Tarrant County Public Health

Division of Epidemiology and Health Information

COUNTY-WIDE ANTIBIOGRAM, 2015

The Tarrant County Public Health Antibiogram which will be released annually is a compilation of antibiograms from 15 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 M100) have been included in this report.

SUMMARY OF FINDINGS

In 2015, the following significant trends and patterns were noted:

- 6 cases of carbapenem-resistant *Klebsiella pneumoniae* (CRKP) were identified in four different facilities (99% susceptibility); in 2014, 23 cases was identified.
- Carbapenem-resistant *Enterobacteriaceae* (CRE) were detected with the lowest susceptibility reported for *Enterobacter aerogenes* (94% susceptibility to Meropenem).
- 4 cases of carbapenem-resistant *Escherichia coli* were reported (99.99% susceptibility).
- Vancomycin-resistant enterococci (VRE) were detected with vancomycin resistance identified in 5% of *E. faecalis* and 68% of *E. faecium* isolates.
- There were no reported cases of vancomycin-resistant *Staphylococcus aureus* (VRSA) or vancomycin-intermediate *Staphylococcus aureus* (VISA) (99.99% susceptibility).
- *Enterobacter* spp. susceptibility ranged from 77-89% and 93-98% to 3rd generation cephalosporins and fluoroquinolones, respectively.
- Six cases of fluoroquinolone resistant *Streptococcus pneumoniae* were reported.
- *Pseudomonas aeruginosa* susceptibility ranged from 64-66% and 82-96% 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, 2015†

Gram Negative Bacteria	Isolates Tested	Penicillins				Cephalosporins/Cephamycins							Carbapenems		Aminoglycosides			Fluoroquinolones		Other		
		Amoxicillin/ Clavutanate	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)
Acinetobacter baumanii	124	R	R	39	57	R	R	R	8	6	41	45	100	50	72	69	76	46	49	R	R	42
Citrobacter freundii	158	R	R	R	92	R	R	R	47	84	83	97	98	99	100	89	94	87	85	84	90	74
Enterobacter cloacae	566	R	R	R	79	R	R	R	53	77	78	93	98	96	100	95	95	93	94	79	37	88
Enterobacter aerogenes	221	R	R	20	91	R	R	R	89	88	87	99	95	94	99	97	97	97	98	91	20	95
Escherichia coli	7118	80	42	49	95	84	100	84	32	91	95	93	100	100	99	89	87	68	66	93	93	66
Klebsiella pneumoniae	1839	92	R	80	94	89	100	80	59	93	94	91	99	100	100	96	93	92	93	94	38	87
Morganella morganii	58	R	R	8	88	R	R	R	35	77	46	96	78	100	100	69	82	41	23	83	R	56
Proteus mirabilis	1046	92	70	76	100	76	100	90	79	94	98	94	95	100	100	91	91	65	64	93	R	69
Pseudomonas aeruginosa	1632	R	R	R	84	R	R	R	R	R	83	78	72	77	96	82	91	66	64	58	R	R
Serratia marcescens	101	R	R	R	85	R	R	R	66	94	92	100	96	99	100	98	88	95	90	92	R	95

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
Enterococcus faecalis	1481	98		95	R	R	R	100	7	55	64	96	94	67	18	R	95
Enterococcus faecium	1822	19		14	R	R	R	95	5	79	8	95	21	46	14	R	32
Staphylococcus aureus (ALL)	1894	0	50	13			65	100	40		54	100	100		92	98	100
Methicillin Susceptible (MSSA)	1329	0	94	23			83	100	65		80	100	100		93	99	100
Methicillin Resistant (MRSA)	1089	0	32	0	R	R	61	100	14		38	100	100		91	98	100
Staph. Coagulase negative (ALL)	158	0	38	5			45	100	27		43	100	100		84	56	100
Staphylococcus epidermidis	638		24	12			47	100	24		39	100	100		82	43	100
Streptococcus pneumoniae	145	0		80		93	71		49		95	100			74	68	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 14 health care facilities in Tarrant County from 01/01/15-12/31/15.*

Tarrant County Public Health

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COUNTY-WIDE ANTIBIOGRAM: CHILDREN, 2015†

Gram Negative Bacteria	Isolates Tested	Penicillins				Cephalosporins/Cephamycins							Carbapenems		Aminoglycosides			Fluoroquinolones		Other		
		Amoxicillin/ Clavutanate	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)
Acinetobacter baumanii	44	R	R	100	57	R	R	R		21	66			100		98	98	98	100	R	R	98
Citrobacter species	34	R	R			R	R	R		94	94	100		100	100	100	100	100				100
Enterobacter species	135	R	R	R		R	R	R		83	83	97		100	99	96	96	99				93
Escherichia coli	1317	R	42	54	96	89				96	96	96		100	100	91	92	91				64
Klebsiella pneumoniae	174		R	79	93	91				93	94	94		100	100	93	92	97				88
Proteus mirabilis	94		85	94		100				100	100	100		100	100	93	94	99			R	90
Pseudomonas aeruginosa	240	R	R	R	95	R	R	R			94	94		98	100	95	96	91	88	67	R	R
Serratia marcescens	43	R	R	R		R	R	R		100	98	100		100	95	91	81	100			R	98

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
Enterococcus faecalis	297	99		99	R	R	R									R	100
Enterococcus faecium	29	65		62	R	R	R									R	100
Staphylococcus aureus (ALL)	1982		55				81		39							98	100
Methicillin Susceptible (MSSA)	1097		100				79		59							98	100
Methicillin Resistant (MRSA)	885		0		R	R	83		14							98	100
Staph. Coagulase negative (ALL)	96		67				92		40							94	100
Staphylococcus epidermidis	193		34				66		31							70	100
Streptococcus pneumoniae	68			50		91										56	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 01/01/15-12/31/15.*