Clark County 2016 Antibiogram

SOUTHERN NEVADA DISTRICT BOARD OF HEALTH PUBLIC HEALTH ADVISORY BOARD MEETING

April 10, 2017

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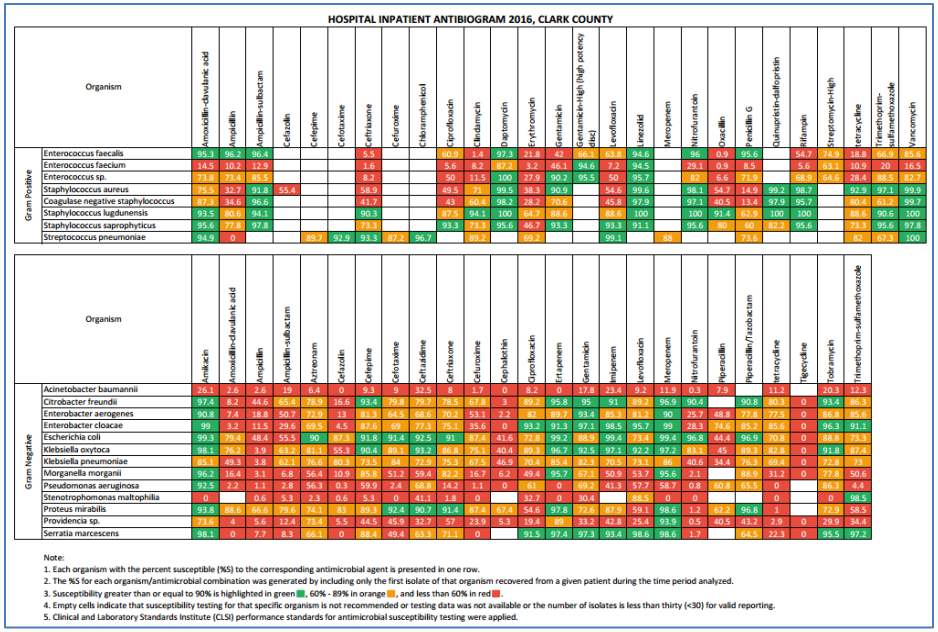
Objectives

- **Brief description of antibiogram**
- **Demo of online antibiogram**

What is Antibiogram?

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



HOSPITAL INPATIENT ANTIBIOGRAM 2016, CLARK COUNTY

	Organism	Amoxicillin-clavulanic acid	Ampicillin	Ampicillin-sulbactam	Cefazolin	Cefepime	Cefotaxime	Ceftriaxone	Ceturoxime	Chloramphenicol	Ciprofloxacin	Clindamycin	Daptomycin	Erythromycin	Gentamicin	Gentamicin-High (high potency disc)	Levofloxacin	Linezolid	Meropenem	Nitrofurantoin	Oxacillin	Penicillin G	Quinupristin-dalfopristin	Rifampin	Streptomycin-High	Tetracycline	Trimethoprim-sulfamethoxazole	Vancomycin
Gram Positive	Enterococcus faecalis	95.3	96.2	96.4				5.5			60.9	1.4	97.3	21.8	42	66.1	67.8	94.6		96	0.9	95.6		54.7	74.9	18.8	66.9	85.6
	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	16.5
	Enterococcus sp.	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	82.7
	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	99.9
	Coagulase negative staphylococcus	87.3	34.6	96.8				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		40.4	61.2	99.7
	Staphylococcus lugdunensis	93.5	80.8	94.1				90.3			97.5	94.1	100	66.7	89.6		88.6	100		100	91.4	82.9	100	100		88.6	90.6	100
	Staphylococcus saprophyticus	95.6	77.4	97.8				71.3			93.3	73.3	95.6	46.7	93.3		93.3	91.1		95.6	80	60	82.2	95.6		71.1	95.6	97.8
	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	100

	Organism	Amikacin	Amoxicillin-clavulanic acid	Ampicillin	Ampicillin-sulbactam	Aztreonam	Cefazolin	Cefepime	Cefotaxime	Ceftazidime	Ceftriaxone	Ceturoxime	Cephalothin	Ciprofloxacin	Ertapenem	Gentamicin	Imipenem	Levofloxacin	Meropenem	Nitrofurantoin	Piperacillin	Piperacillin/Tazobactam	Tetracycline	Tigecycline	Tobramycin	Trimethoprim-sulfamethoxazole
Gram Negative	Acinetobacter baumannii	26.1	2.6	2.6	19	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	7.9		11.2			20.3	12.3
	Citrobacter freundii	97.4	8.2	44.6	65.4	78.9	16.6	93.4	79.8	79.7	78.5	67.8	3	89.2	95.8	95	91	89.2	96.9	90.4		90.8	80.3	0	93.4	85.3
	Enterobacter aerogenes	90.8	7.4	18.8	50.7	72.9	13	81.3	64.5	68.6	70.2	53.1	2.2	82	89.7	93.4	85.3	81.2	90	25.7	48.8	77.8	77.5	0	86.8	85.6
	Enterobacter cloacae	99	3.2	11.5	29.6	69.5	4.5	87.6	69	77.3	75.1	35.6	0	93.2	91.3	97.1	98.5	95.7	99	28.3	74.6	85.2	85.6	0	96.3	91.1
	Escherichia coli	99.3	79.4	48.4	55.5	90	87.3	91.8	91.4	92.5	91	87.4	41.6	72.8	93.2	68.9	99.4	73.4	99.4	96.8	44.4	96.9	70.8	0	88.8	73.3
	Klebsiella oxytoca	98.1	76.2	3.9	63.2	81.1	55.3	90.4	89.1	93.2	86.8	75.1	40.4	89.3	96.7	92.5	97.1	92.2	97.2	83.1	45	89.1	82.8	0	91.8	87.4
	Klebsiella pneumoniae	85.1	49.3	3.8	62.1	76.6	80.3	73.5	84	72.9	75.3	67.5	46.9	70.4	85.4	82.3	70.5	73.1	86	40.6	34.4	76.3	69.4	0	72.8	73
	Morganella morganii	96.2	16.4	3.1	6.8	56.4	10.9	85.8	51.2	59.4	82.2	16.7	6.2	49.4	95.7	67.1	50.9	53.7	95.6	2.1		88.9	31.2	0	77.8	50.6
	Pseudomonas aeruginosa	92.5	2.2	1.1	2.8	56.3	0.3	59.9	2.4	68.8	14.2	1.1	0	61	0	69.2	41.3	57.7	58.7	0.8	60.7	65.5	0		86.3	4.4
	Stenotrophomonas maltophilia	0		0.6	5.3	2.3	0.6	5.3	0	41.1	1.8	0		32.7	0	30.4		88.5	0	0			0		0	98.5
	Proteus mirabilis	93.8	88.6	66.6	79.6	74.1	83	89.3	92.4	90.7	91.4	87.4	67.4	54.6	97.8	72.6	87.9	59.1	98.6	1.2	62.2	96.8	1		72.9	58.5
	Providencia sp.	73.6	4	5.6	12.4	73.4	5.5	44.5	45.9	32.7	57	23.9	5.3	19.4	69	33.2	42.8	25.4	93.9	0.5	40.5	43.2	2.9	0	39.9	34.4
	Serratia marcescens	98.1	0	7.7	8.3	66.1	0	88.4	49.4	63.3	71.1	0		91.5	97.4	97.3	93.4	98.6	98.6	1.7		64.3	22.3	0	95.5	97.2

Note:
1. Each organism with the percent susceptible (%S) to the corresponding antimicrobial agent is presented in one row.
2. The %S for each organism/antimicrobial combination was generated by including only the first isolate of that organism recovered from a given patient during the time period analyzed.
3. Susceptibility greater than or equal to 90% is highlighted in green, 60% - 89% in orange, and less than 60% in red
4. Empty cells indicate that susceptibility testing for that specific organism is not recommended or testing data was not available or the number of isolates is less than thirty (<30) for valid reporting.
5. Clinical and Laboratory Standards Institute (CLSI) performance standards for antimicrobial susceptibility testing were applied.

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.**

Demo

- http://www.southernnevadahealthdistrict.org/stats-reports/antibiogram