

Antibiogram
Niagara Health – SCS
Jan 01, 2022- Dec 31, 2022

90-100% Susceptible (GOOD CHOICE)	#	Ampicillin	Amoxicillin- Clavulanic Acid	Piperacillin- Tazobactam	Meropenem	Cloxacillin	Cefazolin***	Clindamycin	Erythromycin	Ertapenem	Ceftriaxone	Ceftazidime	Tetracycline~	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Rifampin**	Vancomycin	
																					21-89% Susceptible (INTERMEDIATE CHOICE)
																					0-20% susceptible (POOR CHOICE)
																					Antibiotic susceptibility testing is not typically performed on the organism
ALL SPECIMENS EXCEPT SURV.																					
Gram Negative Organisms																					
<i>Escherichia coli</i> ^ ♂	1339	58	77	98	99		80			99	86			72	80		93	92			
<i>Klebsiella pneumoniae</i> ^	341		88	97	100		86			100	90			87	90		97	97			
<i>Pseudomonas aeruginosa</i>	330			89	93							89		90			98	99			
<i>Enterobacter species</i> ^^ ♂	162				98					83				93	94		97	96			
<i>Proteus mirabilis</i> ^	131	89	95	100 n=12(#)	100		87			100	97			89	88		93	98			
Gram Positive Organisms																					
<i>Enterococcus faecalis</i> **	576	100																		99	
<i>Enterococcus faecium</i> **	99	20																		87	
<i>Staphylococcus aureus</i> - All isolates	577					70	70														
MSSA	405					100	100	73	68					100						100	
MRSA*	172							62	27				76	100					99	100	
BLOOD CULTURES																					
Gram Negative Organisms																					
<i>Escherichia coli</i> ^	115	56	81	97	100		69			100	88			78	86		93	90			
<i>Klebsiella pneumoniae</i> ^	39		90	100	100		85			100	90			90	92		95	97			
<i>Pseudomonas aeruginosa</i> (#)	20			85	88							85		95			95	100			
<i>Enterobacter species</i> ^^ (#) ♂	13				92					85				85	92		92	92			
<i>Proteus mirabilis</i> (#)	16	88	94	100 n=6	100		75			100	94			81	88		100	100			
Gram Positive Organisms																					
<i>Enterococcus faecalis</i> **	38	100																		100	
<i>Enterococcus faecium</i> ** (#)	13	31																		100	
<i>Staphylococcus aureus</i> - All isolates	97					71	71														
MSSA	69					100	100	79	75					100						100	
MRSA* (#)	28							57	29				79	100					100	100	
URINE SPECIMENS																					
Gram Negative Organisms																					
<i>Escherichia coli</i> ^ ♂	1150	59	78	98	99		83			99	87			72	80	97	93	92			
<i>Klebsiella pneumoniae</i> ^	266		88	97	100		87			100	91			88	90	29	98	97			
Gram Positive Organisms																					
<i>Enterococcus faecalis</i> **	493	100												86		99				99	
<i>Enterococcus faecium</i> **	64	23												16		11				86	

General Notes:

1. Antibiogram results, patient risk factors for resistant organisms, and hospital epidemiology should be considered together to help guide empiric treatment of initial infections. Treatment should be re-evaluated as additional information from culture and sensitivity become available.
2. n = # of isolates tested
3. (#) = Analysis based on less than 30 isolates. Statistical comparison on results with less than 30 isolates is unreliable.
4. Calculation of results based on the first isolate per patient.

Organism-Specific Notes:

^ Includes ESBL and HL-AmpC isolates (13.6% of total *E.coli* isolates, 9.7% of total *K.pneumoniae* isolates, and 3.1% of total *P. mirabilis* isolates are ESBL and HL-AmpC)

Ø Includes Carbapenem-resistant (0.1 % of total *E.coli* isolates, and 0.6% of total *Enterobacter* sp. isolates)

^^ *Enterobacter* species and other SPICE organisms (*Serratia*, *Providencia*, *Morganella*, *Citrobacter* species, *Proteus vulgaris* and *Klebsiella aerogenes*) contain a chromosomal AmpC B-lactamase. Treatment with penicillins, cephalosporins, broad spectrum penicillins, and B-lactam/B-lactamase inhibitor combinations (i.e. piperacillin-tazobactam) is not recommended.

* *Methicillin Resistant S.aureus* (MRSA) are resistant to all B-Lactams (penicillins, cephalosporins, B-lactam/B-lactamase inhibitor combinations, and carbapenems).

** Includes *Vancomycin-Resistant Enterococcus* species

Clindamycin, Trimethoprim/Sulfamethoxazole and all Cephalosporins are ineffective against *Enterococcus* species.

Antibiotic - Specific Notes:

~Organisms that are susceptible to Tetracycline are also considered susceptible to Doxycycline.

*^ Rifampin should not be used alone for therapy.

***Cefazolin interpretation predicts results for Cephalexin (Keflex) in accordance with CLSI standards for urinary sites only (not systemic).

Antibiogram
Niagara Health -- NFS
Jan 01, 2022 - Dec 31, 2022

90-100% Susceptible (GOOD CHOICE)	#	Ampicillin	Amoxicillin- Clavulanic Acid	Piperacillin-Tazobactam	Meropenem	Cloxacillin	Cefazolin***	Clindamycin	Erythromycin	Ertapenem	Ceftriaxone	Ceftazidime	Tetracycline~	Ciprofloxacin	Trimethoprim-Sulfamethoxazole	Nitrofurantoin	Gentamicin	Tobramycin	Rifampin*	Vancomycin	
																					21-89% Susceptible (INTERMEDIATE CHOICE)
																					0-20% susceptible (POOR CHOICE)
																					Antibiotic susceptibility testing is not typically performed on the organism
ALL SPECIMENS EXCEPT SURV.																					
Gram Negative Organisms																					
<i>Escherichia coli</i> ^	884	62	80	98	100		80			99	88			74	82		95	95			
<i>Klebsiella pneumoniae</i> ^ 8	244		87	97	99		83			99	88			87	88		97	95			
<i>Pseudomonas aeruginosa</i>	208			94	94							94		91			99	100			
<i>Enterobacter</i> species ^^	91				98					81				85	91		95	95			
<i>Proteus mirabilis</i> ^	107	88	98	100 n=8#	100		94			100	100			88	86		97	97			
Gram Positive Organisms																					
<i>Enterococcus faecalis</i> **	366	100																		100	
<i>Enterococcus faecium</i> **	74	7																		88	
<i>Staphylococcus aureus</i> - All isolates	444					70	70														
MSSA	310					100	100	80	71						99					100	
MRSA*	134							59	21				81		99				100	100	
BLOOD CULTURES																					
Gram Negative Organisms																					
<i>Escherichia coli</i> ^	91	52	77	97	100		57			100	81			68	76		97	96			
<i>Klebsiella pneumoniae</i> ^	30		93	100 n=21(#)	100		80			100	93			100	100		100	100			
<i>Pseudomonas aeruginosa</i> (#)	9			100	100							89		100			100	100			
<i>Enterobacter</i> species ^^ (#)	7				100					100				86	86		86	86			
<i>Proteus mirabilis</i> (#)	14	86	100	100 n=5	100		100			100	100			79	93		100	100			
Gram Positive Organisms																					
<i>Enterococcus faecalis</i> ** (#)	21	100																		100	
<i>Enterococcus faecium</i> ** (#)	9	22																		100	
<i>Staphylococcus aureus</i> - All isolates	67					73	73														
MSSA	49					100	100	78	69						100					100	
MRSA* (#)	18							56	28				72		100				100	100	
URINE SPECIMENS																					
Gram Negative Organisms																					
<i>Escherichia coli</i> ^	757	63	81	98	100		83			99	89			75	83	98	95	95			
<i>Klebsiella pneumoniae</i> ^8	197		85	97	99		84			99	87			85	86	31	96	94			
Gram Positive Organisms																					
<i>Enterococcus faecalis</i> **	321	100												87		99				100	
<i>Enterococcus faecium</i> **	55	6												6		9				89	

General Notes:

1. Antibiogram results, patient risk factors for resistant organisms, and hospital epidemiology should be considered together to help guide empiric treatment of initial infections. Treatment should be re-evaluated as additional information from culture and sensitivity become available.
2. n = # of isolates tested
3. (#) = Analysis based on less than 30 isolates. Statistical comparison on results with less than 30 isolates is unreliable.
4. Calculation of results based on the first isolate per patient.

Organism-Specific Notes:

^ Includes ESBL and HL-AmpC isolates (12.2% of total *E.coli* isolates, and 11.1% of total *K.pneumoniae* isolates are ESBL and HL-AmpC)

⌘ Includes Carbapenemase-resistant isolates (0.4% of total *K.pneumoniae* isolates)

^^ *Enterobacter* species and other SPICE organisms (*Serratia*, *Providencia*, *Morganella*, *Citrobacter* species, *Proteus vulgaris* and *Klebsiella aerogenes*) contain a chromosomal AmpC B-lactamase. Treatment with penicillins, cephalosporins, broad spectrum penicillins, and B-lactam/B-lactamase inhibitor combinations (i.e., piperacillin-tazobactam) is not recommended.

* *Methicillin Resistant S.aureus* (MRSA) are resistant to all B-Lactams (penicillins, cephalosporins, B-lactam/B-lactamase inhibitor combinations, and carbapenems).

** Includes *Vancomycin-Resistant Enterococcus* species

Clindamycin, Trimethoprim/Sulfamethoxazole and all Cephalosporins are ineffective against *Enterococcus* species.

Antibiotic - Specific Notes:

~Organisms that are susceptible to Tetracycline are also considered susceptible to Doxycycline.

*^ Rifampin should not be used alone for therapy.

***Cefazolin interpretation predicts results for Cephalexin (Keflex) in accordance with CLSI standards for urinary sites only (not systemic).