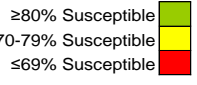


Toronto General Hospital ANTIBIOGRAM
Emergency Department
January 1, 2022 - December 31, 2022

All Specimens Isolates – % 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)	Cefazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid	Daptomycin



ALL BACTERIA	2413	—	20	43			71	74	69			39	59									65						
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ALL GRAM-NEGATIVE BACTERIA	1225	100	14	60			76	100	89		29	68			77					71	67	92	84	97				
<i>Escherichia coli</i>	681	56	22	72			82	100	100		35	84			84					65	69	91	77	96				
<i>Klebsiella pneumoniae</i>	189	15	0	84			84	100	100		54	87			87					75	76	95	89	100				
<i>Pseudomonas aeruginosa</i>	118	10					95	97							98					83		91	99	91				
<i>Proteus mirabilis</i>	59	5	32	95			97	100	100		21	97			97					78	85	95	83	100				
<i>Enterobacter cloacae</i>	41	3	0	0			0	100	97		0	0			0					90	82	100	100	100				
<i>Klebsiella oxytoca</i>	29	2	0	93			93	100	100		20	93			93					90	86	100	100	100				
<i>Serratia marcescens</i>	21	2	0	0			5	100	100		0	0			0					81	95	100	95	100				
<i>Klebsiella aerogenes</i>	17	1	0	0			0	100	100		0	0			0					94	100	100	100	100				
<i>Morganella morganii</i>	17	1	0	0			0	100	100		0	0			0					65	82	76	94	94				
<i>Citrobacter freundii</i>	13	1	0	0			0	92	92		0	0			0					77	100	100	100	100				
<i>Citrobacter koseri</i>	12	1	0	0			0	100	100		0	0			0					100	100	100	100	100				
<i>Providencia stuartii</i>	7	1	0	0			14	100	100		0	0			0					29	100	50	50	100				
<i>Haemophilus influenzae</i> ^{^^}	6	0	67																									
<i>Stenotrophomonas maltophilia</i> [†]	6	0																			33	83						
<i>Providencia rettgeri</i>	5	0	0	0			0	100	100		0	0			0					100	100	100	100	100				

ALL GRAM-POSITIVE BACTERIA	1188	100	26	26	8		66	48	48	40	48	50			54	40					63							98
Coagulase-negative staphylococci	542	46					47	47	47	47	47				68	45	96			78				100	100			
<i>Staphylococcus aureus</i> , all isolates	249	21					87	87	87	87	87				81	69	94			99				100	100			
- methicillin-susceptible	217	18					100	100	100	100	100				81	72	95			100				100	100			
- methicillin-resistant (MRSA)	32	3					0	0	0	0	0				81	47	84			94				100	100			
<i>Enterococcus faecalis</i>	204	17	100	100			100																	100				
Viridans group streptococci*	54	5			62							98												100				
<i>Enterococcus faecium</i> , all isolates	53	4	12	12			12																	100				89
- vancomycin-susceptible	47	4	13	13			13																	100				100
- vancomycin-resistant (VRE)	6	1	0	0			0																	0	100	100		
<i>Streptococcus pneumoniae</i>	23	2				80	80							100	100	80	82			100				100				
<i>Streptococcus anginosus</i> group**	20	2			89								100											100				
<i>Staphylococcus lugdunensis</i>	18	2					83	83	83	83	83					78	78	94			100			100	100			
Group B streptococci**	13	1			100											58	54							100				
<i>Staphylococcus saprophyticus</i> **	12	1														44	82							100				
Group A streptococci**	10	1			100											71	71							100				
Group G streptococci**	7	1			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.
- 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. maltophilia: Susceptibility to moxifloxacin was predicted based on levofloxacin susceptibility testing 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 General 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	Daptomycin

ALL BACTERIA	955	—	17	29			69	74	72		57	67									69							
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ALL GRAM-NEGATIVE BACTERIA	286	100	22	61			75	100	91		42	69			76				71		67	90	91	99				
<i>Escherichia coli</i>	157	55	34	68			80	100	100		47	81			81				65		64	87	88	99				
<i>Klebsiella pneumoniae</i>	57	20	0	82			82	100	100		70	84			84				81		77	95	95	100				
<i>Pseudomonas aeruginosa</i>	19	7					100	95							100				74		95	100	95					
<i>Proteus mirabilis</i>	15	5	40	100			100	100	100		27	100			100				73		87	93	93	100				
<i>Enterobacter cloacae</i>	11	4	0	0			0	100	91		0	0			0				100		91	100	100	100				
<i>Serratia marcescens</i>	7	2	0	0			0	100	100		0	0			0				71		100	100	100	100				
<i>Providencia stuartii</i>	5	2	0	0			0	100	100		0	0			0				20		100	40	40	100				

ALL GRAM-POSITIVE BACTERIA	669	100	16	16	11		66	64	64	52	64	67			58	45					71						99	
Coagulase-negative staphylococci	458	68					62	62	62	62	62				58	42	100				73						100	100
<i>Staphylococcus aureus</i> , all isolates	70	10					89	89	89	89	89				84	73	98				99						100	100
- methicillin-susceptible	62	9					100	100	100	100	100				84	76	98				100						100	100
- methicillin-resistant (MRSA)	8	1					0	0	0	0	0				88	50	100				88						100	100
Viridans group streptococci*	48	7			64							98															100	
<i>Enterococcus faecalis</i>	22	3	100	100			100																				100	
<i>Streptococcus pneumoniae</i>	18	3			50	50								100	100				100	82		100					100	
<i>Enterococcus faecium</i> , all isolates	14	2	7	7			7																				86	
- vancomycin-susceptible	12	2	8	8			8																				100	
- vancomycin-resistant (VRE)	2	0	0	0			0																			0	100	100
Group B streptococci**	11	2			100										64	64											100	
<i>Streptococcus anginosus</i> group**	8	1			75							100															100	
Group G streptococci**	7	1			100										71	71											100	
Group A streptococci**	6	1			100										50	82											100	
<i>Staphylococcus lugdunensis</i>	5	1					100	100	100	100	100				100	100	100				100						100	100

General Notes:

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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 General Hospital ANTIBIOGRAM
Emergency Department
January 1, 2022 - December 31, 2022**

Respiratory Isolates – % 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
≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■																										
#	%																									
ALL BACTERIA	27	—	11	26			80	68	19		19	60									63					
ALL GRAM-NEGATIVE BACTERIA	15	100	20	47			92	92				54			80				80		40	100	75	62		
<i>Pseudomonas aeruginosa</i>	6	40					83	83							83				100			100	100	83		
<i>Haemophilus influenzae</i> ^{^^}	5	33	60																							
<i>Klebsiella pneumoniae</i>	2	13	0	100			100	100				100		100					100		100	100				
<i>Stenotrophomonas maltophilia</i> [†]	2	13																		50	100					
ALL GRAM-POSITIVE BACTERIA	12	100		25			67	42	42	42	42	67				67	50				89					
<i>Staphylococcus aureus</i> , all isolates	7	58					71	71	71	71	71					86	57	100			100				100	100
- methicillin-susceptible	5	42					100	100	100	100	100					100	60	100			100				100	100
- methicillin-resistant (MRSA)	2	17					0	0	0	0	0					50	50	100			100				100	100
<i>Streptococcus pneumoniae</i>	3	25			100	100							100	100						100						100
Coagulase-negative staphylococci	1	8					0	0	0	0	0							0			100					100
<i>Mycobacterium tuberculosis complex</i>	1	8																								

General Notes:

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- 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.
- 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.

[†] *S. maltophilia*: Susceptibility to moxifloxacin was predicted based on levofloxacin susceptibility testing results.

