

Toronto General Hospital ANTIBIOGRAM

Intensive Care Units

January 1, 2016 - December 31, 2016

Blood Isolates – % Susceptible

			<div><div>≥80% Susceptible</div><div>70-79% Susceptible</div><div>≤69% Susceptible</div></div>																									
	#	%	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	380	—	8	15		38	43	39		26	31							53										
ALL GRAM-NEGATIVE BACTERIA	94	100	5	34		51	96	79		24	41	53				84		63	91	91	97							
<i>Escherichia coli</i>	25	27	16	44		56	100	100		40	68	68				60		48	84	84	100							
<i>Klebsiella pneumoniae</i>	16	17	0	88		88	100	100		81	88	88				100		88	100	100	100							
<i>Pseudomonas aeruginosa</i>	16	17				69	75					69				81			81	88	81							
<i>Serratia marcescens</i>	12	13	0	0		0	100	100		0	0	0				100		92	100	92	100							
<i>Enterobacter cloacae</i>	9	10	0	0		0	100	100		0	0	0				100		78	89	89	100							
<i>Klebsiella oxytoca</i>	6	6	0	100		100	100	100		0	100	100				100		100	100	100	100							
ALL GRAM-POSITIVE BACTERIA	286	100	9	9	2	33	27	27	24	27	28		38	26				50				98						
Coagulase-negative staphylococci	200	70				24	24	24	24	24			41	28	92			54				100	100					
<i>Enterococcus faecium</i> , all isolates	30	10	10	10		10																83						
- vancomycin-susceptible	25	9	12	12		12																100						
- vancomycin-resistant (VRE)	5	2	0	0		0																0	100					
- vancomycin-susceptible (vanA+)	0	0																										
<i>Staphylococcus aureus</i> , all isolates	30	10				70	70	70	70	70			77	53	93			97				100	100					
- methicillin-susceptible	21	7				100	100	100	100	100			76	71	95			95				100	100					
- methicillin-resistant (MRSA)	9	3				0	0	0	0	0			78	11	89			100				100	100					
<i>Enterococcus faecalis</i> , all isolates	16	6	100	100		100																100						
- vancomycin-susceptible	16	6	100	100		100																100						
- vancomycin-resistant (VRE)	0	0																										
Viridans group streptococci *	8	3			62						100											100						

- 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.

January 1, 2016 - December 31, 2016

Respiratory Isolates – % Susceptible

	F	Amoxicillin-Clavulanic acid	Penicillin	Penicillin IV (meningitis)	Penicillin IV (non-meningitis)	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Cefazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
≥80% Susceptible																							
70-79% Susceptible																							
≤69% Susceptible																							
ALL BACTERIA	343	—	11	24			66	88	55		53							67					
ALL GRAM-NEGATIVE BACTERIA	240	100	13	31			59	92	44		40	57				72		56	85	87	88		
<i>Pseudomonas aeruginosa</i>	70	29					64	79			67					69			70	80	70		
<i>Haemophilus influenzae</i> ^{a, b}	30	13	77																				
<i>Escherichia coli</i>	24	10	25	46			58	100	100		75	75				62		58	92	83	100		
<i>Enterobacter cloacae</i>	20	8	0	0			0	100	85		0	0				80		80	90	90	100		
<i>Stenotrophomonas maltophilia</i> ^c	19	8															74	100					
<i>Klebsiella pneumoniae</i>	18	8	0	83			83	94	94		89	89				94		83	100	94	100		
<i>Klebsiella oxytoca</i>	15	6	0	93			87	100	100		93	93				100		100	100	100	100		
<i>Serratia marcescens</i>	15	6	0	0			0	100	100		0	0				100		100	100	93	100		
<i>Enterobacter aerogenes</i>	12	5	0	0			0	100	100		0	0				92		100	100	100	100		
<i>Moraxella catarrhalis</i> ^d	6	3																					
ALL GRAM-POSITIVE BACTERIA	103	100	7	7	7		80	80	80	73	80	82	66	61				90				99	
<i>Staphylococcus aureus</i> , all isolates	87	84					86	86	86	86			70	67	99			97				100	100
- methicillin-susceptible	76	74					99	99	99	99	99		71	71	99			99				100	100
- methicillin-resistant (MRSA)	11	11					0	0	0	0	0		64	36	100			82				100	100
<i>Streptococcus pneumoniae</i>	9	9				78	78						78	56			100					100	
<i>Enterococcus faecium</i> , all isolates	4	4	0	0			0															75	
- vancomycin-susceptible	3	3	0	0			0															100	
- vancomycin-resistant (VRE)	1	1	0	0			0															0	100
- vancomycin-susceptible (vanA+)	0	0																					
Coagulase-negative staphylococci	3	3					0	0	0	0	0		0	0	100			0				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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- 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:

^a *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.

^c *S. maltophilia*: Susceptibility to moxifloxacin was predicted based on levofloxacin susceptibility testing results.

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Intensive Care Units
January 1, 2016 - December 31, 2016

Skin, Wound and Abscess Isolates – % Susceptible

			<div><div>≥80% Susceptible</div><div>70-79% Susceptible</div><div>≤69% Susceptible</div></div> <div># %</div>																							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	85	—	15	27		47	59	47			39							48																												
ALL GRAM-NEGATIVE BACTERIA	43	100	7	30		45	92	65			50	54				65		65	90	90	92																									
<i>Escherichia coli</i>	15	35	20	53		67	100	93			87	87				60		60	93	87	100																									
<i>Klebsiella pneumoniae</i>	8	19	0	62		62	100	100			75	75				100		88	100	100	100																									
<i>Pseudomonas aeruginosa</i>	6	14				33	67				50					50			83	100	83																									
<i>Stenotrophomonas maltophilia</i> †	4	9															50	100																												
<i>Serratia marcescens</i>	4	9	0	0		0	100	100			0	0				100		100	100	100	100																									
ALL GRAM-POSITIVE BACTERIA	42	100	24	24	2	50	29	29	26	29	29		29	25				29				93																								
Coagulase-negative staphylococci	12	29				17	17	17	17	17			33	17	92			25				100	100																							
<i>Enterococcus faecium</i> , all isolates	11	26	9	9		9																73																								
- vancomycin-susceptible	8	19	12	12		12																100																								
- vancomycin-resistant (VRE)	3	7	0	0		0																0	100																							
- vancomycin-susceptible (vanA+)	0	0																																												
<i>Staphylococcus aureus</i> , all isolates	10	24				90	90	90	90	90			80	80	100			90				100	100																							
- methicillin-susceptible	9	21				100	100	100	100	100			78	78	100			89				100	100																							
- methicillin-resistant (MRSA)	1	2				0	0	0	0	0			100	100	100			100				100	100																							
<i>Enterococcus faecalis</i> , all isolates	8	19	100	100		100																100																								
- vancomycin-susceptible	8	19	100	100		100																100																								
- vancomycin-resistant (VRE)	0	0																																												
Viridans group streptococci †	1	2			100						100											100																								

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^{*} *S. maltophilia*: Susceptibility to moxifloxacin was predicted based on levofloxacin susceptibility testing results.

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Urine Isolates – % Susceptible

		<div> <div>≥80% Susceptible</div> <div>70-79% Susceptible</div> <div>≤69% Susceptible</div> </div>		#	%	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				84	—	39	63		75	73	65			30	50		12	83	56	71					
ALL GRAM-NEGATIVE BACTERIA				62	100	24	57		73	98	89			40	68	76		86	74	64	92	90	100		
<i>Escherichia coli</i>				35	56	34	63		80	100	100			37	83	83		80	74	94	86	83	100		
<i>Klebsiella pneumoniae</i>				10	16	0	100		100	100	100			90	100	100		100	90	10	100	100	100		
<i>Pseudomonas aeruginosa</i>				6	10				67	83						83		67			100	100	100		
<i>Enterobacter cloacae</i>				6	10	0	0		0	100	83			0	0	0		100	100	83	100	100	100		
<i>Proteus mirabilis</i>				3	5	100	100		100	100	100			100	100	100		100	100	0	100	100	100		
ALL GRAM-POSITIVE BACTERIA				22	100	82	82		82								45	77	5	91				100	
<i>Enterococcus faecalis</i> , all isolates				17	77	100	100		100								35	94		100				100	
- vancomycin-susceptible				17	77	100	100		100								35	94		100				100	
- vancomycin-resistant (VRE)				0	0																				
<i>Enterococcus faecium</i> , all isolates				3	14	33	33		33								67	33		33				100	100
- vancomycin-susceptible				3	14	33	33		33								67	33		33				100	100
- vancomycin-resistant (VRE)				0	0																				
- vancomycin-susceptible (vanA+)				0	0																				
<i>Staphylococcus aureus</i> , all isolates				1	5				0	0	0	0	0	0	0		100		100	100				100	100
- methicillin-susceptible				0	0																				
- methicillin-resistant (MRSA)				1	5				0	0	0	0	0	0	0		100		100	100				100	100
<i>Enterococcus</i> species				1	5	0	0		0								100	0		100				100	

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