

**Mount Auburn Hospital Clinical Path
Pneumonia**

RESOURCE PHYSICIAN: John Tully, M.D.

CARE AREAS: ED, Medical Floors

LOS: 4 Days

Stamp Patient Plate Here

DESCRIPTION: Adult Pneumonia (Exclude immunosuppressed patients)

FOCUS / DISCHARGE OUTCOMES	DAY 1 (ED)		DAY 1 (Floor)		DAY 2		
	INTERVENTIONS	OUTCOMES	INTERVENTIONS	OUTCOMES	INTERVENTIONS	OUTCOMES	
1. RESPIRATORY MANAGEMENT • Afebrile • Defervescing + adequate oxygenation	MD/Nsg: • CXR - PA/LAT (No wait) compare w/prior film; if significant effusion, consider thoracentesis • CBC, lytes, BMP • Consider legionella urine antigen • Bld culture x 2 sets • Sputum gram stain/c+s; Induction sputum prn if unsuccessful, notify MD; review by HO • Antibiotics • U/A • EKG +/- • Oximetry, consider ABG • O2/Aerosol mist • IVF's • Bronchodilator/NEB prn • Consider resp/mask precautions	O2 SAT > 90 NP Labs/Cultures sent Tests done 1st dose Abx given	MD: • Review: Old records/epidemiology hx • Antipyretics temp > 101 • Antibiotics • RT consult • Consider DVT prophylaxis • DC IVF if tol PO intake • Saline lock • Sputum upon arrival (if not obtained in ED) MD/Nsg: Assessment - functional, nutritional, skin, communication Nsg: • Weight • I+O • Temp q 4 hrs • Oximetry • O2/Aerosol mist • Assess lung sounds • Encourage fluids RT: Assessment for therapy	O2 SAT > 90 NP Labs/Cultures sent Tests done 1st dose Abx given	MD: Reassess Dx of pneumonia • Review initial culture & test results • Consider repeat CXR Assess further Dx testing ie: legionella, mycoplasma, TB, influenza Consider Pulmonary consult: • Pleural effusion • COPD • Hypoxemia on nasal O2 Consider ID consult: • Abx clarification • Clinical deterioration Nsg: • Temp q shift • Oximetry • Encourage fluids • Assess lung sounds • Activity as tol RT: Reassess therapies prn	O2 SAT > 90 NP Clinical status improved	
2. EDUCATION / SUPPORT • Verbalizes understanding of medications • S + S to notify MD • Activity	• Discuss initial plan of care with patient • Review Clinical Path		• Review cough & deep breathe • Discuss initial plan of care with patient	• Understands plan & expectation			
3. DISCHARGE PLANNING • Discharge to home or appropriate level of care					CM: • Assess discharge needs • Assess treatment modalities available at discharge facility • Referrals as needed		
SIGNATURE LOG	NIGHT	Init:	Sig:	Init:	Sig:	Init:	Sig:
	DAY	Init:	Sig:	Init:	Sig:	Init:	Sig:
	EVE	Init:	Sig:	Init:	Sig:	Init:	Sig:

This clinical path is a general guideline and does not represent a professional care standard governing providers' obligations to patients. Care is revised to meet the individual patient's needs.

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Form 287-MR, New 5/98, MAH

Starting the Clinical Path

1. Order written.
2. Stamp and date columns.
3. Place on clipboard.
4. OE notification-enter orders; category "CP," procedure F17 for clinical path.
5. Review daily.

Use of Clinical Path

1. All involved disciplines review daily. Nsg review every shift & sign/initial.
2. Evaluate interventions/outcomes.
3. Circle interventions/outcomes not done/not met.
4. The circled **bold italicized items** require a progress note.

FOCUS / DISCHARGE OUTCOMES		DAY 3		DAY 4		DAY 5		
		INTERVENTIONS	OUTCOMES	INTERVENTIONS	OUTCOMES	INTERVENTIONS	OUTCOMES	
1. RESPIRATORY MANAGEMENT • Afebrile • Defervescing + adequate oxygenation		MD: • Consider change po ABX • Evaluate need O2 • Review final cultures/ sensitivities, adjust Abx Nsg: • Temp q shift • Oximetry • Encourage fluids • Assess lung sounds • Activity as tol RT: Reassess therapies prn • Evaluate need home therapies	• Adequate po intake • No evidence delerium / change in mental status • Adequate functional physical activity • Defervescing & adequate oxygenation	MD: • Reconsider pulmonary / ID consult if etiology or response unclear • Consider influenza / pneumococcal vaccine • Consider change po ABX • Review final cultures/ sensitivities, adjust Abx Nsg: • Temp q shift • Oximetry • Encourage fluids • Assess lung sounds • Activity as tol RT: Reassess therapies prn	• Adequate po intake • No evidence delerium / change in mental status • Adequate functional physical activity • Defervescing & adequate oxygenation • Vaccinations	MD: • Oral abx • Reconsider pulmonary / ID consult if etiology or response unclear • Consider influenza / pneumococcal vaccine • Consider change po ABX • Review final cultures/ sensitivities, adjust Abx Nsg: • Temp q shift • Oximetry • Encourage fluids • Assess lung sounds • Activity as tol RT: Reassess therapies prn	• Adequate po intake • No evidence delerium / change in mental status • Adequate functional physical activity • Defervescing & adequate oxygenation • Vaccinations	
		2. EDUCATION / SUPPORT • Verbalizes understanding of medications • S + S to notify MD • Activity			Review • S + S respiratory infection • Medications • Activity • Refer to smoking cessation program		Review • S + S respiratory infection • Medications • Activity • Refer to smoking cessation program	
		3. DISCHARGE PLANNING • Discharge to home or appropriate level of care		MD/CM: • Return to SNF if treatment modalities available Nsg: • Referrals as needed		MD/CM: • Return to SNF if treatment modalities available or • Discharge to home • Flu appointment • Prescriptions Nsg: • Referrals as needed • Discharge Instructions		MD/Nsg: • Discharge to home • Flu appointment • Prescriptions Nsg: • Referrals as needed • Discharge Instructions
SIGNATURE LOG		NIGHT	Init:	Sig:	Init:	Sig:	Init:	Sig:
		DAY	Init:	Sig:	Init:	Sig:	Init:	Sig:
		EVE	Init:	Sig:	Init:	Sig:	Init:	Sig:

Imprint Patient Data	DOCTORS' ORDERS
Previous Drug Allergies	PLEASE ORDER IN METRIC SYSTEM USE BALL POINT PEN ONLY

DATE	TIME	Admission Orders: Pneumonia
		<input type="checkbox"/> Inpatient <input type="checkbox"/> Observation Admit to: _____
		Attending: _____ HO: _____ Beeper: _____
		1. Pneumonia Clinical Path
		2. Condition: Fair
		3. Allergies:
		4. Vital Signs per unit protocol with oximetry; temp q 4 hrs
		5. IV:
		6. I & O
		7. Admission Weight:
		8. Diet:
		9. Respiratory Treatment:
		<ul style="list-style-type: none"> • Respiratory therapy consult • ABG's: <input type="checkbox"/> O2 type _____ % O2 (F102) _____ RR _____ • NEB <input type="checkbox"/> • Oxygen: <input type="checkbox"/> NP _____ LPM <input type="checkbox"/> Mask _____ % maintain sat _____ %
		10. Labs / Tests: (if not already done in ED)
		<ul style="list-style-type: none"> • Blood cultures x 2 • BMP • LFT • CBC w/diff • Sputum: <input type="checkbox"/> C&S (RT induce prn) (notify MD if unobtainable) • UA • CXR - PA & LAT (no wait) clinical hx: _____ • EKG-clinical hx: _____
		11. Medications:
		<ul style="list-style-type: none"> • Antibiotic: • Antipyretic: _____
		12. Other:

_____ M.D.

Pneumonia - Guidelines for Initial Therapy
(to be modified as culture results return)



MOUNT AUBURN
HOSPITAL

Outpatient

Setting / Host	Possible / Expected Pathogens (In no particular order)	Antibiotic Considerations (Not necessarily in order of preference)
I. Community-acquired, otherwise healthy	Mycoplasma pneumoniae Strep pneumo Chlamydia pneumoniae Legionella sp.	Doxycycline Macrolide Newer quinolones*
II. Community-acquired, smoking +/- prior lung disease, +/- other baseline medical problems	All of the above H. influenzae M. catarrhalis Rarely, other bacteria	All of the above 2nd gen Ceph Trimeth-sulfa Amox-clavulanic acid

Inpatient

I. Community-acquired, otherwise healthy	See above	1. Doxycycline or macrolide alone may be reasonable if strong suspicion of atypical organism
II. Community-acquired, smoking, +/- prior lung disease, +/- other baseline medical problems	See above	2. IV azithromycin generally preferable to high-dose IV erythromycin (4g/d) 3. Ceftriaxone preferred over cefuroxime if strong suspicion of Strep pneumo. In some cases, might want vancomycin +/- ceftriaxone. Cefuroxime good choice for presumptive H flu or Moraxella 4. May give macrolide or doxy. plus ceftriaxone in very ill patient when etiology not clear 5. Role of newer quinolones not yet clear
III. Community-acquired, likelihood of aspiration	Oral anaerobes <i>(N.B. not the same for hospital or NH aspiration)</i>	Cefoxitin Clindamycin Ampicillin-sulbactam
IV. Acquired in hospital, nursing home, or chronic care facility	In addition to all of the above, St. aureus (inc. MRSA) Enteric GNR's Pseud-aerug	1. Very difficult in absence of sputum gram stain, given the range of possibilities. Need even more vigorous efforts for sputum here. 2. Consider: -vancomycin (usually) if St. aureus suspect -3rd gen. Ceph or quinolone or carbapenem or aminoglycoside (generally less preferred) if GNR's suspect
V. Immunocompromised host	In addition to all of the above, various opportunists, depending on the host, etc.	Assessed on case-by-case basis. Review with ID, Pulm, or Hem/Onc

* Those with increased strep-pneumo activity (levofloxacin, grepafloxacin, trovafloxacin)