Provincial Measles Primary Care Clinical Pathway

uick Links:

Primer & Expanded details



Provider resources





All HCWs should assess their measles immunity. HCW's are considered immune if

they have: Documentation of having received 2 doses of measlescontaining vaccine

- A documented laboratoryconfirmed measles infection OR
- A blood test showing proof of immunity.

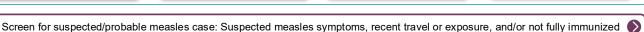


Whenever possible ask patient with suspected/probable measles to call 811 for guidance and avoid in-person clinic visits.

Patient resources



Provide feedback



Whenever possible, complete assessment in the car and avoid bringing a patient into the clinic.

Always use IPC routine practices.

Assess history:

- Onset of illness
- Travel history
- Measles immunization history
- Exposure to positive

Assess clinical symptoms:

- Prodromal Fever ≥38.3
- Coryza
- Cough
- Conjunctivitis
- Koplik spots
- Maculopapular rash (3-7 days after symptom onset)

Assess for differential diagnosis:

- · Measles vaccine reaction
- Drug reaction(s)
- Other viral exanthems

No clinical signs and a differential diagnosis excludes measles



Provide appropriate care and assess need for measles vaccination

If patient inadvertently enters the clinic or you need to bring the patient into the clinic for an assessment, have the patient wear a procedure mask and take them to a single room with the door closed. Use appropriate PPE (seal checked N95, gloves, gown, and eye protection). As much as possible, reduce exposure to other patients and staff.



All suspected, probable, and confirmed cases (from in-person/virtual assessments) must be reported immediately by calling 1-844-343-0971



Please advise the patient to isolate in their home until they are called with the results of their tests and that they may also receive a call from public health. Zone MOH's may be contacted with questions or concerns at the following numbers:

> Calgary Zone: 403-264-5615 North Zone: 1-800-732-8981 Central Zone: 403-356-6430

Edmonton Zone: 780-433-3940

South Zone: 403-388-6111(*ask to have MOH paged) For those living on a First Nation: ISC MOH: 780-218-9929

Investigations



Symptomatic Specimen Collection			
Setting	Specimen and orderable		
Patient seen in an office or clinic setting	Urine OR Nasopharyngeal (NP) swab OR		
	Throat swab for Measles NAT/PCR		
Collection outside of an office or clinic setting	Order lab tests according to the clinical need AND specimen collection availability (Follow Measles Specimen Collection Pathways)		

- For measles laboratory questions contact the ProvLab Microbiologist/Virologist On-Call: Calgary 403-944-1110 or Edmonton 780-407-8822
- Notify the APL Appointment Booking line at 1-877-702-4486 prior to sending patients for serology and urine collection.
- When collecting NP or throat swab in Primary Care:
 - Use appropriate PPE (seal checked N95, gloves, gown, eye protection) and complete in patient's car if possible (avoid patient coming into the clinic).
 - Use universal transport media (red top, white swab, pink medium).
 - Submit the NP or throat swab with the Serology and Molecular Testing Requisition form to the Provincial lab. Ensure the requisition form is filled out in detail.
- For urine sample collect about 10 mL in sterile container.

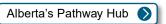
Management of Measles Cases 🔷



- Reinforce Isolation as guided by Public Health: advise patient they need to stay out of public spaces until 4 days after a rash appears. Susceptible exposed individuals may have quarantine requirements guided by Public Health.
- Manage complications: complications can include pneumonia, otitis media, febrile seizures, croup, diarrhea, and encephalitis and can be life-threatening. Tends to be more severe in infants, immunocompromised individuals, and those who are pregnant. Encourage patients and families to monitor symptoms and stay connected with their primary care provider.
- Provide education: Provide information about disease transmission and appropriate infection control measures to minimize the possibility of transmission. Share link to patient information: Measles (alberta.ca).
- Connection with Public Health: Advise patient they may be contacted by Public Health to collect further information and explain additional next steps.
- Support post-exposure prophylaxis recommendations: Specific patient guidance as outlined by Zone MOH.
- Follow Required Disinfection Practices: To prevent spread, any room that the patient has occupied should be left unoccupied, with the door closed and should not be used for two hours after a suspected case has left the room to allow for adequate air changes for 99% air clearance. If unable to maintain the 2-hour window, a N95 must be worn to complete disinfections/cleaning.











EXPANDED DETAILS

Pathway Primer

- Recent updates to this pathway were made April 20, 2025; see <u>Pathway Update Notes</u> for details.
- This pathway is intended to be followed for all patients who have suspected or probable measles cases in the community. The guidance in the pathway is informed by the <u>Alberta Public Health Disease Management</u> Guidelines for Measles [1].

Confirmed Case [1]

Laboratory confirmation of infection in the absence of recent immunization (A) with measles-containing vaccine **AND**:

Molecular detection of measles virus or isolation by culture from an appropriate clinical specimen,
 (B)

or

Positive serologic test for measles Immunoglobulin M (IgM) antibody in a person who is either
epidemiologically linked to a laboratory-confirmed case or has recent exposure to an area of known
measles activity. (C)

or

• Seroconversion or a significant rise (e.g., fourfold or greater) in measles Immunoglobulin G (IgG) titre by any standard serologic assay between acute and convalescent sera,

OR

 Clinical illness (D) in a person who is epidemiologically linked to a laboratory-confirmed case of measles.

Probable Case

In the absence of both recent immunization (A) with a measles-containing vaccine and laboratory confirmation of disease:

• Clinical illness (D) in a person with either an epidemiologic link to a non-laboratory-confirmed case of measles or has recent exposure to an area of known measles activity (C).

Suspect Case

A person for whom public health or a medical practitioner has a suspicion, based on symptoms and/or exposures, that they may be a measles case, but for whom there is not yet enough information to either classify as a confirmed or probable case or to rule out as a measles case.

- (A) Immunization within 28 days prior to onset of rash or illness.
- (B) Refer to the Guide to Services for specimen collection information
- (C) See <u>Measles WHO</u> for Global incidence of measles; however, recent local epidemiology may not yet be reflected in information presented. <u>Public Health Notices</u> Canada may provide recent information for measles outbreaks occurring in Canada.
- (D) Clinical illness, evaluated by a healthcare professional including public health, includes ALL of the following:
 - Fever 38.3°C or greater, AND
 - · Cough, coryza or conjunctivitis, AND
 - · Generalized maculopapular rash for at least 3 days

Background

Measles is caused by the measles virus, a member of the Paramyxoviridae family, genus Morbillivirus [2]. Measles is one of the most contagious of all infectious diseases; up to 9 out of 10 susceptible persons with close contact to a measles patient will develop measles. The virus is transmitted by direct contact with infectious droplets or by airborne spread when an infected person breathes, coughs, or sneezes. Measles virus can remain infectious in the air for up to two hours after an infected person leaves an area [2].

How this will impact you as Primary Care Providers

- Ensure that you and your staff are fully vaccinated to prevent acquiring measles.
- You are considered immune or protected against measles if you have:
 - o Documentation of having received 2 doses of measles-containing vaccine (for example, MMR) OR
 - A documented laboratory-confirmed measles infection OR
 - A blood test showing proof of immunity.

Action Required to prepare for probable or suspected measles cases

- Ensure that you and your staff are fully vaccinated to prevent acquiring measles.
- Two doses of a measles-containing vaccine (given at the appropriate interval and spacing) is about 97% effective at preventing measles if you are exposed to the virus.
 - o Those unsure about their immunization history can text, 'vaccine record' to 88111, call Health Link at 811, or contact their local public health office.
- Familiarize yourself with the clinical presentation of measles and this clinical pathway.
- Check that you have sufficient supplies of nasopharyngeal swabs, Universal/Viral Transport medium and sterile urine containers for sample collection, and the Transport medium has NOT expired (expiry date on container).
- Familiarize yourself and your nursing staff on how to collect a nasopharyngeal swab.
- Ensure that you have sufficient supplies of personal protective equipment especially N95 respirator available

History and Assessment

Whenever possible ask patient with suspected/probable measles to call 811 and avoid patient from entering the clinic. If possible, avoid patient from entering the waiting room and clinic and do assessment in the car. If not possible to complete the assessment in the car, ask patient to don a procedure mask, and immediately take patient to a single room with door closed.

Primary Care providers should be following IPC routine practices. For suspected measles cases, healthcare providers who provide service should be immune and use appropriate PPE as per the current IPC recommendations for cases or susceptible contacts found in the AHS IPC manual on the AHS external and Insite webpages, search "IPC".

*Note: Primary Care and First Nations clinics can purchase PPE from a vendor of choice and/or from AHS at cost. See the AHS PPE price list and the AHS for-cost PPE order form.

Back to algorithm Updated: April 20, 2025 Page 3 of 12



Assess history

Ensure patients are screened and assessed for the following:

- · Onset of illness
 - o Determine date and associated symptoms
- Travel history
 - o See Measles-WHO for awareness of current countries experiencing measles outbreaks
- Measles immunization history
 - Individuals born in or after 1970 and Healthcare workers regardless of year of birth are required to have one of the following to be considered immune:
 - Documentation of 2 doses of measles containing vaccine where the first dose was given
 AFTER 12 months of age and the second dose was given at least 28 days after the first dose
 - Documentation of laboratory-confirmed measles disease in the past
 - Documentation of serological proof of immunity on file prior to exposure
 - Serological <u>pre-exposure testing</u> to determine immunity in healthy individuals including healthcare workers is not routinely recommended
 - If a person's immunization records are unavailable, it is preferable to offer the MMR (measles, mumps and rubella) vaccine on a <u>schedule appropriate</u> for their age and risk factors rather than ordering serological testing
 - For further information, please refer to measles <u>Alberta Health Notifiable Disease guidelines</u> <u>algorithm</u> Page 12.
- Exposure to positive case
 - Determine if the patient has been in contact with any probable, suspected or confirmed measles cases.

Assess clinical symptoms

Measles is an acute, highly contagious viral disease that is characterized by:

- Prodromal fever (≥ 38.3)
- Coryza
- Conjunctivitis
- Cough
- Koplik spots (clustered blue-white lesions on the buccal mucosa). See image on next page.
- Maculopapular rash usually appears 3–7 days after symptom onset. This rash begins on the face and spreads to the rest of the body and may last 4–7 days. The rash appears red and blotchy on lighter skin colours. On darker skin colors, it can appear purple or darker than the skin around it, or it might be hard to see. Serum vitamin A levels are often decreased, and leukopenia is common. Atypical measles presentation can occur in vaccinated persons or those with prior exposure [1][5].
 - See images on next page.
 - o Other Supportive Resource: Rash Algorithm.

Image 1: Koplik spots on palate on day 3 of the illness in the pre-eruptive phase of measles.



Source: Centers for Disease Control and Prevention/Heinz F. Eichenwald. [3]

Image 2: Measles rash



Source: U.S. Centers for Disease Control and Prevention (CDC). All rights reserved. Available online: www.cdc.gov [3] Eichenwald. [3]

Image 3: Measles rash



Courtesy of Dr. CW Leung, Department of Paediatrics and Adolescent Medicine, Princess Margaret Hospital, Hong Ko

Source: Communicable Disease Control, Available online <u>Alberta</u> <u>Health Services</u> [5]

Image 4: Measles rash



Courtesy of the U.S. Centers for Disease Control and Prevention.

Source: Communicable Disease Control, Available online Alberta Health Services [5]

Assess for differential diagnosis

- Measles vaccine reaction
 - o Assess if patient has recently received their MMR vaccine
- Drug reaction
 - Determine if the patient has started any new medications or if they have had any recent changes to what they are ingesting (medications, supplements, food, etc)
- Viruses that commonly cause exanthem rash include [4]:
 - o Varicella-zoster virus
 - o COVID-19 (coronavirus)
 - Fifth disease (parvovirus B19)
 - Hand, foot and mouth disease (coxsackievirus A16)
 - o Roseola (human herpesvirus 6)
 - o Rubella (rubella virus)

Red Flag: Reporting Cases

- All suspected, probable and confirmed cases (in person or virtual) are to be immediately reported by calling 1-844-343-0971.
- You will be prompted to press 1 if you are reporting a measles case. You will be asked to leave the following information:
 - o Your First and last name and the best number to reach you at, as well as;
 - The patients first and last name, date of birth, healthcare number, Onset Date of symptoms, what symptoms the patient is experiencing, what tests have been ordered, and any known links to measles cases including travel.
 - You will get a call back to collect any missing information if needed between 0800 2200 7 days a week.
- Please advise the patient to isolate in their home until they are called with the results of their tests and that they may also receive a call from public health.
- Measles investigations and management requires coordination with Public Health. Diagnosis of measles is
 made based on clinical presentation, exposure history, and laboratory testing. Ordering providers will need
 to ensure that lab results are communicated to patients, public health does not follow up on negative test
 results.
- Zone Medical Officer of Health (MOH) can be contacted with additional questions or concerns at the phone numbers below:

Calgary Zone: 403-264-5615
Central Zone: 403-356-6430
Edmonton Zone: 780-433-3940
North Zone: 1-800-732-8981

South Zone: 403-388-6111 (*ask to have MOH paged)
For those living on a First Nation MOH: 780-218-9929

Investigations

- Diagnosis of measles is made based on clinical presentation, exposure history, and laboratory testing
- For all Measles Specimen Collection Follow: Measles Specimen Collection Pathway
- For measles laboratory questions contact the ProvLab Microbiologist/Virologist On-Call:

Calgary 403-944-1110 or Edmonton 780-407-8822

- Molecular testing (NAT) has many advantages over serological testing:
 - o Allows earlier case confirmation because detection is possible prior to a serological response.
 - Permits genotyping which can distinguish between vaccine and wild-type strains.
 - o Eliminates the need for convalescent serology if measles is confirmed

- Molecular testing (NAT) is preferred. Serum testing can be ordered in addition to molecular testing (NAT) and may be needed when molecular testing (NAT) is not possible.
- Recommended samples for measles testing are listed in the Table below. However if there are restrictions due to local resources, scope of practice or safe collection options, collect as many as possible. For example, a urine sample or throat swab can be collected instead of a nasopharyngeal swab.

Presentation	Samples and Orderable		Comments
Acute illness, from rash onset to 7 days later (Symptomatic)	Urine OR Nasopharyngeal swab OR Throat swab	Order Measles NAT [Lab 4313]	Follow the Measles Specimen Collection Pathway
	Serum	Order measles IgM & IgG	Send a convalescent serum 7 to 10 days after the acute blood if measles IgM antibody is negative and measles is still strongly suspected
Immunity testing	Serum	Order Measles IgG ONLY [LAB657]	Do NOT order measles IgM for immunity status as it is inappropriate and can result in a false-positive result

^{*} There are no studies directly comparing the sensitivity of nasopharyngeal versus throat swabs, but various studies suggest the sensitivity for both sample types is similar. Consequently, throat swabs will be accepted for testing but reported as non-validated sample type as the ProvLab measles assay was validated for nasopharyngeal swabs.

Notify the APL Appointment Booking line at 1-877-702-4486 prior to sending patients for serology or urine testing.

- If collecting Nasopharyngeal swab in primary care, complete in patient's car if possible (avoid patient coming into the clinic)
 - o Use appropriate PPE (seal checked N95, gloves, gown and eye protection).
 - Use universal transport media (red top, white swab and pink medium). Product number: UT-317
 - o Submit the specimen with the Serology and Molecular Testing Requisition form (albertahealthservices.ca) to the Provincial lab. Ensure the requisition form is filled out in detail.
 - If the patient is already a Home Care client, you may consider urgent home care services for NP swabbing if needed.

Urine sample

o You will need about 10 mL in sterile container, preferably the first void of the day (morning sample).

Serum

o Order measles IgM and IgG. Send a convalescent serum 7 to 10 days after the acute blood measles IgM antibody is negative and measles is still strongly suspected.

Back to algorithm Page 7 of 12 Updated: April 20, 2025



Management

Reinforce Isolation:

• Individuals considered to be cases should stay out of public spaces until 4 days after a rash appears. Those who are not immune (based on immunization history) and have been exposed are requested to stay out of public spaces up to 21 days after last exposure if it's outside of the timeframe for serology or access to post-exposure prophylaxis. (This would include not being able to work at places of employment where other people are present).

Manage complications:

- Approximately 30% of reported measles cases have one or more complications which are most often seen in children under 5 years of age and adults 20 years of age and older [1].
- Complications of measles infection may include [1]:
 - o Pneumonia, otitis media, febrile seizures, croup, diarrhea, and encephalitis.
 - In developed countries, the case-fatality rate is estimated to be less than 1%. The most common causes of measles related deaths are acute encephalitis in adults and pneumonia in children. [1] In addition, subacute sclerosing panencephalitis (SSPE) a rare, fatal degenerative central nervous system disease may occur many years later in hosts with a history (often before two years of age) of primary measles infection [1].
 - Measles infection during pregnancy results in a higher risk of spontaneous abortion, premature labour, and infants with low birth weight. Birth defects have rarely been reported; however, measles could not be confirmed as the cause.
 - Disease in the immunocompromised may be severe and have a prolonged course, present without the typical rash, and the person may shed virus for several weeks after the acute illness.
- Encourage patients and families to monitor symptoms and stay connected with their primary care provider.
- If the patient needs to be seen in an Emergency Department or Urgent Care, ensure the facility is notified in advance of arrival to prepare for airborne isolation.

Provide education:

- Provide information about disease transmission and appropriate infection control measures to minimize the possibility of transmission.
- The following resources can be shared with patients:
 - o Measles (alberta.ca)
 - o AHS HEAL resource for patients and families
- Provide education on Measles, mumps & rubella (MMR) Immunization:
 - o See tips for dealing with vaccine-hesitant patients.
 - o Immunization eligibility: Measles, mumps, rubella (MMR) vaccine (alberta.ca)
 - Two doses of a measles-containing vaccine (given at the appropriate interval and spacing) is about
 97% effective at preventing measles if you are exposed to the virus.
 - Those unsure about their or their child's immunization history can text, 'vaccine record' to 88111, call Health Link at 811, or contact their local public health office.
 - First Nation Health Centres are another resource for immunization history. First Nation Health Centres may have additional immunization records, particularly historic records that are not on Netcare.
 - Publicly funded (free of charge) measles-containing vaccine is available through Public Health by appointment.
 - Immunizations can be booked through Health Link at 811 between 8 a.m. and 6 p.m. if you live in Edmonton or Calgary Zone.
 - For other zones and patients living on First Nations, contact your local public community health centre at www.albertahealthservices.ca/info/Page17791.aspx.

- Reminder: Measles-containing vaccines are live vaccines. It is not recommended for
 usage in pregnant women and those with weakened immune systems. Consult the Zone
 MOH as this group may be offered <u>post-exposure prophylaxis within 6 days of exposure</u>
 (Page 16, Figure 4), which may modify or prevent measles disease.
- o AHS has services to provide more culturally safe care and the below resources can be considered:
 - The Indigenous Support Line | AHS
 - Indigenous Languages Interpretation & Translation Services | AHS

Connection with Public Health:

- Advise patient they may be contacted by Public Health to collect further information and explain additional next steps which may include further guidance on isolation and post exposure prophylaxis where relevant.
- Contact tracing will occur based off Public Health Management and as defined in: Measles (alberta.ca).

Support post-exposure prophylaxis recommendations:

- Specific patient guidance is recommended and will be outlined by Zone MOH.
- With MOH guidance, non-Health Care Workers (such as individuals who are immunocompromised, pregnant and infants) can be managed as per the algorithm in **Figure 4** on page 16 of the Alberta Health measles notifiable disease guidelines: <u>Measles (alberta.ca)</u>.
 - o They may require:
 - STAT serology and/or
 - Urgent measles-containing vaccine for post-exposure prophylaxis and/or
 - Immune Globulin (Ig) therapy

Follow required disinfection practices:

- Any room that the patient has occupied should be left unoccupied, with the door closed and should not be
 used for two hours after a suspected case has left the room to allow for adequate air changes for 99%
 air clearance.
- If unable to maintain the 2-hour window, a N95 must be worn to complete disinfections/cleaning. Disinfectants must have DIN details and an achievable contact time. See here for information on Environmental Cleaning Guidance.

Updated: April 20, 2025 Page 9 of 12 Back to algorithm

BACKGROUND

About this pathway

- This pathway was developed in collaboration with Primary Care Physicians, AHS Primary Health Care, AHS Public Health and AHS Medical Offices of Health.
- Condition-specific clinical pathways are intended to offer evidence-based guidance to support primary care providers in caring for patients with a range of clinical conditions.
- This pathway includes hyperlinks and is intended to be used as an electronic tool.

Authors and conflict of interest declaration

Names of the content creators and their conflict-of-interest declarations are available on request by emailing albertapathways@primarycarealberta.ca.

Pathway review process, timelines

Primary care pathways undergo scheduled review every three years, or earlier if there is a clinically significant change in knowledge or practice. The next scheduled review is May 2028. However, we welcome feedback at any time. Please email comments to albertapathways@primarycarealberta.ca.

Copyright information

This work is licensed under a Creative Commons Attribution-NonCommercial-Share Alike 4.0 International license. You are free to copy, distribute and adapt the work for non-commercial purposes, as long as you attribute the work to Primary Care Alberta and abide by the other license terms. If you alter, transform, or build upon this work, you may distribute the resulting work only under the same, similar, or compatible license. The license does not apply to content for which the Primary Care Alberta is not the copyright owner.



© 2025 Primary Care Alberta

DISCLAIMER

This pathway represents evidence-based best practice but does not override the individual responsibility of healthcare professionals to make decisions appropriate to their patients using their own clinical judgment given their patients' specific clinical conditions, in consultation with patients/alternate decision makers. The pathway is not a substitute for clinical judgment or advice of a qualified healthcare professional. It is expected that all users will seek advice of other appropriately qualified and regulated healthcare providers with any issues transcending their specific knowledge, scope of regulated practice or professional competence.

Page 10 of 12 Back to algorithm Updated: April 20, 2025



PROVIDER RESOURCES

Alberta Public Health Disease Management Guidelines: Measles	https://open.alberta.ca/dataset/cddcf8b0-9193-4fd7-aa49-def3fded69cf/resource/b3460034-8a18-4ad5-a179-2c2253c6d6a7/download/hlth-phdmg-measles-2025-03.pdf
Measles Summary Guide (Alberta Health Services)	www.ahs.ca/assets/info/ppih/if-ppih-measles-primary-care- summary-guide.pdf
IPC Recommendations for Measles (Alberta Health Services)	www.ahs.ca/assets/healthinfo/ipc/hi-ipc-emerging-issues- measles.pdf

PATIENT RESOURCES

This section is intended to list resources that primary care providers may find useful to share with patients to help support self-management and care in the medical home.

AHS Measles Webpage (MyHealth Alberta)	https://myhealth.alberta.ca/topic/immunization/pages/Measles.aspx
AHS Health Education and Learning Website (HEAL resources for patients and families)	www.ahs.ca/HEAL

REFERENCES

- [1] Alberta Government. "Alberta Public Health Disease Management Guideline. Measles." March 2025. (Online) Available: Measles (alberta.ca) (Accessed 18/03/2025)
- [2] Heymann DL, editor. Control of Communicable Diseases Manual. 20th ed. Washington, DC: American Public Health Association; 2015.
- [3] Photos of Measles. Centers for Disease Control and Prevention (CDC). All rights reserved. Available online: Photos of Measles and People with Measles | CDC. (Accessed 13/03/2025)
- [4] DermNet AZ. Exanthems (https://dermnetnz.org/topics/exanthems). Accessed 4/19/2024
- [5] Photos of Measles Rash (MyHealth Alberta, Alberta Health Services). March 27, 2025. Available online: Measles (Accessed 28/03/2025).

PATHWAY UPDATE NOTES

April 20, 2025

- Reporting Measles Cases Update:
 - o Algorithm change: All suspected, probable, and confirmed cases (from in-person/virtual assessments) must be reported immediately by calling 1-844-343-0971
 - Page 6 Red Flags for reporting cases

April 10, 2025

Updated guidance on measles specimen collection in algorithm and investigation section. Recommendations are based off Measles Specimen Collection Pathway

March 28, 2025

• Updated pictures and description for maculopapular rash (page 4)

March 25, 2025

- Algorithm (page 1) addition to include HCW's assessing their immunity
- Algorithm (page 1) addition "Whenever possible ask patient with suspected/probable measles to call 811 for guidance and avoid in-person clinic visits."
- · Algorithm (page 1) addition "If patient inadvertently enters the clinic or you need to bring the patient into the clinic for an assessment, have the patient wear a procedure mask and take them to a single room with the door closed. Use appropriate PPE (seal checked N95, gloves, gown, and eye protection). As much as possible, reduce exposure to other patients and staff."

March 18, 2025

- Update Case Definitions on page 2 to align with Alberta Public Health Disease Management Guidelines, Measles
- Links updated including the main reference: Alberta Public Health Disease Management Guidelines, Measles

March 13, 2025

- Update Case Definitions on page 2 to align with Alberta Public Health Disease Management Guidelines, Measles
- Links updated including the main reference: Alberta Public Health Disease Management Guidelines, Measles

