

The following antibiograms are profiles of antimicrobial susceptibility testing results of pathogens submitted to LifeLabs from January 1, 2018 to December 31, 2018 as per the Clinical and Laboratory Standards Institute (CLSI) document M39-A4.

Respiratory Tract Pathogens (Sputum)

ORGANISM	Number of isolates tested	ANTIBIOTIC (% susceptible)																	
		Amoxicillin - Clavulanate	Ampicillin ¹	Azithromycin	Ceftriaxone	Cefuroxime	Ciprofloxacin	Clarithromycin	Doxycycline	Erythromycin	Levofloxacin	Tetracycline	Penicillin (oral)	TMX	Ceftazidime	Gentamicin	Meropenem	Piperacillin-Tazobactam	Tobramycin
<i>Haemophilus influenzae</i>	58	99	71		100		100					88	R	74					
<i>Moraxella catarrhalis</i> ²	40		R										R						
<i>Pseudomonas aeruginosa</i>	29 ⁴						83							97	83	100	100	100	
<i>Streptococcus pneumoniae</i> ³	29 ⁴	>95	>95	76	>95	>95		76	66	76	100		>70	97					

¹Results of ampicillin testing can be used to predict results for amoxicillin.

²Susceptibility 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.

³Detailed data for beta-lactam antibiotics is not available for *S. pneumoniae* due to differences in testing for oxacillin susceptible and resistant strains.

⁴Calculations performed using fewer than the CLSI recommendation of 30 isolates. May not be statistically reliable for comparison with other years or locations.

Skin and Soft Tissue Pathogens

ORGANISM	Number of isolates tested	ANTIBIOTIC (% susceptible)													
		Ampicillin	Azithromycin	Ceftriaxone	Cephalothin / Cephalixin	Clarithromycin	Clindamycin	Cloxacillin	Erythromycin	Levofloxacin	Linezolid	Penicillin	Tetracycline ¹	TMX	Vancomycin
<i>S. aureus</i> (MSSA)	2637				100		88	100	84			96	97		
<i>S. aureus</i> (MRSA)	391	R		R	R		79	R	28		100	R	93	96	100
Group A <i>Streptococcus</i> ²	54	100	87	100	100	87	82		87	100		100		R	100

¹ Isolates susceptible to tetracycline are predictably susceptible to doxycycline; however, some isolates resistant to tetracycline may be susceptible to doxycycline.

²Groups A, B, C and G streptococcal isolates are 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 ¹	Ceftriaxone	Cephalothin / Cephalixin	Ciprofloxacin	Fosfomycin ²	Gentamicin	Nitrofurantoin	Tetracycline ³	TMX
<i>Escherichia coli</i>	8271	64	95	54	89	96	94	98	80	82
<i>Enterococcus faecalis</i>	1378	100		R	84	96		99	24	R
Group B <i>Streptococcus</i> ⁴	1334						R			R
<i>Klebsiella pneumoniae</i>	992	R	97	96	98		99	39	90	95
<i>Proteus mirabilis</i>	409	87	98	96	98		93	R	R	91

¹ Results of ampicillin testing can be used to predict results for amoxicillin.

² Fosfomycin testing was performed on a limited number of isolates *E. coli* (n=268) and *E. faecalis* (n = 30).

³ Isolates susceptible to tetracycline are predictably susceptible to doxycycline; however, some isolates resistant to tetracycline may be susceptible to doxycycline.

⁴Antimicrobial susceptibility testing is not routinely performed on urine isolates of *Streptococcus* group B 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.

	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

TMX = Trimethoprim-Sulfa; **MSSA** = Methicillin-susceptible *Staphylococcus aureus*; **MRSA** = Methicillin-resistant *Staphylococcus aureus*