

# Diagnostic Laboratory Services, Inc

Antimicrobial Epidemiology Data

January 1, 2018 - December 31, 2018

## OUTPATIENTS ONLY - ALL SOURCES

NOTE: Statistics reflect the inclusion of data from patients seen in the medical centers as Emergency Department, Ambulatory, and Clinic patients.

### GRAM NEGATIVE SUSCEPTIBILITIES (Percent Susceptible)



	A. baumannii complex <sup>a</sup>		C. freundii complex <sup>b</sup>		Citrobacter koseri		Kleb. (Ent) aerogenes <sup>c</sup>		E. cloacae complex <sup>d</sup>		Escherichia coli		E. coli ESBL		Klebsiella pneumoniae		Klebsiella oxytoca		Klebsiella oxytoca ESBL		Morganella morganii		Proteus mirabilis		P. mirabilis (ESBL)		Pseudomonas aeruginosa		Serratia marcescens			
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec		
Amikacin			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Ampicillin												62	62										90	90								
Cefepime	93	96	99	100	99	99	100	98	98	98	100	100			100	100						99	99	99	100			99	99	98	100	
Ceftriaxone	71	89	91	91	99	98	96	89	86	87	100	99			100	100			99	100			94	97	99	100			98	96		
Ciprofloxacin	98	96	97	100	100	100	99	98	98	98	86	87	17	22	98	98	42	48	99	100	100	66	94	94	97	97	0	0	93	95	94	99
Ertapenem													100	100			100	99			100	100					100	100				
Gentamicin	99	98	93	97	100	100	100	99	98	96	94	94	81	81	99	99	53	62	100	100	100	100	91	93	98	98	100	100	99	98	98	100
Imipenem													100	99			100	100			100	100					*	100				
Nitrofurantoin (u)			98	97	99	99	50	46	79	78	99	99	97	96	77	82	28	33	93	100	*	66										
Piperacillin/Tazobactam	88	98	93	97	100	100	95	92	90	93	99	99	97	99	99	99	81	92	94	100	100	100	98	99	100	100	100	100	99	99	100	67
Tobramycin	100	98	97	100	100	100	99	98	98	97	99	99	92	92	99	100	50	63	100	100	100	75	98	98	100	99	100	100	99	98	100	100
Trimeth-Sulfa	89	96	82	84	100	100	99	96	90	89	81	80	43	43	92	92	25	19	94	98	0	25	86	88	91	91	100	66			99	99
<b>Total Isolates</b>	92	48	92	70	231	219	164	179	241	263	8260	8411	880	855	1535	1655	79	91	85	83	1	4	126	128	774	760	1	3	875	884	101	85
											% E.coli ESBL		10%	9%	% K.pneu ESBL		5%	5%	% K.oxy ESBL		1%	5%	% P.mir ESBL		0%	0%						

<sup>a</sup> Acinetobacter baumannii complex includes Acinetobacter baumannii and Acinetobacter calcoaceticus

<sup>c</sup> Enterobacter aerogenes has been renamed Klebsiella aerogenes

<sup>b</sup> Citrobacter freundii complex includes C.braaki, C.freundii, C.gillenii, C.murlinae, C.rodenticum, C.sedlakii and C.wekmenii

<sup>d</sup> Enterobacter cloacae complex includes E.asburiae, E.cancerogenus, E.cloacae, E.dissolvens, E.hormaechei, E.kobei, and E.nimpressuralis

Asterisk (\*) indicates no result available

### GRAM POSITIVE SUSCEPTIBILITIES (Percent Susceptible)

	S. aureus MSSA <sup>4</sup>		S. aureus MRSA		Staph sp. (Coag neg)		Enterococcus Non-VRE <sup>5</sup>		Enterococcus VRE		Strep pneumoniae		S. agalactiae (GBS)		S. pyogenes (GAS)	
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Ampicillin							97	98	23	18						
Cefazolin	100	100			59	56										
Ceftriaxone											See Table	100	99	100	100	
Ciprofloxacin							87	87	24	13						
Clindamycin <sup>1</sup>	84	85	43	61	69	67					85	82	66	55	82	86
Daptomycin	100	100	100	100	100	100										
Erythromycin <sup>1,2</sup>	74	75	10	19	50	47					67	71	56	51	81	85
Gentamicin	100	99	97	97	97	96										
Linezolid	100	100	100	100	100	100	100	100	100	100						
Moxifloxacin	96	97	41	56	79	76										
Nitrofurantoin (u)	100	100	100	100	100	100	98	99	83	67						
Oxacillin	100	100			59	55										
Penicillin	37	36			20	20					See Table	100	99	100	100	
Rifampin <sup>3</sup>	100	100	100	99	100	99										
Tetracycline	96	95	83	93	81	82	28	26	24	27	79	82				
Trimeth-Sulfa	98	97	72	73	75	74					88	94				
Vancomycin	100	100	100	100	100	100	99	99	0	0	100	100	100	100	100	100
<b>Total Isolates</b>	1992	2206	875	986	661	669	837	977	26	38	42	17	95	91	745	1240
	% MRSA		31%	31%			% VRE		3%	4%						

Footnotes:

<sup>1</sup> Clindamycin & erythromycin are not appropriate for urine sources

<sup>2</sup> Erythromycin is not appropriate for pregnant women

<sup>3</sup> Rifampin should not be used alone for treatment of Staph infections

<sup>4</sup> Staph aureus (MSSA) isolates that show Penicillin susceptibility may harbor the blaZ gene that produces beta-lactamase

<sup>5</sup> Non-VRE includes intrinsically resistant Enterococcus (E.casseliflavus & E.gallinarum)

### Streptococcus pneumoniae

Incidence by MIC Value

MIC	Penicillin		Ceftriaxone		
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	
	# Isolates		# Isolates		
<=0.06	33	13	<=0.12	35	14
0.12	1	1	0.25	2	2
0.25	2	0	0.5	2	0
0.5	0	1	1	2	1
1	1	1	2	1	0
2	0	0	>=4	0	0
4	0	0			
>=8	0	0			

### S. pneumo interpretive guidelines

Penicillin		
Parenteral non-meningitis	<=2 S	4 I
		>=8 R
Parenteral meningitis	<=0.06 S	----
		>=0.12 R
Oral	<=0.06 S	0.12-1 I
		>=2 R
Ceftriaxone		
Non-meningitis	<=1 S	2 I
		>=4 R
Meningitis	<=0.5 S	1 I
		>=2 R

### Haemophilus influenzae SUSCEPTIBILITIES (Percent Susceptible)

	Haemophilus influenzae	
	Jan-Jun	Jul-Dec
Ampicillin	62	75
Azithromycin	98	99
Ceftriaxone	99	91
Cefuroxime	98	92
Meropenem	100	100
Moxifloxacin	99	100
Tetracycline	95	95
Trimeth-Sulfa	68	58
<b>Total Isolates</b>	136	80

Values in GREEN indicate increase in susceptibility greater than 5%

Values in RED indicated decrease in susceptibility greater than 5%

NOTE: Where total isolates is less than 30, the susceptibility percentage may not be clinically significant and are indicated in yellow on these tables.

Source: CLSI Document M39-A4, January 2014