A ***PRINTED*** copy of this guideline may not be the most recent version.

Mumps

Purpose

To prevent transmission of Mumps. To provide guidance to health care providers on how to:

- Identify
- Isolate
- Notify

Definitions

Contact: Refer to Management of susceptible contacts in the healthcare setting section.

Confirmed Case of mumps:

- Lab confirmed: mumps-compatible illness and laboratory confirmation of infection in the absence of recent immunization with mumps-containing vaccine (i.e., within the previous 28 days).
- Epidemiologically linked: mumps-compatible illness in a person with an epidemiological link to a lab confirmed case.

Mumps-compatible illness: characterized by acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, or orchitis, lasting 2 or more days, and without other evident cause.

Probable Case of mumps: mumps-compatible illness in absence of laboratory confirmation of infection and no known link to a lab-confirmed mumps case.

Overview

Illness Presentation:

The most common symptom of mumps is swelling of the salivary glands. This swelling can cause cheeks to become puffy and tender. Other symptoms of mumps include:

- Fever
- Headache or earache
- Fatigue
- Muscle aches
- Dry mouth
- Difficulty talking, chewing, or swallowing
- Loss of appetite

Many people who become infected with mumps will have very mild symptoms. Up to 1 in 5 people do not have symptoms; however, they can still spread the mumps virus to other people.

Additional signs, symptoms and complications MAY include:

- Orchitis (painful welling of the testicles)
- Oophoritis (swelling of the ovaries)

- Temporary or permanent deafness
- Encephalitis
- Mumps in early stages of pregnancy may increase rate of miscarriage.
- Myocarditis
- Thyroiditis
- Pneumonia
- Pancreatitis
- Nephritis
- Arthritis

Mode of Transmission

- Direct person-person contact with infected droplets from saliva or nasal secretions (e.g., coughing, kissing, sharing food/utensils or cigarettes).

Incubation Period

- The average incubation period for mumps is 16 to 18 days but can range from 12 to 25 days.

Period of Communicability:

- Patients are considered most infectious between 2 days before parotid glands begin to swell, up to 5 days after parotid swelling begins.
- However, mumps virus has been detected in saliva from 7 days before swelling onset and up to 9 days after swelling begins. Mumps has also been detected in urine 14 days after the onset of swelling.
- Asymptomatic infections can be communicable.

Diagnostic Testing

- Refer to IH Microbiology Lab test directory for specimen ordering, collection, and transportation, and handling.
- Mumps laboratory confirmation is by:
    - isolation of mumps virus from an appropriate clinical specimen, or
    - detection of mumps virus RNA, or
    - seroconversion in mumps IgG titre between acute and convalescent sera, or
    - detection of mumps IgM antibody in a person who is either epidemiologically linked to a lab confirmed case or has recently travelled to an area of known mumps activity.
- For acute Mumps infection, both a buccal/oral swab AND urine sample for Mumps PCR, AND serology should be collected.

Virus detection samples

- **Mumps PCR buccal or oral swab**
    - May be collected within the first 3-5 days of parotid gland swelling or symptom onset.
    - In those who have not been previously immunized, the virus can be isolated from the saliva for up to 5 days after onset of symptoms.
    - In those who have been previously vaccinated, the virus may only be detected by PCR within the first 3 days of presentation as it is cleared more quickly than those who are not immunized.
    - Buccal swabs or swabs of the area around Stenson's duct. If possible, the parotid gland should be milked (stroke from angle of the jaw forward and

down) and the specimen collected at the exit of parotid duct (also known as Stenson's duct) which opens into the vestibule of the mouth opposite the upper 2nd molar tooth.

- **Mumps PCR urine**
  - If greater than 5 days after symptom onset, collect urine specimen.
  - Mumps virus can be isolated in the urine for up to 2 weeks after onset of prodromal symptoms.

Serology

Collect both acute and convalescent serum specimens. Serology may be difficult to interpret in previously immunized people or those recently immunized against mumps.

1. **The first (acute) serology sample** to assess for an acute mumps infection should be collected as soon as possible upon suspicion of mumps and within 5 days of symptom onset. If initial serology does not detect IgM for mumps-compatible case, the blood may have been drawn too early and should be recollected. Refer to BCCDC Guidelines for additional serology testing.

2. **The second (convalescent) serology sample** is ideally collected at least 10 days and up to 3 weeks after the first sample. Refer to BCCDC Guidelines for additional details on serology testing.

Best Practices

Additional Precautions

- In addition to Routine Practices, place any suspected or confirmed patient cases on Droplet Precautions with appropriate Droplet Precautions signage posted outside of patient's door.
- Do not await laboratory confirmation to apply additional Droplet Precautions.

Patient Placement and Accommodation

- Single room with dedicated bathroom is preferred.
- Door may remain open.
- If single room unavailable refer to Recommendations for Cohorting Patients with strict bedside isolation, and dedicated toilet/commode and patient equipment.
- Droplet Precautions signage should be placed at the entrance to the patient room, cubicle, and designated bed space (i.e., curtain).

Patient Flow and Transport

- Limit transport to essential and diagnostic purposes only.
- Communication of Droplet Precautions is essential when a patient goes to another department or unit.
- Notify receiving department/facility and BC Emergency Health Services or other transport staff prior to transport.
- Transporting staff to wear a medical mask and eye protection within two meters of patient including during transport.
- Perform a Point of Care Risk Assessment prior to interacting with the patient to determine if additional personal protect equipment is required.
- Don personal protective equipment as per Additional Precautions sign and Point of Care Risk Assessment.

- After assisting patient, doff personal protective equipment inside patient room (except mask and eye protection) and clean hands prior to transport.
- Patient should wear medical mask during transport if tolerated. Contact Infection Prevention and Control if not tolerated.

Before transport consider/follow **the 5 C's**, educate, and assist the patient if necessary:

1. **C**ommunicate: notify receiving department if patient is on Additional Precautions.
2. **C**o-operative: is the patient able to follow instructions.
3. **C**lean hands: assist patient if required to clean their hands.
4. **C**lean clothes/clean sheet: patient to wear clean gown or clothes/cover with clean sheet.
5. **C**over/contain sources:
    - Cover wounds with clean dressings
    - Contain urine/feces or other body fluids
    - Cover cough: If coughing and/or on Contact and Droplet or Airborne Precautions, place medical mask on patient (if tolerated). Contact IPAC if not tolerated.

Personal Protective Equipment (PPE)

- Perform a Point of Care Risk Assessment prior to interacting with the patient to determine if additional PPE is required.
- PPE to be available directly outside the room.
- Perform hand hygiene before accessing any clean PPE.
- Medical mask and eye protection to be worn within two metres of the patient.
- Don PPE as per How to Don Personal Protective Equipment.
- Doff PPE as per How to Doff Personal Protective Equipment and perform hand hygiene.
- The same PPE should not be worn for more than one patient.

Waste, Laundry, Dishes, and Cutlery

- Use Routine Precautions.

Discontinuing Precautions

- Contact Infection Preventionist and/or Medical Microbiologist on-call PRIOR to discontinuing precautions.
- Precautions may be discontinued 9 days after the onset of parotid gland swelling.

Notification

- Any probable or confirmed cases of **mumps** are **immediately notifiable** to the Communicable Disease Unit (1-866-778-7736) Monday – Friday 08:30-16:30 or Medical Health Officer on-call (1-866-457-5648) after hours, weekends, and STATs.
- Notify suspected or confirmed cases of mumps to Infection Preventionist and/or Medical Microbiologist on-call.
- All laboratories notify all positive laboratory results to the Communicable Disease Unit.
- Infection Preventionist to investigate all mumps cases as directed by Medical Health Officer and complete a Communicable Disease Notification Tool.

Management of Susceptible Contacts in the Healthcare Setting

- **Contact:** as defined by BCCDC Mumps guidelines. Contacts within the healthcare setting may include those who have had the following types of contact with the case during the period of maximum communicability:
    - Persons who share sleeping arrangements with the case, including shared rooms.
    - Direct contact with the oral/nasal secretions of an infectious care (e.g., close contact within 2 metres; sharing cigarettes, drinking glasses, food, cosmetics like lip gloss; kissing on the mouth).
- Medical Health Officer will determine appropriate post-exposure prophylaxis for any susceptible contacts.
- Infection Preventionist will identify contacts exposed in healthcare settings and complete follow up for admitted susceptible patients.
- Communicable Disease Unit to review and provide Infection Preventionists with the susceptibility for contacts exposed in healthcare settings and follow-up with any contacts that have been discharged.

Management of Susceptible Exposed Health Care Provider

- Follow up provided by Medical Health Officer and/or Provincial Workplace Health Contact Centre (PWHCC) – See BCCDC Communicable Disease Mumps
- Individuals who believe they have had a breach in PPE or exposure to a communicable disease at work should contact the Provincial Workplace Health Contact Centre (PWHCC) at 1-866-922-9464 for an assessment or email OHN@WHcallcentre.ca. (The PWHCC is for IH employees only.)
- Additional information regarding exposure management for employees and the expectation to report vaccine and immunity status is outlined in Management of Occupational Exposure to Communicable Diseases policy AV0900.

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