Clark County 2016 Antibiogram

2017 HAI Conference

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Overview

- Brief description of antibiogram
- Demo of online Clark County 2016 Antibiogram

What is Antibiogram?

 An overall profile of organisms' susceptibility to a panel of antibiotics

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Organism	Amoxicillin-clavulanic acid	Ampidillin	Ampicillin-sulbactam	Cefazolin	Cefepime	Cefotaxime	Ceftriaxone	Cefuroxime	Chloramphenicol	Ciprofloxacin	Clindamycin	Daptomycin	Erythromydin	Gentamicin	Gentamicin-High (high potency disc)	Levofloxacin	Linezolid	Meropenem	Nitrofurantoin	Oxac ill in	Penicillin G	Quinuprist in-dalfo pristin	Rifampin	Streptomycin-High	tetracycline	Trimethoprim- sulfamethoxazole	
Enterococcus faecalis	95.3	96.2	96.4				5.5			60.9	1.4	97.3	21.8	42	66.1	63.8	94.6		96	0.9	95.6		54.7	74.9	18.8	66.9	1
Enterococcus faecium	14.5	10.2	12.9				1.6			5.6	8.2	87.2	3.2	46.1	94.6	7.2	94.5		29.1	0.9	8.5		5.6	63.1	10.9	20	
Enterococcus sp. Staphylococcus aureus	73.8	73.4	85.5				8.2			50	11.5	100	27.9	90.2	95.5	50	95.7		82	6.6	71.9		68.9	64.6	28.4	88.5	8
Staphylococcus aureus	75.5	32.7	91.8	55.4			58.9			49.5	71	99.5	38.3	90.9		54.6	99.6		98.1	54.7	14.9	99.2	98.7		92.9	97.1	9
Coagulase negative staphylococcus	87.3	34.6	96.6				41.7			43	60.4	98.2	28.2	70.6		45.8	97.9		97.1	40.5	13.4	97.9	95.7		80.4	61.2	9
Coagulase negative staphylococcus Staphylococcus lugdunensis	93.5	80.6	94.1				90.3			87.5	94.1	100	64.7	88.6		88.6	100		100	91.4	62.9	100	100		88.6	90.6	L
Staphylococcus saprophyticus	95.6	77.8	97.8				73.3			93.3	73.3	95.6	46.7	93.3		93.3	91.1		95.6	80	60	82.2	95.6		73.3	95.6	
Streptococcus pneumoniae	94.9	0			89.7	92.9	93.3	87.2	96.7		89.2		69.2			99.1		88			73.6				82	67.3	
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	Amikacin	Amoxicillin-d	Ampidillin	Ampicillin-sulbactam	Aztreonam	Cefazolin	Cefepime	Cefotaxime	Ceftazidime	Ceftriaxone	Cefuroxime	Cephalothin	Ciprofloxacir	Ertapenem	Gentamicin	Imipenem	Levofloxacin	Meropenen	Nitrofurantoi	Piperacillin	Piperacillin/Tazob	tetracycline	Tigecydine	Tobramycin	Trimethoprim-sulfamethoxazole		
Acinetobacter baumannii	26.1	9.2 Amoxicillin-	2.6	- Yambiqillin-	6.4	0	9.3	9	32.5	8	1.7	0	8.2	0	17.8	23.4	9.2	11.9	0.3	Piperadillin	_	11.2	ije B	20.3	12.3		
Citrobacter freundii	26.1 97.4	- Amoxicillin-	2.6 44.6	ullipiduw 19 65.4	6.4 78.9	0 16.6	9.3 93.4	0	32.5 79.7	8 78.5	1.7 67.8	0	8.2 89.2	95.8	17.8 95	Imipen	9.2 89.2	11.9 96.9	0.3 90.4	7.9	90.8	11.2 80.3	0	20.3 93.4	12.3 86.3		
Citrobacter freundii Enterobacter aerogenes	26.1 97.4 90.8	2.6 8.2 7.4	2.6 44.6 18.8	19 65.4 50.7	6.4 78.9 72.9	0 16.6 13	9.3 93.4 81.3	9 79.8 64.5	32.5 79.7 68.6	8 78.5 70.2	1.7 67.8 53.1	0 3 2.2	8.2 89.2 82	95.8 89.7	17.8 95 93.4	23.4 91 85.3	9.2 89.2 81.2	11.9 96.9 90	0.3 90.4 25.7	7.9	90.8	11.2 80.3 77.5	0	20.3 93.4 86.8	12.3 86.3 85.6		
Citrobacter freundii Enterobacter aerogenes Enterobacter cloacae	26.1 97.4 90.8 99	2.6 8.2 7.4 3.2	2.6 44.6 18.8 11.5	19 65.4 50.7 29.6	6.4 78.9 72.9 69.5	0 16.6 13 4.5	9.3 93.4 81.3 87.6	9 79.8 64.5 69	32.5 79.7 68.6 77.3	8 78.5 70.2 75.1	1.7 67.8 53.1 35.6	0 3 2.2 0	8.2 89.2 82 93.2	95.8 89.7 91.3	17.8 95	23.4 91 85.3 98.5	9.2 89.2 81.2 95.7	96.9 90 99	0.3 90.4 25.7 28.3	7.9 48.8 74.6	90.8 77.8 85.2	11.2 80.3 77.5 85.6	0	20.3 93.4 86.8 96.3	12.3 86.3 85.6 91.1		
Citrobacter freundii Enterobacter aerogenes Enterobacter cloacae	26.1 97.4 90.8 99	2.6 8.2 7.4	2.6 44.6 18.8 11.5 48.4	19 65.4 50.7 29.6 55.5	6.4 78.9 72.9 69.5	0 16.6 13 4.5 87.3	9.3 93.4 81.3 87.6 91.8	9 79.8 64.5	32.5 79.7 68.6 77.3 92.5	8 78.5 70.2 75.1 91	1.7 67.8 53.1	0 3 2.2 0 41.6	8.2 89.2 82 93.2 72.8	95.8 89.7 91.3 99.2	17.8 95 93.4 97.1 88.9	23.4 91 85.3 98.5 99.4	9.2 89.2 81.2 95.7 73.4	96.9 90 99 99.4	0.3 90.4 25.7 28.3 96.8	7.9 48.8 74.6 44.4	90.8 77.8 85.2 96.9	11.2 80.3 77.5 85.6 70.8	0 0	20.3 93.4 86.8 96.3 88.8	12.3 86.3 85.6 91.1 73.3		
Citrobacter freundii Enterobacter aerogenes Enterobacter cloacae	26.1 97.4 90.8 99 99.3 98.1	2.6 8.2 7.4 3.2 79.4 76.2	2.6 44.6 18.8 11.5 48.4 3.9	19 65.4 50.7 29.6 55.5 63.2	6.4 78.9 72.9 69.5 90 81.1	0 16.6 13 4.5 87.3 55.3	9.3 93.4 81.3 87.6 91.8	9 79.8 64.5 69 91.4 89.1	32.5 79.7 68.6 77.3 92.5 93.2	8 78.5 70.2 75.1 91 86.8	1.7 67.8 53.1 35.6 87.4 75.1	0 3 2.2 0 41.6 40.4	8.2 89.2 82 93.2 72.8 89.3	95.8 89.7 91.3 99.2 96.7	17.8 95 93.4 97.1 88.9	23.4 91 85.3 98.5 99.4 97.1	9.2 89.2 81.2 95.7 73.4 92.2	96.9 90 99 99.4 97.2	0.3 90.4 25.7 28.3 96.8 83.1	7.9 48.8 74.6 44.4 45	90.8 77.8 85.2 96.9 89.3	11.2 80.3 77.5 85.6 70.8 82.8	0 0 0	20.3 93.4 86.8 96.3 88.8 91.8	12.3 86.3 85.6 91.1 73.3 87.4		
Citrobacter freundii Enterobacter aerogenes Enterobacter cloacae Escherichia coli Klebsiella oxytoca Klebsiella pneumoniae EMorganelia morganii	26.1 97.4 90.8 99 99.3 98.1 85.1	2.6 8.2 7.4 3.2 79.4 76.2 49.3	2.6 44.6 18.8 11.5 48.4 3.9 3.8	19 65.4 50.7 29.6 55.5 63.2 62.1	6.4 78.9 72.9 69.5 90 81.1 76.6	0 16.6 13 4.5 87.3 55.3 80.3	9.3 93.4 81.3 87.6 91.8 90.4 73.5	9 79.8 64.5 69 91.4 89.1 84	32.5 79.7 68.6 77.3 92.5 93.2 72.9	8 78.5 70.2 75.1 91 86.8 75.3	1.7 67.8 53.1 35.6 87.4 75.1 67.5	0 3 2.2 0 41.6 40.4 46.9	8.2 89.2 82 93.2 72.8 89.3 70.4	95.8 89.7 91.3 99.2 96.7 85.4	17.8 95 93.4 97.1 88.9 92.5 82.3	23.4 91 85.3 98.5 99.4 97.1 70.5	9.2 89.2 81.2 95.7 73.4 92.2 73.1	96.9 90 99 99.4 97.2	0.3 90.4 25.7 28.3 96.8 83.1 40.6	7.9 48.8 74.6 44.4	90.8 77.8 85.2 96.9 89.3 76.3	11.2 80.3 77.5 85.6 70.8 82.8 69.4	0 0 0 0 0 0	20.3 93.4 86.8 96.3 88.8 91.8 72.8	12.3 86.3 85.6 91.1 73.3 87.4		
Citrobacter freundii Enterobacter aerogenes Enterobacter doacae Escherichia coli Klebsiella oxytoca Klebsiella pneumoniae Morganella morganii	26.1 97.4 90.8 99 99.3 98.1 85.1 96.2	2.6 8.2 7.4 3.2 79.4 76.2 49.3 16.4	2.6 44.6 18.8 11.5 48.4 3.9 3.8 3.1	19 65.4 50.7 29.6 55.5 63.2 62.1 6.8	6.4 78.9 72.9 69.5 90 81.1 76.6 56.4	0 16.6 13 4.5 87.3 55.3 80.3 10.9	9.3 93.4 81.3 87.6 91.8 90.4 73.5 85.8	9 79.8 64.5 69 91.4 89.1 84 51.2	32.5 79.7 68.6 77.3 92.5 93.2	8 78.5 70.2 75.1 91 86.8 75.3 82.2	1.7 67.8 53.1 35.6 87.4 75.1 67.5 16.7	0 3 2.2 0 41.6 40.4 46.9 6.2	8.2 89.2 82 93.2 72.8 89.3 70.4 49.4	95.8 89.7 91.3 99.2 96.7 85.4	17.8 95 93.4 97.1 88.9	23.4 91 85.3 98.5 99.4 97.1 70.5 50.9	9.2 89.2 81.2 95.7 73.4 92.2 73.1 53.7	96.9 90 99 99.4 97.2 86 95.6	0.3 90.4 25.7 28.3 96.8 83.1 40.6 2.1	7.9 48.8 74.6 44.4 45 34.4	90.8 77.8 85.2 96.9 89.3 76.3 88.9	11.2 80.3 77.5 85.6 70.8 82.8 69.4 31.2	0 0 0	20.3 93.4 86.8 96.3 88.8 91.8	12.3 86.3 85.6 91.1 73.3 87.4 73 50.6		
Citrobacter freundii Enterobacter aerogenes Enterobacter doscae Escherichia coli Klebsiella onytroca Klebsiella pneumoniae Morganella morganii Descumonas aeruginosa	26.1 97.4 90.8 99 99.3 98.1 85.1 96.2	2.6 8.2 7.4 3.2 79.4 76.2 49.3	2.6 44.6 18.8 11.5 48.4 3.9 3.8 3.1	19 65.4 50.7 29.6 55.5 63.2 62.1 6.8 2.8	6.4 78.9 72.9 69.5 90 81.1 76.6 56.4	0 16.6 13 4.5 87.3 55.3 80.3 10.9	9.3 93.4 81.3 87.6 91.8 90.4 73.5 85.8 59.9	9 79.8 64.5 69 91.4 89.1 84 51.2 2.4	32.5 79.7 68.6 77.3 92.5 93.2 72.9 59.4 68.8	8 78.5 70.2 75.1 91 86.8 75.3 82.2 14.2	1.7 67.8 53.1 35.6 87.4 75.1 67.5 16.7	0 3 2.2 0 41.6 40.4 46.9	8.2 89.2 82 93.2 72.8 89.3 70.4 49.4 61	95.8 89.7 91.3 99.2 96.7 85.4 95.7	17.8 95 93.4 97.1 88.9 92.5 82.3 67.1 69.2	23.4 91 85.3 98.5 99.4 97.1 70.5	9.2 89.2 81.2 95.7 73.4 92.2 73.1	11.9 96.9 90 99 99.4 97.2 86 95.6 58.7	0.3 90.4 25.7 28.3 96.8 83.1 40.6 2.1 0.8	7.9 48.8 74.6 44.4 45	90.8 77.8 85.2 96.9 89.3 76.3	11.2 80.3 77.5 85.6 70.8 82.8 69.4 31.2	0 0 0 0 0 0	20.3 93.4 86.8 96.3 88.8 91.8 72.8 77.8 86.3	12.3 86.3 85.6 91.1 73.3 87.4 73 50.6 4.4		
Citrobacter freundii Enterobacter aerogenes Enterobacter cloacae Escherichia coli Klebsiella oxytoca Klebsiella pneumoniae Morganella morganii Pseudomonas aeruginosa Stenotrophomonas maltophilia	26.1 97.4 90.8 99 99.3 98.1 85.1 96.2 92.5	2.6 8.2 7.4 3.2 79.4 76.2 49.3 16.4	2.6 44.6 18.8 11.5 48.4 3.9 3.8 3.1	19 65.4 50.7 29.6 55.5 63.2 62.1 6.8	6.4 78.9 72.9 69.5 90 81.1 76.6 56.4 56.3 2.3	0 16.6 13 4.5 87.3 55.3 80.3 10.9 0.3	9.3 93.4 81.3 87.6 91.8 90.4 73.5 85.8 59.9 5.3	9 79.8 64.5 69 91.4 89.1 84 51.2 2.4	32.5 79.7 68.6 77.3 92.5 93.2 72.9 59.4 68.8 41.1	8 78.5 70.2 75.1 91 86.8 75.3 82.2 14.2	1.7 67.8 53.1 35.6 87.4 75.1 67.5 16.7 1.1	0 3 2.2 0 41.6 40.4 46.9 6.2	8.2 89.2 82 93.2 72.8 89.3 70.4 49.4 61 32.7	0 95.8 89.7 91.3 99.2 96.7 85.4 95.7 0	95 93.4 97.1 88.9 92.5 82.3 67.1	23.4 91 85.3 98.5 99.4 97.1 70.5 50.9	9.2 89.2 81.2 95.7 73.4 92.2 73.1 53.7 57.7	11.9 96.9 90 99 99.4 97.2 86 95.6 58.7	0.3 90.4 25.7 28.3 96.8 83.1 40.6 2.1 0.8	7.9 48.8 74.6 44.4 45 34.4	90.8 77.8 85.2 96.9 89.3 76.3 88.9 65.5	11.2 80.3 77.5 85.6 70.8 82.8 69.4 31.2	0 0 0 0 0 0	20.3 93.4 86.8 96.3 88.8 91.8 72.8	12.3 86.3 85.6 91.1 73.3 87.4 73 50.6 4.4		
Citrobacter freundii Enterobacter aerogenes Enterobacter doscae Escherichia coli Klebsiella oytvoca Klebsiella pneumoniae Morganella morganii Pseudomonas aeruginosa	26.1 97.4 90.8 99 99.3 98.1 85.1 96.2	2.6 8.2 7.4 3.2 79.4 76.2 49.3 16.4	2.6 44.6 18.8 11.5 48.4 3.9 3.8 3.1 1.1	19 65.4 50.7 29.6 55.5 63.2 62.1 6.8 2.8 5.3	6.4 78.9 72.9 69.5 90 81.1 76.6 56.4	0 16.6 13 4.5 87.3 55.3 80.3 10.9	9.3 93.4 81.3 87.6 91.8 90.4 73.5 85.8 59.9	9 79.8 64.5 69 91.4 89.1 84 51.2 2.4	32.5 79.7 68.6 77.3 92.5 93.2 72.9 59.4 68.8	8 78.5 70.2 75.1 91 86.8 75.3 82.2 14.2	1.7 67.8 53.1 35.6 87.4 75.1 67.5 16.7	0 3 2.2 0 41.6 40.4 46.9 6.2	8.2 89.2 82 93.2 72.8 89.3 70.4 49.4 61	95.8 89.7 91.3 99.2 96.7 85.4 95.7	17.8 95 93.4 97.1 88.9 92.5 82.3 67.1 69.2 30.4	23.4 91 85.3 98.5 99.4 97.1 70.5 50.9 41.3	9.2 89.2 81.2 95.7 73.4 92.2 73.1 53.7 57.7	11.9 96.9 90 99 99.4 97.2 86 95.6 58.7	0.3 90.4 25.7 28.3 96.8 83.1 40.6 2.1 0.8	7.9 48.8 74.6 44.4 45 34.4	90.8 77.8 85.2 96.9 89.3 76.3 88.9	11.2 80.3 77.5 85.6 70.8 82.8 69.4 31.2	0 0 0 0 0 0	20.3 93.4 86.8 96.3 88.8 91.8 72.8 77.8 86.3	12.3 86.3 85.6 91.1 73.3 87.4 73 50.6 4.4		

Why Do We Need Antibiogram?

- Problem of Antibiotic Resistance
 - In U.S. 2 million people become infected with bacteria that are resistant to antibiotics, and at least 23,000 people die each year as a direct result of these infections.
- Empiric Antimicrobial Treatment
- Antibiotic Resistance Pattern
- Antimicrobial Stewardship Program
 - The Joint Commission's Antimicrobial Stewardship Standard became effective on January 1, 2017.

Clark County 2016 Antibiogram

Data Source

 Inpatient and outpatient data from two healthcare system laboratories, two hospital laboratories and one commercial laboratory in Clark County

Time Frame

January 1, 2016 to December 31, 2016

Data Inclusion Criteria

- Bacterial isolates from all sources collected for diagnostic purposes
- Final, verified test results from the first isolate per person
- Organisms with testing data for ≥ 30 isolates are included

Demo

 http://www.southernnevadahealthdistrict.org/statsreports/antibiogram

Questions? Comments?



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