

Mumps

Reporting Obligations

Mumps is designated as a disease of public health significance and is reportable under the Ontario Health Protection and Promotion Act. Report all suspect and confirmed cases within **one business day** to the health unit.

REPORTING FORM

Epidemiology

Aetiologic Agent:

Mumps is caused by an RNA virus of the genus *Rubulavirus* in the *Paramyxoviridae* family.

Clinical Presentation:

Fever, swelling and tenderness of one or more salivary glands. Parotitis will develop in about 40% of those infected. Approximately 20% to 30% of infections are subclinical but remain communicable. Respiratory symptoms of 50% of those who acquire infection can add to the difficulty in diagnosing mumps. Orchitis is a common complication after puberty. Permanent sequelae are rare. Mumps infection during the first trimester of pregnancy may increase the rate of spontaneous abortion.

Modes of transmission:

Droplet spread during face-to-face contact and direct contact with saliva or respiratory droplets from the nose or throat of an infected person. Mumps is spread through coughing, sneezing, sharing drinks, kissing, or from contact with any surface that has been contaminated with droplets containing the mumps virus.

Incubation Period:

Ranges from 12 and 25 days, commonly between 16 and 18 days.

Period of Communicability:

A person with mumps is able to spread infection from 7 days before to 5 days after the onset of parotitis.

Risk Factors/Susceptibility

- Attends post-secondary institution
- Not immunized or partially immunized
- Immunocompromised

After natural infection, immunity is generally lifelong. Effectiveness of mumps vaccination after one dose is between 62% and 91% and between 76% and 95% after two doses. There is evidence to suggest waning immunity after both one and two doses of vaccine.

Diagnosis & Laboratory Testing

Probable case: clinically compatible signs and symptoms characterized by acute onset of unilateral or bilateral tenderness and/or self-limited swelling of the parotid or other

salivary gland, lasting >2 days, and without other apparent cause.

Tests to confirm a diagnosis of mumps:

- Buccal swab: This provides the best viral sample and may be collected up to 9 days following symptom onset. Use virus culture kit.
- Urine specimen: Collect clean catch urine up to 14 days following symptom onset.
- Acute serum: IgM and IgG for mumps should be collected as soon as possible or within 5 days of symptom onset.
- Convalescent serum specimen (IgM and IgG for mumps) should be repeated at least 10 to 14 days after the initial (acute) sample.

Note: Optimal recovery of mumps virus is achieved if specimens are obtained 3 to 5 days after symptom onset.

TESTING INFORMATION & REQUISITION

Treatment & Case Management

All clinical cases should be managed as confirmed cases until lab evidence suggests otherwise.

Cases should be advised to stay home from school or postsecondary educational institutions, childcare facilities, workplaces, and other group settings for 5 days from symptom onset. Self-isolation will prevent exposure of susceptible individuals to the virus.

For hospitalized cases, droplet precautions are recommended until 5 days after onset of symptoms.

Contacts will be identified and followed by Public Health staff. Post-exposure prophylaxis with mumps immune globulin (Ig) is ineffective. Contacts should be advised of signs and symptoms of mumps infection that can occur within 25 days of exposure and to seek medical attention upon symptom onset if required. Immunization of mumps-susceptible contacts with MMR vaccine should be considered.

Patient Information

PATIENT FACT SHEET

References

1. [Ontario. Ministry of Health. Infectious Diseases Protocol, Appendix 1: Mumps.](#) Toronto: Queen's Printer for Ontario; 2022 [cited 2024 Mar 12].

Additional Resources

1. [MOHLTC. Publicly Funded Immunization Schedule for Ontario, June 2022.](#)
2. [PHAC. Canadian Immunization Guide, 7th ed., Mumps Vaccine.](#)
3. [Mumps. Toronto: PHO; 2023 Dec 15.](#)
4. [Simcoe Muskoka HealthSTATS: Mumps](#)