

**PROVIDENCE HEALTH CARE
DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE, DIVISION OF MEDICAL MICROBIOLOGY
CUMULATIVE ANTI BIOGRAM FOR JANUARY 1, 2017 – DECEMBER 31, 2017**

	N	PERCENTAGE OF ISOLATES SUSCEPTIBLE TO:										
		AMPICILLIN	CEFZOLIN §	CEFTAZIDIME	CEFTRIAZONE	CIPROFLOXACIN	GENTAMICIN	MEROPENEM	NITROFURANTOIN *	PIP/TAZOBACTAM	TOBRAMYCIN	TRIMETH/SULFA
GRAM-NEGATIVES												
<i>Acinetobacter</i> species	92	R	R	84	–	96	97	100	R	94	98	93
<i>Citrobacter freundii</i> [1]	65	R	R	–	72	91	92	100	95	78	91	77
<i>Citrobacter koseri</i>	43	R	86	–	100	100	100	98	95	88	100	100
<i>Enterobacter aerogenes</i> [1]	82	R	R	–	79	99	100	98	8	78	100	96
<i>Enterobacter cloacae</i> [1]	255	R	R	–	65	91	92	98	45	73	89	83
<i>Escherichia coli</i> [2]	2698	46	74	–	83	73	88	100	97	83	87	69
<i>Klebsiella oxytoca</i>	138	R	41	–	92	96	96	99	89	90	95	95
<i>Klebsiella pneumoniae</i> [2]	599	R	84	–	88	94	94	100	39	98	93	83
<i>Morganella morganii</i> [1]	91	R	R	–	97	81	86	100	R	99	90	79
<i>Proteus mirabilis</i>	327	62	75	–	94	85	93	100	R	99	93	76
<i>Proteus vulgaris</i> [1]	34	R	R	–	91	100	100	100	R	100	100	74
<i>Pseudomonas aeruginosa</i> [3]	510	R	R	91	–	88	95	89	R	89	99	R
<i>Serratia marcescens</i> [1]	124	R	R	–	98	100	100	100	R	92	86	98

Note 1: Organisms producing AmpC β-lactamases may develop resistance during prolonged therapy with 3rd cephalosporins

Note 2: 12% of *E. coli* and 7% of *K. pneumoniae* isolates produce Extended Spectrum β-lactamases (ESBL)

Note 3: Excludes isolates from patients with cystic fibrosis (CF)

Note 4: *Haemophilus influenzae* β-lactamase positive: 18% (Ampicillin resistant)

Note 5: *Moraxella catarrhalis* β-lactamase positive: >90% (Ampicillin resistant)

	N	PERCENTAGE OF ISOLATES SUSCEPTIBLE TO:												
		AMPICILLIN	CEFTRIAZONE	CIPROFLOXACIN	CLINDAMYCIN	CLOXACILLIN	DAPTOMYCIN	ERYTHROMYCIN	LINEZOLID	NITROFURANTOIN*	PENICILLIN	TETRACYCLINE	TRIMETH/SULFA	VANCOMYCIN
GRAM-POSITIVES														
<i>Staphylococcus aureus</i> (MSSA)	1949	–	–	88	75	100	–	70	100	99	11	93	95	100
MRSA	935	R	R	12	65	R	92	18	100	98	R	67	89	100
<i>Staphylococcus lugdunensis</i>	105	–	–	95	91	88	–	91	100	100	24	94	100	100
Coagulase-negative staphylococci	589	–	–	65	57	42	–	37	100	99	10	–	–	100
<i>Enterococcus faecalis</i>	918	100	R	75	R	R	–	R	99	99	–	–	–	99
<i>Enterococcus faecium</i>	313	7	R	5	R	R	95	R	98	21	–	–	–	34
<i>Streptococcus pneumoniae</i>	307	–	100 ^a	–	–	–	–	63	–	–	100 ^a	–	55	100
<i>Streptococcus pyogenes</i> ^b	940	–	–	–	78	–	–	74	–	–	100	–	–	100

	N	PERCENTAGE OF ISOLATES SUSCEPTIBLE TO:		
		CLINDAMYCIN	PENICILLIN	METRONIDAZOLE
ANAEROBES				
<i>Bacteroides fragilis</i> group	36	63	R	100
<i>Clostridium</i> species	16	69	100	100

LEGEND:

- N Maximum number of isolates tested
- R This organism is inherently resistant to this antibiotic
- < Insufficient number of isolates tested, cumulative data not available
- * Urine isolates only
- § Cefazolin predicts results for oral cephalosporins in patients with uncomplicated UTI
- Antibiotic not tested and/or not indicated
- ^a Based on non-meningitis breakpoints; non-invasive isolates only
- ^b Penicillin is the antibiotic of choice for *S. pyogenes*