| Gram-positive Streptococci and Enterococci % Susceptible | No. Tested | Ampicillin | Amoxicillin | Penicillin | Ceftriaxone | Meropenem | Clindamycin | Erythromycin | Levofloxacin | Ciprofloxacin | Linezolid | Nitrofurantoin | Tetracycline | Trimeth-Sulfa | Vancomycin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Streptococci** | | | | | | | | | | | | | | | |
| *Grp. B Streptococcus agalactiae* | 374 | 100 | SP | 100 | SP | - | 41 | 40 | 98 | - | 100 | - | 16 | - | 100 |
| *Grp. A Streptococcus pyogenes* | 69 | 100 | SP | 100 | SP | - | 87 | 87 | 100 | - | 100 | - | 84 | - | 100 |
| *Grp. G Streptococci* | 74 | 100 | SP | 100 | SP | - | 76 | 77 | 96 | - | 100 | - | 72 | - | 100 |
| *S. pneumoniae (Non-meningeal)* | 64 | SP[1] | SP[1] | 98 | 97 | 92 | - | 77 | 98 | - | - | - | 55 | 82 | SP |
| *S. pneumoniae (Meningeal)* | 64 | - | - | 80 | 92 | 92 | - | - | - | - | - | - | - | - | SP |
| *S. anginosus* | 92 | 100 | SP[2] | 100 | SP | - | 79 | 70 | 94 | - | 100 | - | 53 | - | 100 |
| *S. constellatus* | 54 | 93 | SP[2] | 98 | SP | - | 74 | 74 | 100 | - | 100 | - | 80 | - | 100 |
| **Enterococci** | | | | | | | | | | | | | | | |
| *Enterococcus faecalis* | 971 | 100 | SP[2] | 100 | R | - | R | 13 | 89[U] | 87[U] | 98 | 100[U] | 29[U] | R | 100 |
| *Enterococcus faecium* | 96 | 30 | - | 29 | R | - | R | R | 21[U] | 22[U] | 98 | 25[U] | 24[U] | R | 53 |

| Gram-positive Staphylococci % Susceptible | No. Tested | Penicillin | Oxacillin | Ceftaroline | Vancomycin | Erythromycin | Clindamycin | Gentamicin[3] | Trimeth-Sulfa | Linezolid | Daptomycin | Nitrofurantoin | Rifampin[3] | Tetracycline |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Staphylococcus aureus* | 1699 | 5 | 71 | 100 | 100 | 61 | 81 | 99 | 95 | 100 | 100 | 100[U] | 100 | 91 |
| *Staphylococcus lugdunensis* | 205 | - | 92 | - | 100 | 84 | 83 | 100 | 100 | 100 | 100 | 100[U] | 100 | 95 |
| *Staphylococcus epidermidis* | 318 | - | 29 | - | 100 | 26 | 60 | 91 | 58 | 100 | 100 | 100[U] | 99 | 73 |
| *Staphylococcus intermedius* | 48 | - | 90 | - | 100 | 73 | 75 | 79 | 83 | 100 | 100 | 100[U] | 100 | 54 |

**Notes**

[1] Based on susceptibility to standard dose IV penicillin, susceptibility to oral penicillin, and studies of clinical efficacy, nearly all non-meningeal pneumococcal infections can be effectively treated with IV ampicillin or with high dose oral amoxicillin (in children: 80-100 mg/kg/day divided TID; adult dose and maximum dose in children: 1 g TID)

[2] Susceptibility approximately equivalent to ampicillin

[3] Should only be used in combination with other active agents

[U] Use for uncomplicated cystitis ONLY

**Susceptibility**

| <60% | 60-89% | ≥90% |
|---|---|---|

**Analysis Key**

| | |
|---|---|
| R | Intrinsically resistant |
| - | Antimicrobial is not tested |
| SP | Susceptibility predicted |

Marshfield Labs™

# 2024 Combined Antibiogram

## Contact Information

- For susceptibility test questions and data analysis please contact: **Dr. Taylor Wahlig** or **Dr. Sophie Arbefeville** at **715-221-6141** or **ext. 16141**
- For antimicrobial stewardship questions please contact: **Philip (Logan) Whitfield** at **715-387-7578** or **ext. 77578**
- For urgent questions regarding a specific patient case, please consult your local infectious diseases physician

*Inpatient and outpatient isolates have been combined without clinically or statistically significant differences

18725-010

| Gram-negative Enterobacterales % Susceptible | No. Tested | Ampicillin | Amoxicillin-clav | Piperacillin-tazo | Cefazolin[1] | Cefuroxime | Cefpodoxime | Cefoxitin | Ceftriaxone | Cefepime | Aztreonam | Ertapenem | Meropenem | Amikacin | Gentamicin | Tobramycin | Ciprofloxacin | Levofloxacin | Doxycycline | Trimeth-Sulfa |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Citrobacter freundii complex* | 204 | R | R | R | R | R | R | R | R | 100 | R | 99 | 100 | 100 | 95 | 98 | 93 | 89 | 87 | 89 |
| *Citrobacter koseri* | 91 | R | 99 | 96 | - | - | - | 96 | 99 | 99 | - | 99 | 99 | 99 | 99 | 99 | 97 | 98 | 99 | 99 |
| *Enterobacter cloacae complex* | 307 | R | R | R | R | R | R | R | R | 97 | R | 91 | 100 | 100 | 99 | 99 | 95 | 94 | 95 | 92 |
| *Escherichia coli* | 6239 | 66 | 89 | 96 | 71 | 87 | 92 | 95 | 95 | 98 | 97 | 100 | 100 | 100 | 94 | 95 | 88 | 85 | 86 | 85 |
| *Klebsiella aerogenes* | 134 | R | R | R | R | R | R | R | R | 100 | R | 99 | 100 | 100 | 100 | 100 | 99 | 96 | 94 | 99 |
| *Klebsiella oxytoca* | 304 | R | 94 | 93 | - | 91 | 96 | 99 | 95 | 99 | 94 | 100 | 100 | 100 | 98 | 98 | 97 | 97 | 96 | 96 |
| *Klebsiella pneumoniae* | 1007 | R | 95 | 92 | 79 | 88 | 90 | 96 | 95 | 98 | 91 | 100 | 100 | 100 | 98 | 97 | 91 | 90 | 85 | 93 |
| *Morganella morganii* | 74 | R | R | 99 | R | R | - | R | 92 | 98 | - | 100 | 100 | 100 | 91 | 97 | 78 | 78 | 58 | 81 |
| *Proteus mirabilis* | 460 | 87 | 92 | 100 | 11 | 99 | 99 | 98 | 99 | 99 | 100 | 95 | 100 | 100 | 91 | 93 | 89 | 88 | R | 86 |
| *Proteus vulgaris* | 44 | R | 70 | 100 | R | R | - | 100 | - | 95 | - | 98 | 100 | 100 | 100 | 95 | 98 | 95 | R | 93 |
| *Providencia rettgeri* | 32 | R | R | 100 | R | - | - | 91 | 97 | 100 | - | 84 | 100 | - | 97 | 97 | 84 | 75 | R | 91 |
| *Serratia marcescens* | 113 | R | R | - | R | R | - | R | 98 | 100 | - | 96 | 100 | 99 | 99 | 92 | 96 | 95 | 33 | 100 |

| Gram-negative URINE ONLY % Susceptible | No. Tested | Ampicillin | Amoxicillin-clav | Piperacillin-tazo | Cefazolin[U] | Cefuroxime | Cefpodoxime | Ceftriaxone | Cefepime | Aztreonam | Ertapenem | Meropenem | Amikacin | Gentamicin | Tobramycin | Ciprofloxacin | Levofloxacin | Doxycycline | Nitrofuantion[U] | Trimeth-Sulfa |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Citrobacter freundii complex* | 181 | R | R | R | R | R | R | R | 100 | R | 99 | 100 | 100 | 96 | 99 | 93 | 88 | 87 | 94 | 89 |
| *Citrobacter koseri* | 83 | R | 100 | 96 | R | - | - | 100 | 100 | - | 100 | 100 | 100 | 100 | 100 | 98 | 99 | 99 | 92 | 100 |
| *Enterobacter cloacae complex* | 226 | R | R | R | R | R | R | R | 96 | R | 92 | 100 | 100 | 99 | 96 | 96 | 95 | 94 | 31 | 89 |
| *Escherichia coli* | 5972 | 66 | 89 | 96 | 93 | 87 | 93 | 95 | 98 | 97 | 100 | 100 | 100 | 94 | 95 | 88 | 85 | 86 | 97 | 85 |
| *Klebsiella aerogenes* | 119 | R | R | R | R | R | R | R | 100 | R | 98 | 100 | 100 | 100 | 100 | 98 | 96 | 95 | 7 | 99 |
| *Klebsiella oxytoca* | 263 | R | 95 | 94 | R | 90 | 97 | 95 | 99 | 95 | 100 | 100 | 100 | 98 | 98 | 97 | 97 | 97 | 73 | 96 |
| *Klebsiella pneumoniae* | 937 | R | 95 | 93 | 95 | 88 | 90 | 95 | 98 | 92 | 100 | 100 | 100 | 98 | 97 | 92 | 90 | 85 | 24 | 93 |
| *Morganella morganii* | 38 | R | R | 98 | R | R | - | 92 | 97 | - | 100 | 100 | 100 | 91 | 96 | 80 | 80 | 42 | R | 82 |
| *Proteus mirabilis* | 392 | 87 | 92 | 100 | 99 | 100 | 100 | 99 | 99 | 100 | 95 | 100 | 99 | 92 | 94 | 90 | 89 | R | R | 88 |
| *Proteus vulgaris* | 35 | R | 77 | 100 | R | R | - | - | 97 | - | 97 | 100 | - | 100 | 97 | 97 | 94 | R | R | 94 |
| *Serratia marcescens* | 51 | R | R | - | R | R | - | 98 | 100 | - | 94 | 100 | 98 | 98 | 88 | 94 | 92 | 32 | R | 100 |

| Gram-negative Non-Enterobacterales % Susceptible | No. Tested | Piperacillin-tazo | Ceftazidime | Cefepime | Meropenem | Tobramycin | Ciprofloxacin | Levofloxacin | Minocycline | Trimeth-Sulfa |
|---|---|---|---|---|---|---|---|---|---|---|
| *P. aeruginosa* | 558 | 94 | 97 | 97 | 97 | 99 | 90 | 82 | R | R |
| *S. maltophilia* | 42 | R | - | - | R | R | - | 90 | 93 | 100 |

**Analysis Key**

| | |
|---|---|
| R | Isolate is resistant |
| - | Antimicrobial is not tested |

**Susceptibility**

| |
|---|
| ≥90% |
| 60-89% |
| <60% |

**Notes**

[U] Use for uncomplicated cystitis only

[1] Non-urine isolates only

<-- Assess patient's previous urine culture and susceptibility results. In the absence of previous resistance, first-line agents for uncomplicated cystitis are TMP/SMX, nitrofurantoin, and cephalexin.