
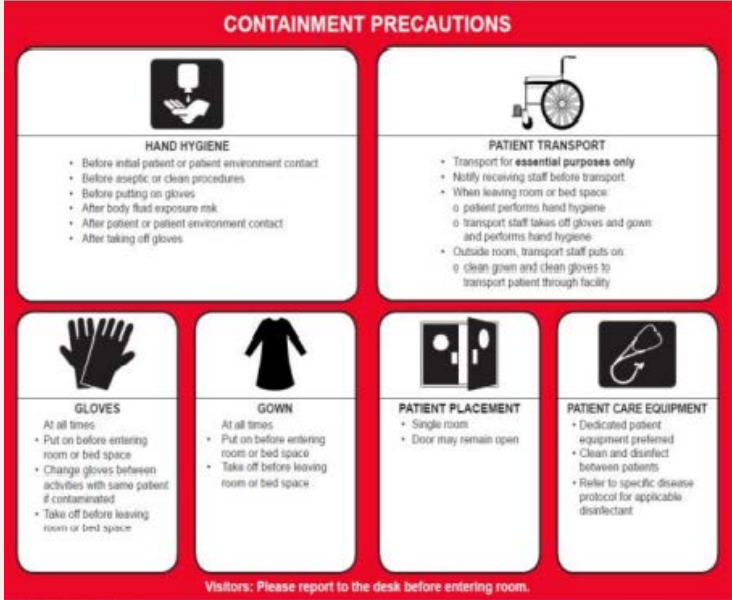


Carbapenemase-Producing Enterobacterales (CPE) SPECIFIC DISEASE PROTOCOL

In developed countries Carbapenemase-Producing Enterobacterales (CPE) transmission occurs almost exclusively within health care settings. The main route of spread is from person to person via contaminated hands of health care workers. Transmission has also been traced to contaminated endoscopes as well as sinks and drain pipes. Other risk factors for health care associated CPE carriage or infection include: prolonged hospital stay, ICU stay, antibiotic use, poor functional status, incontinent brief use, presence of multiple invasive devices, mechanical ventilation, availability of isolation rooms, staff-to-patient ratio and compliance with [hand hygiene](#). Community-acquired CPE in developing countries and in Westerners returning from developing countries have been reported. ^[30,6]

Infection Prevention & Control Measures

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY	
ROUTINE PRACTICES	CPE transmission may be prevented by following good hand hygiene and other Routine Practices at all times. Refer to the Routine Practices section of the Infection Prevention and Control Manual and/or the Routine Practices Policy for specific information.			
CONTAINMENT	 And notify site Infection Control Professional (ICP)	The need for Containment Precautions to be determined in consultation with the Infection Control Professional (ICP) based on a risk/benefit assessment. Infection Control Support Associate (ICSA) should be notified of decision.	Clinic Setting Perform a point of care risk assessment (PCRA) for Routine Care. See Appendix C for more details. Implement Contact Precautions where invasive procedures performed (e.g.'s wound clinics, vascular clinics)	Home Setting n/a

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY	
SIGNAGE	 <p>CONTAINMENT PRECAUTIONS</p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p>HAND HYGIENE</p> <ul style="list-style-type: none"> • Before initial patient or patient environment contact • Before aseptic or clean procedures • Before putting on gloves • After body fluid exposure risk • After patient or patient environment contact • After taking off gloves </div> <div style="width: 50%;"> <p>PATIENT TRANSPORT</p> <ul style="list-style-type: none"> • Transport for essential purposes only • Notify receiving staff before transport • When leaving room or bed space: <ul style="list-style-type: none"> o patient performs hand hygiene o transport staff takes off gloves and gown and performs hand hygiene • Outside room, transport staff puts on: <ul style="list-style-type: none"> o clean gown and clean gloves to transport patient through facility </div> </div> <div style="display: flex; flex-wrap: wrap; margin-top: 10px;"> <div style="width: 25%;"> <p>GLOVES</p> <p>At all times</p> <ul style="list-style-type: none"> • Put on before entering room or bed space • Change gloves between activities with same patient if contaminated • Take off before leaving room or bed space </div> <div style="width: 25%;"> <p>GOWN</p> <p>At all times</p> <ul style="list-style-type: none"> • Put on before entering room or bed space • Take off before leaving room or bed space </div> <div style="width: 25%;"> <p>PATIENT PLACEMENT</p> <ul style="list-style-type: none"> • Single room • Door may remain open </div> <div style="width: 25%;"> <p>PATIENT CARE EQUIPMENT</p> <ul style="list-style-type: none"> • Dedicated patient equipment preferred • Clean and disinfect between patients • Refer to specific disease protocol for applicable disinfectant </div> </div> <p style="text-align: center; font-size: small;">Visitors: Please report to the desk before entering room.</p>		Clinic Setting optional	Home Setting n/a
HAND HYGIENE	<p>Clean your hands according to the 4 moments of Hand Hygiene:</p> <p>Moment 1: BEFORE initial patient/resident/client (PRC) or PRC environment contact</p> <p>Moment 2: BEFORE aseptic/clean procedure</p> <p>Moment 3: AFTER body fluid exposure risk</p> <p>Moment 4: AFTER PRC or PRC environment contact</p>			

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
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PERSONAL PROTECTIVE EQUIPMENT (PPE)

Store PPE outside the room or in anteroom if available.
Perform [hand hygiene](#) before putting on PPE.

PPE for Containment Precautions includes:

- **Gloves – at all times**
 - **Wear gloves** to enter the room even if no contact with the person on Containment Precautions or their environment is anticipated.
 - **Remove gloves; dispose and perform [hand hygiene](#)** on exit from room
 - **Change gloves and perform** hand hygiene between care activities and procedures with the same person (e.g. after handling an indwelling urinary catheter or suctioning an endotracheal tube). This prevents contamination of clean body sites and the environment
 - **Perform** hand hygiene after glove removal.

- **Long-Sleeved Gowns – at all times**
 - **Wear a long sleeved gown** to enter the room even if no contact with the person on [Containment Precautions](#) or their environment is anticipated.
 - **Do not** wear the same gown on repeated occasions (e.g., do not remove then reapply the same gown).
 - **Do not** wear the same gown for more than one patient.
 - **Remove and replace** the gown if it becomes wet or visibly soiled.
 - **Remove the gown, dispose after use and perform [hand hygiene](#)** before leaving the room
 - **Do not** carry any PPE in pocket(s)



Faith or cultural head covering do not require covering or removing

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY	
<p>Accommodation</p>	<p>Put patient in a single room with a private toilet (or designated commode chair).</p> <p>Door may remain open.</p>	<p>Where possible, accommodate resident in a single occupancy room with dedicated toileting.</p> <p>If a single occupancy room is not available, in consultation with IP&C select roommate(s):</p> <ul style="list-style-type: none"> Who does not have a urinary catheter or requires frequent catheterization. Either the resident with CPE or the roommate should not be ambulating and/or sharing the washroom. See Appendix B - Table 1 for more details. <p>Door can remain open.</p> <p>Resident may leave room. See Appendix B – Table 2 for more details.</p> <p>Assist with hand hygiene as necessary.</p> <p>CPE positive residents should only use their own dedicated toileting facilities. Public bathrooms may be dedicated for urgent resident use if required. Immediately after use, the staff member should secure the bathroom until an isolation discharge clean is performed.</p>	<p>Clinic Setting</p> <p>Escort person with CPE to a private clinic room as soon as possible.</p> <p>Ensure regular cleaning of high touch surfaces between all clinic appointments is occurring. See Appendix C for more details.</p>	<p>Home Setting</p> <p>n/a</p>

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
<p>ENVIRONMENT/ EQUIPMENT CLEANING</p>	<p>Clean and disinfect all horizontal and frequently touched surfaces daily, and immediately when soiled. When more than one CPE positive patient resides on a unit or if transmission of CPE is a concern, arrange for a minimum of twice daily cleaning on frequently touched surfaces.</p> <p>Resistance to antibiotics is not an indication for using more concentrated solutions of disinfectants. Current disinfection protocols will be effective if they are properly carried out and performed using friction (scrubbing) and thorough cleaning and disinfection of frequently touch surfaces, daily and immediately when visibly soiled.</p> <p><u>Do not take</u> cleaning equipment/supplies from room to room.</p> <p>When cleaning a Containment Precautions room, ensure equipment is either discarded or reprocessed as appropriate.</p> <p>Pay particular attention to sink cleaning and disinfection.</p> <p>Dedicate PRC care equipment.</p> <p>PRC and family/visitors are <u>not</u> to access common/shared patient care areas or supplies (kitchen, cafeteria, linens etc).</p> <p>The Outbreak Management Team may recommend more extensive and frequent cleaning during an outbreak.</p>		

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
<p>ADMISSION SCREENING</p>	<p>Consult site ICP. After hours, consult:</p> <ul style="list-style-type: none"> • Dr. Evelyn Lo @ pager: 204-932-6538 for St. Boniface Hospital concerns • Dr. John Embil at HSC Switchboard 204-787-2071 for all other hospitals' concerns • Attending Pediatric ID Physician @ 204-787-2071 for pediatric concerns <p>Collect specimen if patient meets the following:</p> <ul style="list-style-type: none"> • Identified as CPE SUS • Identified as CPE positive or a CPE contact by any source, with no lab confirmation, (example, verbal, in patient record or transfer sheet). <p>Notify site Infection Control Professional (ICP) if there is documentation that a patient is positive but this is not recorded in the Electronic Patient Record (EPR). The EPR may not have been up dated.</p> <p>Admitted (in the last 12 months) to a healthcare facility within Canada, known to have endemic rates of CPE. Contact site ICP to determine such facilities.</p> <p>Received healthcare outside of Canada in the last 12 months.</p> <p>Surgery patients (if patient will be admitted after surgery or not): Collect CPE specimens at Pre-Operative Assessment Clinic** (PAC) visit if patient meets any CPE screening criteria, see table below.</p> <p>**or on the day of surgery if PAC visit is not in person</p>		<p>n/a</p>

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
<p>PATIENT TRANSPORT</p> <p>I. Transport within facilities</p> <p>II. Transport between facilities</p> <p>III. Discharge</p>	<p>I. Patient must remain in room unless medically indicated.</p> <p><i>Resident</i> may leave room. See Appendix B - Table 2 for more details</p> <p>Notify receiving unit/clinic/site in advance of the Containment Precautions required.</p> <p>Perform tests and procedures in the patient/resident room whenever possible.</p> <p>If the patient/resident's bed or personal wheelchair is used for transport, wipe the steering handles and side rails with disinfectant and allow required wet contact time before removing it from the room.</p> <p>After preparing the patient for transport, remove gown and gloves before leaving the room and perform hand hygiene.</p> <p>Disinfected handles of the transport chair or stretcher or the patient bed are considered clean until gloves have direct contact with the patient or patient equipment.</p> <p>During procedures, a healthcare worker in contact with the patient must maintain Containment Precautions. A dedicated clean person may be used to minimize environmental contamination.</p> <p>II. Notify receiving facility in advance of need for containment precautions.</p> <p>Document the status of an CPE Positive patient on the patient/resident's Inter-Facility Transfer Referral Form</p> <p>III. Tell the patient/resident is important for them to inform any health care worker of their CPE status. Follow Containment Precautions inside the patient/resident room and after leaving the room.</p>		<p>Follow the 4 Moments of Hand Hygiene and perform a PCRA</p>

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
<p>PATIENT TRANSPORT (cont'd)</p> <p>IV. Day Pass</p>	<p>IV. Precautions required for Patients/Residents</p> <ul style="list-style-type: none"> • Cover all wounds. • Patient/Resident performs hand hygiene on leaving room. • Patient/Resident is not required to wear gloves following hand hygiene. • The patient/resident wears clean clothes. <p>Precautions for Health Care Worker and Visitors Accompanying Patient</p> <ul style="list-style-type: none"> • A separate HCW transports the patient/resident to the door of the facility they are leaving. • The HCW accompanying the patient/resident on the home visit meets the patient at the door of the facility they are leaving. • HCWs and visitors wear a gown and gloves. • Alcohol-based hand rub must be available for hand hygiene of patient/resident and HCW during visit. • Bag, clean, and disinfect any equipment taken on the visit according to facility policy after return to the facility and before use by another patient/resident. 		<p>n/a</p>

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY	
<p>EQUIPMENT AND SUPPLIES</p>	<p>Dedicate patient/resident care equipment to patients/residents on Containment Precautions.</p> <p>If reusable equipment must be used, clean and disinfect with Facility-Approved Disinfectant before removal from room.</p> <p>Keep minimal supplies in patient/resident room. <u>Do not overstock.</u></p> <p>Use dedicated personal supplies (e.g., combs, razors, lotions, creams, and soaps).</p> <p>Discard supplies that cannot be disinfected or sterilized when patient is discharged, deceased, or Containment Precautions are discontinued.</p> <p>Upon discharge, bag personal articles that cannot be disinfected (e.g., books, magazines, toys, playing cards) and give to the patient or discard.</p>		<p>Clinic Setting</p> <p>Keep minimal supplies in the clinic room.</p> <p><u>DO NOT overstock.</u></p>	<p>Home Setting</p> <p>Keep minimal supplies in the home.</p> <p><u>DO NOT overstock.</u></p>
<p>HANDLING THE PATIENT CARE RECORD</p>	<p>Use Facility-Approved Disinfectant to clean and disinfect the cover if it is contaminated.</p> <p>If the health record must accompany the patient/resident for tests or treatments, place in a protective cover (i.e., plastic bag) to prevent contamination. Otherwise, have a dedicated staff person carry the chart.</p> <p>If the Medication Administration Record (MAR) enters in the patient/resident's room, wipe the external surface of the MAR binder with facility approved disinfectant when it leaves the patient/resident room.</p>		<p>n/a</p>	

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
CONTACT FOLLOW-UP	<p>CPE suspects:</p> <ul style="list-style-type: none"> • Consult site ICP. • Implement Containment Precautions. • Send appropriate swabs. A person receiving care who is identified as a CPE suspect/contact requires three (3) surveillance cultures: • Determine last exposure to CPE (e.g., last day in hospital outside Canada). <p>If last exposure was 21 DAYS or LESS:</p> <ol style="list-style-type: none"> Collect swab #1 NOW - record date and time of swab. Collect swab #2 - 7 DAYS LATER, if still in the facility. NOTE: CPE swabs will only be sent if person is in hospital. Record date and time of the swab. If swab #2 is NEGATIVE: <ul style="list-style-type: none"> • Discontinue Containment Precautions • Maintain flag until swab #3 result is negative Collect swab #3 – AT DAY 21 if still in the facility. See note above. Record date and time of the swab See Appendix A for algorithm <p>If last exposure was GREATER THAN 21 DAYS:</p> <ol style="list-style-type: none"> Collect swab #1 NOW – record date and time of the swab Collect swab #2 a minimum of THREE HOURS AFTER FIRST (1ST) SWAB was collected– record date and time of the swab Collect swab #3 a minimum of THREE HOURS AFTER THE SECOND (2ND) SWAB was collected – record date and time of the swab 		n/a
DISCHARGE TEACHING	CPE Fact Sheet		n/a

ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY
HANDLING OF DECEASED BODIES	<p>Follow Containment Precautions.</p> <p>Place clean sheet on transfer stretcher before entering deceased patient's room.</p> <p>Put on PPE while attending to the body.</p> <p>Wrap the body in a shroud and transfer to stretcher.</p> <p>Remove PPE and perform hand hygiene upon leaving the room.</p> <p>Transport body to the morgue.</p> <p>Perform hand hygiene upon leaving the morgue.</p> <p>Clean stretcher with Facility Approved Disinfectants before use on another patient.</p>		<p>n/a</p>
VISITORS / VISITING OTHER PATIENT	<p>Visitors should be kept to a minimum.</p> <p>Perform hand hygiene on entering and leaving the patient/resident room.</p> <p>Visitors wear the same PPE as staff.</p> <p>Visitors who choose not to wear PPE shall not be permitted to visit:</p> <ul style="list-style-type: none"> • other patients • common areas such as unit kitchen, linen room, play room <p>Visitors who choose not to follow these restrictions shall wear PPE.</p> <p>Direct visitors to ask for assistance in obtaining patient care supplies/items from shared spaces on the unit.</p>		<p>n/a</p>
DISCONTINUATION OF CONTAINMENT PRECAUTIONS	<p><u>CPE POSITIVE PATIENTS</u></p> <p>Do not discontinue Containment Precautions.</p> <p>Once a patient is positive, they will always be considered positive.</p> <p>Maintain Containment Precautions for current admission and all future admissions.</p> <p><u>CPE SUSPECTS</u></p> <p>Maintain Containment Precautions until the second negative specimen result is obtained.</p> <p>EPR flag will remain until third swab result is collected and negative.</p>		<p>n/a</p>

CPE SCREENING CRITERIA	REQUIRED ACTIONS
1.1 Identified as CPE POS	<p>Implement Containment Precautions. Notify site ICP; leave a message after hours. Single room (do not cohort). No specimens required.</p>
1.2 Identified as CPE SUS	<p>Check for history of CPE swabs. Implement Containment Precautions (Single room; do not cohort) until:</p> <ul style="list-style-type: none"> • 2nd negative swab results obtained OR • patient has had a history of two (2) negative swabs Containment Precaution not necessary • See Appendix A for more detail <p>Notify site ICP. Collect specimens as directed by site ICP or after hours:</p> <ul style="list-style-type: none"> • Dr. Evelyn Lo @ pager: 204-932-6538 for St. Boniface Hospital concerns • Dr. John Embil @ 204-787-2071 for all other hospitals' concerns • Attending Pediatric ID Physician @ 204-787-2071 for pediatric concerns
1.3 Identified as a CPE positive or contact by any source, (e.g., verbal, in patient record or transfer sheet), with no lab confirmation.	<p>Implement Containment Precautions. Notify site ICP; leave a message after hours. Single room (do not cohort). Collect specimen: Stool/Rectum/Ostomy or Peri-rectal (per 6.2) See Appendix A for more detail</p>
1.4 Received healthcare outside of Canada in the last 12 months	<p>Implement Containment Precautions Notify site ICP Single room (DO NOT cohort) Collect specimens as directed by site ICP or after hours:</p> <ul style="list-style-type: none"> • Dr. Evelyn Lo @ pager: 204-932-6538 for St. Boniface Hospital concerns • Dr. John Embil @ 204-787-2071 for all other hospitals' concerns • Attending Pediatric ID Physician @ 204-787-2071 for pediatric concerns

Carbapenemase-Producing Enterobacterales (CPE)

1. EPIDEMIOLOGY / CAUSE

Carbapenems (e.g., imipenem, meropenem) are broad spectrum antimicrobials, effective against many gram positive and gram negative bacteria. Carbapenemase-producing Enterobacterales (CPE) are gram-negative bacteria in the Enterobacterales family that produce a carbapenemase enzyme.

The most common of these enzymes are NDM, KPC and OXA-48. Enterobacterales most often includes *E. coli*, *Klebsiella* spp. and *Enterobacter* spp. *Serratia marcescens* is also epidemiologically significant.

CPE, like other Enterobacterales, may cause infections such as urinary tract infections; intra-abdominal infections; bloodstream infections; pneumonias (ventilator associated or not); and skin and soft tissue infections (including surgical site). The high mortality associated with CPE infections is likely not due to virulence of the pathogen but because adequate treatment is delayed or unavailable. Also, the antibiotics used for treatment of infections caused by CPE may have suboptimal efficacy.

2. SPECIAL CONSIDERATIONS

Child Health/Neonatal Intensive Care Unit/Mother Baby Unit

- [Containment Precautions](#) are required for all patients with suspected CPE admitted to the neonatal intensive care unit (NICU).
- Containment Precautions are required for all NICU patients whose mother has suspected CPE.
- Containment Precautions are required for all patients with confirmed CPE or with a household/family member with confirmed CPE.
- Family members, other than guardians, with CPE should not visit.
- If the patient's guardian has CPE, they should limit visits to their child only and go directly in and out of the nursery. Family requires a dedicated washroom in NICU.

Infant has CPE:

- [Containment Precautions](#) for infant
- [Containment Precautions](#) for mother
- Mother infant contact, breast feeding, and rooming-in permitted

Mother has CPE:

- Mother infant contact, breast feeding, and rooming-in permitted
- Mother uses [Routine Practices](#) for infant, mother may choose to use gown/blanket and perform diligent [hand hygiene](#), cover wounds if any present.

Pediatrics Inpatient

- If the patient or a household member has ever had a CPE, move the patient immediately into a single room and implement [Containment Precautions](#).

Mental Health Unit

- Follow [Routine Practices](#); [Containment Precautions](#) are not required
- CPE positive patients must perform [hand hygiene](#) regularly and before leaving the unit. This must be emphasized as compliance is sometimes not optimal due to the nature of the illness.

3. ROUTE OF TRANSMISSION

1. **Direct Contact** – e.g. healthcare worker hands
2. **Indirect Contact** – e.g. contaminated equipment, drains

CPE are oftentimes spread from patients with exposures in healthcare facilities and can spread from person to person on the hands of healthcare workers or via shared medical equipment, particularly when [hand hygiene](#) is missed or equipment is not properly cleaned and disinfected.

4. INCUBATION PERIOD

The incubation period for exposure to illness onset is undefined. Individuals colonized with CPE may remain asymptomatic if they are in good health and do not require medical interventions but can still act as a reservoir for transmission to others.

5. PERIOD OF COMMUNICABILITY

The period of communicability of CPE persists as long as the organism is present in the gastrointestinal tract of the patient. Patients may be intermittently positive on repeat screening and may be colonized for months to years.

6. DIAGNOSIS

6.1 SCREENING / SPECIMEN COLLECTION

Specimen Collection See [Shared Health Diagnostic Services Manual](#) for additional information.

Do not take specimens if the Lab has confirmed the person is CPE Positive. Once a patient is positive, they will always be considered positive.

Collect CPE specimens from: Stool/Rectum/Ostomy Specimen for CPE



Collect a stool specimen or insert swab approximately 2.5 cm (for adults) past the anal sphincter/stoma and gently rotate. If patient has both an ostomy and a rectum, collect a specimen from both sites.

NOTE: swab must be visibly soiled

6.2 PERI-RECTAL SPECIMEN

A peri-rectal specimen may be collected instead of rectal specimen only for:

- Neonates
- Pediatrics
- Adolescents
- People who have recently had a hemapoetic stem cell transplant
- People whose absolute neutrophil count (ANC) is expected to be less than $0.5 \times 10^9/L$ for 7 days or more

To collect specimen, swab peri-rectal area:



Place swab in the transport container.

Label container with specimen collection site and at least two unique patient identifiers.

NOTE: swab must be visibly soiled

Requisition information: Complete pertinent patient information on the appropriate requisition and put with the specimen.

Indicate on requisition:

- Test is for CPE suspect or
- Test is approved by Infection Prevention and Control.

For example, some provinces require CPE testing before a patient is transferred to their facility for Hemodialysis or organ transplant.

Keep specimens at room temperature.

Send to lab as soon as possible.

Follow facility procedures.

7. OCCUPATIONAL AND ENVIRONMENTAL SAFETY AND HEALTH (OESH)

Contact OESH for staff assessment and/or concerns.

8. REFERENCES

Ontario Public Health Standards: Requirements for Programs, Services and Accountability (2022). Disease: Carbapenemase-producing Enterobacteriaceae (CPE) infection or colonization. Retrieved from:

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APPENDIX A

Management of a Carbapenemase Producing Enterobacterales (CPE) Suspect Patient

Someone is considered **SUSPECT** for CPE when they were:

- A. Hospitalized outside of Canada within the past year
- OR
- B. A contact of CPE positive patient

IMMEDIATELY place patient on **CONTAINMENT PRECAUTIONS** and **notify** Infection Prevention & Control (IP&C)



ENTER TODAY'S DATE: DD/MM/YYYY

- A. Date patient was discharged from the hospital outside of Canada DD / MM / YYYY
 Number of days from DATE A to TODAY'S DATE = _____ or
- B. Last day of exposure to CPE positive patient DD / MM / YYYY
 Number of days from DATE B to TODAY'S DATE = _____ or
- C. If date unknown, go to: **Equal to or Less than 21 days**

More than 21 DAYS

Collect SWAB #1 (DAY 0)
 Date of collection: DD / MM / YYYY
 Time of collection: XX:XX am / pm

- A. *The day patient was discharged from hospital outside of Canada or*
- B. *Last day of exposure to CPE positive patient*

Collect SWAB #2
A minimum of three hours after SWAB #1
 Date of collection: DD / MM / YYYY
 Time of collection: XX:XX am / pm

Equal to or Less than 21 days

Collect SWAB #1 (DAY 0)
The date and time the patient is identified as CPE suspect
 Date of collection: DD / MM / YYYY
 Time of collection: XX:XX am / pm

Collect SWAB #2 - 7 DAYS later
 Date of collection: DD / MM / YYYY
 Time of collection: XX:XX am / pm

NOTE: Keep patient on CONTAINMENT PRECAUTIONS if SWAB #1 and/or #2 comes back POSITIVE, do not collect any more swabs

if BOTH SWABS #1 & #2 come back NEGATIVE, CONSULT IP&C for Discontinuation of Containment Precautions

Collect SWAB #3
A minimum of three hours after SWAB #2 was collected
 Date of collection: DD / MM / YYYY
 Time of collection: XX:XX am / pm

Collect SWAB #3
at DAY 21 if still admitted (or next admission)
 Date of collection: DD / MM / YYYY
 Time of collection: XX:XX am / pm

Appendix B

Additional Precautions for Carbapenemase-Producing Enterobacterales (CPE) in Long Term Care

CPE status (Infection or Colonization) SHALL NOT prevent admission, a return to, or continued residence in a continuing care setting.

- Consult your site specific or WRHA Infection Control Professional (ICP) or designate for assistance with challenging CPE positive resident placement.
- **ROUTINE admission testing or ROUTINE clearance testing for CPE is NOT recommended.**

NOTE: The following recommendations are intended for non-outbreak situations. In an outbreak or situations of suspected and/or confirmed increased transmission, additional precautions should be considered in consultation with Infection Prevention and Control or designate, the site Medical Lead and Public Health.

In addition to Routine Practices Determine Additional Precautions for CPE Positive Residents

- Use Risk of Transmission of Microorganisms including CPE ([Table 1](#))
- Additional precautions that may be required in acute care are generally not appropriate in continuing care.
- Use [Routine Practices](#) and the [Point of Care Risk Assessment \(PCRA\)](#) for all CPE positive residents including those with CPE colonization or infection of any body site or system when:
 - Wound drainage and body fluids (e.g. sputum, feces, urine, blood, etc.) are contained.
 - The resident is cooperative with practicing good personal hygiene and hand hygiene, unless there is an assessed higher risk of transmission of the microorganism.
- Assessment of the CPE positive resident to determine the need for Additional Precautions will be performed by the person(s) designated by the site/facility. The long term care facility is the resident's home and precautions must be balanced with maintaining quality of life. Each CPE positive resident must be assessed individually, balancing the risk of transmission of CPE and the potential harm additional precautions may have on the resident.
 - Risks can change over time and individuals must be reassessed regularly, and as conditions behaviours and situations change.

Table 1: Risk of Transmission of Microorganisms including CPE

RISK OF TRANSMISSION	ASSESSMENT OF RESIDENT	PLACEMENT AND PRECAUTIONS
<p>LOWER</p>	<ul style="list-style-type: none"> • Cooperative (cognitively intact of impaired) but may need prompting/assistance with hand hygiene, toileting practices, changing soiled clothes, identifying when dressings or incontinence products are leaking AND • Contained drainage/body fluids 	<ul style="list-style-type: none"> • Routine Practices with prompting/assistance as needed, no signs required. • Private room preferred. <ul style="list-style-type: none"> ○ If private room not available, place with resident with same organism or lower risk roommate. ○ Lower Risk Roommate: consistent good hand hygiene and good personal hygiene; intact skin; no invasive devices or open wounds; not dependent on staff for care; and no significant co-morbidities that make them vulnerable to infection. • No restrictions in activities and dining room with clean clothing, clean hands and contained drainage/body fluids
<p>HIGHER</p>	<ul style="list-style-type: none"> • Uncooperative (cognitively intact or impaired) with prompting/assistance – e.g. unable or unwilling to perform hand hygiene, change soiled clothes or leaking dressings or incontinence products OR • Uncontained drainage or uncontained body fluids that regularly soil the environment 	<ul style="list-style-type: none"> • Additional Precautions may be needed in addition to Routine Practices • Additional Precaution sign required • Private Room <ul style="list-style-type: none"> ○ If private room not available, place with resident with same organism or lower risk roommate. ○ Lower Risk Roommate(s): consistent good hand hygiene and good personal hygiene; intact skin; no invasive devices or open wounds; not dependent on staff for care; and no significant co-morbidities that make them vulnerable to infection. <p>Attend group activities Table 2 and dining room ONLY with clean clothing, clean hands and contained drainage/body fluids</p>

Table 2: May Residents Participate in Group Activities?

ACTIVITY	RESIDENT COGNITIVE BEHAVIOR		
	CPE positive resident (colonized or infected at any body side) and cooperative with preforming hand hygiene and wearing clean clothes and body fluids or wound drainage are contained with clean dry incontinence products or clean dry dressings	CPE positive resident (colonized or infected at any body site) and uncooperative or unable to perform hand hygiene or change soiled clothes and body fluids or wound drainage are not contained and regularly soil the environment	CPE positive resident (colonized or infected at any body side) and with symptoms of an acute infection (e.g. infectious rashes, diarrhea, vomiting, coughing, runny nose, fever, etc.)
Dining room	Yes	Consult ICP or Designate <i>(Criteria for participating includes: ONLY with supervision and if cooperative with clean clothing, clean hands, and drainage/body fluids are contained)</i>	No
Group recreational, physiotherapy or occupational	Yes		No
Ambulate outside of room	Yes		No
Food Handling activities	Yes	No	No
Comments	All residents to preform hand hygiene (with assistance as needed) before leaving their room, before entering the dining room and before participation in each activity.		Restrictions should be discontinued when symptoms of acute infection have stopped.

Appendix C

Routine Practices with Additional Precautions for for Carbapenemase-Producing *Enterobacterales* (CPE) in Community Settings

RISK OF TRANSMISSION	ASSESSMENT OF CLIENT	PLACEMENT AND PRECAUTIONS
LOWER	<ul style="list-style-type: none"> No signs/symptoms of communicable diseases (e.g. fever, rash, diarrhea, cough) Cooperative, but may need prompting or assistance with hand hygiene, toileting practices, etc. Contained drainage of body fluids by wound care or incontinence products 	<ul style="list-style-type: none"> Routine Practices with prompting/assistance as needed
HIGHER	<ul style="list-style-type: none"> Signs/symptoms of communicable diseases (e.g. fever, rash, diarrhea, cough) Uncooperative, even with prompting or assistance (e.g. unable or unwilling to perform hand hygiene, change soiled dressings, incontinence products or clothes, etc.) Uncontained drainage of body fluids that regularly soil the environment Severe, non-intact skin conditions with shedding or flaking skin (e.g. extensive dermatitis or psoriasis) 	<p style="text-align: center;">Additional Precautions Required</p> <ul style="list-style-type: none"> Consider booking at end of day or during periods of low activity Individuals with suspected communicable disease should not sit in the waiting room and instead be moved to the exam/treatment space as quickly as possible Clean and disinfect high-touch surfaces and equipment following visit as usual

Adapted from [Alberta Health Services](#)