

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

1	<b>Unique Identifier</b> – assigned by BCCDC Public Health Laboratory (PHL) _____
2	<b>Patient's status</b> <input type="checkbox"/> Inpatient <input type="checkbox"/> Haemodialysis clinic patient <input type="checkbox"/> Other, <i>please specify</i> _____
3	<b>Date of admission or visit</b> (dd/mmm/yyyy) _____
4	<b>Name of the facility</b> _____
5	<b>CPO status</b> <input type="checkbox"/> Infection (please also complete appendix D) <input type="checkbox"/> Colonization <input type="checkbox"/> Unknown
6	<b>Has the patient had an overnight stay in a hospital or undergone medical/surgical procedure outside of Canada within the past 12 months?</b> <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
7	<b>Has the patient had haemodialysis outside Canada within the past 12 months?</b> <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
8	<b>Was the patient transferred from a unit which was under investigation for CPO transmission?</b> <input type="checkbox"/> Yes, <i>please specify the name of the unit and facility</i> _____ <input type="checkbox"/> No - the patient was transferred from a unit or facility which was NOT under investigation for CPO transmission <input type="checkbox"/> Unknown - it is unknown whether the unit or facility from which the patient was transferred was under investigation for CPO transmission <input type="checkbox"/> N/A, the patient was not transferred
9	<b>Has the patient had contact with a known CPO case within the past 12 months?</b> <input type="checkbox"/> Yes, <i>please specify the nature of contact:</i> <input type="checkbox"/> Roommate in a healthcare facility <input type="checkbox"/> Same unit in a healthcare facility <input type="checkbox"/> Household <input type="checkbox"/> Other, <i>please specify</i> _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
10	<b>Is there any evidence that this case was associated with the reporting facility?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unable to determine
11	<b>Is there any evidence of transmission within the reporting facility?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unable to determine

Once completed, please send it to PICNet at [picnet@phsa.ca](mailto:picnet@phsa.ca) (cc [Guanghong.han@phsa](mailto: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 CPO surveillance form (**Appendix C**) has been completed for this case.

1	<b>Unique Identifier</b> – assigned by BCCDC Public Health Laboratory (PHL) _____
2	<b>Patients' status</b> <input type="checkbox"/> Inpatient <input type="checkbox"/> Haemodialysis clinic patient <input type="checkbox"/> Other, please specify _____
3	<b>Date of admission or visit</b> (dd/mmm/yyyy) _____
4	<b>Name of the facility</b> _____
5	<b>Date of CPO infection identification</b> (dd/mmm/yyyy) _____
6	<b>Site(s) of infection</b> <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, please specify _____
7	<b>Organism(s) isolated</b> (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>Entero-bacteriaceae</i> , please specify _____
8	<b>CPO gene(s) detected:</b> <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, please specify _____
9	<b>Was the patient treated with an antibiotic for CPO infection?</b> <input type="checkbox"/> Yes, please specify the antibiotic(s) was / were used? (Check all that apply) <input type="checkbox"/> Colistin <input type="checkbox"/> Tigecycline <input type="checkbox"/> Other, please specify _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
10	<b>Was ICU admission required due to CPO infections or the complications associated with CPO infection?</b> <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
11	<b>Patient outcome <u>30 days</u> or up until discharge after identification of CPO infection</b> <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

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

Please complete this form for notification of a CPO transmission investigation in your facility or health authority and email to [picnet@phsa.ca](mailto: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 investigation initiated\* (dd/mm/yyyy):

Organism (Genus species) \_\_\_\_\_

CPO gene identified (e.g. NDM, KPC) \_\_\_\_\_

### **C. Transmission Investigation Resolved**

Date investigation closed (dd/mm/yyyy):

Notes:

Reported by: \_\_\_\_\_ Date: \_\_\_\_\_

\* Date of investigation initiation = date of positive index case. Please contact Dr. Linda Hoang at 604-707-2618 or [Linda.Hoang@bccdc.ca](mailto:Linda.Hoang@bccdc.ca) for questions or clarifications regarding this form.

Once completed, please send it to PICNet at [picnet@phsa.ca](mailto:picnet@phsa.ca) (cc [Guanghong.han@phsa](mailto: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](mailto:picnet@phsa.ca) or 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	<b>Unique Identifier</b> – assigned by BCCDC Public Health Laboratory (PHL) _____
2	<b>Patient’s CPO status</b> <input type="checkbox"/> Infection <input type="checkbox"/> Colonization <input type="checkbox"/> Unknown
3	<b>Has the patient travelled outside Canada within the past 12 months?</b> <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
4	<b>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?</b> <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	<b>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?</b> <input type="checkbox"/> Yes, <i>please specify the name of the facility</i> _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
6	<b>Has the patient had contact with a known CPO case within the past 12 months?</b> <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"/> Other, <i>please specify</i> _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
<b>If the patient was infected with CPO, please answer the following questions</b>	
7	<b>Site(s) of infection</b> ( <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> _____
8	<b>Was the patient treated with an antibiotic for current CPO infection?</b> <input type="checkbox"/> Yes, <i>please specify the antibiotic(s) was / were used? (Check all that apply)</i> <input type="checkbox"/> Colistin <input type="checkbox"/> Tigecycline <input type="checkbox"/> Other, <i>please specify</i> _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown
9	<b>Was the patient admitted to a BC hospital due to current CPO infection?</b> <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

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