2023 BC Lower Mainland Antibiograms

The following antibiograms are profiles of antimicrobial susceptibility testing results of pathogens submitted to LifeLabs from January 1, 2022 to December 31, 2022 as per the Clinical and Laboratory Standards Institute (CLSI) document M39-A4.

Respiratory Tract Pathogens (Sputum)

ORGANISM	Number of isolates tested	ANTIBIOTIC (% susceptible)													
		Ampicillin/ Amoxicillin	Azithromycin	Ceftriaxone	Ciprofloxacin	Clarithromycin	Erythromycin	Levofloxacin	Tetracycline	Penicillin (oral)	TMP-SMX	Ceftazidime	Gentamicin	Meropenem	Piperacillin-Tazobactam
Haemophilus influenzae	46	76		100	100				96	R	94				
Moraxella catarrhalis[1]	42	R								R					
Streptococcus pneumoniae	39	>95[2]	62	97		62	62	100	64	69	64				
Pseudomonas aeruginosa	57	R	R	R	72	R	R		R	R	R	93	89	95	95

[1]Susceptibility testing for *Moraxella catarrhalis* is not routinely performed. Most clinical isolates of *M. catarrhalis* are resistant to amoxicillin but susceptible to amoxicillin-clavulanate, macrolides, trimethoprim-sulfamethoxazole, quinolones, cefuroxime, cefixime, and ceftriaxone.
[2]Amoxicillin testing is not routinely performed on *Streptococcus pneumoniae*; however, 2019 testing of a subset of isolates showed >95% susceptibility.

Skin and Soft Tissue Pathogens

ORGANISM	Number of isolates tested	ANTIBIOTIC (% susceptible)													
		Ampicillin/ Amoxicillin	Azithromycin	Ceftriaxone	Cephalothin / Cephalexin	Clarithromycin	Clindamycin	Cloxacillin	Erythromycin	Levofloxacin	Linezolid	Penicillin	Tetracycline[1]	TMP-SMX	Vancomycin
S. aureus (MSSA)	6430				100		82	100	78				95	99	100
S. aureus (MRSA)	1485	R		R	R		77	R	44		100	R	70	92	100
Group A Streptococcus[2]	240	100	68	100	100	68	68		68	98		100		R	100

[1]Isolates susceptible to tetracycline are predictably susceptible to doxycycline; however, some isolates that are resistant to tetracycline may be susceptible to doxycycline.
[2]Group A Streptococcus is predictably susceptible to penicillin, amoxicillin and cephalosporins, therefore antimicrobial susceptibility testing is not routinely performed.

Urinary Tract Pathogens

ORGANISM	Number of isolates tested	ANTIBIOTIC (% susceptible)								
		Ampicillin/ Amoxicillin	Cefazolin[4]	Ceftriaxone	Ciprofloxacin	Fosfomycin[1]	Gentamicin	Nitrofurantoin	Tetracycline[2]	TMP-SMX
Escherichia coli	26062	62	89	90	69	96	93	98	79	81
Group B Streptococcus[3]	4351						R			R
Enterococcus faecalis	4250	100			86	96		99	25	R
Klebsiella pneumoniae	3523	R	95	95	95		98	30	89	95
Proteus mirabilis	1601	68	97	98	86		92	R	R	83

[1]Fosfomycin testing was performed on a limited number of *E. faecalis* (n=219) isolates.
[2]Isolates susceptible to tetracycline are predictably susceptible to doxycycline; however, some isolates that are resistant to tetracycline may be susceptible to doxycycline.
[3]Susceptibility testing is not routinely performed on urine isolates of Group B Streptococcus because such infections usually respond to antibiotics commonly used to treat uncomplicated urinary tract infections, such as ampicillin, cephalosporins and nitrofurantoin. Susceptibility to fluoroquinolones is variable.
[4]Cefazolin results can be used to predict results for oral cephalexin and cefuroxime for the treatment of uncomplicated urinary tract infections only.

90-100% of isolates are susceptible to the antibiotic indicated **(GOOD CHOICE)**
51-89% of isolates are susceptible to the antibiotic indicated **(INTERMEDIATE CHOICE)**
0-50% of isolates are susceptible to the antibiotic indicated **(POOR CHOICE)**
R The organism is inherently resistant to the antibiotic indicated **OR** is not recommended due to poor clinical response and/or poor activity
Antimicrobial susceptibility testing not performed

TMP-SMX = Trimethoprim-Sulfa.; **MSSA =** Methicillin-susceptible *Staphylococcus aureus*; **MRSA =** Methicillin-resistant *Staphylococcus aureus*

LifeLabs Medical Laboratory Services
British Columbia