Targeted duration of antibiotic therapy for select pediatric infections

Recommendations are provided as a general guideline with a goal of targeting the shortest effective duration of therapy. When published literature was absent, recommendations were based on expert opinion. Not all diagnoses are included. Patient specific factors (e.g., immunocompromised) may require modifications. Guidelines are not intended to replace clinical judgment. For patient specific questions, contact Infectious Diseases or Antimicrobial Stewardship.

INFECTION	RECOMMENDED DURATION
CENTRAL NERVOUS SYSTEM	
Bacterial meningitis[1]	
Neisseria meningitides	7 days
Haemophilus infuenzae	7 days
Streptococcus pneumoniae	10-14 days
Group B streptococcus	14 days (uncomplicated; complicated may require longer)
Gram-negative bacilli	21 days
Listeria monocytogenes	≥ 21 days
Brain abscess or empyema[2]	Variable (guided by extent of surgical drainage and response to therapy); usual range 4-8 weeks
UPPER RESPIRATORY TRACT	
Acute otitis media[3]	
< 2 years old (or severe symptoms)	10 days
> 2 years old	5 days
Mastoiditis[4]	2-4 weeks (depends on adequate debridement, intracranial extension, extent of osteomyelitis)
Retropharyngeal abscess[4]	14 days (longer if insufficient source control)
Periorbital/preseptal cellulitis[4]	5-10 days (or until resolution of inflammation)
Sinusitis (uncomplicated)[4]	5-7 days
Orbital cellulitis (uncomplicated)[4]	14 days
Orbital cellulitis (with abscess or bone involvement)	21-28 days
Pharyngitis (group A streptococcus)[5]	10 days (enteral therapy); 3 days (IM/IV ceftriaxone)
LOWER RESPIRATORY TRACT	
Tracheitis[6]	3-5 (maximum) days
Aspiration pneumonia[7-9]	5 days; antibiotic therapy not recommended unless symptoms last beyond 48 hours after initial event
Community acquired pneumonia[4,8-9]	
Uncomplicated, outpatient	5 days
Uncomplicated, inpatient	5-7 days
Complicated (empyema, necrotizing)	Based on severity and response; range 10-28 days
Hospital acquired / ventilator associated pneumonia[10]	7 days
SKIN AND SOFT TISSUE	
Cellulitis[11]	5 days appropriate for most patients; may extend to 7-10 days if severe or slow to improve
Abscess[11]	If antibiotic indicated: 5-7 days
Infected bite wound[12]	7-10 days
Staphylococcal scalded skin syndrome[13]	7-10 days

GENITOURINARY TRACT	
Cystitis[14]	
2 months to < 2 years old	10 days
2 years to 12 years old	5 days
≥ 12 years old	3 days
Pyelonephritis[14]	10 days
Pelvic inflammatory disease[15]	14 days
INTRA-ABDOMINAL	
Complicated appendicitis[16]	4-7 days
Intra-abdominal abscess[16]	4-7 days (longer if insufficient source control)
Necrotizing enterocolitis[17]	7-14 days depending on staging
Acute cholangitis	Duration depends on clinical improvement
BONE AND JOINT (WITHOUT HARDWARE)	
Osteomyelitis (acute, hematogenous)[4,18]	Depends on clinical response; minimum 3-4 weeks
Septic arthritis[4]	Depends on clinical response; minimum 2-3 weeks
CARDIOVASCULAR	
Mediastinitis	Depends on clinical response; usual range 4-6 weeks
Endocarditis[19-20]	Depends on pathogen, therapy selected, and presence of prostheses. ID consult recommended.
SEPSIS, NON-FOCAL	
Culture negative sepsis	5-7 (maximum) days
Febrile neonate[21]	Rule out period 24-36 hours; if infection diagnosed, see appropriate duration in other sections
DEVICE-RELATED INFECTIONS	
Catheter-associated peritonitis[22]	Depends on clinical response; usual 14 days
Catheter-associated urinary tract infection[23]	Prompt resolution of symptoms: 7 days Delayed response: 10-14 days
UTI w/ stent or nephrostomy tube in place	14 days
Catheter-associated bloodstream infection[24]	Note: day 1 is typically considered first day of negative cultures
Uncomplicated*	
Coagulase-negative staphylococci	Catheter removed: 5-7 days Catheter retained: 10-14 days
Staphylococcus aureus	10-14 days Remove catheter if possible
Enterococcus sp. *Streptococcus* sp.	Catheter removed: 7 days Catheter retained: 10 days
Gram-negative bacilli	Catheter removed: 7 days Catheter retained: 10-14 days
Candida sp.	Remove catheter and treat 14 days
Complicated, any organism	Variable, range 4-6 weeks
CSF shunt infection (bacterial)[25]	7-21 days depending on type of shunt and pathogen

* Uncomplicated: cultures and fever resolve within 72 hours, no intravascular hardware, no evidence of endocarditis or suppurative thrombophlebitis, immunocompetent

References

1. Tunkel AR, Hartman BJ, Kaplan SL, et al. Practice guidelines for the management of bacterial meningitis. Clin Infect Dis 2004;39:1267-84.
2. Pfister HW, Klein M, Tunkel AR, Scheld WM. Epidural abscess. In: Infection of the Central Nervous System, Fourth Edition. Wolters Kluwer Health, Philadelphia 2014. p550.
3. Lieberthal AS, Carroll AE, Chonmaitree T, et al. The diagnosis and management of acute otitis media. Pediatrics 2013;131(3):e964-99.
4. American Academy of Pediatrics. In: Kimberlin DW et al. Red Book: 2024-2027 Report of the Committee on Infectious Diseases. 33rd ed. Elk Grove Village, IL. AAP; 2024.
5. Shulman ST, Bisno AL, Clegg HW, et al. Clinical practice guideline for the diagnosis and management of group a streptococcal pharyngitis: 2012 update by the Infectious Diseases Society of America. Clin Infect Dis. 2012;55(10):e86-e102.
6. Tamma PD, Turnbull AE, Milstone AM, et al. Ventilator-associated tracheitis in children: does antibiotic duration matter? Clin Infect Dis 2011;52(11):1324-1331.
7. Streck HL, Goldman JL, Lee BR, et al. Evaluation of the treatment of aspiration pneumonia in hospitalized children. JPIDS 2022;11(3):102-107.
8. Bradley JS, Byington CL, Shah SS, et al. The management of community-acquired pneumonia in infants and children older than 3 months of age: clinical practice guidelines by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America. Clin Infect Dis 2011;53(7):e25-76.
9. Pernica JM, Harman S, Kam AJ, et al. Short-course antimicrobial therapy for pediatric community-acquired pneumonia: the SAFER randomized clinical trial. JAMA Pediatr 2021;175:475-482.
10. Kalil AC, Metersky ML, Klompas M, et al. Management of adults with hospital-acquired and ventilator-associated pneumonia: 2016 clinical practice guidelines by the Infectious Diseases Society of American and the American Thoracic Society. Clin Infect Dis 2016;63(5):e61-111.
11. Stevens DL, Bisno AL, Chambers HF, et al. Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America. Clin Infect Dis 2014;59(2):e10-52.
12. Lawrence I. Antibiotic treatment essential for human and animal bites. Emergency Medicine News 2004;26(13):16-18.
13. Patel GK. Staphylococcal scalded skin syndrome: diagnosis and management. Am J Clin Dermatol 2003;4(3):165-175.
14. Refer to Children's Wisconsin system-wide UTI guideline available at: https://connect.chw.org/-/media/intranet/Patient-Care/files/clinical-guidelines/Clinical-Pathways/UTI-Pathway.ashx?la=en; accessed 4/15/2022.
15. Refer to the Centers for Disease Control and Prevention Sexually Transmitted Infections Treatment Guidelines, 2021 available at: https://www.cdc.gov/std/treatment-guidelines/pid.htm; accessed 4/15/2022.
16. Solomkin JS, Mazuski JE, Bradley JS, et al. Diagnosis and Management of Complicated Intra-abdominal Infection in Adults and Children: Guidelines by the Surgical Infection Society and the Infectious Diseases Society of America. Clin Infect Dis. 2010;50(2):133-164.
17. See Children's Wisconsin general surgery application for treatment duration based on staging
18. Woods CR, Bradley JS, Chatterjee A, et al. Clinical practice guideline by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America: 2021 guideline on diagnosis and management of acute hematogenous osteomyelitis in pediatrics. JPIDS 2021;10(8):801-844.
19. Baddour LM, Wilson WR, Bayer AS, et al. Infective endocarditis in addults: diagnosis, antimicrobial therapy, and management of complications. Circulation 2015;132(15):1435-1486.
20. Baltimore RS, Gewitz M, Baddour LM, et al. Infective endocarditis in childhood: 2015 update. Circulation 2015;132(15):1487-1515.
21. Pantell RH, Roberts KB, Adams WG, et al. Clinical practice guideline: evaluation and management of well-appearing febrile infants 8 to 60 days old. Pediatrics 2021;148(2):e2021052228.

22. Kam-Tao Li P, Chun Szeto C, Piraino B, et al. ISPD peritonitis recommendations: 2016 update on prevention and treatment. Perit Dial Int 2016;36(5):481-508.
23. Hooton TM, Bradley SF, Cardenas DD, et al. Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: 2009 international clinical practice guideline from the Infectious Diseases Society of America. Clin Infect Dis 2010;50(5):625-663.
24. Mermel LA, Allon M, Bouza E, et al. Clinical practice guidelines for the diagnosis and management of intravascular catheter-related infection: 2009 update by the Infectious Diseases Society of America. Clin Infect Dis 2009;49(1):1-45.
25. Wells DL and Allen JM. Ventriculoperitoneal shunt infections in adult patients. AACN Adv Crit Care. 2013;24(1):6-12.

Resources are intended for informational purposes only. Resources are current at the date of publication and reviewed on a regular basis to align with best available evidence. It is not intended to establish a protocol for all patients or replace a clinician's judgment. Adherence to this resource is voluntary. Medicine is a dynamic science; as research and clinical experience enhance and inform the practice of medicine, changes in recommendations may be required. Neither the authors nor Children's Hospital and Health System, Inc. warrant the information contained is in every respect accurate or complete, and are not responsible for errors in, omissions from, or results obtained from the use of this information. Readers are encouraged to confirm the information contained in this work with other sources.

Original: 07-2022
Last revised: 09-2026
Process owner: Antimicrobial Stewardship Program