

**Antibiogram for Commonly Encountered Bacteria**  
**St. Luke's Hospital and Regional Healthcare System**  
 Duluth, MN 55805

2022 Published 2023

All isolates recovered from cultures collected between January 1st, 2022 and December 31st, 2022.																				Additional agents not routinely reported								
% Susceptible	# of isolates (N)	Amox/Clav	Ampicillin	Cefazolin	Ceftazidime	Ceftioxone	Ciprofloxacin	Clindamycin	Erythromycin	Gentamicin	② Meropenem	Moxifloxacin	① Nitrofurantoin	Oxacillin	Penicillin	Pip/Tazo	⑥ Rifampin	Tetracycline	Tobramycin	Trimeth/Sulfa	Vancomycin	③ Daptomycin	Gentamicin Synergy	Linezolid	Levofloxacin	Streptomycin Synergy		
		AUG	AM	CFZ	CAZ	CAX	CP	CD	E	GM	MER	MXF	FD	OX	P	P/T	RIF	TE	TO	SXT	VA	DAP	GSS	LZD	LVX	STS		
<b>Gram Negative Rods</b>																												
<i>E. coli</i> (all)	3245		62	89	95	95	84		95	100		97				99				96	85					84		
(inpatient)	173		58	82	93	91	81		95	100		96				97				97	90							
(outpatient + ED)	3072		62	89	95	95	84		95	100		97				99				96	85							
<i>P. mirabilis</i> (all)	287		79	89	97	95	86		89	97		R				100		R		91	90					90		
(inpatient)	6		100	100	100	100	100		100	na						100				100	100							
(outpatient + ED)	281		79	89	97	95	86		89	97						100				91	90							
<i>K. pneumoniae</i> (all)	658		R	93	97	97	96		98	98		49				99				98	91					98		
(inpatient)	47			91	96	93	92		96	100		54				98				100	84							
(outpatient + ED)	611			93	97	97	96		98	97		49				99				98	91							
<i>E. cloacae</i> cmplx	180	R	R	R	81	75	96		98	100		36				89				98	95					98		
(inpatient)	24				83	71	100		100	100		38				88				100	100							
(outpatient + ED)	156				81	76	95		98	100		36				89				98	94							
<i>C. freundii</i> cmplx	96	R	R	R	96	77	100		91	100		72				96				89	85					100		
(inpatient)	15				87	87	100		100	100		86				100				100	100							
(outpatient + ED)	81				81	79	93		93	100		83				100				92	87							
<i>P. aeruginosa</i>	229	R	R		90	R	85		88	99						94		R		99	R					86		
(inpatient)	36				91		97		92	100						94				97								
(outpatient + ED)	193				94		83		87	99						94				99								
			AUG	AM	CFZ	CAZ	CAX	④	CD	E	GM	MER	MXF	FD	OX	P	P/T	RIF	TE	TO	SXT	VA	DAP	GSS	LZD	LVX	STS	
<b>Gram Positive Cocci</b>																												
<i>MSSA</i> (all)	579		99		99			88	85	72	99		96	99	99				99	96		100	100	100		100		
(inpatient)	151		100		100			84	67	96				96	100				99	96		100	100					
(outpatient + ED)	428		99		99			85	74	100				99	99				99	96		100	100					
<i>MRSA</i> (all)	261		0		0			34	71	16	99		81	100	0				97	93		99	100	99		100		
(inpatient)	67		0		0			77	12	99		79	100	0					92	91		100	100					
(outpatient + ED)	194		0		0			69	17	99		99	100	0					99	94		99	100					
<i>S. epidermidis</i> (all)	279		46		45			66	71	31	84		74	100	46	14			98	87		65	100	100		100		
(inpatient)	46		29		28			77	20	77		67	100	28	11				100	87		52	100					
(outpatient + ED)	233		49		48			69	35	87		78	100	50	15				97	83		68	100					
<i>E. faecalis</i> (all)	344			99				75	R	④	R			98		99			④	R	R	99	100	78	100	81	92	
(inpatient)	51			98						25				93		98				28		98	100	74	100	81	98	
(outpatient + ED)	293			99										98		99					100	100	79	100	81	91		
<i>E. faecium</i> (all)	83			13				13	R	④	R			49		16			④	R	R	31	89	80	99	13	68	
(inpatient)	36			11						4				82		15			61			36	95	99	13	81		
(outpatient + ED)	47			14										35		16					27	69	80	99	13	58		

R: Intrinsic Resistance - Data not available

- ① Nitrofurantoin reported on urine isolates only
- ② Meropenem reported on systemic isolates only
- ③ Daptomycin is not appropriate for isolates recovered from the respiratory tract
- ④ Not routinely reported. Only comprehensive data available.
- ⑤ Number of isolates (N) is based on the highest number of organism/antimicrobial combinations tested. Certain subsets of isolates are not tested against all drugs (e.g Nitrofurantoin) and the N will be smaller for such combinations.
- ⑥ Rifampin should not be used alone for therapy.

**Notes:**

- a. Data excludes duplicate isolates recovered within a 4-week period.
- b. Only verified, finalized results included.
- c. Antimicrobial Susceptibility Testing includes direct MIC using Microscan microdilution panels.
- d. Data from organisms with fewer than 30 isolates (n=30) may lead to interpretation errors. The number of observations available is a factor in deciding whether to include or exclude certain clinically relevant organisms
- e. For Enterococcus species, aminoglycosides (except for high-level resistance testing), cephalosporins, clindamycin, and trimethoprim-sulfamethoxazole may appear active in-vitro, but are not effective clinically.
- f. Enterococci are intrinsically resistant to aminoglycosides. However, isolates that demonstrate susceptibility to high-level aminoglycoside testing (i.e. streptomycin synergy screen or gentamicin synergy screen) are predictably susceptible to the synergistic killing effect of that aminoglycoside used in combination with ampicillin, penicillin, or vancomycin (provided susceptibility is demonstrated to this 2nd agent as well).

**Antibiogram prepared 2023, reviewed and Approved by:**

Microbiology Technical Specialist	Jennifer Berglund, M (ASCP) 5/8/2023
Laboratory Medical Director	Steven J. Eastep, MD 5/9/2023
Laboratory Operations Manager	Paige Andersen 5/9/23
Microbiology Department Medical Director	Jon Steinhauer, MD 05/10/2023
Laboratory Administrative Director	Jennifer Alaspa, MBA, MA, MT(ASCP) 5/9/2023
Infection Control Committee Chair	
P&T Committee Chair	