

Iron 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
330	<i>Escherichia coli</i>	85	65	87	94	93	93	80	100	93	82	100	94	98	81	93	79
68	<i>Klebsiella pneumoniae</i>	93	84	95	96	96	96	90	99	94	97	99	41	99	91	94	90
25	<i>Pseudomonas aeruginosa</i>				96	100		68			76	96		100		100	
22	<i>Proteus mirabilis</i>	82	82	79	91	82	86	77	100	86	77	100		100		77	50
17	<i>Klebsiella oxytoca</i>	94	71	12	94	94	94	94	100	94	100	100	83	100	100	94	88
14	<i>Enterobacter cloacae</i> compl.				100	100	86	100	100	100	100	100	25	100	90	100	86

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

N (#)	Species/Organism	Ampicillin	Clindamycin	Not For UTI	Daptomycin	Levofloxacin	Linezolid	Nafcillin	Nitrofurantoin *	Penicillin	Tetracycline	Trimethoprim/Sulfamethoxazole	Vancomycin
77	<i>Enterococcus faecalis</i>	100		51	90*	95		100	99	22			97
41	MSSA		82	100		100	100	100		97	97	100	
17	<i>Streptococcus anginosus</i> group		71						100				100
13	<i>Staphylococcus epidermidis</i>		71	100		100	38	100		85	75	100	
12	MRSA		55	100		100		100		100	91	100	
10	<i>Staphylococcus</i> sp coag neg		83	100		100	80	100		100	100	100	

* For cystitis only

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

- In 2024, 6% of *E. coli*, 9% of *P. mirabilis*, 6% of *K. oxytoca*, and 4% 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.**