



MEMORANDUM

Date: 7/21/2025

Re: Measles Testing Algorithm for Clinicians Updated July 21, 2025

The purpose of this communication is to provide clinicians with a recommended testing algorithm for *Suspected Acute Measles and Immunity to Measles Assessment in Pregnant Individuals for Post-Exposure Prophylaxis (PEP)* based on the laboratory tests offered at the BCCDC Public Health Laboratory (BCCDC PHL). Please note that the immunity assessment algorithm has been updated to focus on pregnant individuals.

Please feel free to use the information in this memo for further distribution within your community of practice.

Please note that the following specimen types are approved for measles testing at the BCCDC PHL. For more information on measles specimen collection containers and collection guidance please consult the BCCDC eLab Handbook at <http://www.elabhandbook.info/PHSA/Default.aspx>.

Test	Specimen	Container
Measles NAT	Throat	COPAN red-top with Universal Transport Media
Measles NAT	Nasopharyngeal swab	COPAN red-top with Universal Transport Media
Measles NAT	Throat/Nose Self-Collected swab	COPAN red-top with Universal Transport Media
Measles NAT	Urine	Sterile container
Measles Serology	Clotted blood	SST (gold top) blood tube

Please do not hesitate to contact any of us if you have any questions.

Linda M. N. Hoang, MSc,
MD, DTM&H, FRCPC
Medical Microbiologist &
Medical Director
BCCDC Public Health
Laboratory

Agatha Jassem, PhD,
(D)ABMM, FCCM Clinical
Microbiologist &
Program Co-Head,
Virology
BCCDC Public Health
Laboratory

Eric Eckbo, MD, FRCPC
Medical Microbiologist &
Program Co-Head,
Virology & High Volume
Serology
BCCDC Public Health
Laboratory

Adriana Airo, PhD, FCCM
Clinical Microbiologist &
Program Co-Head, High
Volume Serology BCCDC
Public Health Laboratory

Measles Testing Algorithm for Clinicians

Suspected Acute Measles

Does the patient have symptoms compatible with acute measles?

Symptoms may include a viral prodrome (fever, cough, coryza, conjunctivitis), Koplik spots on the buccal mucosa, and maculopapular rash 3 – 7 days after symptom onset

(For additional information: [general clinical presentation of measles](#) and [clinical presentation in children](#))

Yes

No

Do not test

Consider testing only if lab confirmation will inform patient care or public health management
Testing does not need to be ordered in situations of widespread localized community transmission

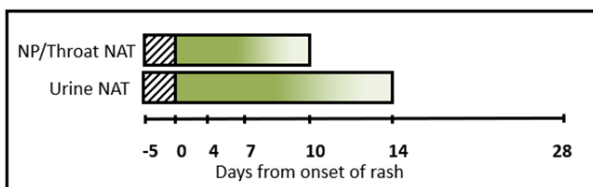
Is the patient fully vaccinated against measles or been previously infected with measles?

Yes

No or unknown

Send nasopharyngeal (NP) or throat swab and urine sample for NAT testing

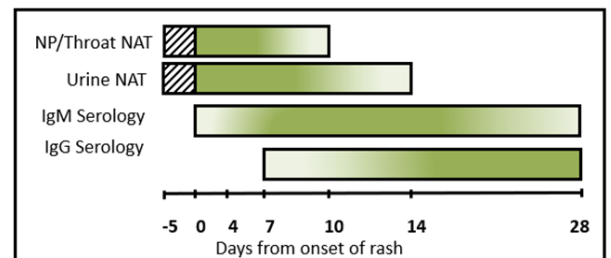
Send nasopharyngeal (NP) or throat swab and urine sample for NAT testing. Consider sending blood for IgM/IgG serology testing



▨ Limited data on test sensitivity; virus may be detected

Note: Serological testing is not indicated in those who are previously vaccinated/infected. Consider serology for assessment of breakthrough infections (i.e. modified measles).

Additional testing on all positive NAT samples will be performed to distinguish between measles vaccine and wild-type virus.



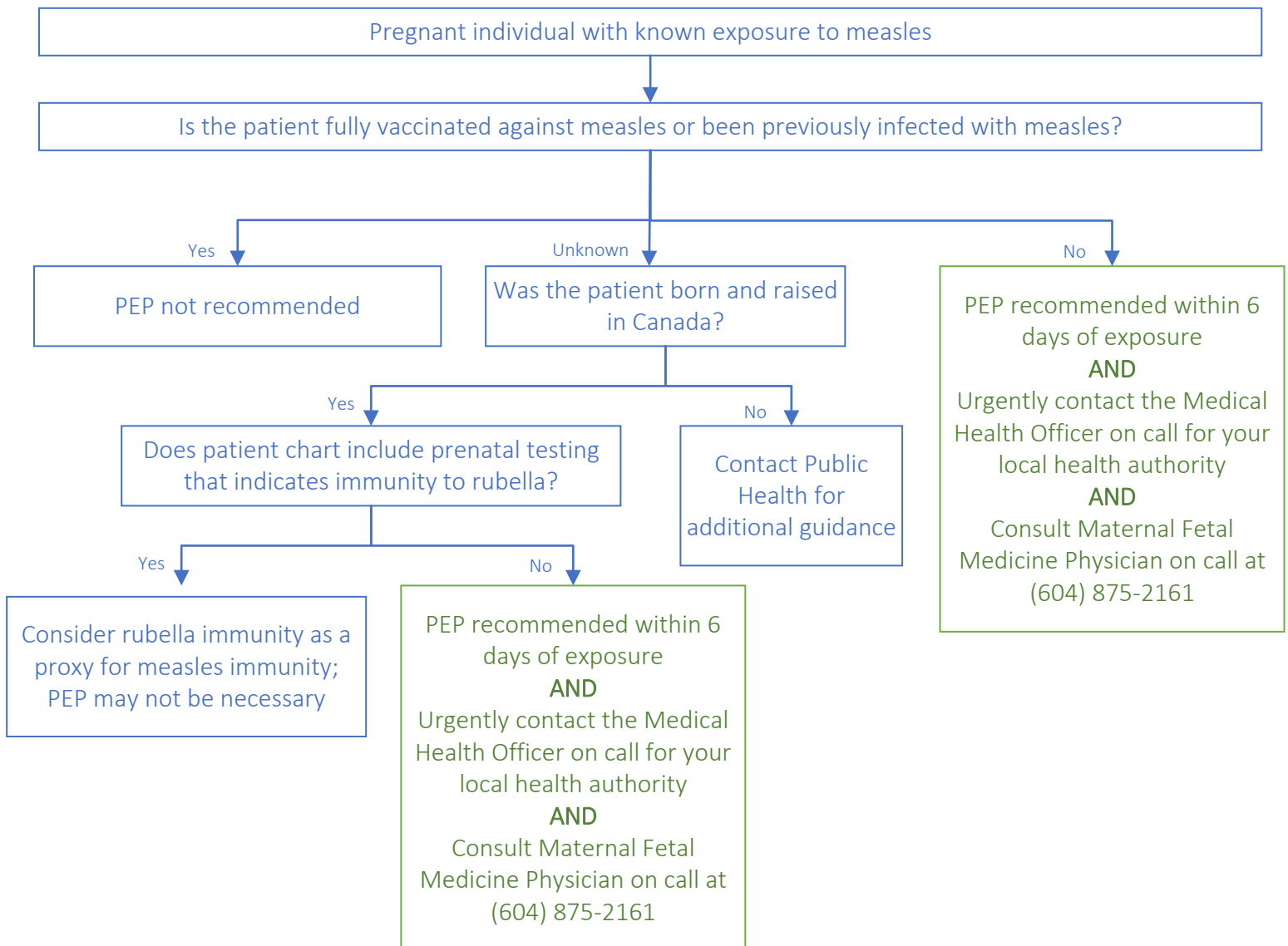
▨ Limited data on test sensitivity; virus may be detected

Note: Serology (IgM and IgG) testing may provide additional diagnostic value in specific clinical scenarios such as in suspect cases who did not have samples collected for NAT shortly after rash onset.

Measles Testing Algorithm for Clinicians

Immunity to Measles Assessment in Pregnant Individuals for Post-Exposure Prophylaxis (PEP)

Susceptible (i.e., not fully immunized or not previously infected) pregnant individuals who are exposed to measles can receive PEP within 6 days of a measles exposure. In situations where immunization status is not known and the individual was born and raised in Canada, rubella immunity can be used as a proxy for measles immunity.¹ For individuals not born in Canada, due to differences in the types of vaccines given, rubella immunity should not be used as a proxy for measles immunity.



Any confirmed cases of measles in pregnancy should be [referred to Reproductive Infectious Diseases at BC Women's Hospital](#)