



Section 1 - Patient Information

PERSONAL HEALTH NUMBER (or out-of province Health Number and province)	DOB (DD/MMM/YYYY)	GENDER <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> UNK
PATIENT SURNAME	PATIENT FIRST AND MIDDLE NAME	
ADDRESS	CITY	POSTAL CODE

DATE RECEIVED

LABORATORY USE ONLY

Section 2 - Submitting Laboratory Details

CONTACT PERSON	HOSPITAL (Name and address for report delivery)
TELEPHONE NUMBER	
ADDITIONAL COPIES TO:	

SAMPLE REF. NO.

DATE COLLECTED
(DD/MMM/YYYY)

Section 3 - Specimen Details

ORGANISM IDENTIFICATION:	Genus	Species	SPECIMEN SOURCE	<input type="checkbox"/> respiratory	<input type="checkbox"/> blood
<input type="checkbox"/> SCREENING ISOLATE	<input type="checkbox"/> CLINICAL ISOLATE	<input type="checkbox"/> CONTACT TRACING	<input type="checkbox"/> urine	<input type="checkbox"/> wound	
<input type="checkbox"/> rectal	<input type="checkbox"/> other:				
PREVIOUS CPO SCREENING:	<input type="checkbox"/> NO	<input type="checkbox"/> YES	DATE:		

Automated Antibiogram:

Antibiotic	MIC	Interpretation (S, I, R)	Antibiotic	MIC	Interpretation (S, I, R)
Ampicillin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Gentamicin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Ampicillin/Clavulanate		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Imipenem		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Aztreonam		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Levofloxacin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Amikacin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Meropenem		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Cefazolin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Minocycline		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Cefepime		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Nitrofurantoin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Cefoxitin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Pefloxacin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Cefpodoxime		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Piperacillin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Ceftazidime		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Piperacillin/Tazobactam		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Cefixime		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Rifampin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Ceftriaxone		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Ticarillin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Cephalothin/Cephalexin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Ticarillin/Clavulanic Acid		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Ciprofloxacin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Tigecycline		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Colistin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Tobramycin		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>
Ertapenem		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>	Trimethoprim/Sulfamethoxazole		S <input type="checkbox"/> I <input type="checkbox"/> R <input type="checkbox"/>

OR, See attached for automated AST results

Phenotypic Confirmation:	Other Results:																
E-test/discs	ESBL E-test Interpretation: _____																
<table border="1"> <thead> <tr> <th>Antibiotic</th> <th>MIC</th> <th>Zone diameter</th> <th>Interpretation</th> </tr> </thead> <tbody> <tr><td>Ertapenem</td><td></td><td></td><td></td></tr> <tr><td>Meropenem</td><td></td><td></td><td></td></tr> <tr><td>Imipenem</td><td></td><td></td><td></td></tr> </tbody> </table>	Antibiotic	MIC	Zone diameter	Interpretation	Ertapenem				Meropenem				Imipenem				Other Tests and Interpretation: _____
Antibiotic	MIC	Zone diameter	Interpretation														
Ertapenem																	
Meropenem																	
Imipenem																	
Rosco Disc Interpretation: _____	CPO PCR Interpretation: _____																

Appendix C – Surveillance Form for Carbapenemase-Producing Organisms (CPO) Identified in Acute Care Facility

1	Unique Identifier – assigned by BCCDC Public Health Laboratory (PHL) _____
2	Patient's status <input type="checkbox"/> Inpatient <input type="checkbox"/> Other, <i>please specify</i> _____
3	Date of admission or visit (dd/mmm/yyyy) _____
4	Name of the facility _____
5	CPO status <input type="checkbox"/> Infection (please also complete appendix D) <input type="checkbox"/> Colonization <input type="checkbox"/> Unknown
6	Did the patient travel outside of Canada within the past 12 months? <input type="checkbox"/> Yes. <i>Please specify the name of the country</i> _____ <input type="checkbox"/> Country not provided <input type="checkbox"/> No. <i>Please skip Question 7.</i> <input type="checkbox"/> Unknown or patient is discharged. <i>Please skip Question 7.</i>
7	If answered Yes to Question 6, did the patient have a healthcare encounter outside of Canada within the past 12 months? <input type="checkbox"/> Yes, an overnight stay in a hospital or undergone medical/surgical procedure outside of Canada <input type="checkbox"/> Yes, other healthcare encounter, e.g., visited GP, walking clinic, dentist, ER, etc. <input type="checkbox"/> No healthcare encounter <input type="checkbox"/> Unknown
8	What types of healthcare encounters has the patient had in BC in the past 12 months? (<i>Check all that apply</i>) <input type="checkbox"/> An acute care unit/facility admission <input type="checkbox"/> A long-term care facility admission <input type="checkbox"/> A medical/surgical procedure in an outpatient setting <input type="checkbox"/> No healthcare encounter <input type="checkbox"/> Unknown
9	Is the unit/facility in which the patient is currently admitted under investigation for CPO transmission? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown or patient is discharged
10	Did the patient have contact [<i>minimum 12 hours</i>] with a known CPO case within the past 12 months? (<i>Check all that apply</i>) <input type="checkbox"/> Yes, within an acute care facility <input type="checkbox"/> Yes, within a long-term care facility <input type="checkbox"/> Yes, private household <input type="checkbox"/> Yes, other <i>please specify</i> _____ <input type="checkbox"/> No. <i>Please skip Question 11.</i> <input type="checkbox"/> Unknown. <i>Please skip Question 11</i>
11	If answer Yes to Question 10, what was the <i>nature</i> of the contact? (<i>Check all that apply</i>) <input type="checkbox"/> Roommate <input type="checkbox"/> Same unit/facility or house <input type="checkbox"/> Healthcare provider <input type="checkbox"/> Friend/Relative <input type="checkbox"/> Environmental sources (e.g., contaminated sink or other surface, medical equipment, etc.) <input type="checkbox"/> Other, <i>please specify</i> _____ <input type="checkbox"/> Unknown

Once completed, please send it to PICNet at picnet@phsa.ca (cc guanghong.han@phsa), or fax 604-875-4373

Appendix D – Addendum Form for Carbapenemase-Producing Organisms (CPO) Infections Identified in Acute Care Facility

NB: This form should be complete if a) the case was identified as a CPO infection; b) the case was initially reported as colonization, and subsequently developed into a CPO infection within a year from initial identification. Please ensure that the surveillance form for CPO (**Appendix C**) has been completed for this case.

1	Unique Identifier – assigned by BCCDC Public Health Laboratory (PHL) _____
2	Patients' status <input type="checkbox"/> Inpatient <input type="checkbox"/> Other, <i>please specify</i> _____
3	Date of admission or visit (dd/mmm/yyyy) _____
4	Name of the facility _____
5	Date of CPO infection identification (dd/mmm/yyyy) _____
6	Site(s) of infection <input type="checkbox"/> Bloodstream <input type="checkbox"/> Urinary tract <input type="checkbox"/> Respiratory tract <input type="checkbox"/> Wound <input type="checkbox"/> Surgical site <input type="checkbox"/> Other, <i>please specify</i> _____
7	Organism(s) isolated (Check all that apply) <input type="checkbox"/> <i>Acinetobacter</i> spp. <input type="checkbox"/> <i>Serratia</i> spp. <input type="checkbox"/> <i>Klebsiella pneumoniae</i> <input type="checkbox"/> <i>Enterobacter</i> spp. <input type="checkbox"/> <i>Escherichia coli</i> <input type="checkbox"/> <i>Proteus</i> spp. <input type="checkbox"/> <i>Morganella morganii</i> <input type="checkbox"/> <i>Citrobacter</i> spp. <input type="checkbox"/> <i>Pseudomonas</i> spp. <input type="checkbox"/> Other <i>Enterobacteriaceae</i> , <i>please specify</i> _____
8	CPO gene(s) detected: <input type="checkbox"/> NDM <input type="checkbox"/> KPC <input type="checkbox"/> OXA-48 <input type="checkbox"/> VIM <input type="checkbox"/> IMP <input type="checkbox"/> SME <input type="checkbox"/> Other, <i>please specify</i> _____
9	Was ICU admission required due to CPO infections or the complications associated with CPO infection? <input type="checkbox"/> Yes – the patient was admitted to ICU as a result of a CPO infection or complications associated with a CPO infection. <input type="checkbox"/> No – the patient was not admitted to ICU <input type="checkbox"/> N/A – patient was already in ICU due to other medical conditions <input type="checkbox"/> Unknown
10	Patient outcome <u>30 days</u> or up until discharge after identification of CPO infection <input type="checkbox"/> Patient alive, still in hospital 30 days after diagnosis <input type="checkbox"/> Patient survived and discharged <input type="checkbox"/> Patient survived and transferred <input type="checkbox"/> Patient died

Once completed, please send it to PICNet at picnet@phsa.ca (cc guanghong.han@phsa) or fax 604-875-4373

Appendix E – Notification of Ongoing Carbapenemase-Producing Organisms (CPO) Transmission Investigation

Please complete this form for notification of ongoing CPO transmission investigation in your facility or health authority and email to picnet@phsa.ca or fax to 604-875-4373

A. Notification Information

Health Authority: _____ Facility Name: _____ Unit: _____

Contact Person: _____ Title: _____

Contact Phone: _____ Email: _____

Facility type: Acute Care Hospital Residential Care Facility Other _____

Is this report: Notification of transmission investigation (*complete section B below*)

Notification of transmission investigation resolved (*complete section C*)

B. Transmission Investigation Notification

Date of the index case* identified (dd/mm/yyyy): _____

Organism (Genus species): _____

CPO gene identified (e.g. NDM, KPC): _____

Date investigation initiated (dd/mm/yyyy): _____

* A case that makes health authority suspected of CPO transmission. It may be or may not be the first case in the transmission.

C. Transmission Investigation Resolved

Date investigation closed (dd/mm/yyyy): _____

Notes:

Reported by: _____ Date: _____

Once completed, please send it to PICNet at picnet@phsa.ca (cc guanghong.han@phsa) or fax 604-875-4373

Appendix F – Letter to Ordering Provider in Response to CPO Cases Identified in the Community

Date:

Dear *Health Care Provider (ordering provider)*,

Re: *Patient Last name, First name; PHN; DOB*

Public Health has received laboratory notification that your patient tested positive for a carbapenemase-producing organism (CPO) - an emerging public health concern. As per the Public Health Act and the Communicable Disease Regulation, physicians/administrators for laboratories that identify CPO are required to report cases to their local medical health officer.

A provincial non-nominal surveillance program is in place to monitor the epidemiology (e.g. risk factors, laboratory data) of CPO in BC. Each patient isolate is assigned a unique identifier for this purpose. The unique identifier for your patient is _____. Attached is a surveillance form. We ask that you complete this form to the best of your ability and return it by email or fax to the Provincial Infection Control Network of BC at picnet@phsa.ca or [604-875-4373](tel:604-875-4373).

CPOs are multi-drug resistant gram negative bacteria that pose significant risk to vulnerable patients in healthcare facilities, as the antibiotics available to treat infections are very limited. Due to this risk, please request that your patient inform any healthcare facility on admission and/or routine healthcare encounters (such as hemodialysis, oncology clinics, BMT day care) that they have tested positive for CPO. Infection Control measures will be put in place to decrease the likelihood of spreading these bacteria to other patients.

At this time, little is known about the carriage and clearance of CPO infections in the community after treatment. Follow-up testing of clearance is not recommended, as carriage may return after treatment with a carbapenem antibiotic.

Interpretation of this laboratory result should be in context of the overall health of your patient. In the community, patients who test positive for a CPO do not generally pose a risk to others. Patients should be advised to maintain good personal hygiene and avoid sharing personal items to prevent spread to others. Added precautions are NOT required in the community office setting.

Attached is a patient information sheet for your patient (CPO Health file). Further information on CPO is available at [BCCDC website](#).

Appendix G – Enhanced Surveillance Form for Carbapenemase-Producing Organisms (CPO) Identified in the Community

1	Unique Identifier – assigned by BCCDC Public Health Laboratory (PHL) _____
2	Patient's CPO status <input type="checkbox"/> Infection <input type="checkbox"/> Colonization <input type="checkbox"/> Unknown
3	At what care setting was the patient identified with CPO? <input type="checkbox"/> Outpatient clinic <input type="checkbox"/> Emergency room <input type="checkbox"/> Community health center/clinic <input type="checkbox"/> Long-term care facility <input type="checkbox"/> GP's office <input type="checkbox"/> Other, <i>please specify</i> _____
4	Has the patient travelled outside Canada within the past 12 months? <input type="checkbox"/> Yes, <i>please specify the name of the country</i> _____ <input type="checkbox"/> Country not provided <input type="checkbox"/> No <input type="checkbox"/> Unknown
5	Has the patient had an overnight stay in a hospital or undergone medical/surgical procedure (e.g., endoscopic procedure, inserting catheter, hemodialysis, outpatient surgery) outside of Canada within the past 12 months? <input type="checkbox"/> Yes, <i>please specify the name of the country</i> _____ <input type="checkbox"/> Country not provided <input type="checkbox"/> No <input type="checkbox"/> Unknown
6	Has the patient had an overnight stay or longer in any BC care facilities (e.g., hospital, residential care facility) within the past 12 months? <input type="checkbox"/> Yes, <i>please specify the name of the facility</i> _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
7	Has the patient had contact with a known CPO case within the past 12 months? <input type="checkbox"/> Yes, <i>please specify the nature of contact:</i> <input type="checkbox"/> Household, i.e., a family member with CPO <input type="checkbox"/> Non-household, i.e., a friend/acquaintance with CPO <input type="checkbox"/> Healthcare facility, i.e., stayed in the same care unit or long-term care facility with a patient/resident with CPO <input type="checkbox"/> Other, <i>please specify</i> _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
If the patient was infected with CPO, please answer the following questions	
8	Site(s) of infection (<i>Check all that apply</i>) <input type="checkbox"/> Bloodstream <input type="checkbox"/> Urinary tract <input type="checkbox"/> Respiratory tract <input type="checkbox"/> Wound <input type="checkbox"/> Surgical site <input type="checkbox"/> Other, <i>please specify</i> _____
9	Was the patient admitted to a BC hospital due to current CPO infection? <input type="checkbox"/> Yes, the patient was admitted due to CPO infection. <i>Specify the name of the facility</i> _____ <input type="checkbox"/> No, the patient was admitted due to other medical conditions. <input type="checkbox"/> No, the patient was not admitted <input type="checkbox"/> Unknown

Once completed, please send it to PICNet at picnet@phsa.ca (cc guanghong.han@phsa) or fax 604-875-4373