

# Toronto General Hospital ANTIBIOGRAM

## Intensive Care Units

### January 1, 2018 - December 31, 2018

#### Blood Isolates – % Susceptible

		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;"> <p>≥80% Susceptible <span style="color: green;">■</span></p> <p>70-79% Susceptible <span style="color: yellow;">■</span></p> <p>≤69% Susceptible <span style="color: red;">■</span></p> </div> <div style="text-align: right;"> <p>#</p> <p>%</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
<b>ALL BACTERIA</b>		360	–	9	18		40	44	41		26	34					63																			
<b>ALL GRAM-NEGATIVE BACTERIA</b>		94	100	6	43		58	96	82		24	50	59			78	67	91	87	99																
<i>Escherichia coli</i>		33	35	12	50		56	100	100		31	62	62		56	56	84	84	97																	
<i>Klebsiella pneumoniae</i>		18	19	0	94		94	100	100		65	100	100		94	89	94	89	100																	
<i>Pseudomonas aeruginosa</i>		13	14				77	69				77			85		100	100	100																	
<i>Enterobacter cloacae</i>		11	12	0	0		0	100	100		0	0	0		100	100	91	90	100																	
<i>Klebsiella oxytoca</i>		7	7	0	71		71	100	100		14	71	71		100	86	86	86	100																	
<i>Serratia marcescens</i>		6	6	0	0		0	100	100		0	0	0		100	100	100	67	100																	
<b>ALL GRAM-POSITIVE BACTERIA</b>		266	100	10	10	2	35	26	26	25	26	29					61				97															
Coagulase-negative staphylococci		169	64				20	20	20	20	20				36	32	96				100	100														
<i>Staphylococcus aureus</i> , all isolates		41	15				78	78	78	78	78				72	65	93				100	100														
- methicillin-susceptible		32	12				100	100	100	100	100				74	74	94				100	100														
- methicillin-resistant (MRSA)		9	3				0	0	0	0	0				67	33	89				100	100														
<i>Enterococcus faecium</i> , all isolates		24	9	5	5		5														67															
- vancomycin-susceptible		16	6	7	7		7														100															
- vancomycin-resistant (VRE)		8	3	0	0		0														0	100														
- vancomycin-susceptible (vanA+)		0	0																																	
<i>Enterococcus faecalis</i> , all isolates		21	8	100	100		100														100															
- vancomycin-susceptible		21	8	100	100		100														100															
- vancomycin-resistant (VRE)		0	0																																	
Viridans group streptococci*		7	3											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.
- 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 ampicillin. If you have any questions, please contact the IUM/ICU 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.

**Toronto General Hospital ANTIBIOGRAM**  
**Intensive Care Units**  
**January 1, 2018 - December 31, 2018**

**Respiratory Isolates – % Susceptible**

		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="font-size: small;"> <p>≥80% Susceptible <span style="color: green;">■</span></p> <p>70-79% Susceptible <span style="color: yellow;">■</span></p> <p>≤69% Susceptible <span style="color: red;">■</span></p> </div> <div style="font-size: x-small; text-align: center;"> <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
<b>ALL BACTERIA</b>	389	—	11	24			69	85	52		24	53									64					
<b>ALL GRAM-NEGATIVE BACTERIA</b>	274	100	13	32			63	87	39			39			59				63		49	86	90	90		
<i>Pseudomonas aeruginosa</i>	94	34					65	69						67				59				76	89	82		
<i>Klebsiella pneumoniae</i>	33	12	0	97			91	100	100			100		100				97			88	100	97	100		
<i>Haemophilus influenzae</i> <sup>^^</sup>	31	11	87																							
<i>Stenotrophomonas maltophilia</i> <sup>†</sup>	30	11																		83	93					
<i>Escherichia coli</i>	26	9	12	38			42	96	92		0	54		54				38			38	77	73	100		
<i>Enterobacter cloacae</i>	18	7	0	0			0	94	83		0	0		0				89			83	100	100	100		
<i>Serratia marcescens</i>	12	4	0	0			0	100	100		0	0		0				100			83	100	92	100		
<i>Klebsiella oxytoca</i>	11	4	0	91			91	100	100		0	91		91				100			100	100	100	100		
<i>Proteus mirabilis</i>	6	2	83	100			100	100	100			100		100				83			83	100	100	100		
<i>Acinetobacter baumannii</i> complex	5	2					60	100				20		80				100			60	80	80			
<b>ALL GRAM-POSITIVE BACTERIA</b>	115	100	5	5	5		82	82	82	77	82	82			71	59					98				99	
<i>Staphylococcus aureus</i> , all isolates	105	91					84	84	84	84	84				71	60	95				99				100	100
- methicillin-susceptible	89	77					99	99	99	99	99				71	67	96				100				100	100
- methicillin-resistant (MRSA)	16	14					0	0	0	0	0				69	19	88				94				100	100
<i>Enterococcus faecium</i> , all isolates	1	1																							0	
- vancomycin-susceptible	0	0																							0	
- vancomycin-resistant (VRE)	1	1																							0	100
- vancomycin-susceptible (vanA+)	0	0																							0	100
<i>Streptococcus pneumoniae</i>	9	8				67	67						67	100	78	56				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.
- ICUs include MSICU, CCU, CVICU.

**Organism-Specific Notes:**

- <sup>^^</sup> *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.
- <sup>†</sup> *S. maltophilia*: Susceptibility to moxifloxacin was predicted based on levofloxacin susceptibility testing results.

# Toronto General Hospital ANTIBIOGRAM

## Intensive Care Units

### January 1, 2018 - December 31, 2018

#### Skin, Wound and Abscess Isolates – % Susceptible

		≥80% Susceptible <span style="color: green;">■</span> 70-79% Susceptible <span style="color: yellow;">■</span> ≤69% Susceptible <span style="color: red;">■</span>			#	%	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
<b>ALL BACTERIA</b>		92	—	11	22		47	60	48	14	34										50						
<b>ALL GRAM-NEGATIVE BACTERIA</b>		47	100	9	30		56	91	66					40	62					74	57	93	96	100			
<i>Pseudomonas aeruginosa</i>		13	28				77	77								85				69			92	100	100		
<i>Escherichia coli</i>		10	21	20	60		70	90	90	0	80	80								60	50	80	80	100			
<i>Klebsiella pneumoniae</i>		7	15	0	86		86	100	100	0	86	86								86	71	100	100	100			
<i>Enterobacter cloacae</i>		5	11	0	0		0	100	100	0	0	0								100	100	100	100	100			
<i>Serratia marcescens</i>		2	4	0	0		0	100	100	0	0	0								100	100	100	100	100			
<i>Klebsiella oxytoca</i>		2	4	0	0		0	100	100					100	100					100	100	100	100	100			
<i>Stenotrophomonas maltophilia</i>		2	4																		100	100					
<i>Proteus mirabilis</i>		2	4	100	100		100	100	100					100	100					50		100	100	100	100		
<i>Citrobacter freundii</i>		2	4	0	0		0	100	100	0	0	0								100	100	100	100	100			
<b>ALL GRAM-POSITIVE BACTERIA</b>		45	100	13	13	4	38	29	29	24	29	29					33	27				42				84	
<i>Enterococcus faecium</i> , all isolates		16	36	0	0		0																			56	
- vancomycin-susceptible		9	20	0	0		0																			100	
- vancomycin-resistant (VRE)		7	16	0	0		0																			0	
- vancomycin-susceptible (vanA+)		0	0																							100	
<i>Staphylococcus aureus</i> , all isolates		12	27				58	58	58	58	58						50	33	92			100				100	
- methicillin-susceptible		7	16				100	100	100	100	100						57	57	100			100				100	
- methicillin-resistant (MRSA)		5	11				0	0	0	0	0						40	0	80			100				100	
Coagulase-negative staphylococci		11	24				36	36	36	36	36						64	55	100			55				100	
<i>Enterococcus faecalis</i> , all isolates		4	9	100	100		100																			100	
- vancomycin-susceptible		4	9	100	100		100																			100	
- vancomycin-resistant (VRE)		0	0																								
Group A streptococci**		2	4			100											100	100								100	

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- Susceptibility to doxycycline was predicted based on tetracycline susceptibility testing results.
- ICUs include MSICU, CCU, CVICU.

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

# Toronto General Hospital ANTIBIOGRAM Intensive Care Units January 1, 2018 - December 31, 2018

## Urine Isolates – % Susceptible

		≥80% Susceptible <span style="color: green;">■</span> 70-79% Susceptible <span style="color: yellow;">■</span> ≤69% Susceptible <span style="color: red;">■</span>																			
#	%	Ampicillin	Amoxicillin-Clavulanic acid	Penicillin	Piperacillin-Tazobactam	Meropenem	Ertapenem	Cloxacillin	Cefazolin	Cephalexin	Ceftriaxone	Ceftazidime	Doxycycline	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Amikacin	Vancomycin	Linezolid
<b>ALL BACTERIA</b>	74	—	25	56	68	82	70		3	48	48		7	73	57	66					
<b>ALL GRAM-NEGATIVE BACTERIA</b>	59	100	17	55	66	100	85			56	56	65		80	68	64	95	95	100		
<i>Escherichia coli</i>	34	58	29	71	74	100	100		0	74	74	74		74	71	100	91	94	100		
<i>Klebsiella pneumoniae</i>	9	15	0	78	78	100	100		0	78	78	78		78	78	0	100	89	100		
<i>Pseudomonas aeruginosa</i>	7	12			86	100						71		86			100	100	100		
<i>Enterobacter cloacae</i>	7	12	0	0	0	100	71		0	0	0	0		100	100	43	100	100	100		
<i>Klebsiella oxytoca</i>	1	2	0	100	100	100	100			100	100	100		100	100	0	100	100	100		
<i>Citrobacter freundii</i>	1	2	0	0	0	100	100		0	0	0	0		100	100	100	100	100	100		
<b>ALL GRAM-POSITIVE BACTERIA</b>	15	100	60	60	73	13	13	13	13	13	13			33	47	13	73			87	100
<i>Enterococcus faecalis</i> , all isolates	9	60	100	100	100									22	78		100			100	100
- vancomycin-susceptible	9	60	100	100	100									22	78		100			100	100
- vancomycin-resistant (VRE)	0	0																			
<i>Enterococcus faecium</i> , all isolates	4	27	0	0	0									25	0		0			50	100
- vancomycin-susceptible	2	13	0	0	0									50	0		0			100	100
- vancomycin-resistant (VRE)	2	13	0	0	0									0	0		0			0	100
- vancomycin-susceptible (vanA+)	0	0																			
<i>Staphylococcus aureus</i> , all isolates	2	13			100	100	100	100	100	100				100		100	100			100	100
- methicillin-susceptible	2	13			100	100	100	100	100	100				100		100	100			100	100
- methicillin-resistant (MRSA)	0	0																			

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