Carbapenem Resistant Organisms

I. If an organism is an *Enterobacterales* and resistant to Meropenem (MIC≥4) or Ertapenem (MIC≥2) by Vitek, confirm result by performing Kirby-Bauer disk diffusion.

II. Isolates exhibiting Carbapenem resistance are forwarded to RIDOH for genetic testing to determine presence or absence of carbapenem-resistance genes when the following situations occur:

1. Isolate recovered is:
    a. *Enterobacterales* **AND** isolate is resistant to at least one of the following:
        i. Imipenem, Meropenem, Doripenem, Ertapenem by standard susceptibility testing methods (i.e., minimum inhibitory concentrations of >=4 µg/mL for Imipenem, Meropenem, Doripenem, or >=2 µg/mL for Ertapenem)

    b. Non-mucoid *Pseudomonas aeruginosa* or *Acinetobacter baumannii* **AND** isolate is resistant to at least one of the following:
        i. Imipenem, Meropenem, or Doripenem by standard susceptibility testing methods (i.e., minimum inhibitory concentrations of >=8 µg/mL)

III. Reporting:

1. If the organism is carbapenem resistant add the isolate comment: **&CRE**

    "Carbapenem Resistance Detected. Isolate forwarded to RIDOH for confirmation."

2. Subculture isolate to send to RIDOH for further testing.
3. Stock isolate in appropriate freezer box, refer to Isolate Stocking Procedure.
4. The provider/unit must be notified if isolate is a Carbapenem Resistant *Enterobacterales*, refer to Critical Results Notification. (Infection Control will be notified electronically via Theradoc, no phone report is needed)
5. Culture may be finalized.

IV. References

1. January 2015 CDC surveillance definition for CRE
http://www.cdc.gov/hai/organisms/cre/definition.html
2. RIDOH specimen submissions – Carbapenem Resistant Bacteria
http://www.health.ri.gov/programs/laboratory/biological/about/specimensubmission/