

SUBJECT: Managing Suspect Measles in Your Office
Date: March 5, 2024
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To: Primary Care Providers
From: Dr. Nicola Mercer, Medical Officer of Health

Actions to take:

- Offer vaccine to any patient that may be part of the under-immunized population.
- Measles is not a clinical diagnosis. The required tests are an NP/throat swab and urine for PCR.
- Report any suspect measles cases to Wellington-Dufferin-Guelph Public Health.

Background

Measles is circulating in Ontario. There have been 5 confirmed cases in Ontario and 10 in Quebec.¹ Traditionally, measles cases in Canada were related to unvaccinated travelers. However, there are now indications of domestic transmission. Currently, there have been no confirmed cases of measles in Wellington-Dufferin-Guelph.

Clinical Information on Measles

Measles illness follows a traditional clinical pathway with 3 distinct phases:²

- **Prodromal phase** – Usually between 2-4 days, with a range of 7-21 days. In this phase, measles cases present with a **high fever** (39°C-40°C), along with the 3 Cs - cough, coryza, and conjunctivitis. During this time, Koplik's spots may be found on the buccal mucosa.
- **Eruptive phase** – A maculopapular rash appears beginning at the hairline and upper neck and, over the next 3 days, proceeds down and outwards **covering the palms of the hands and soles of the feet**. The rash lasts between 5-6 days.
- **Convalescent phase** – After 3-4 days, the rash begins to disappear which may leave brown spots and peeling skin.

Confirm the Diagnosis

Patients may be quite ill and develop complications that require a clinical assessment. A laboratory sample or a direct epidemiological link to a confirmed case is required to make the diagnosis. Do **NOT** send the patient to a lab for serology to make the diagnosis as it is not the best test. This greatly increases the potential for transmission and spread in the community whereas a NP or Urine PCR test confirms the diagnosis.

Collect a: NP or throat swab within 7 days after rash onset.
Urine-50 mL within 14 days of rash onset.

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Preventing the Spread of Measles

Measles is one of the most infectious diseases ($R_0=18$) and is spread by airborne droplet nuclei and close or direct contact with respiratory secretions of a case. The measles virus can remain active and contagious in the air or on infected surfaces for as long as 2 hours. See these patients at the end of the day if possible. If the patient is so ill they need to be seen in the emergency department, ensure the hospital is aware to protect infants and newborns on their site. When routinely assessing pregnant women, draw serology for measles immunity.

Who is at risk?

- Individuals born prior to 1970 are considered immune.
- Individuals born between 1970 and 1978 may have had only 1 dose of measles vaccine.
- Individuals born after 1978 are likely to have received 2 doses of measles vaccine if they attended school in Ontario.
- In 1996 a two-dose measles vaccine schedule was started as well as a measles booster campaign to provide a second dose to all children in school from SK to grade 13 in most provinces.
- One dose of measles vaccine is 93% effective, 2 doses 97% effective.
- Any unvaccinated individual remains at risk.

All suspect patients should self-isolate until results are known.

Reporting

Measles is a reportable disease. **If you suspect a case of measles, please report it to Wellington-Dufferin-Guelph Public Health immediately, 519-822-2715 ext. 4752.** After hours, weekends and holidays please call **1-877-884-8653**.

References:

1. Global Public Health Intelligence Network (GPHIN). Daily Report March 5, 2024.
2. Krawiec C, Hinson JW. Rubeola (Measles) [Updated 2023 Jan 16]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK557716/#:~:text=The%20clinical%20picture%20of%20measles,cough%2C%20conjunctivitis%2C%20and%20coryza.>

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