## Uncomplicated Community Acquired Pneumonia (CAP) Guideline

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

### 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

### Signs And Symptoms Of Respiratory Distress
- Dyspnea
- Grunting
- Nasal Flaring
- Apnea

### Admission Criteria
- Signs 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

### Diagnosis Testing
- 2 View CXR: if diagnosis is uncertain or in those that failed initial antibiotic therapy
- Not Recommended:
  - CBCD
  - CRP
  - Blood Culture

### Discharge Criteria
- Adequate PO Intake
- No Respiratory Distress, Reference To Box 3 Below
- Parents Able To Follow-Up With PCP Within 48 Hours Or Access Emergency Care If Needed.
- If Needed, Consult Case Management For Prior Approvals

### Interventions

**Patient Presents To ED/UC With: Fever, And/Or Increased Work Of Breathing**

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

**Provide O2 To Keep Sats >90%**

**Administer Antipyretics For Temp ≥ 101**

**Hydrate With Oral Fluids If Tolerated**

**Consider Chest X-ray (2View)**

**Provide hydration: Oral or Place IV & hydrate with NS**

**Inadequate Oral Intake/ Dehydration**

**Signs & Symptoms of Respiratory Distress**

- Yes
- No

**Does Patient meet discharge criteria?**

- Yes
- No

**Admit to Inpatient Floor**

**Does Patient meet discharge criteria?**

- Yes
- No

**Discharge**

- Discharge Teaching (Refer To Teaching Sheet)
- Prescription, See Medication Chart If Bacterial Pathogen Suspected
- Follow-Up With PCP Within 48 Hours

**Interventions**

- Provide O2 To Keep Sats >90%
- Antibiotics If Bacterial Pathogen Suspected See Medication Chart Pg. 2
- Fluids As Needed Oral Or IV
- Obtain CXR If Not Already Done

**Discharge**

- Discharge Teaching (Refer To Teaching Sheet)
- Prescription, If Appropriate
- Follow-Up With PCP Within 48 Hours

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**Max Single Dosage**

**PO Step Down and/or Discharge Medications**

<table>
<thead>
<tr>
<th>IV choice for admitted patients</th>
<th>Dose &amp; Schedule</th>
<th>Max Single Dosage</th>
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<th>Max Single Dosage</th>
<th>Total Length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Line A</strong></td>
<td>Ampicillin</td>
<td>75mg/kg q6h</td>
<td>2000mg</td>
<td>Amoxicillin</td>
<td>30mg/kg TID</td>
</tr>
<tr>
<td><strong>First Line with Penicillin Allergy</strong></td>
<td>Clindamycin</td>
<td>13mg/kg q8h</td>
<td>900mg</td>
<td>Clindamycin</td>
<td>10mg/kg TID</td>
</tr>
<tr>
<td><strong>Second Line with Penicillin Allergy B</strong></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>
</tr>
<tr>
<td><strong>If Not Fully Immunized against <em>H.influenzae or S.pneumoniae</em> C</strong></td>
<td>Ceftriaxone</td>
<td>75mg/kg q24h</td>
<td>2000mg</td>
<td>Amoxicillin/Clavulanate D</td>
<td>30mg/kg TID</td>
</tr>
<tr>
<td><strong>For Atypical Pathogen Coverage Add</strong></td>
<td>Azithromycin</td>
<td>10mg/kg x 1 then 5mg/kg daily x 4 days</td>
<td>500mg</td>
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<td>10mg/kg x 1 then 5mg/kg daily x 4 days</td>
</tr>
</tbody>
</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 60mg 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.

**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**