

Toronto Western Hospital ANTIBIOGRAM Emergency Department January 1, 2022 - December 31, 2022

All Specimens – % Susceptible

	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	Penicillin IV (meningitis)	Penicillin IV (non-meningitis)	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftriaxone (meningitis)	Ceftriaxone (non-meningitis)	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid	Daptomycin

≥80% Susceptible ■
 70-79% Susceptible ■
 ≤69% Susceptible ■

ALL BACTERIA	1725	—	19	43				72	75	70		40	62								72							
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ALL GRAM-NEGATIVE BACTERIA	885	100	17	65				79	99	89		30	72			80				76	73	92	79	98			
<i>Escherichia coli</i>	530	60	26	76				84	100	99		37	86			86				70	75	90	70	98			
<i>Klebsiella pneumoniae</i>	96	11	0	92				92	100	100		56	93			93				88	91	98	91	100			
<i>Pseudomonas aeruginosa</i>	76	9						96	93							95				88		88	99	96			
<i>Proteus mirabilis</i>	68	8	15	87				92	100	100		16	94			94				80	80	93	72	88			
<i>Enterobacter cloacae</i>	27	3	0	0				4	100	96		0	0			0				81	88	100	100	100			
<i>Klebsiella oxytoca</i>	21	2	0	90				90	100	100		18	90			90				95	95	100	100	100			
<i>Citrobacter koseri</i>	11	1	0	0				0	100	100		0	0			0				100	100	100	100	100			
<i>Citrobacter freundii</i>	9	1	0	0				0	100	89		0	0			0				100	100	100	100	100			
<i>Morganella morganii</i>	8	1	0	0				0	100	100		0	0			0				62	75	88	100	100			
<i>Providencia stuartii</i>	7	1	0	0				0	100	100		0	0			0				43	71	100	100	100			
<i>Serratia marcescens</i>	7	1	0	0				14	100	100		0	14			14				100	86	100	100	100			
<i>Haemophilus influenzae</i> ^{^^}	6	1	100																								
<i>Providencia rettgeri</i>	6	1	0	0				0	100	100		0	0			0				100	100	100	100	100			
<i>Klebsiella aerogenes</i>	5	1	0	0				0	100	100		0	0			0					100	100	100	100	100		

ALL GRAM-POSITIVE BACTERIA	840	100	21	21	6			64	50	50	44	49	51			57	38				70					
Coagulase-negative staphylococci	430	51						46	46	46	46	46				65	35	96			81			100	100	
<i>Staphylococcus aureus</i> , all isolates	199	24						84	84	84	84	84				78	67	96			100			100	100	
- methicillin-susceptible	168	20						100	100	100	100	99				77	71	98			100			100	100	
- methicillin-resistant (MRSA)	31	4						0	0	0	0	0				84	45	87			100			100	100	
<i>Enterococcus faecalis</i>	122	15	100	100				100																100		
Viridans group streptococci*	30	4			57								96											100		
<i>Staphylococcus lugdunensis</i>	18	2						100	100	100	100	100				100	100	83			100			100	100	
Group A streptococci**	11	1			100											62	60							100		
<i>Staphylococcus saprophyticus</i> [†]	11	1																						100		
<i>Enterococcus faecium</i> , all isolates	10	1	20	20				20																60		
- vancomycin-susceptible	6	1	33	33				33																100		
- vancomycin-resistant (VRE)	4	0	0	0				0																0	100	100
Group B streptococci**	10	1			100											70	70							100		
<i>Streptococcus pneumoniae</i>	10	1			100	100							90	100		100	60				100			100		
<i>Streptococcus anginosus</i> group* ^{††}	6	1			100							100												100		

General Notes:

- Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.
- Some organisms for which there were only very small numbers have been excluded from this report; however the total number of "ALL BACTERIA", "ALL GRAM-NEGATIVE BACTERIA", and "ALL GRAM-POSITIVE BACTERIA" listed includes these organisms.
- Reported susceptibilities for "ALL BACTERIA", "ALL GRAM-NEGATIVE BACTERIA", and "ALL GRAM-POSITIVE BACTERIA" reflect estimates only based on the weighted average of susceptibilities for all organisms included on this report as well as those that have been excluded, with assumptions made for those drugs for which susceptibilities were not tested.
- All specimens refers to all non-surveillance specimens.
- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.

Organism-Specific Notes:

- ^^ *H. influenzae* and *H. parainfluenzae*: Susceptibility to ampicillin was determined using beta-lactamase testing. Beta-lactamase-positive isolates are resistant to ampicillin but are generally susceptible to amoxicillin-clavulanic acid and cefuroxime.
- ** Beta-hemolytic streptococci: Susceptibility testing to penicillin is not routinely performed since resistant strains have not been recognized. All isolates are considered susceptible to penicillin.
- † *S. saprophyticus*: Susceptibility testing is not routinely performed. Most urinary tract infections due to this organism respond to nitrofurantoin, trimethoprim/sulfamethoxazole or fluoroquinolones.
- * Viridans group streptococci: Please note that only a small proportion of these isolates were tested for susceptibilities. Please take this into consideration when interpreting the reported results.
- ** *S. anginosus* group: Please note that only a small proportion of these isolates were tested for susceptibilities. Please take this into consideration when interpreting the reported results.

Toronto Western Hospital ANTIBIOGRAM
Emergency Department
January 1, 2022 - December 31, 2022

Blood Isolates – % Susceptible

≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	Penicillin IV (meningitis)	Penicillin IV (non-meningitis)	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftriaxone (meningitis)	Ceftriaxone (non-meningitis)	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
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ALL BACTERIA	638	—	17	26				58	60	59		47	55									83					
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ALL GRAM-NEGATIVE BACTERIA	159	100	31	67				76	100	92		45	71			76				76		78	92	92	98		
<i>Escherichia coli</i>	90	57	51	74				80	100	100		62	81			81				67		78	89	87	96		
<i>Klebsiella pneumoniae</i>	19	12	0	95				95	100	100		68	95			95				84		84	100	95	100		
<i>Proteus mirabilis</i>	13	8	8	100				100	100	100		8	100			100				92		83	92	100	100		
<i>Pseudomonas aeruginosa</i>	9	6						100	100							89				89			89	100	100		
<i>Enterobacter cloacae</i>	6	4	0	0				0	100	100		0	0			0				83		83	100	100	100		
<i>Klebsiella oxytoca</i>	6	4	0	100				100	100	100		17	100			100				100		100	100	100	100		

ALL GRAM-POSITIVE BACTERIA	479	100	12	12	9			52	48	48	39	48	50				71	47				85					
Coagulase-negative staphylococci	358	75						42	42	42	42	42					74	47	95			89				100	100
<i>Staphylococcus aureus</i> , all isolates	47	10						85	85	85	85	85					79	66	96			100				100	100
- methicillin-susceptible	40	8						100	100	100	100	100					80	72	100			100				100	100
- methicillin-resistant (MRSA)	7	1						0	0	0	0	0					71	29	71			100				100	100
Viridans group streptococci *	24	5			50								96													100	
<i>Enterococcus faecalis</i>	19	4	100	100				100																		100	
<i>Streptococcus pneumoniae</i>	10	2				100	100							90	100		100	60			100					100	
Group B streptococci**	8	2			100												75	75								100	
Group A streptococci**	6	1			100												40	60								100	
<i>Streptococcus anginosus</i> group* *	5	1			100							100														100	

General Notes:

- Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.
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- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.

Year-Specific Notes:

- Only a limited number of coagulase negative staphylococci isolates were tested for susceptibilities. The vast majority of coagulase-negative staphylococci are susceptible to vancomycin. If you have any questions, please contact the UHN/MSH Department of Microbiology.

Organism-Specific Notes:

- ** Beta-hemolytic streptococci: Susceptibility testing to penicillin is not routinely performed since resistant strains have not been recognized. All isolates are considered susceptible to penicillin.
- * Viridans group streptococci: Please note that only a small proportion of these isolates were tested for susceptibilities. Please take this into consideration when interpreting the reported results.
- * * S. anginosus group: Please note that only a small proportion of these isolates were tested for susceptibilities. Please take this into consideration when interpreting the reported results.

Toronto Western Hospital ANTIBIOGRAM Emergency Department January 1, 2022 - December 31, 2022

Respiratory Isolates – % Susceptible

≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftazidime	Clindamycin	Erythromycin	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
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ALL BACTERIA	9	—	22	22	78	78	11		11	44					33					
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ALL GRAM-NEGATIVE BACTERIA	6	100	33	33	100	100				50	100			100		100	100	100		
<i>Pseudomonas aeruginosa</i>	3	50			100	100					100			100		100	100	100		
<i>Haemophilus influenzae</i> ^{^^}	2	33	100																	
<i>Moraxella catarrhalis</i> [^]	1	17																		

ALL GRAM-POSITIVE BACTERIA	3	100			33	33	33	33	33	33		33	33		67					
<i>Staphylococcus aureus</i> , all isolates	2	67			50	50	50	50	50			50	50		100				100	100
- methicillin-susceptible	1	33			100	100	100	100	100			100	100		100				100	100
- methicillin-resistant (MRSA)	1	33			0	0	0	0	0			0	0		100				100	100
<i>Mycobacterium tuberculosis complex</i>	1	33																		

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- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.

Organism-Specific Notes:

- [^] *M. catarrhalis*: Susceptibility testing is not routinely performed. Most isolates are resistant to ampicillin and amoxicillin but are generally susceptible to other antibiotics commonly used for respiratory infections.
- ^{^^} *H. influenzae* and *H. parainfluenzae*: Susceptibility to ampicillin was determined using beta-lactamase testing. Beta-lactamase-positive isolates are resistant to ampicillin but are generally susceptible to amoxicillin-clavulanic acid and cefuroxime.

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Urine Isolates – % Susceptible

≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■		#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid	Daptomycin

ALL BACTERIA	897	—	18	68	81	84	76			8	9	64			74	64	77							
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ALL GRAM-NEGATIVE BACTERIA	734	100	5	67	79	99	90				7	75	80		74	74	73	92	38	96			
<i>Escherichia coli</i>	477	65	4	76	84	100	98				86	86			68	75	97	90	21	100			
<i>Klebsiella pneumoniae</i>	82	11	0	91	91	100	100				92	92			88	94	43	98	67	100			
<i>Proteus mirabilis</i>	51	7	33	89	96	100	100			100	98	98			82	76	6	92	25	75			
<i>Pseudomonas aeruginosa</i>	45	6			93	88							86		84			86	98	95			
<i>Enterobacter cloacae</i>	17	2	0	0	6	100	94			0	0	0			82	94	59	100	100	100			
<i>Klebsiella oxytoca</i>	11	1	0	91	91	100	100				91	91			91	91	91	100					
<i>Citrobacter koseri</i>	9	1	0	0	0	100	100			0	0	0			100	100	100	100	100	100			
<i>Morganella morganii</i>	9	1	0	0	0	100	100			0	0	0			56	67	0	89	100	100			
<i>Citrobacter freundii</i>	8	1	0	0	0	100	86			0	0	0			100	100	88	100	88	88			
<i>Klebsiella aerogenes</i>	6	1	0	0	0	100	100			0	0	0			100	100	17	100	100	100			
<i>Proteus vulgaris</i>	5	1	0	0	0	100	100			0	0	0			80	80	0	100	100	100			
<i>Providencia stuartii</i>	5	1	0	0	0	100	100			0	0	0			40	60	0	100	100	100			

ALL GRAM-POSITIVE BACTERIA	163	100	75	75	90	16	16	16	16	16	17			35	74	13	90				95	
<i>Enterococcus faecalis</i>	120	74	100	100	100									24	91		98				99	100
<i>Staphylococcus aureus</i> , all isolates	19	12			89	89	89	89	89	89				95		100	84				100	100
- methicillin-susceptible	17	10			100	100	100	100	100	100				94		100	82				100	100
- methicillin-resistant (MRSA)	2	1			0	0	0	0	0	0				100		100	100				100	100
<i>Enterococcus faecium</i> , all isolates	10	6	10	10	10									40	20		40				60	100
- vancomycin-susceptible	6	4	17	17	17									67	33		67				100	100
- vancomycin-resistant (VRE)	4	2	0	0	0									0	0		0				0	100
<i>Staphylococcus saprophyticus</i> “	10	6																				
<i>Enterococcus avium</i>	2	1	100	100	100									0	100		50				100	
<i>Staphylococcus lugdunensis</i>	2	1			100	100	100	100	100	100				100		100	100				100	100

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Organism-Specific Notes:

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