

All test information is available on the Pathology Website under [Test Compendium](#)

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Montefiore

MONTEFIORE MEDICAL CENTER

MOSES DIVISION

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Antibiotic Susceptibility Patterns of Commonly Isolated Bacteria

July 2016 - June 2017

(12 Months)

All Montefiore Divisions <i>Streptococcus pneumoniae</i> Susceptibility-2017				
Antibiotic	N	Percentage of Isolates		
Penicillin				
Sterile Sites		Susceptible	Intermediate	Resistant
CSF or Possible CNS Involvement	63	65		35
No CNS Involvement	63	98	0	2
Non-Sterile Sites				
Parenteral Penicillin	82	90	9	1
Oral Penicillin	82	60	23	17
Ceftriaxone				
Sterile Sites				
CSF or Possible CNS Involvement	63	98	0	2
No CNS Involvement	63	98	0	2
Non-Sterile Sites	82	96	3	1
Levofloxacin				
Sterile Sites	63	98	0	2
Non-Sterile Sites	82	96	0	4
Trimeth/Sulfa				
Non-Sterile Sites	82	87	5	8

1. Pneumococcal susceptibility rates against penicillin and ceftriaxone from sterile sites are reported as if isolates came from both CSF and all other sterile sites. Susceptibility rates are higher for non-CSF sites because higher antibiotic concentrations can be reached.

2. For pneumococcal isolates from non-sterile sites (sputum), penicillin susceptibility rates are also reported separately for oral and parenteral formulations. The susceptibility rate is higher for parenteral than oral penicillin because higher concentrations are achieved when penicillin is given parenterally.

3. Pneumococci from sterile sites are not tested against erythromycin and trimethoprim-sulfamethoxazole because those antimicrobials generally should be used only for pneumococcal respiratory infections.

4. The susceptibility rates to vancomycin were all 100%.

All Montefiore Sterile Sites- Enterococcal Susceptibility				
	<i>E. faecalis</i>		<i>E. faecium</i>	
	N	Percent Susceptible	N	Percent Susceptible
AMPICILLIN	156	100	55	15
VANCOMYCIN	156	85	55	22
DAPTOMYCIN ¹	156		55	85
LINEZOLID	156	100	55	98
GENTAMICIN SYNERGY ²	156	67	55	65
STREPTOMYCIN SYNERGY ²	156	75	55	60

Moses Urine- Enterococcal Susceptibility ³				
	<i>E. faecalis</i>		<i>E. faecium</i>	
	N	Percent Susceptible	N	Percent Susceptible
AMPICILLIN	480	99	70	16
LEVOFLOXACIN	477	74	70	13
TETRACYCLINE	480	26	70	13
NITROFURANTOIN	480	100	55	7
VANCOMYCIN	480	93	70	39

1 = For *E. faecalis*, daptomycin is not recommended due to cost and tolerability. Obtain Infectious Disease consult as needed.

2 = Susceptibility indicates synergy with penicillin, ampicillin, piperacillin-tazobactam, and vancomycin.

3 = Urine cultures with 100,000 colonies of enterococci as a single organism have a routine susceptibility test. Infectious Diseases generally recommends susceptibility testing when patients do not respond to empiric therapy.

All Montefiore - Yeast Susceptibility Testing					
Species	Antifungal	N	Susceptible	Dose-Dependent	
				Susceptible	Resistant
				Percent of Isolates	
<i>C. albicans</i>	Fluconazole	113	97	1	2
	Voriconazole	113	97	3	0
<i>C. parapsilosis</i>	Fluconazole	34	97	0	3
	Voriconazole	34	97	0	3
<i>C. tropicalis</i>	Fluconazole	18	94	6	0
<i>C. glabrata</i>	Fluconazole	30		80	20
No susceptible category for <i>C. glabrata</i> and fluconazole					
No interpretive category for voriconazole and <i>C. glabrata</i>					

1. Data is shown for epidemiologic purposes; contact ID for questions about use of antifungals.
2. CLSI no longer recommends testing *Candida* vs. itraconazole.
3. Voriconazole resistant and all *C. glabrata* from sterile sites will be tested v. micafungin.

ANTIBIOTIC SUSCEPTIBILITY PATTERNS OF COMMONLY ISOLATED BACTERIA

July 2016-June 2017 (12 months)
(Percent Susceptible)

MOSES DIVISION

	No. tested (Mode)		AMIK		GENT		TOBRA		AMPI		AMPI/SULB		AZTREO		CEFEPIME		CEFOXITIN		CEFTRIAx		CEFAZOLIN		CIPRO		MEROPENEM		PIP/TAZO		TMP/SMX		NITRO (Urines only)		
	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	
Acinetobacter baumannii complex	60	64	97	83	88	56	93	77			95	80			92	73			47	41			93	64	96	72	72	56	85	65			Acinetobacter baumannii complex
Citrobacter freundii	41	32	100	100	95	97	93	97					88	75	98	94			88	75			85	84	100	94	88	75	85	91	91	100	Citrobacter freundii
Citrobacter koseri	129	42	100	100	99	95	98	95			93	79	98	95	98	95	95	93	98	95	86	83	92	93	100	98	97	90	96	93	47	64	Citrobacter koseri
Enterobacter aerogenes	94	42	100	100	100	100	99	98					95	90	100	100			94	90			98	93	100	100	90	88	95	98	33	44	Enterobacter aerogenes
Enterobacter cloacae	143	127	100	100	95	87	94	87					85	66	93	84			83	66			89	83	99	98	84	63	87	76	32	40	Enterobacter cloacae
Escherichia coli	4131	1183	100	99	89	90	89	86	47	39	52	44	93	85	94	86	90	79	93	84	72	60	80	67	100	99	91	81	71	65	98	97	Escherichia coli
Klebsiella oxytoca	53	56	98	100	100	91	98	89			36	34	96	84	98	89	94	82	94	84	28	25	98	95	100	96	94	84	92	91	83	80	Klebsiella oxytoca
Klebsiella pneumoniae	749	520	99	100	95	93	93	89			80	72	94	84	94	84	90	78	93	83	83	74	92	84	99	95	88	79	88	82	52	47	Klebsiella pneumoniae
Morganella morganii	76	69	100	96	89	81	89	86			13	9	96	93	97	99	75	65	97	88			79	55	99	99	99	93	68	57			Morganella morganii
Proteus mirabilis	434	273	100	100	95	85	95	85	81	72	86	83	99	96	100	97	97	95	98	96	1	1	91	65		99	99	96	89	77			Proteus mirabilis
Providencia stuartii	10	23	100	100							10	35	80	96	90	96	80	96	80	91			20	13	100	100	80	91	80	91			Providencia stuartii
Serratia marcescens	56	58	100	100	98	98	64	69					91	86	98	98			91	83			98	91	96	97	91	84	89	94			Serratia marcescens
Salmonella sp (not S. typhi, all campuses)	36	29							97	76									97	86			91	82			100	89					Salmonella sp (not S. typhi)

	No. tested (Mode)		AMIK		GENT		TOBRA		CEFEPIME		CIPRO		AZTREO		MEROPENEM		PIP/TAZO	
	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I
Pseudomonas aeruginosa	179	339	98	100	93	93	96	95	97	86	85	72	85	69	93	81	96	77

	No. tested (Mode)		CEFTAZ		LEVOFLOX		MINOCYCLINE		TMP/SMX	
	O	I	O	I	O	I	O	I	O	I
Stenotrophomonas maltophilia (all campuses)	37	191	56	44	81	77	100	96	97	98

	N. tested (Mode)		AMP-SUL		AMPI		CEFAZOLIN		CIPRO		TMP-SMX		NITRO	
	O	I	O	I	O	I	O	I	O	I	O	I	O	I
URINE ISOLATES ONLY (Outpatient)⁷														
Escherichia coli	3972		54		47		89		80		71		98	
Klebsiella pneumoniae	660		80				92		92		88		52	
Proteus mirabilis	344		87		80		90		90		88			

	No. tested (Mode)		CLINDA		GENT ⁶		OXACILLIN/CEFAZOLIN		PEN G		VANCO		TETRA		TMP/SMX	
	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I
S. aureus (MSSA) ²	705	465	77	75	99	98	100	100	0	0	100	100	92	95	94	97
S. aureus (MRSA) ^{2,5}	404	322	84	74	96	96	0	0	0	0	100	100	79	83	91	93
Staphylococcus epidermidis ²	113	306	65	47	98	88	53	31	0	0	100	100	90	89		
Staphylococcus haemolyticus ²	16	45	63	64	69	58	50	31	0	0	100	100	79	62		
Staphylococcus lugdenensis ²	145	53	88	70	99	96	98	90	0	0	100	100	96	87	99	100
Staphylococcus saprophyticus ²	41		88		98		15		0		100		87			

N = Number of isolates tested
 O = Outpatients
 I = Inpatients
 =intrinsic resistance
 =blank boxes indicates number of isolates is too small to be significant
 =shaded boxes indicate > 10% decline in susceptibility from previous year

- NOTES:**
- Minimum inhibitory concentrations (MIC) and interpretations are based on the CLSI standards and an advanced antibiotic expert system.
 - All staphylococci may rapidly develop resistance during prolonged therapy with quinolones. Use with staphylococci is not recommended.
 - Percentages are not calculated for organisms with <10 isolates. For N of < 30 isolates, results may not be statistically relevant. Interpret with caution.
 - Oxacillin-resistant staphylococci are also resistant to all penicillins, cephalosporins, and carbapenems. Oxacillin-susceptible staphylococci are also susceptible to dicloxacillin, nafcillin, ampicillin-sulbactam, piperacillin-tazobactam, amoxicillin-clavulanic acid, cefazolin, cephalixin, cefotetan, ceftriaxone, cefepime, and meropenem (as well as other penicillins, cephalosporins, and carbapenems that are non-formulary).
 - MRSA isolates with reduced susceptibility to daptomycin have been detected at Montefiore Campuses.
 - Gentamicin should not be used as single agent and only for synergy for treatment of staphylococcal infections.
 - For urine isolates, cefazolin results predict results for the oral agents cefaclor, cefdinir, cefpodoxime, cefprozil, cefuroxime, cephalixin, and loracarbef when used for therapy of uncomplicated UTI due to *E. coli*, *K. pneumoniae*, *P. mirabilis*.