

South Salt Lake County, UT

Antibiograms summarize local antimicrobial resistance profiles, supporting clinicians in selecting appropriate empiric antibiotics prior to the availability of organism-specific susceptibility. The tables below show the **percentage of microbial isolates susceptible to various antibiotics**. The data was collected in 2024 from Intermountain Health emergency departments and inpatient facilities within the stated geographical region.

Definitive antibiotic therapy should be based on the causative organism(s) susceptibility profile and clinical context once identified.

Susceptibility Rates (%) of Gram-Negative Isolates to Common Antimicrobials

N (#)	Species/Organism	Amoxicillin/Clavulanate	Ampicillin/Sulbactam	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Ertapenem	Gentamicin	Levofloxacin	Meropenem	Nitrofurantoin*	Piperacillin/Tazobactam	Tetracycline	Tobramycin	Trimethoprim/Sulfamethoxazole
1250	<i>Escherichia coli</i>	83	65	85	91	91	91	79	100	93	83	100	94	99	75	93	75
214	<i>Klebsiella pneumoniae</i>	85	80	89	90	90	89	81	100	96	92	100	42	98	79	93	82
87	<i>Pseudomonas aeruginosa</i>				95	97		86			89	99		98		99	
73	<i>Proteus mirabilis</i>	93	90	79	95	95	93	84	100	90	85	100		100		90	81
61	<i>Klebsiella oxytoca</i>	90	70	23	95	97	90	93	100	100	95	100	93	87	97	100	95
57	<i>Enterobacter cloacae</i>		30		89	77	63	96	93	100	98	100	52	84	91	100	93

Susceptibility Rates (%) of Gram-Positive Isolates to Common Antimicrobials

N (#)	Species/Organism	Ampicillin	Ceftriaxone	Clindamycin	Not For UTI	Daptomycin	Levofloxacin	Linezolid	Nafcillin	Nitrofurantoin*	Penicillin	Tetracycline	Trimethoprim/Sulfamethoxazole	Vancomycin
232	<i>Enterococcus faecalis</i>	100				53	93*	98		100	99	21		99
196	<i>Staphylococcus aureus</i> MSSA			82	100		100	100		100		94	99	100
88	<i>Staphylococcus aureus</i> MRSA			85	96		100			100		89	95	100
62	<i>Staphylococcus epidermidis</i>			60	100		100	46		100		81	86	100
44	<i>Streptococcus anginosus</i> grp	100	100	80		100					100			98
37	<i>Staphylococcus sp. coag neg</i>			81	100		100	81		100		92	91	100
18	<i>Enterococcus faecium</i>	44			83	33*	94			50	44	41		72
15	<i>Streptococcus pneumoniae</i>		100	92		100	100				100	100	79	100

* For cystitis only

Interpret the data cautiously in organisms with ≤30 isolates, as they may not be accurate.

- In 2024, 8% of *E. coli*, 3% of *K. oxytoca*, 5% of *P. mirabilis*, and 10% of *K. pneumoniae* screened positive for extended spectrum β-lactamase (ESBL).
- Aminoglycoside monotherapy is not recommended for most infections. Gentamicin is no longer recommended for *P. aeruginosa*.
- Certain organisms, including *Enterobacter cloacae*, *Klebsiella aerogenes*, and *Citrobacter freundii* can become resistant to 3rd-generation cephalosporins (ceftriaxone, cefotaxime, ceftazidime) during treatment of severe infections despite initial *in vitro* susceptibility. Cefepime may be an alternative option and higher doses may be required.
- Enterococcus* spp. are intrinsically resistant to cephalosporins. Fluoroquinolones (e.g., ciprofloxacin, levofloxacin) should not be used to treat any enterococcal infection except uncomplicated cystitis in patients with severe penicillin allergy.
- Ertapenem is not active against *Pseudomonas*, *Acinetobacter*, or *Enterococcus* spp.

- Beta-lactamase positive *Haemophilus* spp. are resistant to penicillin, ampicillin, and amoxicillin.
- Beta-hemolytic streptococci (Groups A, B, C, G) are universally susceptible to β-lactams (penicillins, cephalosporins) and vancomycin; therefore routine susceptibility testing is not needed for these agents. However, resistance to clindamycin and azithromycin can be present.
- Methicillin-susceptible *Staphylococcus aureus* (MSSA) are resistant to penicillin, ampicillin, and amoxicillin. First-line agents are nafcillin/dicloxacillin and cefazolin/cephalexin. Second-line agents include: amoxicillin/clavulanate, ampicillin/sulbactam, cefuroxime, and ceftriaxone.
- S. aureus* bacteremia in adults must be treated with intravenous antibiotics and infectious diseases should be consulted. Outcomes with β-lactam treatment for MSSA are better than vancomycin. ***S. aureus* in the blood is never a contaminant.**