

Saskatchewan Health Authority - Saskatoon Area AntibioGram 2018

ADULT PATIENTS - All isolates (including Urinary isolates)

January 1, 2018 - December 31, 2018

Inpatients – % Susceptible

| | # Isolates tested | Penicillin PO/IV | Penicillin IV - meningitis | Ampicillin/Amoxicillin | Cloxacillin | Amoxicillin-Clavulanic acid | Piperacillin-Tazobactam | Cefazolin | Cefoxitin | Cefuroxime | Ceftriaxone | Ceftriaxone - Meningitis | Ceftazidime | Meropenem | Ertapenem | Clindamycin | Azithromycin | Erythromycin | Tetracycline/Doxycycline | Ciprofloxacin | Moxifloxacin | Trimethoprim-Sulfamethoxazole | Gentamicin | Tobramycin | Vancomycin |
|--|-------------------|------------------|----------------------------|------------------------|-------------|-----------------------------|-------------------------|-----------|-----------|------------|-------------|--------------------------|-------------|-----------|-----------|-------------|--------------|--------------|--------------------------|---------------|--------------|-------------------------------|------------|------------|------------|
| GRAM-NEGATIVE BACTERIA | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Escherichia coli</i> ¹ | 1803 | | | 27 | | 77 | 93 | 40 | | | 47 | | 47 | 100 | 99 | | | | | 70 | | 72 | 88 | 85 | |
| <i>Escherichia coli</i> bloodstream isolates | 185 | | | 31 | | 60 | 80 | 42 | | | 67 | | 67 | 100 | 100 | | | | | 62 | | 40 | 100 | 67 | |
| <i>Enterobacter aerogenes</i> ^{2 †} | 27 | | | R | | R | R | R | R | | R | | R | 100 | 100 | | | | | 100 | | 96 | 100 | 100 | |
| <i>Enterobacter cloacae</i> ² | 121 | | | R | | R | R | R | R | | R | | R | 98 | 87 | | | | | 93 | | 90 | 98 | 98 | |
| <i>Haemophilus influenzae</i> | 50 | | | 76 | | | | | | 90 | 100 | | | 100 | | | 100 | | | | 100 | 78 | | | |
| <i>Klebsiella pneumoniae</i> ¹ | 359 | | | R | | 92 | 96 | 65 | 91 | | 73 | | 73 | 100 | 100 | | | | | 93 | | 90 | 97 | 96 | |
| <i>Klebsiella oxytoca</i> | 69 | | | R | | 89 | 89 | R | 100 | | 71 | | 78 | 100 | 100 | | | | | 100 | | 98 | 100 | 100 | |
| <i>Pseudomonas aeruginosa</i> | 338 | | | | | | 78 | | | | | | 76 | 78 | | | | | | 75 | | | 86 | 96 | |
| <i>Morganella morganii</i> ^{2 †} | 24 | | | R | | R | R | R | 30 | | R | | R | 100 | 100 | | | | | 92 | | 83 | 92 | 96 | |
| <i>Proteus mirabilis</i> ¹ | 99 | | | 72 | | 97 | 100 | 76 | 95 | | 97 | | 98 | 100 | 100 | | | | | 89 | | 85 | 90 | 90 | |
| <i>Citrobacter freundii</i> ^{2 †} | 17 | | | R | | R | R | R | R | | R | | R | 100 | 100 | | | | | 94 | | 82 | 94 | 94 | |
| <i>Citrobacter koseri</i> [†] | 28 | | | R | | 96 | 100 | 93 | 93 | | 100 | | 100 | 100 | 100 | | | | | 100 | | 100 | 100 | 100 | |
| <i>Serratia marcescens</i> ² | 35 | | | R | | R | R | R | R | | R | | R | 97 | 100 | | | | | 100 | | 100 | 97 | 97 | |
| <i>Stenotrophomonas maltophilia</i> [†] | 29 | | | | | | | | | | | | 31 | | | | | | | 50 | | 93 | | | |

| | # Isolates tested | Penicillin PO/IV | Penicillin IV - meningitis | Ampicillin/Amoxicillin | Cloxacillin | Amoxicillin-Clavulanic acid | Piperacillin-Tazobactam | Cefazolin | Cefoxitin | Cefuroxime | Ceftriaxone | Ceftriaxone - Meningitis | Ceftazidime | Meropenem | Ertapenem | Clindamycin | Azithromycin | Erythromycin | Tetracycline/Doxycycline | Ciprofloxacin | Moxifloxacin | Trimethoprim-Sulfamethoxazole | Gentamicin ⁵ | Tobramycin | Vancomycin | |
|---|-------------------|------------------|----------------------------|------------------------|-------------|-----------------------------|-------------------------|-----------|-----------|------------|-------------|--------------------------|-------------|-----------|-----------|-------------|--------------|--------------|--------------------------|---------------|--------------|-------------------------------|-------------------------|------------|------------|--|
| GRAM-POSITIVE BACTERIA | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Staphylococcus aureus</i> , all | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - methicillin-susceptible (MSSA) | 545 | | | | 100 | | | 100 | | | | | | | | 80 | | 79 | 96 | 95 | 96 | 97 | 100 | | 100 | |
| - methicillin-resistant (MRSA) | 359 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | 54 | | 34 | 98 | 47 | 48 | 95 | 92 | | 100 | |
| <i>Staphylococcus epidermidis</i> | 139 | | | | R | | | | 50 | | | | | | | 58 | | 38 | 93 | 53 | 53 | 60 | 87 | | 100 | |
| <i>Streptococcus pneumoniae</i> | 75 | 97 | 87 | | | | | | | 93 | 100 | 96 | | | | 92 | | 79 | | | 100 | | | | 100 | |
| Group A <i>Streptococcus</i> | 61 | 100 | 100 | | | | | | | | 100 | | | | | 69 | | 69 | | | | | | | 100 | |
| Group B <i>Streptococcus</i> | 38 | 100 | | | | | | | | | 100 | | | | | 55 | | 53 | | | | | | | 100 | |
| <i>Streptococcus anginosus</i> group ³ | 42 | 97 | | | | | | | | | 93 | | | | | 67 | | 58 | | | | | | | 100 | |
| "Viridans group" <i>Streptococci</i> ⁴ | 32 | 41 | | | | | | | | | 75 | | | | | 67 | | 44 | | | | | | | 100 | |
| <i>Enterococcus faecalis</i> , excl. urine | 184 | | | 100 | | | | R | R | R | R | R | R | | | R | | R | R | 78 | 92 | | | | 100 | |
| <i>Enterococcus faecium</i> , excl. urine | 105 | | | R | | | | R | R | R | R | R | R | | | R | | R | 63 | R | R | | | | 59 | |

R - intrinsically resistant or less than 25% empiric sensitivity

† Isolates containing less than 30 reported specimens should be interpreted using presented data ALONG WITH clinical judgement and/or input from infectious diseases service

¹ 5.2% of combined *E.coli*, *K.pneumoniae*, and *P.mirabilis* isolates were ESBL (extended spectrum beta-lactamase) positive

² these organisms may produce inducible beta-lactamase (AmpC) enzymes. Use of beta-lactams can result in clinical failure despite in vitro susceptibility

³ *Streptococcus anginosus* group includes: *S. anginosus*, *S. constellatus*, *S. intermedius*

⁴ Viridans group *Streptococci* include *S.mitis/oralis*, *S.parasanguinis*, *S.salivarius*, *S.sanguinis*, *S.mutans*

⁵ susceptibility to gentamicin in gram positive organisms refers to combination synergy treatment only