



Tarrant County Public Health
Division of Epidemiology and Health Information

COUNTY-WIDE ANTIBIOGRAM, 2011

The Tarrant County Public Health AntibioGram which will be released annually is a compilation of antibiograms from 16 hospitals located within Tarrant County. This antibiogram serves two main purposes:

- 1) to aid medical professionals in administering empirical treatment prior to identification of patient isolate specific susceptibility patterns, and;
- 2) to allow for the identification and comparison of antibiotic susceptibility patterns and trends by region and time period.

When interpreting susceptibility patterns provided by this antibiogram, please be aware of the following:

- Susceptibility percentages reported are from all sources and there is no distinction between community acquired and hospital acquired infections.
- Only antibiotics and bacteria reported by a majority of hospitals have been included in this report.
- Only facilities that indicated the use of the Clinical and Laboratory Standards Institute guidance for analysis and presentation of susceptibility data (CLSI M-39) have been included in this report.

SUMMARY OF FINDINGS

In 2011, the following significant trends and patterns were noted:

- 18 cases of carbapenem-resistant *Klebsiella pneumoniae* (CRKP) were identified in five different facilities (99% susceptibility); in 2010, three cases were identified.
- Carbapenem-resistant *Enterobacteriaceae* (CRE) were detected with the lowest susceptibility reported for *Citrobacter freundii* (95% susceptibility to Imipenem).
- 52 cases of carbapenem-resistant *Escherichia coli* were reported (99% susceptibility).
- Vancomycin-resistant enterococci (VRE) were detected with vancomycin resistance identified in 4% of *E. faecalis* and 68% of *E. faecium* isolates.
- Three cases of vancomycin-resistant *Staphylococcus aureus* (VRSA) or vancomycin-intermediate *Staphylococcus aureus* (VISA) were reported (99.99% susceptibility).
- *Enterobacter* spp. susceptibility ranged from 74-85% and 89-97% to 3rd generation cephalosporins and fluoroquinolones, respectively.
- Three cases of fluoroquinolone resistant *Streptococcus pneumoniae* were reported (98% susceptibility).
- *Pseudomonas aeruginosa* susceptibility ranged from 67-69% and 76-92% to fluoroquinolones and aminoglycosides, respectively.

If you have any questions regarding the generation of this antibiogram or if your facility would like to contribute to the report in the future, please contact:

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COUNTY-WIDE ANTIBIOGRAM: ADULTS, 2011[†]

Gram Negative Bacteria	Isolates Tested	Aminoglycosides			Carba-penems		Cephalosporins						Fluoro-quinolones		Penicillins				Other			
		Amikacin	Gentamicin	Tobramycin	Imipenem	Meropenem	Cefazolin (1st)	Cefotetan (2nd)	Cefuroxime (2nd)	Cefotaxime (3rd)	Ceftriaxone (3rd)	Ceftazidime (3rd)	Cefepime (4th)	Ciprofloxacin	Levofloxacin	Amoxicillin/Clavulanate	Ampicillin	Ampicillin/Sulbactam	Piperacillin/Tazobactam	Aztreonam	Nitrofurantoin (urine isolates)	TMP-SMX (Bactrim)
<i>Acinetobacter baumannii</i>	90	79	54	72	45	55	1				12	40	44	44	41	0	0	54	30	0	1	47
<i>Citrobacter freundii</i>	88	100	81	89	95	98	0				86	73	98	85	85	0	0	0	74	100	90	75
<i>Enterobacter cloacae</i>	491	98	94	91	100	100	72		33	74	82	82	97	89	92	0	4	10	85	86	32	90
<i>Enterobacter aerogenes</i>	236	100	97	97	99	100	3	85	68		85	85	99	97	97	0	8	13	87	93	17	95
<i>Escherichia coli</i>	10,952	99	87	79	99	100	84	100	85	98	91	94	94	68	65	78	43	50	95	87	95	64
<i>Klebsiella pneumoniae</i>	2,635	99	96	95	100	99	91	100	88	100	95	95	96	93	94	95	0	79	95	97	42	87
<i>Morganella morganii</i>	113	100	80	97	97	100	3	100			94	78	97	52	56	0	0	4	91	100	0	54
<i>Proteus mirabilis</i>	1,494	99	90	88	91	99	83	98	95	100	96	98	96	68	69	95	69	78	99	91	0	71
<i>Pseudomonas aeruginosa</i>	2,206	92	76	87	83	75	0	0			4	86	80	69	67	1	0	0	87	72	0	1
<i>Serratia marcescens</i>	92	100	100	97	100	100	0				100	100	100	96	98	0	0	0	100	100	0	98

Gram Positive Bacteria	Isolates Tested	Cephalo-sporins		Penicillins			Other										
		Cefazolin (1st)	Ceftriaxone (3rd)	Ampicillin	Oxacillin	Penicillin	Clindamycin	Daptomycin	Erythromycin	Gentamicin Synergy Screen	Levofloxacin	Linezolid	Nitrofurantoin (urine isolates)	Streptomycin Synergy Screen	Tetracycline	TMP-SMX (Bactrim)	Vancomycin
<i>Enterococcus faecalis</i>	2,628			99		93		99	16	75	57	98	97	69	17	100	96
<i>Enterococcus faecium</i>	687			15		12		86	6	89	8	92	24	58	22		32
<i>Staphylococcus aureus</i> (ALL)	5,719	74	42	0	66	9	69	99	39		66	100	99		94	98	100
Methicillin Susceptible (MSSA)	2,322	100	100	0	100	13	83	100	65		86	100	99		95	99	100
Methicillin Resistant (MRSA)	2,641	1	0		0	0	54	99	9		32	100	100		92	98	100
<i>Staph. coagulase negative</i> (ALL)	1,828	36	36	0	34	8	51	98	29		32	100	83		79	51	100
<i>Staphylococcus epidermidis</i>	1,286	27	28	0	24	7	49	100	24		29	100	85		78	49	100
<i>Streptococcus pneumoniae</i>	271		89			66	89	100	47		98	100			78	71	100

[†]Note: Numbers indicate percentage susceptibility for isolates from all sources except where otherwise indicated. Blank cells indicate no data collected/drug not indicated. Susceptibility profiles for adults aged 18 years and older only. Data provided by 15 Tarrant County hospitals; 14 provided data from 01/01/10-12/31/10; 1 provided data from 10/01/10-09/30/11.



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COUNTY-WIDE ANTIBIOGRAM: CHILDREN, 2011[†]

Gram Negative Bacteria	Isolates Tested	Aminoglycosides			Carba-penems		Cephalosporins						Fluoro-quinolones		Penicillins				Other				
		Amikacin	Gentamicin	Tobramycin	Imipenem	Meropenem	Cefazolin (1st)	Cefotetan (2nd)	Cefuroxime (2nd)	Cefotaxime (3rd)	Ceftriaxone (3rd)	Ceftazidime (3rd)	Cefepime (4th)	Ciprofloxacin	Levofloxacin	Amoxicillin/ Clavulanate	Ampicillin	Ampicillin/ Sulbactam	Piperacillin/ Tazobactam	Aztreonam	Nitrofurantoin (urine isolates)	TMP-SMX (Bactrim)	
<i>Acinetobacter baumannii</i>																							
<i>Citrobacter freundii</i>	16	100	88	94	100					75	100	100	94										81
<i>Enterobacter cloacae</i>																							
<i>Enterobacter aerogenes</i>																							
<i>Escherichia coli</i>	1,123	100	94	95	100		89			97	93	98	93	93	80	40	57	100					60
<i>Klebsiella pneumoniae</i>	155	100	97	97	100		95			98	94	98	99		97		88	95					89
<i>Morganella morganii</i>																							
<i>Proteus mirabilis</i>	109	100	91	91			85			85	97	85	97		95	79	94	100					84
<i>Pseudomonas aeruginosa</i>	241	90	66	78	92	78						91	91	83	86			86	60				
<i>Serratia marcescens</i>	32	97	91	91	100					100	100	100	100					100					94

Gram Positive Bacteria	Isolates Tested	Cephalo-sporins		Penicillins			Other																	
		Cefazolin (1st)	Ceftriaxone (3rd)	Ampicillin	Oxacillin	Penicillin	Clindamycin	Daptomycin	Erythromycin	Gentamicin Synergy Screen	Levofloxacin	Linezolid	Nitrofurantoin (urine isolates)	Streptomycin Synergy Screen	Tetracycline	TMP-SMX (Bactrim)	Vancomycin							
<i>Enterococcus faecalis</i>	244					99																	100	
<i>Enterococcus faecium</i>	9					56																		89
<i>Staphylococcus aureus</i> (ALL)	1,776				45		85		31														99	100
Methicillin Susceptible (MSSA)	796				100		83		56														99	100
Methicillin Resistant (MRSA)	980				0		86		11														99	100
Staph. coagulase negative (ALL)	339				44		53		29														75	100
<i>Staphylococcus epidermidis</i>	234				34		51		22														68	100
<i>Streptococcus pneumoniae</i>	95		84			56																	53	100

[†]Note: Numbers indicate percentage susceptibility for isolates from all sources except where otherwise indicated. Blank cells indicate no data collected/drug not indicated. Susceptibility profiles for individuals < 18 years of age only. Data provided by 1 Tarrant County hospital, providing data from 01/01/11-12/31/11.