

# Carbapenem-Resistant and Carbapenemase-Producing Organisms

## Infection Prevention in Long-Term Care Facilities

To stop the spread of carbapenem-resistant organisms (CROs) and carbapenemase-producing organisms (CPOs) in your facility, VDH recommends employing the following infection prevention strategies.

### 1. Hand Hygiene

- Promote, monitor, and provide feedback on hand hygiene.
- Ensure supplies necessary for adherence to hand hygiene are accessible in resident care areas.

### 2. Transmission-Based Precautions

#### Contact Precautions (Table 1)

- Residents infected or colonized with a CRO or CPO who have acute diarrhea, draining wounds, or other sites of secretions or excretions that are unable to be covered or contained should be placed on Contact Precautions.
- Implement Contact Precautions if there is ongoing CRO or CPO transmission in the facility.
- Discontinue Contact Precautions & apply Enhanced Barrier Precautions if the resident no longer meets criteria above.
- Empiric Contact Precautions might be used for residents transferred from high-risk settings (facilities in areas where CPOs are common or from facilities known to have residents with CPO colonization or infection).

#### Enhanced Barrier Precautions (Table 2)

- Enhanced Barrier Precautions should be used during high-contact resident care activities (dressing, bathing/showering, transferring, providing hygiene, changing linens, changing briefs or assisting with toileting, device care or use, or wound care).
- Gown and gloves would not be required for non-high-contact care activities, unless otherwise necessary for adherence to standard precautions.
- CDC does not recommend discontinuing Enhanced Barrier Precautions during the resident's admission.

#### For All Residents

- Monitor and provide feedback on proper adherence to Contact Precautions or Enhanced Barrier Precautions.
- Ensure adequate supplies are available to implement Contact Precautions or Enhanced Barrier Precautions.

### 3. Healthcare Personnel (HCP) and Visitor Education

- HCP and visitors should be educated about preventing transmission of CROs/CPOs.
- At a minimum, education and training should include the proper use of transmission-based precautions, including donning and doffing personal protective equipment (PPE) and hand hygiene.
- Post clear signage on the resident's door describing the type of precautions in place.

### 4. Timely Notification

- Report any suspected or confirmed CPO colonization or infection to the local health department.

### 5. Minimize Use of Invasive Devices

- Devices (e.g., urinary catheters, central lines) should be discontinued promptly when no longer needed.

### 6. Communication of CRO/CPO Status at Discharge and Transfer

- If a resident with CRO or CPO infection or colonization is transferred to another facility, ensure that their diagnosis is shared with the accepting facility in a timely manner.

### 7. Promotion of Antimicrobial Stewardship

- Ensure that antimicrobials are used for appropriate durations and that the appropriate, narrowest spectrum antimicrobial is used.
- CDC has identified core elements for successful long-term care antimicrobial stewardship programs.

### 8. Environmental Cleaning

- Perform daily cleaning and disinfection that include high touch surfaces such as bed rails, meal trays and other areas in close proximity to the resident.
- Clean and disinfect areas around sinks regularly and do not store medical supplies/equipment near sinks.

### 9. Resident Cohorting

- Residents infected or colonized with a CRO or CPO who are on Contact Precautions should be placed in a single-patient room whenever possible.
- Residents on Enhanced Barrier Precautions do not require a private room.

### 10. Screening Contacts of Residents with CPO

- Screen residents with epidemiologic links to residents with newly-identified CPO colonization or infection.
- Contact your local health department for information about colonization screening for CPOs.

### 11. Active Surveillance Testing

- Screen high-risk residents at admission.
- Contact your local health department for information about colonization screening for CPOs.

#### Resources

- [CDC Facility Guidance for Control of CRE](#)
- [CDC Implementation of PPE in Nursing Homes to Prevent Spread of MDROs](#)
- [CDC Management of MDROs in Healthcare Settings](#)
- [CDC Public Health Response to Contain Novel or Targeted MDROs](#)

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# Carbapenem-Resistant and Carbapenemase-Producing Organisms Infection Prevention in Long-Term Care Facilities

Intensity of infection prevention measures is based on resident's clinical status, presence of CRO/CPO transmission in the facility, and factors that increase risk of transmission to other residents in the facility. General guidance is listed below.

**Table 1. Infection Prevention Measures for Residents with CRO/CPO Infection or Colonization Who Require Contact Precautions**

These recommendations are applicable to residents with CRO/CPO infection or colonization who:

- Have acute diarrhea, draining wounds or other sites of secretions or excretions that are unable to be covered or contained **OR**
- Reside on units or in facilities where ongoing CRO/CPO transmission is documented or suspected **OR**
- Have another condition or infection where Contact Precautions is recommended (e.g., *C. difficile*).

| Healthcare Personnel Recommendations                                 |  |
|--|--|
| Standard Precautions   | Yes                                      |
| Contact Precautions  | Yes; gown and gloves upon room entry     |
| Perform hand hygiene often, and always after leaving resident's room | Yes                                      |
| Private room   | Yes                                      |
| Restricted to room   | Yes, except for medically necessary care |
| Door signage   | Yes                                      |
| Designated or disposable equipment                                   | Yes*                                     |
| Visitor Recommendations  |  |
| Perform hand hygiene often, and always after leaving resident's room | Yes                                      |
| Contact Precautions  | Yes; gown and gloves upon room entry     |

\*If not feasible to dedicate equipment, clean and disinfect per manufacturer's instructions before use on another resident.

**Residents may transition to the recommendations in Table 2 when they no longer meet the criteria for Contact Precautions.**

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Intensity of infection prevention measures is based on resident's clinical status, presence of CRO/CPO transmission in the facility, and factors that increase risk of transmission to other residents in the facility. General guidance is listed below.

**Table 2. Infection Prevention Measures for Residents with CRO/CPO Infection or Colonization Who Require Enhanced Barrier Precautions**

These recommendations are applicable to residents with CRO/CPO infection or colonization who **do not meet criteria for Contact Precautions**:

| Healthcare Personnel Recommendations                                 |   |
|--|---|
| Standard Precautions   | Yes   |
| Enhanced Barrier Precautions   | Yes; gown and gloves for high-contact resident care activities*                                     |
| Perform hand hygiene often, and always after leaving resident's room | Yes   |
| Private room   | No  |
| Restricted to room   | No  |
| Door signage   | Yes   |
| Designated or disposable equipment                                   | Not required; clean and disinfect per manufacturer's recommendations before use on another resident |
| Visitor Recommendations  |   |
| Perform hand hygiene often, and always after leaving resident's room | Yes   |
| Standard Precautions   | Yes (e.g., wear gown and gloves if anticipating contact with blood or body fluids)                  |

\*Examples of **high-contact resident care activities** include: dressing, bathing/showering, transferring, providing hygiene, changing linens, changing briefs or assisting with toileting, caring for or using indwelling medical devices (e.g., central line, urinary catheter, feeding tube, tracheostomy/ventilator), and providing wound care.