



## Tarrant County Public Health Division of Epidemiology and Health Information

# COUNTY-WIDE ANTBIOGRAM, 2012

The Tarrant County Public Health Antibiogram which will be released annually is a compilation of antibiograms from 11 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 2012, the following significant trends and patterns were noted:

- The number of carbapenem-resistant *Klebsiella pneumoniae* (CRKP) decreased 18 cases in five different facilities in 2011 to 1 case in 2012 (98% susceptibility).
- Carbapenem-resistant Enterobacteriaceae (CRE) were not detected in 2012.
- 7 cases of carbapenem-resistant *Escherichia coli* were reported (99% susceptibility).
- Vancomycin-resistant enterococci (VRE) were detected with vancomycin resistance identified in 2% of *E. faecalis* and 70% of *E. faecium* isolates.
- One case of vancomycin-resistant *Staphylococcus aureus* (VRSA) or vacomycin-intermediate *Staphylococcus aureus* (VISA) were reported (99.99% susceptibility).
- *Enterobacter* spp. susceptibility ranged from 79-89% and 89-99% to 3<sup>rd</sup> generation cephalosporins and fluoroquinolones, respectively.
- Zero cases of fluoroquinolone resistant *Streptococcus pneumoniae* were reported (100% susceptibility).
- *Pseudomonas aeruginosa* susceptibility ranged from 66-71% and 82-94% 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, 2012<sup>†</sup>**

Gram Negative Bacteria	Isolates Tested	Aminoglycosides			Carba-penems		Cephalosporins					Fluoro-quinolones		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 baumanii</i>	72		58	71			0						40	39			58	39		0	49
<i>Citrobacter freundii</i>	70	100	93	92		98	10			84	84	100	88	89	0	20	40	84	100	96	83
<i>Enterobacter cloacae</i>	454	97	96	91	100	100	1	30	87	79	81	98	89	92	6	5	8	82	79	20	91
<i>Enterobacter aerogenes</i>	191	100	98	99	100	100	2	55	86	89	87	99	99	98		1	29	80	71	10	95
<i>Escherichia coli</i>	9,263	99	88	82	100	100	83	83	89	91	93	94	67	66	78	43	52	94	86	95	66
<i>Klebsiella pneumoniae</i>	2,341	99	98	96	100	100	94	92	96	96	97	97	94	95	96	0	85	96	98	42	89
<i>Morganella morganii</i>	58	98	66	95		100	0			91	74	100	38	50			0			0	35
<i>Proteus mirabilis</i>	1,154	100	91	91	99	99	82	97	99	94	97	96	64	66	97	71	78	92	83	0	73
<i>Pseudomonas aeruginosa</i>	1,831	94	82	90	85	80	0		0	2	86	82	71	66			0	88	71	1	1
<i>Serratia marcescens</i>	48	100	100	91		100	0			96	98	100	93	94			0			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>	2,195	99	99		98		94	13	78	56	99	95	95	33	36	19	37	98
<i>Enterococcus faecium</i>	499		18	13		9		91	1	95	8	95	93	33	36	19	3	30
<i>Staphylococcus aureus (ALL)</i>	4,286	65	100	0	51	5	69	100	39	97	59	100	98			93	98	100
Methicillin Susceptible (MSSA)	2,033	99	100	0	95	5	85	100	67	98	86	100	100			94	98	100
Methicillin Resistant (MRSA)	2,253	7	100	0	4	4	56	100	9	96	35	100	97			92	96	100
<i>Staph. coagulase negative (ALL)</i>	1,047	44	100	0	35	3	53	97	27	78	34	98	82			78	52	100
<i>Staphylococcus epidermidis</i>	898	30	100	0	27	6	51	99	25	78	34	97	75			80	65	100
<i>Streptococcus pneumoniae</i>	214	50	90			57	86		57		100	100				77	77	100

<sup>†</sup>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 10 Tarrant County hospitals; 10 provided data from 01/01/12-12/31/12. Cefazolin was dropped in 2012.



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**COUNTY-WIDE ANTIBIOTIC SUSCEPTIBILITY PROFILE: CHILDREN, 2012<sup>†</sup>**

<b>Gram Negative Bacteria</b>	Isolates Tested	Aminoglycosides			Carba-penems		Cephalosporins						Fluo-roquinolones		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 baumanii</i>																							
<i>Citrobacter freundii</i>	18	100	94	94	100																94		
<i>Enterobacter cloacae</i>																							
<i>Enterobacter aerogenes</i>																							
<i>Escherichia coli</i>	1,521	100	92	93	100		92						98	97	98	92	93	80	40	61	80		61
<i>Klebsiella pneumoniae</i>	192	100	95	94	100		90						95	93	95	98		93		87	93		84
<i>Morganella morganii</i>																							
<i>Proteus mirabilis</i>	132	100	92	92			92						95	96	95	98		96	83	93	96		92
<i>Pseudomonas aeruginosa</i>	231	97	88	61	93	98								92	95	91	90				77	65	
<i>Serratia marcescens</i>	81	93	88	81	100								96	100	100	100				86			89

<b>Gram Positive Bacteria</b>	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>	285					99											100	
<i>Enterococcus faecium</i>	19					26											95	
<i>Staphylococcus aureus</i> (ALL)	2,345					47		84		32							99	100
Methicillin Susceptible (MSSA)	1,110					100		81		55							98	100
Methicillin Resistant (MRSA)	1,235					0		83		12							99	100
<i>Staph. coagulase negative</i> (ALL)	375					38		48		20							68	100
<i>Staphylococcus epidermidis</i>	268					31		48		19							62	100
<i>Streptococcus pneumoniae</i>	71		89			64										51	100	

<sup>†</sup>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 01/01/12-12/31/12.