

Toronto Western Hospital ANTIBIOGRAM
All Inpatients
January 1, 2017 - December 31, 2017

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> <p>#</p> <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	Tobramycin	Amikacin	Vancomycin	Linezolid
ALL BACTERIA		432	—	14	24			60	63	59		51	59							77																				
ALL GRAM-NEGATIVE BACTERIA		112	100	21	59			71	98	86		52	65		76				81		71	94	92	100																
<i>Escherichia coli</i>		58	52	31	71			76	97	100		63	81		81				71		69	91	90	100																
<i>Klebsiella pneumoniae</i>		18	16	0	94			94	100	100		94	94		94				94		100	94	94	100																
<i>Pseudomonas aeruginosa</i>		14	13					64	93						79				86			93	93	100																
<i>Proteus mirabilis</i>		7	6	86	100			100	100	100		50	100		100				86		100	100	100	100																
<i>Enterobacter aerogenes</i>		5	4	0	0			0	100	100		0	0		0				100		100	100	100	100																
ALL GRAM-POSITIVE BACTERIA		320	100	11	11	6		56	50	50	45	50	57			56	40				79				99															
Coagulase-negative staphylococci		204	64					48	48	48	48	48				58	38	92			83				100	100														
<i>Staphylococcus aureus</i> , all isolates		53	17					85	85	85	85	85				70	63	90			98				100	100														
- methicillin-susceptible		45	14					100	100	100	100	100				74	70	88			98				100	100														
- methicillin-resistant (MRSA)		8	3					0	0	0	0	0				50	25	100			100				100	100														
Viridans group streptococci*		21	7									95													100															
<i>Enterococcus faecalis</i> , all isolates		15	5	100	100			100																	100															
- vancomycin-susceptible		15	5	100	100			100																	100															
- vancomycin-resistant (VRE)		0	0																																					
<i>Enterococcus faecium</i> , all isolates		8	3	38	38			38																	75															
- vancomycin-susceptible		6	2	50	50			50																	100															
- vancomycin-resistant (VRE)		2	1	0	0			0																	0															
- vancomycin-susceptible (vanA+)		0	0																						100															
Group B streptococci**		8	3			100										38	38								100															
<i>Streptococcus pneumoniae</i>		5	2											100	100	80	60			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. 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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January 1, 2017 - December 31, 2017

Respiratory 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	236	—	12	28			77	89	53			65									72						
ALL GRAM-NEGATIVE BACTERIA	145	100	17	42			75	95	35			53			75				77		53	91	93	97			
<i>Pseudomonas aeruginosa</i>	44	30					68	86							80				80				91	98	98		
<i>Haemophilus influenzae</i> ^{^^}	31	21	65																								
<i>Klebsiella pneumoniae</i>	19	13	0	84			84	95	95			84		84					95		95	95	89	100			
<i>Escherichia coli</i>	10	7	20	60			70	100	100			70		70					50		60	80	80	90			
<i>Moraxella catarrhalis</i> [^]	10	7																									
<i>Stenotrophomonas maltophilia</i> [†]	7	5																		71	100						
ALL GRAM-POSITIVE BACTERIA	91	100	5	5	5		81	81	81	76	81	85			76	73					96				97		
<i>Staphylococcus aureus</i> , all isolates	78	86					88	88	88	88	88				81	77	96				100				100	100	
- methicillin-susceptible	69	76					100	100	100	100	100				83	83	96				100				100	100	
- methicillin-resistant (MRSA)	9	10					0	0	0	0	0				67	33	100				100				100	100	
<i>Streptococcus pneumoniae</i>	10	11			50	50							80	100	60	60				100					100		
<i>Mycobacterium tuberculosis</i> complex	3	3																									

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:

- Susceptibility for ceftazolin 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.

Toronto Western Hospital ANTIBIOGRAM

All Inpatients

January 1, 2017 - December 31, 2017

All Urine 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	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
ALL BACTERIA	763	—	35	67	79	79	71		46	56		7	79	60	73																				
ALL GRAM-NEGATIVE BACTERIA	600	100	23	63	76	99	88		57	70	79		81	73	68	93	92	100																	
<i>Escherichia coli</i>	357	60	31	76	81	100	99		65	85	85		75	78	96	93	92	100																	
<i>Klebsiella pneumoniae</i>	84	14	0	85	88	99	99		86	89	89		94	88	38	94	93	100																	
<i>Pseudomonas aeruginosa</i>	60	10			87	90					88		87			88	93	100																	
<i>Proteus mirabilis</i>	30	5	90	100	100	100	97		100	100	100		93	83	0	97	97	100																	
<i>Enterobacter cloacae</i>	21	4	0	0	0	95	81		0	0	0		90	95	57	95	86	100																	
<i>Morganella morganii</i>	12	2	0	0	0	100	100		0	0	0		58	64	0	58	75	92																	
<i>Citrobacter koseri</i>	11	2	0	0	0	100	100		0	0	0		100	100	100	100	100	100																	
<i>Klebsiella oxytoca</i>	10	2	0	70	100	100	100		60	100	100		100	100	70	100	100	100																	
<i>Enterobacter aerogenes</i>	6	1	0	0	0	100	100		0	0	0		100	100	17	100	100	100																	
ALL GRAM-POSITIVE BACTERIA	163	100	80	80	88	7	7	7	7	7	7		34	72	10	91				97	97														
<i>Enterococcus faecalis</i> , all isolates	127	78	100	100	100								22	88		100				100	100														
- vancomycin-susceptible	127	78	100	100	100								22	88		100				100	100														
- vancomycin-resistant (VRE)	0	0																																	
<i>Staphylococcus aureus</i> , all isolates	16	10			69	69	69	69	69	69			94		100	94				100	100														
- methicillin-susceptible	11	7			100	100	100	100	100	100			91		100	91				100	100														
- methicillin-resistant (MRSA)	5	3			0	0	0	0	0	0			100		100	100				100	100														
<i>Enterococcus faecium</i> , all isolates	14	9	0	0	0								57	0		7				64	93														
- vancomycin-susceptible	9	6	0	0	0								56	0		11				100	100														
- vancomycin-resistant (VRE)	5	3	0	0	0								60	0		0				0	80														
- vancomycin-susceptible (vanA+)	0	0																																	
<i>Enterococcus gallinarum</i>	3	2	100	100	100								100	100		67				100															
Coagulase-negative staphylococci	1	1			0	0	0	0	0	0			100		100	100				100	100														
<i>Enterococcus</i> species	1	1	100	100	100								0	100		100				100															
<i>Staphylococcus saprophyticus</i> "	1	1																																	

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

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:

- " *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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All Non-Urine Isolates – % 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	1010	—	13	23				67	73	59			60									77					
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ALL GRAM-NEGATIVE BACTERIA	384	100	18	44				72	96	58			52			73					82	61	93	93	99		
<i>Escherichia coli</i>	101	26	35	72				79	97	99			81			81					74	75	87	85	99		
<i>Pseudomonas aeruginosa</i>	99	26						78	90							86					84		95	98	99		
<i>Klebsiella pneumoniae</i>	42	11	0	88				90	98	98			90			90					95	95	95	90	100		
<i>Haemophilus influenzae</i> ^{^^}	34	9	62																								
<i>Enterobacter cloacae</i>	19	5	0	0				0	100	100			0		0						94	83	100	100	100		
<i>Serratia marcescens</i>	18	5	0	0				0	100	100			0		0						100	94	100	89	100		
<i>Proteus mirabilis</i>	16	4	81	100				100	100	100			100			100					88	100	94	94	100		
<i>Klebsiella oxytoca</i>	10	3	0	80				80	100	100			80			80					100	100	100	100	100		
<i>Stenotrophomonas maltophilia</i> [†]	10	3																				70	100				
<i>Moraxella catarrhalis</i> [^]	10	3																									
<i>Enterobacter aerogenes</i>	8	2	0	0				0	100	100			0		0						100	100	100	100	100		

ALL GRAM-POSITIVE BACTERIA	626	100	10	10	6			64	60	60	54	60	65			64	49				87				99	
Coagulase-negative staphylococci	288	46						48	48	48	48	48				63	38	94			88				100	100
<i>Staphylococcus aureus</i> , all isolates	229	37						88	88	88	88	88				75	69	96			100				100	100
- methicillin-susceptible	202	32						100	100	100	100	100				78	76	96			100				100	100
- methicillin-resistant (MRSA)	27	4						0	0	0	0	0				56	19	100			100				100	100
Viridans group streptococci [*]	29	5											97													100
<i>Enterococcus faecalis</i> , all isolates	22	4	100	100									100													100
- vancomycin-susceptible	22	4	100	100									100													100
- vancomycin-resistant (VRE)	0	0																								
<i>Streptococcus pneumoniae</i>	16	3						56	56						91	100		62	56		94					100
<i>Enterococcus faecium</i> , all isolates	11	2	27	27				27																		100
- vancomycin-susceptible	11	2	27	27				27																		100
- vancomycin-resistant (VRE)	0	0																								
- vancomycin-susceptible (vanA ⁺)	0	0																								
Group B streptococci ^{**}	11	2		100												55	55									100
Group A streptococci ^{**}	9	1		100												78	78									100
Group G streptococci ^{**}	6	1		100												100	83									100
<i>Mycobacterium tuberculosis complex</i>	5	1																								

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

Year-Specific Notes:

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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.