Tips for CP-CRE Reporting

1) Check to verify that you have enough information to determine case classification
    - If not, please call hospital IP to get additional information

2) Check to make sure information from lab tab or any lab results in the notes are entered into the Case Detail Form

3) Look to make sure the organism is a *Klebsiella* spp., *Escherichia coli*, or *Enterobacter* spp.

4) Look for a lab report to make sure a **carbapenem** sensitivity is reported and has a Minimum Inhibitory Concentration (MIC) included to make a determination
    - Make sure there is a carbapemen listed and the MIC fits the case definition
    - Do not confirm a case that **does not** have a carbapenem MIC, carbapenemase or carbapenem resistance mechanism reported

5) Check for any carbapenemase testing
    - Phenotypic testing for carbapenemase production (e.g., Carba NP, modified carbapenem inactivation method (mCIM), metallo-β-lactamase test)
    - Look for any positive results

6) Check for any carbapenem resistance mechanism testing (e.g., PCR or Expert Carba-R)
    - Look for any results positive for KPC, NDM, OXA-48 like, IMP, VIM, or other carbapenemase gene

7) If no carbapenemase or resistance mechanism testing was completed or available, check for carbapenem MICs
    - Doripenem, Imipenem, or Meropenem ≥ 4 μg/ml
    - Ertapenem ≥ 2 μg/ml
    - Must have the MIC number included
        - Don't trust interpretations alone (i.e., R - resistant, I - intermediate, S - susceptible) for reporting as laboratories may be using older breakpoint cutoffs

Laboratories are strongly encouraged to submit CRE isolates to the MDHHS Bureau of Laboratories

- Confirm organism identification
- Perform mCIM testing
- Perform PCR testing for KPC, NDM, OXA-48 like, IMP, VIM
    - If mCIM or PCR are positive, antimicrobial susceptibility testing will be performed

CP-CRE Case Classification

CONFIRMED Case

- Positive phenotypic test

Phenotypic tests: Modified Hodge Test (MHT), CarbaNP, Neo-Rapid Carb, Carbapenem Inactivation Method (CIM) or modified CIM (mCIM)

OR

- Positive for carbapenem resistance mechanism

Resistance Mechanisms: KPC, NDM, VIM, IMP, OXA-48 by PCR or Expert Carba-R

SUSPECT Case

- Ertapenem MIC ≥ 2 or
- Doripenem MIC ≥ 4 or
- Meropenem MIC ≥ 4 or
- Imipenem MIC ≥ 4

At least 1 carbapenem has to meet the MIC criteria