

**Toronto Western Hospital ANTIBIOGRAM
Emergency Department
January 1, 2018 - December 31, 2018**

Blood Isolates – % Susceptible

		≥80% Susceptible		70-79% Susceptible		≤69% Susceptible																				
		■		■		■																				
#	%	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	491	—	19	32			71	73	70		57	69									85					
ALL GRAM-NEGATIVE BACTERIA	155	100	27	69			82	99	90		48	77			83				82		67	90	91	99		
<i>Escherichia coli</i>	95	61	32	72			83	100	100		57	84			84				75		63	86	88	100		
<i>Klebsiella pneumoniae</i>	21	14	0	95			95	100	100		86	95			95				95		95	100	100	100		
<i>Proteus mirabilis</i>	12	8	75	92			92	100	100		0	92			92				83		83	83	100			
<i>Pseudomonas aeruginosa</i>	10	6					90	90							90				100			100	100	100		
<i>Enterobacter cloacae</i>	8	5	0	0			0	100	100		0	0			0				100		100	100	100	100		
ALL GRAM-POSITIVE BACTERIA	336	100	15	15	10		66	61	61	51	61	66				77	48				94				100	
Coagulase-negative staphylococci	205	61					60	60	60	60	60					82	45	100			100				100	100
<i>Staphylococcus aureus</i> , all isolates	61	18					79	79	79	79	79					74	59	98			100				100	100
- methicillin-susceptible	48	14					100	100	100	100	100					77	71	98			100				100	100
- methicillin-resistant (MRSA)	13	4					0	0	0	0	0					62	15	100			100				100	100
Viridans group streptococci *	16	5										94														100
<i>Streptococcus pneumoniae</i>	14	4				80	80						93	100		90	57			100						100
<i>Enterococcus faecalis</i> , all isolates	13	4	100	100			100																			100
- vancomycin-susceptible	13	4	100	100			100																			100
- vancomycin-resistant (VRE)	0	0																								
Group A streptococci**	8	2			100											100	100									100
Group B streptococci**	8	2			100											88	62									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 MUH/MSU 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	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Ceftriaxone	Ceftazidime	Clindamycin	Erythromycin	Doxycycline	Ciprofloxacin	Moxifloxacin	Trimethoprim-Sulfamethoxazole	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid	
ALL BACTERIA	26	—	19	23		92	92	27		27	60						44						
ALL GRAM-NEGATIVE BACTERIA	18	100	28	33		94	94			47	89				70		10	89	89	100			
<i>Pseudomonas aeruginosa</i>	9	50				89	89				89				78			89	89	100			
<i>Haemophilus influenzae</i> ^{^^}	6	33	83																				
<i>Moraxella catarrhalis</i> [^]	2	11																					
<i>Stenotrophomonas maltophilia</i> [']	1	6														100	100						
ALL GRAM-POSITIVE BACTERIA	8	100				88	88	88	88	88	88				75	63						100	
<i>Staphylococcus aureus</i> , all isolates	6	75				83	83	83	83	83					67	67	100					100	100
- methicillin-susceptible	5	63				100	100	100	100	100					80	80	100					100	100
- methicillin-resistant (MRSA)	1	13				0	0	0	0	0					0	0	100					100	100
Coagulase-negative staphylococci	2	25				100	100	100	100	100					100	50	100					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.

Toronto Western Hospital ANTIBIOGRAM Emergency Department January 1, 2018 - December 31, 2018

Urine Isolates – % Susceptible

		≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% Susceptible ■																				
		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	805	—	34	69	82	88	84		3	67	70		6	77	64	77						
ALL GRAM-NEGATIVE BACTERIA	690	100	27	68	80	100	95			75	79	83		79	72	75	92	90	100			
<i>Escherichia coli</i>	473	69	33	73	84	100	100		0	83	88	88		75	71	95	90	87	100			
<i>Klebsiella pneumoniae</i>	85	12	0	89	89	100	100		0	91	91	91	0	93	91	41	95	92	100			
<i>Proteus mirabilis</i>	44	6	75	95	98	100	100		0	98	98	98		75	80	2	98	98	100			
<i>Pseudomonas aeruginosa</i>	33	5			94	97						91		82			97	100	100			
<i>Enterobacter cloacae</i>	21	3	0	0	0	100	95		0	0	0	0		95	71	48	95	100	100			
<i>Citrobacter koseri</i>	9	1	0	0	0	100	100		0	0	0	0		100	100	89	100	100	100			
<i>Klebsiella oxytoca</i>	7	1	0	86	86	100	100		0	57	86	86		100	100	71	100	100	100			
<i>Morganella morganii</i>	5	1	0	0	0	100	100		0	0	0	0		100	100	20	100	100	100			
ALL GRAM-POSITIVE BACTERIA	115	100	72	72	91	18	18	18	18	18	18			45	65	15	93				99	
<i>Enterococcus faecalis</i> , all isolates	83	72	100	100	100									35	81		100				100	
- vancomycin-susceptible	83	72	100	100	100									35	81		100				100	
- vancomycin-resistant (VRE)	0	0																				
<i>Staphylococcus aureus</i> , all isolates	16	14			88	88	88	88	88	88				94		100	100				100	100
- methicillin-susceptible	14	12			100	100	100	100	100	100				93		100	100				100	100
- methicillin-resistant (MRSA)	2	2			0	0	0	0	0	0				100		100	100				100	100
<i>Staphylococcus saprophyticus</i>	9	8																				
<i>Enterococcus faecium</i> , all isolates	7	6	0	0	0									57	0		15				86	100
- vancomycin-susceptible	6	5	0	0	0									50	0		17				100	100
- vancomycin-resistant (VRE)	1	1	0	0	0									100	0		0				0	100
- vancomycin-susceptible (vanA+)	0	0																				

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

Organism-Specific Notes:

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

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Emergency Department

January 1, 2018 - December 31, 2018

Skin, Wound and Abscess Isolates – % Susceptible

		≥80% Susceptible ■ 70-79% Susceptible ■ ≤69% 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	209	—	6	10			75	81	70			57	66							85						
ALL GRAM-NEGATIVE BACTERIA	53	100	12	26			68	96	51			31	70					83		51	96	98	96			
<i>Pseudomonas aeruginosa</i>	22	42					90	95					91					86			95	100	95			
<i>Escherichia coli</i>	9	17	22	78			78	100	100			0	89	89				56		56	100	100	100			
<i>Enterobacter cloacae</i>	8	15	0	0			0	100	88			0	0	0				100		100	100	100	100			
<i>Proteus mirabilis</i>	4	8	100	100			100	100	100				100	100				100		100	100	100	100			
<i>Serratia marcescens</i>	3	6	0	0			0	100	100			0	0	0				100		100	100	100	100			
ALL GRAM-POSITIVE BACTERIA	156	100	4	4	3		78	76	76	74	76	77			69	57				97					100	
<i>Staphylococcus aureus</i> , all isolates	144	92					78	78	78	78	78				71	58	95			99					100	100
- methicillin-susceptible	112	72					100	100	100	100	100				68	66	96			100					100	100
- methicillin-resistant (MRSA)	32	21					0	0	0	0	0				81	28	91			97					100	100
Coagulase-negative staphylococci	5	3					60	60	60	60	60				60	40	100			80					100	100
Group A streptococci**	3	2					100								67	100									100	
<i>Enterococcus faecalis</i> , all isolates	2	1	100	100			100																		100	
- vancomycin-susceptible	2	1	100	100			100																		100	
- vancomycin-resistant (VRE)	0	0																								
Group B streptococci**	1	1					100								0	0									100	
Viridans group streptococci*	1	1					0					100													100	

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