Communicable Disease Case Reporting and Investigation Protocol

Congenital Rubella Syndrome (CRS)

I. Identification and definition of cases

A. Clinical description

Congenital rubella syndrome (CRS) is an illness resulting from rubella virus infection during pregnancy. When rubella infection occurs during early pregnancy, serious consequences such as miscarriages, stillbirths, and a constellation of severe birth defects in infants can result. CRS usually present with more than one sign or symptom but may also present with a single defect, most commonly hearing impairment.

B. Wisconsin surveillance case definition

Confirmed case:

An infant with at least one of the symptoms clinically consistent with congenital rubella syndrome listed above, and laboratory evidence of congenital rubella infection demonstrated by:

- Isolation of rubella virus, **or**
- Detection of rubella IgM antibody, **or**
- Infant rubella antibody level that persists at a higher level and for a longer period of time than expected from passive transfer of maternal antibody (rubella titer that does not drop at the expected rate of a two-fold decline per month), **or**
- A specimen that is PCR-positive for rubella virus.

Probable case:

An infant without an alternative etiology that does not have laboratory confirmation of rubella infection but has at least 2 of the following:

- Cataracts or congenital glaucoma,
- congenital heart disease (most commonly patent ductus arteriosus or peripheral pulmonary artery stenosis),
- hearing impairment, **or**
- pigmentary retinopathy;

or

An infant without an alternative etiology that does not have laboratory confirmation of rubella infection but has at least one or more of the following:

- Cataracts or congenital glaucoma,
- congenital heart disease (most commonly patent ductus arteriosus or peripheral pulmonary artery stenosis),
- hearing impairment, **or**
- pigmentary retinopathy, **and**

- one or more of the following:
    - purpura,
    - hepatosplenomegaly,
    - jaundice,
    - microcephaly,
    - developmental delay,
    - meningoencephalitis, **or**
    - radiolucent bone disease.

Suspect case:
An infant who does not meet the criteria for a probable or confirmed case but who has one or more of the following clinical findings:

- cataracts or congenital glaucoma,
- congenital heart disease (most commonly patent ductus arteriosus or peripheral pulmonary artery stenosis),
- hearing impairment,
- pigmentary retinopathy
- purpura,
- hepatosplenomegaly,
- jaundice,
- microcephaly,
- developmental delay,
- meningoencephalitis, **or**
- radiolucent bone disease.

Infection only (other criteria):
An infant without any clinical symptoms or signs of rubella but with laboratory evidence of infection demonstrated by:

- Isolation of rubella virus, **or**
- Detection of rubella IgM antibody, **or**
- Infant rubella antibody level that persists at a higher level and for a longer period of time than expected from passive transfer of maternal antibody (rubella titer that does not drop at the expected rate of a two-fold decline per month), **or**
- A specimen that is PCR-positive for rubella virus.

Comment: In probable cases, either or both of the eye-related findings (cataracts and congenital glaucoma) count as a single complication. In cases classified as infection only, if any compatible signs or symptoms (for example, hearing impairment) are identified later, the case is reclassified as confirmed.

II. Reporting

A. Wisconsin disease surveillance category I—methods for reporting

This disease is of urgent public health importance and shall be reported by telephone to the patient's local health officer or to the local health officer's designee upon identification of a case or suspected case, per

Wis. Admin. Code § DHS 145.04 (3) (a). DPH may provide guidance on alternate methods for immediate reporting, such as electronic reporting instead of telephone. In addition to the immediate notification, report electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS), or mail or fax a completed Acute and Communicable Disease Case Report (DHS F-44151) to the address on the form, within 24 hours.

B. Responsibility for reporting

According to Wis. Admin. Code § DHS 145.04(1), persons licensed under Wis. Stat. ch. 441 or 448, laboratories, health care facilities, teachers, principals, or nurses serving a school or day care center, and any person who knows or suspects that a person has a communicable disease identified in Appendix A.

C. Clinical criteria for reporting

Clinically compatible illness. Cases should be reported immediately upon consideration CRS in the differential diagnosis.

III. Case investigation

A. Responsibility for case investigation

It is the responsibility of the local and Tribal health department (LTHD) to investigate or arrange for investigation of suspected or confirmed cases as soon as is reasonably possible. A case investigation may include information collected by phone, in person, in writing, or through review of medical records or communicable disease report forms, as necessary and appropriate.

B. Required documentation

- Complete the WEDSS disease incident investigation report, including appropriate, disease-specific tabs.
- Upon completion of investigation, set WEDSS disease incident process status to "Sent to State."

C. Additional investigation responsibilities

Contact your Immunization Program Regional Representative

IV. Public health interventions and prevention measures

- In accordance with Wis. Admin. Code § DHS 145.05, local public health agencies should follow the methods of control recommended in the current editions of Control of Communicable Diseases Manual, edited by David L. Heymann, published by the American Public Health Association, and the American Academy of Pediatrics' Red Book: Report of the Committee on Infectious Diseases, unless otherwise specified by the state epidemiologist.
- Laboratory confirmation should be sought in all suspected CRS cases, regardless of signs or symptoms. Clinical specimens should be sent to the Wisconsin State Laboratory of Hygiene.
- Investigation to determine where the mother was exposed to rubella virus.
- Infants with CRS should be considered infectious until they are at least 1 year old or until two specimens obtained one month apart after the infant is older than three months of age are negative for rubella virus. Infants with CRS should be placed in contact isolation during any hospital admission before 1 year of age or until the infant is no longer considered infectious and be excluded from childcare facilities until no longer considered infectious.

V. Contacts for consultation

- Local health departments and Tribal health agencies
- Bureau of Communicable Diseases: 608-267-9003 or DHSDPHBCD@dhs.wisconsin.gov
- Wisconsin State Laboratory of Hygiene: 800-862-1013

VI. Related references

- Heymann DL, ed. Rubella. In: Control of Communicable Diseases Manual. 21st ed. Washington, DC: American Public Health Association, 2022.Click here to enter text.
- Committee on Infectious Diseases, American Academy of Pediatrics. David W. Kimberlin, MD, FAAP, ed. 2024. Red Book: 2024-2027 Report of the Committee on Infectious Diseases - 33rd Ed. American Academy of Pediatrics. ISBN 978-1-61002-734-2. eISBN 978-1-61002-735-9.
- Centers for Disease Control and Prevention. Manual for the Surveillance of Vaccine-Preventable Diseases Chapter 14: Rubella. Page last reviewed: 03/06/2025.
- Centers for Disease Control and Prevention. Manual for the Surveillance of Vaccine-Preventable Diseases Chapter 15: Congenital Rubella Syndrome. Page last reviewed: 04/28/2025.
- Wisconsin Immunization Program Rubella webpage.