

# Carbapenem-Resistant Organisms

## Isolate Submission to the CDPHE Laboratory

EIP Version, November 1, 2016

### Carbapenem-Resistant Enterobacteriaceae (CRE)

1) Isolates that meet all of the following criteria should be sent to the CDPHE laboratory for purposes of EIP surveillance:

Organism is one of the following:

- *Escherichia coli*
- *Klebsiella pneumoniae*
- *Klebsiella oxytoca*
- *Enterobacter aerogenes*
- *Enterobacter cloacae*

**And is resistant to at least one carbapenem** (based on current CLSI breakpoints)

- ◇ Doripenem (MIC  $\geq 4$  or  $\leq 19$  mm)
- ◇ Imipenem (MIC  $\geq 4$  or  $\leq 19$  mm)
- ◇ Meropenem (MIC  $\geq 4$  or  $\leq 19$  mm)
- ◇ Ertapenem (MIC  $\geq 2$  or  $\leq 18$  mm)

**And is from urine or a normally sterile site** (blood, CSF, bone, joint/synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, internal body site, muscle, etc.)

2) Isolates that meet all of the following criteria should be sent to the CDPHE laboratory for PCR testing:

Organism is one of the following:

- *Escherichia coli*
- *Klebsiella* species
- *Enterobacter* species

**And is resistant to two or more carbapenems** (based on current CLSI breakpoints)

- ◇ Doripenem (MIC  $\geq 4$  or  $\leq 19$  mm)
- ◇ Imipenem (MIC  $\geq 4$  or  $\leq 19$  mm)
- ◇ Meropenem (MIC  $\geq 4$  or  $\leq 19$  mm)
- ◇ Ertapenem (MIC  $\geq 2$  or  $\leq 18$  mm)

**(Any specimen type)**

### Carbapenem-Resistant *Acinetobacter baumannii* (CRAB)

CDPHE does not request isolates of CRAB.

### Carbapenem-Resistant *Pseudomonas aeruginosa* (CRPA)

**Please save every isolate that meets the following criteria:** *P. aeruginosa* resistant to one or more carbapenems (based on current CLSI breakpoints) from any specimen site:

- ◇ Doripenem or Imipenem or Meropenem (MIC  $\geq 8$  or  $\leq 15$  mm)

After each month, specific isolates will be requested to be sent to the CDPHE laboratory for EIP surveillance or for PCR testing. Mucoid isolates do not need to be saved.

### Isolate Submission Instructions

Clinical laboratories can send **pure subcultures** on appropriate swabs, slants, or plates including **Amies or Stuart's swabs (or comparable transport swabs), trypticase soy agar (TSA), blood agar or chocolate agar**. If these plates contain multiple subcultures from several clinical specimens, please mark the portion of the plate with the organism of interest (e.g., CRE) accordingly. If convenient, clinical laboratories may send isolates as frozen samples or on slants. Seal the culture plate, place into a specimen collection container, and **store in a 4 degree Celsius refrigerator**. Plates should be labeled with a unique identifier for the clinical laboratory (i.e., accession number).

Please send isolates and requisition form to 8100 Lowry Blvd, Denver, CO 80230.

Please fax positive test results to the Communicable Disease Branch: 303.782.0338.



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**Thank you for your partnership!**

For questions, please contact Sarah Janelle at 303.692.3018 or Sarah.Janelle@state.co.us