

Antibiogram - 2022

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>	3600	60	86	88	75	90		99			78		93	93	81
<i>Klebsiella pneumoniae</i> complex	906		92	89	83	91		99			87		97	95	86
<i>Proteus mirabilis</i>	453	86	98			97			99		85		91	91	87
<i>Enterobacter cloacae</i> complex	350					63		98			89		95	91	87
<i>Klebsiella oxytoca</i>	251		87			89		99			95		95	95	93
<i>Citrobacter freundii</i> complex	146					65		97			86		92	90	82
<i>Serratia marcescens</i>	120					88		97	97	99			99	86	100
<i>Klebsiella aerogenes</i>	91					63		90			91		100	100	96
<i>Morganella morganii</i>	90					77		14	100	72			87	81	72
<i>Citrobacter koseri</i>	66		95			100		100			95		100	98	98
<i>Pseudomonas aeruginosa</i>	1136			84				82	67	82	78		86	90	
<i>Stenotrophomonas maltophilia</i>	140											85			93

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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	Number of Isolates	Ampicillin	Penicillin	Penicillin (Meningeal)	Penicillin (Non-meningeal)	Cloxacillin	Ceftriaxone	Ceftriaxone (Meningeal)	Ceftriaxone (Non-meningeal)	Clindamycin	Doxycycline	Gentamicin	TMP-SMX	Vancomycin
Gram Positive Organisms														
<i>Staphylococcus aureus</i> (incl. MRSA)	2397					69				84	100		99	100
MRSA	729					0				92	100		97	100
<i>Staphylococcus epidermidis</i>	347					37				64			63	100
<i>Staphylococcus lugdunensis</i>	45					96				91			100	100
<i>Enterococcus faecalis</i>	201	99										93		100
<i>Enterococcus faecium</i>	180	4										59		88
<i>Streptococcus pneumoniae</i>	76			76	97			92	100				90	100
<i>Streptococcus anginosus</i> group	96		100				92							100
<i>Streptococcus mitis</i> group	48		64				89							100

Enterococcus susceptibility to gentamicin refers to synergy with cell wall active agents, including penicillin, ampicillin, or vancomycin.

Susceptibility of *S. pneumoniae* to certain β -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>