

Toronto Western Hospital ANTIBIOGRAM
All Inpatients
January 1, 2018 - December 31, 2018

Blood 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	Vancomycin	Linezolid	
ALL BACTERIA	383	—	13	22			52	57	53		41	51									67						
ALL GRAM-NEGATIVE BACTERIA	99	100	24	56			71	99	87		38	65			74				85		71	98	96	100			
<i>Escherichia coli</i>	49	49	45	71			80	100	100		61	84			84				76		69	98	96	100			
<i>Klebsiella pneumoniae</i>	13	13	0	77			77	100	100		54	77			77				85		85	92	85	100			
<i>Pseudomonas aeruginosa</i>	10	10					90	90							90				100			100	100	100			
<i>Enterobacter cloacae</i>	8	8	0	0			0	100	100		0	0			0				100		100	100	100	100			
<i>Klebsiella oxytoca</i>	6	6	0	83			83	100	100		17	100			100				100		100	100	100	100			
ALL GRAM-POSITIVE BACTERIA	284	100	10	10	6		46	42	42	36	42	47				48	32				65					100	
Coagulase-negative staphylococci	186	65					30	30	30	30	30					40	20	100			60					100	100
<i>Staphylococcus aureus</i> , all isolates	54	19					87	87	87	87	87					72	65	98			100					100	100
- methicillin-susceptible	47	17					100	100	100	100	100					70	68	98			100					100	100
- methicillin-resistant (MRSA)	7	2					0	0	0	0	0					86	43	100			100					100	100
Viridans group streptococci *	14	5										100														100	
<i>Enterococcus faecalis</i> , all isolates	9	3	100	100			100																			100	
- vancomycin-susceptible	9	3	100	100			100																			100	
- vancomycin-resistant (VRE)	0	0																									
<i>Streptococcus pneumoniae</i>	6	2				83	83						83	100		83	67			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.

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.

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.
- * 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	Vancomycin	Linezolid
ALL BACTERIA	268	—	16	26			76	86	49		32	61									70					
ALL GRAM-NEGATIVE BACTERIA	157	100	22	39			74	93	29			50			73				81		51	92	95	96		
<i>Pseudomonas aeruginosa</i>	46	29					80	76							83				87			91	96	96		
<i>Haemophilus influenzae</i> ^{^^}	45	29	71																							
<i>Klebsiella pneumoniae</i>	12	8	0	83			83	100	100		0	83			83				83		92	83	83	100		
<i>Escherichia coli</i>	10	6	20	40			50	100	100		0	70			70				70		80	90	90	100		
<i>Moraxella catarrhalis</i> [^]	10	6																								
<i>Enterobacter cloacae</i>	9	6	0	0			0	100	100		0	0			0				100		89	100	100	100		
<i>Serratia marcescens</i>	8	5	0	0			0	100	100		0	0			0				100		100	100	100	100		
<i>Stenotrophomonas maltophilia</i> [†]	8	5																		100	100					
ALL GRAM-POSITIVE BACTERIA	111	100	8	8	8		77	77	77	69	77	77			67	54					91					93
<i>Staphylococcus aureus</i> , all isolates	85	77					89	89	89	89	89				72	62	93				99				100	100
- methicillin-susceptible	76	68					100	100	100	100	100				71	67	93				100				100	100
- methicillin-resistant (MRSA)	9	8					0	0	0	0	0				78	22	89				89				100	100
<i>Streptococcus pneumoniae</i>	16	14				56	56						50	83	69	44			100						100	
<i>Mycobacterium tuberculosis complex</i>	8	7																								
Coagulase-negative staphylococci	2	2					50	50	50	50	50				100	0	100				100				100	100

General Notes:

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- 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.

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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All Inpatients

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All 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	648	—	37	66	79	80	71			2	53	57		8	78	57	73							
ALL GRAM-NEGATIVE BACTERIA	508	100	25	62	77	99	88				66	70	80		81	71	68	93	92	100				
<i>Escherichia coli</i>	296	58	36	72	81	100	100			0	80	85	85		73	75	97	92	89	100				
<i>Klebsiella pneumoniae</i>	72	14	0	85	82	100	97			0	83	86	86	0	90	88	42	92	90	100				
<i>Pseudomonas aeruginosa</i>	56	11			89	95							89		93			96	96	98				
<i>Proteus mirabilis</i>	31	6	71	90	97	100	100			0	94	97	97		84	77	0	94	100	100				
<i>Enterobacter cloacae</i>	23	5	0	0	0	100	78			0	0	0	0		100	87	43	100	100	100				
<i>Klebsiella oxytoca</i>	13	3	0	92	92	100	100			0	69	92	92		100	100	85	100	100	100				
<i>Morganella morganii</i>	7	1	0	0	0	100	100			0	0	0	0		100	100	0	100	100	100				
<i>Citrobacter koseri</i>	6	1	0	0	0	100	100			0	0	0	0		100	100	83	100	100	100				
ALL GRAM-POSITIVE BACTERIA	140	100	80	80	1	89	9	9	9	9	9	9	9		39	67	9	91					98	
<i>Enterococcus faecalis</i> , all isolates	108	77	100	100	100										33	83		100					100	
- vancomycin-susceptible	108	77	100	100	100										33	83		100					100	
- vancomycin-resistant (VRE)	0	0																						
<i>Enterococcus faecium</i> , all isolates	17	12	6	6	6										41	11		24					88	100
- vancomycin-susceptible	15	11	7	7	7										33	13		27					100	100
- vancomycin-resistant (VRE)	2	1	0	0	0										100	0		0					0	100
- vancomycin-susceptible (vanA+)	0	0																						
<i>Staphylococcus aureus</i> , all isolates	11	8			100	100	100	100	100	100	100				82		100	100					100	100
- methicillin-susceptible	11	8			100	100	100	100	100	100	100				82		100	100					100	100
- methicillin-resistant (MRSA)	0	0																						

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All Non-Urine Isolates – % Susceptible

	#	%	Antibiotics																								
			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	1020	—	14	22			68	75	60		46	60									75						
ALL GRAM-NEGATIVE BACTERIA	384	100	19	42			69	96	57		19	50			69					83	62	95	95	99			
<i>Pseudomonas aeruginosa</i>	94	24					81	86							85					87		94	96	98			
<i>Escherichia coli</i>	87	23	33	65			76	100	99		56	80			80					71	77	93	92	100			
<i>Haemophilus influenzae</i> ^{^^}	46	12	72																								
<i>Klebsiella pneumoniae</i>	44	11	0	77			79	100	100		45	79			79					88	84	91	86	100			
<i>Enterobacter cloacae</i>	33	9	0	0			0	100	100		0	0			0					100	94	100	100	100			
<i>Serratia marcescens</i>	16	4	0	0			0	100	100		0	0			0					100	100	100	100	100			
<i>Proteus mirabilis</i>	13	3	85	100			100	100	100			100			100					100	92	100	100	100			
<i>Stenotrophomonas maltophilia</i>	12	3																		100	100						
<i>Moraxella catarrhalis</i> [^]	11	3																									
<i>Klebsiella oxytoca</i>	10	3	0	90			90	100	100		29	100			100					100	100	100	100	100			
<i>Morganella morganii</i>	6	2	0	0			0	100	100		0	0			0					100	100	100	100	100			
<i>Citrobacter koseri</i>	6	2	0	0			0	100	100		0	0			0					100	100	100	100	100			
ALL GRAM-POSITIVE BACTERIA	636	100	10	10	5		67	62	62	57	62	66				64	45				83					98	
Coagulase-negative staphylococci	276	43					54	54	54	54	54					64	34	92			82					100	100
<i>Staphylococcus aureus</i> , all isolates	250	39					84	84	84	84	84					74	63	95			99					100	100
- methicillin-susceptible	211	33					100	100	100	100	100					72	69	96			99					100	100
- methicillin-resistant (MRSA)	39	6					0	0	0	0	0					82	31	92			97					100	100
<i>Enterococcus faecalis</i> , all isolates	28	4	100	100			100																			100	
- vancomycin-susceptible	28	4	100	100			100																			100	
- vancomycin-resistant (VRE)	0	0																									
<i>Streptococcus pneumoniae</i>	23	4				64	64							71	93	73	52			100						100	
Viridans group streptococci*	21	3										100														100	
Group A streptococci**	10	2			100											80	80									100	
<i>Enterococcus faecium</i> , all isolates	9	1	33	33			33																			100	
- vancomycin-susceptible	9	1	33	33			33																			100	
- vancomycin-resistant (VRE)	0	0																									
- vancomycin-susceptible (vanA+)	0	0																									
<i>Mycobacterium tuberculosis</i> complex	9	1																									
Group B streptococci**	6	1			100											83	83									100	

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Year-Specific Notes:

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