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# Rubella, congenital syndrome

**REPORTABLE DISEASES TOOLKIT**

***Information for Health Care Professionals***

## Reporting Obligations

Individuals who have or may have rubella shall be reported immediately to the local Health Unit. Laboratory confirmed cases are to be reported by phone as soon as identified.

***REPORTING FORM***

## Epidemiology

**Aetiologic Agent:**

Rubella virus (family Togaviridae; genus Rubivirus)

**Clinical Presentation:**

Congenital Rubella Syndrome (CRS) can result in miscarriage, stillbirth and fetal malformations, including congenital heart disease, cataracts, deafness and intellectual disabilities. Fetal infection can occur at any stage of pregnancy, but the risk of fetal damage following maternal infection is particularly high in the earliest months after conception (90% in the first trimester) with progressive diminution of risk thereafter, and it is very uncommon after the 20th week of pregnancy. Infected infants who appear normal at birth may later show eye, ear or brain damage. Congenital infection may give rise to such problems as diabetes mellitus and panencephalitis later in life. Congenitally infected infants may shed the virus in the urine and in nasopharyngeal secretions for 1 year or more.

**Modes of transmission:**

Transplacental passage of rubella virus from maternal blood.

**Incubation Period:**

Not applicable.

**Period of Communicability:**

Birth to 9-12 months of age, rarely longer. A small number of infants with congenital rubella continue to shed virus in nasopharyngeal secretions and urine for 1 year or more and can transmit infection to susceptible contacts.

## Patient Information

***PATIENT FACT SHEET***

## Additional Resources

1. Heymann, D.L. Control of Communicable Disease Manual (20th Ed.). Washington, American Public Health Association, 2015.
2. Pickering LK, Baker CJ, Long SS, McMillan JA editors. Red Book, 2006 Report of the Committee on Infectious Diseases (27th Ed.). Elk Grove Village, IL, American Academy of Pediatrics, 2006.

## References

1. Ministry of Health and Long Term Care, Infectious Diseases Protocol, 2013.

## Risk Factors/Susceptibility

Fetuses of rubella-susceptible pregnant women who have not received at least one dose of rubella-containing vaccine. Immunity is usually permanent after immunization and natural infection.

## Diagnosis & Laboratory Testing

Two clinically compatible manifestations such as cataracts/glaucoma, congenital heart defect, hearing loss, retinopathy, purpura, hepatosplenomegaly, microcephaly, micro ophthalmia, developmental delay, meningoencephalitis, and radiolucent bone disease, with laboratory confirmation. Testing includes any of the following:

- Isolation of rubella virus in culture from clinical samples (throat, NP swabs/aspirates, urine)
- Nucleic acid amplification test (NAT) to detect rubella virus RNA
- Positive serology for rubella IgM antibody in the absence of recent (i.e., 7 – 42 days) immunization with rubella-containing vaccine
- Rubella Immunoglobulin G (IgG) persisting for longer than would be expected (approximately 6 months following birth) from passive transfer of maternal antibody, or in the absence of recent immunization.

Rubella IgM may not always be detectable at birth following congenital infection. Virus isolation and/or detection of rubella RNA and monitoring of IgG response may be necessary.

***TESTING INFORMATION & REQUISITION***

## Treatment & Case Management

There is no specific treatment for congenital rubella except for symptomatic and supportive care. Infants with congenital rubella infection should be isolated from non-immune pregnant women, infants and children, and should be considered infectious until there are 2 set of negative tests. Urine and nasopharyngeal (NP) specimens in addition to serology should be collected shortly after birth and again in 1-2 months. If the test results are not negative, the infant is considered infectious and should continue to be isolated from non-immune persons. Regular testing should be done until tests are negative.

Public health staff will be involved in case and contact management.