



Blank Children's Hospital
UnityPoint Health

Outpatient Antibiotic Handbook

Created by Blank Children's Hospital's
Antibiotic Stewardship Team

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Please, see full list of Blank Children's Hospital's Clinical Practice Guidelines at:

<https://www.unitypoint.org/blankchildrens/pathways.aspx>



Strep Throat (Group A Streptococcal Pharyngitis)^{1,2}

EXCLUSION CRITERIA:
 Bacterial lymphadenitis (edematous, tender node with overlying erythema & warmth—see Cervical Lymphadenitis guideline)
 Retropharyngeal abscess (limited neck extension or other decreased movement due to pain)
 Peritonsillar abscess (trismus, uvular edema/deviation, muffled voice, drooling)
 Ludwig's angina (infection at floor of mouth)

Notes:

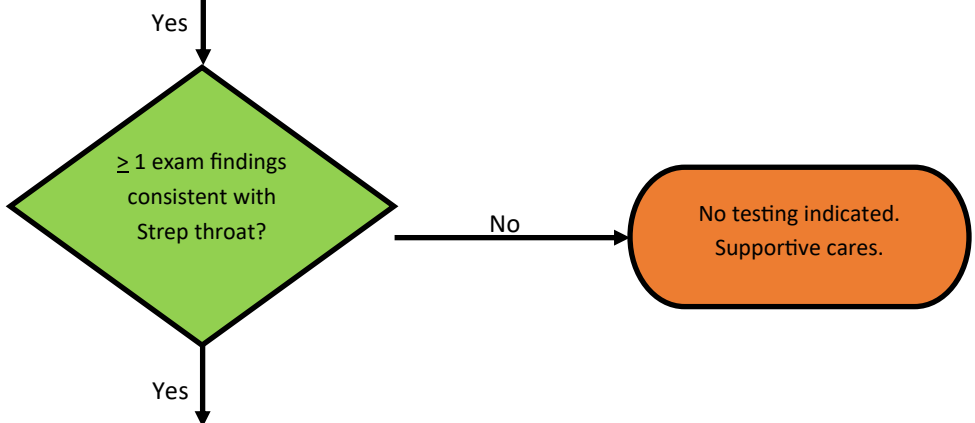
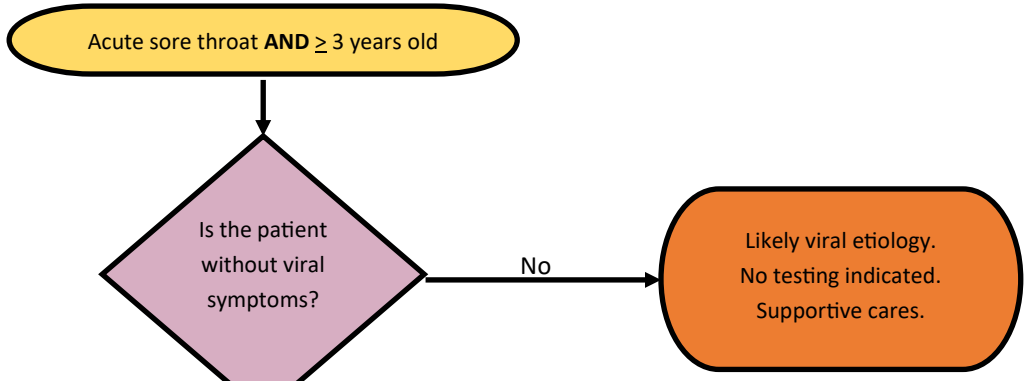
- Strep throat uncommon and rheumatic fever rare in children < 3 years of age
- Only test children < 3 years of age who have symptoms & exam findings of Strep throat AND a household contact with active/recent confirmed Strep throat. Likely asymptomatic carriers if test positive without meeting above criteria.
- Fever in absence of sore throat → Strep throat very unlikely

Viral symptoms:

- Conjunctivitis
- Rhinorrhea/nasal congestion
- Cough
- Diarrhea
- Hoarseness
- Oral ulcers
- Viral rash

Exam findings consistent with streptococcal pharyngitis:

- Tonsillopharyngeal erythema with or without exudates
- Tender, enlarged anterior cervical nodes
- Scarletiform rash
- Palatal petechiae
- Red and swollen uvula



Obtain Rapid Antigen Detection Test (Point of Care Rapid Strep)



First Line Options:

- Amoxicillin 50 mg/kg PO once daily x 10 days (max 1000 mg/day)
- Penicillin G benzathine IM shot:
 - < 27 kg: 600,000 units x 1
 - ≥ 27 kg: 1.2 million units x 1
- Oral penicillin VK:
 - < 27 kg: 250 mg PO BID x 10 days
 - ≥ 27 kg: 500 mg PO BID x 10 days

Non-severe penicillin allergy (e.g., hives):

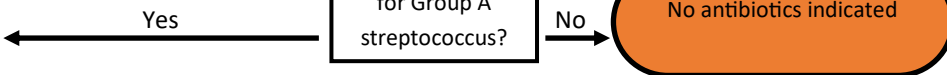
- Consider referral to allergy for antibiotic challenge
- Cephalexin 40 mg/kg/day PO div BID x 10 days (max 1000 mg/day)

Severe penicillin allergy (e.g., anaphylaxis):

- Clindamycin 30 mg/kg/day div TID x 10 days (max 900 mg/day)

Supportive cares. Do NOT start antibiotics. Await throat culture results.

Culture positive for Group A streptococcus?



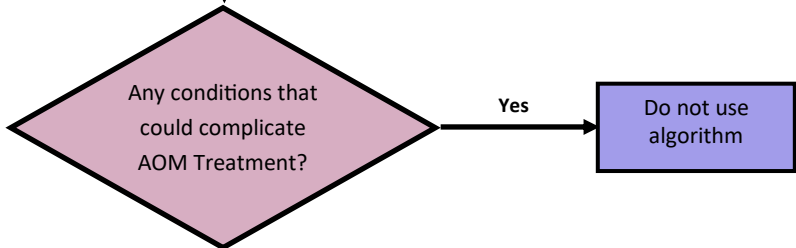
Do NOT Use:

- Azithromycin—high rates of Group A streptococcal resistance
- 2nd (cefuroxime) or 3rd generation (cefdinir, cefixime, cefpodoxime, ceftriaxone) cephalosporins. All are unnecessarily broad. 100% of Group A streptococcus covered by amoxicillin/penicillin and 1st generation cephalosporins (cephalexin).
- Amoxicillin-clavulanate—Group A streptococcus is universally susceptible to amoxicillin, so addition of clavulanate provides no additional Group A streptococcal coverage
- Trimethoprim-sulfamethoxazole, doxycycline, fluoroquinolones
- Aspirin or corticosteroids

Acute Otitis Media (AOM)²⁻⁶

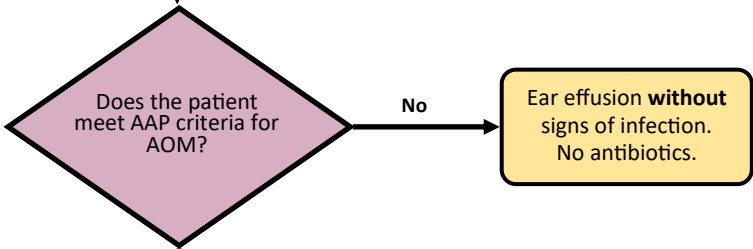
Concern for AOM

- Conditions that complicate AOM Treatment (NOT all-inclusive list):**
- Immunodeficiencies
 - Malignancy
 - Cochlear implants present
 - Tympanostomy tubes present
 - Fever in child ≤ 60 days of age—see Febrile Infant Guidelines



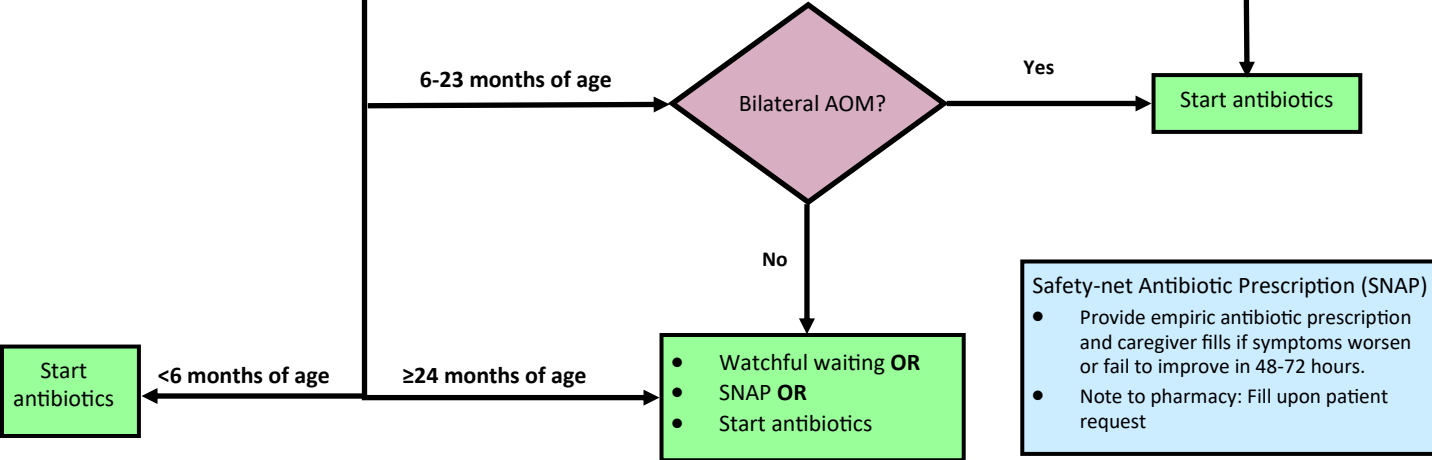
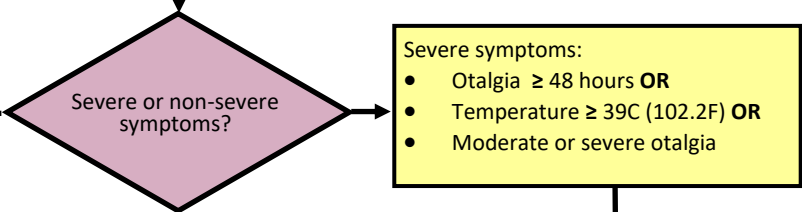
Treat ear pain and assess for AOM

- Criteria for Diagnosis of AOM** AAP
- Middle ear effusion **PLUS ONE**:
- Moderate or severe bulging of TM
 - New onset otorrhea (not due to otitis externa)
 - Mild bulging of TM **AND** recent otalgia
 - Mild bulging of TM **AND** significant erythema of TM



- Non-severe symptoms:**
- Mild otalgia < 48 hours **AND**
 - Temperature $< 39C$ (102.2F)

- Severe symptoms:**
- Otalgia ≥ 48 hours **OR**
 - Temperature $\geq 39C$ (102.2F) **OR**
 - Moderate or severe otalgia



- Safety-net Antibiotic Prescription (SNAP)**
- Provide empiric antibiotic prescription and caregiver fills if symptoms worsen or fail to improve in 48-72 hours.
 - Note to pharmacy: Fill upon patient request

Acute Otitis Media (AOM) Treatment

- Oral cephalosporins are alternative options for first line treatment in children who cannot receive amoxicillin.
- However, these oral cephalosporins have inferior coverage for *Streptococcus pneumoniae* due to nonoptimal pharmacokinetic/pharmacodynamic properties (e.g., short half-lives, low bioavailability).
- Therefore, amoxicillin-clavulanate failure should **NOT** be treated with oral cephalosporin monotherapy (see below)
- Do **NOT** use azithromycin for AOM due to high rates of pneumococcal resistance.
- For amoxicillin-clavulanate, consider using ES formulation: 600 mg-42.9mg/5mL to decrease diarrhea.

First Line Treatment

No penicillin allergy:

- No concurrent purulent conjunctivitis or amoxicillin in last 30 days:
 - Amoxicillin 80-90 mg/kg/day PO divided BID (max 875 mg/dose)
- Concurrent purulent conjunctivitis present or amoxicillin in last 30 days:
 - Amoxicillin-clavulanate 80-90 mg/kg/day PO divided BID (max 875 mg amoxicillin component/dose)

Mild/moderate penicillin allergy (e.g., hives):

- Consider outpatient referral to allergy for antibiotic challenge
- Cefdinir 14 mg/kg/day PO divided **BID** (max 300 mg/dose) (once daily dosing suboptimal for many pneumococcal and non-pneumococcal isolates) **OR**
- Cefuroxime 30 mg/kg/day PO divided BID (max 500 mg/dose) - only available in tablet form **OR**
- Cefpodoxime 10 mg/kg/day PO divided BID (max 200 mg/dose) - cost & availability may be restrictive **OR**
- Ceftriaxone 50 mg/kg/dose IM or IV x 1 dose (max 1000 mg/dose)

Severe penicillin allergy (e.g., anaphylaxis)

- No concurrent purulent conjunctivitis: Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose)
- Concurrent purulent conjunctivitis present: Discuss with pediatric infectious diseases

Antibiotic Selection After Treatment Failure (Treatment Failure = No Clinical Improvement After 48-72 Hours)

Failed amoxicillin:

- Amoxicillin-clavulanate 80-90 mg/kg/day PO divided BID (max 875 mg amoxicillin component/dose)

Failed amoxicillin-clavulanate:

- Ceftriaxone 50 mg/kg IM or IV once daily (max 1000 mg/dose) x 3 days **OR**
- Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose) **PLUS**
 - Cefdinir **OR** cefuroxime **OR** cefpodoxime (see doses above)

Failed oral cephalosporin **OR** IM ceftriaxone x 1 dose:

- Ceftriaxone 50 mg/kg IM or IV once daily (max 1000 mg/dose) x 3 days **OR**
- Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose) - only use if no purulent conjunctivitis present

Duration

- 10 days if: < 2 years old **OR** severe AOM **OR** recurrent AOM **OR** perforation of TM
- 7 days if: 2-5 years old **AND** non-severe symptoms
- 5-7 days if: > 6 years **AND** non-severe symptoms



Uncomplicated Community-Acquired Pneumonia (CAP) ≥ 4 Months of Age⁷⁻¹⁰

- Clinical findings: Fever $\geq 100.4^{\circ}\text{F}$, lower respiratory symptoms, & focal findings on auscultation (exclude wheezing)
- Chest x-ray not typically needed among immunocompetent children ≥ 4 months if well-appearing and not requiring hospitalization
- Uncomplicated CAP: No significant pleural effusion, empyema, necrotizing pneumonia, lung abscess, sepsis, shock, current or impending respiratory failure
- Do **NOT** use algorithm if: < 4 months of age, immunocompromised, receiving home mechanical ventilation, tracheostomy dependent, hospitalized within past 7 days, acute asthma exacerbation, cystic fibrosis, clinical concern for aspiration pneumonia

Treatment

First Line:

- Amoxicillin 90 mg/kg/day PO divided BID (max 1000 mg/dose)

Mild/Moderate penicillin allergy (e.g., hives):

- Consider outpatient referral to allergy for antibiotic challenge
- Clindamycin 30 mg/kg/day PO divided TID (max 600 mg/dose)
 - Often best option among children who cannot swallow pills due to limited availability and cost of liquid cefpodoxime and cefprozil
- Cefuroxime 30 mg/kg/day PO divided BID (max 500 mg/dose) (only available in tablet form)
- Cefpodoxime 10 mg/kg/day PO divided BID (max 200 mg/dose) (cost & availability may be restrictive)
- Cefprozil 30 mg/kg/day PO divided BID (max 500 mg/dose) (cost & availability may be restrictive)

Severe penicillin allergy (e.g., anaphylaxis) or cephalosporin allergy:

- Clindamycin 30 mg/kg/day PO divided TID (max 600 mg/dose)

Severe penicillin allergy (e.g., anaphylaxis) or cephalosporin allergy AND inability to tolerate clindamycin:

- Levofloxacin
 - 6 months—4 years of age: 10 mg/kg/dose PO BID (max 750 mg/day)
 - ≥ 5 years of age: 10 mg/kg PO once daily (max 750mg/day)

Atypical pneumonia:

- Azithromycin 10mg/kg PO once daily on day 1 (max 500 mg/dose), then 5 mg/kg (max 250 mg/dose) once daily on days 2-5

Duration

- Typical/Lobar CAP: 5 days
 - 5 days of therapy has similar clinical response to 10 days of therapy with decreased antibiotic exposure and resistance development
- Atypical CAP: 5 days

Notes

- **Do NOT use cefdinir** for CAP, as it does not achieve therapeutic concentrations in lungs to treat pneumococcus
- All oral cephalosporins are inferior to high dose amoxicillin for pneumococcus
- Nearly half of pneumococcal isolates are resistant to azithromycin among children in central Iowa, so do **NOT** use azithromycin for typical/lobar CAP

Uncomplicated Urinary Tract Infection (Cystitis)

Children ≥ 2 years of age^{2,11}

- To be uncomplicated, child must be well-appearing **AND** without fever, vomiting, or flank pain
- Obtain urinalysis with micro and urine culture
- If patient has history of UTI, empiric antibiotic therapy should be based on previous cultures if available

Treatment

First Line:

- Cephalexin 50 mg/kg/day PO divided TID (max 500 mg/dose)

Alternative Options:

- Cefpodoxime 10 mg/kg/day PO divided BID (max 100 mg/dose) (cost & availability may be restrictive)
- Cefixime 8 mg/kg PO once daily (max 400 mg/dose) (cost & availability may be restrictive)
- Amoxicillin-clavulanate
 - < 12 years of age: 40 mg/kg/day PO divided TID (Max 500 mg amoxicillin component/dose)
 - ≥ 12 years of age: 500 mg/dose PO BID

Cephalosporin allergy or severe penicillin allergy (e.g. anaphylaxis):

- Consider outpatient referral to allergy for antibiotic challenge
- TMP-SMX 6-12 mg/kg/day PO divided BID (Max 160 mg TMP component/dose)
 - ~25% of *E. Coli* isolates resistant to TMP-SMX among children in central Iowa
- Nitrofurantoin 5-7 mg/kg/day PO divided every 6 hours (max 100mg/dose)

Duration

- 5-7 days for younger children & adolescent males
- 5-7 days if using nitrofurantoin regardless of age
- 3-5 days for adolescent females NOT receiving nitrofurantoin

Do NOT use

- **Cefdinir** for UTI due to poor urine concentration among children compared to adults

Febrile Urinary Tract Infection (Pyelonephritis)

Children \geq 2 months of age^{2,11}

- Pyelonephritis = UTI in a child with fever, vomiting, flank pain, and/or is ill-appearing
- Evaluate the need for hospitalization:
 - Possible indications: age < 2 months, ill-appearing, sepsis, vomiting, inability to tolerate oral medication, immunocompromised, failure to respond to outpatient therapy, difficulty in ensuring timely outpatient follow-up
- Obtain urinalysis with micro and urine culture
- If patient has history of UTI, empiric antibiotic therapy should be based on previous cultures if available

Treatment

First Line:

- Cephalexin 75 mg/kg/day PO divided TID (max 1000 mg/dose)

Alternative Options:

- Cefpodoxime 10 mg/kg/day PO divided BID (max 200 mg/dose) (cost & availability may be restrictive)
- Cefixime 8 mg/kg/day PO divided BID (max 200 mg/dose or 400mg/day) (cost & availability may be restrictive)
- Amoxicillin-clavulanate
 - < 12 years of age: 40 mg/kg/day PO divided TID (max 500 mg amoxicillin component/dose)
 - \geq 12 years of age: 875 mg/dose PO BID

Cephalosporin allergy or severe penicillin allergy (e.g. anaphylaxis):

- Consider outpatient referral to allergy for antibiotic challenge
- TMP-SMX 6-12mg/kg/day PO divided BID (Max 160 mg TMP component/dose)
 - ~25% of *E. Coli* isolates resistant to TMP-SMX among children in central Iowa
- Ciprofloxacin 20 mg/kg/day PO divided BID (Max 750 mg/dose)

Duration

- 7-10 days (7 days typically adequate)

Do NOT use

- Cefdinir due to poor urine concentration among children compared to adults
- Nitrofurantoin for pyelonephritis—concentrates well in urine but not kidneys



Skin and Soft Tissue Infections (SSTIs) > 60 Days of Age¹²

- Do **NOT** use this guideline if: immunocompromised, \leq 60 days of age, concern for deeper or necrotizing infection, post-surgical site infection, human/animal bite infection (see Human/Animal Bite Wounds Guideline), and/or meets criteria for hospitalization
- Hospitalization criteria (NOT all-inclusive list): Sepsis/SIRS, failing outpatient treatment, inability to tolerate oral medications, difficulty ensuring timely outpatient follow-up, altered mental status
- *Staphylococcus aureus* and group A *Streptococcus* are most common pathogens
- MRSA risk factors: personal or family history of MRSA
- If patient has history of MRSA abscesses, empiric antibiotic therapy should be based on previous cultures if available

Treatment

Impetigo

- Mild cases with only a few lesions
 - Topical mupirocin BID x 5 days
- Numerous lesions, perioral lesions, or outbreak affecting several people
 - First line: cephalexin 50 mg/kg/day PO divided TID (max 500 mg/dose)
 - If personal or family history of MRSA OR severe penicillin/cephalosporin allergy
 - Consider outpatient referral to allergy for antibiotic challenge if allergy present
 - Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose) **OR**
 - TMP-SMX 8-12 mg/kg/day PO divided BID (max 160 mg TMP component/dose)
 - May not cover group A *Streptococcus*
 - Duration: 5-7 days

Nonpurulent Cellulitis or Erysipelas

- First line: cephalexin 50 mg/kg/day PO divided TID (max 500 mg/dose)
- If personal or family history of MRSA OR severe penicillin/cephalosporin allergy
 - Consider outpatient referral to allergy for antibiotic challenge if allergy present
 - Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose) **OR**
 - TMP-SMX 8-12 mg/kg/day PO divided BID (max 160 mg TMP component/dose)
 - May not cover group A *Streptococcus*
- Duration: 5-7 days

Abscess

- I & D with stab or crisscross incision; attempt to place loop drain if able. **SEND CULTURE.**
- First line:
 - Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose) **OR**
 - TMP-SMX 8-12 mg/kg/day PO divided BID (max 160 mg TMP component/dose)
 - Consider narrowing antibiotic choice if culture results MSSA or group A *Streptococcus* (GAS), as rates of MSSA and GAS resistance to clindamycin are increasing among children in central Iowa
 - For MSSA—cephalexin 50 mg/kg/day PO divided TID (max 500 mg/dose)
 - For GAS—amoxicillin 45 mg/kg/day PO divided BID (max 875 mg amoxicillin/dose)
- Duration: 5-7 days



Acute Bacterial Sinusitis^{2,13}

Diagnosis

- **Exclusion criteria:** immunocompromised, cystic fibrosis, ciliary dyskinesia, < 1 year of age, previous sinus surgery, sinusitis complications present
- **Sinusitis complications:** subperiosteal abscess, orbital cellulitis or abscess, subdural/epidural empyema, brain abscess, meningitis, cavernous or sagittal sinus thrombosis, Pott puffy tumor (frontal bone osteomyelitis)
- **Diagnosis:** 3 ways to make presumptive diagnosis of acute bacterial sinusitis in children:
 1. Persistent illness—nasal discharge and/or daytime cough lasting > 10 days **WITHOUT** improvement
 2. Worsening course—worsening or new onset nasal discharge, daytime cough, or fever after initial improvement
 3. Severe onset— concurrent fever ($\geq 39^{\circ}\text{C}/102.2^{\circ}\text{F}$) & purulent nasal discharge for ≥ 3 consecutive days

Treatment

Non-severe disease AND no antibiotics within previous 30 days AND does not attend child care AND ≥ 2 years old:

- **No penicillin allergy:** amoxicillin 80-90 mg/kg/day PO divided BID (max 875 mg/dose)
- **Mild penicillin allergy (e.g., hives):**
 - Consider outpatient referral to allergy for antibiotic challenge
 - Cefpodoxime 10 mg/kg/day PO div BID (max 200 mg/dose) (cost/availability may be restrictive)
 - Cefuroxime 30 mg/kg/day PO divided BID (max 500 mg/dose) (only available in tablet form)
 - Cefixime 8 mg/kg/day PO divided BID (max 200 mg/dose) PLUS clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose)
 - Cefixime cost/availability may be restrictive
- **Severe penicillin allergy (e.g., anaphylaxis):** Levofloxacin 10 mg/kg/dose PO BID if < 5 years of age **OR** 10 mg/kg/dose PO once daily if ≥ 5 years of age (max 500 mg/day for all ages)

Severe disease OR mild-moderate disease with ANY of the following: received antibiotics within previous 30 days, attends child care, or < 2 years of age:

- Amoxicillin-clavulanate 80-90 mg/kg/day PO divided BID (max 875 mg amoxicillin/dose)
 - Consider ES formulation: 600 mg-42.9mg/5mL to decrease clavulanate-associated diarrhea

Duration

- 10-14 days (10 days typically adequate)

Notes

- Bacterial sinusitis is uncommon in kids < 2 years old
- Do **NOT** use:
 - **Cefdinir**—does not achieve therapeutic concentrations in sinuses to treat pneumococcus
 - **Azithromycin**—high rates of pneumococcal resistance



Human/Animal Bite Wounds^{2,12}

- Evaluate need for Tetanus and/or Rabies prophylaxis
- Copious irrigation/cleaning for all bite wounds
- If no signs of infection after bite, provide antibiotic prophylaxis for those with any of the following:
 - Moderate or severe bite wounds, especially if edema or crush injury present
 - All face, hand, foot, or genital area bite wounds
 - Puncture wounds
 - Wounds in immunocompromised, asplenic, or advanced liver disease patients
 - Cat bite wounds
- Antibiotic prophylaxis NOT needed for mild injuries where skin is abraded—cleansing of wounds is sufficient
- If signs of infection after bite:
 - Aerobic and anaerobic culture of purulent material if present
 - Start antibiotic therapy

Antibiotic Selection

First Line:

- Amoxicillin-clavulanate 45 mg/kg/day PO divided BID (max 875 mg amoxicillin component/dose)

Penicillin Allergy:

- Consider outpatient referral to allergy for antibiotic challenge
- Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose) **PLUS**
 - TMP-SMX 8-12 mg/kg/day PO divided BID (max 160 mg TMP component/dose) **OR**
 - Doxycycline 4.4 mg/kg/day PO divided BID (max 100 mg/dose)

Duration

- Prophylaxis: 3 days
- Treatment: 5-10 days

Notes

- Primary wound closure **NOT** recommended except:
 - Wounds to face—needs copious irrigation & cautious debridement prior to primary closure
- Consider loosely approximating larger bite wounds
- **DO NOT** use tissue adhesive/skin glue on any bite wounds

Dental Abscess¹⁴

- Uncomplicated dental abscess—has limited, localized inflammation of surrounding tissues
- Complicated dental abscess—has diffuse facial edema and/or facial cellulitis
- Significant complications— periorbital or orbital cellulitis, sinusitis, Ludwig angina, deep neck space infection, osteomyelitis of the jaw, and rarely meningitis
- Consider hospitalization if ill-appearing/sepsis, inability to tolerate oral antibiotic, significant complication (see above), etc.
- If child is immunocompromised, discuss with pediatric infectious diseases

Treatment

Abscess with limited, localized inflammation

- First line = amoxicillin 50 mg/kg/day PO divided TID (max 500 mg/dose)
 - If treatment failure after 2-3 days of amoxicillin
 - Amoxicillin-clavulanate 50 mg/kg/day PO divided TID (max 500 mg amoxicillin component/dose)
- Penicillin allergy or severe cephalosporin allergy (e.g., anaphylaxis)
 - Consider outpatient referral to allergy for antibiotic challenge
 - Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose)

Abscess with diffuse facial edema and/or facial cellulitis WITHOUT significant complication

- First line = amoxicillin-clavulanate 50 mg/kg/day PO divided TID (max 500 mg amoxicillin component/dose)
- Penicillin allergy or severe cephalosporin allergy (e.g., anaphylaxis)
 - Consider outpatient referral to allergy for antibiotic challenge
 - Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose)

Dental referral

- All children with dental abscess require an urgent dental referral

Duration

- 7 days



Cervical Lymphadenitis²

- Bacterial lymphadenitis is typically unilateral, tender, and often with overlying erythema and warmth of skin.
 - Treat with antibiotic therapy
 - *Staphylococcus aureus* and group A *Streptococcus* are most common pathogens
 - Consider anaerobic organisms if poor dental hygiene, periodontal disease/abscess present
 - Young infants (< 90 days of age) can suffer cellulitis-adenitis syndrome from group B *Streptococcus* (GBS). Many will have bacteremia and/or meningitis, and all require admission for evaluation and treatment.
- Bilateral lymphadenitis is typically viral and can be observed without antibiotic therapy
- *Bartonella henselae* typically causes subacute/chronic unilateral lymphadenitis—often kitten/cat scratch
 - Overlying skin typically not erythematous or warm but can suppurate
- Nontuberculous *Mycobacterium* (NTM) causes subacute/chronic unilateral lymphadenitis in children 1-5 years
 - Overlying skin often becomes dark red/purple in color

Treatment

First Line in children WITHOUT poor dental hygiene, periodontal disease/abscess:

- Cephalexin 50-75 mg/kg/day PO divided TID (max 1000 mg/dose)

First Line in children WITH poor dental hygiene, periodontal disease/abscess:

- Amoxicillin-clavulanate 45 mg/kg/day PO divided BID (max 875 mg amoxicillin component/dose)

Cephalosporin allergy

- Consider outpatient referral to allergy for antibiotic challenge
- Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose)

MRSA concern (personal or family history of MRSA)

- Clindamycin 30 mg/kg/day PO divided TID (max 450 mg/dose)

Concern for *Bartonella* (subacute/chronic presentation and cat scratch)

- Send *Bartonella* antibodies
- Azithromycin 10mg/kg PO once daily on day 1 (max 500 mg/dose), then 5 mg/kg (max 250 mg/dose) once daily on days 2-5

Concern for Nontuberculous *Mycobacterium* (NTM)

- Referral to pediatric ENT and pediatric infectious diseases

Duration

- Duration: 5-7 days
- Can adjust course based on response

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Antibiogram (Blank) January 1, 2021 - June 30, 2022

Gram-Negative Organisms	NO. of Isolates	Ampicillin	Ampicillin/ Subactam	Amoxicillin/ Clavulanate	Aztreonam	Cefazolin	Cefepime	Cefixime	Cefuroxime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Gentamicin	Levofloxacin	Nitrofurantoin	Piperacillin/ Tazobactam	Tetracycline	Tobramycin	Trimethoprim/ Sulfamethoxazole
<i>Enterobacter cloacae</i>	18†	0	11	0		0	100		0	94				100	50	94	100	100	94
<i>Escherichia coli</i>	307	54	60	88		84	100		97	99	99				99	100	81	96	80
<i>Klebsiella pneumoniae</i>	35	0	82	100		80	97		97	97	97				60	100	83	100	100
<i>Klebsiella oxytoca</i>	20†	0	40	95		20			94	100	94					88	95	100	100
<i>Pseudomonas aeruginosa</i>	68				87		94			96			96	82		96			97
<i>Proteus Mirabilis</i>	20†	95	100	95		10			94		94				0		0	100	95
<i>Serratia marcescens</i>	30	0	0	0		0	100		0	100	97					100	0	85	

Gram-Positive Organisms	NO. of Isolates	Ampicillin	Ceftriaxone	Clindamycin	Doxycycline	Erythromycin	Linezolid	Nitrofurantoin	Oxacillin	Penicillin	Tetracycline	Trimethoprim/ Sulfamethoxazole	Vancomycin
<i>Enterococcus faecalis</i>	78	100					100	100		100	37		100
<i>Staphylococcus aureus</i> - MSSA	149			77	99	62			100	0	88	95	100
<i>Staphylococcus aureus</i> - CA-MRSA	41			92	100	23			0	0	90	96	100
<i>Staphylococcus aureus</i> - HA-MRSA	13†			83	100	17			0	0	100	100	100
<i>Staphylococcus epidermidis</i>	88			50	88	15			33	0	83		100
<i>Streptococcus pneumoniae</i> ††	28†		100			67				100			

† Please note that a minimum of 30 isolates is necessary to obtain statistical significance.

†† Please note inability to calculate ceftriaxone susceptibility percentages for Pneumococcal CNS disease due to low number of isolates.