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Uncomplicated Community Acquired Pneumonia (CAP) Guideline

Patients 2 Months -18 Years Of Age With Signs And Symptoms Of Community Acquired Pneumonia (Viral And Bacterial)

Clinical Exam: Abnormal Auscultatory Findings (Crackles, Decreased Or Abnormal Breath Sounds) Suspicous For Pneumonia

Interventions

- Provide O2 To Keep Sats >90%
- Administer Antibiotics If Bacterial Pathogen Suspected See Medication Chart Pg. 2
- Hydrate With Oral Fluids If Tolerated
- Fluids As Needed Oral Or IV

Signs & Symptoms Of Respiratory Distress

- Tachypnea, Respiratory Rate, Breaths/min:
  - Age 2 To 12 Months: >60
  - Age 18 To 35 Months: >55
  - Age 3 To 6 Years: >50
  - Age >6 Years: >40
- Signs:
  - Altered Mental Status
  - Pulse Ox <90%
  - Retractions (Suprasternal, Intercostal Or Subcostal)

Discharge Criteria

- Adequate PO Intake
- No Respiratory Distress, Reference Box 1 Above
- Parents Able To Follow-Up With PCP Within 48 Hours Or Access Emergency Care If Needed.
- If Needed, Consult Case Management For Prior Approvals

Diagnostic Testing

- 2 View CXR:
  - If signs and symptoms of respiratory distress
  - If diagnosis is uncertain, OR
  - Failed initial therapy
- Not Recommended:
  - CBCD
  - CRP
  - Blood Culture

Inpatient Recommended:

- CXR
- Procalcitonin (PCT): Consider
  - If holding antibiotics if PCT < 0.25 ng/ml
  - Viral Respiratory Panel

Blood culture only if:

- Failure of first line antibiotic therapy with Lobar Consolidation, OR
- Moderate To Severe (Presumed) bacterial CAP (Especially if complicated pneumonia; Refer to Complicated Pneumonia Guideline)

Exclusion Criteria

- Immunocompromised
- Cystic Fibrosis
- Infants <2 Months Of Age
- Nosocomially Acquired Pneumonia (>48 Hrs)
- Moderate To Severe Effusion, Empyema/abscess, Necrosis
- Medically Complex Patients
- Multilobar Pneumonia
- Suspected Aspiration Pneumonia

Diagnostic Testing

- Viral Respiratory Panel
- Procalcitonin (PCT)
- Blood Culture

3 Admission Criteria

- Sign And Symptoms Of Respiratory Distress
- Vomiting/poor PO Intake
- Inability To Manage Patient At Home
- Lack Of Improvement On Outpatient Therapy
- Consider If ≤ 6 Months With Lobar Consolidation

Consider PICU If:

- FiO2 >40%
- PCO2 >55
- PEWS ≥ 5
- Fluid Refractory Hypotension
- HFNC exceeding floor limits (see guidelines: SR HFNC, EG/HS HFNC)

If No Improvement After ≥ 48 Hours Consider Further Imaging Or Labs Or Consider Placing Patient On The Complicated Pneumonia Guideline

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### Uncomplicated Community Acquired Pneumonia (CAP) Medication Chart

**Patients 2 Months - 18 Years Of Age With Signs And Symptoms Of Community Acquired Pneumonia (Bacterial)**

**Updated 6/2023**

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<table>
<thead>
<tr>
<th>IV choice for admitted patients</th>
<th>Dose &amp; Schedule</th>
<th>Max Single Dosage</th>
<th>PO Step Down and/or Discharge Medications</th>
<th>Dose &amp; Schedule</th>
<th>Max Single Dosage</th>
<th>Total Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Line A</td>
<td>Ampicillin</td>
<td>75mg/kg q6h</td>
<td>2000mg</td>
<td>Amoxicillin</td>
<td>40mg/kg BID</td>
<td>1000mg</td>
</tr>
<tr>
<td>First Line with Penicillin Allergy</td>
<td>Clindamycin</td>
<td>13mg/kg q8h</td>
<td>900mg</td>
<td>Clindamycin</td>
<td>10mg/kg TID</td>
<td>600mg</td>
</tr>
<tr>
<td>Second Line with Penicillin Allergy B</td>
<td>Levofloxacin</td>
<td>&lt;5yo:10mg/kg q12h ≥ 5yo:10mg/kg q24h</td>
<td>750mg</td>
<td>Levofloxacin B</td>
<td>&lt;5yo:10mg/kg BID ≥ 5yo:10mg/kg QD</td>
<td>750mg</td>
</tr>
<tr>
<td>If Not Fully Immunized against H.influenzae or S.pneumoniae C</td>
<td>Ceftriaxone</td>
<td>75mg/kg q24h</td>
<td>2000mg</td>
<td>Amoxicillin/Clavulanate B</td>
<td>40mg/kg BID</td>
<td>1000mg</td>
</tr>
<tr>
<td>For Atypical Pathogen Coverage D Add</td>
<td>Azithromycin</td>
<td>10mg/kg x 1 then 5mg/kg daily x 4 days</td>
<td>500mg</td>
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</table>

**A** Known susceptibility should be used to guide therapy

**B** Consider Levofloxacin in patients with Penicillin allergy AND 1) severe disease OR 2) not fully immunized against H.influenzae or S.pneumoniae

**C** Definition of fully immunized against H.influenzae or S.pneumoniae: Up to date for age

**D** Concentration of Amoxicillin/Clavulanate suspensions vary, preferred formulation for patients <40kg is suspension with 600mg Amoxicillin-42.9mg Clavulanate/5mL. For patients ≥ 40kg use the 875mg Amoxicillin-125mg Clavulanate tablets or 400mg Amoxicillin – 57mg Clavulanate/5mL suspension.

**E** If patient on Levofloxacin, atypical pathogens are covered and an addition of azithromycin is not needed.

**F** For outpatients with pneumonia, 5 days of treatment is generally sufficient. Among inpatients, further treatment may be reconsidered after the initial 5 day course based on disease severity.

**Lack of improvement on outpatient first line therapy:**

- Ensure patient has been compliant and on appropriate first line therapy for a minimum of 48-72 hrs.
- Consider viral (<2 yr.)/atypical (>5 yr.) pneumonia if no response to antibiotic
- If bacterial pathogen is suspected:
  - If patient needs admission, start IV Ampicillin
  - If patient is stable for discharge:
    - May consider Augmentin if not fully immunized
    - May consider Clindamycin if fully immunized
  
  **Note:** 2nd and 3rd generation oral cephalosporins (Cefprozil, Cefdinir, Cefpodoxime) have less activity against pneumococcus than Amoxicillin

**Consult SOAP team or Infectious Disease before giving Ceftriaxone or Levofloxacin for patient being discharged home from ED or UC**