

## Carbapenemase-producing organism (CPO) FAQs

*This document outlines recommendations and frequently asked questions (FAQs) for healthcare facilities (HCFs) regarding managing care for patients and residents infected or colonized with carbapenemase-producing organisms (CPOs), such as NDM-producing CRAB or VIM-producing CRPA.*

### GENERAL RESOURCES

---

[LACDPH CPO website](#)  
[CDPH CRO Quicksheet](#)

[CDPH CRO & CPO website](#)  
[LACDPH NMDRO website](#)

QUESTIONS? CONTACT THE LACDPH HEALTHCARE OUTREACH UNIT AT  
[HAI@PH.LACOUNTY.GOV](mailto:HAI@PH.LACOUNTY.GOV) OR 213-240-7941

### ADMISSION RECOMMENDATIONS

---

For all admissions from the list of HCFs to monitor (sent weekly via email to HCF IPs), **verify their current CPO status** and follow the recommendations below.

- If positive: patient should be placed in single room on Contact Precautions. Patients may be cohorted by CPO (carbapenemase gene and organism) status if needed.
  - Positive patients should not be re-screened as they can be colonized for a long time.
- If negative or pending, **and**:
  - specimen was collected more than 24 hours before discharge: **patient is suspect** and should be screened. Patient should be placed in single room on empiric Contact Precautions until swabbed for CPO colonization and result returns negative.
  - specimen was collected less than 24 hours before discharge: patient does **not** need to be re-screened. Patient should be placed in single room on empiric Contact Precautions until result is provided.
- See [LACDPH Transferring Guidance for MDROs](#) for more details if needed.

**Strongly consider additional admission screening for carbapenemase-producing organisms (CPOs)** of other high-risk patients (see page 2). CDPH has created a [CPO Screening Decision Tree](#) tool to guide colonization testing recommendations in HCFs.

Flag positive patients' medical records for future re-admissions, as many patients can remain colonized even after being discharged home. Suspect patients should also be flagged, then screened on admission. LACDPH recommends all facilities use an [inter-facility transfer form](#) for all admissions.

### DISCHARGE RECOMMENDATIONS

---

If patient is discharged from your facility, **you must notify the receiving HCF** of the patient's confirmed or suspect CPO status. In addition, a phone call to the receiving facility's infection preventionist (IP) is recommended.

**LACDPH strongly recommends all facilities use an [inter-facility transfer form](#) for all discharges.** Facilities should also review both internal and external protocols to ensure the appropriate persons (including transporters) will be made aware of patients' NDM-CRAB and other MDRO status upon transfer.

## FREQUENTLY ASKED QUESTIONS

---

### What are CPOs?

CPO are bacteria that produce carbapenemase enzymes (e.g., KPC, NDM, OXA-48, IMP, VIM). These enzymes inactivate carbapenem antibiotics, such as meropenem. CPO include *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and bacteria in the Enterobacterales order such as *Escherichia coli* (E. coli) and *Citrobacter*, *Enterobacter*, and *Klebsiella* species (spp.).

### What is the difference between CPO and CRO?

A carbapenem-resistant organism (CRO) is resistant to carbapenem antibiotics regardless of having a carbapenemase or not. A CPO is a subset of CRO that produces a carbapenemase, making them resistant to carbapenem antibiotics. The carbapenemase enzyme is the mechanism of resistance. For more information, please see [https://www.vdh.virginia.gov/content/uploads/sites/174/2022/08/MidAtlantic-Webinar-simplifying-CROs\\_cleared.pdf](https://www.vdh.virginia.gov/content/uploads/sites/174/2022/08/MidAtlantic-Webinar-simplifying-CROs_cleared.pdf)

### How do CPOs spread?

CPOs spread easily in healthcare settings. Patients can serve as sources of transmission. They are of particular concern due to their increased resistance and transmissibility. CPO outbreaks have been identified in short-stay acute care hospitals (ACH), long-term acute care hospitals (LTACH), and skilled nursing facilities (SNF) (with and without subacute units). Some CPOs may be hardy and can persist for long periods of time in the environment including on surfaces and shared medical equipment.

### Who is at risk of CPOs?

Generally, healthy individuals will not have CPOs. Risk factors include prior healthcare exposure (especially from long-term acute care hospitals (LTACHs)), mechanical ventilation, and presence of indwelling medical devices such as urinary catheters or endotracheal tubes.

### How do I know if a patient/resident has a CPO?

Always look for lab reports or documentation of CPOs upon and during admission. Call the transferring facility if this information is not available or apparent. CPOs can only be identified if [specific testing](#) has been performed on a CRO isolate. Some laboratories do not conduct carbapenemase testing on CRO isolates, therefore the presence of a carbapenemase is unknown which is important for HCFs to understand for cohorting or infection control purposes.

### When should we screen patients/residents for CPOs?

Screen for CPO colonization in the following scenarios:

1. In response to a newly-identified CPO case (use [CDPH Screening Decision Tree](#)):
  - a. Always screen roommates and those who shared a bathroom.
  - b. Consider screening those who shared primary healthcare personnel (HCP) or a device.
2. In response to an ongoing outbreak/transmission
3. Considered at-risk of being colonized or infected with CPOs, such as patients admitted:
  - a. from a known outbreak facility (see list sent weekly to IPs)
  - b. from LTACH or subacute unit of a SNF
  - c. who are trached/vented, with other indwelling devices, or have open/draining wounds
  - d. who have had a recent overnight stay in a healthcare facility outside of the US

### How do we screen for CPOs?

Some labs can screen for carbapenemase-producing organism (CPO) colonization by testing rectal swabs. We advise HCFs to set up carbapenemase testing for carbapenem-resistant organism isolates to identify

carbapenemase genes (or find a lab that can do this). If you need help identifying a laboratory that can perform carbapenemase testing, please email the Healthcare Outreach Unit at [hai@ph.lacounty.gov](mailto:hai@ph.lacounty.gov).

### **What infection control measures do I implement for CPOs?**

As with patients with other multidrug-resistant organisms (MDRO):

- Place the patient on Contact precautions, ideally in a single room if possible.
- Dedicate medical equipment as much as possible. Consider single-use, disposable equipment.
- If your facility has multiple positive patients, consider cohorting geographically, and dedicating primary nursing staff.
- Ensure cleaning and disinfection with an EPA-registered disinfectant with kill claims for the CPO using correct contact time.
- Carry out routine adherence monitoring of hand hygiene, environmental cleaning, and Contact precautions practices in the facility – on all shifts.

### **Does soap and water or alcohol-based hand sanitizer work better against CPOs?**

Alcohol-based hand sanitizer is the preferred method for cleaning hands if not visibly soiled. If hands are visibly soiled, wash with soap and water. For more information, please see

<https://www.cdc.gov/handhygiene/providers/index.html>

### **What do I do when a patient with a CPO is discharged?**

Communicate (ideally verbally) the patient's CPO status to the receiving facility or home health agency; always use an interfacility transfer form. For patients discharged home, provide a letter to give to their healthcare provider if readmitted to a healthcare facility in the future.

### **How do we cohort CPO patients with other patients?**

Patients positive for a CPO should be placed in a single room on [Contact Precautions](#), but can be cohorted with other positive patients as long as both the carbapenemase gene and organism are the same (e.g., a resident with KPC-CRE should not be cohorted with a resident with NDM-CRAB). COVID-19 and other MDRO status should also be considered. Suspect patients should be placed separately from positive patients as much as possible. If you need assistance in determining a cohorting strategy in order to make room for a new suspect or confirmed patient, contact LACDPH.

### **Do colonized patients require treatment?**

Generally, colonized individuals (i.e., positive via screening swab or culture of a non-invasive source without showing signs/symptoms of infection) do not require treatment.

### **Is there a clearance protocol for patients with CPOs?**

At this time, there is no clearance or decolonization protocol for patients with CPOs. Once identified with a CPO, the individual is considered colonized indefinitely. Patients/residents should remain on Contact Precautions for the duration of their admission.

### **A health care facility is refusing to accept/treat my CPO patient. What can I do?**

Please note that CPOs, or any MDRO infection/colonization status, alone is never a reason to refuse (re)admission or treatment of a person. There are no local, state, nor federal requirements for a negative test prior to admission. If a facility can provide appropriate care and has available bed/treatment space, they should not deny admitting/seeing a patient. Note that facilities can be reported to the CDPH Health Facilities Inspection Division for refusing patients based on MDRO status alone.

### **How do I report CPOs?**

CPOs are a mandated [laboratory-reportable condition](#) by LACDPH and CDPH. In addition, pan-nonsusceptible (intermediate and/or resistant to all antibiotics tested) gram-negative bacteria are also a lab-reportable condition in Los Angeles County. Reports may be securely submitted via the LACDPH RedCAP MDRO Reporting Portal: [redcap.link/LACMDROPortal](https://redcap.link/LACMDROPortal).