

Carbapenemase-Producing Organisms Colonization Screening Recommendations

Carbapenemase-Producing Organisms (CPOs) are a serious threat to public health. Identifying persons colonized with CPOs is a key step in containing their spread. It is also important for patients to know if they are colonized with CPOs to help future providers prescribe optimal antibiotics when deemed medically necessary.

Testing

Specimens are tested at the Mid-Atlantic Antibiotic Resistance Lab Network (ARLN) located at the Maryland Public Health Laboratory (MDPHL). The test is performed on rectal swab specimens. MDPHL uses the Xpert Carba-R Assay to detect the presence of Imipenemase metallo-beta-lactamase (IMP), *Klebsiella pneumoniae* carbapenemase (KPC), New Delhi metallo-beta-lactamase (NDM), oxacillinase-type 48 (OXA-48), and Verona integron-encoded metallo-beta-lactamase (VIM). Testing and supplies are provided at no charge. Healthcare providers should contact their [local health department](#) to coordinate screenings.

Persons Recommended for Colonization Screening

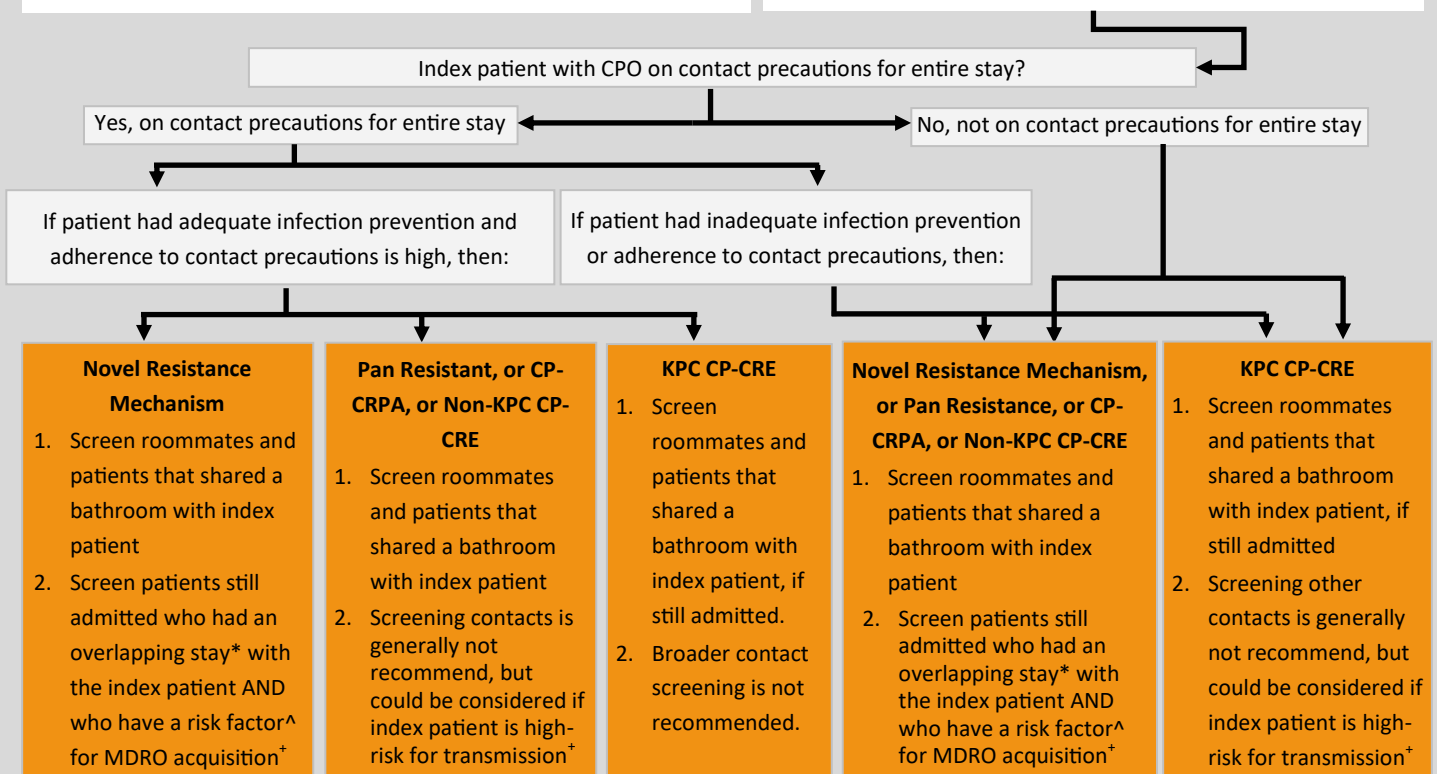
Below recommendations are taken from the [CDC MDRO Containment Strategy for Novel or Targeted MDROs](#). VDH recognizes that each situation is unique and other local factors may be considered. The final approach to screening will be based on discussions between VDH and the facility. VDH might conduct an onsite infection prevention and control assessment to help guide recommendations and provide feedback on practices.

Admission Screening Recommendations

1. Patients coming from high-risk facilities. (e.g., ventilated skilled nursing facilities and long-term acute care hospitals).
2. Patients admitted overnight to healthcare facilities in countries outside the United States in the last 12 months.
3. Patients admitted to high-risk settings (e.g. ICU).
4. Patients who were previously identified as high-risk contacts of an index case but not tested.
5. Patients admitted to a facility with a CPO outbreak.

Contact Investigation Recommendations

When CPOs are identified in a facility, **the facility should work with the local health department** to identify patients who should be screened. Recommendations vary depending on the specific organism and mechanism [Carbapenemase-producing carbapenem-resistant Enterobacteriaceae (CP-CRE) or carbapenemase-producing carbapenem-resistant *Pseudomonas aeruginosa* (CP-CRPA)]. See below algorithm.



Wider surveys and ongoing point prevalence surveys extending beyond roommates and high risk patients are indicated if there is evidence or suspicion of ongoing transmission (e.g., isolates from multiple patients) or if initial targeted screening of high-risk patients identifies new cases.

*Overlapping stay can refer to patients who overlapped for three or more days, but could also refer to patients who overlapped for a shorter period depending on the transmission risk of the index case and acquisition risk of the healthcare contact.

[^]Risk factors include, but are not limited to: bedbound, high levels of care (including ICU), receipt of antibiotics, or mechanical ventilation.

⁺Alternatively, a unit point prevalence survey could occur. If identifying high-risk contacts is anticipated to take more than a few days or if most high-risk contacts have been discharged from a facility, performing unit point prevalence surveys may be preferred.