

Antibiotic % Susceptibility Patterns
 Calgary Emergency Departments & Urgent Care Centres
 January - December 2019

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

		n	Penicillin (IV)	Ampicillin / Amoxicillin	Cloxacillin	Amoxicillin-Clavulanate (PO)	Piperacillin-Tazobactam	Cephalixin (urine)	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Azithromycin	Clindamycin	Trimethoprim-Sulfamethoxazole	Vancomycin	Tetracycline ^b	Nitrofurantoin	Fosfomycin	Ciprofloxacin ^{e,f}	Levofloxacin [*]	Gentamicin	Tobramycin	Ertapenem	Meropenem	
GP	<i>Enterococcus faecalis</i>	725	100					R	R	R	R	R		R	R	100	20 ^c	99		86 ^c						
	<i>Enterococcus faecium</i>	65	23					R	R	R	R	R		R	R	80	50 ^c	18		23 ^c						
		All	2225		78				78						85	92	100	96								
	<i>Staphylococcus aureus</i>	MSSA	1747		100				100					86	92	100	97									
		MRSA	524		R				R					81	92	100	92									
	Coagulase-negative <i>Staphylococcus</i>		185		61				61					73	80	100	91									
	<i>Staphylococcus lugdunensis</i>		151		97				97					91	100	100	97									
	<i>Streptococcus anginosus</i> group		204	86							100			74 ^a	81		100	63								
	<i>Streptococcus viridans</i> group (other than <i>S. anginosus</i>)		62	61							95			34 ^a	88		100	79								
	Group A <i>Streptococcus</i>		207	100						100	100			83 ^a	87		100									
	Group B <i>Streptococcus</i>		61	100						100	100			53 ^a	58		100									
	<i>Streptococcus pneumoniae</i>	meningitis	149	96							99						100									
		non-meningitis	149	100							100			92	97	94	100	91				100				100
GN	<i>Haemophilus influenzae</i>	55		75						97					57											
	<i>Citrobacter freundii</i> complex ^d	77		R		R		R	R					81				92		81		95	94	100	100	
	<i>Citrobacter koseri</i>	79		R	99	100	97	97			99				100				90	95		99	99			
	<i>Enterobacter cloacae</i> complex ^d	167		R		R		R							95				39	93		99	98	100	100	
	<i>Escherichia coli</i>	All	5741	56	85	90	90	84		90				77					98	72		92	93			
		ESBL	550	R					R	R	R	R			44				94	97	10	66	60	100	100	
	<i>Klebsiella (Enterobacter) aerogenes</i> ^d	70		R		R		R	R						99				23	99		100	100	99	100	
	<i>Klebsiella oxytoca</i>	196		R		97	96	93	51		96				96				90	95		98	97			
	<i>Klebsiella pneumoniae</i> complex	729		R		96	96	96	94		96				92				53	90		97	97			
	<i>Morganella morganii</i> ^d	39		R		R		R	R	R					56		R	R		69		85	87	100	100	
	<i>Proteus mirabilis</i>	261		R		80	98	100	98	78		99			82		R	R		86		92	95			
	<i>Pseudomonas aeruginosa</i>	216		R		R		96					96		R		R			84			98	R	94	
	<i>Salmonella</i> species, non-typhoidal	31		R		77			R	R	R	97			100					84		R	R			
<i>Serratia marcescens</i> ^d	45		R		R			R	R	R				100				R		93		100	93	98	100	

^a As inferred from susceptibility to erythromycin

^b Susceptibility to doxycycline can be inferred from susceptibility to tetracycline

^c Urine isolates only

^d These organisms usually produce inducible β-lactamase which can cause failure of 3rd generation β-lactam therapy, despite in vitro susceptibility

^e Revised (2019) CLSI Enterobacterales (other than *Salmonella* spp.) interpretive criteria for susceptible are being used for the first time to calculate %S; these are ≤ 0.25 µg/mL and ≥ 26 mm for ciprofloxacin. Previous CLSI interpretive criteria for susceptible were ≤ 1 µg/mL and ≥ 21 mm

^f Revised (2019) CLSI *Pseudomonas aeruginosa* interpretive criteria for susceptible are being used for the first time to calculate %S; these are ≤ 0.5 µg/mL and ≥ 25 mm for ciprofloxacin. Previous CLSI interpretive criteria for susceptible were ≤ 1 µg/mL and ≥ 21 mm

Note 1: Includes FMC, PLC, RGH, SHC, Sheldon M. Chumir Health Centre, South Calgary Health Centre, Airdrie Community Health Centre, Cochrane Community Health Centre, Okotoks Health and Wellness Centre

Note 2: Percent susceptible for each organism/antimicrobial combination was generated by including the first isolate of that organism recovered from a given patient during the time period analyzed

ABBREVIATIONS: GP - Gram-positive; GN - Gram-negative; MSSA - methicillin-susceptible *Staphylococcus aureus*; MRSA - methicillin-resistant *Staphylococcus aureus*; ESBL - extended spectrum beta-lactamase; R - intrinsic resistance