

Toronto General Hospital ANTIBIOGRAM
Intensive Care Units
January 1, 2019 - December 31, 2019

Blood Isolates – % Susceptible

		Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid	
#	%																						
ALL BACTERIA	294	—	9	12	38	41	38		27	34							47						
ALL GRAM-NEGATIVE BACTERIA	51	100	10	24	35	94	73		12	35	43				77		59	92	90	92			
<i>Escherichia coli</i>	13	25	8	31	31	85	77		25	54	54				54		54	92	85	85			
<i>Pseudomonas aeruginosa</i>	7	14			71	86					71				100			86	100	71			
<i>Klebsiella pneumoniae</i>	7	14	0	43	43	100	100		43	71	71				57		71	100	71	100			
<i>Enterobacter cloacae</i>	7	14	0	0	0	100	71		0	0	0				86		100	100	100	100			
<i>Serratia marcescens</i>	5	10	0	0	0	100	100		0	0	0				100		100	100	100	100			
ALL GRAM-POSITIVE BACTERIA	243	100	9	9	1	39	31	31	30	31	34		43	30			44					97	
Coagulase-negative staphylococci	159	65				33	33	33	33	33			50	33	50		50					100	100
<i>Enterococcus faecium</i> , all isolates	32	13	3	3	3																	78	
- vancomycin-susceptible	25	10	4	4	4																	100	
- vancomycin-resistant (VRE)	7	3	0	0	0																	0	100
<i>Staphylococcus aureus</i> , all isolates	23	9				87	87	87	87	87			83	70	100		100					100	100
- methicillin-susceptible	20	8				100	100	100	100	100			80	75	100		100					100	100
- methicillin-resistant (MRSA)	3	1				0	0	0	0	0			100	33	100		100					100	100
<i>Enterococcus faecalis</i>	19	8	100	100	100																	100	
Viridans group streptococci ^o	8	3								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.
- 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

		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="font-size: small;"> ≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■ </div> <div style="text-align: center;"> <table border="0"> <tr><td>#</td><td>%</td><td>Ampicillin</td><td>Amoxicillin-Clavulanic acid</td><td>Penicillin</td><td>Penicillin IV (meningitis)</td><td>Penicillin IV (non-meningitis)</td><td>Piperacillin-Tazobactam</td><td>Meropenem</td><td>Ertapenem</td><td>Cloxacillin</td><td>Cefazolin</td><td>Ceftriaxone</td><td>Ceftriaxone (meningitis)</td><td>Ceftriaxone (non-meningitis)</td><td>Ceftazidime</td><td>Clindamycin</td><td>Erythromycin</td><td>Doxycycline</td><td>Ciprofloxacin</td><td>Moxifloxacin</td><td>Trimethoprim-Sulfamethoxazole</td><td>Gentamicin</td><td>Tobramycin</td><td>Amikacin</td><td>Vancocycin</td><td>Linezolid</td></tr> </table> </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
#	%	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	379	—	11	24			72	91	56		29	58									67																							
ALL GRAM-NEGATIVE BACTERIA	278	100	14	31			64	91	43		6	44			64					72		54	86	85	90																			
<i>Pseudomonas aeruginosa</i>	80	29					75	79							75					74			78	86	79																			
<i>Escherichia coli</i>	34	12	27	47			50	97	96		8	65			65					62		50	82	73	100																			
<i>Haemophilus influenzae</i> ^{^^}	34	12	82																																									
<i>Klebsiella pneumoniae</i>	29	10	0	83			83	100	100		43	93			93					90		93	93	91	100																			
<i>Stenotrophomonas maltophilia</i> [†]	24	9																			67	96																						
<i>Enterobacter cloacae</i>	19	7	0	0			0	100	84		0	0			0					100		95	100	100	100																			
<i>Serratia marcescens</i>	14	5	0	0			0	100	100		0	0			0					100		100	100	93	100																			
<i>Klebsiella oxytoca</i>	13	5	0	69			69	100	100		20	77			77					92		92	100	89	100																			
<i>Moraxella catarrhalis</i> [^]	12	4																																										
ALL GRAM-POSITIVE BACTERIA	101	100	4	4	4		91	91	91	87	91	92				80	67					97				98																		
<i>Staphylococcus aureus</i> , all isolates	95	94					93	93	93	93	93					79	66	94				98				99	100																	
- methicillin-susceptible	88	87					100	100	100	100	100					80	70	95				99				99	100																	
- methicillin-resistant (MRSA)	7	7					0	0	0	0	0					71	14	83				86				100	100																	
<i>Streptococcus pneumoniae</i>	5	5				80	80							100	100	100	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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- 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:

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

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Skin, Wound and Abscess Isolates – % Susceptible

	#	%	Antibiotics																			
			Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin
ALL BACTERIA	57	—	9	19	46	51	49		22	37							51					
ALL GRAM-NEGATIVE BACTERIA	24	100	8	33	54	79	75		11	46	63				63		54	92	95	87		
<i>Escherichia coli</i>	8	33	25	62	75	100	100		33	75	75				38		38	88	86	86		
<i>Pseudomonas aeruginosa</i>	6	25			67	33					67				33			83	100	67		
<i>Klebsiella pneumoniae</i>	5	21	0	60	60	80	100		0	80	80				100		100	100	100	100		
<i>Klebsiella oxytoca</i>	2	8	0	0	0	100	100		0	50	50				100		100	100	100	100		
<i>Enterobacter cloacae</i>	1	4	0	0	0	100	100		0	0	0				100		100	100	100	100		
<i>Serratia marcescens</i>	1	4	0	0	0	100	100		0	0	0				100		100	100	100	100		
<i>Citrobacter koseri</i>	1	4	0	0	0	100	100		0	0	0				100		100	100	100	100		
ALL GRAM-POSITIVE BACTERIA	33	100	9	9	39	30	30	30	30	30		33	27				48				88	
<i>Staphylococcus aureus</i> , all isolates	13	39			77	77	77	77	77			69	62	100			92				100	100
- methicillin-susceptible	10	30			100	100	100	100	100			60	60	100			90				100	100
- methicillin-resistant (MRSA)	3	9			0	0	0	0	0			100	67	100			100				100	100
<i>Enterococcus faecium</i> , all isolates	11	33	9	9	9																64	
- vancomycin-susceptible	7	21	14	14	14																100	
- vancomycin-resistant (VRE)	4	12	0	0	0																0	100
Coagulase-negative staphylococci	7	21			0	0	0	0	0			29	14	100			57				100	100
<i>Enterococcus faecalis</i>	2	6	100	100	100																100	

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Urine Isolates – % Susceptible

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ALL BACTERIA		79	—	20	48	66	77	63	5	40	45	8	69	48	71																				
ALL GRAM-NEGATIVE BACTERIA		61	100	6	43	64	98	79	5	50	57	67	72	61	70	90	86	97																	
<i>Escherichia coli</i>		39	64	10	49	62	100	96	8	61	69	69	62	62	97	90	89	100																	
<i>Pseudomonas aeruginosa</i>		7	11			100	100				100	100	100		100	100	100																		
<i>Klebsiella pneumoniae</i>		6	10	0	100	100	100	100	100	100	100	100	83	83	0	83	67	100																	
<i>Enterobacter cloacae</i>		3	5	0	0	0	100	33	0	0	0	0	100	100	67	100	100	100																	
<i>Klebsiella oxytoca</i>		1	2	0	100	100	100		100	100	100	100	100	100	100	100																			
<i>Citrobacter freundii</i>		1	2	0	0	0	100	100	0	0	0	0	0	0	100	100	100	100																	
<i>Providencia stuartii</i>		1	2	0	0	0	100	100	0	0	0	0	100	100	0	100	100	100																	
<i>Citrobacter koseri</i>		1	2	0	0	0	100	100	0	0	0	0	100	100	100	100	100	100																	
<i>Pantoea agglomerans</i>		1	2	0	0	0	100	100	0	0	0	0	100	100	0	100	100	100																	
<i>Burkholderia cepacia</i>		1	2										100																						
ALL GRAM-POSITIVE BACTERIA		18	100	67	67	72	6	6	6	6	6	6	33	61	6	72				100															
<i>Enterococcus faecalis</i>		12	67	100	100	100							25	92		100				100															
<i>Enterococcus faecium</i>		5	28	0	0	0							40	0		0				100	100														
<i>Staphylococcus aureus</i>		1	6			100	100	100	100	100	100		100		100	100				100	100														

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