



## Communicable Disease Case Reporting and Investigation Protocol **MUMPS**

### **I. IDENTIFICATION AND DEFINITION OF CASES**

- A. **Clinical Description:** Mumps is a viral illness characterized by acute parotid or other salivary gland swelling. Parotitis tends to occur early and may first be noted as an earache or pain on palpitation at the angle of the jaw. Symptoms tend to decrease after one week and usually resolve after 10 days. The mumps virus is spread by contact with infectious respiratory tract secretions and saliva. The incubation for mumps is usually 16-18 days, with a range of 12-25 days. A symptomatic individual is considered infectious from two days prior to parotitis onset through five days after.
- B. **Laboratory Criteria: Laboratory confirmed infection is defined by:**
- Detection of mumps nucleic acid by polymerase chain reaction (PCR) from a buccal swab specimen (preferred test for mumps), or
  - Isolation of mumps virus from clinical specimen, or
  - Positive serologic test for mumps IgM antibody (**NOTE:** Mumps IgM response in persons previously vaccinated with a mumps-containing vaccine may be absent or short lived, and false-positive and false-negative results are possible), or
  - Demonstration of specific mumps antibody response in the absence of recent vaccination, either a fourfold increase in mumps IgG antibody as measured by a quantitative assay, or a seroconversion from negative to positive using a standard serologic assay of paired acute and convalescent serum specimens.
- C. **Wisconsin Surveillance Case Definition:**
1. **Confirmed:** A positive mumps laboratory confirmation for mumps virus with PCR or culture in a patient with an acute illness characterized by any of the following:
    - Acute parotitis or other salivary gland swelling lasting at least two days
    - Aseptic meningitis
    - Encephalitis
    - Hearing loss
    - Orchitis
    - Oophoritis
    - Mastitis
    - Pancreatitis
  2. **Probable:** Acute parotitis or other salivary gland swelling lasting at least two days, or orchitis or oophoritis unexplained by another more likely diagnosis in:
    - a. A person with a positive test for serum anti-mumps IgM antibody, or
    - b. A person with epidemiologic linkage to another probable or confirmed case, or linkage to a group/community defined by public health during an outbreak of mumps.
  3. **Suspected:**
    - a. Parotitis, acute salivary gland swelling, orchitis, or oophoritis unexplained by another more likely diagnosis, or
    - b. A positive laboratory result with no mumps clinical symptoms (with or without epidemiological linkage to a confirmed or probable case).

### **II. REPORTING**

- A. **Wisconsin Disease Surveillance Category II – Methods for Reporting:** This disease shall be reported to the patient's local health officer or to the local health officer's designee within 72 hours of recognition of a case or suspected case, per Wis. Admin. Code § [DHS 145.04 \(3\) \(b\)](#). Report electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS), or mail or fax a completed Acute and Communicable Disease Case Report ([F-44151](#)) to the address on the form.

- 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 of mumps in the differential diagnosis.
- D. **Laboratory Criteria for Reporting:** Laboratory evidence of infection (e.g., PCR, culture, or IgM).

### III. CASE INVESTIGATION

- A. **Responsibility for case investigation:** It is the responsibility of the local health department (LHD) 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:**
  1. Complete the WEDSS disease incident investigation report, including appropriate, disease-specific tabs.
  2. Upon completion of investigation, set WEDSS disease incident process status to “Sent to State.”
- C. **Additional Investigation Responsibilities**
  1. Wisconsin specific additional guidance for LHDs can be found on the Division of Public Health’s website at <https://www.dhs.wisconsin.gov/publications/p0/p00640.pdf>
  2. Contact your Immunization Program Regional Representative: <https://www.dhs.wisconsin.gov/lh-depts/counties.htm>

### IV. PUBLIC HEALTH INTERVENTIONS AND PREVENTION MEASURES

- A. 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.
- B. Refer to Wisconsin DPH’s Mumps Surveillance and Control Guidelines for detailed information on case and contact management at: <https://www.dhs.wisconsin.gov/publications/p0/p00640.pdf>
- C. Implement control measures before laboratory confirmation. If the laboratory results are negative, the decision to continue control measures should be made in consultation with the treating physician, the LHD, and Bureau of Communicable Diseases.

### V. CONTACTS FOR CONSULTATION

- A. Local health departments and tribal health agencies: <https://www.dhs.wisconsin.gov/lh-depts/index.htm>
- B. Regional Immunization Program representatives: <https://www.dhs.wisconsin.gov/lh-depts/counties.htm>
- C. Bureau of Communicable Diseases, Immunization Program: 608-267-9959. After hours number 608-258-0099.
- D. Wisconsin State Laboratory of Hygiene: 1-800-862-1013. After hours emergency number 608-263-3280.

### VI. RELATED REFERENCES

- A. Heymann DL, ed. Mumps. In: *Control of Communicable Diseases Manual*. 20th ed. Washington, DC: American Public Health Association, 2015: 419-423.
- B. Pickering LK, ed. Mumps. In: *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2015: 564-569.
- C. Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Hamborsky J, Kroger A, Wolfe S, eds. 13<sup>th</sup> ed. Washington D.C. Public Health Foundation, 2015.

- D. Centers for Disease Control and Prevention. Manual for the Surveillance of Vaccine-Preventable Diseases Mumps website: <https://www.cdc.gov/vaccines/pubs/surv-manual/chpt09-mumps.html>
- E. Centers for Disease Control and Prevention. Mumps Surveillance Worksheet. Retrieved July 24, 2017, from <https://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix10-2-mum-wrsht.pdf>
- F. Wisconsin Immunization Program Mumps webpage: <https://www.dhs.wisconsin.gov/immunization/mumps.htm>
- G. Wisconsin Department of Health Services. (2017). *Mumps surveillance and control guidelines*. Retrieved July 18, 2017, from <https://www.dhs.wisconsin.gov/publications/p0/p00640.pdf>