Antibiotic Profile
January - December 2015
Total Patients

ANTIBIOGRAM Q&A

Clinical Pathology Division
Microbiology Section

GRAM NEGATIVE

ORGANISMS	#	Isolets Tested	Amikacin	Ampicillin	Amoxicillin / Clavulanate	Cefazolin	Cefepime	Cefotaxime	Cefoxitin	Ceftazidime	Ceftriaxone	Cephalothin**	Ciprofloxacin	Colistin	Gentamicin	Levofloxacin	Meropenem	Minocycline	Piperacillin / Tazobactam	Tobramycin	Trimethoprim / Sulfamethoxazole	Nitrofurantoin Urine Isolates Only <
		% SUSCEPTIBILITY																				
Achromobacter xylosoxidans	31	19				8			16			26		10	68	93	77	19	16	90	
Citrobacter freundii	36	100		14	0	94	72	3		72	0	94		97	94	100		79	94		96
Citrobacter species	33	100		79	32	100	85	70		85		100		100	100	100		100	100		
Enterobacter cloacae	138	99		1	0	92	66	1		66	0	97		91	99	99		77	93	81	42
Enterobacter species	28	100		7		100	78	0		79		100		96	100	96		86	96	96	
Escherichia coli	1,893	100	40	77	18	95	92	90		92	35	88		88	88	100		91	89	62	95
Klebsiella pneumoniae	307	100	0	84	35	93	88	84		88	78	95		93	96	99		87	90	79	31
Klebsiella species not pneumoniae	59	100	0	81	4	98	84	85		85	67	97		95	97	100		88	92	92	91
Proteus mirabilis	173	100	82	99	11	99	97	97		97	92	98		95	99	100		99	94	87	0
Pseudomonas aeruginosa	374	99				94			90			88		91	88	97		91	97		
Salmonella species not typhi	29		90							100		93			93					96	
Serratia species	63	98		3		97	93	20		94		98		95	97	100		95	90		
Shigella species	79		91									99			99					60	
Stenotrophomonas maltophilia	51								35						88		96			96	
Cystic Fibrosis Isolates																					
Achromobacter xylosoxidans (CF)	37	7				17			18			11		3	31	71	43	14	0	57	
Pseudomonas aeruginosa (CF)	325	71				82			81			78	98	61	87	87		81	80		
Stenotrophomonas maltophilia (CF)	53								6						74		94			94	

GRAM POSITIVE

ORGANISMS	#	Isolets Tested	Ampicillin	Cefotaxime	Cefotaxime Meningitis	Cefotaxime Nonmeningitis	Ceftriaxone Meningitis	Ceftriaxone Nonmeningitis	Clindamycin	Erythromycin	Gentamicin	Gentamicin High Level	Levofloxacin	Linezolid	Meropenem	Oxacillin / Nafcillin / Methicillin	Penicillin	Penicillin Meningitis	Penicillin Nonmeningitis	Streptomycin High Level	Tetracycline°	Trimethoprim / Sulfamethoxazole	Vancomycin	Nitrofurantoin Urine Isolates Only <
		% SUSCEPTIBILITY																						
Alpha streptococcus not Streptococcus pneumoniae	61	39	72														43						100	
Coagulase negative staphylococcus†	191								42	28	74			100		32					87		100	
Enterococcus faecalis	116	100										80	92	100			100			90	26		100	100
Enterococcus species	213	98										79	97				97			90	24		99	96
Staphylococcus aureus	1,778								83	43	99			100		56					96	97	100	100
Streptococcus agalactiae (Group B Streptococcus)	114								45	36							TOC*							
Streptococcus anginosus group	118	77	100														93						100	
Streptococcus pneumoniae	173			78	85	79	86	77	46				100	100	77			50	80		76	60	100	
Streptococcus pyogenes (Group A Streptococcus)																	TOC*							
Cystic Fibrosis Isolates																								
Staphylococcus aureus (CF)	387								64	43				99		70					94	98	100	
Staphylococcus aureus, Methicillin Resistant (CF)	116								48	10				99		0					93	97	100	
Staphylococcus aureus, Methicillin Sensitive (CF)	271								71	58				99		100					94	99	100	

The cumulative susceptibilty data report is based on the inclusion of only the first isolate of a given species from an individual patient.

This data is presented with the aim of guiding the clinician in the selection of initial emperical antimicobial therapy for infection.

**URINE ISOLATES ONLY: Cephalothin can be used to predict susceptibility to certain oral Cephalosporins.

^ Not recommended for pyelonephritis, even if susceptible

° Organisms that are susceptible to tetracycline are also susceptible to doxycycline and minocycline. However, some organisms that are intermediate or resistant to tetracycline may be susceptible to doxycycline, minocycline, or both.

† Susceptibility data for coagulase negative Staphylococcus is not for treatment purposes, Vancomycin is the therapy of choice.

GRAY shading indicates drug/bug combination not tested. Generally not recommended for therapy.

Red shading indicates intrisic resistance.

*TOC = Therapy of Choice; no resistance has been reported.

VIEW ANTIBIOTIC PROFILES BY SECTION:

INPATIENTS

OUTPATIENTS

EC

NEONATOLOGY

PAVILION OBGYN

Texas Children's Hospital®

EC

Antibiotic Profile
January - December 2015

ANTIBIOGRAM Q&A

Clinical Pathology Division
Microbiology Section

GRAM NEGATIVE

ORGANISMS	Isolates Tested #	Amikacin	Ampicillin	Amoxicillin / Clavulanate	Cefazolin	Cefepime	Cefotaxime	Cefoxitin	Ceftazidime	Ceftriaxone	Cephalothin**	Ciprofloxacin	Gentamicin	Levofloxacin	Meropenem	Piperacillin / Tazobactam	Tobramycin	Trimethoprim / Sulfamethoxazole	Nitrofurantoin^ Urine Isolates Only
		% SUSCEPTIBILITY																	
Enterobacter cloacae	42	98		5	0	98	81	2		81	0	100	98	100	100	85	98	86	37
Escherichia coli	1,334	100	40	78	17	95	93	91		93	35	89	88	89	100	92	89	61	95
Klebsiella pneumoniae	126	99	0	87	36	95	92	88		90	82	96	98	96	100	91	94	82	31
Proteus mirabilis	111	100	78	99	12	99	96	97		96	91	98	95	100	100	99	94	86	0
Pseudomonas aeruginosa	102	99				95			91				94	91	97	93	99		
Shigella species	70		90									99		99				59	

GRAM POSITIVE

ORGANISMS	Isolates Tested #	Ampicillin	Cefotaxime Meningitis	Cefotaxime Nonmeningitis	Ceftriaxone Meningitis	Ceftriaxone Nonmeningitis	Clindamycin	Erythromycin	Gentamicin	Gentamicin High Level	Levofloxacin	Linezolid	Meropenem	Oxacillin / Nafcillin / Methicillin	Penicillin	Penicillin Meningitis	Penicillin Nonmeningitis	Streptomycin High Level	Tetracycline°	Trimethoprim / Sulfamethoxazole	Vancomycin	Nitrofurantoin^ Urine Isolates Only
		% SUSCEPTIBILITY																				
Coagulase negative staphylococcus†	57						52	35	81			100		49					89		100	
Enterococcus faecalis	31	100								87					100			87			100	
Enterococcus species	104	99								83	100				99			90	24		100	97
Staphylococcus aureus	834						86	40				100		52					96	97	100	
Streptococcus pneumoniae	52		78	82	78	81	82	60			100	100	79			63	77		82	68	100	
Streptococcus pyogenes (Group A Streptococcus)															TOC*							

The EC antibiogram includes both the main campus and west campus emergency centers. The EC antibiogram accounts for 47% of total patient antibiogram isolates. The main campus emergency center accounts for 69% of total EC isolates, and the west campus EC accounts for 31% of total EC isolates.

The cumulative susceptibilty data report is based on the inclusion of only the first isolate of a given species from an individual patient.

This data is presented with the aim of guiding the clinician in the selection of initial emperical antimicobial therapy for infection.

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^Not recommended for pyelonephritis, even if susceptible

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Red shading indicates intrisic resistance.

*TOC = Therapy of Choice; no resistance has been reported.

VIEW ANTIBIOTIC PROFILES BY SECTION:

TOTAL PATIENTS

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Antibiotic Profile
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ANTIBIOGRAM Q&A

Inpatients

Clinical Pathology Division
Microbiology Section

GRAM NEGATIVE

ORGANISMS	# Isolates Tested	% SUSCEPTIBILITY																				Nitrofurantoin Urine Isolates Only ^
		Amikacin	Ampicillin	Amoxicillin / Clavulanate	Cefazolin	Cefepime	Cefotaxime	Cefoxitin	Ceftazidime	Ceftriaxone	Cephalothin **	Ciprofloxacin	Colistin	Gentamicin	Imipenem	Levofloxacin	Meropenem	Minocycline	Piperacillin / Tazobactam	Tobramycin	Trimethoprim / Sulfamethoxazole	
Enterobacter cloacae	62	100	0	0	0	84	54	0		55	0	95		84	100	100	98		70	89	74	
Escherichia coli	243	99	41	69	17	92	88	83		88	31	82		87	100	82	100		84	88	63	94
Klebsiella pneumoniae	106	100	0	78	39	88	81	77		82	73	90		87	93	92	98		80	81	76	
Proteus mirabilis	30	100	87	100	0	100	100	97		100	93	100		93		100	100		100	93	83	
Pseudomonas aeruginosa	212	99				95			90			88		91	100	86	97		92	96		
Stenotrophomonas maltophilia	42															86		95			95	
Cystic Fibrosis Isolates																						
Pseudomonas aeruginosa (CF)	42	62				73			69				93	46	50		79		69	74		

GRAM POSITIVE

ORGANISMS	# Isolates Tested	% SUSCEPTIBILITY																					Nitrofurantoin Urine Isolates Only ^
		Ampicillin	Cefotaxime	Cefotaxime Meningitis	Cefotaxime Nonmeningitis	Ceftriaxone Meningitis	Ceftriaxone Nonmeningitis	Clindamycin	Erythromycin	Gentamicin	Gentamicin High Level	Levofloxacin	Linezolid	Meropenem	Oxacillin / Nafcillin / Methicillin	Penicillin	Penicillin Meningitis	Penicillin Nonmeningitis	Streptomycin High Level	Tetracycline °	Trimethoprim / Sulfamethoxazole	Vancomycin	
Alpha streptococcus not Streptococcus pneumoniae	36	39	61													39						100	
Coagulase negative staphylococcus†	78							52	42	85			100		34					94		100	
Enterococcus faecalis	52	100									73					100			87			100	
Enterococcus species	51	94									73	92				90			86	31		96	92
Staphylococcus aureus	689							82	43	100			100		56					97	99	100	
Streptococcus anginosus group	92	77	100													93						100	
Streptococcus pneumoniae	98		100	79	88	82	89	76	40			100	100	76			45	84		75	56	100	
Streptococcus pyogenes (Group A Streptococcus)																TOC*							

The inpatient antibiogram includes both main campus and west campus isolates, but does not include isolates from the pavilion for women. The inpatient antibiogram accounts for 29% of the total antibiogram isolates. The four inpatient areas that comprise the top 48% of inpatient isolates are: WT-OR (23%), WT-PICU (11%), Pulmonary-14th floor (8%), and 11th floor WT-surgery care (6%).

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VIEW ANTIBIOTIC PROFILES BY SECTION:

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PAVILION OBGYN

Texas Children's Hospital®

Antibiotic Profile
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ANTIBIOGRAM Q&A

Outpatients

Clinical Pathology Division
Microbiology Section

GRAM NEGATIVE

ORGANISMS	Isolates Tested	Amikacin	Ampicillin	Amoxicillin/ Clavulanate	Cefazolin	Cefepime	Cefotaxime	Cefoxitin	Ceftazidime	Ceftriaxone	Cephalothin**	Ciprofloxacin	Colistin	Gentamicin	Levofloxacin	Meropenem	Minocycline	Piperacillin/ Tazobactam	Tobramycin	Trimethoprim/ Sulfamethoxazole	Nitrofurantoin Urine Isolates Only^
	#	% SUSCEPTIBILITY																			
Escherichia coli	201	100	41	78	20	95	93	88		93	37	83		89	83	100		91	91	61	93
Klebsiella pneumoniae	38	100	0	82	27	97	87	79		87	71	100		89	100	100		86	92	74	31
Pseudomonas aeruginosa	43	100				88			84					86	84	95		81	95		
Cystic Fibrosis Isolates																					
Pseudomonas aeruginosa (CF)	267	73				83			84			80	99	63	88	89		84	80		
Achromobacter xylosoxidans (CF)	30	5				13			15			11			31	68	37	11	0	50	
Stenotrophomonas maltophilia (CF)	47								7						72		96			96	

GRAM POSITIVE

ORGANISMS	Isolates Tested	Clindamycin	Erythromycin	Linezolid	Oxacillin/Nafcillin/ Methicillin	Tetracycline°	Trimethoprim/ Sulfamethoxazole	Vancomycin
	#	% SUSCEPTIBILITY						
Staphylococcus aureus	155	75	53	100	68	96	98	100
Cystic Fibrosis Isolates								
Staphylococcus aureus (CF)	348	65	45	99	71	95	98	100
Staphylococcus aureus, Methicillin Resistant (CF)	100	49	10	99	0	93	97	100
Staphylococcus aureus, Methicillin Sensitive (CF)	248	71	58	100	100	95	99	100

The outpatient antibiogram includes all of the outpatient clinics, and accounts for 17% of the total patient isolates. The three clinics that account for 55% of the outpatient isolates are: Pulmonary medicine-including CF (38%), urology clinic (11%), and special needs primary care clinic (6%).

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VIEW ANTIBIOTIC PROFILES BY SECTION:

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PAVILION OBGYN

Texas Children's Hospital®

Antibiotic Profile
January - December 2015

ANTIBIOGRAM Q&A

Neonatology

Clinical Pathology Division
Microbiology Section

GRAM NEGATIVE	Isolates Tested	Amikacin	Ampicillin	Amoxicillin / Clavulanate	Cefazolin	Cefepime	Cefotaxime	Cefoxitin	Ceftriaxone	Ciprofloxacin	Gentamicin	Levofloxacin	Meropenem	Piperacillin / Tazobactam	Tobramycin	Trimethoprim / Sulfamethoxazole	Nitrofurantoin Urine Isolates Only <
ORGANISM	#	% SUSCEPTIBILITY															
Escherichia coli	40	100	38	68	13	95	90	85	90	92	90	92	100	80	90	65	83

GRAM POSITIVE	Isolates Tested	Clindamycin	Erythromycin	Gentamicin	Linezolid	Oxacillin / Nafcillin / Methicillin	Tetracycline °	Trimethoprim / Sulfamethoxazole	Vancomycin
ORGANISMS	#	% SUSCEPTIBILITY							
Coagulase negative staphylococcus†	37	12	0	45	100	11	74		100
Staphylococcus aureus	75	74	53		100	71	99	95	100

The NICU antibiogram is comprised of isolates from the level 2 and level 3 newborn centers as well as the newborn center at the pavilion for women. The NICU antibiogram accounts for 3% of total patient isolates. 64% of NICU isolates come from level 3, 19% of NICU isolates come from level 2, and 17% of NICU isolates come from the pavilion NICU.

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PAVILION OBGYN

Texas Children's Hospital®

Pavilion ObGyn

Antibiotic Profile
January - December 2015

ANTIBIOGRAM Q&A

Clinical Pathology Division
Microbiology Section

GRAM NEGATIVE

ORGANISM	Isolates Tested	Amikacin	Ampicillin	Amoxicillin / Clavulanate	Cefazolin	Cefepime	Cefotaxime	Cefoxitin	Ceftriaxone	Cephalothin**	Ciprofloxacin	Gentamicin	Levofloxacin	Meropenem	Piperacillin / Tazobactam	Tobramycin	Trimethoprim / Sulfamethoxazole	Nitrofurantoin Urine Isolates Only^
	#	% SUSCEPTIBILITY																
Escherichia coli	75	100	53	84	24	95	90	89	89	44	85	89	84	100	95	88	75	96

GRAM POSITIVE

ORGANISMS	Isolates Tested	Clindamycin	Erythromycin	Linezolid	Oxacillin / Nafcillin / Methicillin	Penicillin	Rifampin	Tetracycline°	Trimethoprim / Sulfamethoxazole	Vancomycin
	#	% SUSCEPTIBILITY								
Staphylococcus aureus	25	63	29	100	56		100	88	96	100
Streptococcus agalactiae (Group B Streptococcus)	105	49	38			TOC*				

The pavilion OBGYN antibiogram does **not** include the Pavilion NICU patients; isolates from the non-NICU pavilion patients account for only 4% of the total patient isolates. 50% of pavilion patient isolates come from the woman's assessment center, 15% come from women's specialty, and 14% of isolates come from labor and delivery.

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Antibiotic Profile
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Clinical Pathology Division
Microbiology Section

Antibiogram Q&A

Q: What is an antibiogram?

A: An antibiogram is a summary of *microbial* susceptibility data for a given patient population *summarized in a manner that can readily* aid physicians in selecting initial empiric antimicrobial therapy.

Q: Why is the Antibiogram only available for the prior year?

A: *Typically 12 months of accumulated data are required to achieve an appropriate level of statistical significance. Hence the presentation of the prior year is common practice.*

Q: Why are some organisms not represented in the data?

A: Not all drug/bug combinations are presented in an antibiogram because a minimum of thirty patient isolates are required to provide reliable indication of susceptibility.

Q: If a patient has multiple isolates throughout a year, are all of them included in the antibiogram data?

A: No, only the first isolate of a species from an individual patient is included to ensure that the antibiogram most closely represents the likelihood of an organism being susceptible to a given drug on first presentation.

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For questions or additional information, please contact:

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