

***In Vitro* Activity of Ceftolozane/Tazobactam, Imipenem/Relebactam, Ceftazidime/Avibactam and Comparators against *Pseudomonas aeruginosa* Isolates Collected in United States Hospitals – Results from the SMART Surveillance Program, 2018-2020**

James A. Karlowsky, Sibylle H. Lob, C. Andrew DeRyke, David W. Hilbert, Michael T. Wong, Katherine Young, Fakhar Siddiqui, Mary R. Motyl and Daniel F. Sahn

SUPPLEMENTARY DATA

TABLE S1 Percentages of susceptibility to ceftolozane/tazobactam, imipenem/relebactam, and ceftazidime/avibactam among all *P. aeruginosa* isolates and subsets of nonsusceptible and resistant isolates collected in four United States census regions

| Phenotype | West ^a | | | | Midwest ^b | | | | Northeast ^c | | | | South ^d | | | |
|-----------------|-------------------|-----------|-----------|-----------|----------------------|-----------|-----------|-----------|------------------------|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|
| | N | C/T %S | IMR %S | CZA %S | N | C/T %S | IMR %S | CZA %S | N | C/T %S | IMR %S | CZA %S | N | C/T %S | IMR %S | CZA %S |
| All | 596 | 95.5 | 89.6 | 92.1 | 1109 | 96.4 | 93.1 | 95.9 | 381 | 96.1 | 87.4 | 92.1 | 445 | 98.2 | 93.9 | 96.0 |
| MDR | 80 | 71.3 | 46.3 | 48.8 | 124 | 73.4 | 62.9 | 71.0 | 68 | 80.9 | 58.8 | 66.2 | 47 | 83.0 | 70.2 | 63.8 |
| Pan-β-lactam-NS | 63 | 69.8 | 42.9 | 41.3 | 73 | 71.2 | 56.2 | 58.9 | 47 | 76.6 | 48.9 | 51.1 | 24 | 83.3 | 62.5 | 45.8 |
| DTR | 54 | 66.7 | 40.7 | 37.0 | 62 | 67.7 | 51.6 | 58.1 | 33 | 72.7 | 36.4 | 39.4 | 20 | 80.0 | 60.0 | 35.0 |

Abbreviations: C/T, ceftolozane/tazobactam; IMR, imipenem/relebactam; CZA, ceftazidime/avibactam; S, susceptible; CAZ, ceftazidime; TZP, piperacillin/tazobactam; IMI, imipenem; MEM, meropenem; NS, non-susceptible; MDR, multidrug-resistant; pan-β-lactam-NS, non-susceptible to all tested β-lactams; DTR, difficult-to-treat-resistance.

^a West: California, Colorado, Utah, Washington.

^b Midwest: Illinois, Indiana, Michigan, Minnesota, Nebraska, Ohio, Wisconsin.

^c Northeast: New York.

^d South: Florida, Georgia, North Carolina, Texas.

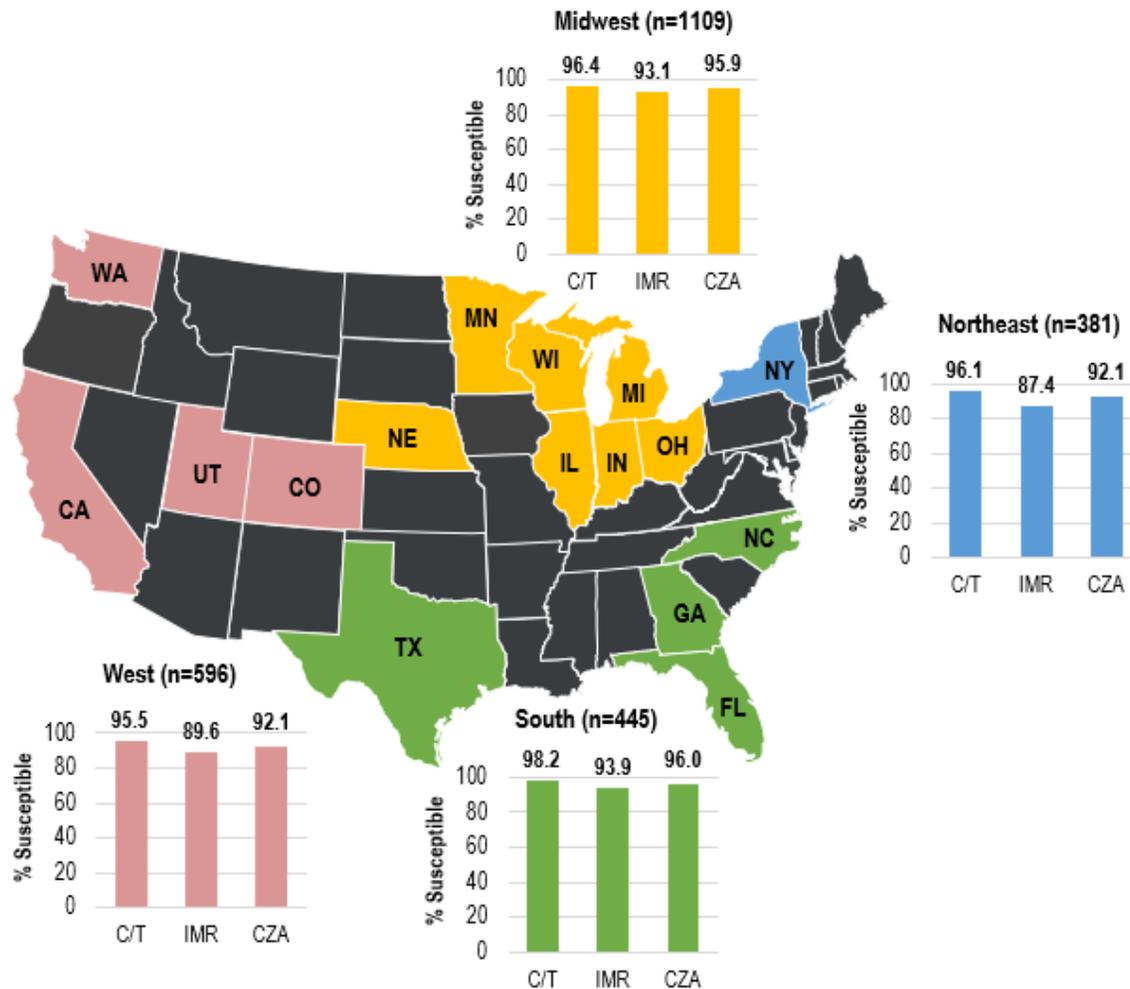


FIG S1 *In vitro* susceptibility to ceftolozane/tazobactam, imipenem/relebactam and ceftazidime/avibactam among 2531 *P. aeruginosa* isolates collected in four United States census regions.

Abbreviations: C/T, ceftolozane/tazobactam; CZA, ceftazidime/avibactam; IMI/REL, imipenem/relebactam; CA, California; CO, Colorado; FL, Florida; GA, Georgia; IL, Illinois; IM, Indiana; MI, Michigan; MN, Minnesota; NE, Nebraska; NY, New York; NC, North Carolina; OH, Ohio; TX, Texas; UT, Utah; WA, Washington; WI, Wisconsin.

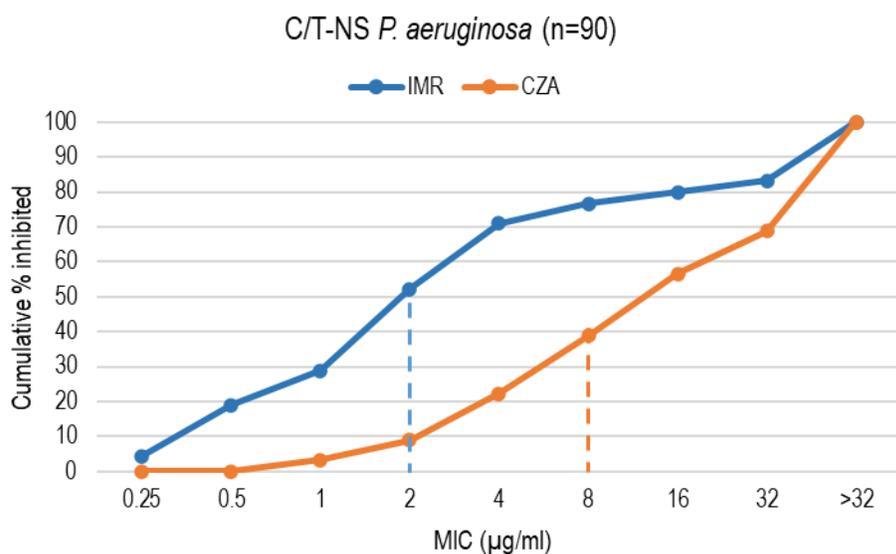


FIG S2 Cumulative MICs for imipenem/relebactam and ceftazidime/avibactam against ceftolozane/tazobactam-nonsusceptible *P. aeruginosa* isolates.

Abbreviations: C/T, ceftolozane/tazobactam; IMR, imipenem/relebactam CZA, ceftazidime/avibactam; NS, nonsusceptible.

CLSI susceptibility breakpoints indicated by dashed lines.