Yukon-Kuskokwim HEALTH CORPORATION

Clinical Guideline

Pneumonia (Adult)

Patient presents with symptoms suggesting Community Acquired Pneumonia:
Cough, sputum, dyspnea, pleuritic chest pain, fever

If multiple TB risk factors, see Adult TB guideline.

Obtain CXR especially if patient has ≥ 2 of these signs: Temp. > 100.4, HR > 100/min, abnormal chest exam, RR> 20/min, 02 Sat <90%, history of chronic lung disease

CXR shows infiltrate?

No → Chronic lung disease?

No →
A. Patient Education.
B. Rational for no antibiotics.
C. Follow-up if patient worsens.
D. Treat bronchospasm if present.
E. Verify TB and HIV status.

Yes

If yes, consider

Patient Education
1. Smoking Cessation
2. Immunizations
   - Influenza
   - Pneumovax
3. PPD
4. Follow-up

One or more of the following: Comorbid condition or abnormal physical exam findings from PSI or Age ≥ 60?

No →

Outpatient Antibiotics
1. Amoxicillin 1000 mg PO TID for 5-7 days
   AND
2. Azithromycin 500 mg PO daily for 3 days

If anaphylaxis to PCN:
3. Doxycycline 100 mg PO BID for 5-7 days is reasonable for patient without comorbid conditions.
4. Levofloxacin 750 mg PO daily for 5 days

Yes

Labs
1. CBC with diff
2. Comprehensive Metabolic Panel
3. +/- Blood culture x 2 (prior to ABX)
4. +/- Sputum
5. +/- ABG
6. +/- HIV
7. Procalcitonin

Consider procalcitonin to differentiate bacterial causes of symptoms.

If patient is in a village and CXR isn't available, OR the patient refuses to travel for CXR, consider using doxycycline as the YK Delta still has good pneumococcal coverage with doxycycline.

PSI ≤ 70

Yes →

No

PSI 71-90

Yes → Probable outpatient treatment. Management to be based on clinical judgement as above.

No

PSI ≥ 91

Yes →

Inpatient Antibiotics
1. Ceftriaxone 1gram IV daily
   AND
2. Azithromycin 500 mg IV/PO daily x 3 days

If anaphylaxis to PCN:
3. Levofloxacin 750 mg IV/PO daily for 5 days

- Consult pharmacists for any questions/concerns.
- Consider consultation with respiratory therapy for admitted patients.

Suspect Aspiration : ampicillin-sulbactam 3 grams IV Q6hrs **OR** Ceftriaxone 1 gram IV Q24hrs **AND** metronidazole 500 mg IV every 8 hours
Suspect Pseudomonas: Cefepime 1 gram IV Q 8hours, extended infusion.
Suspect early onset HAP: within first 4 days of hospitalization, treat as CAP
Suspect late onset HAP or VAP: Vancomycin IV dosed per protocol **AND** Cefepime 1 gram IV Q 8 hours, extended infusion

Remember to order a follow up chest x-ray in 6-8 weeks to ensure resolution of infiltrate

Pneumonia Severity Index (PSI)
http://pda.ahrq.gov/clinic/psi/psicalc.asp
Score = Total points accumulated below

Demographic Factors	
Age of Males in years	age (years)
Age of Female in years	age (years) - 10
Nursing home resident	+10
Comorbid Illnesses	
Neoplastic disease[1]	+30
Liver disease[2]	+20
Congestive heart failure[3]	+10
Cerebrovascular disease[4]	+10
Renal disease[5]	+10
Physical Examination Findings	
Altered mental status	+20
Respiratory rate > 30/minute	+20
Systolic BP < 90 mmHg	+15
Temperature < 95°F (35°C) or > 104°F (40°C)	+15
Pulse >125/minute	+10
Laboratory Findings	
pH < 7.35	+30
BUN > 20 mg/dl (11 mmol/L)	+20
Sodium < 130 mEq/L	+20
Glucose > 250 mg/dL (14 mmol/L)	+10
Hgb < 9 gm (Hematocrit < 30%)	+10
PO2< 60, Sp 02 sat < 90%(room air)	+10
Pleural effusion	+10

Patient with 02 sat < 90%, homelessness, multilobar pneumonia, or risk for aspiration may warrant hospitalization despite their risk classification.

1. Neoplastic disease – any cancer, except basal or squamous cell carcinoma of the skin active at the time presentation.
2. Liver disease – clinical or histologic cirrhosis or chronic active hepatitis.
3. CHF – documented with history, physical exam, or CXR findings; echo, MUGA; or left ventriculogram.
4. CVD – clinical diagnosis of stroke or TIA or documented stroke on CT or MR.
5. Renal disease – chronic renal disease or abnormal BUN or creatinine.

CAP = Community Acquired Pneumonia
HAP = Healthcare Associated Pneumonia
VAP = Ventilator Associated Pneumonia

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.
Approved by MSEC 9/21/18.
If comments about this guideline, please contact Ellen_Hodges@ykhc.org.