

DALLAS COUNTY 2014 ANTIBIOGRAM

What is the Dallas County Antibioqram?

This antibiogram represents aggregate data from the majority of hospitals in Dallas County and has been carefully constructed with highly appreciated contributions from our area hospitals, microbiologists, and infectious disease specialists. It summarizes the antibiotic resistance patterns among the most common microorganisms detected by hospitals in adult patients this year. The tables list the microorganisms in the left-most column, and antibiotics in the remaining columns. The percent of organisms that are susceptible to each antibiotic is recorded in the table cells.

How is this a useful tool?

This community-antibiogram was created for use by medical providers in settings where an individual hospital antibiogram is not available. It provides useful information for the selection of an empiric antibiotic treatment, when a presumptive diagnosis of infection with a specific bacterial species is made. It is no longer useful once the specific bacterial species has been identified and an antibiotic resistance profile established for the infection.

The periodic compilation of aggregated hospital microbiology data is a simple and relatively efficient way to monitor antimicrobial resistance trends on a larger scale in our community.

Please contact us if you have any questions, comments or suggestions, or if your facility would like to contribute data for future antibiograms.

What are some of its limitations?

This antibiogram represents compiled resistance profiles for only the most commonly reported microorganisms from the majority of hospital laboratories. Community-acquired infections are not distinguished from hospital-acquired organisms in hospital laboratories. The antibiotic resistance patterns for both groups may be substantially different. Gram negative rods tend to be more prevalent in healthcare associated infections, and more resistant if they originate from healthcare sources.

Why can I not find an antibiotic cell I need in this antibiogram?

The cell you are looking for may not be available by many hospital laboratories because the antibiotic may not be appropriate for the corresponding organism, or the antibiotic may be uncommonly-used in most hospital settings. Consultation with an infectious disease specialist can be considered.

Why may some hospital antibiograms differ substantially from this aggregate antibiogram?

Since antibiograms typically depict percentages of susceptible microorganisms, facilities reporting relatively small denominators of particular infections may demonstrate wider variations in reported percentages of resistant organisms.

The composition of patient populations (e.g. numbers of intensive care, transplant, and burn patients) may also vary substantially by hospital, in a manner which impacts antibiotic resistance profiles.

Miscellaneous Organisms

<i>Neisseria gonorrhoeae</i> [^] (304 isolates tested)	% S
Ceftriaxone*	100
Cefixime* [§]	100
Ciprofloxacin	88
Azithromycin*	96

[^]Data obtained directly from Gonococcal Isolate Surveillance Project (GISP), Jan - Dec 2014

*Note: CLSI criteria for decreased susceptibility to cefixime, ceftriaxone and azithromycin have not been established for *N. gonorrhoeae*; data reflect decreased susceptibility using provisional breakpoints.

[§]CDC recommends combination therapy with ceftriaxone plus either azithromycin or doxycycline. Routine use of cefixime is no longer recommended for treatment of *N. gonorrhoeae*.

<i>Mycobacterium tuberculosis</i> [†] (124 isolates tested)	% S
Isoniazid	92
Ethambutol	100
Rifampin	98
Pyrazinamide	98

[†]Data from susceptibilities of initial cultures, Texas Department of State Health Services,

Initial four-drug therapy is recommended for TB disease diagnosed in our area, at least until first-line drug susceptibility results are known.

DCHHS Epidemiology

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DALLAS COUNTY HEALTH AND HUMAN SERVICES COUNTY – WIDE 2014 ANTIBIOGRAM

Gram Negative Organisms (All Sources)	Total Isolates tested	Aminoglycosides			Penicillins			Cephalosporins						Fluoro-quinolones		Carbapenems			Other		
		Gentamicin	Tobramycin	Amikacin	Ampicillin	Ampicillin/ Subactam	Piperacillin/ Tazobactam	Cefazolin	Cefuroxime	Cefotaxime	Ceftazidime	Ceftriaxone	Cefepime	Levofloxacin	Ciprofloxacin	Ertapenem	Imipenem	Meropenem	Trimethoprim/ Sulfamethoxazole	Aztreonam	Nitrofurantoin (Urine Only)
<i>Acinetobacter baumannii</i>	438	63	83	83		63					48		53	47	51			60	62		
<i>Enterobacter cloacae</i> ¹	1265	94	94	99			81			77	75	76	93	86	89	96	98	99	85	77	24
<i>Escherichia coli</i> ¹ (all sources)	21440	87	87	99	41	47	96	84	85	88	93	92	92	70	70	>99	>99	>99	64	91	95
- <i>E. coli</i> (urine only)	7350	87	87	99	41	46	96	84	89	92	95	92	93	69	71		>99		61		96
<i>Klebsiella pneumoniae</i> ¹	4841	94	93	99		78	94	88	85	89	93	92	92	93	92	99	99	99	88	91	39
<i>Proteus mirabilis</i> ¹	2858	89	90	99	73	81	99	84	96	98	98	96	97	69	70	99	95	98	73	94	
<i>Pseudomonas aeruginosa</i>	3603	81	92	93			82				84		82	69	73		80	82		72	
<i>Serratia marcescens</i> ¹	451	97	91	98			66			66	75	87	98	94	90	99	99	99	94	83	

Gram Positive Organisms (All Sources)	Total Isolates tested	Penicillins					Cephalosporins				Other												
		Penicillin	Penicillin (meningitis)	Penicillin (non-meningitis)	Ampicillin	Oxacillin	Cefazolin	Ceftriaxone	Ceftriaxone (meningitis)	Ceftriaxone (non-meningitis)	Erythromycin ³	Tetracycline	Trimethoprim/ Sulfamethoxazole	Clindamycin ⁴	Levofloxacin	Linezolid	Vancomycin	Daptomycin	Gentamicin Synergy Screen	Meropenem			
<i>Enterococcus faecalis</i>	4914				99						19				91	97	100	68					
<i>Enterococcus faecium</i>	955				14						15				98	34	93	90					
<i>Staphylococcus aureus</i> (all)	9752					52	52			44	91	91	78	59	100	>99	>99						
- MSSA	5071					100	>99	>99		67	94	97	88	91	100	100	>99						
- MRSA ²	4931					0	0	0		13	91	96	68	34	100	>99	>99						
<i>Staphylococcus epidermidis</i>	787					36	38			34	74	56	56	41	100	98	100						
<i>Streptococcus pneumoniae</i>	640	87*	65 (230)	88 (319)						97	92 (285)	99 (295)		55	82	71	90	98	100	100			76
<i>Streptococcus viridans</i> group	89	79			71					97				46			93			100			

Number represents the percentage of isolates susceptible to the antibiotic. Indicates high level of resistance or drug not indicated. * Includes CSF and non-CSF isolates.

Organisms represented are first clinical isolate per patient regardless of source.

Data collected January - December 2014 from 19 area hospitals. Summary excludes patients under 18 years of age.

¹ Due to recent changes in CLSI interpretive criteria, not all laboratories are yet using the revised MIC breakpoints to determine *Enterobacteriaceae* resistance to cefazolin, 3rd generation cephalosporins, carbapenems, and aztreonam. The number of discrepant interpretations as a result of these differences is expected to be small and should not greatly impact the validity of this antibiogram.

² MRSA are assumed to be resistant to **all** beta-lactam antibiotics.

³ Erythromycin predicts susceptibility for azithromycin and clarithromycin. ⁴ Does not reflect D-test results. D-test should be requested if clindamycin therapy considered, since erythromycin resistance is associated with inducible clindamycin resistance.