

# Measles Diagnosis based on Public Health Ontario Alert to Clinicians – March 9, 2013

<http://www.ocfp.on.ca/docs/default-source/annual-scientific-assembly/pho-alert-to-clinicians--measles-.pdf?sfvrsn=0>

## Signs and symptoms of measles:

- Fever  $\geq$  38.3 degrees Celsius (oral);
- Cough, runny nose or conjunctivitis;
- Generalized maculopapular rash

## Infection control:

Patients with suspected measles should be promptly isolated in a single room with negative air flow (*airborne isolation* room). If you do not have an airborne infection isolation room, the patient should wear a mask and be placed in a single room. In either case, the door should remain closed and only measles-immune health care workers should attend to these patients.

All healthcare providers should ensure they are immune to measles. Evidence of immunity is two documented doses of MMR vaccine or laboratory evidence of immunity (<http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-meas-roug-eng.php#vacadv>).

## Report to public health:

Please report suspected cases of measles **immediately** to your local public health unit. Do not wait for laboratory confirmation.

## Laboratory Diagnostic Testing

Laboratory diagnosis of measles should include both serology and virus detection. Please obtain all of the following:

- Virus Detection: A nasopharyngeal swab/aspirate or throat swab collected using Viral Transport Media (pink liquid medium) obtained within 4 to 7 days after rash onset and 50 mL of urine collected within 14 days after the onset of rash.

Please note that Measles virus detection is now performed by Measles PCR testing. Please refer to the [PHO Measles PCR Lababstract](#) to review specimen acceptance criteria for measles PCR testing. If you are uncertain, please contact Public Health Ontario Laboratories (PHOL)

customer service at 416-235-6556 or 1-877-604-4567, or after hours duty officer at 416-605-3113, to speak to the Medical/Clinical Microbiologist on-call.

- Acute Serology: A blood specimen (5ml in serum tube) for measles antibodies (IgM and IgG) collected at the first visit (ideally within 7 days after rash onset).
- Convalescent Serology: A second blood specimen collected 7 to 10 days after the onset of rash (and a minimum of 5 days after the acute sample). Requisition should state “convalescent measles serology.” Seroconversion or a significant rise in IgG titre is indicative of recent/acute infection.

On each laboratory requisition for virus isolation or acute serology clearly mark “suspect case of measles.” All requisitions should contain the following information: patient’s symptoms, date of onset of symptoms, exposure history, travel history (if any) and vaccination history. Specimens must be stored and shipped cold.

Public Health Ontario [Measles PCR Lababstract \(June 2011\)](#) provides additional information on testing.