

PEDIATRIC Expected Practice Document

Multiple clinical trials have demonstrated shorter courses of antibiotics are equally effective to longer courses for many common infections in both adult and pediatric patients. Shorter courses reduce antibiotic selective pressure, decrease the rate of development of resistant bacteria, and lower the risk of adverse effects. Recommended therapies and durations below are based on randomized control trials for pediatric patients. This list is not all-inclusive; full guideline available upon request. In addition to evidence-based durations, clinical judgement is important to ensure that the diagnosis and treatment are appropriate for the disease and patient. Deviations from these durations of antibiotics should be clinically justified as longer courses have not been proven to be more effective for typical cases.

Condition	Duration and Antibiotic Regimens
Community-Acquired Pneumonia (CAP)	<p>5 days (previously healthy children w/ improvement observed by day 3) Up to 10 days (immune deficiency, chronic lung disease, poor clinical response to therapy)</p> <p>Amoxicillin or Augmentin (if patient has received amoxicillin within 30 days) 30 mg/kg/dose PO TID (max 1000 mg/dose) + Azithromycin 10 mg/kg/dose PO x1 (max 500 mg) on day 1, then 5mg/kg/dose daily days 2-5 (max 250 mg)</p> <p>Non-severe PCN allergy Cefdinir 7 mg/kg/dose BID (max 300 mg/dose) Cefuroxime 15 mg/kg/dose PO BID (max 500 mg/dose)</p> <p>Severe PCN allergy Levofloxacin (max 750 mg/day) - ≥ 6 months - < 5 years: 8-10 mg/kg/dose BID - ≥ 5 years - ≤ 16 years 8-10 mg/kg/dose daily</p>
Acute Otitis Media	<p>≥ 6 years old 5-7 days 2-5 years old 7 days < 2 years old 10 days</p> <p>Amoxicillin or Augmentin (if patient has received antibiotics within 30 days) 45 mg/kg/dose PO BID (max amoxicillin: 2000 mg/dose; Augmentin: 875 mg/dose)</p> <p>PCN allergy Cefdinir 7 mg/kg/dose BID (max 300 mg/dose) Ceftriaxone 50 mg/kg/dose IM once daily for 1-3 days</p>
Acute Sinusitis	<p>5 – 10 days Augmentin 45 mg/kg/dose BID</p>
Pharyngitis (Strep throat)	<p>10 days Penicillin VK - < 27 kg: 250 mg PO BID-TID - ≥ 27 kg: 500 mg PO BID-TID Amoxicillin 25/kg/dose BID (max 500 mg/dose)</p>
Cellulitis/Skin abscesses	<p>5 – 10 days Mild non-purulent Amoxicillin 16 mg/kg/dose TID (max 500 mg/dose)</p>

	<p>Cephalexin 16 mg/kg/dose PO TID</p> <p>Purulent – ALL must receive I&D Bactrim 5 mg/kg/dose (based on TMP) PO BID Cephalexin 12 mg/kg/dose PO QID</p>
UTI	
Referral is recommended if < 2 months, clinical urosepsis, vomiting or inability to take PO, lack of adequate outpatient (OP) follow-up, failure to respond to OP therapy	
>1 month - < 2 years	<p>5 days if cystitis: Cephalexin 30 mg/kg/dose PO TID Cefuroxime 10-15 mg/kg/dose BID (max 1000 mg daily)</p> <p>Allergy/recent use of cephalosporin: Augmentin 16 mg/kg/dose TID (max 500 mg/dose) Nitrofurantoin 5-7 mg/kg/day PO Q6H (max 60-100 mg Q6H) for 7 days</p> <p>10 days if high likelihood of pyelonephritis (fever, immune deficiency, back pain, CVA tenderness) Cefdinir 7 mg/kg/dose BID</p> <p>Allergy: Ciprofloxacin 10-20 mg/kg/dose BID (max 750 mg/dose)</p>
> 2 years	<p>5 days if uncomplicated, afebrile females ≥ 2 years or males 2-13 years Cefdinir 7 mg/kg/dose BID Bactrim 5 mg/kg/dose PO of TMP BID (max 160 mg/dose)</p> <p>7-10 days if ≥ 2 with recurrent, febrile, or complicated cystitis, OR males ≥13 with uncomplicated cystitis IV antibiotics likely necessary</p>

Specialist consultations recommended with subacute/chronic infections or recurrent acute infections.

Sensitivity results are from all specimens tested by SPH Laboratory (both inpatient and outpatient).

Staphylococcus aureus: The rate of MRSA was 29% in 2023 compared to 21% in 2022.

Restricted Agents: Certain antimicrobial agents are restricted and require approval by the Antimicrobial Stewardship team prior to use based on best-practice criteria. Such agents include **Linezolid, Daptomycin, Meropenem, Ertapenem, Ceftaroline, Oritavancin, Fosfomycin, Tigecycline, IV Bactrim, Fidaxomicin, Voriconazole, Anidulafungin, and fecal microbiota transplant.**

Antibiotic Allergy Assessment

Antimicrobial stewardship is able to perform antibiotic allergy assessment with evaluation for test dosing or skin testing. Studies show that patients with no history of anaphylaxis to penicillins in most cases will tolerate penicillins and cephalosporins. Upon request, pharmacist will complete screening to review patient's antibiotic allergies and appropriateness for test dosing or skin testing. An order for allergy evaluation can be placed using "Pharmacy Allergy Clarification" under Medications.

AMS Pharmacist Extension: 447-2450

St. Peter's Health
Microbiology and Pharmacy Departments
Antibiotic Sensitivity Profile for Period January-December 2023

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St. Peter's Health Antibiotic Sensitivity Profile 2023	# Isolates	Ampicillin/Sulbactam	Ampicillin	Cefazolin	Cefotaxime	Ceftazidime	Cefepime	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Ertapenem	Erythromycin	Gentamicin	Imipenem	Levofloxacin	Linezolid	Meropenem	Minocycline	Nitrofurantoin ²	Oxacillin(nafcillin)	Penicillin	Piperacillin/Tazobactam	Rifampin	Tetracycline	Tobramycin	Trimethoprim/Sulfa	Vancomycin
Staphylococcus aureus MRSA ³	103								72	100			11	100			100		100	100				100	86		98	100
Staphylococcus aureus MSSA	344								81	99			72	100			100		100	100	100			100	93		98	100
Staphylococcus lugdunensis	57								90	100			90	100			100		100	100	96			100	100		100	100
Coagulase negative Staphylococcus	108								65	100			36	95		79	100		100	100	56			100	82		72	100
Streptococcus pneumoniae ⁴	22				90			86		90			65			100	100					80			100		95	100
Streptococcus anginosus	29		100		100			100		70			56				96								52			100
Enterococcus species ¹	86		100						94	100						94	100			100					34			100
Escherichia coli	1744	73	64	95		96	98	96	91			100		93	100	91				98			100			94	97	
Klebsiella aerogenes	33			0		82	100	76	100			93		100	85	100				26			100			97	97	
Enterobacter cloacae complex	58			0		78	98		100					98	95	100				57			100			100	97	
Klebsiella oxytoca	55	60	0	87		98	100	94	100			100		97	100	100				91			100			98	93	
Klebsiella pneumoniae	234	90	0	96		96	98		98			100		99	99	99				52			100			99	95	
Proteus mirabilis	78	95	86	100		100	100	100	88			100		91	19	90							100			92	79	
Pseudomonas aeruginosa	133					95	100		97					98	99	96		100					100			99		

Values are reported as percent susceptible.

Group B strep and group A strep can be considered 100% susceptible to penicillin, ampicillin and cefazolin therefore sensitivities are not routinely done and alternatives should only be considered in penicillin-allergic OB patients or for serious infections.

¹ Includes E. faecalis and other Group D enterococci (including non-faecium and non-faecalis species, some of which (i.e. E. gallinarum and E. casseliflavus) are intrinsically resistant to vancomycin).

Ampicillin is the drug of choice for UTI's caused by Enterococci. Ampicillin is highly concentrated in the urine meaning Enterococci remains susceptible to urinary concentrations of ampicillin 100% of the time even if the MIC is resistant. Sensitivities are performed on all sources except outpatient urine cultures.

² Sensitivities are only tested on urine cultures.

³ All Staph aureus MRSA species are 99% susceptible to daptomycin.

⁴ Sensitivities for S. pneumoniae only tested on 22 isolates but improved/stable trend from 2020-2022.