



Tarrant County Public Health
Division of Epidemiology and Health Information

COUNTY-WIDE ANTIBIOGRAM, 2014

The Tarrant County Public Health AntibioGram which will be released annually is a compilation of antibiograms from 19 health care facilities and 1 commercial lab 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 2014, the following significant trends and patterns were noted:

- 23 cases of carbapenem-resistant *Klebsiella pneumoniae* (CRKP) were identified in eleven different facilities (99% susceptibility); in 2011, 51 cases was identified.
- Carbapenem-resistant *Enterobacteriaceae* (CRE) were detected with the lowest susceptibility reported for *Citrobacter freundii* (84% susceptibility to Imipenem).
- 40 cases of carbapenem-resistant *Escherichia coli* were reported (99.99% susceptibility).
- Vancomycin-resistant enterococci (VRE) were detected with vancomycin resistance identified in 6% of *E. faecalis* and 59% of *E. faecium* isolates.
- Two cases of vancomycin-resistant *Staphylococcus aureus* (VRSA) or vacomycin-intermediate *Staphylococcus aureus* (VISA) was reported (99.99% susceptibility).
- *Enterobacter* spp. susceptibility ranged from 74-89% and 85-91% to 3rd generation cephalosporins and fluoroquinolones, respectively.
- Six cases of fluoroquinolone resistant *Streptococcus pneumoniae* were reported.
- *Pseudomonas aeruginosa* susceptibility ranged from 61-65% and 82-95% 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, 2014[†]

Gram Negative Bacteria	Isolates Tested	Aminoglycosides			Carbapenems		Cephalosporins						Fluoroquinolones		Penicillins				Other		
		Amikacin	Gentamicin	Tobramycin	Imipenem	Meropenem	Cefazolin (1st)	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>	240	67	56	75	70	54			53	20	37	39	42	37	0	0	51	42		42	25
<i>Citrobacter freundii</i>	204	96	87	86	100	98			91	80	76	98	84	78				77	84	77	87
<i>Enterobacter cloacae</i>	710	99	96	95	99	99			74	77	77	96	85	90				80	80	80	87
<i>Enterobacter aerogenes</i>	290	100	98	97	84	100			51	87	89	97	87	91				84	90	84	92
<i>Escherichia coli</i>	15,863	99	88	87	100	100	84	75	75	91	92	93	64	65	75	40	49	94	93	94	63
<i>Klebsiella pneumoniae</i>	3,519	99	96	93	99	100	88	84	84	93	92	93	90	94	90	0	82	94	94	94	85
<i>Morganella morganii</i>	248	88	76	82	100	100			14	95	77	96	32	43				97	93		46
<i>Proteus mirabilis</i>	2,442	98	89	88	69	99	79	90	90	99	97	96	53	62	99	59	70	99	96	93	66
<i>Pseudomonas aeruginosa</i>	2,923	95	82	88	78	77					83	77	65	61				83	72		
<i>Serratia marcescens</i>	120	91	91	94	100	100	0	0	0	97	99	100	81	94	0	0	0	95	100		100

Gram Positive Bacteria	Isolates Tested	Cephalosporins		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>	2,924			96		97		99	8	61		98	98	73	18		94
<i>Enterococcus faecium</i>	1,039			32		11		96	3	88		95	50	51	16		41
<i>Staphylococcus aureus (ALL)</i>	1,791	54	31	4	41	8	64	100	35	100	43	100	100		93	98	100
Methicillin Susceptible (MSSA)	2,816	99		0	100	9	83	100	67	100	82	100	100		93	98	100
Methicillin Resistant (MRSA)	2,583	0			0	0	59	100	10	99	23	100	99		90	97	100
<i>Staph. coagulase negative (ALL)</i>	748	43			42	10	53	100	35		48	99	88		84	56	100
<i>Staphylococcus epidermidis</i>	825	58	11	1	27	3	44	96	26	77	32	99	100		74	47	100
<i>Streptococcus pneumoniae</i>	307		94			81	76		47		98	100			81	78	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 19 health care facilities in Tarrant County; 19 provided data from 01/01/14-12/31/14.



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COUNTY-WIDE ANTIBIOGRAM: CHILDREN, 2014[†]

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 species</i>	45	100	100	100		100				89	91	98	100									84
<i>Enterobacter species</i>	119	100	97	98		100				79	77	100	99									92
<i>Enterobacter aerogenes</i>																						
<i>Escherichia coli</i>	1,330	100	92	93		100	91			97	97	98	91			44	54	94				61
<i>Klebsiella pneumoniae</i>	177	100	95	94		100	94			94	94	94	99				89	95				85
<i>Morganella morganii</i>																						
<i>Proteus mirabilis</i>	91	100	93	95		100	98			100	100	100	99				91					97
<i>Pseudomonas aeruginosa</i>	254	98	87	96		98						96	96	94	89				92	100		
<i>Serratia marcescens</i>	34	88	76	76		97				97	94	97	97									91

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>	309			100		100											100
<i>Enterococcus faecium</i>	16			69		56											100
<i>Staphylococcus aureus (ALL)</i>	1,971				48		77		35							99	100
Methicillin Susceptible (MSSA)	948				100		79		57							98	100
Methicillin Resistant (MRSA)	1,023				0		76		14							99	100
<i>Staph. coagulase negative (ALL)</i>	203				69		60		43							89	100
<i>Staphylococcus epidermidis</i>	310				37		55		27							79	100
<i>Streptococcus pneumoniae</i>	93		90			49										54	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 01/01/14-12/31/14.