

Toronto General Hospital ANTIBIOGRAM
Intensive Care Units
January 1, 2017 - December 31, 2017

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="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">#</div> <div style="border: 1px solid black; padding: 2px;">%</div> </div> <div style="display: flex; flex-direction: column; gap: 5px; font-size: x-small;"> <div style="border: 1px solid black; padding: 2px;">Ampicillin</div> <div style="border: 1px solid black; padding: 2px;">Amoxicillin-Clavulanic acid</div> <div style="border: 1px solid black; padding: 2px;">Penicillin</div> <div style="border: 1px solid black; padding: 2px;">Piperacillin-Tazobactam</div> <div style="border: 1px solid black; padding: 2px;">Meropenem</div> <div style="border: 1px solid black; padding: 2px;">Ertapenem</div> <div style="border: 1px solid black; padding: 2px;">Cloxacillin</div> <div style="border: 1px solid black; padding: 2px;">Cefazolin</div> <div style="border: 1px solid black; padding: 2px;">Ceftriaxone</div> <div style="border: 1px solid black; padding: 2px;">Ceftazidime</div> <div style="border: 1px solid black; padding: 2px;">Clindamycin</div> <div style="border: 1px solid black; padding: 2px;">Erythromycin</div> <div style="border: 1px solid black; padding: 2px;">Doxycycline</div> <div style="border: 1px solid black; padding: 2px;">Ciprofloxacin</div> <div style="border: 1px solid black; padding: 2px;">Moxifloxacin</div> <div style="border: 1px solid black; padding: 2px;">Trimethoprim-Sulfamethoxazole</div> <div style="border: 1px solid black; padding: 2px;">Gentamicin</div> <div style="border: 1px solid black; padding: 2px;">Tobramycin</div> <div style="border: 1px solid black; padding: 2px;">Amikacin</div> <div style="border: 1px solid black; padding: 2px;">Vancomycin</div> <div style="border: 1px solid black; padding: 2px;">Linezolid</div> </div> </div> </div>															
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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:

- * 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="text-align: left;"> <p>≥80% Susceptible ■</p> <p>70-79% Susceptible ■</p> <p>≤69% Susceptible ■</p> </div> <div style="text-align: center;"> <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	Amikacin	Vancomycin	Linezolid
ALL BACTERIA	383	—	11	24			72	89	53			56									32				
ALL GRAM-NEGATIVE BACTERIA	269	100	14	33			65	90	39			42			65				77			87	95		
<i>Pseudomonas aeruginosa</i>	82	30					72	74						79					80			85	90		
<i>Haemophilus influenzae</i> ^{^^}	37	14	70																						
<i>Escherichia coli</i>	32	12	25	50			59	94	94			66		66					66			81	100		
<i>Klebsiella pneumoniae</i>	28	10	0	86			82	100	100			86		86					93			89	100		
<i>Stenotrophomonas maltophilia</i> [†]	19	7																		89					
<i>Enterobacter cloacae</i>	18	7	0	0			0	94	59			0		0					94			94	100		
<i>Serratia marcescens</i>	15	6	0	0			0	100	100			0		0					100			100	100		
<i>Moraxella catarrhalis</i> [^]	9	3																							
<i>Klebsiella oxytoca</i>	8	3	0	75			62	100	100			88		88					100			100	100		
<i>Proteus mirabilis</i>	6	2	67	100			100	100	100			100		100					83			100	100		
<i>Acinetobacter baumannii</i> complex	5	2					80	100				20		100					100			80	100		
<i>Enterobacter aerogenes</i>	5	2	0	0			0	100	100			0		0					100			100	100		
ALL GRAM-POSITIVE BACTERIA	114	100	3	3	3		85	85	85	82	85	85				76	71				97			93	
<i>Staphylococcus aureus</i> , all isolates	108	95					87	87	87	87	87					75	72	98			98			98	99
- methicillin-susceptible	94	82					100	100	100	100	100					80	80	98			98			98	100
- methicillin-resistant (MRSA)	14	12					0	0	0	0	0					43	21	100			100			100	93
<i>Streptococcus pneumoniae</i>	5	4				60	60					50	100		100	60			100						
<i>Mycobacterium tuberculosis</i> complex	1	1																							

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- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.
- ICUs include MSICU, CCU, CVICU.

Year-Specific Notes:

- Susceptibility for cefazolin are not available for Gram-negative isolates from non-sterile site specimens for the current year.

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

		<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 style="display: flex; flex-direction: column; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">Ampicillin</div> <div style="border: 1px solid black; padding: 2px;">Amoxicillin-Clavulanic acid</div> <div style="border: 1px solid black; padding: 2px;">Penicillin</div> <div style="border: 1px solid black; padding: 2px;">Piperacillin-Tazobactam</div> <div style="border: 1px solid black; padding: 2px;">Meropenem</div> <div style="border: 1px solid black; padding: 2px;">Ertapenem</div> <div style="border: 1px solid black; padding: 2px;">Cloxacillin</div> <div style="border: 1px solid black; padding: 2px;">Cefazolin</div> <div style="border: 1px solid black; padding: 2px;">Ceftriaxone</div> <div style="border: 1px solid black; padding: 2px;">Ceftazidime</div> <div style="border: 1px solid black; padding: 2px;">Clindamycin</div> <div style="border: 1px solid black; padding: 2px;">Erythromycin</div> <div style="border: 1px solid black; padding: 2px;">Doxycycline</div> <div style="border: 1px solid black; padding: 2px;">Ciprofloxacin</div> <div style="border: 1px solid black; padding: 2px;">Moxifloxacin</div> <div style="border: 1px solid black; padding: 2px;">Trimethoprim-Sulfamethoxazole</div> <div style="border: 1px solid black; padding: 2px;">Gentamicin</div> <div style="border: 1px solid black; padding: 2px;">Tobramycin</div> <div style="border: 1px solid black; padding: 2px;">Amikacin</div> <div style="border: 1px solid black; padding: 2px;">Vancomycin</div> <div style="border: 1px solid black; padding: 2px;">Linezolid</div> </div> </div>																							
#	%																								
ALL BACTERIA	66	—	23	41	62	60	51			44						50									
ALL GRAM-NEGATIVE BACTERIA	37	100	16	49	63	81	65			51	57				75	61	83	89	94						
<i>Pseudomonas aeruginosa</i>	10	27			40	30					20				70		70	100	90						
<i>Escherichia coli</i>	8	22	38	100	100	100	100			100	100				88	75	100	100	100						
<i>Klebsiella pneumoniae</i>	5	14	0	100	100	100	100			100	100				100	100	100	100	100						
<i>Klebsiella oxytoca</i>	3	8	0	67	67	100	100			67	67				67	67	67	67	100						
<i>Enterobacter cloacae</i>	2	5	0	0	0	100	100			0	0				100	100	100	100	100						
<i>Proteus mirabilis</i>	2	5	100	100	100	100	100			100	100				50	100	100	100	100						
<i>Serratia marcescens</i>	2	5	0	0	0	100	100			0	0				100	100	100	50	100						
ALL GRAM-POSITIVE BACTERIA	29	100	31	31	3	62	34	34	31	34	34			34	31					36				86	
<i>Enterococcus faecium</i> , all isolates	8	28	13	13		13																		50	
- vancomycin-susceptible	4	14	25	25		25																		100	
- vancomycin-resistant (VRE)	4	14	0	0		0																		0	
- vancomycin-susceptible (vanA+)	0	0																						100	
<i>Staphylococcus aureus</i> , all isolates	7	24				100	100	100	100	100					71	71	100			100				100	100
- methicillin-susceptible	7	24				100	100	100	100	100					71	71	100			100				100	100
- methicillin-resistant (MRSA)	0	0																							
Coagulase-negative staphylococci	6	21				33	33	33	33	33					67	50	100			50				100	100
<i>Enterococcus faecalis</i> , all isolates	6	21	100	100		100																		100	
- vancomycin-susceptible	6	21	100	100		100																		100	
- vancomycin-resistant (VRE)	0	0																							
Group B streptococci**	1	3			100									100	100									100	
<i>Enterococcus species</i>	1	3	100	100		100																		100	

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- ICUs include MSICU, CCU, CVICU.

Year-Specific Notes:

- Susceptibility for ceftazolin are not available for Gram-negative isolates from non-sterile site specimens for the current year.

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.

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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		
≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■																								
ALL BACTERIA	96	—	31	54		70	84	71			43	51		4	78	58	56							
ALL GRAM-NEGATIVE BACTERIA	82	100	25	51		70	99	83			50	60	72		83	68	52	94	93	99				
<i>Escherichia coli</i>	41	50	32	63		76	100	100			61	80	80		73	63	90	93	90	100				
<i>Pseudomonas aeruginosa</i>	10	12				100	100						100		100			100	100	100				
<i>Klebsiella pneumoniae</i>	9	11	0	78		78	89	89			78	78	78		89	100	0	89	89	89				
<i>Proteus mirabilis</i>	9	11	78	89		89	100	89			89	89	89		78	100	0	89	89	100				
<i>Enterobacter cloacae</i>	4	5	0	0		0	100	50			0	0	0		100	100	50	100	100	100				
ALL GRAM-POSITIVE BACTERIA	14	100	71	71		71								28	50		79					100		
<i>Enterococcus faecalis</i> , all isolates	9	64	100	100		100								22	78		100					100		
- vancomycin-susceptible	9	64	100	100		100								22	78		100					100		
- vancomycin-resistant (VRE)	0	0																						
<i>Enterococcus faecium</i> , all isolates	5	36	20	20		20								40	0		40					100		
- vancomycin-susceptible	5	36	20	20		20								40	0		40					100		
- vancomycin-resistant (VRE)	0	0																						
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