



<b>Section:</b> Clinical Practice Guideline	<b>Subject:</b> Use of Antibiotics for Pediatric Respiratory Infections
<b>Adopted:</b> October 15, 2001	<b>Revised:</b> 11/13/03, 10/13/05, 9/2007, 9/2011, 9/2013, 9/2015, 9/2017 <b>Neighborhood reviews Clinical Practice Guidelines every two years.</b>

NOTE: Treatment guidelines are intended to serve as guides and not as clinical recommendations for a specific child.

Please note that antibiotic standards can change over time based on local shifts in antibiotic resistance and new clinical data. Please consider these developments when making prescribing decisions.

In the following document, the word “severe” is used and requires clinical judgment. Portions of these guidelines referencing the word “severe” should be considered if a child is in significant pain or appears acutely ill. It is also important to consider social circumstances, family support and education, and ability of the family to recognize and follow up with a provider in the event of worsening disease. Concerns regarding social circumstances and family support may suggest that using the guidelines addressing severe disease may be appropriate.

# Neighborhood Health Plan of Rhode Island

## Clinical Practice Guideline - Use of Antibiotics for Pediatric Respiratory Infections

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Illness	Definition	Antibiotic Therapy	Type of Antibiotics, If Applicable	Comments
Acute Otitis Media (AOM)	<p>A certain diagnosis of AOM meets the following criteria:</p> <ul style="list-style-type: none"> <li>Moderate/severe bulging of the tympanic membrane or new onset of otorrhea not due to acute otitis externa</li> <li>or</li> <li>Mild bulging of the TM and recent (48hours) onset of signs and symptoms of local or systemic illness (fever, pain, etc.) or intense erythema of the TM</li> <li>Presence of fluid in the middle ear must be present in both cases. Clinicians should not diagnose AOM in children who do not have middle ear effusion (MEE) on pneumatic otoscopy and/or typanometry</li> </ul>	<p>Age Group:</p> <ul style="list-style-type: none"> <li>&lt;6 months: antibiotics</li> <li>6 months to two years: Antibacterial therapy if severe/bilateral illness ; observation option</li> <li>* if non-severe illness</li> <li>&gt; 2 years: antibiotics if severe illness; observation option if non-severe</li> </ul> <p>Patients with an underlying condition such as a cranio-facial condition, chronic recurrent AOM, or perforation of the tympanic membrane should generally receive treatment for 10 days.</p>	<p>1st Line: High Dose</p> <p>Amoxicillin (80-90 mg/kg /day) BID</p> <p>For those who had been treated initially (within 30 days) with amoxicillin and did not improve, or those who have concurrent purulent conjunctivitis or have a history or recurrent AOM unresponsive to amoxicillin: high-dose amoxicillin-clavulanate (80-90 mg/kg per day of amoxicillin component, with 6.4 mg/kg per day of clavulanate in 2 divided doses) should be used</p> <p>Cephalosporins ( Cefdinir 14mg/kg/d in 1-2 doses, Cefuroxime (30mg/kg/d in 2 doses) Cefpodoxime (10mg/kg/d in 2 doses) Ceftriaxone (50mg IM or IV per day for 1 or 3 das an alternative in case of non- severe penicillin allergy</p> <p>Length of treatment: &lt;2years10days; 2-5years with mild/moderate symptoms 7days; 6 years and older with mild/moderate 5-7days.</p>	<p>*The "observation option" for AOM refers to deferring Antibacterial treatment of selected children for 48 to 72hours and limiting management to symptomatic relief. The decision to observe or treat is based on the child's age, diagnostic certainty, and illness severity. To observe a child without initial antibacterial therapy, it is important that the parent/caregiver has a ready means of communicating with the clinician.</p>

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Acute Bacterial Sinusitis	<p>1. Persistent illness (nasal discharge of any quality) or daytime cough or both lasting more than 10 days without improvement.</p> <p>2. Worsening course (worsening or new onset of nasal discharge, daytime cough or fever after initial improvement)</p> <p>3. Severe onset concurrent</p>	<p>Initial antibiotic treatment of acute sinusitis should be with the most-narrow— spectrum agent which is active against the pathogens.</p> <p>There is the option of out-patient observation as part of initial management which consists of continued observation for 3 days with commencement of antibiotic therapy if either the child does not improve clinically within several days of diagnosis or if there is clinical worsening of the child's condition at any time.</p>	<p>1st Line: Amoxicillin with or without clavulanate. Mild/ Moderate (&gt;2years, no day care, no antibiotics in last 4 weeks) 80-90 mg/kg/day in 2 divided doses. If high prevalence nonsusceptible S pneumonia, moderate/severe, &lt; 2 years, day care or recent antibiotics</p> <p>80-90 mg/kg/d PO divided Bid maximum 2g per dose Typically, uncomplicated cases of acute sinusitis are responsive to amoxicillin. Single dose 50mg/kg ceftriaxone if unable to tolerate p.o. This can be followed by po if improvement in 24 hours.</p> <p>Length of treatment: 10 – 28 days or continue treatment for 7 days after patient free of signs and symptoms</p> <p>For children allergic to penicillin, a second- or third-generation cephalosporin (cefdinir, cefuroxime or cefpodoxime) can be used but potential cross reactivity of cephalosporins needs to be considered. In cases of serious allergic reaction in less than 2 year olds, clindamycin (or linezolid) and cefixime can be used.</p>	<p><b>When not to treat with an antibiotic:</b></p> <p>Nearly all cases of mild acute bacterial sinusitis resolve without antibiotics.</p> <p>Factors affecting observation vs treatment decision include symptom severity, child's quality of life, recent antibiotic use, cost of antibiotics, caregiver concerns and development of complications.</p> <p>Children with previous antibiotic use (4 weeks), concurrent bacterial infection, actual or suspected complication of acute bacterial sinusitis or with underlying conditions (e.g. asthma, cystic fibrosis, previous sinus surgery, immunocompromised etc) should generally be managed with antibiotic therapy</p>

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Pharyngitis (tonsillitis)	Diagnosis of Group A Strep must be made on results of throat culture or antigen-detection (—rapid strep <sup>®</sup> ) test with culture backup for negative screen.	Group A streptococcus Treatment reserved for patients with positive rapid antigen detection or throat culture. Initiation of antibiotic treatment pending throat culture results may be appropriate only in particular settings when the likelihood of streptococcal pharyngitis is high (child over 3 with sudden onset fever, pharyngeal or tonsillar inflammation or exudate and anterior cervical lymphadenopathy in the absence of upper respiratory symptoms) and an effort is made to discontinue treatment upon receipt of a negative culture result.	<p>1st Line: Penicillin V Children 250mg po bid/tid; Adolescents 250mg tid/qid or 500mg bid</p> <p>Macrolides (Erythromycin preferred) are an acceptable alternative for penicillin-allergic patients. First generation oral cephalosporins can also be used when there is no immediate type hypersensitivity reaction to penicillin. Azithromycin is not recommended due to antibiotic resistance issues. (1)</p> <p>Amoxicillin is preferred when concurrent otitis media or sinusitis is being treated. 12.5mg/kg bid or 10mg/kg tid (mild) 22.5mg/kg bid or 13.3 mg/kg tid (severe)</p> <p>Usual duration of antibiotic therapy is 10 days for prevention of rheumatic fever</p> <p><i>Please note that adherence considerations may influence choice of antibiotic suspensions as palatability may affect adherence.</i></p>	<p><b>When not to treat with an antibiotic:</b> Respiratory viral causes; conjunctivitis, cough, rhinorrhea, and/or diarrhea are uncommon with Group A Strep</p> <p>Most episodes of sore throats, particularly in children under 3 years of age, are caused by viral agents.</p>

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Non-specific Cough Illness/Bronchitis	Principally caused by viral pathogens. Airway inflammation and sputum production are non-specific responses and do not imply a bacterial etiology.	Consider antibiotics only for suspected pneumonia, based on fever with focal exam, infiltrate on chest x-ray, tachypnea or toxic appearance.  Prolonged cough (>10 -14 days without improvement) may suggest specific illnesses (e.g. sinusitis) that warrant antibiotic treatment.	Treatment with a macrolide may be warranted in the child when mycoplasma or pertussis is suspected.	<b>When not to treat with an antibiotic:</b> Cough < 10 -14 days in well-appearing child without physical signs of pneumonia.
Non-Specific URI/ Common Cold/ Viral Rhinosinusitis	This acute illness typically is characterized by rhinorrhea, sore throat, cough and fever.	Antibiotics do not effectively treat URI or prevent subsequent bacterial infections	Not indicated	Mucous may change from yellow to green but this is not an indication of bacterial infection. In uncomplicated colds, cough and nasal discharge may persist for 14 days or more, long after other symptoms have resolved. However, mucopurulent rhinitis that persists > 10 days without signs of improvement may suggest acute bacterial sinusitis.

**The following are medication recommendations for the treatment of the above listed conditions. Some of the medications may not be on Neighborhood’s formulary and may require a Prior Authorization. Prior authorization is required due to RI Medicaid pharmacy benefits and Neighborhood’s formulary management.**

#### References:

1. “Principles of Judicious Antibiotic Prescribing for Upper Respiratory Tract Infections in Pediatrics”, Hersh et al, Pediatrics 2013; 132; 1146-1154.
2. “Redbook 2015: Report of the Committee on Infectious Disease”, 30<sup>th</sup> edition, American Academy of Pediatrics, 2015.