



Tarrant County Public Health
Division of Epidemiology and Health Information

COUNTY-WIDE ANTIBIOGRAM, 2016

The Tarrant County Public Health Antibioqram which will be released annually is a compilation of antibiograms from 16 health care facilities 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 2016, the following significant trends and patterns were noted:

- 9 cases of carbapenem-resistant *Klebsiella pneumoniae* (CRKP) were identified in five of sixteen facilities; resulting in 98.9% susceptibility for these five facilities.
- Carbapenem-resistant *Enterobacteriaceae* (CRE) detection continued to improve in 2016 with the lowest susceptibility reported for *Citrobacter freundii* and *Enterobacter cloacae* (96% susceptibility for Imipenem and Meropenem, respectively).
- 12 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 61% of *E. faecium* isolates.
- 4 cases of vancomycin-resistant *Staphylococcus aureus* (VRSA) or vancomycin-intermediate *Staphylococcus aureus* (VISA) were reported (99.89% susceptibility).
- *Enterobacter* spp. susceptibility ranged from 34-76% and 88-98% to 3rd generation cephalosporins and fluoroquinolones, respectively.
- Five cases of fluoroquinolone resistant *Streptococcus pneumoniae* were reported.
- *Pseudomonas aeruginosa* susceptibility ranged from 65-69% and 81-94% 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, 2016[†]

Gram Negative Bacteria	Isolates Tested	Penicillins				Cephalosporins/Cephameycins							Carbapenems		Aminoglycosides			Fluoroquinolones		Other		
		Amoxicillin/ Clavulanate	Ampicillin	Ampicillin/ Sulbactam	Piperacillin/ Tazobactam	Cefazolin (1st)	Cefotetan (2nd)	Cefuroxime (2nd)	Cefotaxime (3rd)	Ceftriaxone (3rd)	Ceftazidime (3rd)	Cefepime (4th)	Imipenem	Meropenem	Amikacin	Gentamicin	Tobramycin	Ciprofloxacin	Levofloxacin	Aztreonam	Nitrofurantoin (urine isolates)	TMP-SMX (Bactrim)
<i>Acinetobacter baumannii</i>	209	R	R	38	60	R	R	R	15	16	40	30		37	72	57	97	30	32	R	R	30
<i>Citrobacter freundii</i>	200	R	R	R	81	R	R	R	20	79	76	97	96	100	100	91	89	87	87	82	85	76
<i>Enterobacter cloacae</i>	368	R	R	R	75	R	R	R	34	71	74	87	97	96	99	93	92	88	90	71	45	87
<i>Enterobacter aerogenes</i>	149	R	R	16	80	R	R	R	36	76	75	97	100	100	98	97	97	95	98	79	46	95
<i>Escherichia coli</i>	12262	80	43	51	96	81	99	82	33	90	92	92	100	100	99	89	88	70	69	91	95	67
<i>Klebsiella pneumoniae</i>	2661	92	R	80	95	90	100	85	38	92	93	92	100	100	100	95	93	93	94	92	43	86
<i>Morganella morganii</i>	117	R	R	10	90	R	R	R	45	81	69	94	97	99	99	74	84	49	52	90	R	48
<i>Proteus mirabilis</i>	1347	93	73	81	99	80	100	92	53	94	97	95	98	99	99	89	89	68	71	90	R	72
<i>Pseudomonas aeruginosa</i>	1777	R	R	R	81	R	R	R	R	R	76	78	62	75	94	81	90	69	65	52	R	R
<i>Serratia marcescens</i>	154	R	R	R	85	R	R	R	52	89	85	99	95	99	99	98	86	89	92	91	R	96

Gram Positive Bacteria	Isolates Tested	Penicillins			Cephalosporins		Other										
		Ampicillin	Oxacillin	Penicillin	Cefazolin (1st)	Ceftriaxone (3rd)	Clindamycin	Daptomycin	Erythromycin	Gentamicin Synergy	Levofloxacin	Linezolid	Nitrofurantoin (urine isolates)	Streptomycin Synergy Screen	Tetracycline	TMP-SMX (Bactrim)	Vancomycin
<i>Enterococcus faecalis</i>	2079	99		99	R	R	R	100	8	65	68	97	98	75	21	R	98
<i>Enterococcus faecium</i>	337	18		19	R	R	R	97	10	89	14	95	28	19	20	R	39
<i>Staphylococcus aureus (ALL)</i>	1059	0	56	0	60	59	69	100	42		59	100	100		92	98	100
Methicillin Susceptible (MSSA)	1938	0	99	19	100	100	81	100	64		82	100	99		94	99	100
Methicillin Resistant (MRSA)	1698	0	0	0	R	R	61	90	10		24	100	99		88	96	100
<i>Staph. Coagulase negative (ALL)</i>	452	0	41	2	39	48	56	100	35		57	100	100		81	65	100
<i>Staphylococcus epidermidis</i>	582		26	11			45	100	25		40	100	100		77	41	100
<i>Streptococcus pneumoniae</i>	134	0		82		95	86		59		96	100			81	73	100

R – Intrinsic resistance

[†]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 16 health care facilities in Tarrant County; provided data from 01/01/16-12/31/16.



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COUNTY-WIDE ANTIBIOGRAM: CHILDREN, 2016[†]

Gram Negative Bacteria	Isolates Tested	Penicillins				Cephalosporins/Cephameycins							Carbapenems		Aminoglycosides			Fluoroquinolones		Other		
		Amoxicillin/ Clavulanate	Ampicillin	Ampicillin/ Sulbactam	Piperacillin/ Tazobactam	Cefazolin (1st)	Cefotetan (2nd)	Cefuroxime (2nd)	Cefotaxime (3rd)	Ceftioxone (3rd)	Ceftazidime (3rd)	Cefepime (4th)	Imipenem	Meropenem	Amikacin	Gentamicin	Tobramycin	Ciprofloxacin	Levofloxacin	Aztreonam	Nitrofurantoin (urine isolates)	TMP-SMX (Bactrim)
<i>Acinetobacter</i> species	40	R	R	98	75	R	R	R		23	60			98		90	98	90	98	R	R	95
<i>Citrobacter freundii</i> complex	56	R	R			R	R	R		77	77	100		100	100	98	100	100				100
<i>Enterobacter</i> species	135	R	R	R		R	R	R		81	81	97		99	100	93	93	99				95
<i>Escherichia coli</i>	1393	R	42	50		85				93	93	94		100	100	91	90	90				64
<i>Klebsiella pneumoniae</i>	161		R	87		94				96	96	96		100	100	99	98	100				93
<i>Proteus mirabilis</i>	112		91	93		96				100	100	100		100	100	96	97	100		R		96
<i>Pseudomonas aeruginosa</i>	305	R	R	R		R	R	R			96	98		98	98	91	98	94	91		R	R
<i>Serratia marcescens</i>	58	R	R	R		R	R	R		98	97	100		100	98	93	86	97			R	98

Gram Positive Bacteria	Isolates Tested	Penicillins			Cephalosporins		Other										
		Ampicillin	Oxacillin	Penicillin	Cefazolin (1st)	Ceftioxone (3rd)	Clindamycin	Daptomycin	Erythromycin	Gentamicin Synergy	Levofloxacin	Linezolid	Nitrofurantoin (urine isolates)	Streptomycin Synergy Screen	Tetracycline	TMP-SMX (Bactrim)	Vancomycin
<i>Enterococcus faecalis</i>	401	100		100	R	R	R									R	100
<i>Enterococcus faecium</i>	36	58		53	R	R	R									R	89
<i>Staphylococcus aureus</i> (ALL)	2118		58				89		43							98	100
Methicillin Susceptible (MSSA)	1221		100				93		62							97	100
Methicillin Resistant (MRSA)	897		0		R	R	83		18							99	100
Staph. Coagulase negative (ALL)	161		70				81		39							97	100
<i>Staphylococcus epidermidis</i>	200		31				61		21							71	100
<i>Streptococcus pneumoniae</i>	87			49/99		87/98										57	100

R – Intrinsic resistance

[†]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 01/01/16-12/31/16.