MEASLES, MUMPS, RUBELLA

Disease name

Disease	Select from measles, mumps or rubella. Cases of congenital rubella should be reported using the generic form.

Basis of diagnosis

Clinical criteria

Fits clinical description	Select the 'Yes' option if the case fits the clinical description (for the disease) as follows: **Measles:** cases must meet **all** the following criteria: • cough and/or coryza and/or conjunctivitis and/or Koplik's spots present at the time of rash onset • fever (at least 38°C if measured) present at time of rash onset • generalised maculopapular rash starting on the head and neck then spreading down and out and fading. **Mumps:** an acute illness with unilateral or bilateral tenderness and swelling of the parotid or other salivary gland/s, lasting more than two days, with or without fever and without other apparent cause. **Rubella:** an illness with a generalised maculopapular rash, and fever, **and** one or more of the following: • arthralgia / arthritis • lymphadenopathy • conjunctivitis. Rubella often presents atypically and is difficult to diagnose clinically with certainty. Up to 50% of infections are subclinical. If accurate diagnosis is important, it must be laboratory confirmed.
Clinical features	Ideally, obtain information on all of the clinical features (for the disease) listed. If the feature was present, record by selecting the 'Yes' option. If not, select the 'No' option. If not known or unavailable, then select the 'Unknown' box. Where maculopapular rash is present for measles or rubella cases, specify the date of onset of the rash.

Laboratory criteria

Laboratory confirmation of disease	If the laboratory test results were positive select the 'Yes' option, if negative select the 'No' option. If the results of the laboratory test are not yet available, select 'Awaiting results'. If laboratory tests were not carried out, select 'Not Done'.
Laboratory confirmation date	If the case was laboratory confirmed, provide the date of the first positive laboratory test.
Confirmation method	Specify the method(s) of confirmation - select all that apply. If genetic characterisation was done, select the 'Genetic characterisation' checkbox and provide the typing result.

Epidemiological criteria	
Contact with a confirmed case	Indicate whether the person has had any contact with a confirmed case of the disease. If 'Yes', specify the EpiSurv number of the confirmed case. If not known or unavailable, then select the 'Unknown' option.

Additional laboratory results	
This section will be automatically populated with data from the National Measles and Rubella Reference Laboratory in Christchurch when the typing results are available	
Genotype	Specify the measles genotype identified.
Strain name	Specify the measles strain.
Strain ID	Specify the strain ID code.
Updated	A flag to indicate that the laboratory results have been updated by CHL (closed to users)
Laboratory	The name of the laboratory from where the results originated (closed to users).
Date result updated	The date the result fields were updated (closed to users).
Sample Number	The laboratory sample number (closed to users).

Classification

Classification (Measles mumps and rubella)	**Under investigation** - a case which has been notified but information is not yet available to classify it as probable or confirmed. **Probable (measles only)**– a clinically compatible illness where there is a high index of suspicion* of disease, and either laboratory suggestive evidence or laboratory confirmatory testing is inconclusive or cannot be performed. **Probable (mumps and rubella)** – a clinically compatible illness **Confirmed** – a clinically compatible illness that is laboratory confirmed or epidemiologically linked to a confirmed case. **Not a case** – a case that has been investigated, and subsequently found not to meet the case definition.
Laboratory confirmation *Measles*	**Definitive laboratory evidence** for a measles confirmed case is: • A positive NAAT of a non-vaccine strain **Suggestive laboratory evidence** for a measles probable case is: • IgG seroconversion between paired sera tested in parallel • IgM detection in an unvaccinated person. * A high index of suspicion is if someone has a clinically compatible illness, is susceptible to measles (not immune/immunised) and has been in an area with known measles cases (either in New Zealand or overseas) during the incubation period OR when there is an epidemiological link to a probable case.

Laboratory confirmation *Mumps*	**Definitive laboratory evidence** for a mumps confirmed case requires at least one of the following: • detection of mumps virus nucleic acid (PCR) (recommended) • isolation of mumps virus by culture. If the case received a vaccine containing the mumps virus in the 6 weeks prior to symptom onset then laboratory definitive evidence requires also: • evidence of infection with a wild-type virus strain obtained through genetic characterisation.
Laboratory confirmation *Rubella*	If the case received a vaccine containing the rubella virus in the 6 weeks prior to symptom onset then **laboratory definitive evidence** for a confirmed case requires: • evidence of infection with a wild-type virus strain obtained through genetic characterisation. If the case did not receive a vaccine containing the rubella virus in the 6 weeks prior to symptom onset, then **laboratory definitive evidence** for a confirmed case requires at least one of the following: • detection of rubella virus nucleic acid (preferred method) • detection of IgM antibody specific to the virus • IgG seroconversion or a significant rise (four-fold or greater) in antibody level for the virus between paired sera tested in parallel where the convalescent serum was collected 10 to 14 days after the acute serum • isolation of rubella virus by culture.

Risk factors

Contact with a confirmed case	Indicate whether the case has been in contact with a confirmed case of the same disease during the incubation period for the disease. Consult the Communicable Disease Control Manual for details of the incubation periods for each disease. If not known or unavailable then select the 'Unknown' option.
Overseas travel	Indicate whether the case was overseas during the incubation period for the disease. If 'Yes', record the date of arrival in New Zealand. List the countries/regions visited (up to three) from the most recent to the least recent. Record date of entry and departure for each country/region.
Other risk factor for disease	Specify any other risk factors under surveillance for the disease if they were present.

Source

Source of the virus (measles and rubella only)	For cases of measles and rubella, indicate whether the infection was imported, import related or endemic. If not known or unavailable, then select the 'Unknown' option. **Imported**: is an infection resulting from exposure outside the country during the incubation period (7-21 days prior to rash onset for measles and 14-23 days for rubella) as supported by epidemiological and/or virological evidence. **Import-related**: is a locally-acquired infection due to transmission from an imported or other import-related case as supported by epidemiologic and/or virological evidence. **Endemic**: is a locally acquired infection due to transmission of an indigenous virus or an imported measles virus that has persisted in the country for ≥12 months. If the case was imported, specify the country and region/city they visited at the likely time of exposure. If the case was import-related, provide the EpiSurv number of the source case. If the case was infected in New Zealand, specify the DHB where contact occurred.

Protective factors

Was case immunised at 12 months or older	Indicate whether the case had been immunised with MMR or the appropriate monovalent vaccine at age 12 months or older at any time **before becoming ill**.
Vaccine details	If the case had been immunised (prior to becoming ill), record the details of each dose they received. Record the date of each dose or the age when it was given. Specify the age units (weeks, months, years) by selecting one of the boxes. If the case only received one dose, record the details for the dose received and select the 'Not given' option for the second dose to indicate no further doses had been received. If vaccination dose information is not known or unavailable, then select the 'Unknown' option. Indicate whether the source of immunisation information was patient/caregiver recall or documented for each dose.
Was case given MMR0 when under 12 months	Indicate whether the case had been immunised with MMR or the appropriate monovalent vaccine when they were aged under 12 months at any time **before becoming ill**.
MMR0 vaccine details	If the case had received a dose of MMR when aged under 12 months, record the date or the age when it was given. Specify the age units (weeks, months, years) by selecting one of the boxes. Indicate whether the source of immunisation information was patient/caregiver recall or documented.

Management

Case management	
Investigation start date (measles and rubella only)	For cases of measles and rubella, indicate the date the case investigation was started.
Pregnant (rubella only)	For cases of rubella, indicate whether they were pregnant. If 'Yes', record gestation in weeks at time of onset. If not known or unavailable, then select the 'Unknown' option.
Contact management	
Flight number/s (measles only)	For cases of measles, record the flight numbers if the case was infectious while on board any international flights. List flight numbers (up to four) from the most recent to least recent flight. Record the date of departure for each flight.