

2017

Abbott Northwestern Hospital Antimicrobial Susceptibilities of Major Pathogens

Data is also located on the Allina Knowledge Network (AKN):

<http://ww5.allinahealth.org/ahs/allinalabs.nsf/page/MicroSusceptCard>

The intent of this card is to provide a preliminary guide to susceptibilities. This information should be used together with the specific susceptibility results of the isolated organism and guidelines from current publications.

Results are from inpatients only and include only one isolate per patient.

MRSA and VRE surveillance culture isolates are not included.

All intermediate (I) interpretations are included in the resistant category.

All organisms identified are held for a period of 7 days after the final results have been reported, in case further testing is requested. Blood culture isolates are held for 1 month. Testing of additional antimicrobials is available upon request.

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Comparative Daily Costs for Commonly used INTRAVENOUS Antibiotics*	Commonly used INTRAVENOUS Antibiotics*		Comparative Daily Costs for Commonly used ORAL Antibiotics*		
Intravenous Antibiotics	Normal Dose	Daily Med Cost (\$)	Oral Antibiotics	Normal Dose	Daily Med Cost (\$)
Pencillians			Penicillins		
Ampicillin	1 gm q 6h	6.44	Amoxicillin	500 mg tid	0.24
Ampicillin/Sulbactam	3 gm q 6h	10.70	Amoxicillin/Clavulanate	500 mg tid	1.32
Nafcillin	1 gm q 4h	28.11	Dicloxacillin	500 mg qid	2.64
Penicillin G	5 MU q 4h	34.91	Penicillin VK	500 mg qid	0.94
Piperacillin/Tazobactam	3.375 gm q8h	10.38	Cephalosporins		
Cephalosporins			Cefadroxil	500 mg bid	0.74
Cefazolin	1 gm q 8h	1.98	Cefdinir	300 mg bid	1.47
Cefepime	1 gm q 8h	6.88	Cefuroxime axetil	250 mg bid	1.77
Ceftazidime	1 gm q 8h	11.67	Cephalexin	500 mg qid	0.32
Cefoxitin	1 gm q 6h	10.70	Anaerobic		
Ceftaroline	600 mg q12h	321.03	Clindamycin	450 mg tid	1.83
Ceftriaxone	1 gm q 24h	1.20	Metronidazole	500 mg tid	1.68
Cefuroxime	1.5 gm q 8h	10.26	Miscellaneous		
Aminoglycosides			Acyclovir	200 mg 5x/d	0.55
Gentamicin*	100 mg	2.08	Atovaquone	1500 mg daily	61.60
Tobramycin*	100 mg (usual dose 5-7 mg/kg q 24h or 1.8 mg/kg q 8h)	1.61	Azithromycin	250 mg daily	1.20
Anaerobic Agents			Ciprofloxacin	500 mg bid	0.26
Clindamycin	900 mg q 8 h	19.50	Clarithromycin	500 mg bid	1.68
Metronidazole	500 mg q 8 h	3.03	Dapsone	100 mg daily	1.91
Miscellaneous			Doxycycline	100 mg bid	1.45
Acyclovir	500 mg q 8 h	9.24	Erythromycin thysuccinate	400 mg qid	45.23
Ambisome (usual 0.25-6 mg/kg/day)	50 mg	83.83	Fluconazole	100 mg daily	0.95
Amphotericin (usual 0.25-1 mg/kg/day)	50 mg	32.04	Fosfomycin	1 packet x 1	73.73
Azithromycin	500 mg q 24 h	2.48	Isavuconazonium Sulfate	372 mg daily	275.89
Aztreamam	1 gm q 8h	75.33	Levofloxacin	750 mg daily	0.40
Caspofungin	50 mg q 24h	72.14	Linezolid	600 mg q 12h	6.58
Ciprofloxacin	400 mg q 12h	4.33	Moxifloxacin	400 mg q 24h	9.10
Daptomycin (usual 4-6 mg/kg/day)	500 mg vial	163.02	Minocycline	100 mg bid	0.89
Doxycycline	100 mg q 12h	34.36	Nitrofurantoin	100 mg bid	3.68
Ertapenem	1 gm q 24h	119.50	Posaconazole DR Tablets	300 mg daily	181.87
Erythromycin	500 mg q 6h	259.31	Posaconazole Suspension	200 mg tid	181.95
Fluconazole	200 mg q 24h	3.04	Sulfa/Trimethoprim DS	1 tab bid	0.25
Imipenem	500 mg q 8h	29.73	Vancomycin Capsule	125 mg qid	18.32
Isavuconazonium Sulfate	372 mg daily	275.89	Vancomycin oral solution	125 mg qid	3.33
Levofloxacin	500 mg q 24h	1.96	Voriconazole	250 mg qid	6.66
Linezolid	600 mg q 12h	53.52	Costs as of January 2018. Subject to change.	200 mg q 12h	17.82
Meropenem	1 gm q 8h	16.23			
Moxifloxacin	400 mg q 24h	30.81			
Posaconazole	300 mg daily	492.64			
Sulfa/Trimethoprim	10 ml q 8h	21.82			
Tigecycline	50 mg q 12h	278.62			
Vancomycin	1 gm q 12h	11.15			
Voriconazole (usual 4 mg/kg q12h)	200 mg	31.52			
Costs as of January 2018. Subject to change.					

GRAM POSITIVE COCCI Percent Susceptible	<i>Streptococcus pneumoniae</i>
Number of isolates	37
CLSI -1	Trimethoprim/sulfa
	Penicillin-oral (note C)
	Penicillin-IV meningitis (note C)
	Penicillin-IV nonmeningitis (note C)
	Clarithromycin
	Azithromycin
CLSI -2	Ceftriaxone-IV meningitis (note C)
	Ceftriaxone-IV nonmeningitis (note C)
	Vancomycin

Note C:

Penicillin - oral and IV meningitis: susceptible <0.06 µ/mL
Penicillin - IV non meningitis: susceptible < 2 µ/mL
Ceftriaxone – IV meningitis: susceptible <0.5 µ/mL
Ceftriaxone – IV non meningitis: susceptible <1 µ/mL

NOTES:

This report summarizes all tested antibiotics, but actual patient reports selectively exclude some susceptibility results.

ABBOTT NORTHWESTERN HOSPITAL-2017 ANTIMICROBIAL SUSCEPTIBILITIES

The 2017 Antimicrobial Susceptibility data is based on the current CLSI breakpoints. Prior to 2017, the 2009 breakpoints were used for Enterobacteriaceae. This change has resulted in a change in the % susceptible for some organism/antibiotic combinations.

GRAM NEGATIVE BACILLI Percent Susceptible		<i>Citrobacter</i> species	<i>Enterobacter</i> species	<i>Escherichia coli</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella</i> other species	<i>Proteus mirabilis</i>	<i>Serratia marcescens</i>
Number of isolates		98	187	1040	271	128	137	48
CLSI -1	Ampicillin	0	0	53	0	0	83	0
	¹ Cefazolin	*NA	*NA	*U 90 *NA	*U 92 *NA	*NA	*U 97 *NA	*NA
	Gentamicin	95	99	93	96	98	94	98
	Tobramycin	93	99	92	95	97	95	88
CLSI -2	Trimethoprim/sulfa	86	94	76	91	95	84	100
	Ampicillin/sulbactam	0	0	60	85	66	93	0
	Piperacillin/tazobactam	83	80	96	95	91	100	100 ²
	¹ Cefepime	96	91	93	94	98	99	96
	¹ Ceftriaxone	77	78	92	94	95	99	94
	Ciprofloxacin	92	97	79	95	99	80	94
	Levofloxacin	92	92	79	96	98	80	94
	¹ Imipenem	99	92	100	99	99	20	75 ²
CLSI -3	¹ Ceftazidime	77	81	93	94	98	99	96
CLSI -4	(Urines only)							
	Nitrofurantoin	91	50	96	43	81	0	0

*U-Urine for uncomplicated urinary tract infections with *E coli*, *K pneumoniae* & *P. mirabilis*

*NA-All other sources: For cefazolin, the % sensitive can only be ascertained on isolates of *E.coli*, *Klebsiella pneumoniae*, and *Proteus mirabilis* from uncomplicated UTIs. The cefazolin threshold for sensitive is <= 2 µg/ml for all other sources and Enterobacteriaceae. The lowest dilution for cefazolin on the Vitek antibiotic card is 4 µg/ml, thus no sensitive results can be determined by this method.

GRAM NEGATIVE BACILLI Percent Susceptible		<i>Pseudomonas aeruginosa</i>	<i>Stenotrophomonas maltophilia</i>
Number of isolates		309	41
CLSI -1	Ceftazidime	93	44
	Gentamicin	92	
	Tobramycin	97	
	Trimethoprim/sulfa		81
	Cefepime	95	
CLSI -2	Imipenem	91	
	Levofloxacin	84	88
	Ciprofloxacin	87	
	Piperacillin/tazobactam	90	

¹ Breakpoint changes in 2017.

² Low number tested; less statistical validity

Guide for Clinical and Laboratory Standards Institute (CLSI) groupings:

CLSI -1 First choice drugs for treatment

CLSI -2 Second choice drugs

CLSI -3 For treatment of patients allergic to primary drugs, treatment of unusual organisms, or if institution harbors endemic resistant strains.

CLSI -4 For urinary tract only.

GRAM POSITIVE COCCI Percent Susceptible		<i>Enterococcus</i>	<i>Staphylococcus aureus</i>	<i>Staphylococcus coagulase negative</i>	<i>Staphylococcus lugdunensis</i>	Streptococcus Group B
Number of isolates		517	783	386	71	52
CLSI -1	Oxacillin		70	48	92	
	Penicillin		20	14	59	100
	Cefazolin		70	47	93	
	Erythromycin		53	40	83	35
	Clindamycin		71	62	85	52
CLSI -2	Trimethoprim/sulfa		97	68	100	
	Ampicillin	91	-			100
	Ceftriaxone					100
	Tetracycline		94	88	94	
	Vancomycin	94	100	100	100	100
CLSI -3	Rifampin (note A)		99			
	Linezolid (note B)	100	100			
	Levofloxacin		71	65	100	
	Gentamicin		100	91	100	
	(Urines only)					
CLSI -4	Nitrofurantoin	90	100	100		
	Levofloxacin	71				

Note A: Rifampin should not be used alone for antimicrobial therapy.

Note B: Linezolid tested on critical isolates of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococcus* (VRE) only.