

# MLS Laboratory Advisory: Travel Associated Measles Case

MAY 7, 2024

## Purpose of this Message:

To remind clinical laboratory partners of measles reporting requirements and testing offered at the Minnesota Department of Health Public Health Laboratory (MDH-PHL). Instructions on acceptable specimens, transport media, and shipping conditions for testing at the MDH-PHL are included.

## Action Item:

Please review the information below and share with your clinical laboratory partners.

## Background:

Suspect cases of measles are reportable per the MN Disease Reporting Rule and must be reported to MDH **at time of specimen collection**.

In addition to MDH-PHL offering measles PCR testing, some commercial labs have started to offer PCR testing for measles. Healthcare providers using commercial labs for any measles testing must ensure immediate notification to MDH at time of specimen collection so that a preliminary public health investigation can start.

Waiting until after a positive result to report measles to MDH may result in missed opportunities to provide post-exposure prophylaxis (PEP). The time frame to provide post-exposure prophylaxis (PEP) to susceptible persons is short (MMR must be administered within 72 hours of first exposure, and immune globulin must be administered within 6 days of exposure).

Suspect measles cases in persons who received an MMR within the 21 days prior to rash onset will likely be positive by measles PCR, because of detection of the measles vaccine strain. When this occurs, healthcare resources are directed to follow-up on individuals who are not true measles cases. At this time, MDH-PHL is the only lab in MN that offers a PCR test that can distinguish between wild type measles and vaccine strain.

Testing for measles by PCR is the recommended method to confirm measles. In MN, Measles IgM is generally only recommended when there are issues obtaining specimens for PCR.

Measles IgM false positives are common and should not be the primary method of testing for measles.

## Laboratory Testing Information:

The MDH-PHL offers a real-time reverse transcriptase PCR assay for measles testing. The MDH-PHL also offers a measles vaccine-specific assay for suspect cases with a history of recent vaccination ( $\leq 21$  days of rash onset). Testing by real-time RT-PCR at MDH is provided at no additional cost, and is supported in part by federal vaccine preventable disease program funding.

Requests received at MDH-PHL for measles IgM serology are sent to CDC for testing. Real-time PCR is the preferred diagnostic assay due to cross-reactivity with the serology test. It is important to collect specimens as soon as possible after the onset of the rash. Considering day 0 as the rash onset date, collect specimens as outlined below:

- Day 0 – 5 of rash: throat swab
- Day 6 – 9 of rash: throat swab and urine

### Acceptable specimens:

- Throat swab (preferred), nasal/nasopharyngeal swab or nasal washing submitted in a viral transport media [VTM, universal transport medium (UTM), M5, M4, Minimum Essential Medium (MEM), saline, balanced salt solution (BSS), Sterile isotonic solutions, Phosphate buffered saline (PBS), Liquid Stuart's Medium].
- Urine (10 – 40 mL) should be collected and shipped in a sterile urine container.

### Transport:

Store and ship specimens at refrigeration temperature (2 - 8°C) in an insulated container and on ice packs. Further information on collection, transport media, and shipping can be found on the

### Additional Information on measles reporting and testing:

- [Reportable Disease Rule \(Communicable Disease Reporting Rule\) Infectious Disease Reporting - MN Dept. of Health](https://www.health.state.mn.us/diseases/reportable/rule/index.html)  
(<https://www.health.state.mn.us/diseases/reportable/rule/index.html>)
- [Reporting Measles](https://www.health.state.mn.us/diseases/measles/hcp/report.html)  
(<https://www.health.state.mn.us/diseases/measles/hcp/report.html>)
- [Lab Testing for Measles at the MDH Public Health Laboratory](https://www.health.state.mn.us/diseases/measles/hcp/labtesting.html)  
(<https://www.health.state.mn.us/diseases/measles/hcp/labtesting.html>)
- [Measles Pocket Guide for Healthcare Providers](https://www.health.state.mn.us/diseases/measles/hcp/measlesguide.pdf)  
(<https://www.health.state.mn.us/diseases/measles/hcp/measlesguide.pdf>)

This information was shared with clinicians and infection preventionists through the Health Alert issued by [MDH Health Alert Network \(https://www.health.state.mn.us/han\)](https://www.health.state.mn.us/han).

**Questions:** Please contact: Scott Cunningham, Virology Unit Supervisor; 651-201-5032, [Scott.Cunningham@state.mn.us](mailto:Scott.Cunningham@state.mn.us).

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