

CARBAPENEMASE-PRODUCING ORGANISMS (CPO)

Fact Sheet for Health Care Providers (Residential Care)

What is a Carbapenemase-Producing Organism (CPO)?

Carbapenemase-Producing Organisms (CPOs) are bacteria that are resistant to most antibiotics. Similar to other Antibiotic Resistant Organisms (AROs), residents/clients can be colonized or infected with CPO.

Normally these bacteria live in the gut and do not cause illness. If the bacteria move to the blood, or other areas in the body they can cause an infection. When CPO causes an infection, the choice of antibiotics available to treat the infection is limited.

The best way for staff to protect residents/clients is through hand hygiene, thorough cleaning, and disinfection of shared equipment and surfaces.

Where did CPOs come from?

CPOs are found in a number of countries around the world. Healthcare Facilities in Canada, including B.C., are starting to see more of these microorganisms as people travel from countries and regions where CPOs are more common.

Most individuals identified as being CPO positive have a history of healthcare encounters outside of Canada. The longer a person is hospitalized and the more extensive the care they received in that country, the more likely he/she will acquire a CPO.

How are CPOs spread?

CPOs are spread like all other AROs:

- from one resident/client to the next on the hands of a health care worker who did not clean their hands properly between residents/clients
- through shared medical equipment used between residents/clients that was not thoroughly cleaned and disinfected between use
- from touching contaminated surfaces that were not thoroughly cleaned and disinfected and not performing hand hygiene in the resident's/client's environment
- between residents/clients who touch contaminated surfaces and who do not do hand hygiene

Recommendations for managing residents/clients with CPOs in residential care settings:

- Notify Infection Control and Medical Microbiologist/MHO in-charge of the facility to assist in resident/client placement.
- Provide private room with a bathroom for CPO positive residents/clients.
- If a single occupancy room is not available, try to cohort CPO positive resident/client with a roommate who:
 - is also CPO positive
 - does not have a urinary catheter or require frequent catheterization
 - does not have open wounds
 - is immunocompetent (healthy immune system)
 - is not ambulatory and will not be using the washroom
- If the resident/client with CPO uses a urinal or a bedpan, use a washer/disinfectant to dispose of contents. If a washer/disinfectant is not available, use containment systems, such as disposable bags (e.g. disposable HYGIE® bedpan liner bags and/or urinals). Bedpan still needs cleaning and disinfecting between use.

- If the washroom is used by both the resident/client with CPO and the roommate:
 - Environmental Services (EVS) should do a second daily cleaning of ‘high touch’ areas of the sink and toilet handles, lids on both sides, and light switches in the washroom.
 - Toilet brush should be disposable.
 - Toilet seat should be wiped on both sides using accelerated hydrogen peroxide wipes (AHP) between each use.
- Follow routine processes for bath tub/shower providing thorough cleaning and disinfection between each resident/client.
- Priority order for bathing residents/clients:
 - **Non-isolated residents/clients**
 - ARO positive residents/clients (e.g. MRSA)
 - CPO positive residents/clients
 - GI symptomatic residents/clients (whenever possible, defer showering of residents/clients with diarrhea and vomiting until symptoms have resolved. Do not use tub for these residents/clients)
- Meticulous hand washing with soap and water or using an alcohol-based hand sanitizer before and after caring for each resident/client.
- Ensure hand hygiene for all residents/clients before meals and after toileting.
- Hand hygiene before and after encountering a resident’s/client’s environment.
- Appropriate precautions signage should be posted outside resident’s/client’s room to ensure that infection control measures are followed.
- Dedicate reusable resident/client care equipment and devices for the CPO resident/client where possible and use accelerated hydrogen peroxide (AHP) to clean and disinfect between use.
- Shared non-critical equipment must be cleaned and disinfected using accelerated hydrogen peroxide (AHP) wipes in between resident/client use.
- Do hand hygiene, then put on gown and gloves prior to entering room to provide direct care to a CPO positive resident/client.
- Remove gloves, gown and do hand hygiene before exiting the room.

Note:

Routine screening for CPOs at the time of moving into or returning to a residential care facility is not indicated for residential care settings.

References:

- Toolkit for the Management of Carbapenemase Producing Organisms (CPO)
<https://www.picnet.ca/wp-content/uploads/PICNet-CPO-Toolkit-2015.pdf>
Guide to the Elimination of Multidrug-resistance Acinetobacter Baumannii Transmission in Healthcare settings;
<file:///H:/Infection%20Control/CRGNB/UBCH/APIC-AB-Guide.pdf>
Guidance for Control of Carbapenem-resistance Enterobacteriaceae (CRE);
<http://www.cdc.gov/hai/pdfs/cre/CRE-guidance-508.pdf>