

# Community Antibiograms



## 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       | 100             | 98          | 100     |            |
| 215                    | <i>Enterococcus faecalis</i>      | 100        |             |              | 76         |             | 87*          | 99        |           | 98              |             |         | 100        |
| 164                    | MRSA                              |            |             | 74           | 100        | 83          |              | 100       |           | 100             |             | 91      | 100        |
| 147                    | <i>Staphylococcus epidermidis</i> |            |             | 63           | 100        | 83          | 80           | 99        | 39        | 100             |             | 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        | 100             |             | 46      | 100        |
| 35                     | <i>Staphylococcus lugdunensis</i> |            |             | 78           | 100        | 100         | 100          | 100       | 94        | 100             |             | 100     | 100        |
| 33                     | <i>Streptococcus anginosus</i>    | 100        | 86          |              |            | 100         | 100          |           |           |                 | 100         |         | 100        |

- 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.**

\* For cystitis only

† Not for meningitis

TMP/SMX= trimethoprim/sulfamethoxazole

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