**University of Washington Medical Center**

Clinical Microbiology Laboratory Document # 601.U.339.03

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| Antibiotics Manual**CARBAPENEMASE TESTING CHART** | Effective:4/20/18 |
| Process Document  | Written by: Heather Berger | Reviewed by: Andrew Bryan MD, PhD |
| Revises or supersedes: 6/30/17 | Revised by: Heather Berger |

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| Annual Review | Date | Annual Review | Date | Annual Review | Date |
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**CARBAPENEMASE TESTING:**

1. The trek system is programmed to hide beta-lactam antibiotics when meropenem OR imipenem is non-susceptible for Enterobacteriales (see III below for *Pseudomonas* and *Acinetobacter* sp.). Unsuppress and report all the resistant beta-lactam drugs, keep all susceptible/intermediate drugs hidden until the PCR testing is done. Add “further susceptibilities to follow” if drugs have been suppressed.
* If only ertapenem is non-susceptible, there will be no suppression of drugs and all normally reported antibiotics will be released. Do send for carbapenemase testing.
* If only imipenem is non-susceptible for *Proteus, Providencia* or *Morganella* and the other carbapenems test susceptible, the susceptibility will be reported as tested without suppression. Do not send for carbapenemase testing.
1. Drugs may be unsuppressed and reported with first negative carbapenemase (PCR) test result.
2. *Pseudomonas* and *Acinetobacter* species will not have susceptibilities altered or suppressed and will be reported as tested by Trek.
3. Create a workup for the organism using WCIM workup group code. Send to the antibiotics section by 1pm

**When to send organism for carbapenemase testing**

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| **Organism** | **Phenotypic susceptibility results:** |
| ***Enterobacteriacae* species** (NOT *Proteus*, *Providencia*, and *Morganella)* | Non-susceptible to **any carbapenem** (ertapenem, imipenem, meropenem) tested. |
| ***Proteus*, *Providencia*, & *Morganella*** | Must be either **Ertapenem** OR **meropenem** non-susceptible. *If only imipenem is non-susceptible do not send for carbapenemase testing.* |
| ***Acinetobacter species****Non-cystic Acinetobacter species only. CIM testing only, PCR testing performed by special request only. Do not charge for carbapenemase testing.* | **Imipenem** OR **meropenem** non-susceptible (intermediate or resistant) |
| ***Pseudomonas species****Non-cystic and non-mucoid Pseudomonas species only. CIM testing only, PCR testing performed by special request only. Do not charge for carbapenemase testing.* | **Imipenem** OR **meropenem** non-susceptible (intermediate or resistant) |