

Toronto Western Hospital ANTIBIOGRAM
Emergency Department
January 1, 2019 - December 31, 2019

Blood 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: right;"> <p># %</p> </div> </div>																Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	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		515	—	16	31		67	69	67		56	70							65																					
ALL GRAM-NEGATIVE BACTERIA		155	100	26	75		86	99	94		55	84					88			87		77	95	96	99															
<i>Escherichia coli</i>		93	60	34	77		87	100	100		61	90					90			84		76	93	95	100															
<i>Klebsiella pneumoniae</i>		32	21	0	84		84	100	100		77	88					88			94		84	97	94	97															
<i>Proteus mirabilis</i>		13	8	71	100		100	100	100		20	100					100			92		100	100	100	100															
<i>Pseudomonas aeruginosa</i>		7	5				86	86									86			86		100	100	100																
<i>Enterobacter cloacae</i>		3	2	0	0		0	100	100		0	0					100			100		100	100	100																
<i>Klebsiella oxytoca</i>		3	2	0	100		100	100	100		67	100					100			100		100	100	100	100															
ALL GRAM-POSITIVE BACTERIA		360	100	11	11	8	59	56	56	47	56	64								54	21			58			100													
Coagulase-negative staphylococci		228	63				50	50	50	50	50									50	0	100		50			100	100												
<i>Staphylococcus aureus</i> , all isolates		60	17				93	93	93	93	93									77	70	98		100			100	100												
- methicillin-susceptible		56	16				100	100	100	100	100									75	73	98		100			100	100												
- methicillin-resistant (MRSA)		4	1				0	0	0	0	0									100	25	100		100			100	100												
Viridans group streptococci*		19	5								100																100													
Group A streptococci**		16	4				100													94	94						100													
<i>Streptococcus pneumoniae</i>		12	3																								100													
<i>Enterococcus faecalis</i> , all isolates		11	3	100	100		100																				100													
- vancomycin-susceptible		11	3	100	100		100																				100													
- vancomycin-resistant (VRE)		0	0																																					
Group B streptococci**		8	2				100													50	38						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. If you have any questions, please contact the UHN/MSH Department of Microbiology.

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.
- * 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	25	—	20	28			92	71	24		16	50									50					
ALL GRAM-NEGATIVE BACTERIA	16	100	31	44			100	86	13			53			94			60			20	78	89	89		
<i>Pseudomonas aeruginosa</i>	7	44					100	71							100			86				86	100	86		
<i>Haemophilus influenzae</i> ^{^^}	5	31	100																							
<i>Escherichia coli</i>	1	6	0	100			100	100	100			100			100			0			0	0	0	100		
<i>Klebsiella pneumoniae</i>	1	6	0	100			100	100	100			100			100			0			100	100	100	100		
<i>Stenotrophomonas maltophilia</i> [†]	1	6																		100	100					
<i>Moraxella catarrhalis</i> [^]	1	6																								
ALL GRAM-POSITIVE BACTERIA	9	100		33			78	44	44	44	44	44				50	33				100				100	
<i>Staphylococcus aureus</i> , all isolates	6	67					67	67	67	67	67					50	50	67			100				100	100
- methicillin-susceptible	4	44					100	100	100	100	100					50	50	75			100				100	100
- methicillin-resistant (MRSA)	2	22					0	0	0	0	0					50	50	50			100				100	100
<i>Streptococcus pneumoniae</i>	3	33				100	100						0	100		50	0			100					100	

General Notes:

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- 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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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	Linezolid		
≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■																									
ALL BACTERIA	167	—	8	13	80	88	79	64	71							86									
ALL GRAM-NEGATIVE BACTERIA	44	100	13	32	66	100	66	10	36	66					84	57	96	96	100						
<i>Pseudomonas aeruginosa</i>	15	34			87	100				87					100		100	100	100						
<i>Escherichia coli</i>	9	20	20	78	89	100	100	50	89	89					78	78	89	83	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					75	100	100	100	100						
<i>Klebsiella pneumoniae</i>	3	7	0	67	67	100	100	0	67	67					67	67	100	100	100						
<i>Morganella morganii</i>	3	7	0	0	0	100	100	0	0	0					67	67	67	100	100						
ALL GRAM-POSITIVE BACTERIA	123	100	7	7	5	85	84	84	79	84	84	79	69			97						100			
<i>Staphylococcus aureus</i> , all isolates	111	90				86	86	86	86	86			82	70	96		99					100	100		
- methicillin-susceptible	96	78				100	100	100	100	100			83	78	97		100					100	100		
- methicillin-resistant (MRSA)	15	12				0	0	0	0	0			73	20	93		93					100	100		
Group A streptococci**	6	5			100								100	100								100			
Coagulase-negative staphylococci	4	3				25	25	25	25	25			25	25	100		75					100	100		
<i>Enterococcus faecalis</i> , all isolates	2	2	100	100	100																	100			
- vancomycin-susceptible	2	2	100	100	100																	100			
- vancomycin-resistant (VRE)	0	0																							

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- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.

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

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ALL BACTERIA	894	—	31	69	82	90	87	5	69	72	5	75	65	76																							
ALL GRAM-NEGATIVE BACTERIA	768	100	26	70	80	100	96	1	75	79	83	77	70	73	90	87	100																				
<i>Escherichia coli</i>	540	70	30	74	83	100	100	1	82	86	86	72	69	95	88	85	100																				
<i>Klebsiella pneumoniae</i>	88	11	0	86	84	100	100	0	86	88	88	89	83	26	95	90	100																				
<i>Proteus mirabilis</i>	55	7	65	91	96	100	100	0	89	96	96	78	82	0	91	91	100																				
<i>Pseudomonas aeruginosa</i>	30	4			100	90					93	90			90	93	100																				
<i>Enterobacter cloacae</i>	20	3	0	0	0	100	85	0	0	0	0	90	85	30	95	95	100																				
<i>Klebsiella oxytoca</i>	13	2	0	100	100	100	100	0	85	100	100	100	92	85	100	100	100																				
<i>Citrobacter koseri</i>	9	1	0	0	0	100	100	0	0	0	0	100	100	89	100	100	100																				
ALL GRAM-POSITIVE BACTERIA	126	100	62	62	2	91	32	32	29	32	32	31	44	65	25	94				98																	
<i>Enterococcus faecalis</i> , all isolates	74	59	100	100	100								23	91	100					100																	
- vancomycin-susceptible	74	59	100	100	100								23	91	100					100																	
- vancomycin-resistant (VRE)	0	0																																			
<i>Staphylococcus aureus</i> , all isolates	27	21			89	89	89	89	89	89		96	100	100						100	100																
- methicillin-susceptible	24	19			100	100	100	100	100	100		96	100	100						100	100																
- methicillin-resistant (MRSA)	3	2			0	0	0	0	0	0		100	100	100						100	100																
<i>Staphylococcus saprophyticus</i> *	16	13																																			
<i>Enterococcus faecium</i> , all isolates	6	5	17	17	17							67	0	33						67	100																
- vancomycin-susceptible	4	3	25	25	25							75	0	50						100	100																
- vancomycin-resistant (VRE)	2	2	0	0	0							50	0	0						0	100																
- vancomycin-susceptible (vanA+)	0	0																																			
Group B streptococci**	2	2		100																100																	

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- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.

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.

* *S. saprophyticus*: Susceptibility testing is not routinely performed. Most urinary tract infections due to this organism respond to nitrofurantoin, trimethoprim/sulfamethoxazole or fluoroquinolones.