

AdventHealth CFD-South  
2023 Cumulative Antimicrobial Susceptibility Report  
Apopka Campus Inpatient Antibigram 2023

### Enterobacterales

|                                         | # Isolates | Amoxicillin/<br>Clavulanic Acid | Piperacillin/<br>tazobactam | Cefazolin<br>(Urine only) | Ceftriaxone | Cefepime | Meropenem | Ciprofloxacin | Gentamicin | Tobramycin | Trimethoprim/<br>sulfamethoxazole | Nitrofurantoin<br>(Urine only) | Fosfomycin<br>(ESBL urine only) | Carbapenemase<br>Product. (n=isolates) |
|-----------------------------------------|------------|---------------------------------|-----------------------------|---------------------------|-------------|----------|-----------|---------------|------------|------------|-----------------------------------|--------------------------------|---------------------------------|----------------------------------------|
| <b>MIC Breakpoints (CLSI 2019)</b>      |            | ≤ 8                             | ≤ 16                        | ≤ 16                      | ≤ 1         | ≤ 2      | ≤ 1       | ≤ 0.25        | ≤ 4        | ≤ 4        | ≤ 2/38                            | ≤ 32                           |                                 |                                        |
| <i>Escherichia coli</i> non-ESBL        | 626        | 88                              | 98                          | 98                        | 99          | 99       | 100       | 76            | 91         | 90         | 70                                | 97                             |                                 |                                        |
| <i>Escherichia coli</i> ESBL (17%)      | 131        | R                               | R                           | R                         | R           | R        | 100       | 16            | 77         | 62         | 38                                | 89                             | 95                              |                                        |
| <i>Klebsiella pneumoniae</i> non-ESBL   | 208        | 96                              | 96                          | 98                        | 97          | 98       | 97        | 93            | 99         | 97         | 92                                | 32                             |                                 |                                        |
| <i>Klebsiella pneumoniae</i> ESBL (20%) | 52         | R                               | R                           | R                         | R           | R        | 100       | 9             | 38         | 21         | 23                                | 15                             | 56                              |                                        |
| <i>Klebsiella oxytoca</i> * (ESBL 3%)   | 33         | 94                              | 97                          | 73                        | 97          | 97       | 100       | 94            | 94         | 85         | 94                                | R                              |                                 |                                        |
| <i>Proteus mirabilis</i> * (ESBL 5%)    | 112        | 86                              | 95                          | 92                        | 95          | 95       | 100       | 73            | 93         | 92         | 79                                | R                              |                                 |                                        |
| <i>Enterobacter cloacae</i> complex     | 41         | R                               | 73                          | R                         | 63          | 87       | 97        | 78            | 87         | 81         | 82                                | R                              |                                 |                                        |
| <i>Serratia marcescens</i>              | 41         | R                               | 95                          | R                         | 95          | 95       | 100       | 56            | 73         | 75         | 65                                | R                              |                                 |                                        |

**RED MIC:** indicates %S isolates in presence of inducible resistance mechanisms.

\* These isolates include ESBL strains

### Non-fermenters

|                                                  | # Isolates | Ampicillin/<br>sulbactam | Piperacillin/<br>tazobactam | Ceftazidime | Cefepime | Aztreonam | Meropenem | Ciprofloxacin | Levofloxacin | Gentamicin | Tobramycin | Amikacin | Trimethoprim/<br>sulfamethoxazole | Minocycline | Ceftolozane/<br>Tazobactam <sup>1</sup> | Carbapenemase<br>Product. (n=isolates) <sup>2</sup> |
|--------------------------------------------------|------------|--------------------------|-----------------------------|-------------|----------|-----------|-----------|---------------|--------------|------------|------------|----------|-----------------------------------|-------------|-----------------------------------------|-----------------------------------------------------|
| <b>MIC Breakpoints (CLSI 2019)</b>               |            | ≤ 8                      | ≤ 16                        | ≤ 8         | ≤ 8      | ≤ 8       | ≤ 2       | ≤ 0.5         | ≤ 2          | ≤ 4        | ≤ 4        | ≤ 16     | ≤ 2/38                            | ≤ 4         | ≤ 4                                     |                                                     |
| <i>Pseudomonas aeruginosa</i> non-MDR            | 191        | R                        | 85                          | 91          | 91       | 77        | 87        | 83            | 79           | 95         | 98         | 100      | R                                 | R           |                                         |                                                     |
| <i>Pseudomonas aeruginosa</i> MDR (9%)           | 19         | R                        | 21                          | 42          | 47       | 5         | 32        | 47            | 11           | 68         | 68         | 100      | R                                 | R           | 89                                      |                                                     |
| <i>Stenotrophomonas maltophilia</i> * (MDRO 13%) | 48         | R                        | R                           | R           |          |           | R         |               | 83           | R          | R          |          | 88                                | 98          | R                                       |                                                     |

\* These organisms include MDRO strains

- Data gathered from January 1, 2022 to December 31 2022 and presented as percent of susceptible isolates (%S)
- A minimum of 30 organisms are required to be include in this report based on the CLSI guidelines M39 Ed5th. Some organisms were included despite less than 30 organisms were isolated based on its clinical significance.

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### Gram-Positive Organisms

|                                         | # Isolates | Penicillin | Ampicillin | Oxacillin | Cefazolin | Ceftriaxone | Clindamycin | Tetracycline | Doxycycline | Trimethoprim/<br>sulfamethoxazole | Nitrofurantoin<br>(urine only) | Gentamicin<br>(synergy) | Vancomycin | Linezolid | Daptomycin |
|-----------------------------------------|------------|------------|------------|-----------|-----------|-------------|-------------|--------------|-------------|-----------------------------------|--------------------------------|-------------------------|------------|-----------|------------|
| <b>MIC Breakpoints (CLSI 2019)</b>      |            |            |            |           |           |             |             |              |             |                                   |                                |                         |            |           |            |
| <i>Staphylococcus aureus</i> (MSSA)     | 107        | R          | R          | S         | S         | S           | 81          | 94           | 98          | 95                                | 88                             |                         | 100        | 100       | 100        |
| <i>Staphylococcus aureus</i> (MRSA 51%) | 113        | R          | R          | R         | R         | R           | 52          | 69           | 77          | 87                                | 91                             |                         | 100        | 100       | 100        |
| <i>Enterococcus faecalis</i> (VRE 0%)   | 144        |            | 100        | R         | R         | R           | R           | 28           | 33          | R                                 | 99                             | 78                      | 100        | 100       | 100        |

### Antimicrobial Resistance Definitions:

- **MRSA:** *S. aureus* positive to cefoxitin screen OR resistant to oxacillin OR positive for *mecA* or *mecC* gene
- **VRE:** *E. faecium* & *E. faecalis* resistant to vancomycin OR positive for *vanA* or *vanB* gene
- **ESBL:** *E. coli*, *K. pneumoniae*, *K. oxytoca* & *P. mirabilis* intermediate or resistant to ceftriaxone OR ceftazidime OR cefepime
- **CRE:** *Enterobacterales* intermediate or resistant to meropenem
- **CP-CRE:** CRE + a carbapenemase gene detected (i.e., *KPC*, *NDM*, *OXA48*, *VIM*, etc.)
- **MDRO:**
  - *P. aeruginosa*, *A. baumannii* & *A. xylosoxidans*: intermediate or resistant to 1 antimicrobial in at least 3 active tested classes
  - *S. maltophilia*: intermediate or resistant to trimethoprim/sulfamethoxazole
- **DTR:**
  - *P. aeruginosa*: intermediate or resistant to all tested antimicrobials, except aminoglycosides
  - *A. baumannii*: intermediate or resistant to ampicillin/sulbactam + meropenem + 1 more active antimicrobial

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