivirus, by nucleic acid testing, that cannot be identified in Australian reference laboratories or which is identified as one of the flaviviruses not otherwise classified
OR
3. IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre of flavivirus specific IgG that cannot be identified or which is identified as being specific for one of the flaviviruses not otherwise classified. There must be no history of recent Japanese encephalitis or yellow fever vaccination
OR
4. Detection of flavivirus IgM in cerebrospinal fluid, with reactivity to more than one flavivirus antigen (Murray Valley encephalitis, Kunjin, Japanese Encephalitis and/or dengue) or with reactivity only to one or more of the flaviviruses not otherwise classified
OR
5. Detection of flavivirus IgM in the serum, with reactivity to more than one flavivirus antigen (Murray Valley encephalitis, Kunjin, Japanese Encephalitis and/or dengue) or with reactivity only to one or more of the flaviviruses not otherwise classified. This is only accepted as laboratory evidence for encephalitic illnesses. There must be no history of recent Japanese encephalitis or yellow fever vaccination

Clinical evidence

1. Non-encephalitic disease: acute febrile illness with headache, myalgia and/or rash
OR

2. Encephalitic disease: acute febrile meningoencephalitis characterised by one or more of the following:

- focal neurological disease or clearly impaired level of consciousness
- an abnormal computerised tomograph or magnetic resonance image or electrocardiograph
- presence of pleocytosis in cerebrospinal fluid.

Australian national notifiable diseases case definitions - Zika virus case definition

Confirmed and probable cases are nationally notifiable under the disease *Flavivirus infection (unspecified)* using the Organism Name field to specify infection with Zika virus (ZIKV).

Reporting

Both **confirmed** and **probable** cases are nationally notifiable. Both confirmed and probable cases should be further sub-classified into clinical and non-clinical cases.

Confirmed case

A confirmed case requires **laboratory definitive evidence** only. Clinical evidence should be used to sub-classify cases as clinical or non-clinical.

Laboratory definitive evidence

- Detection of ZIKV by nucleic acid testing or virus isolation;
OR
- IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre of ZIKV-specific IgG, and recent infection by dengue or other epidemiologically possible flaviviruses has been excluded;
OR
- Detection of ZIKV-specific IgM in cerebrospinal fluid, in the absence of IgM to other possible infecting flaviviruses.

Probable case

A probable case requires **laboratory suggestive evidence** AND **epidemiological evidence**. Clinical evidence should be used to sub-classify cases as clinical or non-clinical.

Laboratory suggestive evidence

Detection of ZIKV-specific IgM in the absence of IgM to other epidemiologically possible flaviruses or flavivirus vaccination in the 3 weeks prior to testing.

Notes:

1. If the date of most recent exposure was greater than 4 weeks before the specimen date, then ZIKV-specific IgG must also be positive.
2. If ZIKV-specific IgG was initially negative and subsequent testing greater than 4 weeks after exposure fails to demonstrate seroconversion the case should be rejected.

Epidemiological evidence

Clinical case

- Travel to or residence in a ZIKV receptive country⁵ or area in Australia within two weeks prior to symptom onset;

⁵ ZIKV receptive countries and areas are outlined on the Global Consensus Map at

OR

- Sexual exposure to a confirmed or probable case of ZIKV infection within two weeks prior to symptom onset.

Non-clinical case

- Travel to or residence in a ZIKV receptive country¹ or area in Australia within two months prior to specimen date.

OR

- Sexual exposure to a confirmed or probable case of ZIKV infection within two months prior to specimen date.

Clinical case

Both confirmed and probable cases should be further sub-classified into **clinical** or **non-clinical** cases.

Clinical evidence

An acute illness within 2 weeks of exposure with 2 or more of the following symptoms:

- Fever
- Headache
- Myalgia
- Arthralgia
- Rash
- Non-purulent conjunctivitis.

In the absence of clinical evidence, the case will be classified as non-clinical.

Australian national notifiable diseases case definitions - congenital Zika virus infection case definition

Confirmed and probable cases are nationally notifiable under the disease *Flavivirus infection (unspecified)* using the Organism Name field to specify congenital ZIKV infection.

Reporting

Both **confirmed** and **probable** cases are nationally notifiable.

Confirmed Case

A confirmed case requires **laboratory definitive evidence** only.

Laboratory definitive evidence

Fetal (at 20 weeks gestation or more)

Isolation or detection of ZIKV from appropriate clinical samples (i.e. fetal blood, amniotic fluid, chorionic villus sample or post-mortem cerebrospinal fluid or tissue) by viral culture or nucleic acid testing.

<http://www.healthmap.org/dengue/en/>. Areas are considered receptive to ZIKV where the likelihood of local acquisition is placed on the map as 'uncertain' or more.

Infant (within 28 days following birth)

Isolation or detection of ZIKV from appropriate clinical samples by viral culture or nucleic acid testing, with no history of travel since birth to, or residence in, a ZIKV receptive country¹ or area in Australia.

Probable Case

A probable case requires **clinical evidence** AND **epidemiological evidence**.

Clinical evidence

Microcephaly^{6,7,8,9,10} or other CNS abnormalities¹¹ in the infant or fetus (in the absence of any other known cause).

Epidemiological evidence

Confirmed or probable ZIKV infection in the mother during pregnancy.

⁶ Head circumference <-2SD below mean for gestation.

⁷ WHO Assessment of infants with microcephaly in the context of ZIKV. Interim guidance. 4 March 2016, WHO/ZIKV/MOC/16.3 Rev.1.

⁸ WHO Growth standards for term neonates (<http://www.who.int/childgrowth/standards/en/>)

⁹ WHO Pregnancy management in the context of ZIKV. Interim guidance. 2 March 2016. WHO/ZIKV/MOC/16.2

¹⁰ Intergrowth standards for preterm neonates (Villar, José et al. (2014). International standards for newborn weight, length, and head circumference by gestational age and sex: the Newborn Cross-Sectional Study of the INTERGROWTH-21st Project. Lancet; (384). 9946: 857–868)

¹¹ These include: ventriculomegaly, calcifications, abnormal sulcation and gyration, brain atrophy, callosal dysgenesis, microphthalmia, eye calcifications.

Gonococcal infection

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of *Neisseria gonorrhoeae*

OR

Detection of *Neisseria gonorrhoeae* by nucleic acid testing

OR

Detection of typical Gram-negative intracellular diplococci in a smear from a genital tract specimen.

Haemolytic uraemic syndrome (HUS)

Note: Where STEC/VTEC is isolated in the context of HUS, it should be notified as both STEC/VTEC and HUS.

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires clinical evidence only.

Clinical evidence

Acute microangiopathic anaemia on peripheral blood smear (schistocytes, burr cells or helmet cells)

AND AT LEAST ONE OF THE FOLLOWING:

Acute renal impairment (haematuria, proteinuria or elevated creatinine level)

OR

Thrombocytopenia, particularly during the first seven days of illness.

Haemophilus influenzae serotype b (Hib) (invasive only)

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation or detection of *Haemophilus influenzae* type b (Hib) from a normally sterile site where typing has been confirmed at a jurisdictional or regional reference laboratory.

Hepatitis A

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 starts within 15 to 50 (average 28 – 30) days after this contact

AND

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

Hepatitis B – newly acquired

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Detection of hepatitis B surface antigen (HBsAg) in a patient shown to be negative within the last 24 months

OR

Detection of HBsAg and IgM to hepatitis B core antigen, except where there is prior evidence of hepatitis B infection OR

Detection of hepatitis B virus by nucleic acid testing, and IgM to hepatitis B core antigen, except where there is prior evidence of hepatitis B infection

Note:

Transient HBsAg positivity can occur in patients following HBV vaccination. This occurs more commonly in dialysis patients and is unlikely to persist beyond 14 days post-vaccination.

Hepatitis B – unspecified

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND that the case does not meet any of the criteria for a newly acquired case.

Laboratory definitive evidence

Detection of hepatitis B surface antigen (HBsAg), or hepatitis B virus by nucleic acid testing, except where there is prior evidence of hepatitis B infection.

Note:

Transient HBsAg positivity can occur in patients following HBV vaccination. This occurs more commonly in dialysis patients and is unlikely to persist beyond 14 days post-vaccination.

Hepatitis C - newly acquired

Reporting

Only **confirmed cases** 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 anti-hepatitis C antibody from a person who has had a negative anti-hepatitis C antibody test recorded within the past 24 months

OR

Detection of hepatitis C virus by nucleic acid testing from a person who has a negative anti-hepatitis C antibody test result currently, or has had, within the past 24 months

OR

Detection of anti-hepatitis C antibody from a child aged 18 months to 24 months

OR

Detection of hepatitis C virus by nucleic acid testing in a child aged 3 months to 24 months.

Laboratory suggestive evidence

Detection of anti-hepatitis C antibody, or hepatitis C virus by nucleic acid testing in a patient with no prior evidence of hepatitis C infection.

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

Alanine transaminase (ALT) ten times the upper limit of normal.

Hepatitis C - unspecified

Reporting

Only **confirmed cases** should be notified.

Confirmed case

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 virus infection:

Detection of anti-hepatitis C antibody

OR

Detection of hepatitis C virus by nucleic acid testing.

Hepatitis D

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only, in a person known to be hepatitis B surface antigen (HbsAg) positive.

Laboratory definitive evidence

Detection of IgM or IgG to hepatitis D virus

OR

Detection of hepatitis D virus on liver biopsy.

Hepatitis E

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence

OR

Laboratory suggestive evidence AND clinical evidence.

Laboratory definitive evidence

Detection of hepatitis E virus by nucleic acid testing

OR

Detection of hepatitis E virus in faeces by electron microscopy

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to hepatitis E virus

Laboratory suggestive evidence

Detection of IgM or IgG to hepatitis E virus.

Clinical evidence

A clinically compatible illness without other apparent cause.

Hepatitis (not elsewhere classified)

Reporting

Only **confirmed cases** should be notified.

Confirmed cases

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

Laboratory exclusion of hepatitis A, B, C, D and E and other clinically relevant infectious and non-infectious causes of hepatitis.

Clinical evidence

Clinical hepatitis, defined as:

Jaundice

OR

Bilirubin in urine

OR

Alanine transaminase (ALT) seven times the upper limit of normal.

Human immunodeficiency virus (HIV) infection – individuals less than 18 months of age

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Detection of HIV by at least two virologic assays (nucleic acid testing for proviral DNA; HIV p24 antigen, with neutralisation; virus isolation) on at least two separate blood samples (excluding cord blood).

Probable case

A probable case requires laboratory suggestive evidence only.

Laboratory suggestive evidence

Detection of HIV by one of the following virologic assays (nucleic acid testing for proviral DNA; HIV p24 antigen, with neutralisation; virus isolation) in one blood sample (excluding cord blood) and no subsequent negative HIV virologic or antibody tests.

Human immunodeficiency virus (HIV) – newly acquired

Newly acquired HIV infection may be diagnosed in individuals aged 18 months or older at the time of blood sample collection. A diagnosis of newly acquired HIV infection excludes a diagnosis of HIV infection (unspecified).

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Repeatedly reactive result on a screening test for HIV antibody followed by a positive result on a western blot AND laboratory evidence of a negative or indeterminate HIV antibody result in the 12 months prior to blood sample collection

OR

A group IV indeterminate western blot AND detection of HIV by at least one of the following virologic assays (nucleic acid testing for proviral DNA; HIV p24 antigen, with neutralisation; virus isolation). A group IV indeterminate western blot is defined by the presence of a glycoprotein band (gp41, gp120 or gp160) and one or two other HIV specific bands.

Probable case

A probable case requires laboratory suggestive evidence and clinical evidence.

Laboratory suggestive evidence

Detection of HIV by at least one of the following virologic assays (nucleic acid testing for proviral DNA; HIV p24 antigen, with neutralisation; virus isolation)

OR

Repeatedly reactive result on a screening test for HIV antibody followed by a positive result on a western blot.

Clinical evidence

HIV seroconversion illness within the 12 months prior to blood sample collection.

Human immunodeficiency virus (HIV) - unspecified individuals over 18 months of ages

HIV infection (unspecified) is diagnosed in individuals aged 18 months or older at the time of blood sample collection, who do not have evidence of HIV acquisition in the previous 12 months. A diagnosis of HIV infection (unspecified) excludes a diagnosis of newly acquired HIV infection.

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only AND that the case does not meet any of the criteria for a newly acquired case.

Laboratory definitive evidence

Repeatedly reactive result on a screening test for HIV antibody followed by a positive result on a western blot. A positive result on a western blot is defined by the presence of a glycoprotein band (gp41, gp120 or gp160) and at least three other HIV-specific bands

OR

Detection of HIV by at least two virologic assays (nucleic acid testing for proviral DNA; HIVp24 antigen, with neutralisation; virus isolation) performed on at least two separate blood samples.

Probable case

A probable case requires laboratory suggestive evidence only.

Laboratory suggestive evidence

Detection of HIV by at least one of the following virologic assays (nucleic acid testing for proviral DNA; HIV p24 antigen, with neutralisation; virus isolation) in one blood sample.

Influenza (laboratory confirmed)

Reporting

Only **confirmed cases** should be notified.

Confirmed cases

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

1. Isolation of influenza virus by culture from appropriate respiratory tract specimen
OR
2. Detection of influenza virus by nucleic acid testing from appropriate respiratory tract specimen
OR
3. Laboratory detection of influenza virus antigen from appropriate respiratory tract specimen
OR
4. IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to influenza virus
OR
5. Single high titre by CFT or HAI to influenza virus.

Japanese encephalitis virus infection

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

1. Isolation of Japanese encephalitis virus

OR

2. Detection of Japanese encephalitis virus by nucleic acid testing

OR

3. IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre of Japanese encephalitis virus-specific IgG proven by neutralisation or another specific test, with no history of recent Japanese encephalitis vaccination

OR

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

OR

5. Detection of Japanese encephalitis virus-specific IgM in serum in the absence of IgM to Murray Valley encephalitis, West Nile/Kunjin and dengue viruses, with no history of recent Japanese encephalitis vaccination.

Confirmation of laboratory result by a second arbovirus reference laboratory is required if the case appears to have been acquired in mainland Australia.

Clinical evidence

1. *Non-encephalitic disease*: acute febrile illness with headache, myalgia and/or rash

OR

2. *Encephalitic disease*: acute febrile meningoencephalitis characterised by one or more of the following:

- focal neurological disease or clearly impaired level of consciousness
- an abnormal computerised tomogram or magnetic resonance image or electroencephalogram
- presence of pleocytosis in cerebrospinal fluid

OR

3. *Asymptomatic disease*: case detected as part of a serosurvey should not be notified.

Legionellosis

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

Presence 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

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

Leprosy

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.

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.

Leptospirosis

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of pathogenic *Leptospira* species

OR

A fourfold or greater rise in *Leptospira* agglutination titre between acute and convalescent phase sera obtained at least two weeks apart and preferably conducted at the same laboratory

OR

A single *Leptospira* micro agglutination titre greater than or equal to 400 supported by a positive enzyme-linked immunosorbent assay IgM result.

Listeriosis

Reporting

Only **confirmed cases** should be notified. Where a mother and fetus (≥ 20 weeks gestation)/neonate are both confirmed, both cases should be notified.

Confirmed case

A confirmed case requires either:

- 1) laboratory definitive evidence.
OR
- 2) Clinical AND epidemiological evidence.

Laboratory definitive evidence

Isolation or detection of *Listeria monocytogenes* from a site that is normally sterile, including fetal gastrointestinal contents.

Clinical evidence

- 1) A fetus/neonate where the gestational outcome is one of the following:
 - a) Stillbirth
 - b) Premature birth (<37 weeks gestation)
 - c) Diagnosis (within the first month of life) with at least one of the following:
 - Granulomatosis infantiseptica
 - Meningitis or meningoencephalitis
 - Septicaemia
 - Congenital pneumonia
 - Lesions on skin, mucosal membranes or conjunctivae
 - Respiratory distress and fever at birth

AND

In the absence of another plausible diagnosis

OR

- 2) A mother has experienced at least one of the following conditions during pregnancy:
 - a) Fever of unknown origin
 - b) Influenza like illness
 - c) Meningitis or meningoencephalitis
 - d) Septicaemia
 - e) Localised infections such as arthritis, endocarditis and abscesses
 - f) preterm labour/abruption

AND

In the absence of another plausible diagnosis

Epidemiological evidence

A maternal/fetal pair where one of either the mother or fetus/neonate is a confirmed case by **laboratory definitive evidence** (up to 2 weeks postpartum).

Notes

1. The clinical AND epidemiological evidence criteria for a confirmed case means that if the mother is a confirmed case by laboratory definitive evidence, then the fetus/neonate is also a confirmed case if they have the defined (fetus/neonate) clinical evidence, and vice versa.

2. Laboratory definitive evidence in a fetus <20 weeks gestation means the mother only is a confirmed case.

Lyssavirus (not elsewhere classified)

Reporting

Only **confirmed cases** should be notified AND only where there is insufficient evidence to meet a case definition for Australian bat lyssavirus or rabies.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

Positive fluorescent antibody test result for lyssaviral antigen on fresh brain smears

OR

Specific immunostaining for lyssaviral antigen on formalin fixed paraffin sections of central nervous system tissue

OR

Presence of antibody to serotype 1 lyssavirus in the cerebrospinal fluid

OR

Detection of lyssavirus-specific RNA (other than to ABL or rabies).

Clinical evidence

Acute encephalomyelitis with or without altered sensorium or focal neurological signs.

Malaria

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory evidence

Detection and specific identification of malaria parasites by microscopy on blood films with confirmation of species in a laboratory with appropriate expertise

OR

Detection of *Plasmodium* species by nucleic acid testing.

Measles

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires either:

Laboratory definitive evidence

OR

Clinical evidence AND epidemiological evidence.

Laboratory definitive evidence

At least one of the following:

Isolation of measles virus

OR

Detection of measles virus by nucleic acid testing

OR

Detection of measles virus antigen

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to measles virus EXCEPT if the case has received a measles-containing vaccine eight days to eight weeks before testing (Note: paired sera must be tested in parallel)

OR

Detection of measles virus-specific IgM antibody confirmed in an approved reference laboratory EXCEPT if the case has received a measles-containing vaccine eight days to eight weeks before testing.

Clinical evidence

An illness characterised by all of the following:

A generalised maculopapular rash lasting three or more days

AND

Fever (at least 38°C if measured) at the time of rash onset

AND

Cough OR coryza OR conjunctivitis OR Koplik spots.

Epidemiological evidence

An epidemiological link is established when there is:

1. Contact between two people involving a plausible mode of transmission at a time when:
 - a. one of them is likely to be infectious (approximately five days before to four days after rash onset)

AND

- b. the other has an illness that starts within seven to 18 (usually 10) days after this contact

AND

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

Probable case

A probable case requires laboratory suggestive evidence AND clinical evidence.

Laboratory suggestive evidence

Detection of measles specific IgM antibody other than by an approved reference laboratory EXCEPT if the case has received a measles-containing vaccine eight days to eight weeks before testing.

Clinical evidence

As with confirmed case.

Meningococcal infection (Invasive)

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires either:

1. Laboratory definitive evidence

OR

2. Laboratory suggestive evidence AND clinical evidence.

Laboratory definitive evidence

1. Isolation of *Neisseria meningitidis* from a normally sterile site

OR

2. Detection of specific meningococcal DNA sequences in a specimen from a normally sterile site by nucleic acid amplification testing.

Laboratory suggestive evidence

- Detection of Gram-negative diplococci in Gram stain of specimen from a normally sterile site or from a suspicious skin lesion

OR

- High titre IgM or significant rise in IgM or IgG titres to outer membrane protein antigens of *N. meningitidis*.

Clinical evidence (for a confirmed case)

Disease which in the opinion of the treating clinician is compatible with invasive meningococcal disease.

Probable case

A probable case requires clinical evidence only.

Clinical evidence (for a probable case)

A probable case requires:

1. The absence of evidence for other causes of clinical symptoms

AND EITHER

2. Clinically compatible disease including haemorrhagic rash

OR

3. Clinically compatible disease AND close contact with a confirmed case within the previous 60 days.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

Reporting

Confirmed and **probable** cases should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Detection of MERS coronavirus by polymerase chain reaction (PCR) in a public health reference laboratory using the testing algorithm described in the [national guideline \(SoNG\)](#) and summarised below¹².

Probable case

A probable case requires clinical evidence AND epidemiological evidence.

Clinical evidence

An acute respiratory infection with clinical, radiological, or histopathological evidence of pulmonary parenchymal disease (e.g. pneumonia or pneumonitis or Acute Respiratory Distress Syndrome).

AND

No possibility of laboratory confirmation for MERS-CoV because the patient or samples are not available for testing.

Epidemiological evidence

Close contact with a laboratory-confirmed case.

¹² To consider a case as laboratory-confirmed, one of the following conditions must be met:

- A positive PCR result for at least two different specific targets on the MERS-CoV genome.
- One positive PCR result for a specific target on the MERS-CoV genome and an additional different PCR product sequenced, confirming identity to known sequences of MERS-CoV.

Mumps

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires either:

Laboratory definitive evidence

OR

Laboratory suggestive evidence AND clinical evidence

OR

Clinical evidence AND epidemiological evidence.

Laboratory definitive evidence

Isolation of mumps virus

OR

Detection of mumps virus by nucleic acid testing

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to mumps virus EXCEPT when there has been recent mumps-containing immunisation.

Laboratory suggestive evidence

Detection of mumps-specific IgM antibody (in the absence of recent mumps vaccination).

Clinical evidence

A clinically compatible illness characterised by swelling of the parotid or other salivary glands lasting two days or more without other apparent cause.

Epidemiological evidence

An epidemiological link is established when there is:

1. Contact between two people involving a plausible mode of transmission at a time when:
 - a. one of them is likely to be infectious (6-7 days before onset of overt parotitis to nine days after)

AND

- b. the other has an illness that starts within approximately 12 to 25 days after this contact

AND

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

Murray Valley encephalitis virus infection

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

1. Isolation of Murray Valley encephalitis virus

OR

2. Detection of Murray Valley encephalitis virus by nucleic acid testing

OR

3. IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to Murray Valley encephalitis virus

OR

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

OR

5. Detection of Murray Valley encephalitis virus-specific IgM in serum in the absence of IgM to West Nile/Kunjin, Japanese encephalitis and dengue viruses. This is only accepted as laboratory evidence for encephalitic illnesses.

Confirmation of laboratory result by a second arbovirus reference laboratory is required if the case occurs in areas of Australia not known to have established enzootic/endemic activity or regular epidemic activity.

Clinical evidence

1. Non-encephalitic disease: acute febrile illness with headache, myalgia and/or rash

OR

2. Encephalitic disease: acute febrile meningoencephalitis characterised by one or more of the following:

- focal neurological disease or clearly impaired level of consciousness
- an abnormal computerised tomogram or magnetic resonance image or electroencephalogram
- presence of pleocytosis in cerebrospinal fluid

OR

3. Asymptomatic disease: case detected as part of a serosurvey should not be notified.

Ornithosis (psittacosis)

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence AND epidemiological evidence.

Laboratory definitive evidence

A fourfold rise or greater in antibody titre against *Chlamydia psittaci* as demonstrated by microimmunofluorescence (MIF) on acute and convalescent sera (collected at least two weeks later) tested in parallel

OR

Detection of *C. psittaci* by nucleic acid testing or culture.

Clinical evidence

Pneumonia

OR

AT LEAST TWO of the following:

- fever,
- headache,
- myalgia,
- rigors,
- dry cough or
- dyspnoea.

Epidemiological evidence

Exposure to birds or bird products, or proximity to an outbreak of psittacosis.

Probable case

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

Laboratory suggestive evidence

A single high total antibody level or detection of IgM antibody to *C. psittaci* by MIF

OR

A single high total antibody titre to *Chlamydia* species demonstrated by complement fixation (CF) in at least one sample obtained at least two weeks after onset of symptoms

OR

A fourfold or greater rise in antibody titre against *Chlamydia* species as demonstrated by CF.

Clinical evidence

As with confirmed case.

Epidemiological evidence

As with confirmed case.

Paratyphoid

Reporting

Only **confirmed cases** should be notified

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation or detection of *Salmonella* Paratyphi A or *S. Paratyphi* B (excluding *S. Paratyphi* B biovar Java) or *S. Paratyphi* C.

Pertussis

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

Probable case

A probable case requires clinical evidence AND epidemiological evidence

Laboratory definitive evidence

Isolation of *Bordetella pertussis*

OR

Detection of *B. pertussis* by nucleic acid testing

OR

Seroconversion in paired sera for *B. pertussis* using whole cell or specific *B. pertussis* antigen(s) in the absence of recent pertussis vaccination

Laboratory suggestive evidence

In the absence of recent vaccination

Significant change (increase or decrease) in antibody level (IgG, IgA) to *B. pertussis* whole cell or *B. pertussis* specific antigen(s)

OR

Single high IgG and/or IgA titre to Pertussis Toxin (PT)

OR

Single high IgA titre to Whole Cell *B. pertussis* antigen.

Clinical evidence

A coughing illness lasting two or more weeks

OR

Paroxysms of coughing OR inspiratory whoop OR post-tussive vomiting.

Epidemiological evidence

An epidemiological link is established when there is:

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

- a. one of them is likely to be infectious (from the catarrhal stage, approximately one week before, to three weeks after onset of cough)

AND

b. the other has an illness which starts within 6 to 20 days after this contact

AND

At least one case in the chain of epidemiologically linked cases (which may involve many cases) is a confirmed case with either laboratory definitive or laboratory suggestive evidence.

Plague

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of *Yersinia pestis*.

Pneumococcal disease (invasive)

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of *Streptococcus pneumoniae* from a normally sterile site by culture

OR

Detection of *Streptococcus pneumoniae* from a normally sterile site by nucleic acid testing.

Poliovirus infection

1. Poliomyelitis (paralytic infection)

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

Wild poliovirus infection

Isolation of wild poliovirus (confirmed in the National Enterovirus Reference Laboratory) OR detection of wild poliovirus by nucleic acid testing (confirmed in the National Enterovirus Reference Laboratory).

Vaccine-associated paralytic poliomyelitis (VAPP)

Isolation of Sabin-like poliovirus (confirmed in the National Enterovirus Reference Laboratory) OR detection of Sabin-like poliovirus by nucleic acid testing (confirmed in the National Enterovirus Reference Laboratory).

Vaccine derived poliovirus (VDPV) infection

Isolation of poliovirus (confirmed in the National Enterovirus Reference Laboratory) OR detection of poliovirus by nucleic acid testing (confirmed in the National Enterovirus Reference Laboratory), characterised as a vaccine derived poliovirus according to the current definition of the World Health Organization (reported by the National Enterovirus Reference Laboratory).

Clinical evidence

Any child under 15 years of age with acute flaccid paralysis* (including Guillain-Barré syndrome) or any person of any age with paralytic illness if polio is suspected.

For a case to be classified as VAPP the determination must be made by the Polio Expert Panel.

Probable case

A probable case of poliomyelitis (paralytic infection) requires clinical evidence AND the case not discarded as non-polio paralytic illness by the Polio Expert Panel.

Clinical evidence

As with confirmed case.

* Acute flaccid paralysis syndrome is characterised by rapid onset of weakness of an individual's extremities, often including weakness of the muscles of respiration and swallowing, progressing to maximum severity within 1-10 days. The term "flaccid" indicates the absence of spasticity or other signs of disordered central nervous system (CNS) motor tracts such as hyperflexia, clonus, or extensor plantar responses. (Excerpt from *Acute onset flaccid paralysis*; World Health Organization 1993; WHO/MNH/EPI/93.3. Geneva)

2. Poliovirus (non-paralytic) infection

Reporting

Isolation or detection of poliovirus from clinical specimens with laboratory definitive evidence should be notified.

This case definition should be used for asymptomatic patients or patients with illness not consistent with acute flaccid paralysis.

Laboratory definitive evidence

Wild poliovirus infection

Isolation of wild poliovirus (confirmed in the National Enterovirus Reference Laboratory) OR detection of wild poliovirus by nucleic acid testing (confirmed in the National Enterovirus Reference Laboratory).

Sabin-like poliovirus infection

Isolation of Sabin-like poliovirus (confirmed in the National Enterovirus Reference Laboratory) OR detection of Sabin-like poliovirus by nucleic acid testing (confirmed in the National Enterovirus Reference Laboratory) except where there has been vaccination with Sabin oral polio vaccine in the six weeks[#] prior to the date of specimen collection.

Note: This period may be longer for immunocompromised individuals

Vaccine derived poliovirus (VDPV) infection

Isolation of poliovirus (confirmed in the National Enterovirus Reference Laboratory) OR detection of poliovirus by nucleic acid testing (confirmed in the National Enterovirus Reference Laboratory), characterised as a vaccine derived poliovirus according to the current definition of the World Health Organization (reported by the National Enterovirus Reference Laboratory).

Q fever

Reporting

Only **confirmed cases** 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 *Coxiella burnetii* by nucleic acid testing

OR

Seroconversion or significant increase in antibody level to Phase II antigen in paired sera tested in parallel in absence of recent Q fever vaccination

OR

Detection of *C. burnetii* by culture (Note: this practice should be strongly discouraged except where appropriate facilities and training exist).

Laboratory suggestive evidence

Detection of specific IgM in the absence of recent Q fever vaccination.

Clinical evidence

A clinically compatible disease.

Rabies

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of rabies virus confirmed by sequence analysis

OR

Detection of rabies virus by nucleic acid testing.

Ross River virus infection

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Probable case

A probable case requires laboratory suggestive 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 IgG antibody level (e.g. fourfold or greater rise in titre) to Ross River virus.

Laboratory suggestive evidence

Detection of Ross River virus IgM AND Ross River virus IgG EXCEPT if Ross River IgG is known to have been detected in a specimen collected greater than 3 months earlier.

Rubella

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of rubella virus

OR

Detection of rubella virus by nucleic acid testing

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to rubella virus in the absence of recent rubella vaccination. The results must be established by the testing of paired sera in parallel

OR

Detection of rubella-specific IgM, in the absence of recent rubella vaccination. (Note: that in pregnant women, the result needs to be confirmed in a reference laboratory).

Probable case

A probable case requires:

Clinical evidence

AND

Laboratory suggestive evidence OR epidemiological evidence.

Laboratory suggestive evidence

In a pregnant patient, detection of rubella-specific IgM that has not been confirmed in a reference laboratory, in the absence of recent rubella vaccination.

Clinical evidence

A generalised maculopapular rash

AND

fever

AND

arthralgia/arthritis OR lymphadenopathy OR conjunctivitis.

Epidemiological evidence

An epidemiological link is established when there is:

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

- a. one of them is likely to be infectious (about one week before to at least four days after appearance of rash)

AND

b. the other has an illness which starts within 14 and 23 days after this contact

AND

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

Congenital Rubella Infection

Congenital rubella infection is reported based on relevant evidence from a live or stillborn infant, miscarriage or pregnancy termination. Congenital rubella syndrome is reported as a subset of congenital rubella infection.

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence (fetal)

OR

Laboratory definitive evidence (infant) AND epidemiological evidence

Laboratory definitive evidence

Fetal

Isolation or detection of rubella virus from an appropriate clinical sample (i.e. fetal blood or tissue, amniotic fluid, chorionic villus sample) by culture or nucleic acid testing

Infant

Isolation or detection of rubella virus from an appropriate clinical sample in an infant, by culture or nucleic acid testing.

OR

Detection of rubella-specific IgM antibody in the serum of the infant.

Epidemiological evidence

The mother has confirmed rubella infection during pregnancy (see definition for Rubella – non-congenital).

Probable case

A probable case requires

Epidemiological evidence (1st trimester infection)

OR

Epidemiological evidence (2nd and 3rd trimester infection) AND laboratory suggestive evidence (infant)

Laboratory suggestive evidence

Infant

High / rising rubella-specific IgG level in first year of life

Congenital Rubella Syndrome

Reporting

Both **confirmed cases** and **probable cases** should be reported.

Confirmed case

A confirmed case requires laboratory definitive evidence (fetal or infant), as described above AND clinical evidence

Clinical evidence

A live or stillborn infant with ANY of the following compatible defects: cataract, congenital glaucoma, congenital heart disease, hearing defect, microcephaly, pigmentary retinopathy, developmental delay, purpura, hepatosplenomegaly, meningoencephalitis, radiolucent bone disease or other defect not better explained by an alternative diagnosis.

Probable case

A probable case requires laboratory suggestive evidence (infant) OR epidemiological evidence, as described above

AND clinical evidence

Clinical evidence

(as for confirmed CRS case)

Salmonellosis

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation or detection of *Salmonella* species (excluding serotypes captured under the case definitions for typhoid and paratyphoid)

Severe acute respiratory syndrome (SARS)

Reporting

Only **confirmed cases** should be notified. (Note: A surveillance case definition for **probable cases** is currently in preparation).

Confirmed case

A confirmed case requires laboratory definitive evidence and clinical evidence.

Laboratory definitive evidence

Detection of severe acute respiratory syndrome-coronavirus (SARS-CoV) by nucleic acid testing using a validated method from at least two different clinical specimens (e.g. nasopharyngeal and stool) OR the same clinical specimen collected on two or more occasions during the course of the illness (e.g. sequential nasopharyngeal aspirates) OR two different assays or repeat PCR using a new RNA extract from the original clinical sample on each occasion of testing

OR

Seroconversion or significant increase in antibody level or fourfold or greater rise in titre to SARS-CoV tested in parallel by enzyme-linked immunosorbent assay or immunofluorescent assay

OR

Isolation of SARS-CoV AND detection of SARS-CoV by nucleic acid testing using a validated method.

Clinical evidence

A person with a history of:

Fever ($\geq 38^{\circ}\text{C}$)

AND

One or more symptoms of lower respiratory tract illness (cough, difficulty breathing)

AND

Radiographic evidence of lung infiltrates consistent with pneumonia or Acute Respiratory Distress Syndrome (ARDS) OR autopsy findings consistent with the pathology of pneumonia or ARDS.

Note:

The NNDSS definition is based on that provided by WHO for use in the inter-outbreak period. It should be recognised that the case definition provided by WHO may be modified in the event of a second global alert. Until the epidemiology of SARS has been further defined, “alert cases” (see below) should be reported to State and Territory Health Departments, and informally reported to the Australian Government Department of Health and Ageing. The aim of the alert cases is to provide early warning of the potential recurrence of SARS to:

- rapidly implement appropriate infection control measures
- expedite diagnosis
- activate the public health response.

Alert case

In the absence of an alternate diagnosis:

Two or more health care workers in the same health care unit fulfilling the clinical case definition of SARS and with onset of illness in the same 10-day period

OR

Hospital acquired illness in three or more persons (health care workers and/or other hospital staff and/or patients and/or visitors) in the same health care unit fulfilling the clinical case definition of SARS and with onset of illness in the same 10-day period.

Shiga toxin-producing *Escherichia coli* (STEC)

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

1. Isolation of Shiga toxigenic *Escherichia coli* from faeces

OR

2. Detection of the gene(s) encoding the Shiga toxins (stx1 and/or stx2) in faeces or from a clinical isolate of *Escherichia coli*.

Note: Where STEC is isolated or detected in the context of haemolytic uraemic syndrome (HUS), it should be notified as STEC and HUS.

Shigellosis

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation or detection of *Shigella* species.

Smallpox

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of variola virus, confirmed at the Victorian Infectious Diseases Reference Laboratory

OR

Detection of variola virus by nucleic acid testing, confirmed at the Victorian Infectious Diseases Reference Laboratory.

Probable case

A probable case requires either:

Clinical evidence AND laboratory suggestive evidence

OR

Clinical evidence AND epidemiological evidence.

Laboratory suggestive evidence

Detection of a poxvirus resembling variola virus by electron microscopy

OR

Isolation of variola virus pending confirmation

OR

Detection of variola virus by nucleic acid testing pending confirmation.

Clinical evidence

Credible clinical smallpox as judged by an expert physician.

Epidemiological evidence

An epidemiological link to a confirmed case.

Note:

The “*Guidelines for Smallpox Outbreak, Preparedness, Response and Management*” include separate case definitions for smallpox surveillance both preceding and during an outbreak. The Guidelines define confirmed, probable, suspected and possible cases for the purposes of public health response. The definitions are at some variance with the case definitions for reporting to the National Notifiable Diseases Surveillance System. Suspected cases and possible cases should also be reported to the State/Territory Health Department.

Syphilis - congenital

Reporting

Both **confirmed cases** and **probable cases** should be notified, including syphilis-related stillbirth.¹

Confirmed case

A confirmed case requires laboratory definitive evidence.

Laboratory definitive evidence

Mother and child both seropositive by a treponemal specific test²

AND

One or more of the following:

Direct demonstration of *Treponema pallidum* by any of the following: nucleic acid amplification (NAA) test, dark field microscopy, fluorescent antibody or silver stain - in specimens from lesions, nasal discharge, placenta, umbilical cord, cerebrospinal fluid (CSF), amniotic fluid or autopsy material

OR

Detection of *Treponema pallidum* specific IgM in the child

OR

The child's serum non-treponemal³ serology titre at birth is at least fourfold greater than the mother's titre.

Probable case

A probable case requires laboratory suggestive evidence AND clinical evidence.

Laboratory suggestive evidence

Direct demonstration of *Treponema pallidum* as described under laboratory definitive evidence (above), but without serological confirmation in the child.

OR

Child seropositive on non-treponemal testing in the absence of IgM testing

OR

A reactive CSF non-treponemal test (VDRL or RPR) in a child.

OR

A child who remains seropositive by a treponemal specific test at 15 months of age, which is confirmed either by another, different reactive treponemal specific test or a reactive non-treponemal test, in the absence of post-natal exposure to *Treponema pallidum*, including the non-venereal subspecies *Treponema pallidum* subsp. *pertenue* (Yaws) or subsp. *endemicum* (Bejel, endemic syphilis).

Clinical evidence

1. Any evidence of congenital syphilis on physical examination

OR

2. Any evidence of congenital syphilis on radiographs of long bones

OR

3. An elevated CSF cell count or protein (without other cause)

OR

4. The mother is seropositive in the perinatal period AND has no documented evidence of adequate treatment⁴.

Notes:

1 A stillbirth where the foetal death has occurred after a 20 week gestation or in a foetus which weighs greater than 500g should be counted as clinical evidence towards a case where laboratory suggestive or definitive evidence exists.

2 Treponemal specific tests are:

Treponema pallidum immunoassays, *Treponema pallidum* haemagglutination assay (TPHA), *Treponema pallidum* particle agglutination assay (TPPA), Fluorescent Treponemal Antibody Absorption (FTA-Abs) and various IgM assays including 19S-IgM antibody test, or IgM immunoassay. IgM assays should not be used for screening purposes.

Treponema pallidum-specific rapid immunochromatography (ICT) assays for use as point-of-care tests are now becoming available, but their performance has not yet been fully established. Positive ICT results should be confirmed with a second treponemal specific assay.

3 Non-treponemal tests are the agglutination assays Rapid Plasma Reagin (RPR) and Venereal Disease Research Laboratory (VDRL). Any positive sera should be tested by serial dilution to provide an end-titre. Non-treponemal tests may be used to monitor efficacy of treatment. Mother and child sera should be collected contemporaneously and tested in parallel and cord blood should not be used for the investigation of congenital syphilis.

4 Treatment is considered adequate if

- a stage-appropriate penicillin-containing regimen was used 30 days or more prior to delivery AND
- all antenatal and delivery pathology investigations were performed and results verified AND
- there is no evidence of reinfection.

4.1 Treatment with macrolides alone during pregnancy in penicillin-allergic women is no longer regarded as adequate therapy as resistance to macrolides in *T. pallidum* is increasingly common and may arise during therapy.

4.2 Although the risk of congenital syphilis is much higher in early-stage disease, in the presence of untreated syphilis the birth of an unaffected child does not guarantee that subsequent children will not be affected.

Infectious Syphilis – less than 2 years duration (includes primary, secondary and early latent)

Reporting

Confirmed and **probable cases** should be notified.

Confirmed case

A confirmed case requires either:

1. Laboratory definitive evidence

OR

2. Laboratory suggestive evidence AND clinical evidence.

Laboratory definitive evidence

1. Seroconversion in past two years: treponemal specific test^a reactive when previous treponemal specific test non-reactive within past two years and the latest result is confirmed by either a reactive non-treponemal test^b or a different reactive treponemal specific test

OR

2. A fourfold or greater rise in non-treponemal antibody titre compared with the titre within past two years, and a reactive treponemal specific test

Laboratory suggestive evidence

1. Demonstration of *Treponema pallidum* by darkfield microscopy (not oral lesions), direct fluorescent antibody microscopy (direct antigen test), equivalent microscopic methods (e.g. silver stains), or DNA methods (e.g. nucleic acid testing)

OR

2. A reactive treponemal specific test confirmed by either a reactive non-treponemal test or a different reactive treponemal specific test

OR

3. A reactive non- treponemal test confirmed by a treponemal specific test

Clinical evidence

1. Presence of a primary chancre (or ulcer)

OR

2. Clinical signs of secondary syphilis.

Probable case

A probable case requires that case does not meet the criteria for a confirmed case AND

Either:

- a. In a person with no known previous reactive serology: no history of adequate treatment of syphilis, or endemic treponemal disease, and
 1. Contact with an infectious case AND laboratory suggestive evidence.

OR

2. Laboratory suggestive evidence AND RPR ≥ 16 .

OR

3. Positive syphilis IgM AND laboratory suggestive evidence.

OR

- b. In a person with previous reactive serology: a fourfold or greater rise in non- treponemal antibody titre when the previous serology was done more than two years ago.

AND

1. Contact with an infectious case

OR

2. Positive syphilis IgM

Notes:

- a. Treponemal specific tests are: IgG immunoassay, *Treponema pallidum* haemagglutination assay, *Treponema pallidum* particle agglutination assay, Fluorescent Treponemal Antibody Absorption, 19S-IgM antibody test, or IgM immunoassay
- b. Non-treponemal tests are; Rapid Plasma Reagin (RPR), Venereal Disease Research Laboratory (VDRL)

Syphilis - more than 2 years duration or unspecified duration

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires that the case does not meet the criteria for a case of infectious syphilis less than 2 years duration AND either:

1. Laboratory definitive evidence

OR

2. Laboratory suggestive evidence AND clinical evidence.

Laboratory definitive evidence

1. A reactive specific treponemal test (e.g. IgG enzyme immunoassay, *Treponema pallidum* haemagglutination assay, *Treponema pallidum* particle agglutination, *Treponema pallidum* immobilisation assay, or fluorescent treponemal antibody absorption) which is confirmed either by a reactive non-specific treponemal test (e.g. Venereal Diseases Research Laboratory, Rapid Plasma Reagin) or a different specific treponemal test

AND

2. a) In a person with no known previous reactive serology: no history of adequate treatment of syphilis, or endemic treponemal disease (e.g. Yaws)

OR

b) In a person with previously reactive serology: a fourfold or greater rise in non-specific treponemal antibody titre when the previous serology was done more than two years ago.

Note: In a high prevalence area, only one reactive specific treponemal test result is necessary.

Laboratory suggestive evidence

Demonstration of *Treponema pallidum* by darkfield microscopy (not oral lesions), direct antigen detection tests, equivalent microscopic methods (e.g. silver stains), or DNA methods (e.g. nucleic acid testing).

Clinical evidence

Clinical, radiological or echocardiographic signs of tertiary syphilis.

Tetanus

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires either:

Laboratory definitive evidence

OR

Clinical evidence.

Laboratory definitive evidence

Isolation of *Clostridium tetani* from a wound in a compatible clinical setting and prevention of positive tetanospasm in mouse test from such an isolate using specific tetanus antitoxin.

Clinical evidence

A clinically compatible illness without other apparent cause.

Tuberculosis

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires a diagnosis accepted by the Director of Tuberculosis Control (or equivalent) in the relevant jurisdiction, based on either:

Laboratory definitive evidence

OR

Clinical evidence.

Laboratory definitive evidence

Isolation of *Mycobacterium tuberculosis* complex (*M. tuberculosis*, *M. bovis* or *M. africanum*, excluding *M. bovis* var BCG) by culture

OR

Detection of *M. tuberculosis* complex by nucleic acid testing EXCEPT where this is likely to be due to previously treated or inactive disease.

Clinical evidence

A clinician experienced in tuberculosis makes a clinical diagnosis of tuberculosis, including clinical follow-up assessment to ensure a consistent clinical course.

Tularaemia

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation of *Francisella tularensis*.

Probable case

A probable case requires laboratory suggestive evidence AND clinical evidence.

Laboratory suggestive evidence

1. Isolation of Gram negative bacilli suggestive of *F. tularensis* where the organism identity and pathogenicity have not yet been confirmed by a reference laboratory

OR

2. Detection of *F. tularensis* by nucleic acid testing

OR

3. Detection of Gram-negative bacilli suggestive of *F. tularensis*, confirmed by a reference laboratory

OR

4. Detection of *F. tularensis* by direct immunofluorescence antigen detection testing

OR

5. Detection of *F. tularensis* by immunohistochemical stains.

Clinical evidence

A clinically compatible illness.

Typhoid

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Isolation or detection of *Salmonella typhi*.

Varicella zoster (chickenpox)

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires either:

1. Laboratory definitive evidence AND clinical evidence

OR

2. Clinical evidence AND epidemiological evidence.

Laboratory definitive evidence

1. Isolation of varicella-zoster virus from a skin or lesion swab. If the case received varicella vaccine between five and 42 days prior to the onset of rash the virus must be confirmed to be a wild type strain

OR

2. Detection of varicella-zoster virus from a skin or lesion swab by nucleic acid testing from a skin or lesion swab. If the case received varicella vaccine between five and 42 days prior to the onset of rash the virus must be confirmed to be a wild type strain

OR

3. Detection of varicella-zoster virus antigen from a skin or lesion swab by direct fluorescent antibody from a skin or lesion swab. If the case received varicella vaccine between five and 42 days prior to the onset of rash the virus must be confirmed to be a wild type strain

OR

4. Detection of varicella-zoster virus-specific IgM in an *unvaccinated* person.

Clinical evidence

Acute onset of a diffuse maculopapular rash developing into vesicles within 24–48 hours and forming crusts (or crusting over) within 5 days.

Epidemiological evidence

An epidemiological link is established when there is:

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

a. one of them is likely to be infectious

AND

b. the other has illness 10 to 21 days after contact

AND

2. At least one case in the chain of epidemiologically-linked cases is laboratory confirmed.

Probable case

A probable case requires clinical evidence only.

Note: Laboratory confirmation should be strongly encouraged for vaccinated cases. If positive, samples should be referred for identification as a vaccine or wild type strain.

Varicella zoster (shingles)

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

1. Isolation of varicella-zoster virus from a skin or lesion swab

OR

2. Detection of varicella-zoster virus from a skin or lesion swab by nucleic acid testing from a skin or lesion swab

OR

3. Detection of varicella-zoster virus antigen from a skin or lesion swab by direct fluorescent antibody from a skin or lesion swab.

Clinical evidence

A vesicular skin rash with a dermatomal distribution that may be associated with pain in skin areas supplied by sensory nerves of the dorsal root ganglia.

Probable case

A probable case requires clinical evidence only.

Note: Laboratory confirmation should be strongly encouraged for vaccinated cases. If positive, samples should be referred for identification as a vaccine or wild type strain.

Varicella zoster (unspecified)

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence, either in the absence of clinical information or where clinical evidence does not meet criteria for varicella-zoster infection (chickenpox) or varicella-zoster infection (shingles).

Laboratory definitive evidence

1. Isolation of varicella-zoster virus.

OR

2. Detection of varicella-zoster virus by nucleic acid testing.

OR

3. Detection of varicella-zoster virus antigen by direct fluorescent antibody testing.

OR

4. Detection of varicella-zoster virus-specific IgM in an unvaccinated person.

Viral haemorrhagic fevers (quarantinable) (Quarantinable – includes Ebola, Marburg, Lassa and Crimean-Congo fevers)

Reporting

Both **confirmed cases** and **probable cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence only.

Laboratory definitive evidence

Laboratory definitive evidence requires confirmation by the Victorian Infectious Diseases Reference Laboratory (VIDRL), Melbourne*, or the Special Pathogens Laboratory, CDC, Atlanta, or the Special Pathogens Laboratory, National Institute of Virology (NIV), Johannesburg

Isolation of a specific virus

OR

Detection of specific virus by nucleic acid testing or antigen detection assay

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to specific virus.

Probable case

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

Laboratory suggestive evidence

Isolation of virus pending confirmation by VIDRL, Melbourne, or CDC, Atlanta or NIV, Johannesburg

OR

Detection of specific virus by nucleic acid testing, pending confirmation by VIDRL, Melbourne, or CDC, Atlanta or NIV, Johannesburg

OR

IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to specific virus pending confirmation by VIDRL, Melbourne, or CDC, Atlanta or NIV, Johannesburg

OR

Detection of IgM to a specific virus.

Clinical evidence

A compatible clinical illness as determined by an infectious disease physician. Common presenting complaints are fever myalgia, and prostration, with headache, pharyngitis, conjunctival injection, flushing, gastrointestinal symptoms. This may be complicated by spontaneous bleeding, petechiae, hypotension and perhaps shock, oedema and neurologic involvement.

Epidemiological evidence

History of travel to an endemic/epidemic area within 9 days (Marburg), 13 days (Crimean Congo) or 21 days (Lassa, Ebola) of illness onset. Filoviruses are endemic in Sub-Saharan Africa, Lassa in 90

Western Africa, Crimean Congo in Africa and the Middle East to West China;

OR

Contact with a confirmed case,

OR

Exposure to viral haemorrhagic fever (VHF)-infected blood or tissues.

* The first case in any outbreak in Australia will also be confirmed by CDC, Atlanta or NIV, Johannesburg.

END

West Nile /Kunjin virus infection

Reporting

Only **confirmed cases** should be notified.

Confirmed case

A confirmed case requires laboratory definitive evidence AND clinical evidence.

Laboratory definitive evidence

1. Isolation of West Nile virus/Kunjin virus

OR

2. Detection of West Nile virus/Kunjin virus by nucleic acid testing

OR

3. IgG seroconversion or a significant increase in antibody level or a fourfold or greater rise in titre to West Nile virus/Kunjin virus

OR

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

OR

5. Detection of West Nile virus/Kunjin virus-specific IgM in serum in the absence of IgM to Murray Valley encephalitis, Japanese encephalitis and dengue viruses. This is only accepted as laboratory evidence for encephalitic illnesses.

Confirmation of laboratory result by a second arbovirus reference laboratory is required if the case occurs in areas not known to have established enzootic/endemic activity or regular epidemic activity.

Clinical evidence

1. *Non-encephalitic disease*: acute febrile illness with headache, myalgia and/or rash

OR

2. *Encephalitic disease*: acute febrile meningoencephalitis characterised by one or more of the following:

- focal neurological disease or clearly impaired level of consciousness
- an abnormal computerised tomogram or magnetic resonance image or electroencephalogram
- presence of pleocytosis in cerebrospinal fluid

OR

1. *Asymptomatic disease*: case detected as part of a serosurvey should not be notified.

Yellow fever

Reporting

Only a **confirmed case** should be notified.

Confirmed case

A confirmed case requires either:

1. Laboratory definitive evidence AND clinical evidence

OR

2. 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.

Appendix A: National notifiable diseases sorted according to disease type

Disease group	Disease
Bloodborne diseases	<p>Acquired immunodeficiency syndrome (AIDS)</p> <p>Hepatitis B – newly acquired</p> <p>Hepatitis B – unspecified</p> <p>Hepatitis C – newly acquired</p> <p>Hepatitis C – unspecified</p> <p>Hepatitis D</p> <p>Hepatitis – (not elsewhere specified)</p> <p>Human immunodeficiency virus (HIV) infection - individuals less than 18 months of age</p> <p>Human immunodeficiency virus (HIV) – newly acquired</p> <p>Human immunodeficiency virus (HIV) – unspecified over 18 months of age</p>
Gastrointestinal diseases	<p>Botulism</p> <p>Campylobacteriosis</p> <p>Cryptosporidiosis</p> <p>Haemolytic uraemic syndrome</p> <p>Hepatitis A</p> <p>Hepatitis E</p> <p>Listeriosis</p> <p>Salmonellosis</p> <p>Shiga toxin- and /verocytotoxin-producing <i>Escherichia coli</i> (STEC/VTEC)</p> <p>Shigellosis</p> <p>Typhoid</p>
Quarantinable diseases	<p>Cholera</p> <p>Avian influenza in humans</p> <p>Middle East respiratory Syndrome Coronavirus (otherwise known as MERS-CoV)</p> <p>Plague</p> <p>Rabies</p> <p>Severe acute respiratory syndrome (SARS)</p> <p>Smallpox</p> <p>Viral haemorrhagic fevers (quarantinable)</p> <p>Yellow fever</p>

Disease group	Disease
Sexually transmitted infection	Chlamydia Donovanosis Gonococcal infection Syphilis congenital Infectious syphilis – less than 2 years duration (includes primary, secondary and early latent), Syphilis – more than 2 years duration or unspecified duration
Vaccine preventable diseases	Diphtheria <i>Haemophilus influenzae</i> serotype b (HIB) infection – (invasive only) Influenza (laboratory confirmed) Measles Mumps Pertussis Pneumococcal disease – invasive Poliovirus infection Rubella Rubella (congenital) Tetanus Varicella zoster (chickenpox) Varicella zoster (shingles) Varicella zoster (unspecified)
Vectorborne diseases	Barmah Forest virus infection Chikungunya virus infection Dengue virus infection Flavivirus infection – unspecified including Zika virus Japanese encephalitis virus infection West Nile/Kunjin virus infection Malaria Murray Valley encephalitis virus infection Ross River virus infection

Disease group	Disease
Zoonoses	Anthrax Australian bat lyssavirus Brucellosis Leptospirosis Lyssavirus (not elsewhere classified) Ornithosis (Psittacosis) Q fever Tularaemia
Other bacterial infections	Creutzfeldt-Jakob disease (CJD) Legionellosis Leprosy Meningococcal infection (invasive) Tuberculosis

Notice regarding detection of IgGs

Wherever possible when a serological diagnosis is made, recent infection should be shown to have occurred by demonstrating a significant change in IgG between acute and convalescent sera. It is particularly important for infections which either fail to produce a measurable IgM response (e.g. influenza), where the IgM response persists for extended periods (e.g. flavivirus infections), or where false positive or cross-reacting IgM is a known problem. Usually an interval of 10-14 days is sufficient though for some infection (e.g. legionellosis) the antibody may rise may take up to 4-6 weeks. Significant changes in IgG may be shown by either:

- Seroconversion: Change from IgG negative to IgG positive between acute and convalescent samples. This may be used for confirming recent infection using tests that do not quantify the antibody levels. That includes most enzyme-linked immunosorbent assays, particle agglutination, immunofluorescent antibody and latex agglutination tests as performed routinely.
- Significant increase in antibody level or titre: This is generally confined to tests which use titrations in two-fold dilutions, in which a four-fold increase is regarded as significant. For some enzyme immunoassays that are not titred, it may be possible to establish changes in absorbance that may be regarded as significant. That should only be done for properly validated methods.