

Antibiotic % Susceptibility
 City of Calgary Emergency Departments & Urgent Care Centres
 May -December 2023^a

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

		N	Penicillin (IV)	Ampicillin / Amoxicillin	Cloxacillin	Amoxicillin/Clavulanate	Piperacillin/Tazobactam	Cephalexin	Cefazolin	Cefixime	Ceftriaxone	Ceftazidime	Azithromycin ^f	Clindamycin	Trimethoprim-sulfamethoxazole	Vancomycin	Doxycycline	Tetracycline ^d	Nitrofurantoin ^c	Fosfomycin (PO) ^e	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	Ertapenem	Meropenem	
Gram Positive:																											
Enterococcus faecalis		474		100 ^b				R	R	R	R	R		R	R	100		27	99		87 ^c						
Enterococcus faecium		56		30 ^b				R	R	R	R	R		R	R	75		34	29		20 ^c						
Staphylococcus aureus	all	1879			80			80	80					87	78	100		96									
	MSSA	1503			100			100	100					88	75	100		96									
	MRSA	404			R			R	R					81	89	100		93									
Staphylococcus, coagulase-negative		88			64			64	64					88	80	100		89									
Staphylococcus lugdunensis		63			91			92	92					89	98	100		98									
Streptococcus anginosus group		86	99								99			80		100											
Streptococcus, group A		128	100	100				100	100		100			83		100											
Streptococcus, group B		36	100	100				100	100		100			58		100											
Streptococcus, groups C/G		40	100	100				100	100		100			90		100						100					
Streptococcus pneumoniae	Meningitis	121	81								93																
	non-meningitis	142	99								100		68		77	100						100					
Gram Negative:																											
Citrobacter freundii complex ^a		50		R		R		R	R						94				96		90		98	98	100	100	
Citrobacter koseri		48		R		98	98			100	100				100				94		98		100	100	100	100	
Enterobacter cloacae complex ^a		137		R		R		R	R						87				53		85		97	97	99	100	
Escherichia coli	all	2980		57		88	97	86 ^c	81	85	87				78				98		69		91	91			
	ESBL	356		R				R	R	R	R	R			49		52		89	98	13		68	62	100	100	
Haemophilus influenzae		30		67																							
Klebsiella (Enterobacter) aerogenes ^a		44		R		R		R	R						98				30		98		100	100	98	100	
Klebsiella oxytoca		103		R		93	94	80 ^c	17	98	95				95				95		96		100	98			
Klebsiella pneumoniae complex	all	518		R		92	92	90 ^c	87	91	92				89				57		86		96	97			
	ESBL	37		R				R	R	R	R				16		44				19		68	70	100	100	
Morganella morganii ^a		30		R		R		R	R	R	R	R			80				R		73		90	90	100	100	
Proteus mirabilis		191		81		98	99	97 ^c	82	98	99				81				R		83		94	96			
Pseudomonas aeruginosa		171		R		R	90				R	R	94		R						81		96	98	R	96	
Serratia marcescens ^a		46		R		R		R	R						100				R		98		98	98	100	100	

^aDue to launch of Connect Care in May 2023, data from Jan-April not included.

^bFor Enterococci, results of ampicillin susceptibility testing can be used to predict the activity of amoxicillin, amoxicillin-clavulanate, piperacillin-tazobactam and for E. faecalis only, additionally imipenem.

^cUrinary isolates only

^dSusceptibility to doxycycline can be inferred from susceptibility to tetracycline

^eThese organisms usually produce β-lactamase which can cause failure of 3rd generation cephalosporin therapy, despite in vitro susceptibility

^fRespiratory specimens only

Note: 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: MSSA - methicillin-susceptible Staphylococcus aureus; ESBL - extended spectrum beta-lactamase; R - intrinsic resistance



ALBERTA PRECISION LABORATORIES

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Antibiotic % Susceptibility Patterns Calgary Emergency Departments & Urgent Care Centers January - December 2022

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

		N	Penicillin (IV)	Ampicillin / Amoxicillin	Cloxacillin	Amoxicillin-Clavulanate	Piperacillin-Tazobactam	Cephalexin	Cefazolin	Cefixime	Ceftriaxone	Ceftazidime	Azithromycin	Clarithromycin	Clindamycin	Trimethoprim-sulfamethoxazole	Vancomycin	Tetracycline ^c	Doxycycline ^b	Nitrofurantoin ^b	Fosfomycin (PO) ^b	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	Ertapenem	Meropenem	
Gram-positive																												
Enterococcus faecalis		696		100				R	R	R	R	R				R	R	100	22		99		87 ^b					
Enterococcus faecium		83		39				R	R	R	R	R				R	R	86	43		18		25 ^b					
Enterococcus species - other ^d		47		93				R	R	R	R	R				R	R	87	59				98 ^b					
Staphylococcus aureus	All	2206		77				77	77							87	88	100	97									
	MSSA	1736		100				100	100							88	87	100	98									
	MRSA	513		R				R	R							85	92	100	94									
Staphylococcus, coagulase-negative		110		58				58	58							77	83	100	92									
Staphylococcus lugdunensis		167		97				97	97							93	100	100	99									
Streptococcus anginosus group		188	99									100				87		100										
Streptococcus viridans group		47	83								98					91		100										
Streptococcus, group A		177	100	100					100							86		100										
Streptococcus, group B		52	100	100					100							66		100										
Streptococcus, group C/G ^d		73	100	100					100							81		100										
Streptococcus pneumoniae	meningitis	185	80																									
	non-meningitis	185	99										77											100				
Gram-negative																												
Acinetobacter baumannii complex ^d		40		R		R	88					98				98					R	95		98	97	R	100	
Citrobacter freundii complex ^a		87		R		R		R	R							92					96		92		97	97	100	100
Citrobacter koseri		53		R		98	98	98 ^b	98	100	100					100					93		96		100	100		
Eikenella corrodens ^d		51		100												96							98					
Enterobacter cloacae complex ^a		172		R		R		R	R							90					41		92		98	99	95	100
Escherichia coli	All	4877		60		87	89	88 ^b	82	88	89					79					98		70		92	92		
	ESBL	458		R				R	R	R	R	R				43			49	94	98	4		68	64	100	100	
Haemophilus influenzae		62		81										92		76												
Klebsiella (Enterobacter) aerogenes ^a		57		R		R		R	R							100					22		95		98	100	100	100
Klebsiella oxytoca		163		R		95	95	81 ^b	40	97	95					96					92		96		98	98		
Klebsiella pneumoniae complex	All	679		R		95	95	95 ^b	93	96	95					94					44		89		98	98		
	ESBL ^d	50		R				R	R	R	R	R				29			41	26		20		61	59	100	100	
Morganella morganii ^a		55		R		R		R	R							73					R		71		89	95	100	100
Pasteurella species		30	100										93			100		100										
Proteus mirabilis		234		85		98	98	97 ^b	73	98	98					79		R	R	R		82		92	95			
Pseudomonas aeruginosa		257		R		R	96			R	R	96				R		R	R			83			98	R	93	
Salmonella, non-typhi ^d		35		89							100					94					93		83					
Serratia marcescens ^{a,d}		81		R		R		R	R							100				R		95		100	99	100	100	

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

^b Urine isolates only

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

^d Combined data (January - December 2021 and January - December 2022) due to the small number of isolates in 2022

Note: 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: MSSA - methicillin-susceptible *Staphylococcus aureus*; MRSA - methicillin-resistant *Staphylococcus aureus*; ESBL - extended spectrum beta-lactamase; R - intrinsic resistance