

Jefferson County, 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
962	<i>Escherichia coli</i>	89	63	85	90	90	90	73	99	91	82	100	99	98	78	91	79
212	<i>Klebsiella pneumoniae</i> grouper	90	76	82	87	86	87	82	98	94	89	100	45	93	77	92	86
155	<i>Pseudomonas aeruginosa</i> grouper				94	91		82			80	92		92		94	
117	<i>Proteus mirabilis</i>	95	87	58	97	100	96	76	99	89	76			100		90	81
73	<i>Klebsiella oxytoca</i> grouper	89	49	27	98	98	93	95	100	98	98	100	87	91	94	98	95
72	<i>Enterobacter cloacae</i> complex				93	76	70	90	84	97	93	100	33	79	91	100	97
23	<i>Serratia marcescens</i> grouper				100	100	100	100	100	100	100	100		95		82	100
19	<i>Citrobacter freundii</i> complex				100	89	84	84	100	100	89	100	86	89	89	100	89
19	<i>Klebsiella aerogenes</i>				100	63	63	100	100	100	100	100	18	68	100	100	100

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

N (#)	Species/Organism	Amoxicillin or Ampicillin	Ceftriaxone	Clindamycin <i>Not for UTI</i>	Daptomycin	Doxycycline	Levofloxacin	Linezolid	Nafcillin	Nitrofurantoin*	TMP/SMX	Vancomycin
273	MSSA			78	100	97	91	100	100	100	97	100
211	<i>Enterococcus faecalis</i>	100			81	100	87	98		100		99
160	<i>Staphylococcus epidermidis</i>			61	100	83	81	100	41	100	45	100
149	MRSA			75	100	85	52	100		100	95	100
75	<i>Streptococcus viridans</i>		100	85			98	100				100
60	<i>Staphylococcus</i> sp. coagulase (-)			63	100	91	81	100	70	100	85	100
49	<i>Enterococcus faecium</i>	53			96		26	89				55
40	<i>Streptococcus pneumoniae</i>	100	100	92		92†	97	100			80	100

* For cystitis only

† Represents tetracycline sensitivity; doxycycline susceptibility is likely higher

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

TMP/SMX= trimethoprim/ sulfamethoxazole

- In 2024, 13% of *E. coli* and 8% 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.**