Alaska Antimicrobial Stewardship Collaborative
ADULT Inpatient Community-Acquired Pneumonia (CAP) Guideline

Major Criteria	Minor Criteria	Severity and Risk Factor Considerations
• Septic shock with need for vasopressors • Respiratory failure requiring mechanical ventilation	• Respiratory rate ≥ 30breaths/min • Pao2/FIo2 ratio ≤ 250 • Multilobar infiltrates • Confusion/disorientation • Uremia (BUN ≥ 20 mg/dl) • Leukopenia (WBC < 4,000 cells/µl) • Thrombocytopenia (plts <100,000/µl) • Hypothermia (<36° C) • Hypotension requiring aggressive fluid resuscitation	**NOTE:** Prior categorization of healthcare-associated pneumonia (HCAP) has been abandoned. The following are **NOT** predictive of multi-drug resistant pneumonia and should **NOT** be used alone as an indication for empiric broad-spectrum coverage: • Hospitalized in an acute care hospital for 2 or more days within 90 days of infection • Resided in a nursing home or long term care facility • Received recent chemotherapy or wound care in last 30 days • Attended a hemodialysis clinic in the last 30 days

Treatment Recommendations

Infection	Standard Treatment	Hospitalized within 90 days PLUS IV antibiotics#	Prior MRSA in Respiratory Culture#	Prior *Pseudomonas* in Respiratory Culture#	Duration
Non-Severe	**Preferred Therapy:** ○ **Ceftriaxone 1g** IV q24hr **PLUS Azithromycin 500mg** PO/IV q24hr x3 days **Anaphylactic β-Lactam Allergy:** ¥ ○ **Levofloxacin 750mg** PO/IV q24hr	Empiric treatment for MRSA or *P. aeruginosa* **not recommended** Escalate based upon culture results	**Preferred Therapy:** ○ **Vancomycin 15mg/kg x1 then** (Pharmacy to Dose) ○ **Ceftriaxone 1g** IV q24hr **PLUS Azithromycin 500mg** PO/IV q24hr x3 days **Anaphylactic β-Lactam Allergy:** ¥ ○ **Vancomycin 15mg/kg x1 then** (Pharmacy to Dose) ○ **PLUS Levofloxacin 750mg** PO/IV q24hr	**Preferred Therapy:** ○ **Cefepime 2gm** IV q8hr **PLUS Azithromycin 500mg** PO/IV q24hr x3 days **Anaphylactic β-Lactam Allergy:** ¥ ○ **Levofloxacin 750mg** PO/IV q24hr **PLUS Aztreonam 2gm** IV q8hr	○ **5 days** for patients **without** immunosuppression or structural lung disease ○ **7 days** for patients with **moderate** immunosuppression& or structural lung disease ○ **10-14 days** for poor clinical response, initial inappropriate treatment, or **significant** immunosuppression Patients should be afebrile for 48-72hr and demonstrate signs of clinical stability before therapy is discontinued
Severe (1 major or ≥ 3 minor criteria)	**Preferred Therapy:** ○ **Ceftriaxone 1g** IV q24hr **PLUS Azithromycin 500mg** PO/IV q24hr x3 days **Anaphylactic β-Lactam Allergy:** ¥ ○ **Levofloxacin 750mg** PO/IV q24hr **+/- Vancomycin 15mg/kg** (Pharmacy to Dose)	**Empiric MRSA treatment:** **Add Vancomycin 15mg/kg** (Pharmacy to Dose) **Empiric *P. aeruginosa* treatment:** **Substitute Cefepime 2g** IV q8h for ceftriaxone			
Aspiration pneumonia	Addition of anaerobic therapy is **NOT** recommended unless lung abscess or empyema is suspected.				
Suspected+ or confirmed Influenza	**Oseltamivir 75mg** PO BID x5 days				
Oral options to consider for de-escalation of β-lactam (total duration IV + PO as above)**	**Preferred Therapy:** ○ **Amoxicillin 1g** PO TID^ ○ **Augmentin 875mg** BID ▪ **Consider additional amoxicillin 1g** BID in addition to **Augmentin** for CAP complicated by empyema, asplenia or Strep pneumo PenG MIC 2-4 **Non-Anaphylactic Penicillin Allergy:** ○ **Cefuroxime axetil 500mg** PO BID				

Consideration

Prior positive cultures within 1 year. If empiric treatment for MRSA or *P. aeruginosa*, blood and respiratory cultures should be collected prior to antibiotic administration
¥ If patient reports penicillin allergy, inquire about onset and severity of symptoms, as well as prior beta-lactam exposure and update patient medical record. Severe or life-threatening allergic reactions may include: anaphylaxis, angioedema, urticaria, Stevens-Johnson Syndrome (SJS), etc.
Dosage recommendations based upon an assumed CrCl > 60 ml/min. If patient has diminished renal function, doses should be dose-reduced.
+Certain patient populations are at a higher risk for influenza related complications and may require treatment in absence of confirmed influenza. Refer to local guidelines.
**Patient should complete macrolide therapy
^ Strep pneumo and/or cefinase negative H.influenzae / M.cattarhalis use high-dose amoxicillin
& Severe immunosuppression: Neutropenia (WBC < 4 or ANC < 500), HIV+ with CD4 < 200, active chemotherapy, undergone solid organ transplant on active immunosuppression, Moderate immunosuppression: all other diseases (including long-term steroid use with prednisone at 10mg/day or equivalent)

Metlay JP, et al. Diagnosis and treatment of adults with community-acquired pneumonia, clinical practice guideline of the American Thoracic Society and Infectious Diseases Society of America. *Am J Respir Crit Care Med*. 2019; 200(7):e45-e67.

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