VCUHS EMERGENCY DEPARTMENT ANTIBIOTIC SUSCEPTIBILITY TABLES
JANUARY – DECEMBER 2024
Department of Pathology - Microbiology/Immunology

Table 1. Activity of selected antibiotics against gram-positive cocci

	Percentage (%) of Organisms Susceptible														
Organism	**Number Tested**	**Penicillin (Nonmeningitis)**	**Penicillin (Meningitis)**	**Ampicillin**	**Oxacillin [a]**	**Ceftriaxone (Nonmeningitis)**	**Ceftriaxone (Meningitis)**	**Vancomycin**	**Tetracycline**	**Levofloxacin**	**Clindamycin**	**TMP/SMX**	**Ceftaroline [c]**	**Daptomycin [b,c]**	**Linezolid**
Staphylococcus aureus	439				61			100	88		70	96	100	100	100
Coagulase negative *Staphylococcus* species	93				43			100				59		98	100
Enterococcus faecalis	295			99				96						95	98
Enterococcus faecium	45			20				46						100	91
Streptococcus pneumoniae [d]	64	95	63			95	87	100	71	93					
Streptococcus species Viridans group	59	83				96					84				

[a] Staphylococci resistant to oxacillin (methicillin) are also resistant to penicillin, ampicillin, cefazolin, cefoxitin, ceftriaxone, meropenem and all other beta-lactam antibiotics. Staphylococci species breakpoints are in use.
[b] Respiratory tract isolates included in Daptomycin results though excluded from reporting per CLSI M100 guidelines.
[c] Ceftaroline and Daptomycin results include Susceptible Dose Dependent (SDD) isolates.
[d] Data included from January 2023 until December 2024 due to data with fewer than 30 isolates being considered statistically unreliable.

Table 2. Activity of selected antibiotics against gram-negative bacilli

	Percentage (%) of Organisms Susceptible														
Organism	**Number Tested**	**Ampicillin**	**Amp/Sulb**	**Pip/Tazo [d]**	**Cefazolin**	**Cefazolin (Urine)**	**Cefepime [d]**	**Ceftriaxone**	**Meropenem**	**Gentamicin**	**Ciprofloxacin**	**Levofloxacin**	**TMP/SMX**	**Nitrofurantoin**	**Tobramycin**
Citrobacter koseri (diversus)	30	IR	100	100	100	100	100	100	100	100	100	100	100		
Klebsiella (Enterobacter) aerogenes [a]	43	IR	IR	86	IR	IR	100	86	100	93	95	97	97		
Enterobacter cloacae complex [a]	68	IR	IR	75	IR	IR	95	72	100	97	85	88	76		
Escherichia coli	1447		79	99	86	87	95	89	99	89	78	80	68	98	
Klebsiella oxytoca	50	IR	76	90	70	83	96	90	96	96	98	100	98		
Klebsiella pneumoniae	445	IR	73	95	84	85	93	87	98	92	84	90	82		
Proteus mirabilis [b]	230	92	96	100	89	96	100	97	100	91	82	83	80		
Pseudomonas aeruginosa	203	IR	IR	92			94	IR	93		88	79[c]	IR		97
Serratia marcescens	41	IR	IR	97	IR	IR	97	95	100	97	90	95	92		

IR = Intrinsic Resistance
[a] Use of 3rd generation cephalosporins is not recommended for *Enterobacter cloacae* complex, *Citrobacter freundii* complex, and *Klebsiella aerogenes* infections because resistance develops rapidly. Cefepime, meropenem, a quinolone, or TMP/SMX are recommended.
[b] *Proteus* species other than *Proteus mirabilis* are more resistant (similar to *Morganella* species).
[c] Levofloxacin breakpoints for Pseudomonas aeruginosa are based on a dosage regimen of 750mg every 24 hours.
[d] Piperacillin/tazobactam and Cefepime results include Susceptible Dose Dependent (SDD) isolates.

Data collected by the Clinical Microbiology Laboratory, Department of Pathology
CLSI M100-ed33 and M27M44-ed3 Interpretation breakpoints were applied unless otherwise stated.