

Toronto General Hospital ANTIBIOGRAM
All Inpatients
January 1, 2020 - December 31, 2020

Blood Isolates – % Susceptible

		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="font-size: small;"> <p>≥80% Susceptible ■</p> <p>70-79% Susceptible ■</p> <p>≤69% Susceptible ■</p> </div> <div style="font-size: x-small;"> <p># %</p> </div> </div>																								
		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
ALL BACTERIA	899	—	10	21			47	49	45		30	39									58					
ALL GRAM-NEGATIVE BACTERIA	262	100	3	43			60	96	80		30	50		64					74		59	90	89	98		
<i>Escherichia coli</i>	97	37	0	51			61	100	100		41	65		65					55		49	85	81	98		
<i>Klebsiella pneumoniae</i>	59	23	0	78			75	98	95		61	80		80					80		73	90	85	98		
<i>Pseudomonas aeruginosa</i>	42	16					81	81						83					81			90	100	95		
<i>Enterobacter cloacae</i>	27	10	0	0			0	96	89		0	0		0					96		100	100	100	100		
<i>Klebsiella oxytoca</i>	12	5	0	75			75	100	100		8	75		75					100		100	100	100	100		
<i>Proteus mirabilis</i>	9	3	100	88			100	100	100		22	100		100					100		100	89	89	89		
<i>Serratia marcescens</i>	8	3	0	0			0	100	100		0	0		0					100		100	100	100	100		
ALL GRAM-POSITIVE BACTERIA	637	100	12	12	2		41	30	30	28	30	35			49	34					58				98	
Coagulase-negative staphylococci	378	59					25	25	25	25	25				57	35	96				65				100	100
<i>Staphylococcus aureus</i> , all isolates	99	16					87	87	87	87	87				74	64	95				98				100	100
- methicillin-susceptible	86	14					100	100	100	100	100				71	64	95				98				100	100
- methicillin-resistant (MRSA)	13	2					0	0	0	0	0				92	62	92				100				100	100
<i>Enterococcus faecalis</i> , all isolates	64	10	98	98			98																		100	
- vancomycin-susceptible	64	10	98	98			98																		100	
- vancomycin-resistant (VRE)	0	0																								
<i>Enterococcus faecium</i> , all isolates	54	8	7	7			7																		72	
- vancomycin-susceptible	40	6	10	10			10																		97	
- vancomycin-resistant (VRE)	14	2	0	0			0																	0	100	
Viridans group streptococci ^o	29	5										93													100	
Group B streptococci**	5	1		100											60	60									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.

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

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.
- ^o 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.

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Respiratory Isolates – % Susceptible

		<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>≥80% Susceptible ■</p> <p>70-79% Susceptible ■</p> <p>≤69% Susceptible ■</p> </div> </div>																								
#	%	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	Vancocycin	Linezolid
ALL BACTERIA	487	–	4	13			74	87	56		34	47									61					
ALL GRAM-NEGATIVE BACTERIA	306	100	2	16			66	87	38		3	22			63				71		41	87	76	88		
<i>Pseudomonas aeruginosa</i>	150	49					83	78							83				76			85	92	90		
<i>Klebsiella pneumoniae</i>	31	10	0	84			84	100	100		17	84			84				84		84	90	20	80		
<i>Escherichia coli</i>	27	9	0	41			48	100	100		0	63			63				44		54	85	33	100		
<i>Enterobacter cloacae</i>	24	8	0	0			0	100	92		0	0			0				92		88	100	100	100		
<i>Stenotrophomonas maltophilia</i> [†]	20	7																		85	100					
<i>Serratia marcescens</i>	13	4	0	0			0	100	100		0	0			0				100		100	100	100	100		
<i>Klebsiella oxytoca</i>	10	3	0	80			80	100	100		33	80			80				80		80	90	100	100		
<i>Burkholderia cepacia</i>	7	2						43							57						71					
<i>Moraxella catarrhalis</i> [^]	6	2																								
<i>Citrobacter koseri</i>	6	2	0	0			0	100	100		0	0			0				100		100	100	100	100		
<i>Proteus mirabilis</i>	5	2	100	100			100	100				100			100				100		100	100				
ALL GRAM-POSITIVE BACTERIA	181	100	7	7	7		87	87	87	80	87	85				69	62				97				98	
<i>Staphylococcus aureus</i> , all isolates	161	89					89	89	89	89	89					70	64	95			99				100	100
- methicillin-susceptible	145	80					99	99	99	99	99					69	66	95			99				100	100
- methicillin-resistant (MRSA)	16	9					0	0	0	0	0					75	44	94			100				100	100
<i>Streptococcus pneumoniae</i>	15	8				83	83							60	100	77	60			100					100	
<i>Mycobacterium tuberculosis</i> complex	4	2																								

General Notes:

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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.

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

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Urine Isolates – % Susceptible

	#	%	Antibiotics																				
			Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid	
ALL BACTERIA	980	—	20	57		69	71	57		6	41	45			67	44	65						
ALL GRAM-NEGATIVE BACTERIA	695	100	1	53		69	99	79		6	57	62	72		73	60	61	89	51	91			
<i>Escherichia coli</i>	354	51	2	64		73	100	96		9	72	78	78	50	62	62	96	86	39	100			
<i>Klebsiella pneumoniae</i>	127	18	0	76		78	99	100		8	76	80	80	0	81	65	23	93	50	92			
<i>Pseudomonas aeruginosa</i>	75	11				92	91						93		89			95	99	97			
<i>Enterobacter cloacae</i>	35	5	0	0		0	100	91		0	0	0	0		74	74	46	86	83	100			
<i>Proteus mirabilis</i>	34	5	0	94		97	100				91	100	100		79	82	0	94					
<i>Klebsiella oxytoca</i>	17	2	0	94		94	100				65	100	100		100	88	88	100					
<i>Serratia marcescens</i>	12	2	0	0		0	100	100		0	0	0	0		100	100	0	100	100	100			
<i>Citrobacter freundii</i>	12	2	0	0		0	100	92		0	0	0	0		67	67	100	67	100	100			
<i>Morganella morganii</i>	8	1	0	0		0	100	100		0	0	0	0		75	75	0	100	100	100			
<i>Citrobacter amalonaticus</i>	7	1	0	0		0	100	100		0	0	0	0		100	86	71	86	100	100			
<i>Citrobacter koseri</i>	6	1	0	0		0	100	100		0	0	0	0		100	100	100	100	100	100			
ALL GRAM-POSITIVE BACTERIA	285	100	66	66		70	5	5	5	5	5	5		28	54	7	74				94	99	
<i>Enterococcus faecalis</i> , all isolates	183	64	100	100		100								27	83		98				100	100	
- vancomycin-susceptible	183	64	100	100		100								27	83		98				100	100	
- vancomycin-resistant (VRE)	0	0																					
<i>Enterococcus faecium</i> , all isolates	79	28	2	2		2								11	0		9				80	100	
- vancomycin-susceptible	63	22	3	3		3								11	0		10				100	100	
- vancomycin-resistant (VRE)	16	6	0	0		0								12	0		6				0	100	
- vancomycin-susceptible (vanA+)	0	0																					
<i>Staphylococcus aureus</i> , all isolates	18	6				72	72	72	72	72	72			94		100	100					100	100
- methicillin-susceptible	13	5				100	100	100	100	100	100			92		100	100					100	100
- methicillin-resistant (MRSA)	5	2				0	0	0	0	0	0			100		100	100					100	100
Coagulase-negative staphylococci	3	1				33	33	33	33	33				100		33	100					100	100
<i>Enterococcus gallinarum</i>	2	1	100	100		100								50	100		100					100	

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All Non-Urine Isolates – % Susceptible

		<div style="display: flex; align-items: center;"> <div style="width: 10px; height: 10px; background-color: #90EE90; margin-right: 5px;"></div> ≥80% Susceptible <div style="width: 10px; height: 10px; background-color: #FFFF00; margin-right: 5px;"></div> 70-79% Susceptible <div style="width: 10px; height: 10px; background-color: #FF0000; margin-right: 5px;"></div> ≤69% Susceptible </div>			#	%	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
ALL BACTERIA			2097	—	8	21			58	64	51		33	43									58								
ALL GRAM-NEGATIVE BACTERIA		872	100		30				63	94	61		19	37			62				75		51	90	88	95					
<i>Pseudomonas aeruginosa</i>		274	31						85	85							85				81		51	90	95	92					
<i>Escherichia coli</i>		207	24	0	49				58	99	98		36	65			65				56		51	82	74	97					
<i>Klebsiella pneumoniae</i>		122	14	0	85				84	99	96		67	86			86				85		77	93	85	98					
<i>Enterobacter cloacae</i>		89	10	0	0				0	97	91		0	0			0				94		93	100	99	100					
<i>Serratia marcescens</i>		36	4	0	0				0	100	97		0	0			0				100		100	100	94	100					
<i>Proteus mirabilis</i>		35	4	0	88				97	100	100		21	97			97				86		86	97	92	92					
<i>Klebsiella oxytoca</i>		31	4	0	77				81	100	100		14	81			81				94		90	94	100	100					
<i>Stenotrophomonas maltophilia</i>		31	4																			84	100								
<i>Citrobacter freundii</i>		12	1	0	0				0	100	100		0	0			0				83		92	100	100	100					
<i>Morganella morganii</i>		11	1	0	0				0	100	100		0	0			0				73		82	91	100	100					
<i>Citrobacter koseri</i>		9	1	0	0				0	100	100		0	0			0				100		100	100	100	100					
<i>Moraxella catarrhalis</i> [^]		8	1																												
<i>Burkholderia cepacia</i>		7	1							57							71						57								
ALL GRAM-POSITIVE BACTERIA		1225	100	14	14	3			55	43	43	41	43	47				53	40				64				97				
Coagulase-negative staphylococci		521	43						31	31	31	31	31					61	37	84			68				100	100			
<i>Staphylococcus aureus</i> , all isolates		380	31						88	88	88	88	88					74	67	94			99				100	100			
- methicillin-susceptible		335	27						100	100	100	100	100					74	69	95			99				100	100			
- methicillin-resistant (MRSA)		45	4						0	0	0	0	0					76	49	89			100				100	100			
<i>Enterococcus faecalis</i> , all isolates		133	11	99	99				99																		100				
- vancomycin-susceptible		133	11	99	99				99																		100				
- vancomycin-resistant (VRE)		0	0																												
<i>Enterococcus faecium</i> , all isolates		99	8	8	8				8																		72				
- vancomycin-susceptible		72	6	11	11				11																		99				
- vancomycin-resistant (VRE)		27	2	0	0				0																		0	100			
- vancomycin-susceptible (vanA+)		0	0																												
Viridans group streptococci ^o		51	4										96														100				
<i>Streptococcus pneumoniae</i>		17	1						90	90								91	65			100					100				
Group B streptococci ^{**}		11	1						100									60	60								100				
Group A streptococci ^{**}		7	1						100									83	83								100				
<i>Mycobacterium tuberculosis complex</i>		6	0																												

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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.
- ^{**} 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.
- ^o 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.

