

## Carolina Antimicrobial Stewardship Program

# Best Practices for Duration of Antimicrobial Therapy for the Most Common Infectious Syndromes

Too often, patients receive longer-than-needed antimicrobial treatment for common infections, when a shorter duration would be equally effective.

Duration recommendations are provided as a general guideline for therapy (IV or PO) with a goal of minimizing unintended consequences to the patient (e.g., precipitating *C. difficile* colitis, development of resistant pathogens, organ dysfunction). Patient-specific factors should influence duration decisions and transition to oral therapy.

### Content

The evidence-based durations are divided into two tables:

1. Adult Durations for Common Conditions
2. Pediatric Durations for Common Conditions

### Questions?

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This document is intended for educational purposes and does not replace the medical decision and diagnosis of a treating provider. Although we have made a good faith effort to provide accurate information as of the date of creation, we make no representation or warranty regarding its accuracy and have no obligation to update the guidelines as new medical information becomes available.

Infectious Diseases consultation recommended if diagnosis is not established or if patient does not respond to recommended therapies. These recommendations may not be appropriate for patients with significant immunocompromise (e.g., recent burn, transplant, or hematologic cancer).  
Developed by UNC Hospitals Carolina Antimicrobial Stewardship Program  
Approved by Anti-infective P&T Subcommittee and ACS-PPC August 2020; Updated May 2023

**Table 1: Adult Durations for Common Conditions**

SYNDROME	DURATION	COMMENTS	EVIDENCE
<b>Lower respiratory tract infection</b>			
Acute bronchitis	0 days (do not treat, 90% of cases are viral)		
Tracheitis	0 days (do not treat, treatment is not associated with clinical benefit)		
Community-acquired (CAP)	5 days minimum	Consider IV to PO switch if patient <38°C for 48-72 hours and no more than 1 CAP-associated sign of clinical instability	CAP, IDSA (CID 2007;4(S2):S27
Hospital-associated (HAP)	7 days		HAP/VAP, IDSA (CID 2016;63:e61)
Ventilator-associated (VAP)	7 days		
Acute exacerbation of COPD and chronic bronchitis	5 days	Reserve antibiotics for patient with acute exacerbation with physiologic compromise on top of chronic bronchitis or for COPD for patients with physiologic compromise, and worsening sputum purulence and either increased dyspnea or frequency of cough.	Bronchitis/COPD, HEDIS <a href="#">(link)</a> , Am Fam Physician 2016; 94:560-65.
<b>Skin and Soft Tissue</b>			
Cellulitis and/or cutaneous abscesses (e.g., boils/furuncles)	5 days	All fluid collections and abscesses should be drained/debrided. Antibiotic therapy may not be needed for cutaneous abscess without surrounding cellulitis.	IDSA (CID 2014;59:e10-e52)
<b>Urinary Tract</b>			
Asymptomatic bacteriuria	0 days	Do not treat unless patient is pregnant or undergoing urologic procedure or manipulation.	IDSA (CID 2019;see IDSA web page)
Cystitis	5 days, nitrofurantoin 3 days, TMP/SMX 1 day, fosfomycin 4-7 days, oral beta-lactam		IDSA (CID 2011;52:e103e120)
Pyelonephritis	5-7 days (10-14 days if slow clinical response)	Appropriate for complicated and uncomplicated populations. Source control if appropriate; remove or replace urinary catheters.	IDSA (CID 2011;52:e103e120)
Pyelonephritis with bacteremia	7 days	<i>Enterobacteriaceae</i> from urinary source	CID 2019;69: 1091-1098.

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**Table 1: Adult Durations for Common Conditions, continued**

SYNDROME	DURATION	COMMENTS	EVIDENCE
<b>Central Nervous System Infections</b>			
Brain abscess Subdural empyema Spinal epidural abscess	6 weeks	<b>ID consult highly recommended.</b> Final duration guided by clinical response and re- imaging (e.g., CT, MRI).	Consensus*
Encephalitis, Herpes simplex 1 or 2	14-21 days	<b>ID consult highly recommended.</b>	IDSA (CID, 2008;47:303)
Meningitis		<b>ID consult highly recommended.</b> Do not obtain lumbar puncture for test of cure	IDSA (CID 2004;1267-1284)
<i>Neisseria meningitides</i>	7 days		
<i>Haemophilus influenzae</i>	7 days		
<i>Streptococcus pneumoniae</i>	10-14 days		
<i>Streptococcus agalactiae</i>	14-21 days		
Aerobic GNR	21 days		
<i>Listeria monocytogenes</i>	≥ 21 days		
<b><i>Clostridioides difficile</i> infection</b>	10 days	Obtain test only if ≥3 watery stools in past 24 hours plus no laxatives in 48 hours. Discontinue offending antibiotics, if possible. Do not order test of cure.	CDC, IDSA (CID 2018;66:e1)
<b>Diabetic Foot Infections</b>			
Soft tissue only, mild	1 week	Follow-up recommended to assess response to therapy (i.e., resolution of purulence, erythema, and induration; presence of ulcer is not indication for continued therapy). Consider oral therapy for mild or moderate infection.	Consensus* IDSA (CID, 2012;54:132)
Soft tissue only, moderate	1-2 weeks		
Soft tissue only, severe	2 weeks		
<b>Endocarditis</b>	2-6 weeks based on pathogen, therapy and presence of prostheses	<b>ID consult highly recommended.</b>	IDSA (Circulation 2015;132:1435- 86)
<b>Intra-abdominal</b>			
Hemodynamically stable patients following source control procedure	4 days		IDSA (CID 2010;50;133-64); NEJM 2015;372:1996-2005
Patients without source control or hemodynamically unstable	≥ 4 days	Recommend ID consult; longer durations may be required.	IDSA (CID 2010;50;133-64)

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**Table 1: Adult Durations for Common Conditions, continued**

SYNDROME	DURATION	COMMENTS	EVIDENCE
<b>Osteomyelitis</b>		<b>ID consult highly recommended.</b>	
<i>S. aureus</i>	6 weeks	May consider 1-3 months of rifampin-based combination therapy following initial 6 weeks; consider prolonged therapy for chronic infection or if debridement not performed.	Consensus*
Other bacterial pathogens	4 weeks from last major operative debridement		Consensus*
Vertebral	6 weeks		IDSA (CID 2015;61:e26-e46)
Amputation with all infected tissue removed	24-48 hours		Consensus*
Amputation with residual infected tissue and bone	6 weeks		Consensus*
<b>Pharyngitis, streptococcal</b>	5 days: azithromycin		IDSA (CID, 2012;55:e86)
	10 days: $\beta$ -lactam, clindamycin, clarithromycin		
<b>Septic Arthritis (no prosthetic or hardware involved)</b>		<b>ID consult highly recommended.</b>	
Gonorrhea	7 days		
Other bacterial pathogens	3 weeks	May change to oral therapy after 1 week	
<b>Tick-Borne Diseases</b>			
Rocky Mountain spotted fever	5-7 days (at least 3 days after cessation of fever)	Doxycycline is the first-line therapy for adults (including pregnant patients) and children of all ages.	CDC (see web pages)
Ehrlichiosis	5-7 days (at least 3 days after cessation of fever)		
Anaplasmosis	10-14 days		

CDC, Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)); CID, Clinical Infectious Diseases; COPD, chronic obstructive pulmonary disease; GNB, Gram-negative bacilli; IDSA, Infectious Disease Society of America ([idsociety.org](http://idsociety.org))

\*"Consensus" reflects review of current clinical data by the UNC Antimicrobial Stewardship Program

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**Table 2: Pediatric Durations for Common Conditions**

SYNDROME	DURATION	COMMENTS	EVIDENCE
<b>Neonatal Group B Streptococcal Infections (0-2 months of age)</b>			
Urinary tract infection without meningitis	10 days	<b>ID consult highly recommended.</b> Meningitis must be definitively ruled out to use shorter durations.	AAP Red Book 2021: “Group B Streptococcal Infections”
Bacteremia without meningitis	10 days		
Meningitis	14->21 days		
Septic arthritis and/or osteomyelitis	3-4 weeks		
<b>Central Nervous System Infections</b>			
Brain abscess Subdural empyema Spinal epidural abscess <i>Meningitis (see below)</i>	6 weeks	<b>ID consult highly recommended.</b> Final duration guided by clinical response and re-imaging (e.g., CT, MRI)	Consensus*
<b>Neonatal HSV Infection</b>			
Skin, eyes, mucous membranes (SEM)	14 days	<b>ID consult highly recommended.</b> For CNS disease, documentation of HSV clearance from CSF is recommended prior to antiviral discontinuation.	AAP Red Book 2021: “Herpes Simplex”
Disseminated Central nervous system (CNS)	21 days ≥ 21 days		
<b><i>Clostridioides difficile</i> infection</b>	10 days (refer to adult guidelines above)	Obtain test only if ≥3 watery stools in past 24 hours plus no laxatives in 48 hours. Discontinue offending antibiotics, if possible. Do not order test of cure.	CDC, IDSA (CID 2018;66:e1)
<b>Endocarditis</b>	2-6 weeks based on pathogen, therapy and presence of prostheses	<b>ID consult highly recommended.</b>	IDSA (Circulation 2015;132:1435-86)
<b>Pediatric Community-acquired Pneumonia (CAP)</b>	5 days	Longer courses may be required for complicated CAP	Local guidelines: “Pediatric CAP” in the <a href="#">UNC Children’s Clinical Care Portal</a> JAMA Pediatr 2021;175:475-82. IDSA (CID 2011; 53(7)) <a href="#">JAMA</a> . 2021; 326: 1713–1724. <a href="#">JAMA Pediatr</a> 2022; 176: 1–9.

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**Table 2: Pediatric Durations for Common Conditions, continued**

SYNDROME	DURATION	COMMENTS	GUIDELINE
<b>Healthcare-associated Respiratory Infections</b>			
Ventilator-associated pneumonia	Refer to adult guidelines above, “Lower respiratory tract infections”		HAP/VAP, IDSA (CID 2016;63:e61)
Healthcare-associated pneumonia			
Tracheitis			
<b>Bacterial Meningitis (≥3 months of age)</b>	Refer to adult guidelines above	<b>ID consult highly recommended.</b>	IDSA (CID 2004;1267-1284)
<b>Pediatric Musculoskeletal Infections</b>			
Osteomyelitis	4-6 weeks	<b>ID consult highly recommended.</b> Duration dependent upon response to therapy.	Local guidelines: “Pediatric Musculoskeletal Infection” in the <a href="#">UNC Children’s Clinical Care Portal</a>
Septic arthritis	3-4 weeks		
Pyomyositis	3 weeks		
<b>Tick-Borne Infections</b>	Refer to adult guidelines above.		CDC (see web pages)
<b>Urinary Tract Infections (≥2 months of age)</b>			
Febrile UTI, children ≤12 years	7 days	Longer durations of 10-14 days may be needed with significant functional and/or anatomic abnormalities of the urinary tract.	Pediatrics 2011 Sep;128(3):595-610 JAMA Netw Open. 2020 1;3(5):e203951. Pediatrics. 2021 ;147(2):e2020012138.
UTI without fever, children ≤12 years	3-5 days		
UTI, child >12 years of age	Refer to adult guidelines above	Consult Pediatric ID if concern for abscess.	
<b>Pediatric Appendicitis</b>			
Uncomplicated (no perforation)	Discontinue after appendectomy	For perforated appendicitis, transition to PO antibiotics is acceptable if meeting discharge criteria. See guidelines.	Local guidelines: “Pediatric Appendicitis Pathway” in the <a href="#">UNC Children’s Clinical Care Portal</a>
Perforated	7 days		

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SYNDROME	DURATION	COMMENTS	GUIDELINE
<b>Acute Otitis Media</b>			
≤2 years	10 days	Consider watchful waiting as first-line therapy in the appropriate patient (i.e., >2 years old with AOM without otorrhea or ≤2 years old with unilateral AOM without otorrhea)  Ceftriaxone indicated only after failure of amoxicillin-clavulanate or oral third-generation cephalosporin or in patient who is truly intolerant of oral antibiotics. Duration is 1-3 days if using ceftriaxone.	Pediatrics 2013;131:e964–e999
2-5 years	7 days		
≥6 years	5-7 days		
<b>Skin and Soft Tissue Infection</b>			
Cellulitis or drained abscess	5 days	Refer to adult guideline. ID consultation recommended for more complicated infections.	
Staphylococcal scalded skin syndrome	7 days		
<b>Streptococcal pharyngitis</b>	Beta-lactam, clindamycin: 10 days Azithromycin: 5 days	Beta-lactams (penicillin or amoxicillin) are first-line therapy.	IDSA (CID, 2012;55:e86)

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