

Suggested Empiric Antimicrobial Agents of Choice In Hospitalized Adults

(11th Edition)

Aspirus Wausau Hospital
2018 - 2020

Antimicrobial Stewardship
Subcommittee

&
Pharmacy and Therapeutics
Committee



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# ISOLATES	ASPIRUS REFERENCE LAB ANTI-BIOGRAM REPORTED AS % SUSCEPTIBLE JAN.2017-DEC.2017 GRAM-POSITIVE COCCI	Ampicillin	Oxacillin	Penicillin	Ceftriaxone	Clindamycin	Erythromycin	Levofloxacin	Gentamicin*	Nitrofurantoin	Rifampin*	Tetracycline	TMP/SMX	Vancomycin
69	<i>Enterococcus faecium</i>	29		26					SYN 88	35		36		57
1129	<i>Enterococcus faecalis</i>	100							SYN 69	98		21		100
2432	<i>Staphylococcus aureus</i>		67			74	52	69	99	99	100	92	97	100
1628	MSSA (67% of <i>Staph aureus</i>)		100			81	70	89	100	99	100	95	98	100
804	MRSA (33% of <i>Staph aureus</i>)		0			58	16	29	98	98	99	87	94	100
208	<i>Staphylococcus coag negative</i>		71	25		67	49	78	96	99	99	79	89	100
493	<i>Staphylococcus epidermidis</i>		49	10		70	41	59	90	99	99	88	59	100
255	<i>Staphylococcus lugdunensis</i>		91	53		83	84	99	100	100	100	96	99	100
261	<i>Staphylococcus saprophyticus</i>		56			71	39	100	100	100	100	91	95	100
114	<i>Streptococcus agalactiae</i> (GrpB)			100	41					100		13		100
72	<i>Streptococcus pneumoniae</i>					44	100					80		100
	71 Non-meningitis			98	94									
	1 Meningitis^			100	100									

CY 2017 **Haemophilus influenzae** n=122, **41% Beta-lactamase positive**
*Should not be used alone to treat staphylococcal infections
SYN: Synergy with Ampicillin or Vancomycin
^Strep pneumoniae Meningitis breakpoints are lower than pneumonia/bacteremia

# ISOLATES	ASPIRUS REFERENCE LAB ANTI-BIOGRAM REPORTED AS % SUSCEPTIBLE JAN.2017-DEC.2017 GRAM-NEGATIVE BACILLI	Ampicillin	Amp/Sul	Pip/Tazo	Aztreonam	Cefazolin	Ceftriaxone	Ceftazadime	Cefepime	TMP/SMX	Levofloxacin	Gentamicin	Tobramycin	Nitrofurantoin	Ertapenem	Meropenem
242	<i>Citrobacter freundii</i>			88	88		88	86	99	84	91	90	94	90	99	99
163	<i>Enterobacter aerogenes</i>			94	94		96	93	99	98	96	98	98	29	99	100
345	<i>Enterobacter cloacae</i> complex			87	90		89	89	98	89	97	99	100	41	97	98
8232	<i>Escherichia coli</i>	65	69	97	96	90	95	95	96	85	85	94	95	97	100	100
303	<i>Klebsiella oxytoca</i>		62	94	95	62	97	98	98	96	98	97	97	89	100	100
1334	<i>Klebsiella pneumoniae</i>		88	97	98	96	98	98	98	93	98	98	99	40	100	100
604	<i>Proteus mirabilis</i>	78	84	100	98	91	98	98	98	69	65	77	78		100	100
575	<i>Pseudomonas aeruginosa</i>			98			95	96	96	81	97	100			97	
91	<i>Serratia marcescens</i>				99		99	99	99	99	98	88			99	99
32	<i>Acinetobacter baumannii</i>		97				78			97	97	97				100

Intravenous Antimicrobial Renal Dose Adjustments					
Antimicrobial	Usual Dose	CrCl 50-30mL/min	CrCl 30-10mL/min	CrCl < 10mL/min	HD*
Ampicillin	1-2g q4-6h	1-2g q6-8h		1-2g q8-12h	HD: 1-2g q8-12h
Ampicillin/Sulbactam	1.5-3g q6h	1.5-3g q6-8h	1.5-3g q12h	(<15 mL/min) 1.5-3g q24h	HD: 1.5-3g q24h (post HD)
Aztreonam	1-2g q8h	1-2g q8h	1-2g q12h	1-2g q24h	HD: 1-2g q24h (post HD)
Cefazolin	1-2g q8h		(<35 mL/min) 0.5-1g q12h	1 g q24h	HD: 1g q24h (post HD)
Cefepime	1g q6h	(60-30mL/min) 1g q8h	1g q12h	1g q24h (post HD)	
Cefepime (Neutropenic fever)	2g q8h	(60-30mL/min) 2g q12h	1g q12h	1g q24h (post HD)	
Ciprofloxacin	400mg q12h		400 mg q24h		HD: 400mg q24h (post HD)
Ciprofloxacin (Pseudomonas, critically ill)	400mg q8h		400 mg q12h	400 mg q24h	HD: 400mg q24h (post HD)
Ertapenem	1g q24h		500mg q24h		HD: 500mg q24h (post HD)
Fluconazole	100-400mg q24h	50% of dose q24h			HD: 50% of dose q24h (post HD)
Levofloxacin	500mg q24h	(50-20mL/min) 500mg x1, then 250mg q24h	(20-10mL/min) 500mg x1, then 250mg q48h	500mg x1, then 250mg q48h	
Levofloxacin (Nosocomial PNA, skin, intraabdominal, pyelo)	750mg q24h	(50-20mL/min) 750mg q48h	(20-10mL/min) 750mg x1, then 500mg q48h	750mg x1, then 500mg q48h	
Meropenem	500mg q6h	(50-26 mL/min) 500mg q8h	(25-10 mL/min) 500mg q12h	500mg q24h	HD: 500mg q24h (post HD)
Penicillin G	2-4 mU q4	1-3 mU q4h		1-2 mU q6h	HD: 1-2 mU q6h
Piperacillin/Tazobactam (Extended-infusion)	3.375g q8h	3.375g q8h	(<20mL/min) 3.375g q12h	3.375g q12h	
TMP/SMX (Dose based on TMP)	5mg/kg q12h		5mg/kg q24h (post HD)		
TMP/SMX (Dose based on TMP, PCP treatment)	5 mg/kg q6-8h		2.5 mg/kg q6-8h	2.5 mg/kg q8h	HD: 2.5 mg/kg q8h
Amikacin, Gentamicin Tobramycin, Vancomycin	Dosing per pharmacy				
*For antimicrobials dosed every 24 hours in patients on hemodialysis, doses should be administered after dialysis on dialysis days. Alternatively, all doses may be administered once daily in the evening to ensure administration after dialysis on dialysis days.					

- 10% of patients report a PCN allergy, but only 1% are found to be real.
- Over time patients lose their Type I allergy to PCNs. After 10 years, 80% of patients won't have the allergy anymore.
- Cross-reactivity between beta-lactams is associated with similar or identical side chains. The cross-reactivity table above can be used to identify beta-lactam antibiotics to AVOID administering to patients with reported allergies due to similar/identical side chains. Find the agent the patient is allergic to in the first column. Avoid administering any of the agents with similar/identical side chains in the row following it. If an agent is not listed as being similar/identical to the patient's allergen then it can be safely administered as cross-reactivity between PCNs and cephalosporins or PCNs and carbapenems is <1%.
- o For example, a patient with a Type I allergy of rapid-onset hives to amoxicillin should NOT receive cephalexin as they have similar R1 side chains. Ceftriaxone, with a dissimilar side chain, would be a good choice.