

2024 Antibigrams



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General Notes:			
- Historical susceptibility data may not reflect current CLSI breakpoints - Isolate numbers may not always be accurate. Isolate totals were assumed to apply when testing was indicated from specific sites (i.e. urine) or data was provided for multiple years (i.e. data from 2023 and 2024 combined). Interpret with caution - Cefazolin may contain susceptibilities measured at different breakpoints. Interpret with caution - Each susceptibility contains data from ≥3 hospitals - Aggregated data with <30 isolates were excluded - Duplicate data excluded			
Symbols:		Abbreviations:	
\$	In 2023, CLSI revised all aminoglycoside breakpoints for <i>Pseudomonas</i> . Of note, gentamicin is no longer a treatment option for <i>Pseudomonas</i>	NU:	Non-Urine
!	E. coli and K. pneumoniae ≠ Non-ESBL + ESBL data due to variation in reporting across hospitals	U:	Urine
?	Includes data from <i>Acinetobacter baumannii/nosocomialis</i> group	ESBL:	Extended Spectrum Beta-Lactamase
#	Includes data from <i>Acinetobacter baumannii/haemolyticus</i>	MRSA:	Methicillin Resistant <i>Staphylococcus aureus</i>
&	Includes data from <i>Klebsiella oxytoca/Raoultella ornitholytica</i>	MSSA:	Methicillin Susceptible <i>Staphylococcus aureus</i>
~	<i>Staphylococcus aureus</i> ≠ MRSA + MSSA data due to variation in reporting across hospitals	GBS:	Group B <i>Streptococcus</i>
		2YD:	2023 + 2024 data combined
		SDD:	Susceitble-Dose Dependent

For more information, visit <https://firstline.org/nyc/>

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All NYC 2024	Aminoglycosides						Tetracyclines					
	Amikacin		Gentamicin		Tobramycin		Minocycline		Tetracycline		Tigecycline	
	n	%	n	%	n	%	n	%	n	%	n	%
Gram Negative												
<i>Acinetobacter baumannii</i> ?#	672 2YD: 163	58 2YD: 74	924 2YD: 204	60 2YD: 76	864 2YD: 163	61 2YD: 75	681 2YD: 180	70 2YD: 81	138	44		
<i>Citrobacter freundii</i>	123 2YD: 120	99 2YD: 99	673 2YD: 190	93 2YD: 95	619 2YD: 111	91 2YD: 93			319	82	417	97
<i>Citrobacter koseri</i>	235 2YD: 161	100 2YD: 99	685 2YD: 161	99 2YD: 99	568	98					446	100
<i>Enterobacter cloacae</i>	740	99	2766	96	2294	96			988	87	1337	97
<i>Escherichia coli</i> !	3465	99	35956	85	35899	84	3575	91	15250	61	25117	100
Non-ESBL	9537	99	14623	90	4091	93						
ESBL	1411	98	2574	73	663	70						
<i>Klebsiella aerogenes</i>	273	100	1039 2YD: 228	99 2YD: 99	884 2YD: 182	98 2YD: 99			400	93	466	97
<i>Klebsiella oxytoca</i> &	333	100	1213 2YD: 138	95 2YD: 99	1027 2YD: 138	94 2YD: 98			456	87	680	100
<i>Klebsiella pneumoniae</i> !	1263	98	11509	90	11478	85	1715	69	4839	75	7768	98
Non-ESBL	2502	100	4180	98	1416	98						
ESBL	611	93	935	69	362	56						
<i>Klebsiella variicola</i>			389	97	389	95					389	100
<i>Morganella morganii</i>	430	100	1593	87	1359	90			473	51		
<i>Proteus mirabilis</i>	2233	98	8717	87	7180	86						
ESBL			146	57								
<i>Proteus vulgaris</i>					35	100						
<i>Providencia stuartii</i>												
<i>Pseudomonas aeruginosa</i> \$	3922 U: 4934	96 U: 98	1082	53	1986	95						
<i>Serratia marcescens</i>	412	97	1601 2YD: 103	95 2YD: 97	1467	77			727	22	837	98
<i>Stenotrophomonas maltophilia</i>							845	96				



All NYC 2024	Other		Urine Only			
	Trimethoprim-Sulfamethoxazole		Fosfomycin		Nitrofurantoin	
Gram Negative	n	%	n	%	n	%
<i>Acinetobacter baumannii</i> ?#	914 2YD: 204	46 2YD: 68				
<i>Citrobacter freundii</i>	673 2YD: 190	85 2YD: 82			569 2YD: 70	95 2YD: 96
<i>Citrobacter koseri</i>	685 2YD: 161	96 2YD: 98			538	88
<i>Enterobacter cloacae</i>	2766	84			2195 2YD: 229	47 2YD: 39
<i>Escherichia coli</i> !	35916	65	5508	95	34636	97
Non-ESBL	14685	68			12501	97
ESBL	2574	36			2156	91
<i>Klebsiella aerogenes</i>	1039 2YD: 228	97 2YD: 96			618	37
<i>Klebsiella oxytoca</i> &	1213 2YD: 138	89 2YD: 90			973 2YD: 87	92 2YD: 98
<i>Klebsiella pneumoniae</i> !	11509	73			11009	58
Non-ESBL	4180	90			3428	53
ESBL	935	22			739	36
<i>Klebsiella variicola</i>	389	92			389	83
<i>Morganella morganii</i>	1593	71				
<i>Proteus mirabilis</i>	8696	72				
ESBL	146	23			102	0
<i>Proteus vulgaris</i>						
<i>Providencia stuartii</i>	146	73				
<i>Pseudomonas aeruginosa</i> \$						
<i>Serratia marcescens</i>	1601 2YD: 103	97 2YD: 97				
<i>Stenotrophomonas maltophilia</i>	1217 2YD: 75	97 2YD: 100				



All NYC 2024	Beta-lactams									
	Ampicillin		Ceftriaxone		Oxacillin		Penicillin G		Penicillin VK	
	n	%	n	%	n	%	n	%	n	%
Gram Positive										
<i>Enterococcus faecalis</i>	15722	100					3065	99		
<i>Enterococcus faecium</i>	3268 2YD: 102	13 2YD: 20					680	16		
Coagulase Negative <i>Staphylococci</i>					3487	51	682	3		
<i>Staphylococcus aureus</i> ~					12978	58	1074	12		
MRSA	1198	0			6882	0	1925	0		
MSSA					11015	100	2218	11		
<i>Staphylococcus epidermidis</i>					3043 2YD: 137	36 2YD: 30				
<i>Staphylococcus lugdunensis</i>					422	84				
<i>Streptococcus agalactiae</i> (GBS)	246	100					754	100		
<i>Streptococcus pneumoniae</i>							176 2YD: 185	85 2YD: 94	166	59
Non-Meningitis			450 2YD: 344	94 2YD: 99			338 2YD: 159	95 2YD: 98		
Meningitis			450 2YD: 344	90 2YD: 89			450 2YD: 344	58 2YD: 58		
Viridans group <i>Streptococci</i>			667	98			667	87		



All NYC 2024	Quinolones				Aminoglycosides		Tetracyclines		Other			
	Ciprofloxacin		Levofloxacin		Gentamicin		Tetracycline		Clindamycin		Daptomycin	
Gram Positive	n	%	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	7851	72	10398	78			12824	20			13513	98
<i>Enterococcus faecium</i>	1386	10	1965	10			2592	17			1633 SDD: 1386 2YD: 102	90 SDD: 96 2YD: 95
Coagulase Negative <i>Staphylococci</i>	2801	72			563	90	3485	77	3480	58	3195	100
<i>Staphylococcus aureus</i> ~	6877	67	3887	78	1074	96	12978	81	12978	74	12597	100
MRSA	2759	39	1967	53	1649	88	8666	64	8489	76	8482	100
MSSA	4013	86	2835	88	2138	95	11015	92	10791	72	8984	100
<i>Staphylococcus epidermidis</i>	1641	64	1063	46			3328 2YD: 137	76 2YD: 81	3379 2YD: 137	49 2YD: 45	2306	100
<i>Staphylococcus lugdunensis</i>	392	97					422	92	422	74	422	100
<i>Streptococcus agalactiae</i> (GBS)			677	97			250	33	1152	41		
<i>Streptococcus pneumoniae</i>			369 2YD: 356	98 2YD: 98			149	61	373	76		
Non-Meningitis												
Meningitis												
Viridans group <i>Streptococci</i>			667	97					667	79		

All NYC 2024										
	Erythromycin		Linezolid		Rifampin		Trimethoprim-sulfamethoxazole		Vancomycin	
Gram Positive	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>			13777	99	503	94			15700	93
<i>Enterococcus faecium</i>			3193 2YD: 102	98 2YD: 99					3261 2YD: 102	35 2YD: 36
Coagulase Negative <i>Staphylococci</i>	2801	34	2869	100	571	98	3487	70	3487	100
<i>Staphylococcus aureus</i> ~ MRSA MSSA	7570	42	12808	100	1074	98	12925	96	12978	100
	3442	17	8239	100	1782	97	8666	92	8665	100
	5009	60	8495	100	2110	99	10976	98	11015	100
<i>Staphylococcus epidermidis</i>	2014	24	2226	100			3067	57	3379 2YD: 137	100 2YD: 100
<i>Staphylococcus lugdunensis</i>	422	69	422	100			422	98	422	100
<i>Streptococcus agalactiae</i> (GBS)									665	100
<i>Streptococcus pneumoniae</i> Non-Meningitis Meningitis	318	52					424 2YD: 114	75 2YD: 71	433 2YD: 326	100 2YD 100
Viridans group <i>Streptococci</i>	667	51							667	100



All NYC 2024	Synergy				Urine Only	
	Gentamicin		Streptomycin		Nitrofurantoin	
Gram Positive	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	12479	80	8040	87	13041	99
<i>Enterococcus faecium</i>	2787 2YD: 102	85 2YD: 89	1432	60	2964 2YD: 102	58 2YD: 58
Coagulase Negative <i>Staphylococci</i>						
<i>Staphylococcus aureus</i> ~					7817	99
MRSA	1206	94			3007	100
MSSA	1754	96			4853	99
<i>Staphylococcus epidermidis</i>	349	84			716	99
<i>Staphylococcus lugdunensis</i>						
<i>Streptococcus agalactiae</i> (GBS)						
<i>Streptococcus pneumoniae</i>						
Non-Meningitis						
Meningitis						
Viridans group <i>Streptococci</i>						

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Manhattan 2024	Aminoglycosides						Tetracyclines					
	Amikacin		Gentamicin		Tobramycin		Minocycline		Tetracycline		Tigecycline	
Gram Negative	n	%	n	%	n	%	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>	2YD: 163	2YD: 74	163 2YD: 204	67 2YD: 76	2YD: 163	2YD: 75	163 2YD: 180	52 2YD: 81				
<i>Citrobacter freundii</i>			252 2YD: 156	91 2YD: 93	198 2YD: 111	89 2YD: 93						
<i>Citrobacter koseri</i>	2YD: 161	2YD: 99	130 2YD: 161	100 2YD: 99								
<i>Enterobacter cloacae</i>	418	99	1074	97	876	96			580	88		
<i>Escherichia coli</i> !	1061	99	11538	85	11481	85	1643	97	8545	60	2867	100
Non-ESBL	3157	100	4476	90								
ESBL	960	99	1145	74								
<i>Klebsiella aerogenes</i>			341 2YD: 228	99 2YD: 99	302 2YD: 182	99 2YD: 99			221	92		
<i>Klebsiella oxytoca</i>	201	100	551 2YD: 138	94 2YD: 99	426 2YD: 138	93 2YD: 98			285	85		
<i>Klebsiella pneumoniae</i> !	454	98	3958	92	3927	90			2439	75	1029	98
Non-ESBL	1132	100	1442	99								
ESBL	443	94	475	73								
<i>Morganella morganii</i>	237	99	547	87	428	92			247	51		
<i>Proteus mirabilis</i>	1108	98	2712	87	2045	88						
<i>Pseudomonas aeruginosa</i> \$	1942 U: 967	97 U: 96			1112	95						
<i>Serratia marcescens</i>	253	98	654	98	520	83			399	22		
<i>Stenotrophomonas maltophilia</i>							425	98				



Manhattan 2024	Other		Urine Only			
	Trimethoprim-sulfamethoxazole		Fosfomycin		Nitrofurantoin	
Gram Negative	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>	163 2YD: 204	53 2YD: 68				
<i>Citrobacter freundii</i>	252 2YD: 156	83 2YD: 80			198 2YD: 70	93 2YD: 96
<i>Citrobacter koseri</i>	130 2YD: 161	96 2YD: 98				
<i>Enterobacter cloacae</i>	1074	84			794 2YD: 229	41 2YD: 39
<i>Escherichia coli</i> !	11538	62	5508	95	11538	97
	Non-ESBL	4538			3727	98
	ESBL	1145			1044	92
<i>Klebsiella aerogenes</i>	341 2YD: 228	96 2YD: 96				
<i>Klebsiella oxytoca</i>	551 2YD: 138	87 2YD: 90			381 2YD: 87	91 2YD: 98
<i>Klebsiella pneumoniae</i> !	3958	76			3927	52
	Non-ESBL	1442			1225	55
	ESBL	475			443	38
<i>Morganella morganii</i>	547	72				
<i>Proteus mirabilis</i>	2712	77				
<i>Pseudomonas aeruginosa</i> \$						
<i>Serratia marcescens</i>	654	98				
<i>Stenotrophomonas maltophilia</i>	522 2YD: 75	95 2YD: 100				



Manhattan 2024	Beta-lactams								Quinolones			
	Ampicillin		Ceftriaxone		Oxacillin		Penicillin G		Ciprofloxacin		Levofloxacin	
	n	%	n	%	n	%	n	%	n	%	n	%
Gram Positive												
<i>Enterococcus faecalis</i>	4709	99					2054	100	1125	79	2771	83
<i>Enterococcus faecium</i>	1332 2YD: 102	11 2YD: 20									494	8
<i>Staphylococcus aureus</i> ~					5494	54			1361	71	2956	77
MRSA					2736	0	270	0			1361	62
MSSA					4692	100					1420	92
<i>Staphylococcus epidermidis</i>					1592	35			439	73	761	61
<i>Streptococcus pneumoniae</i>							2YD: 114	2YD: 90			156 2YD: 246	97 2YD: 97
Non-Meningitis			186 2YD: 234	94 2YD: 99			2YD: 120	2YD: 97				
Meningitis			186 2YD: 234	87 2YD: 87			186 2YD: 234	53 2YD: 55				

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Brooklyn 2024	Quinolones				Aminoglycosides					
	Ciprofloxacin		Levofloxacin		Amikacin		Gentamicin		Tobramycin	
Gram Negative	n	%	n	%	n	%	n	%	n	%
<i>Acinetobacter baumannii</i> #	165	45	148	44	247	51	322	63	322	66
<i>Enterobacter cloacae</i>	484	82	546	87	128	98	612	96	564	95
<i>Escherichia coli</i>	3410	60	5342	67			5342	84	5342	83
<i>Klebsiella aerogenes</i>	197	96	194	98			242	98	225	97
<i>Klebsiella oxytoca</i>			180	95			180	89		
<i>Klebsiella pneumoniae</i>	1251	67	1931	78			1931	90	1931	81
<i>Morganella morganii</i>	286	68	330	71			382	90	351	93
<i>Proteus mirabilis</i>	1151	61	1476	63	283	98	1622	88	1622	87
<i>Pseudomonas aeruginosa</i> \$	1831	74	2142	70	627 U: 1251	94 U: 99	283	88	466	92
<i>Serratia marsescens</i>			335	73			378	91	378	73
<i>Stenotrophomonas maltophilia</i>			218	87						



Brooklyn 2024	Other		Urine Only	
	Trimethoprim-sulfamethoxazole		Nitrofurantoin	
	n	%	n	%
Gram Negative				
<i>Acinetobacter baumannii</i> #	312	46		
<i>Enterobacter cloacae</i>	612	79	457	41
<i>Escherichia coli</i>	5302	65		
<i>Klebsiella aerogenes</i>	242	96	147	34
<i>Klebsiella oxytoca</i>	180	86	180	85
<i>Klebsiella pneumoniae</i>	1931	70		
<i>Morganella morganii</i>	382	75		
<i>Proteus mirabilis</i>	1601	71		
<i>Pseudomonas aeruginosa</i> \$				
<i>Serratia marsescens</i>	378	94		
<i>Stenotrophomonas maltophilia</i>	283	97		



Brooklyn 2024	Beta-lactams								Quinolones		Aminoglycosides	
	Ampicillin		Ceftriaxone		Oxacillin		Penicillin G		Levofloxacin		Gentamicin	
Gram Positive	n	%	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	3648	100					716	99	1765	79		
<i>Enterococcus faecium</i>	570	14							286	9		
Coagulase Negative <i>Staphylococci</i>					587	44						
<i>Staphylococcus aureus</i> ~					2212	59						
MRSA					949	0					412	93
MSSA					1491	100	809	13			632	95
<i>Streptococcus pneumoniae</i>												
Non-Meningitis			112	98			112	95				
Meningitis			112	96			112	62				

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Brooklyn 2024	Other		Synergy		Urine Only	
	Vancomycin		Gentamicin		Nitrofurantoin	
Gram Positive	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	3648	92	1546	81	2769	99
<i>Enterococcus faecium</i>	601	35	207	87	480	64
Coagulase Negative <i>Staphylococci</i>	587	100				
<i>Staphylococcus aureus</i> ~	2212	100				
MRSA	1380	100				
MSSA	1491	100				
<i>Streptococcus pneumoniae</i>	112	100				
Non-Meningitis						
Meningitis						

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Queens 2024	Inhibitor Combinations				Quinolones				Aminoglycosides			
	Ceftolozane-Tazobactam		Piperacillin-Tazobactam		Ciprofloxacin		Levofloxacin		Amikacin		Gentamicin	
	n	%	n	%	n	%	n	%	n	%	n	%
Gram Negative												
<i>Acinetobacter baumannii</i> ?	225	94			152	51	269	43	152	66	269	62
<i>Citrobacter freundii</i>			117	98	129	86	177	90			177	96
<i>Citrobacter koseri</i>			135	97	294	96	294	96			294	98
<i>Enterobacter cloacae</i>			411 SDD: 411	87 SDD: 87	644	87	822	92	194	99	822	96
<i>Escherichia coli</i> !			4537 SDD: 9221	97 SDD: 95	11430	69	13758	72			13758	86
Non-ESBL			5670	96	5670	76	5670	74	5670	98	5670	91
ESBL			120	76	542	15	542	19	341	98	543	74
<i>Klebsiella aerogenes</i>			223	91	315	95	371	97	136	100	371	99
<i>Klebsiella oxytoca</i> &			162	98	295	95	325	99	132	100	325	97
<i>Klebsiella pneumoniae</i> !			1588 SDD: 2441	90 SDD: 89	3096	78	4029	86			4029	91
Non-ESBL	94	57	1428	94	1428	94	1428	95	1146	100	1428	98
ESBL					137	24	137	49	94	82	154	59
<i>Klebsiella varicola</i>												
<i>Morganella morganii</i>			246 SDD: 293	96 SDD: 99	449	69	539	69	116	100	539	86
<i>Proteus mirabilis</i>			1592 SDD: 1462	98 SDD: 95	2504	75	3054	73	842	99	3054	87
<i>Providencia stuartii</i>					106	34	106	36				
<i>Pseudomonas aeruginosa</i> \$			3206	86	2689	84	3206	79	1305 U: 1856	96 U: 98	655	50
<i>Serratia marcescens</i>			224 SDD: 226	79 SDD: 91	342	80	450	82			450	95
<i>Stenotrophomonas maltophilia</i>							336	91				



Queens 2024	Aminoglycosides		Tetracyclines						Other		Urine Only	
	Tobramycin		Minocycline		Tetracycline		Tigecycline		Trimethoprim-sulfamethoxazole		Nitrofurantoin	
	n	%	n	%	n	%	n	%	n	%	n	%
Gram Negative												
<i>Acinetobacter baumannii</i> ?	269	56	140	84					269	52		
<i>Citrobacter freundii</i>	177	95			117	86	177	96	177	87	127	92
<i>Citrobacter koseri</i>	215	98					215	100	294	97	215	89
<i>Enterobacter cloacae</i>	664	97			253	85	664	99	822	87	727	51
<i>Escherichia coli</i> !	13758	84			4537	61	13758	100	13758	65	12869	98
Non-ESBL									5670	69	4549	97
ESBL									543	36	340	93
<i>Klebsiella aerogenes</i>	272	98			124	94	272	99	371	97	279	43
<i>Klebsiella oxytoca</i> &	286	97			123	91	286	100	325	93	255	98
<i>Klebsiella pneumoniae</i> !	4029	87			1588	75	4029	97	4029	74	3807	64
Non-ESBL									1428	93	1146	46
ESBL									154	30		
<i>Klebsiella varicola</i>												
<i>Morganella morganii</i>	455	89							539	70		
<i>Proteus mirabilis</i>	2389	85							3054	74		
<i>Providencia stuartii</i>									106	79		
<i>Pseudomonas aeruginosa</i> \$												
<i>Serratia marcescens</i>	450	74			224	24	450	98	450	96		
<i>Stenotrophomonas maltophilia</i>			195	96					336	100		



Queens 2024	Beta-lactams						Quinolones				Aminoglycosides	
	Ampicillin		Oxacillin		Penicillin G		Ciprofloxacin		Levofloxacin		Gentamicin	
Gram Positive	n	%	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	4784	100					2978	72	3754	78		
<i>Enterococcus faecium</i>	852	13					451	11	715	10		
Coagulase Negative <i>Staphylococci</i>			1682	53			1257	72				
<i>Staphylococcus aureus</i> ~			3842	63			2979	70				
MRSA	718	0	2195	0	739	0	1135	43			543	79
MSSA	913	0	3617	100			1844	86	1069	89	821	97
<i>Staphylococcus epidermidis</i>	373	3	724	38			687	62				
<i>Streptococcus pneumoniae</i>					64	66			116	98		



Queens 2024	Tetracyclines		Other									
	Tetracycline		Clindamycin		Daptomycin		Erythromycin		Linezolid		Rifampin	
Gram Positive	n	%	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	4427	21			4251	96	503	20	4784	99		
<i>Enterococcus faecium</i>	778	15			205 SDD: 451	91 SDD: 98			852	98		
Coagulase Negative <i>Staphylococci</i>	1682	78	1682	60	1635	100	1257	33	1325	100		
<i>Staphylococcus aureus</i> ~	3842	84	3842	73	3672	100	3672	44	3672	100		
MRSA	2506	69	2506	73	2506	100	1871	17	2506	100	543	98
MSSA	3617	91	3617	73	3479	100	2913	61	3383	100		
<i>Staphylococcus epidermidis</i>	1060	75	1060	52	1060	100	1060	22	1060	100		
<i>Streptococcus pneumoniae</i>			142	77			142	53				



Queens 2024	Other				Synergy				Urine Only	
	Trimethoprim-sulfamethoxazole		Vancomycin		Gentamicin		Streptomycin		Nitrofurantoin	
Gram Positive	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>			4762	95	4762	80	3251	89	3999	99
<i>Enterococcus faecium</i>			814	39	814	83	514	68	718	49
Coagulase Negative <i>Staphylococci</i>	1682	72	1682	100						
<i>Staphylococcus aureus</i> ~	3842	96	3842	100					3672	98
MRSA	2506	90	2506	100					1436	100
MSSA	3617	98	3617	100					2757	98
<i>Staphylococcus epidermidis</i>	1060	60	1060	100					373	100
<i>Streptococcus pneumoniae</i>	136	78	142	100						



Pediatrics 2024	Beta-lactams											
	Ampicillin		Aztreonam		Cefazolin		Cefepime		Cefoxitin		Ceftazidime	
	n	%	n	%	n	%	n	%	n	%	n	%
Gram Negative												
<i>Escherichia coli</i>	2044	42	2308	88	2308	77	2308	89	2103	97	1093	88
<i>Klebsiella pneumoniae</i>			461	86	461	79	461	86	398	94	277	87
<i>Proteus mirabilis</i>			197	89	197	89	197	97	197	97		
<i>Pseudomonas aeruginosa</i> \$			462	86			506	89			506	90



Pediatrics 2024	Beta-lactams						Inhibitor Combinations			
	Ceftriaxone		Ertapenem		Meropenem		Ampicillin-Sulbactam		Piperacillin-Tazobactam	
	n	%	n	%	n	%	n	%	n	%
Gram Negative										
<i>Escherichia coli</i>	2308	87	2308	100	2308	100	2308	53	1093	98
<i>Klebsiella pneumoniae</i>	461	85	461	99	461	99	461	77	277	94
<i>Proteus mirabilis</i>	197	97	197	99	197	100	197	88		
<i>Pseudomonas aeruginosa</i> \$					506	93			506	89



Pediatrics 2024	Quinolones				Aminoglycosides				Tetracyclines			
	Ciprofloxacin		Levofloxacin		Gentamicin		Tobramycin		Tigecycline		Tetracycline	
Gram Negative	n	%	n	%	n	%	n	%	n	%	n	%
<i>Escherichia coli</i>	1272	79	2308	83	2308	87	2251	86	1479	100	1036	61
<i>Klebsiella pneumoniae</i>	215	85	429	94	461	93	430	94	223	99		
<i>Proteus mirabilis</i>			197	95	197	94	197	92				
<i>Pseudomonas aeruginosa</i> \$	304	85	506	82								



Pediatrics 2024	Sulfonamide		Urines Only	
	Trimethoprim-sulfamethoxazole		Nitrofurantoin	
Gram Negative	n	%	n	%
<i>Escherichia coli</i>	2308	64	2308	98
<i>Klebsiella pneumoniae</i>	461	82	411	62
<i>Proteus mirabilis</i>	197	89		
<i>Pseudomonas aeruginosa</i> \$				



Pediatrics 2024	Beta-lactams						Quinolones		Tetracyclines	
	Ampicillin		Oxacillin		Penicillin G		Levofloxacin		Tetracycline	
Gram Positive	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	491	100			140	99	398	93	356	26
<i>Staphylococcus aureus</i> ~			1640	62					1640	84
	MRSA		660	0					712	71
	MSSA		1301	100			505	94	1301	93
<i>Staphylococcus epidermidis</i>			387	31					336	82



Pediatrics 2024	Other												
	Clindamycin		Daptomycin		Erythromycin		Linezolid		Trimethoprim-sulfamethoxazole		Vancomycin		
Gram Positive	n	%	n	%	n	%	n	%	n	%	n	%	
<i>Enterococcus faecalis</i>			442	100			442	100			491	100	
<i>Staphylococcus aureus</i> ~	1640	77	1640	100			1640	100	1640	99	1640	100	
	MRSA	712	83	712	100	291	23	712	100	712	97	712	100
	MSSA	1301	74	1210	100	530	60	1210	100	1301	100	1301	100
<i>Staphylococcus epidermidis</i>	387	43	252	100			201	100	387	69	387	100	



Pediatrics 2024	Synergy		Urine Only	
	Gentamicin		Nitrofurantoin	
Gram Positive	n	%	n	%
<i>Enterococcus faecalis</i>	329	85	447	100
<i>Staphylococcus aureus</i> ~ MRSA MSSA			730	100
			249	100
			530	100
<i>Staphylococcus epidermidis</i>				



ED 2024	Beta-lactams											
	Ampicillin		Aztreonam		Cefazolin		Cefepime		Cefoxitin		Ceftazidime	
Gram Negative	n	%	n	%	n	%	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>							86	59			87	73
<i>Citrobacter koseri</i>			129	98	167	94	167	99	91	97		
<i>Enterobacter cloacae</i>			414	79			463	93			196	82
<i>Escherichia coli</i> !	9763	43	10506	84	10506	77	10506	85	9969	97	4379	87
Non-ESBL	6138	49	6656	99	7136	90	7136	98	5074	98	5718	82
ESBL	680	0	767	2	848	1	848	1	485	17	569	6
<i>Klebsiella aerogenes</i>			146	95			217	98			92	88
<i>Klebsiella oxytoca</i>			207	92	207	35	207	96	163	95		
<i>Klebsiella pneumoniae</i> !			2444	79	2444	76	2444	80	2325	93	950	85
Non-ESBL	1078	0	1587	99	1773	94	1773	100	792	96	1372	100
ESBL	112	0	163	1	209	1	209	1			177	0
<i>Morganella morganii</i>			252	83			291	97	192	92	126	88
<i>Proteus mirabilis</i>	2010	67	2199	84	2316	73	2316	84	1605	99	1184	92
<i>Pseudomonas aeruginosa</i> \$			1543	82			1597	90			1597	89
<i>Serratia marcescens</i>			171	80			199	96			131	72



ED 2024	Beta-lactams									
	Ceftriaxone		Cefuroxime		Ertapenem		Imipenem		Meropenem	
Gram Negative	n	%	n	%	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>									87	63
<i>Citrobacter koseri</i>	167	95			91	100	91	100	167	100
<i>Enterobacter cloacae</i>	453	70			387	97	196	98	463	99
<i>Escherichia coli</i> !	10506	83			10506	100	7011	100	10506	100
Non-ESBL	7136	98			6138	100			7136	100
ESBL	848	1			984	99			1152	99
<i>Klebsiella aerogenes</i>	174	81			143	100	83	93	187	100
<i>Klebsiella oxytoca</i>	207	91			207	100	141	100	207	100
<i>Klebsiella pneumoniae</i> !	2444	79			2444	96	1707	95	2444	97
Non-ESBL	1773	98			1433	100			1773	100
ESBL	209	0			204	90			301	92
<i>Morganella morganii</i>	291	87			222	99			291	100
<i>Proteus mirabilis</i>	2316	84	302	87	2086	100			2316	100
<i>Pseudomonas aeruginosa</i> \$							758	87	1597	88
<i>Serratia marcescens</i>	199	75			146	99			199	99



ED 2024	Inhibitor Combinations						Quinolones			
	Ampicillin-Sulbactam		Ceftolozane-Tazobactam		Piperacillin-Tazobactam		Ciprofloxacin		Levofloxacin	
Gram Negative	n	%	n	%	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>	87	67	243	62			70	54	61	47
<i>Citrobacter koseri</i>	167	93					167	97	129	96
<i>Enterobacter cloacae</i>					272 SDD: 191	89 SDD: 87	428	86	434	89
<i>Escherichia coli</i> !	10506	57			4379 SDD: 6127	98 SDD: 96	7011	67	10506	72
Non-ESBL	7136	62			7136	97	7136	78	6668	78
ESBL	605	39			728	88	1152	21	1082	28
<i>Klebsiella aerogenes</i>					152	94	174	93	201	97
<i>Klebsiella oxytoca</i>	207	84			88 SDD: 119	99 SDD: 98	207	93	207	99
<i>Klebsiella pneumoniae</i> !	2444	72			950 SDD: 1494	96 SDD: 89	1707	76	2444	86
Non-ESBL	1773	87			1773	97	1773	91	1644	95
ESBL	132	15			209	73	301	21	263	54
<i>Morganella morganii</i>	279	18			176 SDD: 115	98 SDD: 100	263	66	261	67
<i>Proteus mirabilis</i>	2316	86			1384 SDD: 932	99 SDD: 95	1937	73	2220	76
<i>Pseudomonas aeruginosa</i> \$			182	52	1597	90	1353	82	1541	78
<i>Serratia marcescens</i>					91	88	188	86	176	89



ED 2024	Aminoglycosides						Tetracyclines					
	Amikacin		Gentamicin		Tobramycin		Minocycline		Tetracycline		Tigecycline	
Gram Negative	n	%	n	%	n	%	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>	69	75	87	63	87	70						
<i>Citrobacter koseri</i>			167	98	167	98					91	99
<i>Enterobacter cloacae</i>	132	100	463	95	302	94			40	95	221	97
<i>Escherichia coli</i> !			10506	86	10506	85	1679	96	3842	61	7754	100
Non-ESBL	3802	100	7136	90								
ESBL	532	98	1152	71								
<i>Klebsiella aerogenes</i>	64	100	217	97	170	96			61	96	83	100
<i>Klebsiella oxytoca</i>			207	95	141	94					141	100
<i>Klebsiella pneumoniae</i> !			2444	91	2444	88			950	78	1842	99
Non-ESBL	950	100	1773	98								
ESBL	133	96	301	69								
<i>Morganella morganii</i>	78	100	291	85	230	90			46	53		
<i>Proteus mirabilis</i>	675	98	2316	88	1669	86						
<i>Pseudomonas aeruginosa</i> \$	700 u: 700	97 u: 97			317	94						
<i>Serratia marcescens</i>	90	97	199	96	159	79					106	100



ED 2024	Other		Urine Only			
	Trimethoprim-sulfamethoxazole		Fosfomycin		Nitrofurantoin	
Gram Negative	n	%	n	%	n	%
<i>Acinetobacter baumannii</i>	87	53				
<i>Citrobacter koseri</i>	167	95			151	84
<i>Enterobacter cloacae</i>	463	85			419	47
<i>Escherichia coli</i> !	10506	65	1712	95	10506	98
Non-ESBL	7136	68			6490	97
ESBL	1152	35			1055	91
<i>Klebsiella aerogenes</i>	217	96			164	39
<i>Klebsiella oxytoca</i>	207	91			163	97
<i>Klebsiella pneumoniae</i> !	2444	77			2444	61
Non-ESBL	1773	89			1556	52
ESBL	301	19			238	39
<i>Morganella morganii</i>	291	72				
<i>Proteus mirabilis</i>	2316	75				
<i>Pseudomonas aeruginosa</i> \$						
<i>Serratia marcescens</i>	199	98				



ED 2024	Beta-lactams								Quinolones			
	Ampicillin		Ceftriaxone		Oxacillin		Penicillin G		Ciprofloxacin		Levofloxacin	
Gram Positive	n	%	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>	4004	100					561	100	1818	71	2278	78
<i>Enterococcus faecium</i>	380	15							222	11	241	14
Coagulase Negative <i>Staphylococci</i>					916	56	385	3	527	76		
<i>Staphylococcus aureus</i> ~					2635	57			1345	66	1026	84
MRSA	460	0			1911	0	930	0	524	40	549	60
MSSA					2688	100	1007	11	801	84	737	90
<i>Staphylococcus epidermidis</i>					363	44			234	69		
<i>Streptococcus agalactiae</i> (GBS)							147	100			147	99
<i>Streptococcus pneumoniae</i>												
Non-Meningitis			118	99			118	97				
Meningitis			118	98			118	83				

[illegible]

ED 2024	Other				Synergy				Urine Only	
	Trimethoprim-sulfamethoxazole		Vancomycin		Gentamicin		Streptomycin		Nitrofurantoin	
Gram Positive	n	%	n	%	n	%	n	%	n	%
<i>Enterococcus faecalis</i>			4004	94	3565	80	1959	88	3031	99
<i>Enterococcus faecium</i>			380	45	340	81	236	62	364	56
Coagulase Negative <i>Staphylococci</i>	916	73	916	100						
<i>Staphylococcus aureus</i> ~ MRSA MSSA	2635	97	2635	100					1702	97
	2211	93	2210	100					678	100
	2687	98	2688	100					1116	97
<i>Staphylococcus epidermidis</i>	356	66	434	100					101	100
<i>Streptococcus agalactiae</i> (GBS)			145	100						
<i>Streptococcus pneumoniae</i>	101	88	139	100						
Non-Meningitis										
Meningitis										