Manitoba
Health, Seniors and Long-Term Care

Measles Documentation in PHIMS- Quick Reference Guide

Purpose: This resource provides guidance for Measles documentation in the Public Health Information Management System (PHIMS) and assists to support consistent data collection for Measles case and contact investigations.

This resource provides specific guidance when documenting:

1. Case Investigations
2. Contact Investigations
3. Cohorts: For Contact Investigations and Mass Immunization Events
4. Measles Outbreaks

Appendix: Linking an Acquisition Event (AE) to a Source Case in PHIMS

All case and contact information should be entered as soon as possible. Refer to regional documentation guidelines regarding specific timelines.

1. Case Investigation - Documentation

All the data elements are outlined in the *Vaccine Preventable Disease (VPD) Investigation Form* https://www.gov.mb.ca/health/publichealth/surveillance/docs/mhsu_8733.pdf

Below are key elements that are important to capture:

Data Element	Guidance and Purpose
Case classification	Update as soon as determined, as this is critical for timely and accurate reporting.
Disposition	Ensure this is kept current to reflect the case's status.
Sensitive Environment/ Occupation	Information can also be added in regarding sensitive environment/occupation (e.g., health care facility, child care)
Symptom onset	Important to include the rash onset and date to determine communicability period.
Acquisition Event (AE)	**The source of the infection must be documented whether it is known, suspected, or unknown.** This information is used nationally to evaluate Canada's measles elimination status. Clearly document the names, locations, and dates of known exposures to measles (suspect or confirmed) or areas where measles is known to be circulating. **If more than one possible source of acquisition, indicate "most likely source" (check box under "Source") if possible, to determine.**

Refer to Appendix D for appropriate documentation of Exposure Setting Types:
https://www.gov.mb.ca/health/publichealth/surveillance/docs/mhsu_ug.pdf

At least one AE should be documented based on the general categories outlined below:

- Travel out of country
- Travel out of province (within Canada)
- Visitor (either out of province or out of country)
- Exposures in Manitoba (e.g. known case, known exposure location, known area where measles is circulating)
- Unknown (no known exposures to measles in a location in Manitoba where measles is not known to be circulating)

The following are examples to guide documentation:

Exposure Name	Data Element
Out of country	• Exposure dates • Exposure location name: • Exposure setting type: Travel • Exposure setting: Outside of Canada/US or Within US • Country • Address – include City and other details if available
Out of province (within Canada)	• Exposure dates • Exposure location name: • Exposure setting type: Travel • Exposure setting: Outside of home P/T but within Canada • Country • Address – include Province/Territory, City and other details if available
Exposure to an out of province/out of Canada visitor from (city and country) with suspected measles (note: indicate city/country of origin of the visitor in the exposure name)	• Exposure dates • Exposure location name: • Exposure setting type: Type of community contact • Exposure setting: Visiting friends and relatives • Country • City/community of exposure in MB

	Exposure to an area in Manitoba with known measles activity	• Exposure dates • Exposure location name: (e.g. various locations throughout the community) • Exposure setting type: Type of community contact • Exposure setting: as applicable – may be "other" • Country: Canada • Address – include City and other details if available
	Exposure in a publicly notified exposure location	• Exposure dates: (should align with the dates of public notification) • Exposure location name: name of public location identified • Exposure setting type: as applicable • Exposure setting: as applicable • Country: Canada • Address – include City and other details if available
	Contact to a known case Note: The practice of adding "Contacts to a Known Case" as an AE and linking source cases to the current case as a contact, is ONLY applicable to Measles case investigations. See Appendix: Linking an Acquisition Event (AE) to a Source Case in PHIMS	**A. <u>Cases in which the source case did NOT identify the current case as a contact</u>:** • Exposure dates: (Ensure that the AE is consistent with the source case communicability period) • Exposure Location Name: ***NOT NAMED BY SOURCE CASE*** must be entered at beginning, followed by other pertinent details. • Exposure Setting Type: as applicable • Exposure setting: as applicable • Country: Canada • Address: include City and other details if available • Link to **Inv ID** of the source case from the AE. This creates a TE in the source case to assist in epi-linking to the current case. **Ensure the information regarding the exposure is not inadvertently disclosed to the source case**

		○ Note: Do **NOT** link by client ID as this will result in a new case investigation being created **B. <u>Cases in which the source case had identified the current case as a contact</u>:** • Exposure dates: (Ensure that the AE is within the source case communicability period) • Exposure location name: **Contact to a known case** • Exposure Setting Type: as applicable • Exposure setting: as applicable • Country: Canada • Address: include City and other details if available Link to **Inv ID** of the source case from the AE. This creates a TE in the source case to assist in epi-linking to the current case* Note: Do **NOT** link by client ID as this will result in a new case investigation being created **Although the case was previously identified by the source case it is still important to link the current case to the source case to confirm that the exposure may have been the source of acquisition (e.g. aligns with exposure dates and whether it was the most likely source) and to facilitate epi-analysis.*
	Household contact	• Exposure dates • Exposure location name: household • Exposure setting type: household exposure • Country • Address – include City and other details
	Unknown exposure	• no exposures were identified add unknown exposure as an AE

		• Country: Canada
Transmission Events (TE)	• Clearly document the names, locations, dates, and times of any known places visited or exposures to others (e.g., household, classroom, public venue). • For public exposures, this information is helpful for public notifications and to clearly define the exposure that occurred. • Responsible Organization: Select the responsible organization that will be managing the contact investigation (i.e., the region in which the contact resides). **TE's and Contact Investigations** • For each TE, list all identified contacts who were exposed at the location and assess if they are susceptible based on immunity criteria. • Known contacts should be added to the TE. Refer to QRC- TE- Known Contacts. (Note: Contacts added to TEs of the known case creates contact investigations) • Contacts can be added to TEs either individually or as a cohort. • In settings with large numbers of contacts (e.g., schools), TEs in which identified contacts would be added would be those with a known exposure (e.g., specific classrooms), and then each contact is reviewed for susceptibility. • In TEs with extremely large numbers of exposed individuals involved in a known exposure, you may choose to only add susceptible contacts. Ensure to include a note that all contacts were informed but only susceptible contacts were added to the TE. • For TE's with contacts with unknown exposure, listing identified contacts under these TE's is generally not required. These contacts should have received general notification (e.g., letters or public communication) with guidance. For additional information refer to Exposures User Guide: Entering Contacts.	
Risk Factors	Note any relevant risk factors such as: contact with a confirmed case, recent travel, links to an outbreak (OB), or underlying illness(s).	
Outcomes	Indicate whether the case required ER visits, hospitalization, ICU admission, or resulted in death. This helps to determine the severity of the case.	
Immunization History Interpretation	Interpret disease immunity at the time of the case to determine whether the case was unimmunized, partially immunized, fully immunized, or unknown. Ensure all immunization records are entered in PHIMS. ○ Measles-containing vaccine administered within the 14 days prior to symptom onset should not be counted in the assessment of immunity.	

	○ If the case was previously identified as a contact and vaccine was administered post-exposure, do not count doses administered more than 3 days after the first exposure if the client acquires measles in the incubation period of that exposure.
Interventions and Notes:	Summarize key public health interventions under interventions including exclusion from work/school or daycare and applicable dates. Add key interactions with the client in the notes section.
Context documents	Useful for adding copies of letters or communications that were sent out. Ensure a note is authored to indicate that a context document has been added.

2. Contact Investigations – Documentation

Data Elements	Guidance
Classification	• Contact - PUI – unlike case investigations, keep as a PUI. No need to update contact classifications from Contact- PUI to Contact-Contact • Contact-Not a Contact for those who have been determined to not meet the criteria of a contact.
Disposition	• Follow-up in progress- when first created • Previously infected/treated/immunized for those that are not susceptible • Follow- up complete for susceptible contacts that were immunized/treated or isolation completed • Contact turned to case Other options are available depending on situations outside of the above (e.g. unable to locate)
Immunization History Interpretation	Interpret disease immunity at the time of the contact to determine whether the contact was unimmunized, partially immunized, fully immunized, or unknown. Ensure all immunization records are entered in PHIMS. Measles-containing vaccine administered within the 14 days prior to exposure should not be counted in the assessment of immunity.
Risk Factors	• Underlying illness, pregnancy, or other (e.g. less than 6 months of age) (to determine /PEP requirements) • Contact to a known case
Interventions and Notes	Document key public health actions, such as post-exposure prophylaxis (PEP), and exclusion from work/school or daycare(self-isolation) recommendations under interventions. Include brief notes on significant interactions with the client in the notes section.

3. Cohorts- For Contact Investigations and Mass Immunization Events

Cohorts in PHIMS enable efficient documentation by grouping individuals—such as school classes—so that actions can be applied collectively, improving workflow efficiency.

Use of cohorts can be helpful when there are large numbers of contacts to a measles case as then the list of contacts is only created once and can be added into a Mass Immunization event and to the TE of the case.

Cohorts can be created in two ways:

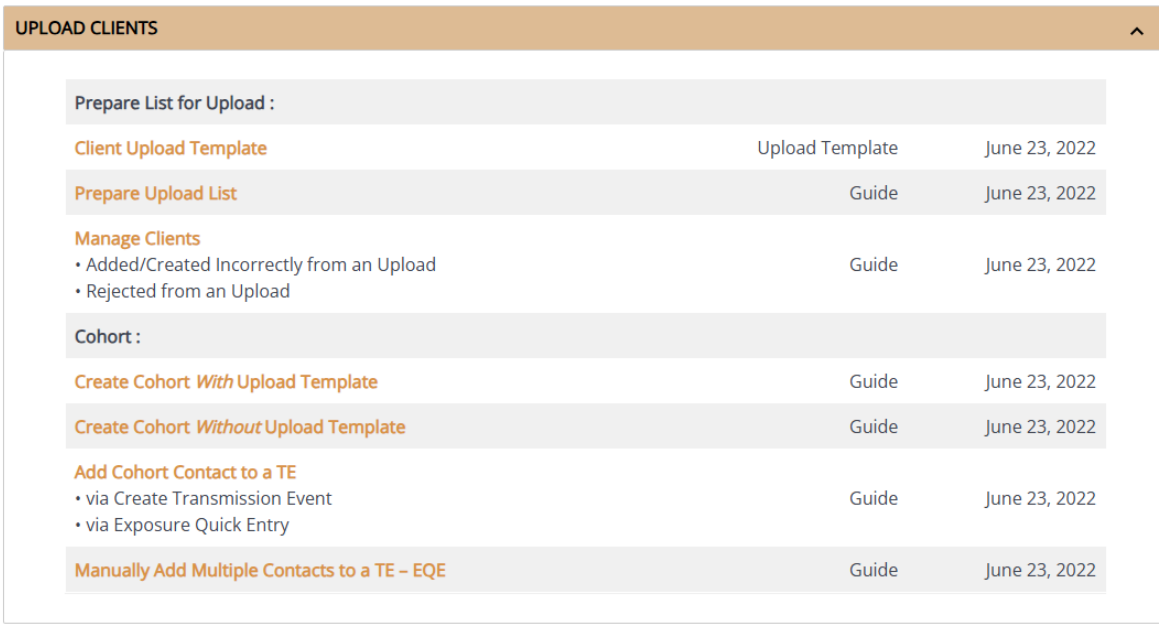
- Uploading a Client List
- Without Uploading Client List (direct entry)

Once created, a cohort can be:

- Added to a **Mass Immunization Event** to populate the client list to review the immunization status of the measles contacts
- Linked to a **Transmission Event** to associate individuals as contacts. The cohort is linked by the cohort ID once its created and all the contacts are then added as a grouping vs individually.

Video guidance on creating and adding a cohort to a Transmission Event can be found on the PHIMS website PHIMS Create a Cohort under Support Tools > Reference Docs and Videos.

Additional guidance and client upload templates can also be found under Support Tools > Public Health > Investigations under ***Upload Clients***

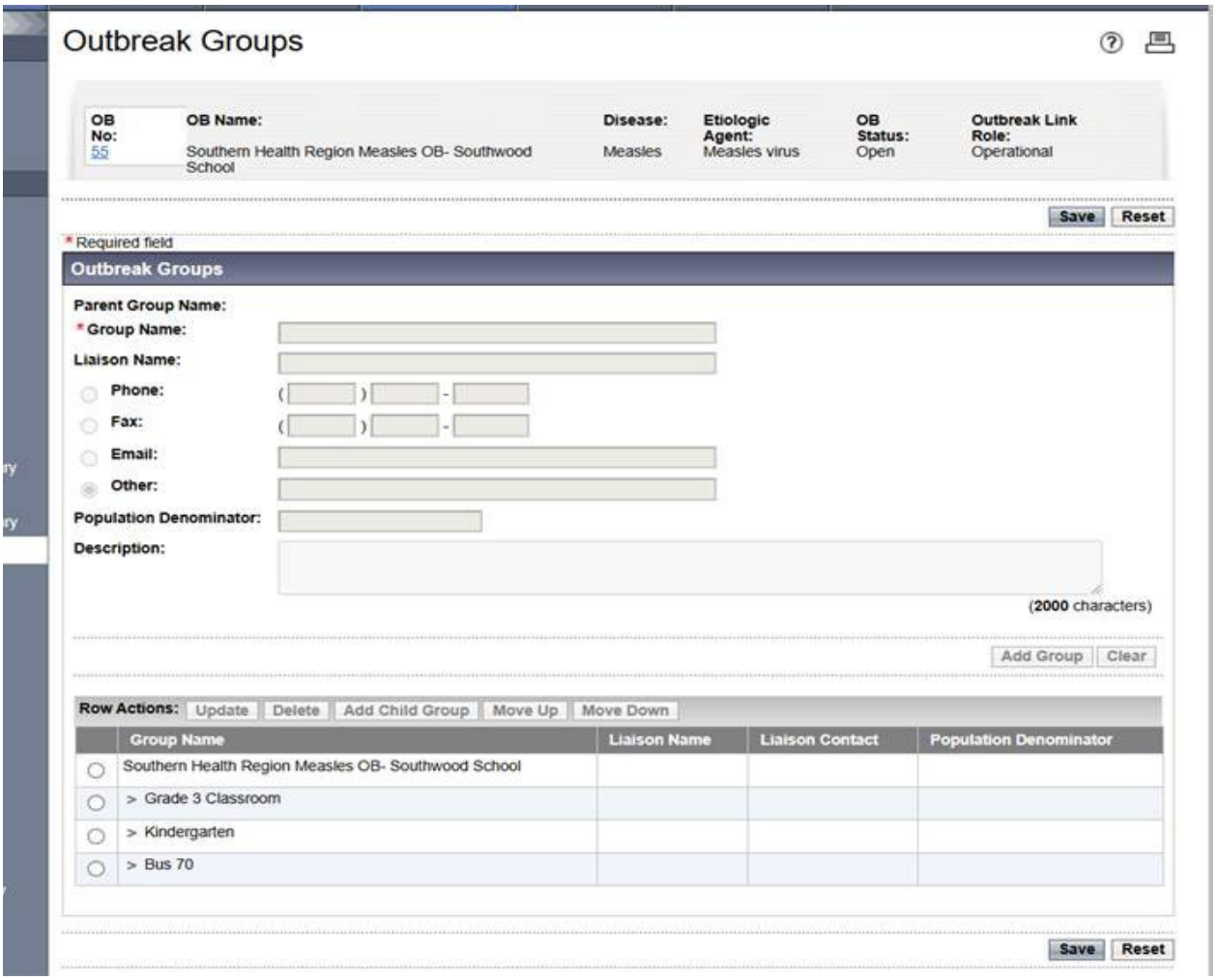


4. Measles Outbreak Documentation

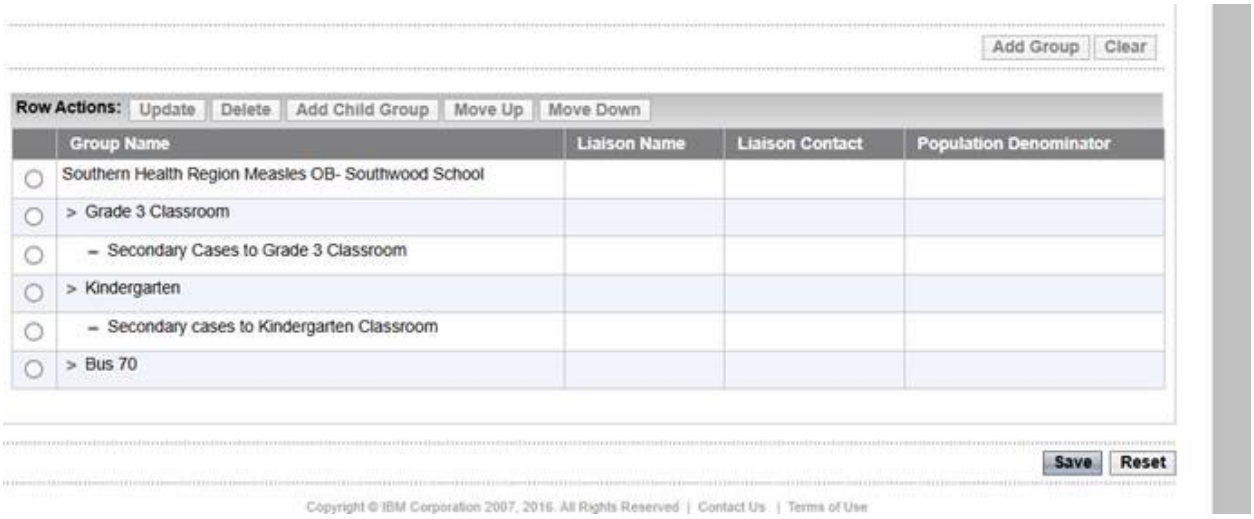
Measles outbreaks (OBs) should be created when there are two or more cases with at least one lab-confirmed case, epi-linked to a specific location or event. This will assist with identifying all cases linked to that location or event. Examples might include: school exposures, a public event (wedding), a community/town etc.

Refer to the SOP: Documentation of Outbreaks in in PHIMS

Use of Outbreak Groups can be helpful when organizing different exposure sources within the OB. Refer to QRC: Outbreaks- Outbreak Groups



Subgroups within the groups can also be created to further help organize the cases as the OB spreads.


Add Group
Clear
Row Actions: Update Delete Add Child Group Move Up Move Down
Group Name
Liaison Name
Liaison Contact
Population Denominator
Southern Health Region Measles OB- Southwood School
> Grade 3 Classroom
– Secondary Cases to Grade 3 Classroom
> Kindergarten
– Secondary cases to Kindergarten Classroom
> Bus 70
Save
Reset
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Appendix

Linking an Acquisition Event (AE) to a Source Case in PHIMS

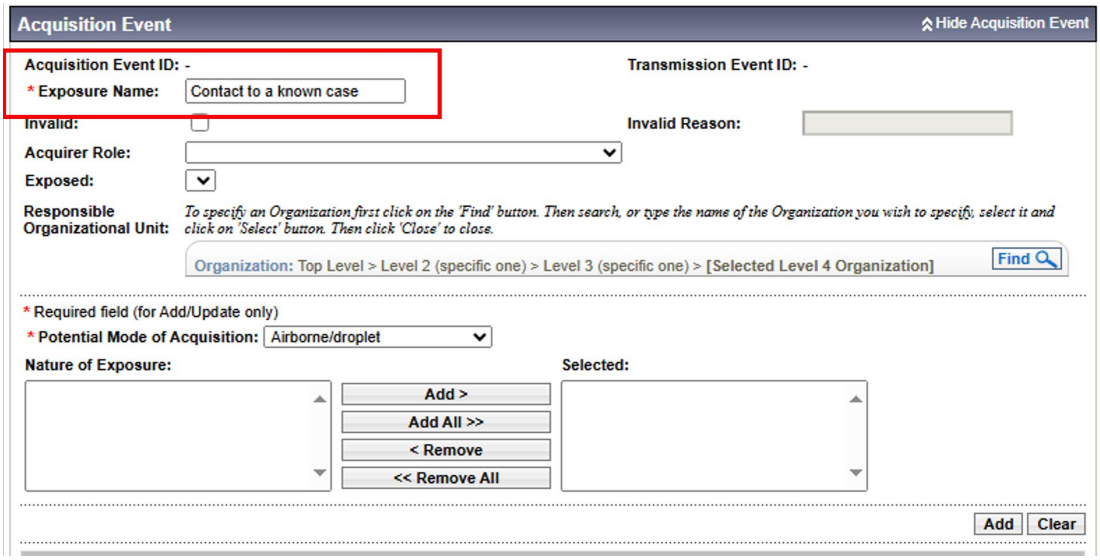
This step-by-step guide outlines how to accurately link an Acquisition Event (AE) to a Source Case in PHIMS using the Investigation ID. Follow the workflow below to ensure proper linkage and data integrity. **NOTE: This is only applicable to Measles case investigations.**

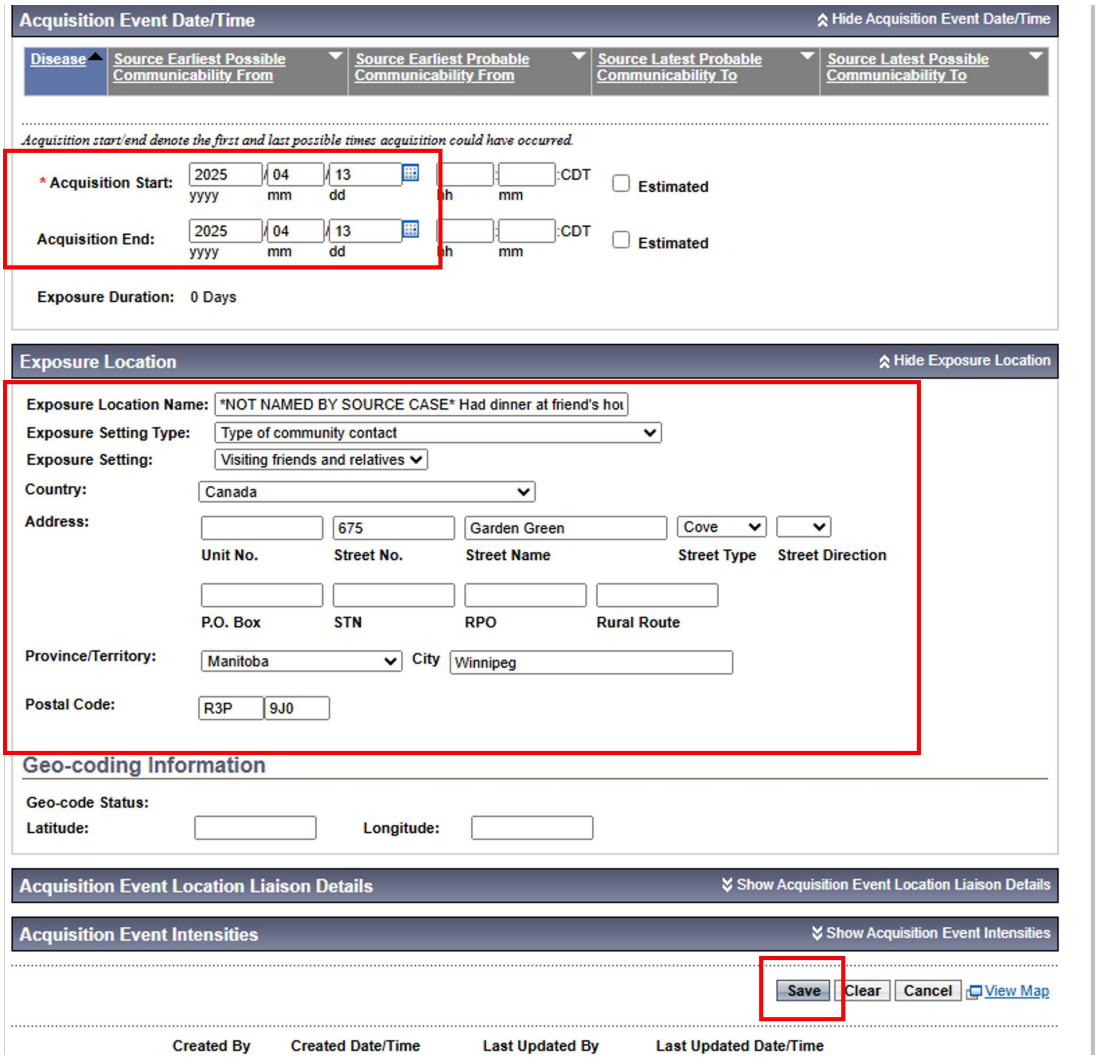
Step 1: Review Source Case

It's the responsibility of the investigator to ensure that the exposure occurred during the source case's communicable period prior to linking an AE

Step 2: Create the Acquisition Event

Refer to the **Measles Documentation in the PHIMS Quick Reference Guide** to complete all required AE fields.
Click "Save" once all fields are entered to finalize the AE.

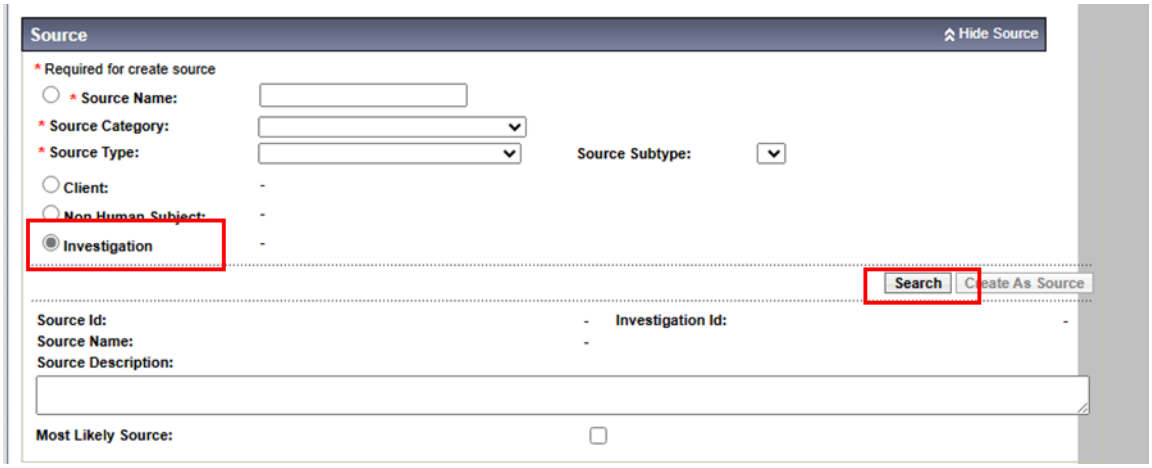


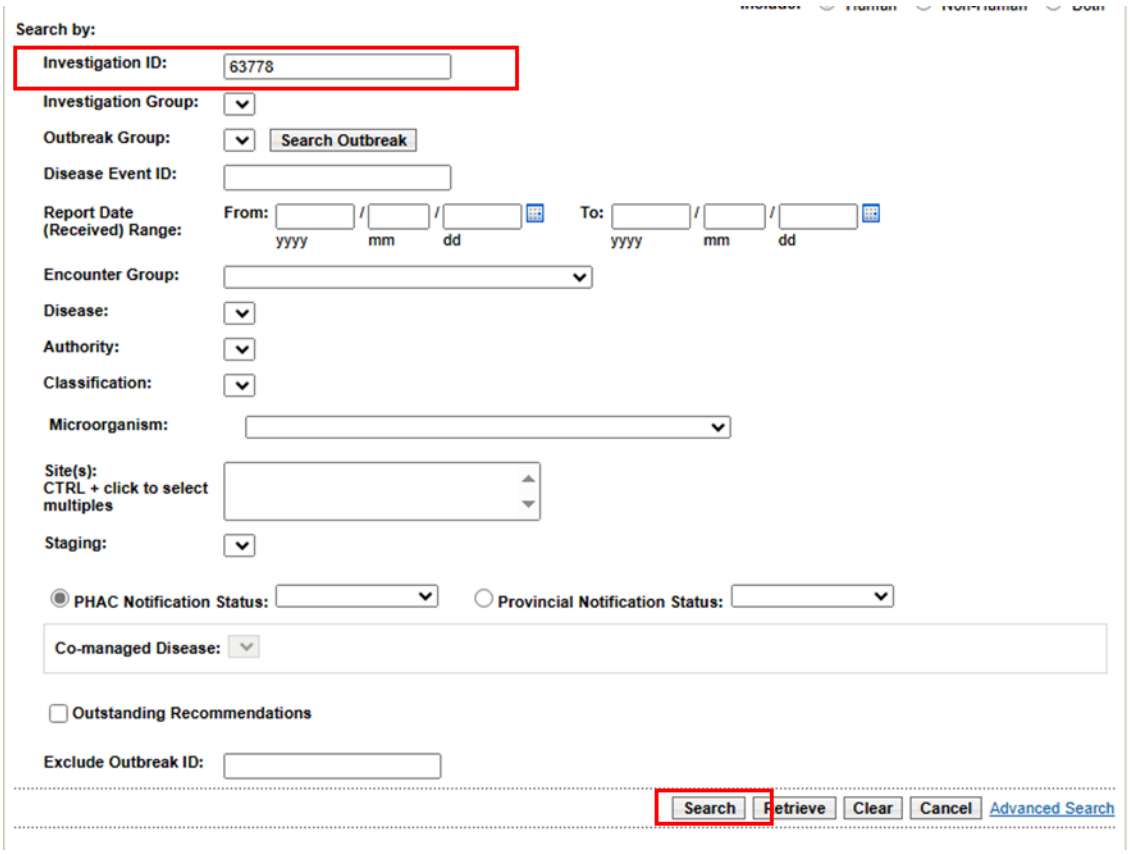


Step 3: Link the AE to the Source Case

A. Search for the Source Case

Use the Investigation ID (Inv ID) to locate the case.
From the factory table, select the matching record.
Click “Select and Return.”


Source
Hide Source
* Required for create source
* Source Name:
* Source Category:
* Source Type:
Source Subtype:
Client:
Non Human Subject:
Investigation
Search
Create As Source
Source Id:
Investigation Id:
Source Name:
Source Description:
Most Likely Source:


Search by:
Investigation ID:
63778
Investigation Group:
Outbreak Group:
Search Outbreak
Disease Event ID:
Report Date (Received) Range:
From:
To:
yyyy
mm
dd
Encounter Group:
Disease:
Authority:
Classification:
Microorganism:
Site(s): CTRL + click to select multiples
Staging:
PHAC Notification Status:
Provincial Notification Status:
Co-managed Disease:
Outstanding Recommendations
Exclude Outbreak ID:
Search
Retrieve
Clear
Cancel
Advanced Search

B. Assign Most Likely Source

Choose the most likely source from the dropdown if applicable (Note: some cases may have several sources)
Click "Save."

Step 4: Final TE View in Source Case

A Transmission Exposure (TE) is now created in the Source Case and linked to the AE.
Important Notes:
Once linked, AE fields become read-only.
To make updates, navigate to the TE within the Source Case.
The TE clearly states that the contact was not named by the Source Case, helping to avoid accidental disclosure.

INVESTIGATIONS | IMMUNIZATION | INVENTORY

Exposure Summary

Notes — ACTIVE

Client ID:	Name(Last, First Middle) / Gender:	Preferred Alternate Name:	Health Card No:
142046	Gore, Hermione / Female	-	744320637
Date of Birth / Age:	**Phone Number:**	**Health Region Organization:**	**Additional ID Type / Additional ID:**
2005 Jan 06 / 20 years	Mobile Contact: 778-555-7464	Manitoba,Prairie Mountain Health	Manitoba Health Family Registration Number / 131909

Investigation

Investigation ID:	Status:	Disposition:	Investigator:
63778	OPEN	Follow up complete	Generic Prairie10 RN
Disease:	**PHAC Date/Type:**	**Etiologic Agent:**	**Authority/Classification:**
Measles	2022 Feb 25 / Date Reported	Measles virus / Measles virus genotype D5	Provincial / Case - Lab Confirmed / 2022 Feb 25

Transmission Event Summary

Hide Transmission Event Summary

2 Transmission Events Found. 1 Contacts Found.

Row Actions: Copy | Contact Quick Entry | Exposure Quick Entry | Multiple TE Entry | Create Transmission Event

		TE ID	Transmission Start	Transmission End	Location Name	Setting Type	Outbreak ID	Invalid
○	⊕	14040	2025 Feb 20	2025 Feb 25	Household	Household exposure	-	-
○	⊕	14039	2025 Apr 13	2025 Apr 13	*NOT NAMED BY SOURCE CASE* Had dinner at...	-	-	-

Acquisition Event Summary

Hide Acquisition Event Summary

1 Acquisition Events Found.

Row Actions: Search and Link TE | Copy | Multiple AE Entry | Create Acquisition Event

	AE ID	TE ID	Source Name	Acquisition Start	Acquisition End	Location Name	Setting Type	Exposed	Likely Source	Invalid
○	18857	12997	Laguardia, Gretl	2019 May 2 00:00 CDT	2019 May 10 00:00 CDT	Home	Household exposure	-	-	-

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