Neighborhood Health Plan of Rhode Island
Clinical Practice Guideline - Use of Antibiotics for Pediatric Respiratory Infections
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| Acute Otitis Media (AOM) | A certain diagnosis of AOM meets the following criteria:  
  - Moderate/severe bulging of the tympanic membrane or new onset of otorrhea not due to acute otitis externa or  
  - Mild bulging of the TM and recent (48 hours) onset of signs and symptoms of local or systemic illness (fever, pain, etc.) or intense erythema of the TM  
  - Presence of fluid in the middle ear must be present in both cases | Age Group:  
  - <6 months: antibiotics  
  - 6 months to two years: Antibacterial therapy if severe/bilateral illness; observation option* if non-severe illness  
  - > 2 years: antibiotics if severe illness; observation option if non severe | 1st Line: High Dose Amoxicillin (80-90 mg/kg /day) BID  
For those who had been treated initially with amoxicillin and did not improve, 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  
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 d as an alternative in case of non-severe penicillin allergy | *The "observation option" for AOM refers to deferring antibacterial treatment of selected children for 48 to 72 hours 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.
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| Acute Bacterial Sinusitis | 1. Persistent illness (nasal discharge of any quality) or daytime cough or both lasting more than 10 days without improvement.  
2. Worsening course (worsening or new onset of nasal discharge, daytime cough or fever after initial improvement)  
3. Severe onset concurrent fever higher than 39.0°C (102.2°F) and purulent discharge for at least 3 consecutive days                                                                                       | Initial antibiotic treatment of acute sinusitis should be with the most-narrow—spectrum agent which is active against the pathogens. There is the option of outpatient 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. | 1st Line: Amoxicillin with or without clavulanate. Mild/Moderate (>2years, no daycare, no antibiotics in last 4weeks) 45mg/kg/day 2 divided doses. If high prevalence nonsusceptible S pneumonia, moderate/severe, <2years, daycare or recent antibiotics 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 ceftriaxone if unable to tolerate p.o. This can be followed by po if improvement in 24 hours.  
For children allergic to penicillin, a second- or third-generation cephalosporin (cefdinir, cefuroxime or cefpodoxime) can be used (These can be safely used in a type 1 hyper sensitivity reaction with prior allergy testing). In cases of serious allergic reaction in less than 2 year olds, clindamycin (or linezolid) and cefixime can be used.  
Consider levofloxacin. | When not to treat with an antibiotic: Nearly all cases of mild acute bacterial sinusitis resolve without antibiotics.  
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.  
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  
Length of treatment: 10 – 28 days or continue treatment for 7 days after patient free of signs and symptoms |
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<td>Pharyngitis (tonsillitis)</td>
<td>Diagnosis of Group A Strep must be made on results of throat culture or antigen-detection (—rapid strep) test with culture backup for negative screen.</td>
<td>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.</td>
<td>1st Line: Pencillin V Children 250mg po bid/tid; Adolescents 250mg tid/qid or 500mg bid</td>
<td>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. 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) Usual duration of antibiotic therapy is 10 days for prevention of rheumatic fever. When not to treat with an antibiotic: Respiratory viral causes; conjunctivitis, cough, rhinorrhea, and/or diarrhea are uncommon with Group A Strep. Most episodes of sore throats, particularly in children under 3 years of age, are caused by viral agents.</td>
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<td>Non-specific Cough Illness/Bronchitis</td>
<td>Principally caused by viral pathogens. Airway inflammation and sputum production are non-specific responses and do not imply a bacterial etiology.</td>
<td>Consider antibiotics only for suspected pneumonia, based on fever with focal exam, infiltrate on chest x-ray, tachypnea or toxic appearance. Prolonged cough (&gt;10 -14 days without improvement) may suggest specific illnesses (e.g. sinusitis) that warrant antibiotic treatment.</td>
<td>Treatment with a macrolide may be warranted in the child when mycoplasma or pertussis is suspected.</td>
<td>When not to treat with an antibiotic: Cough &lt; 10 -14 days in well-appearing child without physical signs of pneumonia.</td>
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### Illnesses and Antibiotic Therapy

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<td>Non-Specific URI/Common Cold/Viral Rhinosinusitis</td>
<td>This acute illness typically is characterized by rhinorrhea, sore throat, cough and fever.</td>
<td>Antibiotics do not effectively treat URI or prevent subsequent bacterial infections</td>
<td>Not indicated</td>
<td>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.</td>
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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:

- [http://aappolicy.aappublications.org](http://aappolicy.aappublications.org)
- CME.medscape.com; Revisiting the 2004 AOM Management Guidelines
- Emedicine.medscape.com: Pediatric Sinusitis, Medical Treatment
- CMA Foundation AWARE Project: Pediatric Clinical Practice Guidelines Compendium Summary; [www.aafp.org/afp](http://www.aafp.org/afp); Volume 74, Number 6; September 15, 2006
- AMA: American Medical Association 2006/07 Pediatrics: Acute Respiratory Tract Infection Guideline Summary
- CDC: Centers For Disease Control ([http://www.cdc.gov/drugresistance/community/healthcare_provider.htm#2a](http://www.cdc.gov/drugresistance/community/healthcare_provider.htm#2a));
- AHRQ – Agency for Healthcare Research and Quality, National Guideline Clearinghouse
- Pediatrics – Clinical Practice Guideline for the Diagnosis and Management of Acute Bacterial Sinusitis in Children Aged 1 to 18 years Pediatrics Vol 132 No 1 July 1 2013
- Pediatrics – The Diagnosis and Management of Acute Otitis Media 2013;131:e964