

Suggested Empiric Antimicrobial Agents of Choice In Hospitalized Adults

(13th Edition)

Aspirus System 2022

System Antimicrobial Stewardship Subcommittee
System Pharmacy and Therapeutics Committee

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Recommended Treatment Durations – Shorter is Better!		
INFECTION	DURATION	
Genitourinary Tract Infections		
Uncomplicated UTI (uUTI)	3 – 7 days (relative to antibiotic)	TMP/SMX = 3 days Nitrofurantoin = 5 days Beta-lactam = 3 – 7 days
Pyelonephritis, Complicated UTI (cUTI)	5 – 14 days (relative to antibiotic)	Levofloxacin = 5 days Ciprofloxacin = 7 days TMP/SMX = 7 – 14 days Beta-lactam = 10 – 14 days
Catheter-Associated UTI (CA-UTI)	3 – 14 days (relative to patient)	3 – 5 days women ≤ 65 yo without upper urinary symptoms, after catheter removal. 7 days with swift symptom resolution. 10 – 14 days if delayed clinical response.
Gastrointestinal Infections		
Complicated Intra-abdominal Infection (cIAI)	4 – 7 days	4 days after source control, with adequate clinical response (afebrile for >24hr, WBC < 11, and consumption of more than half of patient's regular diet w/out adverse events) 7 days if NO source control.
Spontaneous Bacterial Peritonitis (SBP)	5 days	
Diverticulitis	5 – 7 days	
Clostridioides difficile (C. diff)	10 days	
Sepsis		
Severe Sepsis and Shock	Unknown source	7 – 10 days (with clinical improvement)
Bloodstream Infections		
Uncomplicated Gram-negative Rod Bacteremia	7 – 14 days	<u>Uncomplicated</u> : no uncontrolled focus of infection, immunocompetent, afebrile for at least 48 hours and hemodynamically stable by day 7 of antibiotics.
Staphylococcus aureus Bacteremia		<u>Uncomplicated</u> : 14 days minimum from first negative BCx. (no metastatic infection, negative echo, no implanted prostheses, no fever within 72 hours of active antibiotics, and negative repeat BCx 2 – 4 days after initial <u>Complicated</u> : 4 – 8 weeks from first negative blood cultures depending on source of infection.
Catheter-Related Bloodstream Infections	5 days – 8 weeks depending on type of catheter, removal, and organism.	
Endocarditis	2 – 8 weeks dependent on organism, valve, and presence of additional metastatic infection.	
Candidemia	14 days after first blood cultures negative.	

** Procalcitonin can be used to shorten the duration of antibiotics. Consider stopping antibiotics if the procalcitonin value falls to < 20% of the previous peak level or a subsequent value drops to less than 0.25 ng/mL and is accompanied by clinical improvement.**

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Recommended Treatment Durations – Shorter is Better!		
INFECTION	DURATION	
Skin and Skin Structure Infections		
Cellulitis	5 – 10 days	5 days if no progression at day 5. 5 – 10 days if not improved at day 5.
Purulent Including Abscess	5 – 10 days	7 – 14 days if febrile neutropenia patient.
Animal Bite	5 – 10 days	5 – 10 days if cellulitis and/or abscess.
Diabetic Foot Infection	<i>Soft Tissue ONLY</i>	mild soft tissue: 5 – 14 days (only skin/tissue and erythema >0.5cm and ≤ 2 cm) moderate: 7-21 days (skin/soft tissue and erythema >2cm, or deep infection, and NO SIRS) severe: 14-28 days (moderate criteria and ≥ 2 SIRS)
	<i>Soft Tissue AND Bone Involved</i>	2 – 5 days s/p clean amputation with NO residual tissue. 1 – 3 weeks s/p amputation with residual soft tissue (all infected bone removed). 4 – 6 weeks s/p amputation with residual tissue AND viable but infected bone. >12 wks if no amputation or s/p amputation with residual dead bone.
Musculoskeletal Infections		
Acute Osteomyelitis	28 – 56 days (4 – 8 weeks)	
Chronic Osteomyelitis	42 – 84 days (6 – 12 weeks)	
Septic Arthritis	14 – 28 days (2 – 4 weeks)	
Lower Respiratory Tract Infections		
Community-Acquired Pneumonia (CAP)	5 – 7 days	5 days with clinical improvement (afebrile for 48-72 hours, requires no supplemental oxygen above baseline, and has one or less abnormal vital sign: HR > 100, RR > 24, SBP ≤ 90) No more than 5 days of azithromycin is needed. 7 days if MRSA or <i>Pseudomonas aeruginosa</i> as source.
Nosocomial Pneumonia (HAP/VAP)		7 days (even for MRSA and <i>Pseudomonas</i>)
Acute Exacerbation of Chronic Bronchitis (AECB)	5 – 7 days	No more than 5 days of azithromycin needed. Indications for antibiotics: severe acute exacerbations with increased cough, sputum volume and sputum purulence.
Nervous System Infections		
Community-Acquired Meningitis		<i>Streptococcus pneumoniae</i> = 10 – 14 days <i>Neisseria meningitidis</i> = 7 – 10 days <i>Haemophilus influenzae</i> = 7 – 10 days <i>Listeria monocytogenes</i> = 14 – 21 days Enterobacteriaceae = 14 – 21 days HSV-1 = 14 – 28 days
Post-Neurosurgical Meningitis		14 – 28 days

Aspirus Reference Laboratory Antibiogram Jan. 2021 - Dec. 2021
All Sources

# OF ISOLATES	GRAM NEGATIVE BACILLI REPORTED AS % SUSCEPTIBLE: JAN.2021 - DEC.2021	Ampicillin	Ampicillin/ Sulbactam	Piperacillin/ Tazobactam	Aztreonam	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	TMP/SMX	Levofloxacin	Gentamicin	Tobramycin	Nitrofurantoin	Ertapenem	Meropenem
35	<i>Acinetobacter</i> sp.		100	85				26	71	91	91	91	97	97		94
218	<i>Citrobacter freundii</i>			86	87			86	85	99	91	97	98	99	99	99
122	<i>Enterobacter (Klebsiella) aerogenes</i>			90	94			95	92	99	100	100	100	20	99	99
363	<i>Enterobacter cloacae complex</i>			88	87			86	86	99	91	99	99	30	99	99
7548	<i>Escherichia coli</i>	66		73	98	96	93	96	96	97	86	90	95	97	100	100
303	<i>Klebsiella oxytoca</i>			55	95	93	61	95	96	96	100	98	97	87	100	100
1011	<i>Klebsiella pneumoniae</i>			88	99	97	95	97	97	93	98	98	98	30	100	100
146	Other <i>Klebsiella</i> sp.			97	99	99	99	99	99	99	99	99	99	57	100	100
539	<i>Proteus mirabilis</i>	84		89	100	97	95	97	97	82	81	88	89		100	100
702	<i>Pseudomonas aeruginosa</i>			95				94	95		88	97	99		100	98
105	<i>Serratia marcescens</i>						99		99			99				100

# OF ISOLATES	GRAM POSITIVE COCCI REPORTED AS % SUSCEPTIBLE: JAN.2021-DEC.2021	Ampicillin	Oxacillin	Penicillin	Ceftriaxone	Clindamycin	Erythromycin	Levofloxacin	Gentamicin*	Nitrofurantoin	Rifampin*	Tetracycline	TMP/SMX	Vancomycin
61	<i>Enterococcus faecium</i>	41		36					86 SYN	33		38		72
786	<i>Enterococcus faecalis</i>	100		99					78 SYN	99		27		100
2465	<i>Staphylococcus aureus</i>		74			81	61	79	99	100	100	93	98	100
1818	MSSA (74% of <i>Staph aureus</i>)		100			85	75	91	96	99	100	94	99	100
647	MSSA (26% of <i>Staph aureus</i>)		0			69	16	42	99	99	99	85	93	100
87	<i>Staphylococcus coag negative</i>		71	46		63	52	85	99	99	100	90	96	100
452	<i>Staphylococcus epidermidis</i>		50	14		81	41	70	93	100	99	82	66	100
114	<i>Staphylococcus lugdunensis</i>		89	46		89	88	97	100	100	100	96	100	100
83	<i>Streptococcus agalactiae</i> (Grp B)		100			40						21		100
	<i>Streptococcus pneumoniae</i>					88	48	100				85		100
41	41 Non-Meningitis 0 Meningitis ^a			97	97									

CY 2021 *Haemophilus influenzae* 63 12% beta lactamase positive
*Should not be used alone to treat staphylococcal infections
SYN: Synergy with Ampicillin or Vancomycin
^a*Strep pneumoniae* Meningitis breakpoints are lower than pneumonia/bacteremia

