

Toronto General Hospital ANTIBIOGRAM
Intensive Care Units
January 1, 2020 - December 31, 2020

Blood Isolates – % Susceptible

	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid

ALL BACTERIA	397	—	12	16	53	53	49		38	43						67					
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ALL GRAM-NEGATIVE BACTERIA	77	100	4	26	40	91	70		14	30	47				79	57	84	88	95		
<i>Pseudomonas aeruginosa</i>	20	26			60	70					65				80		80	100	95		
<i>Klebsiella pneumoniae</i>	16	21	0	62	50	94	88		38	62	62				69	75	75	69	94		
<i>Escherichia coli</i>	15	19	0	20	27	100	100		20	40	40				53	40	73	73	93		
<i>Enterobacter cloacae</i>	9	12	0	0	0	100	100		0	0	0				100	100	100	100	100		
<i>Klebsiella oxytoca</i>	6	8	0	67	67	100	100		17	67	67				100	100	100	100	100		

ALL GRAM-POSITIVE BACTERIA	320	100	13	13	56	43	43	43	43	46		57	24			70					98	
Coagulase-negative staphylococci	189	59			50	50	50	50	50			75	25	100		88					100	100
<i>Staphylococcus aureus</i> , all isolates	50	16			86	86	86	86	86			66	52	98		98					100	100
- methicillin-susceptible	43	13			100	100	100	100	100			63	56	98		98					100	100
- methicillin-resistant (MRSA)	7	2			0	0	0	0	0			86	29	100		100					100	100
<i>Enterococcus faecalis</i>	36	11	100	100	100																100	
<i>Enterococcus faecium</i> , all isolates	29	9	7	7	7																79	
- vancomycin-susceptible	24	8	8	8	8																96	
- vancomycin-resistant (VRE)	5	2	0	0	0																0	100
Viridans group streptococci ^o	7	2								86											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.
- ICUs include MSICU, CCU, CVICU.

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:

- ^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

	#	%	Ampicillin	Amoxicillin-Clavulanic acid	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	389	—	9	22			71	90	60		32	54									71					
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ALL GRAM-NEGATIVE BACTERIA	#	%	Ampicillin	Amoxicillin-Clavulanic acid	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
<i>Pseudomonas aeruginosa</i>	80	31					80	80							79				78			56	90	76	86	
<i>Haemophilus influenzae</i> ^{^^}	29	11		76																			86	92	89	
<i>Klebsiella pneumoniae</i>	27	10	0	93			93	100	100		33	93		93					93		93	96	33	67		
<i>Escherichia coli</i>	26	10	0	46			50	100	100		0	65		65					42		48	88	40	100		
<i>Enterobacter cloacae</i>	20	8	0	0			0	100	95		0	0		0					95		100	100	100	100		
<i>Klebsiella aerogenes</i>	17	7	0	0			0	88	88		0	0		0					76		100	100	100	100		
<i>Stenotrophomonas maltophilia</i>	16	6																		88	100					
<i>Serratia marcescens</i>	12	5	0	0			0	100	100		0	0		0					100		100	100	100	100		
<i>Klebsiella oxytoca</i>	8	3	0	75			75	100	100		0	75		75					88		88	88	100	100		
<i>Burkholderia cepacia</i>	5	2						40						60							80					
<i>Citrobacter koseri</i>	5	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	#	%	Ampicillin	Amoxicillin-Clavulanic acid	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	
<i>Staphylococcus aureus</i> , all isolates	118	90					88	88	88	81	88	87							69	61							
- methicillin-susceptible	107	82					99	99	99	99	99								67	64	94					100	100
- methicillin-resistant (MRSA)	11	8					0	0	0	0	0								91	55	91					100	100
<i>Streptococcus pneumoniae</i>	12	9			73	73							67	100					73	42		100				100	
<i>Mycobacterium tuberculosis complex</i>	1	1																									

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.
- ICUs include MSICU, CCU, CVICU.

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.

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Skin, Wound and Abscess Isolates – % Susceptible

	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid

ALL BACTERIA	81	—	11	23	46	65	55		29	33						46					
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ALL GRAM-NEGATIVE BACTERIA	44	100	9	32	47	95	75		26	35	48				64	48	88	74	98		
<i>Escherichia coli</i>	12	27	0	42	42	100	100		33	50	50				42	33	75	43	100		
<i>Pseudomonas aeruginosa</i>	9	20			67	78					67				78		89	100	89		
<i>Klebsiella pneumoniae</i>	7	16	0	57	57	100	100		50	57	57				71	57	86	50	100		
<i>Enterobacter cloacae</i>	5	11	0	0	0	100	80		0	0	0				80	100	100	100	100		
<i>Serratia marcescens</i>	4	9	0	0	0	100	100		0	0	0				75	100	100	100	100		
<i>Proteus mirabilis</i>	4	9	100	100	100	100	100		100	100	100				75	50	100	100	100		

ALL GRAM-POSITIVE BACTERIA	37	100	13	13	45	32	32	32	32	32		37	24		45					87	
<i>Enterococcus faecium</i> , all isolates	14	38	0	0	0															71	
- vancomycin-susceptible	10	27	0	0	0															100	
- vancomycin-resistant (VRE)	3	8	0	0	0															0	100
- vancomycin-susceptible (vanA+)	1	3	0	0	0															0	100
<i>Staphylococcus aureus</i> , all isolates	10	27			90	90	90	90	90			90	70	100		100				100	100
- methicillin-susceptible	9	24			100	100	100	100	100			89	78	100		100				100	100
- methicillin-resistant (MRSA)	1	3			0	0	0	0	0			100	0	100		100				100	100
Coagulase-negative staphylococci	9	24			33	33	33	33	33			56	22	78		78				100	100
<i>Enterococcus faecalis</i>	4	11	100	100	100															100	
<i>Enterococcus casseliflavus</i>	1	3	100	100	100															0	

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Urine Isolates – % Susceptible

	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid

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

ALL BACTERIA	77	—	13	45	61	75	58		3	37	40			61	47	60					
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ALL GRAM-NEGATIVE BACTERIA	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
<i>Escherichia coli</i>	29	50	0	55	59	100	100	0	57	66	66	0	59	62	100	83	50	100			
<i>Pseudomonas aeruginosa</i>	12	21			75	83					75		83			92	100	92			
<i>Klebsiella pneumoniae</i>	10	17	0	80	80	100	100	0	80	80	80		80	80	20	90	0	100			
<i>Enterobacter cloacae</i>	2	3	0	0	0	100	100	0	0	0	0		50	100	50	100	100	100			
<i>Citrobacter freundii</i>	1	2	0	0	0	100	100	0	0	0	0		100	100	100	100	100	100			
<i>Klebsiella aerogenes</i>	1	2	0	0	0	100	100	0	0	0	0		100	100	0	100	100	100			
<i>Klebsiella oxytoca</i>	1	2	0	100	100	100			100	100	100		100	100	0	100					
<i>Proteus mirabilis</i>	1	2	100	100	100	100			100	100	100		100	100	0	100					
<i>Proteus vulgaris</i>	1	2	0	0	0	100	100	0	0	0	0		0	100	0	100	100	100			

ALL GRAM-POSITIVE BACTERIA	#	%	Ampicillin	Amoxicillin-Clavulanic acid	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
<i>Enterococcus faecalis</i>	9	47	100	100	100								22	78	100					100	
<i>Enterococcus faecium</i> , all isolates	7	37	0	0	0								15	0	15					86	100
- vancomycin-susceptible	6	32	0	0	0								17	0	17					100	100
- vancomycin-resistant (VRE)	1	5	0	0	0								0	0	0					0	100
<i>Staphylococcus aureus</i> , all isolates	3	16			67	67	67	67	67	67			67		100	100				100	100
- methicillin-susceptible	2	11			100	100	100	100	100	100			50		100	100				100	100
- methicillin-resistant (MRSA)	1	5			0	0	0	0	0	0			100		100	100				100	100

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