

Clinical Guidelines for Management of Healthcare Personnel Exposed to Mumps

Background

Mumps transmission in healthcare settings, while not common, has occurred in past outbreaks, involving hospitals and long-term care facilities. Correct isolation of suspected mumps patients requires use of standard and droplet precautions through day 5 after onset of parotid swelling. Only personnel with presumptive evidence of immunity should be exposed to the case.¹

Mumps Vaccination Recommendations for Healthcare Personnel (HCP)

An effective vaccination program is the best approach to prevent healthcare-associated mumps transmission. All persons who work in healthcare facilities should have presumptive evidence of immunity to mumps. This information should be documented and readily available at the work location.

Presumptive evidence of immunity for HCP includes any of the following¹:

- Written documentation of vaccination with 2 doses of live mumps or MMR vaccine administered at least 28 days apart, or
- Laboratory evidence of immunity*, or
- Laboratory confirmation of disease, or
- Birth before 1957[†]

**Mumps immunoglobulin (IgG) in the serum; equivocal results should be considered negative.*

†Though most persons born before 1957 are likely to be immune to mumps, this does not guarantee mumps immunity. Healthcare facilities should consider vaccinating HCP born before 1957 who lack evidence of immunity with 2 doses of MMR at the appropriate interval. During an outbreak of mumps, healthcare facilities should recommend 2 doses of MMR vaccine for unvaccinated personnel born before 1957 who lack evidence of immunity.

Note: History of disease is no longer considered adequate presumptive evidence of mumps immunity for HCP.

HCP without presumptive evidence of immunity to mumps should receive two doses of MMR vaccine administered at least 28 days apart.

For HCP who do not have adequate presumptive evidence of mumps immunity, prevaccination antibody screening before MMR vaccination is not necessary. For HCP with two documented doses of MMR or other acceptable evidence of immunity to mumps, serologic testing for immunity is not recommended. If HCP have two documented doses of MMR, are tested serologically, and have negative or equivocal mumps titer results, it is not recommended that they receive an additional dose of MMR vaccine. They should be considered to have adequate presumptive evidence of immunity.

Unprotected Exposures in Healthcare Settings

Unprotected exposure is defined as being within 3 feet of a patient with a diagnosis of mumps without the use of proper personal protective equipment.²

Post-Exposure Management of HCP

If HCP have an unprotected exposure to mumps, decisions to allow them to work and whether to vaccinate is based on documentation of presumptive immunity.³

Immune status [§]	Vaccination recommendations	Work exclusion	Symptom monitoring
No evidence of immunity	May receive first dose of MMR but vaccination after exposure does not change exclusion.	Exclude from the 10th day after the first unprotected exposure through the 25th day after the last exposure.	Educate HCP about symptoms of mumps, including non-specific presentations. All exposed HCP should notify occupational health of any signs or symptoms of illness during the incubation period, from 12 through 25 days after exposure.
Partial vaccination (1 dose of MMR)	Receive a second dose of MMR as soon as possible (but no sooner than 28 days after the first dose).	None	
Presumptive evidence of immunity	None [‡]	None	

[§]Close contacts who do not have prior evidence of immunity should not be tested for laboratory evidence of immunity since a positive IgG titer may indicate acute infection and does not indicate whether a person has protection against mumps disease.

[‡]ACIP recommended in 2017 a third dose of a mumps virus-containing vaccine for persons previously vaccinated with 2 doses who are identified by public health authorities as being part of a group or population at increased risk for acquiring mumps because of an outbreak.⁴ Depending on local epidemiology, an additional dose may be recommended.

Management of HCP with Illness due to Mumps

HCP who develop symptoms of mumps after unprotected exposures should be excluded from the healthcare setting for 5 days after the onset of parotitis.

Reporting Mumps in Chicago

All cases of mumps (including suspected) must be reported to CDPH within 24 hours through Illinois' National Electronic Disease Surveillance System (I-NEDSS). Healthcare facilities without access to I-NEDSS may report by using the online case report form:

<https://redcap.link/ChicagoVPDReport> or by calling (312) 743-9000, Monday-Friday between 8:30am-4:30pm. After hours, weekends, and holidays, call 311 and ask for the communicable disease physician on-call.

References

1. Centers for Disease Control and Prevention. Immunization of Health-Care Personnel: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep November 25, 2011; 60(No. RR-07); 1-45.
2. Centers for Disease Control and Prevention. Manual for the Surveillance of Vaccine-Preventable Diseases. Chapter 9: Mumps. <https://www.cdc.gov/vaccines/pubs/surv-manual/chpt09-mumps.html>
3. Centers for Disease Control and Prevention. Strategies for the Control and Investigation of Mumps Outbreaks. Accessed November 7, 2022 from <https://www.cdc.gov/mumps/health-departments/strategies.html>.
4. Centers for Disease Control and Prevention. Recommendation of the Advisory Committee on Immunization Practices for Use of a Third Dose of Mumps Virus–Containing Vaccine in Persons at Increased Risk for Mumps During an Outbreak. MMWR Morb Mortal Wkly Rep 2018;67:33–38.