# Antibiogram - 2022

Middlesex Health Alliance

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**A Guide to Interpreting the Antibiogram**

- The antibiogram is an annual cumulative report of the antimicrobial susceptibility rates of common pathogens recovered from patients receiving care at Middlesex Health Alliance facilities and is to be used as a resource to inform empirical antimicrobial therapy.
- Susceptibility rates are calculated from the compilation of susceptibility results from all ‘first’ clinical isolates of a specific pathogen recovered from an individual patient per 30-day period. The rationale for this referral period is based on the need to represent ‘wild-type’ susceptibility profiles and avoid over-representing antimicrobial resistance that may develop de novo during a patient’s prolonged hospital stay.
- Susceptibility rates for pathogens or clinical scenarios represented by less than 30 isolates are not calculated due to their limited statistical significance and interpretive value.
- The appropriateness of empiric therapy is highlighted using a colour range that corresponds to susceptibility rates. Green, 80-100%; Yellow, 70-79%; Red, <70%.

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| Organism | Number of Isolates | Ampicillin | Amoxacillin-Clavulanate | Piperacillin-Tazobactam | Cloxacillin | Cephalexin (urinary tract) | Cefazolin | Ceftriaxone | Ceftazidime | Imipenem | Meropenem | Ciprofloxacin | Clindamycin | Doxycycline | Gentamicin | Tobramycin | TMP-SMX | Vancomycin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Escherichia coli* | 495 | 65 | 89 | | | 90 | 79 | 92 | | 100 | | 84 | | | 92 | 93 | 86 | |
| *Klebsiella pneumoniae* complex | 86 | | 97 | | | 92 | 90 | 94 | | 99 | | 94 | | | 99 | 98 | 87 | |
| *Proteus mirabilis* | 49 | 90 | 96 | | | | | 94 | | | 100 | 88 | | | 98 | 96 | 88 | |
| *Pseudomonas aeruginosa* | 43 | | | 86 | | | | | 86 | 64 | 88 | 84 | | | 86 | 90 | | |
| *Staphylococcus aureus* (incl. MRSA) | 119 | | | | 74 | | | | | | | | 89 | 100 | | | 99 | 100 |
| MRSA | 31 | | | | 0 | | | | | | | | 100 | 100 | | | 97 | 100 |

*Enterobacter, Citrobacter, Klebsiella aerogenes* and *Serratia* species are intrinsically resistant to ampicillin, cefazolin, and cefuroxime and may develop resistance to broader-spectrum beta-lactams during prolonged beta-lactam therapy.

https://www.lhsc.on.ca/palm/labs/microbiology.html#main-content