



Organism Definitions

Acronyms and Abbreviations

CRE = Carbapenem-Resistant Enterobacterales

CPO = Carbapenem Producing Organism

ESBL = Extended Spectrum Beta-Lactamase

MRSA = Methicillin-Resistant *Staphylococcus aureus*

Pan Res = Pan-Resistant Organism

VRE = Vancomycin-Resistant Enterococci

CRE

By definition, these organisms are (1) part of the Enterobacterales family and (2) resistant to at least one carbapenem.

- Examples of Enterobacteriaceae: *E. coli*, *Klebsiella* sp., *Enterobacter* sp., *Proteus* sp., etc.
- Examples of carbapenem antibiotics: Meropenem, Ertapenem, Imipenem, Doripenem, etc.

CPO

By definition, these organisms (1) have the ability to produce a carbapenemase.

- Carbapenemase genes can be identified by laboratory tests such as the Carba-R. Your results would specify which gene was detected (KPC, NDM, VIM, IMP, OXA, etc.).
- Carbapenemase production can be identified by laboratory tests like CarbaNP or mCIM. Your result would specify if the isolate was positive or negative for carbapenemase production.
- The term CPO includes organisms such as CP-CRE*, carbapenemase producing *Pseudomonas* sp, and carbapenemase producing *Acinetobacter* sp.

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ESBL

By definition, these organisms (1) have the ability to produce an ESBL.

- ESBL production can be determined from various laboratory tests. The most common genes responsible for ESBL are TEM, SHV, and CTX-M.
- In the United States, unless tested by PCR, ESBL is only reportable for *E. coli*, *K. pneumoniae*, *K. oxytoca*, or *P. mirabilis*. Some laboratories use ceftriaxone resistance as a surrogate.

MRSA

By definition, these organisms are (1) identified as *Staphylococcus aureus* and (2) resistant to a methicillin surrogate antibiotic (*i.e.* oxacillin, ceftioxin) or positive for the *mecA* gene.

Pan-Resistant Organism

For the purposes of this guidance, pan-resistant organisms should be defined as an organism that is (1) not susceptible (resistant or intermediate) to all antimicrobials tested and (2) that testing has included antimicrobials from at least three drug classes.

VRE

By definition, these organisms are (1) *Enterococcus* sp. and (2) resistant to vancomycin.

- Note that *Enterococcus casseliflavus* and *Enterococcus gallinarum* are intrinsically resistant to vancomycin (it is *expected* that they are resistant to vancomycin) and they should not be considered MDROs.

Note: Confirmed or suspected outbreaks involving any organism listed are reportable to the Healthcare Associated Infections and Antimicrobial Resistance Team at the Indiana State Department of Health. Please direct questions to the Antimicrobial Resistance Epidemiologist at (317) 233-1306.