

# Antibiogram - 2023

London Health Sciences Centre & St. Joseph's Healthcare

# Antibiogram

## LHSC and St. Joseph's Healthcare Facilities

### 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 London Health Sciences Centre and St. Joseph's Healthcare 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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Gram Negative Organisms	Number of Isolates	Ampicillin	Amoxicillin-Clavulanate	Piperacillin-Tazobactam	Cephalexin (urinary tract)	Cefazolin	Ceftriaxone	Ceftazidime	Imipenem	Meropenem	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	TMP-SMX
<i>Escherichia coli</i>	4094	59	87		87	73	88		99		79		92	92	79
<i>Klebsiella pneumoniae</i> complex	1051		92		87	79	89		99		84		95	93	82
<i>Proteus mirabilis</i>	474	85	97				96			99	88		88	86	87
<i>Enterobacter cloacae</i> complex	401								99		90		97	95	87
<i>Klebsiella oxytoca</i>	317		86				86		98		93		94	93	91
<i>Citrobacter freundii</i> complex	144								90		78		91	90	81
<i>Serratia marcescens</i>	147						93		99		94		99	79	99
<i>Klebsiella aerogenes</i>	75								99		96		100	100	100
<i>Morganella morganii</i>	113								4	96	68		92	83	68
<i>Citrobacter koseri</i>	74		97				100		100		99		99	99	98
<i>Pseudomonas aeruginosa</i>	1110			88				84	67	84	80			93	
<i>Stenotrophomonas maltophilia</i>	135											81			97

*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.

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Gram Positive Organisms	Number of Isolates	Ampicillin	Penicillin	Penicillin (Meningeal)	Penicillin (Non-meningeal)	Cloxacillin	Ceftriaxone	Ceftriaxone (Meningeal)	Ceftriaxone (Non-meningeal)	Clindamycin	Doxycycline	Gentamicin	TMP-SMX	Vancomycin
<i>Staphylococcus aureus</i> (incl. MRSA)	2703					71				81	100		99	100
MRSA	783					0				91	100		98	100
<i>Staphylococcus epidermidis</i>	353					37				58	100		61	100
<i>Staphylococcus lugdunensis</i>	61					92				88	100		100	100
<i>Enterococcus faecalis</i>	222	100										90		100
<i>Enterococcus faecium</i>	207	8										71		80
<i>Streptococcus pneumoniae</i>	80			78	98			92	99				79	100
<i>Streptococcus anginosus</i> group	72		99				96							100
<i>Streptococcus mitis</i> group	44		61				91							100

Susceptibility of *S. pneumoniae* to certain  $\beta$ -lactams is pharmacodynamically interpreted to guide therapy for meningeal (M) and non-meningeal (NM) infections, and infections treated with oral penicillin V (PO).

# Antibiogram Tables

- Internal link <https://intra.lhsc.on.ca/pathology-and-laboratory-medicine-palm/laboratories/microbiology/antibiograms>
- External link <https://www.lhsc.on.ca/palm/labs/microbiology.html#main-content>