

Denver, CO

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	TMP/SMX
826 <i>Escherichia coli</i>	86	58	82	90	88	88	68	99	88	79	100	96	98	70	88	74
184 <i>Klebsiella pneumoniae</i>	92	78	82	85	84	84	82	99	93	86	100	42	94	82	92	84
154 <i>Pseudomonas aeruginosa</i>				92	94		83			79	92		91		94	
81 <i>Proteus mirabilis</i>	97	92	53	98	100	98	86	100	87	86			100		90	88
77 <i>Enterobacter cloacae</i> complex				93	72	72	96	87	98	97	100	28	76	89	98	90
53 <i>Klebsiella oxytoca</i> Grouper	86	43	16	94	94	86	86	100	92	98	100	96	88	84	92	86
35 <i>Stenotrophomonas maltophilia</i>					34				80							100
26 <i>Citrobacter freundii</i> complex				100	53	50	80	100	92	88	100	100	73	76	88	76
18 <i>Klebsiella aerogenes</i>				100	88	88	100	94	100	100	100	18	88	88	100	94

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

N (#) Species / Organism	Ampicillin	Ceftriaxone	Clindamycin†	Daptomycin	Doxycycline	Levofloxacin	Linezolid	Nafcillin	Nitrofurantoin*	Penicillin†	TMP/SMX	Vancomycin
267 MSSA			74	100	96	93	100	100		98	100	
215 <i>Enterococcus faecalis</i>	100			76		87*	99				100	
164 MRSA			74	100	83		100			91	100	
147 <i>Staphylococcus epidermidis</i>			63	100	83	80	99	39		57	100	
83 <i>Streptococcus viridans</i>		100	79			100	100		92		100	
42 <i>Enterococcus faecium</i>	35			97	100	33*	100		100		69	
40 <i>Streptococcus pneumoniae</i>		100	92			97	100			87	72	100
38 CNS Grouper			70	100	91	80	100	63		46	100	
35 <i>Staphylococcus lugdunensis</i>			78	100	100	100	100	94		100	100	
33 <i>Streptococcus anginosus</i>		100	86			100	100		100		100	

* For cystitis only

† Not for meningitis

TMP/SMX=
trimethoprim/
sulfamethoxazole

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

- In 2024, 12% of *E. coli* and 16% 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.**