

iPHIS User Guide: Carbapenemase-Producing *Enterobacteriaceae* (CPE)



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Public Health Ontario

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Introduction

This user guide outlines the standardized data entry procedures and requirements for a case of carbapenemase-producing *Enterobacteriaceae* (CPE) into the Outbreak Management module of the integrated Public Health Information System (iPHIS). It is intended to help staff working in Ontario public health units (PHUs) with documenting CPE investigations.

What is CPE?

Enterobacteriaceae are a family of gram-negative bacteria found in our gastrointestinal tract. Commonly encountered *Enterobacteriaceae* include *E. coli*, *Klebsiella* species, and *Enterobacter* species.

Carbapenems are a class of antibiotics that includes ertapenem, imipenem, and meropenem. They are among the strongest antibiotics and are used for treating infections that are difficult to treat.

CPE are *Enterobacteriaceae* that produce enzymes (i.e., carbapenemases) that inactivate carbapenems and several other classes of antibiotics. This causes severe infections and mortality in up to 50% of severely infected patients.

Both CPE colonizations and infections are communicable and require surveillance for prevention of spread and control. In either scenario, CPE is reportable to the local medical officer of health where the patient resides if it meets the surveillance definitions outlined in [CPE Appendix B, Infectious Diseases Protocol](#). These diseases are designated as Diseases of Public Health Significance under [O.Reg. 135/18: 'Designation of Diseases'](#). The provincial surveillance definitions and criteria for case and contact management are outlined in [Appendix A and B of the Infectious Diseases Protocol](#).

CPE Ontario Investigation Tool

PHO highly recommends PHUs to use the [CPE Ontario Investigation Tool](#) to collect CPE information for iPHIS entry, reported to them by infection control practitioners, health care providers, and from laboratory reports. The form is designed to capture the information needed for provincial CPE surveillance and for complete and accurate iPHIS data entry.

CPE Appendix B of the Infectious Diseases Protocol

The Infectious Diseases Protocol includes two appendices that outline provincial CPE surveillance definitions and the criteria for case and outbreak classification in iPHIS.

Once colonized or infected with CPE, individuals may carry CPE indefinitely. Several *Enterobacteriaceae* species are capable of exchanging mobile genetic elements that encode enzymes to inactivate carbapenems (i.e., carbapenemases). *Therefore:*

INDICATION #1: Each unique carbapenemase (e.g., NDM, KPC, OXA-48) is reportable as a new case of CPE

INDICATION #2: Only the first organism isolated (e.g., *E. coli*, *Klebsiella pneumoniae*, *Enterobacter* spp.) is reportable, unless a new carbapenemase is isolated in a subsequent specimen (consistent with what is specified in condition #1, above)

Information Required for Provincial CPE Surveillance

iPHIS has certain system mandatory data fields that are shown with a red diamond. Additional fields required for provincial CPE surveillance are indicated with an 'R' and accurate hospital names should be entered where indicated with the blue star in this user guide. These symbols used throughout the user guide are explained below:

CPE iPHIS User Guide Key

- Red diamond mandatory fields (M) - iPHIS designation for system mandatory fields. These fields are indicated with an 'M' throughout the user guide and red fields in the detailed guide tables.
- Required fields (R) - Several fields are required for provincial CPE surveillance. These fields are indicated with an 'R' throughout the user guide and yellow fields in the detailed guide tables.
- Optional fields (O) - iPHIS provides several fields that are available for case management but not currently required for provincial CPE surveillance. These fields are indicated with an 'O' throughout the user guide and purple fields in the detailed guide tables.
- Blue star fields  - As a health care-associated infection, capturing hospital names is crucial for provincial CPE surveillance. Throughout the user guide, the blue star is used to mark each instance of entering a hospital name. Specify the city and hospital name in all capital letters in the free text field with the following format: CITY NAME-HOSPITAL NAME. Please refer to the hospital naming convention specified in the Ministry of Health's [master list](#) to ensure you have typed in the accurate name of the intended hospital. Most city and hospital names fall within the 50-character limit for free text fields.

Information from both **mandatory** and **required** data fields is necessary for CPE surveillance in Ontario. Please utilize the [CPE Investigation Tool](#) developed by PHO to collect the minimum required information for reporting a case of CPE. iPHIS contains several other fields and screens that are not included in this user guide and currently not required for provincial CPE surveillance. Each health unit may wish to utilize additional fields at their own discretion; however, we have not included guidance on how to enter information into these fields. Contact the Infection Prevention and Control (IPAC) department at ipac.surveillance@oahpp.ca if you have questions about entering CPE case information into iPHIS.

Timely Entry and Completion of CPE Reports

To effectively monitor CPE incidence, it is important to complete CPE reports in iPHIS in a timely manner.

As indicated in iPHIS [Bulletin #17](#) – Timely entry of cases and outbreaks for Diseases of Public Health Significance (DOPHS), public health units (PHUs) must enter a case of CPE within **five business days** of receiving initial notification of the case. This should include the “minimum mandatory data elements” for the Client Demographics module and the Outbreak module as defined in Bulletin #17. PHUs must enter outbreaks of CPE within **one business day** of receiving initial notification of the outbreak. Once the CPE investigation is complete, PHUs have **30 calendar days** to complete data entry and close the case in iPHIS.

CPE Surveillance at PHO

The IPAC Department at PHO is responsible for provincial surveillance of CPE in Ontario. This includes monitoring cases and outbreaks of CPE reported in iPHIS to identify and investigate any patterns in transmission, monitoring CPE surveillance trends over time and contributing to evaluation of IPAC programs and resources.

The IPAC department at PHO is available to PHU staff for consultation on individual CPE case and outbreak reports and can help with understanding CPE reporting requirements and case definitions. In partnership with the Ministry of Health, IPAC is also developing CPE resources for PHUs and health care providers, which will be available on the [IPAC website](#).

The IPAC department extracts and reviews CPE data from iPHIS and may follow-up with PHUs directly if there is missing information or clarification required for certain cases of CPE.

PHO is here to help public health units

Contact IPAC at PHO (ipac.surveillance@oahpp.ca) if you have any questions about reporting CPE or this User Guide, the [CPE Ontario Investigation Tool](#), [CPE Appendix B, Infectious Diseases Protocol](#) or data entry in iPHIS.

For iPHIS technical issues, contact the **Public Health Solutions Service Desk** at 1-866-272-2794 or 416-327-3512 or email PublicHealthSolutions@Ontario.ca

1.0 Creating a Case

Special Considerations

Follow these instructions to create a case.

You may need to enter multiple CPE reports for the same client if you receive laboratory confirmation for more than one Aetiologic Agent with different carbapenemases. There are some technical limitations in iPHIS that make these difficult to enter. Refer to [Appendix 3](#) for detailed instructions on how to enter these cases.

You can always contact the IPAC at PHO (ipac.surveillance@oahpp.ca) if you are uncertain about how to proceed with data entry.

Steps:

1. Search for and then create client or update an existing client as per the Client Demographics User Guide or [Client Demographics eLearning module](#) available by logging into [Adobe Connect](#).
2. From the left navigation menu, select **Outbreak > Management**. The **Outbreak Search** screen displays (see [Appendix 5, Outbreak Search Screen](#)).
3. Enter provincial outbreak number for sporadic CPE, **0000-2018-007** in **Outbreak Number** field.
4. Click **Search**.
5. The “SPORADIC CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE) CASES” outbreak will appear. Select the **Details** button to the far right (see [Appendix 5, Sporadic CPE Outbreak Results](#)).
6. Enter relevant search criteria (e.g., **Client ID** or first and last name) to check if the case has previously been created. The **Health Unit Responsible** field defaults to your PHU. Select the blank line at the top of the dropdown to widen your search to all cases in iPHIS.
7. Click **Search**. If the case is found, proceed to step 7a. If the case is not found, proceed to step 8.
 - a. If the case is found, select the **Details** button to access the **Case Details** screen for that case. The case **Status** must be set to “OPEN” for a case to be updated.
8. If the case has not yet been created, click the **New Case** button (see [Appendix 5, Case Results](#)).
9. Complete a **Client sub-search** using the **Client ID** generated in Step 1 (see [Appendix 5, Client Sub-Search Screen](#)) and click on the **Select** button for the appropriate client.

1.1 Case Details

Special Considerations

Enter the case details of the CPE report on this screen. Key information captured here that is necessary for CPE surveillance includes **Disease** and **Subtype**.

In the **Disease** field, specify whether the case was colonized, infected, or if the status is unknown (unspecified). Enter cases as unspecified when the lab report has been received initially, but additional review or investigation is required to determine if the case was a colonization or infection of CPE. Once the investigator has determined the case status, update the **Disease** field. Colonization is the presence and growth of a microorganism in or on a body without tissue invasion, cellular injury or symptoms. Enter cases as colonized if they are asymptomatic. Symptomatic or clinical infection is one resulting in clinical signs and symptoms (disease). Enter cases as infected if there are signs and symptoms indicative of an infection.

The Subtype is used to capture the type of carbapenemase identified by laboratory testing. This information is critical in understanding the emerging resistance in Ontario. Please see [Case Details Quick List](#) and [Table 1a](#) below for further instructions.

Refer to [Appendix 3](#) for guidance on entering two or more cases for the same client.

Steps:

1. Click on the (+) beside Other Details, Physician and Assignment History to expand these sections (see [Appendix 5, screen shots Case Details Screen, Expanded Other Details Section, Reporting Information Section, and Assignment History Section](#))
2. Enter the information from [Case Details Quick List](#) on the **Case Details** screen. Refer to [Table 1a](#) for more detailed information.
3. Click **Save**.

Case Details Quick List: Mandatory (M) and Required (R) Data Fields

All data fields below are necessary for provincial CPE surveillance.

- (M) Reported date
- (M) Health Unit Responsible
- (M) Assigned Date
- (M) Branch Office
- (M) Diagnosing HU
- (M) Disease
- (M) Aetiologic Agent
- (R) Subtype
- (M) Classification
- (M) Outbreak Case Classification
- (M) Disposition
- (M) Status
- (M) Priority
- (M) Classification Date
- (M) Outbreak Classification Date
- (M) Disposition Date
- (M) Status Date

Table 1a: Detailed guide for Case Details fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
N/A (autofilled)	Case ID	The Case ID auto-populates. The system generates a unique identifier for each case.	N/A
M	Reported Date	Enter the date the CPE case was reported to the PHU (i.e., through a health care provider, laboratory report). Reported Date should not change when a client is transferred to another PHU; it should remain as the date when the initial PHU became aware of the case.	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
O	Assigned Date	Auto-populates with the date of entry. This field may be changed at the discretion of the PHU.	N/A
M	Health Unit Responsible	Enter the PHU responsible for case management. Note: Bulletin #13 (revised November 2010) provides guidance on how to assign Health Unit Responsible and Diagnosing HU (health unit) in special circumstances (e.g., client's address is uncertain, client moves, etc.).	N/A
M	Branch Office	Select as appropriate.	Values are specific to each PHU.
M	Diagnosing HU	Select the PHU where the client was residing when the CPE was reported to public health (e.g., address on the Ontario CPE Reporting Form). <u>Do not change this if the client moves during the episode.</u>	N/A
M	Disease	Specify whether the case was colonized, infected, or if the status is unknown (unspecified). To complete this field, the investigator will need to contact the infection control practitioner from the reporting health care	<ul style="list-style-type: none"> • Carbapenemase-prod Enterobacteriaceae (CPE)- Infection • Carbapenemase-prod Enterobacteriaceae (CPE)- Colonization • Carbapenemase-prod Enterobacteriaceae (CPE)- Unspecified

M/R/O	Field Name	Data Entry Information	Dropdown Values
		<p>facility or the health care provider that requested testing.</p> <p>Enter a case as unspecified when the lab report has been received initially, but additional review or investigation is required to determine if the case was a colonization or infection of CPE.</p> <p>Enter a case as a colonization if the case is asymptomatic. Enter a case as an infection if there are signs and symptoms indicative of an infection.</p>	
M	Aetiologic Agent	Select the organism provided in the laboratory slip. If more than one organism is detected from one specimen, select the first organism alphabetically and enter in any additional organisms in Further differentiation (free text).	See Appendix 2 for the list of organisms provided in Aetiologic Agent.
R	Subtype	Select the type of CPE resistance detected by laboratory testing.	See Appendix 2 for the list of CPE resistance types provided in Subtype.
O	Further Differentiation	Use this free text field to enter any organisms (Aetiologic Agents) that are not listed in the pre-populated drop-down menu (i.e., if CPE OTHER (SPECIFY)	Free text

M/R/O	Field Name	Data Entry Information	Dropdown Values
		<p>is selected as the Aetiologic Agent).</p> <p>Note: Only the first isolated organism is reportable. However, if more than one organism is detected from the same specimen, select the first organism in Aetiologic Agent (according to alphabetical order if >1 organism is isolated from the same specimen). Then, use the free text Further Differentiation field to type in any other detected organisms.</p>	
M	Classification	<p>Use the CPE case classification definitions and criteria outlined in section 3.0 of the CPE Appendix B, Infectious Diseases Protocol.</p> <p>Classify the case as soon as there is enough information to support the classification.</p> <p>The only valid classifications for a CPE are “Confirmed”, “Does not meet definition” and “Person under investigation”. Do <u>not</u> use any other classification.</p> <p>Note: Case classification is for surveillance purposes</p>	<p>Confirmed</p> <p>Outlined in section 3.1 of CPE Appendix B. Confirmed cases require laboratory confirmation of CPE by any microbiology laboratory in Ontario.</p> <p>Does not meet definition</p> <p>Enter when the CPE case under investigation does not meet the case definition. Use this when the Disposition is ‘Entered in Error’ or ‘Closed duplicate’.</p> <p>Person under investigation (PUI)</p> <p>Use when a CPE case is initially reported or there is not yet enough information to classify as “Confirmed” or “Does Not Meet”.</p>

M/R/O	Field Name	Data Entry Information	Dropdown Values
			<p>Do <u>not</u> close a case as “PUI”. Cases can only be closed as either “Confirmed” or “Does Not Meet”.</p> <p>**Do <u>not</u> use “Probable”, “Suspect”, or “Undetermined” classifications for CPE. They are not valid options for CPE.</p>
M	Classification Date	<p>Enter the date the Classification was determined or changed.</p> <p>Note: When the Classification field is updated, enter the date the decision was made. This may not necessarily be the same day the field is updated in iPHIS.</p>	N/A
M	Outbreak Case Classification	Enter the same value selected for the Classification field.	See “Classification” above.
M	Outbreak Classification Date	Enter the same value as the Classification Date field.	N/A
M	Disposition	<p>Select the value reflecting the current state of the investigation. The current CPE Investigation Tool is posted on the PHO website here. Use this form when conducting follow-up with infection control professionals (ICPs) or the client’s health care provider to collect relevant</p>	<p>Pending</p> <p>Select if the investigation is ongoing and the Status is “Open”. Update this when the Status is changed to “Closed”.</p> <p>Does not meet definition</p> <p>Do <u>not</u> use. Use the Classification field to indicate that a case does not meet definition.</p>

M/R/O	Field Name	Data Entry Information	Dropdown Values
		<p>information required for reporting in iPHIS.</p> <p>Value pre-populates to “Pending”.</p> <p>The value ‘Referred to FNIHB’ was added in July 2017. It is unlikely that it would be needed for a CPE case. For more information on this value, refer to iPHIS Notice #546 (published July 21, 2017).</p>	<p>Complete</p> <p>Select if case investigation/ management is complete. Hospital ICPs will usually have detailed information on the relevant risk factors of each case of CPE in their facility.</p> <p>Entered in error</p> <p>Select if the case has been created in error. Be sure to set the Classification field to “Does not meet definition” if this value is selected.</p> <p>Closed – duplicate – do <u>not</u> use</p> <p>Select if the case is a duplicate case and should therefore not be counted. Be sure to set the Classification field to “Does not meet definition” if this value is selected.</p> <p>Referred to FNIHB</p> <p>Select if the case was referred to the First Nations & Inuit Health Branch of Health Canada.</p> <p>Lost to follow-up*</p> <p>Select if the investigation was started but was not completed.</p> <p>For example, if the health unit is able to obtain information for follow up from the infection control practitioner or physician.</p> <p>Untraceable*</p>

M/R/O	Field Name	Data Entry Information	Dropdown Values
			<p>Select if there is information on the case but the PHU was unable to contact the case and could not begin the investigation.</p> <p>*Note: Cases with a disposition of “Lost to follow-up” or “Untraceable” can be classified as confirmed as long as there is enough information from the initial report/investigation to support this classification (see CPE Appendix B, Infectious Diseases Protocol).</p>
M	Disposition Date	<p>Enter the date the Disposition was determined or changed. Note: When the Disposition field is updated, enter the date the decision was made. This may not necessarily be the same day this field is updated in iPHIS.</p>	N/A
M	Status	<p>Indicates whether the case is open or closed. Value pre-populates to “Open”.</p> <p>Note: Do <u>not</u> select “Closed” if the Disposition is “Pending”.</p>	<p>Open</p> <p>Select when the investigation is ongoing.</p> <p>Closed</p> <p>Select when the investigation and all necessary data fields have been completed in iPHIS. Ensure the Disposition is not “Pending” if the Status is “Closed”.</p>

M/R/O	Field Name	Data Entry Information	Dropdown Values
M	Status Date	<p>The date the status was determined.</p> <p>Note: When the Status field is updated, enter the date the decision was made. This may not necessarily be the same day this field is updated in iPHIS.</p>	N/A
M	Priority	<p>Enter according to the procedure of each individual PHU.</p> <p>Note: This field is not used for provincial reporting purposes.</p>	<p>High</p> <p>Medium</p> <p>Low</p>

1.2 Other Details and Reporting Information

1. Click on the (+) beside the **Other Details** section on the bottom of the **Case Details** screen (see [Appendix 5, Case Details Screen](#) and [Expanded Other Details Section](#))
2. Enter the information specified in [Table 1b](#).
3. Click **Save**.

Table 1b: Detailed guide for ‘Other Details’ and ‘Reporting Information’ fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
M	Client Address at Time of Case	Select the address where the client was living when the CPE occurred.	Populated by the address entered in the Client Demographics module.
O	Received Date	Note: Data entered in this field may differ across health units and so would not be comparable.	N/A
O	Notification Method	Enter at the discretion of the PHU	Email Fax Mail Phone Walk-in
R	Investigation Start Date	Enter the date the PHU first tried to contact the case and/or the healthcare provider.	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
R	Reporting Source	<p>Select the reporting source.</p> <p>Enter External Source Type and either Source Name or City to filter and select the reporting source from the Name dropdown list.</p> <p>For all other reports (i.e., RN, RPN, Infection Control Practitioner), please enter the reporting source under Other Reporting Source Type.</p>	<p>Physician (includes nurse practitioners)</p> <p>Hospital</p> <p>Lab</p> <p>**Do <u>not</u> use any other value (e.g., agency, branch office, financial, etc.)</p>
R	Other Reporting Source Type	<p>If the reporting source is other than a physician, hospital or laboratory (which are reported under Reporting Source), select the value that best reflects the source of the initial report and provide additional detail in Other Reporting Source Name.</p> <p>If the reporting source is a "HEALTHCARE PROFESSIONAL" other than a physician or nurse practitioner, please specify in Other Reporting Source Name (e.g., nurse, pharmacist, etc.).</p>	<p>Canadian blood services</p> <p>Detention centre</p> <p>Insurance</p> <p>Healthcare professional</p> <p>Other (specify)</p> <p>Self (client)</p> <p>Other agency</p> <p>** Do <u>not</u> use any other values (e.g., family member, friend, group home, shelter, etc.)</p>
R	Other Reporting Source Name	<p>Use this field to specify the reporting source when Other Reporting Source Type is completed.</p>	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
		If “Healthcare Professional” is selected above, record the name and professional designation (e.g., June Juniper, Infection Control Practitioner).	

1.3 Physician

This section is optional and may be entered at the discretion of the PHU.

Steps:

1. Scroll down to the **Physician** section of the **Case Details** screen
2. Click on the (+) beside **Physician**.
3. Enter the information specified in [Table 1c](#).
4. Click **Add**.

Table 1c: Detailed guide for Physician fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
M	Physician	<p>Select as appropriate.</p> <p>Note: The physician list only appears when the Source Name and/or City has been filtered on. Enter either Source Name or City for filter.</p> <p>Source Name: Enter the surname of the physician / nurse practitioner or the first few letters of the physician / nurse practitioner’s surname followed by “%”.</p> <p>Click Filter.</p> <p>Note: If the physician / nurse practitioner is not known or is not in the filtered</p>	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
		<p>results, then filter on External Source Type = "PERSONNEL" and Source Name = "%OTHER%". Then select "EXTERNAL, OTHER" or "INTERNAL, OTHER".</p> <p>City: Select the city of the physician.</p> <p>Click Filter.</p>	
<input type="radio"/>	Phone	Optional	N/A
<input type="radio"/>	Address	Optional	N/A
<input type="radio"/>	Role	Select as appropriate	Attending physician Family physician Other Specialist Unknown Walk-in clinic physician
<input type="radio"/>	Effective Date	Optional	N/A
<input type="radio"/>	End Date	Optional	N/A

1.4 Assignment History

This section is optional and may be entered at the discretion of the PHU. See [Appendix 5, Assignment History Section](#).

1. Click on the (+) beside **Assignment History of the Case Details** screen
2. Enter the information specified in [Table 1d](#).
3. Click **Save**.

Table 1d: Detailed guide for Assignment History fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
M	Investigator	Select the name of the investigator currently responsible for the case investigation and click Save . Update if the investigator changes.	The list of names auto-populates based on the Responsible Health Unit .
O	Assignment Date/Time	Auto-populates the date and time each time the investigator is saved.	N/A

2.0 Laboratory

Special Considerations

Enter information provided on the laboratory slip. The format of the laboratory slip may vary between laboratories. All confirmed cases require laboratory confirmation of CPE by any Ontario microbiology laboratory (see [CPE Appendix B of the Infectious Diseases Protocol](#)). The type of testing conducted on the specimen is captured in **Resulted Test Code**. The number of options in this field is reduced by first selecting CD - Other in the **Resulted Test Group Code** field first.

2.1 Requisition Information

Steps:

1. Navigate to **Cases > Case > Lab**.
2. Click '**Lab Requisition**' and see relevant fields in [Table 2a](#).
3. Enter **Lab Requisition Date** and click **Save**.

Table 2a. Detailed guide for Requisition Information fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
R	Placer Requisition ID	For Public Health Ontario Laboratory (PHOL) requisitions, this number will take the following format: year, laboratory initial, specimen number (e.g., 19C000123). For all other laboratories, use the unique specimen identifier that they provide followed by the lab requisition year (-YYYY) (e.g., 100189-2019). Note: iPHIS does not allow the same Placer Requisition ID to be entered for	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
		<p>multiple cases in the same client. Identify the first case with a '-1' after the Placer Requisition ID, and the second case with '-2', etc.</p> <p>e.g., 19C000123-1; 19C000123-2</p> <p>If nothing is manually entered, an ID will auto-generate.</p>	
O	External Source Type	<p>Choose "PHYSICIAN" for the ordering physician.</p> <p>Note: Nurse practitioners can be found under the "Physician" filter.</p>	Physician
O	Source Name	<p>Enter the surname of the ordering physician / nurse practitioner or the first few letters of the physician / nurse practitioner's surname followed by "%".</p> <p>Click Filter.</p> <p>Note: If the physician / nurse practitioner is not known or is not in the filtered results, then filter on External Source Type = "PERSONNEL" and Source Name = "%OTHER%". Then select "EXTERNAL, OTHER" or "INTERNAL, OTHER".</p>	N/A
O	Ordering Provider	Select as appropriate	N/A
O	Comments	Enter the name of the hospital or clinic if the name of the physician/nurse practitioner is unknown.	N/A
O	Lab	Select as appropriate	N/A
M	Requisition Date	Enter the date on which the laboratory work was requested. If missing, enter the date of specimen collection.	N/A

2.2 Test Information

Steps:

1. Select **Add Test**.
2. Select the relevant information from the drop down options for **Specimen Type, Body Site** (**Note:** Select the appropriate Specimen Type first to filter the relevant Body Sites). See [Table 2b](#).
3. Select Microbiology for the field **Test Name**.
4. Enter the specimen **Collection Date** and **Reported Date**.
5. Click **Save**.

Table 2b. Detailed guide for Test Information fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
O	Specimen Type	Select as appropriate	Blood Sputum Stool Surgical site Swab Tissue Urine Other specimen
O	Specimen ID	<u>Do not use.</u> Technical issues leading to loss of information in this field have been noted.	N/A
M	Body Site	Select as appropriate.	Filtered based on the selection for Specimen Type .
M	Test Name	Select Microbiology.	Microbiology
O	Test Result Status	<u>Do not use.</u>	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
R	Collection Date	Enter the date the specimen was collected as indicated on the laboratory slip.	N/A
R	Reported Date	Enter the date as indicated on the laboratory slip. Note: This is not the same field as the Reported Date field on the Case Details screen.	N/A
O	Defining Specimen	<u>Do not use.</u>	N/A

2.3 Result Information

Steps:

1. Select **Add Result** near the bottom right of the page.
2. Select the appropriate **Branch** and **CD** as the **Program Area**. See [Table 2c](#).
3. Ensure **Disease/Diagnosis** is the same as specified in the [Case Details](#) screen.
4. Select '**CD - Other**' as the **Resulted Test Group Code** to filter the **Resulted Test Code** field.
5. Select one of: '**Phenotypic testing**', '**In-house PCR - CPE**', '**Reference Lab PCR - CPE**', '**Other specify:**', as the **Resulted Test Code**.
6. If '**Other specify:**' is selected, enter the test details in **Observation Value** (free text).
7. Select the appropriate **Result** from the drop down options.
8. Click **Save**.

Table 2c. Detailed guide for Result Information fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
N/A (autofilled)	Health Unit	Auto-populates to the user's PHU.	N/A

M/R/O	Field Name	Data Entry Information	Dropdown Values
M	Branch	Select as appropriate. This list is filtered based on the selection for Health Unit.	N/A
M	Program Area	Auto-populates to CD. Do <u>not</u> change.	CD
R	Disease/Diagnosis	Auto-populates to the disease associated with the Outbreak Number entered in the Case Details screen.	N/A
R	Resulted Test Group Code	CD - Other	N/A
R	Resulted Test Code	Select the lab test used to confirm the specimen of CPE.	Reference Lab PCR - CPE In-house PCR - CPE Phenotypic testing Other specify:
M	Result	Select as appropriate. Select TO BE CONFIRMED while awaiting confirmation of the CPE Subtype (see Table 1a for details on entering CPE subtype and Appendix 2 for possible subtype values)	Positive Negative - CPE not detected Inconclusive To be confirmed
R	Assign Result to Case	Auto-populates based on Disease/Diagnosis field. Do not change.	N/A
O	Observation Value	May be used to enter laboratory information such as additional comments from the laboratory.	N/A

3.0 Risks

Special Considerations

Enter information related to risks for CPE on this screen.

The primary risk factor for acquiring CPE is exposure to health care facilities with prevalent CPE. In health care facilities, contacts at highest risk for CPE are those with increased duration of exposure (e.g., prolonged length of stay) and intensity of exposure (e.g., invasive medical procedures, intensive nursing). Recent travel and hospitalization abroad are also important risk factors of CPE acquisition.

Note: the information requested in this section is not strictly risk factors for CPE. It also includes relevant factors used to understand the overall CPE risk among the client and contacts. Select the relevant response (Not asked/Yes/No/Unknown) for the applicable factors listed. See definitions in [Table 3a](#) and [Table 3b](#).

Steps:

1. Navigate to **Cases > Case > Risks**.
2. Enter information on the risk factors listed in [Risk factors Quick List](#). Refer to [Table 3a](#) and [Appendix 4, Risk Factor Entry for CPE Screen](#) for more detailed information.
3. Select the appropriate value from the dropdown beside each listed risk factor.
4. Enter any specified details (free text) and dates in the corresponding fields
5. Select **Save**.

Risks Quick List: Mandatory (M) and Required (R) Data Fields

All data fields in this table are necessary for provincial CPE surveillance.

Medical Risk Factors

- (R) Inpatient hospitalization at time of testing (specify hospital and admission date) ★
- (R) Previous hospitalization at the reporting hospital in the last 12 months (specify hospital and admission date) ★
- (R) Resident of a long-term care home at time of testing (specify facility)
- (R) Specimen collected >48 hours following admission to the reporting health care facility
- (R) Previous colonization with CPE

- (R) Endoscopic procedure in Canada in the last 12 months
- (R) Medical/surgical procedure in Canada in the last 12 months – excluding endoscopic procedures (specify procedure and hospital/clinic) ★
- (R) Other inpatient hospitalization in Canada in the last 12 months (specify city and hospital) ★
- (R) ICU admission in Canada in the last 12 months (specify city and hospital) ★
- (R) Medical/surgical procedure outside of Canada in the last 12 months (specify country)
- (R) Hospitalization outside of Canada in the last 12 months (specify country)
- (R) Chronic illness/underlying medical condition (specify)
- (R) Reason for specimen collection: admission testing
- (R) Reason for specimen collection: prevalence testing
- (R) Reason for specimen collection: clinical specimen
- (R) Reason for specimen collection: contact of a case/outbreak investigation

Behavioural Social Factors

- (R) Known contact with confirmed case in the last 12 months
- (R) Travel outside Canada in the last 12 months (specify country)

Table 3a. Detailed Guide for Medical Risk Factors

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
R	Medical Risk Factor	Inpatient hospitalization at time of testing (specify hospital and admission date)	The client was admitted to a hospital at the time of testing.	<ul style="list-style-type: none"> ● Select drop-down option ● Specify the master hospital name★ in all capital letters using the format: MASTER HOSPITAL NAME. ● Provide the date of admission with the calendar date picker. <p>Refer to the Ministry of Health’s health care facility naming convention specified in the master list. Most health care facility names are within the 50-character limit of the free text field, and even if they are incomplete, there should be enough identifiable information in the master name.</p> <p>e.g., For ‘William Osler Health System – Peel Memorial’, the hospital name in the master list is ‘WILLIAM OSLER HEALTH SYSTEM-PEEL MEMORIA’.</p>

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
				Enter this abbreviated name into the free text field.
R	Medical Risk Factor	Previous hospitalization at the reporting hospital in the last 12 months (specify hospital and admission date)	Only applicable to cases reported by the hospital identified above and refers to past admissions at the reporting hospital in the last 12 months. Consideration of any history of admission in the last 12 months provides information on whether this case of CPE was acquired at the present health care encounter or a previous health care encounter.	<ul style="list-style-type: none"> • Select drop-down option • Specify the master hospital name★ in all capital letters using the format: MASTER HOSPITAL NAME. • Provide the historical admission date with the calendar date picker. • Leave as NOT ASKED if the client was not admitted to a hospital at the time of testing. <p>Refer to the Ministry of Health’s health care facility naming convention specified in the master list. Most health care facility names are within the 50-character limit of the free text field, and even if they are incomplete, there should be enough identifiable information in the master name.</p> <p>e.g., For ‘William Osler Health System – Peel Memorial’, the hospital name in the master list is ‘WILLIAM OSLER HEALTH SYSTEM-PEEL MEMORIA’.</p>

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
				Enter this abbreviated name into the free text field.
R	Medical Risk Factor	Resident of a long-term care home at time of testing (specify facility)	The client is a resident at a long-term care home (i.e., their permanent address is a long-term care home) regardless of where CPE testing was performed	<ul style="list-style-type: none"> • Select drop-down option • Specify the master long-term care home name★ in all capital letters using the format: MASTER LTCH NAME. <p>Refer to the Ministry of Health’s health care facility naming convention specified in the master list. Most health care facility names are within the 50-character limit of the free text field, and even if they are incomplete, there should be enough identifiable information in the master name.</p>
R	Medical Risk Factor	Specimen collected >48 hours following admission to the reporting health care facility	Only applicable to cases reported by a health care facility (i.e. hospital or long-term care home). The confirmatory specimen was collected greater than 48hours following admission to the reporting health care facility. Risk for CPE acquisition is increased if duration of	<ul style="list-style-type: none"> • Select drop-down option • Leave as NOT ASKED if the client was not admitted to a health care facility at the time of testing

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
			exposure in a health care facility is greater than 48 hours.	
R	Medical Risk Factor	Previous colonization with CPE	The client has a history of CPE colonization or infection. The incubation period for CPE is indeterminate; any known history of CPE colonization or infection should be reported.	<ul style="list-style-type: none"> Select drop-down option
R	Medical Risk Factor	Endoscopic procedure in Canada in the last 12 months	The client had an endoscopic procedure such as endoscopic retrograde cholangiopancreatography (ERCP), colonoscopy, or sigmoidoscopy performed in Canada within the last 12 months.	<ul style="list-style-type: none"> Select drop-down option Specify the hospital/clinic★ and endoscopic procedure in all capital letters in the free text field using the format: HOSPITAL/CLINIC-PROCEDURE <p>e.g., ENDO CLINIC-ERCP</p>
R	Medical Risk Factor	Medical/surgical procedure in Canada in the last 12 months – excluding endoscopic procedures (specify procedure and hospital/clinic)	The client had undergone medical/surgical procedures, such as hemodialysis, outpatient surgery (excluding endoscopic procedures) in Canada within the last 12 months.	<ul style="list-style-type: none"> Select drop-down option Specify the hospital/clinic★ and medical procedure in all capital letters in the free text field using the format: HOSPITAL/CLINIC NAME-PROCEDURE. <p>e.g., KIDNEY CLINIC-HEMODIALYSIS</p>

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
R	Medical Risk Factor	Other inpatient hospitalization in Canada in the last 12 months (specify city and hospital)	The client has a history of hospital admission and overnight stay in a hospital in Canada within the last 12 months. For clients that are currently hospitalized, this does not include the current hospitalization.	<ul style="list-style-type: none"> • Select drop-down option • Specify the city and master hospital name★ in all capital letters in the free text field using the format: CITY-MASTER HOSPITAL NAME (up to 50 characters) <p>If the case has a history of more than one hospitalization in the past 12 months, only provide the name of the most recent hospital in the free text field.</p> <p>Refer to the Ministry of Health’s health care facility naming convention specified in the master list. Most city and health care facility names are within the 50-character limit of the free text field, and even if they are incomplete, there should be enough identifiable information in the master name.</p> <p>e.g., For ‘William Osler Health System – Peel Memorial’, the hospital name in</p>

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
				the master list is 'WILLIAM OSLER HEALTH SYSTEM-PEEL MEMORIA'. Enter ' MISSISSAUGA-WILLIAM OSLER HEALTH SYSTEM-PEEL MEMOR ' as the 50-character abbreviation in free text field.
R	Medical Risk Factor	ICU admission in Canada in the last 12 months (specify city and hospital)	The client was admitted to hospital and had an overnight stay in an ICU at a hospital located in Canada within the last 12 months	<ul style="list-style-type: none"> Select drop-down option Specify the city and master hospital name ★ in all capital letters in the free text field using the format: CITY-MASTER HOSPITAL NAME (up to 50 characters). <p>e.g., Enter 'MISSISSAUGA-WILLIAM OSLER HEALTH SYSTEM-PEEL MEMOR' as the 50-character abbreviation in free text field.</p>
R	Medical Risk Factor	Medical/surgical procedure outside of Canada in the last 12 months (specify country)	The client underwent any medical or surgical procedure, such as hemodialysis, endoscopy, outpatient surgery outside of Canada within the last 12 months.	<ul style="list-style-type: none"> Select drop-down option Specify the country and the medical procedure in all capital letters in the free text field using the format COUNTRY-PROCEDURE. <p>e.g., GREECE-ENDOSCOPY</p>

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
R	Medical Risk Factor	Hospitalization outside of Canada in the last 12 months (specify country)	The client was admitted and had an overnight stay in a hospital outside Canada within the last 12 months.	<ul style="list-style-type: none"> Select drop-down option Specify the country in all capital letters in the free text field using the format: COUNTRY1, COUNTRY2. <p>If the client was hospitalized in >1 country in the last 12 months, separate the countries with a comma. Do not provide any additional information other than the countries of hospitalization.</p> <p>e.g., USA, INDIA.</p>
R	Medical Risk Factor	Chronic illness/underlying medical condition (specify)	Any self-reported secondary chronic medical condition that puts the individual at greater risk of acquiring the disease or having a more severe outcome due to their infection. Many underlying medical conditions may also be considered comorbidities.	<ul style="list-style-type: none"> Select drop-down option Specify the medical condition in all capital letters in the free text field
O	Medical Risk Factor	Other (specify)	A medical risk factor of interest that is not currently specified on the Risks screen in iPHIS for the case/episode/encounter under investigation.	<ul style="list-style-type: none"> Select drop-down option Specify the risk factor in all capital letters in the free text field e.g., hospitalization in Canada or abroad >12 months ago, chronic indwelling devices

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
O	Medical Risk Factor	Unknown	The health unit was unable to collect any medical risk factor information from the client.	<ul style="list-style-type: none"> Select drop-down option
R	Medical Risk Factor	Reason for specimen collection: admission testing	Clients may be tested for CPE as part of a health care facility's screening program. Admission screening may test all patients admitted to the health care facility for CPE or may be based on certain criteria.	<ul style="list-style-type: none"> Select drop-down option Select YES if the client was tested for CPE on admission without signs of CPE infection (e.g., rectal swab, perianal swab, other non-clinical specimens)
R	Medical Risk Factor	Reason for specimen collection: prevalence testing	<p>Surveillance for all existing and new nosocomial infections and/or colonizations in a health care setting either on a single day (point prevalence) or over a specified number of days (period prevalence).</p> <p>A prevalence survey can provide a rapid way to estimate the magnitude of health care-associated infections in a health care setting at a single point in time (e.g., testing all patients in a defined area, such as a specific unit, at a single point in time to determine how many are colonized with CPE).</p>	<ul style="list-style-type: none"> Select drop-down option Select YES if the client was tested for CPE as part of a prevalence survey during their stay as an inpatient or resident in the reporting health care facility, without signs of CPE infection (e.g., rectal swab, perianal swab, or other non-clinical specimens)

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response Format in iPHIS
R	Medical Risk Factor	Reason for specimen collection: clinical specimen	Clients with signs and symptoms of clinical infection (e.g., pneumonia, urinary tract infection) who likely require health care services.	<ul style="list-style-type: none"> Select drop-down option Select YES if the client was tested for CPE due to clinical signs of infection (e.g., sputum, blood culture, urine)
R	Medical Risk Factor	Reason for specimen collection: contact of a case/outbreak investigation	When there are known contacts of a confirmed case or outbreaks in a health care setting, testing asymptomatic patients for CPE may help to identify new patients colonized with CPE.	<ul style="list-style-type: none"> Select drop-down option Select YES if the client was tested for CPE as a contact of another case of CPE or during an outbreak investigation without signs of infection (e.g., rectal swab, perianal swab, any non-clinical specimen)
O	Medical Risk Factor	Reason for specimen collection: other (specify)	Specify the reason for specimen collection if the client was tested for CPE for a reason not provided in the options above.	<ul style="list-style-type: none"> Select drop-down option Specify the reason for specimen collection in the free text field.

Table 3b: Behavioural Social Factors Detailed Guide: Mandatory (M) and Required (R) Data Fields

M/R/O	Risk Factor Type	Risk Factor Field Name	Definition	Response format in iPHIS
R	Behavioural Social Factor	Travel outside Canada in the last 12 months (specify country)	Travel and overnight stay outside Canada within the last 12 months.	<ul style="list-style-type: none"> Select drop-down option Specify country in all capital letters in the free text field using the format: COUNTRY1, COUNTRY2. <p>If the client travelled to >1 country in the last 12 months, separate the countries with a comma. Do not provide any additional information other than the countries of travel.</p> <p>e.g., PAKISTAN, BANGLADESH</p>
R	Behavioural Social Factor	Known contact with a confirmed CPE case in the last 12 months	The client had contact with a confirmed case of CPE in the last 12 months (e.g., roommate in a health care facility, family member household contact)	<ul style="list-style-type: none"> Select drop-down option
O	Behavioural Social Factor	Other (specify)	A risk factor of interest that is not currently specified on the Risks screen in iPHIS for the case/episode/encounter under investigation.	<ul style="list-style-type: none"> Select drop-down option Specify the risk factor in the free text field in all capital letters

○	Behavioural Social Factor	Unknown	The health unit was unable to collect any risk factor information from the client.	• Select drop-down option
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4.0 Exposures

Special Considerations

Enter information related to exposures to CPE on this screen.

Please report all exposures for a case that relate to how the case acquired the disease (i.e., acquisition exposure) as well as exposures for which the case may present a risk for transmission to others (i.e., transmission exposure). If no acquisition exposures are identified, enter an **Unknown exposure** (see Sporadic Outbreak Numbers – Unknown Exposures).

Reporting exposures in iPHIS is a two-step process that first requires identifying the appropriate exposure. This can be achieved in one of two ways: the first is by searching for an existing exposure; if one does not exist, create new exposures for hospitals or institutions that can be attributed as the most likely source of CPE acquisition/transmission.

Exposure Name format: **HOSPITAL OR INSTITUTION NAME – ADDRESS – YYYY-MM-DD.**

The second step involves linking the relevant exposure to the case, at which point it can be specified as an ‘Acquisition’ or ‘Transmission’ exposure for the case. **Important note:** Exposure and [Risk](#) information are closely related in CPE case reporting. If you report that a case has an acquisition exposure from a health care facility, ensure that you have reviewed all of the Risks and select the appropriate response for each factor listed ([Cases > Case > Risks](#)).

For cases with unknown exposure, link to Exposure ID **141467**, Exposure Name: 01-UNKNOWN-CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE)-DO NOT MODIFY. See [Appendix 4](#) for details.

Steps:

1. Navigate to **Cases > Case > Exposures**.
2. Click **Link Exposure** to display the **Exposure Sub-Search** screen.
3. Enter relevant search criteria and click **Search**. If the exposure is unknown, enter the **Exposure ID 141467** to link to the existing Ministry-created unknown exposure. Refer to [Appendix 4](#) for instructions on linking a case to an unknown exposure.
4. If the exposure of interest is not found, click on the **New Exposure** button.
5. Enter the information specified in [Table 4](#).
6. Click **Save**.

Exposures Quick List: Mandatory (M) and Required (R) Data Fields

All data fields below are necessary for provincial CPE surveillance.

- (M) Exposure Level
- (M) Exposure Type
- (M) Exposure Name
- (M) Health Unit Responsible
- (M) Earliest Exposure Date / Time
- (M) Country
- (M) Province
- (M) City

Table 4: Detailed guide for Exposure Fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data Entry Information	Dropdown Values
M	Exposure Level	Refer to CPE Appendix B of the Infectious Diseases Protocol for the CPE surveillance definitions and the criteria for case and outbreak classification.	Case only Outbreak only Outbreak and case Unknown
M	Exposure Type	Select the appropriate exposure type.	Person Exposure to another case with CPE Item/fomite Exposure is a contaminated endoscope, sink, or drain Travel Exposure occurred abroad, e.g., in a CPE prevalent region (e.g., Indian subcontinent, health care-associated in another country) Unknown

M/R/O	Field Name	Data Entry Information	Dropdown Values
			Note: Do <u>not</u> use Animal or Vector
M	Exposure Name	Enter the exposure name in the format: HOSPITAL OR INSTITUTION NAME – ADDRESS – YYYY-MM-DD	Provide the name of the hospital or institution, address, and estimated date of exposure ★ e.g., HALLOWS HEALTH CARE – 123 GOURD AVE – 2018-10-31.
M	Health Unit Responsible	The PHU where the exposure occurred. Note: the PHU that identifies the exposure is responsible for creating the exposure in iPHIS.	N/A
M	Earliest Exposure Date / Time	Using the calendar date picker, select the estimated exposure date.	N/A

5.0 Symptoms

Special Considerations

Enter information related to symptoms of CPE on this screen. When reporting a case of CPE infection, respond to the pre-selected list of infections that may result from CPE. If you wish to add other symptoms that are not listed, you may scroll through the drop down list of all symptoms and add them to the list of symptoms for the case.

When reporting a case of CPE colonization, select **Asymptomatic**.

Steps:

1. Navigate to **Cases > Case > Symptoms**.
2. Select the relevant 'YES' or 'NO' Response for each **Symptom** listed and enter the estimated **Onset Date** for any applicable symptoms.
3. **Note:** The symptoms screen is only relevant for cases of CPE infection. If 'YES' is selected for any symptoms, a corresponding **Onset Date** or **Duration** (days and/or hours) is required.
4. Click **Save**.

Symptoms Quick List: Mandatory (M) and Required (R) Data Fields

All data fields in this table are necessary for provincial CPE surveillance.

- (R) Asymptomatic
- (R) Bacteremia
- (R) Intra-abdominal infection
- (R) Any infection (specify)
- (R) Pneumonia
- (R) Urinary tract infection

6.0 Interventions

Special Considerations

Enter information related to interventions if the client was admitted to hospital or was a resident of an institution. This information can be obtained from the infection control practitioner at the hospital or relevant staff in an institution.

The consistent use of routine practices is essential to reduce the risk of CPE transmission in all health care settings. Routine practices include hand hygiene, cleaning and disinfection of all equipment prior to reuse on another patient or resident, as well as regular auditing of these infection prevention and control practices. Infection control interventions may be applied at the discretion of the reporting hospital or health care institution to further prevent transmission of CPE to other clients at risk.

Steps:

1. Navigate to **Cases > Case > Intervent/Treatments**.
2. If any of the pre-selected interventions were implemented, click **Update**.
3. Enter the estimated **Start Date** of the selected intervention.
4. Enter the **Internal Provider** as the primary health unit investigator.
5. In the **External Provider Filter Box**, enter any available relevant information on the health care provider (e.g., infection control practitioner) to narrow down the list of External Providers. Select the corresponding **External Provider** from the drop down options.

Table 7: Detailed Guide for Outcome fields

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data entry information	Dropdown Values
M	Outcome	This area is for recording any fatal outcome within 30 days of case report. Do not record any other outcome information here. If case has died, it is mandatory to select “Fatal”. All notes describing the fatal outcome should be recorded in Cases > Case > Notes .	Fatal Note: Do <u>not</u> use any other outcomes (e.g., Ill, Pending)
R	Outcome Date	Enter the date of death.	N/A
R	Accurate	Check the box if the Outcome Date is exact.	N/A
M	Cause of Death	Enter information from the autopsy, coroner’s report or other source. If cause of death is unknown, enter “Unknown”.	N/A
M	Type of Death	Select “Unknown” unless there is a coroner’s report that identifies the cause of death.	<ul style="list-style-type: none"> ● Reportable disease contributed to but was not underlying cause of death ● Reportable disease was underlying cause of death ● Reportable disease was unrelated to cause of death ● Unknown
R	Source	Enter the source of cause of death information (e.g., death certificate, autopsy).	N/A

8.0 Closing a Case

Special Considerations

When closing a case, update the case details screen according to the following steps.

Also, please review and update the information entered into case details for **Disease, Aetiologic Agent, Subtype, Risks, Symptoms, and Outcome**. In particular, ensure the 30-day mortality is captured in the [Cases > Case > Outcome](#) screen if the case was fatal.

Classification and Outbreak Case Classification must be either “Confirmed” or “Does not meet”. Do not close a case with a Disposition Description of “Pending” or “Does not meet definition”.

Steps:

1. Navigate to **Cases > Case > Case Details**.
2. Verify and update information entered in the case from Closing a Case Quick List below.
3. Refer to [Table 8](#) and [Appendix 5, Example of Closing a Case](#) for more detailed information.
4. Click **Save**.

Closing a Case Quick List: Mandatory (M) and Required (R) Data Fields

All data fields in this table are necessary for provincial CPE surveillance.

- (M) Disease
- (M) Aetiologic Agent
- (M) Subtype
- (M) Classification
- (M) Outbreak Case Classification
- (M) Disposition
- (M) Status
- (M) Classification date
- (M) Outbreak Classification date
- (M) Disposition date
- (M) Status date

Table 8: Detailed Guide for Closing a Case

Legend: ● M = mandatory field; ● R = required field; ● O = optional field

M/R/O	Field Name	Data entry information	Dropdown Values
M	Classification	<p>Use the CPE case classification criteria outlined in section 3.0 (Case Classification) of the CPE Appendix B, Infectious Diseases Protocol.</p> <p>When closing a case only two classifications are valid: “Confirmed” or “Does not meet”. Do not use any other classifications.</p> <p>Note: Case classification is for surveillance purposes only.</p>	<p>Confirmed</p> <p>Outlined in section 3.1 of CPE Appendix B, Infectious Diseases Protocol</p> <p>Does not meet definition</p> <p>Enter when the CPE case under investigation does not meet the case definition. Use this when the Disposition is ‘Entered in Error’ or ‘Closed duplicate’.</p> <p>Person under investigation (PUI)</p> <p>Do not use when closing a case. Cases can only be closed as “Confirmed” or “Does not meet”.</p> <p>Note: Do not use “Probable” or “Suspect” or “Undetermined” classifications for CPE. These are not valid options for CPE.</p>
M	Classification Date	<p>The date the case classification was determined.</p> <p>Note: When the Classification field is updated, enter the date the decision was made. This may</p>	N/A

M/R/O	Field Name	Data entry information	Dropdown Values
		not necessarily be the same day the field is updated in iPHIS.	
M	Outbreak Case Classification	Enter the same value selected for the Classification field.	See “Classification” above.
M	Outbreak Classification Date	Enter the same value as the Classification Date field.	N/A
M	Disposition	<p>Select the final disposition of the closed case.</p> <p>Note: The case classification and disposition are different fields and are slightly independent of each other. If there is enough information to classify a case this should be done regardless of the disposition. For example, a case could have a “Lost to follow-up” disposition if an investigation was incomplete but there was enough information to classify the case as confirmed even though there was some missing information.</p> <p>The value ‘Referred to FNIHB’ was added in July 2017. It is unlikely that it would be needed for a CPE case. For more information on this value, refer to iPHIS Notice #546 (published July 21, 2017).</p>	<p>Pending Do <u>not</u> use when closing a case.</p> <p>Does not meet definition Do <u>not</u> use. Use the Classification field to indicate that a case does not meet definition.</p> <p>Complete Select if case investigation/management is complete.</p> <p>Entered in error Select if the case has been created in error. Be sure to set the Classification field to “Does not meet definition” if this value is selected.</p> <p>Closed – duplicate – do <u>not</u> use Select if the case is a duplicate case and should therefore not be counted. Be sure to set the</p>

M/R/O	Field Name	Data entry information	Dropdown Values
M			<p>Classification field to “Does not meet definition” if this value is selected.</p> <p>Referred to FNIHB</p> <p>Select if the case was referred to the First Nations & Inuit Health Branch of Health Canada.</p> <p>Lost to follow-up*</p> <p>Select if the investigation was started but was not completed due to problems contacting the case.</p> <p>Untraceable*</p> <p>Select if there is information on the case & the adverse event but the PHU was unable to contact the case and could not begin the investigation.</p> <p>*Note: Cases with a disposition of “Lost to follow-up” or “Untraceable” can be classified as confirmed as long as there is enough information from the initial report/investigation to support this classification (see CPE Appendix B, Infectious Diseases Protocol).</p>
	Disposition Date	<p>The date the disposition was determined.</p> <p>Note: When the Disposition field is updated, enter the date the decision was made. This may</p>	N/A

M/R/O	Field Name	Data entry information	Dropdown Values
		not necessarily be the same day this field is updated in iPHIS.	
M	Status	Select "Closed".	N/A
M	Status Date	Update to the date when the decision was made to close the case in iPHIS. Note: After a case is closed, it must be reopened to add or change anything.	N/A

Appendices

Appendix 1: Example Laboratory Report for CPE Confirmation

Lab screen

SPEC #: 18:M1234567X

COLL: 07/23/2018

Source: Blood

Organism: Escherichia coli

Result: This organism is POSITIVE for Metallo beta-lactamase CARBAPENEMASE detected by phenotypic methods. NDM gene detected by molecular methods.

Testing performed at:
Gotham Public Health Laboratory
1007 Mountain Drive
Gotham City, ON B6T 3A4

Results forwarded to Infection Prevention and Control on 07/25/2018 at 0830 by GCHC.

END OF REPORT

Table A1.1: Entering case information using information provided in the example lab report.

M/R/O	Entry screen	Field Name	Data entry information
M	Case Details	Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION
R	Case Details	Aetiologic Agent	Escherichia coli
R	Case Details	Subtype	NDM

M/R/O	Entry screen	Field Name	Data entry information
M	Lab > Test Information	Specimen Type	Blood
M	Lab > Test Information	Body Site	Blood
R	Lab > Test Information	Collection Date	07/23/2018
M	Lab > Result Information	Branch	Select applicable
M	Lab > Result Information	Program Area	CD
R	Lab > Result Information	Resulted Test Group Code	CD - Other Note: Do not use any of the other options when entering cases of CPE.
R	Lab > Result Information	Resulted Test Code	Reference Lab PCR - CPE Note: the lap slip indicates both phenotypic and molecular methods were used, however since confirmation was conducted using molecular methods at the reference lab, the Reference Lab PCR - CPE option is most suitable for this case.
M	Lab > Result Information	Result	Positive

Appendix 2: List of Values in iPHIS for CPE Case Details

A2.1: List of “Aetiologic Agents” Values in iPHIS

The following list outlines commonly identified genera or binomial name of the bacterial species in the *Enterobacteriaceae* family provided in the **Aetiologic Agent** drop-down list:

Aetiologic Agent

- *Citrobacter freundii*
- *Citrobacter* unspecified
- *Enterobacter cloacae*
- *Enterobacter* unspecified
- *Escherichia coli*
- *Klebsiella oxytoca*
- *Klebsiella pneumoniae*
- *Klebsiella* unspecified
- *Morganella morganii*
- *Pantoea* unspecified
- *Proteus mirabilis*
- *Proteus* unspecified
- *Providencia* unspecified
- *Raoultella* unspecified
- *Serratia marcescens*

A2.2: List of “Subtype” Values in iPHIS.

Acronym	Carbapenemase
OXA-48	OXA-48-like carbapenemases
NDM	New Delhi Metallo-beta-lactamase
KPC	Klebsiella pneumoniae carbapenemase
IMP	Imipenemase
IMI	Imipenem-hydrolyzing β -lactamase
GES	Guiana extended-spectrum enzyme
VIM	Verona integrin-encoded Metallo- β -lactamase
SME	Serratia marcescens enzyme
NDM/GES	New Delhi Metallo-beta-lactamase/Guiana extended-spectrum enzyme
NDM/KPC	New Delhi Metallo-beta-lactamase/Klebsiella pneumoniae carbapenemase
NDM/OXA-48	New Delhi Metallo-beta-lactamase/OXA-48-like carbapenemases
VIM/IMP	Verona integrin-encoded Metallo- β -lactamase/Imipenemase
VIM/KPC	Verona integrin-encoded Metallo- β -lactamase/Klebsiella pneumoniae carbapenemase

Appendix 3: How to Record Two or More CPEs for the Same Client

Occasionally, you may need to enter multiple CPE reports for the same client if you receive laboratory confirmation for more than one aetiologic agent with different carbapenemases. These are considered separate CPE reports and need to be entered into iPHIS as separate cases. However, there are some technical challenges in iPHIS to be aware of:

iPHIS **does not** allow more than one CPE case to be open for the same client.

iPHIS **does not** allow a client to have two (or more) CPE cases with the same reported date.

Follow the steps below to enter two (or more) CPE cases reported for the same client.

Steps:

1. Investigate and document **all** CPE cases reported on the same date for this client.
2. Open a new CPE case in iPHIS for the client. Enter the CPE that occurred most recently.
3. Use the date the CPE was reported to the PHU as the **Reported Date**. For example, if the CPE was reported on 1 September 2018, use this date.
4. Complete data entry for the first CPE case (according to this guide).
5. Close the case.
6. Open a second CPE case for the client. For the **Reported Date**, enter the date 1 day **after** the CPE was reported to the PHU. For example, if the CPE was reported on 1 September 2018, use 2 September 2018.
7. Complete data entry for the second CPE case (according to this guide).
8. Close the case.
9. Repeat steps 6-8 for each additional CPE case reported on the same date.

Appendix 4: Linking Cases to Unknown Exposure

To minimize the number of exposures created in the system and to reduce workload when exposures are truly unknown, a provincial “Unknown Exposure” has been created within selected sporadic outbreaks to indicate that the case acquired CPE from an unknown source. The ‘**Earliest Exposure Date**’ for the exposures has been set to ‘1111-01-01’ and no ‘**Most recent Exposure Date**’ is entered.

Note: Users must not modify the exposure details for the unknown exposures (provided below).

To link a case or contact to the provincial Unknown Exposure within a sporadic outbreak:

1. After selecting a case or contact within Outbreak Management, select **Cases > Case > Exposures** or **Contacts > Contact > Exposures**
2. Select the **Link Exposure** button. All exposures created within this outbreak should appear.
3. Click the **Select** button beside the unknown exposure. See [Table A4.1](#) below for the particular name of the provincial Unknown Exposure to be used for each sporadic outbreak.
4. Enter the **Client Earliest Exposure Date/Time** using the calendar date picker and **Exposure Mode = Acquisition**.
5. Click **Save**. The unknown exposure is now linked to the case or contact.

Table A4.1: CPE provincial unknown exposures and exposure IDs associated with sporadic outbreaks. All public health units can link cases to the sporadic outbreak unknown exposures.

Disease Name	Outbreak Number	Exposure ID	Unknown Exposure Name
CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-UNSPECIFIED	0000-2018-007	141467	01-UNKNOWN- CARBAPENEMASE- PRODUCING ENTEROBACTERIACEAE (CPE)- DO NOT MODIFY

Appendix 5: iPHIS Application Screen Shots

1.0 Creating a Case

Outbreak Search Screen

[Return to Section 1.0 Creating a Case](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Search

Demographics
General
Administration
System Admin
CD
TB
STD
Lab
Mass
Public Health
Outbreak
Reports
Logoff

Outbreak Number:

Outbreak Name:

Outbreak Status:

Outbreak Classification:

Onset Date Range: To

Reported Date: To

Primary Investigator:

Disease Group:

Disease:

Agent Type:

Exposure Id:

Exposure Type:

Category/Transmission:

Source:

Source Details:

Exposure Setting:

Exposure Setting Type:

Outbreak Type:

Health Unit Responsible: MOHLTC - PHD (0)

Aetiologic Agent:

Subtype:

Exposure Name:

Exposure Location Name:

	Sort Order	Ascending/Descending
Health Unit Responsible	1	ASCENDING
Outbreak Name	2	ASCENDING
Outbreak Number	3	ASCENDING
Outbreak Classification	4	ASCENDING
Disease	5	ASCENDING
Reported Date	6	ASCENDING
Onset Date	7	ASCENDING
Outbreak Status	8	ASCENDING
Investigator	9	ASCENDING

Search Clear All Retrieve Criteria

Sporadic CPE Outbreak Results

[Return to Section 1.0 Creating a Case](#)

The screenshot shows the 'Outbreak Management' interface in Internet Explorer. The main content area displays 'Outbreak Search Results' with a table containing one entry:

Health Unit Responsible	Outbreak Number	Outbreak Name	Outbreak Classification	Disease	Reported Date	Onset Date	Outbreak Status	Investigator
MOHLTC - PHD (0)	0000-2018-007	SPORADIC CARBAPENAMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES	CONFIRMED	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION	2018-05-01	2018-05-01	OPEN	

Below the table are buttons for 'Search Again' and 'New Description'. A 'Details' button is located at the end of the table row.

Case Results

[Return to Section 1.0 Creating a Case](#)

The screenshot shows the 'Outbreak Management' interface with detailed case information. The top section displays outbreak details:

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENAMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	MOHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		

Below this are tabs for 'Contacts', 'Cases', 'Exposures', and 'Supply Orders'. The 'Case Search Results' section shows a table with the following columns:

Health Unit Responsible	Case ID	Reported Date	Case Name	Date of Birth	Case Classification	Case Disease	Case Disposition	Case Status	Primary Investigator
-------------------------	---------	---------------	-----------	---------------	---------------------	--------------	------------------	-------------	----------------------

Buttons for 'Search Again', 'New Case' (circled in red), and 'Link Cases' are located below the table.

Client Sub-Search Screen

[Return to Section 1.0 Creating a Case](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Client Sub-Search

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENAMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	HQHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		

Demographics
General
Administration
System Admin
CD
TB
STD
Lab
Mass
Public Health
Outbreak
Reports
Logoff

Contacts Cases Exposures Supply Orders

Please fill in the following for Client sub-search

HN	<input type="text"/>	Birth Date	<input type="text"/>
Last Name	<input type="text"/>	First Name	<input type="text"/>
Second Name	<input type="text"/>	Include Aliases in Search	<input type="checkbox"/>
Age Range	<input type="text"/> To <input type="text"/>	Soundex Search	<input type="checkbox"/>
Gender	<input type="text"/>	Year Of Birth Range	<input type="text"/> To <input type="text"/>
Country Emigrated From	<input type="text"/>	HU	<input type="text"/>
Phone	<input type="text"/>	Client Visit Between	<input type="text"/> and <input type="text"/>
DIAND Number	<input type="text"/>	TB Number	<input type="text"/>
		Client ID	<input type="text"/>

1.1 Case Details

Case Details Screen

[Return to Section 1.1 Case Details](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Number: 0000-2018-007
Outbreak Type: CPE - COMMUNITY
Health Unit Responsible: MOHLTC - PHD (0)
Primary Disease: CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION

Outbreak Name: SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Outbreak Status: OPEN
Reported Date: 2018-05-01

Case ID 4567 Client Name RASPBERRY, ROSIE Client ID 5614 Date of Birth 2000-08-13 [Details](#)

Episode Date 2018-08-13 Episode Date Type REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Outbreak Management > Case Details
[New Case](#) [Profile Report](#)

Case Details

Case ID: 4567 External Reference Number:

Reported Date: 2018-08-13 [History](#)

Health Unit Responsible: KINGSTON, FRONTENAC, LENNOX & ADDINGTON (2241) Assigned Date: 2018-08-13 [History](#)

Branch Office: KFLA - Kingston Office

Diagnosing HU: MIDDLESEX-LONDON (2244)

Onset Date:

Relevant Immunizations up-to-date for Client:

Progression

Disease: CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION Follow-Up Date/Time:

Aetiologic Agent: CITROBACTER FREUNDII

Subtype: GES

Further Differentiation:

Classification: CONFIRMED Classification Date: 2018-08-13 11:33:45 [History](#)

Outbreak Case Classification: CONFIRMED Outbreak Class. Date: 2018-08-13 11:33:45 [History](#)

Disposition: PENDING Disposition Date: 2018-08-13 11:33:45 [History](#)

Status: OPEN Status Date: 2018-08-13 11:33:45 [History](#)

Original Closed Date:

Priority: HIGH Priority Date:

Comments:

[+ Other Details](#)

Expanded Other Details Section

[Return to Section 1.1 Case Details](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	MHHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		

Case ID 4567 **Client Name** RASPBERRY, ROSIE **Client ID** 5614 **Date of Birth** 2000-08-13 [Details](#)

Episode Date 2018-08-13 **Episode Date Type** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Case ID	4567	External Reference Number	<input type="text"/>
Reported Date	2018-08-13		
Health Unit Responsible	KINGSTON, FRONTENAC, LENNOX & ADDINGTON (2241)	Assigned Date	2018-08-13 History
Branch Office	KFLA - Kingston Office		
Diagnosing HU	MIDDLESEX-LONDON (2244)		
Onset Date			
Relevant Immunizations up-to-date for Client			
Progression		Follow-Up Date/Time	
Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		
Aetiologic Agent	CITROBACTER FREUNDII		
Subtype	GES		
Further Differentiation			
Classification	CONFIRMED	Classification Date	2018-08-13 11:33:45 History
Outbreak Case Classification	CONFIRMED	Outbreak Class. Date	2018-08-13 11:33:45 History
Disposition	PENDING	Disposition Date	2018-08-13 11:33:45 History
Status	OPEN	Status Date	2018-08-13 11:33:45 History
Original Closed Date			
Priority	HIGH	Priority Date	<input type="text"/>
Comments	<input type="text"/>		

Other Details

Client Address at Time of Case	<input type="text"/>	
Sensitive Occupation	<input type="text"/>	
Travel		Immigration and Other

1.2 Reporting Information

Reporting Information Section

[Return to Section 1.1 Case Details](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	MOHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		

Case ID 4567 **Client Name** RASPBERRY, ROSIE **Client ID** 5614 **Date of Birth** 2000-08-13 [Details](#)

Episode Date 2018-08-13 **Episode Date Type** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

+ Other Details

Transcriber Information

Transcriber Last Name

Transcriber First Name

Date of Transcription

Created By

Created Date 2018-08-13 11:34:33

Reporting Information

Received Date

Notification Method

Investigation Start Date

Reporting Source
* Enter External Source Type and either Source Name or City for filter

External Source Type Source Name City [Filter](#)

Type Name

Address

Phone Number

Other Reporting Source Type

Other Reporting Source Name

[Save](#) [Check Classification](#)

1.3 Assignment History

Assignment History Section

[Return to Section 1.1 Case Details](#)

The screenshot displays the 'Outbreak Management' interface. The top navigation bar includes links for Home, Client Search, Wait Queue, Scheduling, To Do's, Lab, Site Map, Help, About, and Logoff. The left sidebar contains a menu with options: Demographics, General, Administration, System Admin, CD, TB, STD, Lab, Mass, Public Health, Outbreak, Reports, and Logoff. The main content area shows outbreak details for 'SPORADIC CARBAPENEMASE-PRODUCING ENTEROCOPEN'. Key information includes Outbreak Number (0000-2018-007), Outbreak Type (CPE - COMMUNITY), Health Unit Responsible (MOHLTC - PHD (0)), and Reported Date (2018-05-01). Client information for ROSIE RASPBERRY is also visible. The 'Reporting Information' section contains fields for Received Date, Notification Method, and Investigation Start Date. Below this is the 'Reporting Source' section with a 'Filter' button. The 'Physician' section includes 'Physician Filters' and a table for adding physicians with columns for Phone, Address, Role, Effective Date, and End Date. The 'Assignment History' section at the bottom is highlighted with a red box and shows an 'Investigator' dropdown menu with a 'Save' button. Below the dropdown, the assignment history is displayed as a table with columns for 'Assignment Date/Time' and 'Investigator', showing a record for '2018-08-13 14:19:01' assigned to 'STUDENT01, KINGSTON'.

Assignment Date/Time	Investigator
2018-08-13 14:19:01	STUDENT01, KINGSTON

2.0 Laboratory

Requisition Information Section

[Return to Section 2.0 Lab](#)

Lab Requisition Details

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Number: 0000-2018-007
Outbreak Type: CPE - COMMUNITY
Outbreak Name: SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Health Unit Responsible: MOHLTC - PHD (0)
Outbreak Status: OPEN
Primary Disease: CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION
Reported Date: 2018-05-01

Case ID: 4567 **Client Name:** RASPBERRY, ROSIE **Client ID:** 5614 **Date of Birth:** 2000-08-13 [Details](#)
Episode Date: 2018-08-13 **Episode Date Type:** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Client Information

Client Name: RASPBERRY, ROSIE **Birth Date:** 2000-08-13
Gender: FEMALE **Health Unit:** MOHLTC - PHD (0)

Requisition Information

Placer Requisition ID: 235646
Responsible Authority: MOHLTC - PHD
* Enter External Source Type and either Source Name or City for filter
External Source Type: LAB **Source Name:** **City:** KINGSTON [Filter](#)
Ordering Provider: Kingston General Hospital
External Number: 4122
Addresses: 76 STUART STREET, KINGSTON, ON, K7L2V7
Comments:
Lab: Kingston General Hospital
Requisition Date: 2018-08-01 [+](#)

[Save](#) [New](#) [Delete](#)

Test and Result Summary

Program Area: CD **Test Panel:**

Set ID	Specimen Type	Specimen ID	Def.	Body Site	Test Name	Test Result Status	Collection Date	Reported Date	Add Test
--------	---------------	-------------	------	-----------	-----------	--------------------	-----------------	---------------	--------------------------

Test Information Section

[Return to Section 2.0 Lab](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Lab Test Details

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENAMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASE
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	MOHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		

Case ID 4567 **Client Name** RASPBERRY, ROSIE **Client ID** 5614 **Date of Birth** 2000-08-13 [Details](#)

Episode Date 2018-08-13 **Episode Date Type** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Client Information

Client Name	RASPBERRY, ROSIE	Birth Date	2000-08-13
Gender	FEMALE	Health Unit	MOHLTC - PHD (0)
Placer Requisition ID	235646		

[Requisition Details](#)

Test Information

Set ID	
Specimen Type	◆ Blood ▼
Specimen ID	
Body Site	◆ Blood ▼
Test Name	◆ MICROBIOLOGY ▼
Test Result Status	Final results; results stored and verified. Only changed with a corrected result ▼
Collection Date	2018-08-08 📅
Reported Date	2018-08-13 📅
Defining Specimen	<input type="checkbox"/>

[Save](#) [New](#) [Delete](#)

Result Information Section

[Return to Section 2.0 Lab](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Lab Result Details

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	MOHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION		

Case ID 4567 **Client Name** RASPBERRY, ROSIE **Client ID** 5614 **Date of Birth** 2000-08-13 [Details](#)

Episode Date 2018-08-13 **Episode Date Type** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Client and Test Information

Client Name	RASPBERRY, ROSIE	Birth Date	2000-08-13
Gender	FEMALE	Health Unit	MOHLTC - PHD (0)
Placer Requisition ID	235646		
Specimen Type	Blood	Body Site	Blood
Collected Date	2018-08-08	Reported Date	2018-08-13

[Requisition Details](#) [Test Details](#)

Result Information

Set OBX Id

Health Unit

Branch

Program Area

Disease/Diagnosis

Resulted Test Group Code Resulted Test Code

Result

Assign result to case

Observation Value

[Save](#) [New](#) [Delete](#) [Create Default Case and Link](#)

[Sensitivities](#)

Abnormal Flags [Add](#)

Notes [Add](#)

3.0 Risks

Risk Factor Entry for CPE Screen

[Return to Section 3.0 Risks](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logout

Outbreak Management

Outbreak Number: 0000-2018-007
Outbreak Type: CPE - COMMUNITY
Health Unit Responsible: H04LTC - PHD (0)
Primary Disease: CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION

Outbreak Name: SPORADIC CARBAPENAMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Outbreak Status: OPEN
Reported Date: 2018-05-01

Case ID: 4567 **Client Name:** RASPBERRY, ROSIE **Client ID:** 5614 **Date of Birth:** 2000-08-13 [Details](#)

Episode Date: 2018-08-13 **Episode Date Type:** REPORTED

[Contacts](#) | [Cases](#) | [Exposures](#) | [Supply Orders](#)

Medical Risk Factors

CHRONIC ILLNESS/UNDERLYING MEDICAL CONDITION (SPECIFY)	NO					Notes
ENDOSCOPIC PROCEDURE IN CANADA IN THE LAST 12 MONTHS	NO					Notes
HOSPITALIZATION IN CANADA IN THE LAST 12 MONTHS (SPECIFY CITY AND HOSPITAL)	NO					Notes
HOSPITALIZATION OUTSIDE OF CANADA IN THE LAST 12 MONTHS (SPECIFY COUNTRY)	YES	India				Notes
ICU ADMISSION IN CANADA IN THE LAST 12 MONTHS	NO					Notes
MEDICAL/SURGICAL PROCEDURE IN CANADA IN THE LAST 12 MONTHS - EXCLUDING ENDOSCOPIC PROCEDURES (SPECIFY PROCEDURE AND HOSPITAL/CLINIC)	NO					Notes
MEDICAL/SURGICAL PROCEDURE OUTSIDE OF CANADA IN THE LAST 12 MONTHS (SPECIFY COUNTRY)	YES	India				Notes
OTHER (SPECIFY)	NO					Notes
PREVIOUS COLONIZATION WITH CPE	UNKNOWN					Notes
UNKNOWN	NO					Notes

[No to All](#)

Behavioural Social Factors

KNOWN CONTACT WITH CONFIRMED CASE IN THE LAST 12 MONTHS	NO					Notes
OTHER (SPECIFY)	UNKNOWN					Notes
TRAVEL OUTSIDE CANADA IN THE LAST 12 MONTHS (SPECIFY COUNTRY)	YES	India				Notes
UNKNOWN	NO					Notes

[No to All](#)

4.0 Symptoms

Signs and Symptoms Screen

[Return to Section 5.0 Symptoms](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Number: 0000-2018-007
Outbreak Type: CPE - COMMUNITY
Health Unit Responsible: MOHLTC - PHD (O)
Primary Disease: CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION
Outbreak Name: SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Outbreak Status: OPEN
Reported Date: 2018-05-01

Case ID: 4567 **Client Name:** * RASPBERRY, ROSIE **Client ID:** 5614 **Date of Birth:** 2000-08-13 [Details](#)
Episode Date: 2018-08-08 **Episode Date Type:** SPECIMEN

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Outbreak Management > Case > Signs and Symptoms

Signs and Symptoms

Symptom [Add](#)

Symptom Details (if positive)												
Symptom	Delete Symptom	Response	Use As Onset	Onset Date	Onset Time	Recovery Date	Recovery Time	Duration Days	Duration Hours	Site / Description	Observed Value	Observed Unit
ASYMPTOMATIC	<input type="checkbox"/>	DON'T KNOW	<input type="checkbox"/>	<input type="text"/>								
BACTEREMIA	<input type="checkbox"/>	YES	<input type="checkbox"/>	<input type="text"/>								
INTRA-ABDOMINAL INFECTION	<input type="checkbox"/>	NO	<input type="checkbox"/>	<input type="text"/>								
OTHER [SPECIFY]	<input type="checkbox"/>	NO	<input type="checkbox"/>	<input type="text"/>								
PNEUMONIA	<input type="checkbox"/>	NO	<input type="checkbox"/>	<input type="text"/>								
URINARY TRACT INFECTION	<input type="checkbox"/>	NO	<input type="checkbox"/>	<input type="text"/>								

[Save](#) [Delete](#)

5.0 Interventions

[Return to Section 6.0 Interventions](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Number: 0000-2018-007
Outbreak Type: CPE - COMMUNITY
Health Unit Responsible: MOHLTC - PHD (O)
Primary Disease: CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION

Outbreak Name: SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Outbreak Status: OPEN
Reported Date: 2018-05-01

Case ID: 4567 **Client Name:** RASPBERRY, ROSIE **Client ID:** 5614 **Date of Birth:** 2000-08-13 [Details](#)

Episode Date: 2018-08-13 **Episode Date Type:** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Outbreak Management > Case > Interventions

Interventions

[New Intervention](#)

Intervention Type:

Start Date/Time: End Date/Time:

Internal Provider: Location:

* Enter either Professional Status, Source Name, HU, or City for filter.

External Provider Filter: Professional Status: Source Name:
 HU: City: [Filter](#)

External Provider:

[Save](#)

Intervention Type	Start Date/Time	End Date/Time	Internal Provider	External Provider	Location	Update	Delete	Notes
COHORTING: PATIENTS	2018-08-13 14:33:52		STUDENT01, MOH		Kingston General Hospital	Update	Delete	Notes
DEDICATED EQUIPMENT	2018-08-13 14:28:58		STUDENT01, PHD		Kingston General Hospital	Update	Delete	Notes

6.0 Outcome (Fatal Outcomes Only)

Case Outcome Screen

[Return to Section 7.0 Outcome \(Fatal Outcomes Only\)](#)

The screenshot shows the 'Outbreak Management' interface. The top navigation bar includes links for Home, Client Search, Wait Queue, Scheduling, To Do's, Lab, Site Map, Help, About, and Logoff. The left sidebar contains a menu with options: Demographics, General, Administration, System Admin, CD, TB, STD, Lab, Mass, Public Health, Outbreak, Reports, and Logoff. The main content area displays case details for Case ID 4530, Client Name BLUEBERRY, BONNIE, Client ID 3702, and Date of Birth 2003-01-14. The 'Outcome' section is active, showing a dropdown menu with 'Outcome' selected, an 'Outcome Date' field, and an 'Accurate' checkbox. The 'Save' button is circled in red.

Field	Value
Outbreak Number	0000-2018-007
Outbreak Type	CPE - COMMUNITY
Health Unit Responsible	NOHLTC - PHD (0)
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-UNSPECIFIED
Outbreak Name	SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Outbreak Status	OPEN
Reported Date	2018-05-01

Case ID 4530 Client Name BLUEBERRY, BONNIE Client ID 3702 Date of Birth 2003-01-14 [Details]

Episode Date 2018-06-10 Episode Date Type SPECIMEN

[Contacts] [Cases] [Exposures] [Supply Orders]

Outbreak Management > Case > Outcome

Outcome

Outcome [dropdown] Outcome Date [text] Accurate

[Save] [Notes]

Fatal Outcome Options Screen

[Return to Section 7.0 Outcome \(Fatal Outcomes Only\)](#)

Outbreak Management

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Demographics
General
Administration
System Admin
CD
TB
STD
Lab
Mass
Public Health
Outbreak
Reports
Logoff

Outbreak Number 0000-2018-007
Outbreak Type CPE - COMMUNITY
Health Unit Responsible HOULTC - PHD (0)
Primary Disease CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-INFECTION

Outbreak Name SPORADIC CARBAPENAMASE-PRODUCING ENTEROBACTERIACEA (CPE) CASES
Outbreak Status OPEN
Reported Date 2018-05-01

Case ID 4567 **Client Name** RASPBERRY, ROSIE **Client ID** 5614 **Date of Birth** 2000-08-13 [Details](#)

Episode Date 2018-08-13 **Episode Date Type** REPORTED

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Outbreak Management > Case > Outcome

Outcome

Outcome Outcome Date Accurate

Funeral Date Funeral Postponed / Delayed

[Save](#) [Notes](#)

Disposition Type Infection Notification

Facility Name Liaison

Street Number Street Name

Street Type Street Direction

City Municipality

Telephone

[Add](#)

Disposition Type Infection Notification Facility Name Liaison Address Telephone

Cause of Death **Type Of Death** **Outbreak Related Source** [Add](#)

7.0 Closing a Case

Example of Closing a Case

[Return to Section 9.0 Closing a Case](#)

Home • Client Search • Wait Queue • Scheduling • To Do's • Lab • Site Map • Help • About • Logoff

Outbreak Management

Outbreak Number	0000-2018-007	Outbreak Name	SPORADIC CARBAPENEMASE-PRODUCING ENTEROBACTERIACEAE (CPE) CASES
Outbreak Type	CPE - COMMUNITY	Outbreak Status	OPEN
Health Unit Responsible	MOHLTC - PHD (0)	Reported Date	2018-05-01
Primary Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-UNSPECIFIED		

Case ID 4530 **Client Name** * BLUEBERRY, BONNIE **Client ID** 3702 **Date of Birth** 2003-01-14 [Details](#)

Episode Date 2018-05-01 **Episode Date Type** SPECIMEN

[Contacts](#) [Cases](#) [Exposures](#) [Supply Orders](#)

Outbreak Management > Case Details

[New Case](#) [Profile Report](#)

Case Details

Case ID	4530	External Reference Number	
Reported Date	2018-06-12		
Health Unit Responsible	SUDBURY AND DISTRICT (2261)	Assigned Date	2018-08-10 History
Branch Office	Sudbury & District Espanola Office		
Diagnosing HU	MOHLTC - PHD (0)		
Onset Date			
Relevant Immunizations up-to-date for Client			
Progression		Follow-Up Date/Time	
Disease	CARBAPENEMASE-PROD ENTEROBACTERIACEAE (CPE)-COLONIZATION		
Aetiologic Agent	ENTEROBACTER CLOACAE		
Subtype	NDM		
Further Differentiation	E. coli		
Classification	CONFIRMED	Classification Date	2018-06-11 10:49:33 History
Outbreak Case Classification	CONFIRMED	Outbreak Class. Date	2018-05-11 10:49:33 History
Disposition	COMPLETE	Disposition Date	2018-08-10 15:23:53 History
Status	CLOSED	Status Date	2018-06-12 10:49:33 History
Original Closed Date			
Priority	HIGH	Priority Date	
Comments			

Appendix 6: Summary of mandatory (M) and required (R) fields for provincial surveillance of CPE

1.1 Case Details ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Reported Date	7	M	Outbreak Case Classification	11
M	Health Unit Responsible	8	M	Disposition	11
M	Branch Office	8	M	Status	13
M	Diagnosing HU	8	M	Priority	14
M	Disease	8	M	Classification Date	11
M	Aetiologic Agent	9	M	Outbreak Classification Date	12
R	Subtype	9	M	Disposition Date	13
M	Classification	10	M	Status Date	13

1.2 Other Details and Reporting Information ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Client Address at Time of Case	15	R	Other Reporting Source Type	16
R	Investigation Start Date	15	R	Other Reporting Source Name	16
R	Reporting Source	16			

1.3 Physician Information ([return to section](#))

M/R	iPHIS field name	Page
M	Physician	17

1.4 Assignment History Information ([return to section](#))

M/R	iPHIS field name	Page
M	Investigator	18

2.1 Laboratory: Requisition Information ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
R	Placer Requisition ID	20	M	Requisition Date	21

2.2 Laboratory: Test Information ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Body Site	22	R	Collection Date	22
M	Test Name	22	R	Reported Date	23

2.3 Laboratory: Result Information ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Branch	24	R	Resulted Test Code	24
M	Program Area	24	M	Result	24
R	Disease/Diagnosis	24	R	Assign Result to Case	24
R	Resulted Test Group Code	24			

3.0 Risk Factors ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
R	Medical Risk Factors	27-34	R	Behavioural Social Factors	35

4.0 Exposure Field Information ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Exposure Level	37	M	Earliest Exposure Date/Time	38
M	Exposure Type	37	M	Country	37
M	Exposure Name	38	M	Province	37
M	Health Unit Responsible	38	M	City	37

5.0 Symptoms ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Asymptomatic	39	R	Any infection (specify)	39
R	Bacteremia	39	R	Pneumonia	39
R	Intra-abdominal infection	39	R	Urinary tract infection	39

7.0. Outcome ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Outcome (fatal)	42	M	Cause of Death	42
R	Accurate	42	R	Source	42
R	Outcome Date	42	M	Type of Death	42

8.0 Closing a Case ([return to section](#))

M/R	iPHIS field name	Page	M/R	iPHIS field name	Page
M	Classification	44	M	Disposition	45
M	Classification Date	44	M	Disposition Date	47
M	Outbreak Case Classification	45	M	Status	47
M	Outbreak Classification Date	45	M	Status Date	47

Document History

Table 1. History of Revisions

Revision Date	Document Section	Description of Revisions
January 2019	Entire CPE iPHIS user guide developed.	Pre-release of CPE iPHIS user guide version 1.0 to health units. Content has been finalized. Formatting and adherence to PHO visual identity is under review.
March 2019	CPE iPHIS user guide	Reviewed by PHO Knowledge Services for accessibility and visual identity.
August 2019	CPE iPHIS user guide	Formatting throughout document by Emergency Preparedness & Support and IPAC to make user guide consistent with other recently published iPHIS user guides.
October 2019	<ol style="list-style-type: none"> 1. Page 4, change of contact information for iPHIS technical support 2. Page 20, guidance for entering Placer Requisition IDs 	<ol style="list-style-type: none"> 1. In an effort to continue to integrate public health applications and support, the iPHIS Help Desk will merge with the Panorama Help Desk, now part of the Public Health I&IT Solutions Branch effective November 4, 2019. Contact information has been updated in the CPE user guide. 2. Guidance for entering the same Placer Requisition ID for multiple cases in one client has been added.

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