Rubella

For Congenital Rubella refer to separate protocol

Te Mana Ora Protocol

This protocol is based on the Ministry of Health Communicable Disease Control Manual[1]

- Protocol users should **document** their response to **action points,** marked throughout with this arrow.

Contents

Associated documents

Te Whatu Ora Waitaha Māori health policy

Te Whatu Ora Waitaha tikanga policy

Te Whatu Ora Waitaha interpreter procedure

Te Mana Ora privacy/nohotapu policy

Case report form
K:\CFS\ProtectionTeam\FinalDocs\NotifiableConditions\Rubella\FormsStdLettersQuest\CaseReportFormMMRJun2015.pdf

Manatū Hauora | Ministry of Health fact sheet
https://www.health.govt.nz/your-health/conditions-and-treatments/diseases-and-illnesses/rubella

The Illness

Epidemiology in New Zealand[2]

Humans are the only source of rubella infection. Infection is often asymptomatic. In the pre-vaccine era the highest incidence of clinical cases occurred in the spring among 5–9-year-old children, and 80–90 percent of adults were immune to rubella. Extensive outbreaks of rubella occurred every six to nine years, in which many children were affected by congenital rubella syndrome (CRS - refer to the separate *Rubella – congenital* protocol).

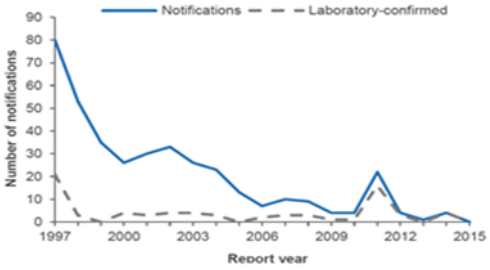
Immunisation against rubella, introduced to prevent the occurrence of CRS, has resulted in a very significant reduction in infection, especially once vaccination was introduced to boys and girls.

The incidence of rubella in New Zealand has decreased since the last national epidemic in 1995. A cohort of women born in the years 1965 -1967 may be less likely to have been immunised as children than women born before or later. In New Zealand, rubella immunisation was introduced in 1970 and rubella has been a notifiable disease since June 1996.

No cases of rubella were notified in 2015, compared with four cases in 2014.

Since the last national rubella outbreak in 1995, the number of rubella cases notified each year has decreased steadily, except for an increase in notifications in 2011 during the measles outbreak (Figure 1).

Figure 1 NZ rubella notifications and laboratory reported cases year by year, 1997-2015



Te Mana Ora cases: last five years

Only one case of rubella was notified to Community and Public Health over the five years to the end of 2018, a person of Asian ethnicity notified in 2016.

Clinical description

An illness with a generalised maculopapular rash, 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 rubella infections are subclinical. If an accurate diagnosis is important, rubella must be laboratory confirmed.

Incubation

14–23 days, commonly 16–18 days.

Transmission

Children and adults transmit the virus in their nasopharyngeal secretions by droplet spread or direct contact.

Communicability

From about 1 week before to 1 week after the onset of the rash.

Notification

Cases of rubella and congenital rubella syndrome (see separate protocol) must be notified on suspicion. Notification should not await confirmation. Recent immunisation with the MMR vaccine may also result in detectable anti-rubella IgM or a significant increase in anti-rubella IgG and since laboratories do not necessarily have access to this information, all results consistent with possible rubella infection should be notified.

Case classification

Under investigation: A case that has been notified, but information is not yet available to classify it as probable or confirmed.

Probable: A clinically compatible illness that is either epidemiologically linked to a confirmed case or has had contact with the same common source – that is, is part of a common-source outbreak.

Confirmed: A clinically compatible illness that is laboratory confirmed.

Not a case: A case that has been investigated and subsequently found not to meet the case definition.

Laboratory testing

If the case **received a vaccine** containing the rubella virus in the 6 weeks prior to symptom onset then laboratory confirmation requires evidence of infection with a wild-type virus strain obtained through genetic characterisation (in New Zealand, genetic characterisation is generally only performed for measles virus).

If the case **did not receive a vaccine** containing the rubella virus in the 6 weeks prior to symptom onset, then laboratory confirmation requires at least one of the following:

- 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
- detection of rubella virus nucleic acid (swabs for rubella PCR will be positive at rash onset. Virus can be isolated from the nasopharynx for up to 2 weeks after the onset of the rash. Nasopharyngeal swabs should be sent to Virology, Canterbury Health Laboratories, in Universal Transport Medium[3]).

Cultural and social context

Cultural, social, work and home environments affect any person's risk of contracting a communicable disease, the likely impact of that disease on them, and their likelihood of passing the infection on others. Keep these factors in mind at every point of your investigation and follow-up.

- Request an **interpreter** if needed
- **Consider** the potential impact of cultural, social, work or home factors on a person or family's ability or willingness to provide information and/or follow public health advice
- **Tailor your advice** to the situation
- **Seek advice yourself** if unsure. Talk to:
    - Te Mana Ora Māori Relationships Manager or Pacific Relationships Manager or Communicable Diseases Manager for advice on community and primary care support people or agencies
    - Ngā Ratonga Hauora Māori for Maori patients at Christchurch Hospital or Christchurch Women's hospital
- If appropriate, and with the case and/or contact's permission, seek the **assistance** of family or other community members, community leaders, and/or support agencies if required

Management of case

Investigation

- Action **on the day of notification** and ensure that the case's details are obtained promptly.
- **Discuss with the case or parent/guardian** to complete all details.
- **Check** that the following information is obtained:
    - the **date of onset** (important to establish duration of communicability)
    - history of prior MMR **vaccination** (the vaccine may cause a fever and non-infectious rash around 6-12 days after immunisation)
    - history of **travel**
    - identify possible **contacts**, including travellers from overseas.
- **Check whether the case is pregnant,** as rubella serology in the absence of a compatible illness or contact with a rash during pregnancy can be falsely positive.
- If the case is pregnant, **discuss the result with the lead maternity carer.** If confirmed as an acute rubella case **discuss with the MOH** (also see Management of Contacts below)**.**
- **Ensure laboratory confirmation** by serology or detection of virus in clinical specimens has been attempted. Nasal, throat, urine, blood and cerebrospinal fluid specimens can yield the virus. Discuss testing with an infectious disease's physician or a microbiologist.

On the West Coast, the Public Health Nurses follow up these notifications.

Restriction

- In health care facilities**, apply droplet and contact precautions** until at least 7 days after onset of a rash in postnatal rubella. Non-immune pregnant women, in particular, should not have contact with an infectious case
- **Exclude from any early childhood service, school, institution or work** until fully recovered and for 7 days after onset of rash.
- Cases should **avoid contact with women of childbearing age.**

Treatment

Nil specific.

Counselling

- **Advise** the case and their caregivers of the nature of the infection and its mode of transmission.
- Provide Ministry of Health **fact sheet:**

  https://www.health.govt.nz/your-health/conditions-and-treatments/diseases-and-illnesses/rubella

Management of contacts

Definition

All people with **close unprotected contact** (eg household, school, workplace, military camp) with the case during **the week before onset of illness to seven days after the onset of the rash**.

Air travel

No specific advice.

Investigation

Identify contacts for investigation, immunoglobulin and counselling where appropriate.

- Check **immunisation status** of contacts**.**
- Advise any **pregnant** contact to get in touch with her lead maternity carer (LMC) to check her rubella status**.**
- Pregnant contacts with **confirmed immunity** can be reassured that the likelihood of rubella infection is remote. This applies if:
    - a previous antibody screening test has detected a protective level of antibodies, and this has been documented, OR
    - she has received at least two documented doses of rubella vaccine, OR
    - one dose of vaccine followed by a rubella antibody screening test showing a protective level of antibodies has been documented.
- Pregnant contacts whose **immunity to rubella has not been confirmed must be investigated** serologically as soon as possible in liaison with their LMC and primary health care doctor as the rash is not diagnostic and infection can occur without clinical symptoms. Discuss testing with an infectious diseases physician or a microbiologist.
    - The laboratory should test for rubella IgM and IgG (no pregnant woman under 20 weeks gestation should have rubella diagnosed on IgM alone). The laboratory should store (frozen) an aliquot of serum for later testing in tandem with a follow-up sample.
    - If the sample is IgM positive, regardless of IgG, then a full assessment of the serological status is needed. Results must be interpreted in conjunction with the time lapse since exposure to determine whether or not acute infection has occurred. Consider further serum samples and/or testing in a reference laboratory.
    - If the sample is negative for both IgM and IgG, then the woman is susceptible, and if she remains asymptomatic then a second blood specimen should be obtained 28 days after last exposure to the case. If, however, the woman develops clinical symptoms suggestive of

rubella, a second blood specimen should be obtained as soon as possible. A third blood specimen may be necessary 7 days after the onset of symptoms.
  - If IgG is detected and IgM is not detected, and the IgG is less than 15 IU/mL and there is a history of onset of rash in the previous 10 days, request further serum.

- Diagnosis and management based on any the above tests should be **discussed with an obstetrician or infectious diseases physician**. Management of primary rubella or secondary re-infection depends on the gestation of the pregnancy and when the infection occurred.
- Pregnant contacts who are not immune should also be **offered MMR vaccination after delivery.**

Restriction
Nil

Prophylaxis
Immunisation is contraindicated during pregnancy.

The routine use of immunoglobulin (IG) for post-exposure prophylaxis of rubella in early pregnancy is not recommended. It may be considered if termination of the pregnancy is not an option. Although IG has been shown to reduce clinically apparent infection in the mother, there is no guarantee that it will prevent foetal infection.

- Post-exposure immunisation of non-pregnant women is recommended, especially if given within 3 days of exposure. **All women of childbearing age should be screened** for rubella antibody and immunised if necessary.

Counselling
- Advise all contacts of the **incubation period and typical symptoms** of rubella.
- Encourage them to seek **early medical attention** if symptoms develop**.**
- **Pregnant contacts** may require additional advice; refer to an appropriate specialist.
- Advise **MMR vaccination** of susceptible women of child bearing age and that children's vaccinations be up to date.
- If the case attends a preschool/school or an institution, advise that **others attending be informed** of a possible risk.
- Provide Ministry of Health **fact sheet:**
  https://www.health.govt.nz/your-health/conditions-and-treatments/diseases-and-illnesses/rubella

Other control measures
- **In a cluster of cases or an outbreak,** women of child bearing age and children who are unvaccinated should be advised to have MMR vaccination (this is funded)**.**

Identification of source
- Check for **other cases** in the community and look for associations. If recent **travel,** check if possible outbreaks in areas visited.

Disinfection
Generally not needed[4]. Clean and disinfect surfaces and articles soiled with upper respiratory tract secretions, urine or other infectious bodily fluids.

Reporting
- Enter case details on **EpiSurv.**
- **Document** your response to each **action point** (marked with this arrow) in this protocol
- If a **cluster** of cases occurs, contact the Ministry of Health Communicable Diseases Team and outbreak liaison staff at ESR, and complete the Outbreak Report Form.
- If an outbreak, write **report** for Outbreak Report File
- **File.**

References and further information

1. Ministry of Health, *Communicable Disease Control Manual*. 2019, Ministry of Health: Wellington.
2. Ministry of Health, *Immunisation Handbook 2017*. 2nd ed. 2018, Wellington: Ministry of Health.
3. Canterbury Health Laboratories. *Community Measles and Respiratory Virus Testing Guideline*. 2015; Available from: https://canterbury.communityhealthpathways.org/files/Resources/CHL%20Measles%20Swab%20Respiratory%20Memo%20to%20GPs.pdf.
4. Ministry of Health, *Communicable Disease Control Manual Appendix 1: Disinfection*. Ministry of Health: Wellington.
5. New South Wales Government. *Rubella (German Measles) control guideline*. 2019; Available from: https://www.health.nsw.gov.au/Infectious/controlguideline/Pages/rubella.aspx.
6. Best, J.M., et al., *Interpretation of rubella serology in pregnancy--pitfalls and problems.* BMJ, 2002. **325**(7356): p. 147-8.
7. Centers for Disease Control and Prevention. *Rubella (German Measles, Three-Day Measles)*. 2017; Available from: https://www.cdc.gov/rubella/index.html.
8. Public Health England. *Rubella (German measles): guidance, data and analysis*. 2019; Available from: https://www.gov.uk/government/collections/rubella-german-measles-guidance-data-and-analysis.

Document Control

Protocol review task	Responsibility	Date completed
Advise team of review (and planned timeframes)	Public Health Specialist (PHS)	11/06/2019
Create draft update document, including this table, and save in: Y:\CFS\Quality\NewDraftDocuments\CDProtocols	PHS	11/06/2019
Review Ministry of Health (MoH) advice, literature, other protocols, and write draft update (reviewed CDC, PHE, NSW Health info)	PHS	18/07/2019
Update Fact Sheet (or source link from MoH website)	PHS	18/07/2019
Send drafts to MOsH, CD, Team Leader, and HPO for feedback	PHS	28/09/2019
Update drafts further as required	PHS	n/a
Send final drafts to Com Dis MOH	PHS	07/10/2019
Com Dis MOH sign-off	Com Dis Medical Officer of Health (MOoH)	
Send final drafts to Clinical Director for approval	Com Dis MOoH	07/10/2019
Clinical Director approval (EDMS automated).	Clinical Director (CD)	22/10/2019
QC receives EDMS notification of CD approval, and completes the following processes: ➢ Document control tasks within document, incl. header, footer and formatting. ➢ EDMS document properties/ metadata updates. ➢ Checks and updates hyperlinks on Te Mana Ora policies and procedures site. ➢ Creates .pdf (for external link), and saves to CFS folder: • Protocols – Y:\CFS\Quality\Archive\Protection\IntranetPROTOCOLS. ➢ New or reviewed document is uploaded to: • Protocols: o Surveillance (PHU server) website, and o Microsoft Teams on-call documentation group. ➢ Fact/information sheets are checked for validity: • Te Mana Ora | CPH website, or • MoH website.	Quality Coordinator (QC)	V4, 16/02/2023
Update **paper** copies (on-call folder/ vehicle)	HPO	22/10/2019
Advise operational/ regional staff of update, summarising any substantial changes (text highlighted in blue in document)	HPO	22/10/2019
Once finalised, save the original draft document incl. this table (recording update process) in: Y:\CFS\Quality\Archive\Protection\ComDisProtocolsArchive	QC	22/10/2019
Minor update notes: V4 added Pacific Relationships Manager into Cultural and Context section	QC	V4, 16/02/2023