ALBERTA PRECISION LABORATORIES
Leaders in Laboratory Medicine

Antibiotic % Susceptibility
Calgary Zone, Urine Emergency & Community Patients < 16yrs
May -December 2023[a]

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

	N	Ampicillin	Amoxicillin/Clavulanate	Piperacillin/Tazobactam	Cephalexin (Urine)	Cefazolin	Cefixime	Ceftriaxone	Trimethoprim-sulfamethoxazole	Vancomycin	Doxycycline	Tetracycline	Nitrofurantoin	Fosfomycin	Ciprofloxacin	Gentamicin	Tobramycin	Ertapenem	Meropenem
Gram Positive:																			
Enterococcus faecalis	**279**	100[c]			R	R	R	R	R	100		19[b]	100		97				
Gram negative:																			
Escherichia coli	**1107**	59	89	98	87	85	88	90	78				100	98	74	92	92	100	100
Escherichia coli (ESBL)	**113**	R	79		R	R	R	R	51		60		98	98	10	80	72	100	100
Klebsiella pneumoniae complex	**55**	R	93	96	95	94	95	95	89				47		87	98	98	100	100
Proteus mirabilis	**79**	77	96	100	97	93	99	100	78		R	R	R		91	91	94	100	100

[a]Due to launch of Connect Care in May 2023, data from Jan-April not included.

[b]Susceptibility to doxycycline can be inferred from susceptibility to tetracycline

[c]For Enterococci, results of ampicillin susceptiblity testing can be used to predict the activity of amoxicillin, amoxicillin-clavulanate, piperacillin-tazobactam and for E. faecalis only, additionally imipenem.

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

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Antibiotic % Susceptibility Patterns: Urine - < 16 years
Emergency and Community Patients
January - December 2022

Data derived from routine susceptibility tests performed by Alberta Precision Laboratories

		N	Ampicillin / Amoxicillin	Cloxacillin	Amoxicillin-Clavulanate	Piperacillin-Tazobactam	Cephalexin	Cefazolin	Cefixime	Ceftriaxone	Ceftazidime	Trimethoprim-sulfamethoxazole	Vancomycin	Tetracycline[c]	Doxycycline	Nitrofurantoin	Fosfomycin (PO)	Ciprofloxacin	Gentamicin	Tobramycin	Ertapenem	Meropenem
Gram-positive																						
Enterococcus faecalis		303	**100**				R	R	R	R	R	R	**100**	**24**		**100**		**98**				
Staphylococcus aureus[a,d]		30		**97**				**97**					**100**									
Gram-negative																						
Citrobacter freundii complex[b,d]		31	R		R		R	R				**87**				**97**		**90**	**94**	**90**	**100**	**100**
Enterobacter cloacae complex[b]		30	R		R		R	R				**87**				**37**		**97**	**97**	**97**	**97**	**100**
Escherichia coli	All	1405	**60**		**87**	**91**	**89**	**85**	**90**	**91**		**79**				**100**		**75**	**92**	**93**		
	ESBL	105	R				R	R	R	R	R	**45**			**54**	**98**	**98**	**6**	**73**	**69**	**100**	**100**
Klebsiella oxytoca		32	R		**94**	**94**	**88**	**47**	**97**	**94**		**97**				**97**		**100**	**100**	**100**		
Klebsiella pneumoniae complex		62	R		**92**	**95**	**90**	**90**	**92**	**92**		**85**				**39**		**85**	**97**	**100**		
Proteus mirabilis		95	**82**		**97**	**97**	**94**	**76**	**97**	**97**		**78**		R	R	R		**88**	**88**	**95**		
Pseudomonas aeruginosa[d]		51	R		R	**100**			R	R	**100**	R		R	R			**96**	**96**	**98**	R	**98**

[a] Staphylococcus aureus bacteriuria may be associated with blood stream or other systemic infection. Clinical correlation required.
[b] These organisms usually produce β-lactamase which can cause failure of 3rd generation cephalosporin therapy, despite in vitro susceptibility
[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: ESBL - extended spectrum beta-lactamase; R - intrinsic resistance