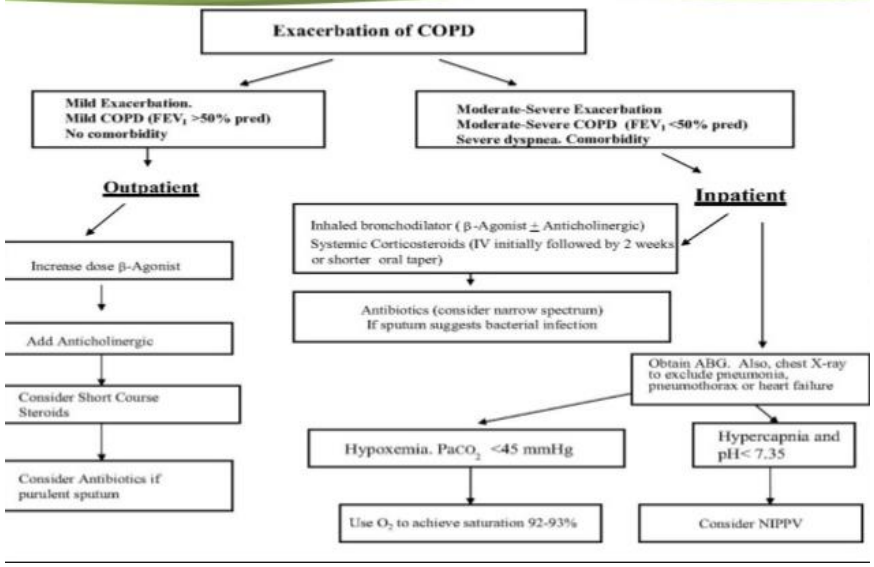
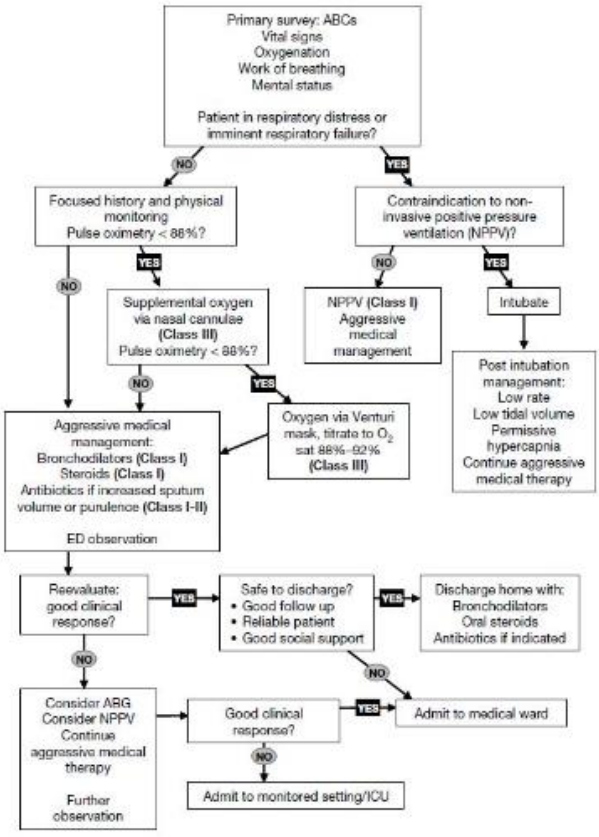
Management of COPD Exacerbation



Clinical Pathway: Therapeutic Management Of COPD Exacerbation



The **evidence for recommendations** is graded using the following scale. For complete definitions, see back page. **Class I:** Definitely recommended. Definitive, excellent evidence provides support. **Class II:** Acceptable and useful. Good evidence provides support. **Class III:** May be acceptable, possibly useful. Fair-to-good evidence provides support. **Class Indeterminate:** Continuing area of research.

This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.

Admission Orders Examples

Medications

Inhaled medications

- ☐ albuterol 2.5 mg/3 mL (0.083%) Neb q4h or q ____ h **Evidence**
- ☐ albuterol 2.5 mg/3 mL (0.083%) Neb q2h or q ____ h PRN Shortness of Breath/Wheezing **Evidence**
- ☐ ipratropium (ATROVENT) 0.5 mg/2.5 mL (0.02%) Neb q6h **Evidence**
- ☐ Albuterol + Ipratropium (2.5mg + 0.5mg) 3mL Neb q6h
- ☐ Albuterol + Ipratropium (2.5mg + 0.5mg) 3mL Neb q ____ h PRN
- ☑ Respiratory Therapy may adjust medication frequency based on protocol Link to Bronchodilator Protocol

Glucocorticoids:For patients that are NPO **Evidence**

- ☐ Methylprednisolone 40mg IV daily for first 24 hours or until patient can take po

Glucocorticoids: For patients that are taking PO **Evidence**

- ▸ If less than 10 days duration of therapy, no wean required. May taper over 7-14 days, not to exceed 14 days total course
- ☐ prednisone 40mg po daily x7 days then stop

OR use taper course:

- ☐ prednisone 40mg po qAM x 2 days, THEN prednisone 30mg po qAM x 3 days, THEN prednisone 20mg po qAM x 3 days, THEN stop

Vaccinations

- ☐ pneumococcal 23-valent vaccine (PNEUMOVAX) 0.5 mL IM x1 if patient is over 65 years and has not received in the past 5 years.
- ☐ influenza virus vaccine, inactivated (FLUZONE or FLUARIX) 0.5 mL IM x1 during flu season.

☑ Request Pharmacy to renally adjust any antibiotics ordered for patients in Group II or Group III Risk Factors below:

ANTIMICROBIALS GROUP II RISK FACTORS FOR MODERATE TO SEVERE DISEASE (for patients that are NPO) **Source**

Antibiotic Reminders **Evidence** Link to S&W Inpatient Antibiogram

- ▸ Antibiotics may be indicated if the patient demonstrates increased dyspnea, sputum volume, or sputum purulence
- ▸ Note: choose an antibiotic from a different class than what the patient received in the previous 3 months (if applicable).

Risk Factors

- ☐ Increased dyspnea
- ☐ Purulent sputum
- ☐ Change in ____

Injectable Antibiotic (for patients that are NPO)

- ☐ ceftriaxone (ROCEPHIN) 1 gram IV daily
- ☐ moxifloxacin (AVELOX) 400 mg IV daily for PCN allergic patients only

ANTIMICROBIALS GROUP III RISK FACTORS FOR SEVERE COPD (for patients that are NPO)

Risk Factors

- ☐ Constant Purulent Sputum
- ☐ Bronchiectasis
- ☐ Known FEV 1 less than 35% predicted
- ☐ Multiple risk factors (more than 4 exacerbations/year and FEVI less than 50%)

Injectable Antibiotics for Group III Risk Factors **Evidence**

- ☐ ciprofloxacin (CIPRO) 400 mg IV q12h PLUS one of the following antibiotics
- ☐ cefepime (MAXIPIME) 2 gram IV q8h
- ☐ piperacillin-tazobactam (ZOSYN) 4.5 gram IVPB q6h

Oral Antibiotic (For patients that are taking PO)

- ☐ Augmentin 875mg po bid x 7 days
- ☐ moxifloxacin (AVELOX) 400 mg PO daily x 7 days
- ☐ doxycycline (VIBRAMYCIN) 100 mg PO bid x 7 days
- ☐ sulfamethoxazole 800mg -trimethoprim 160mg (BACTRIM DS) 1 tablet PO q12h x 7 days

Nicotine Replacement Therapy

- ▸ (Please select only one of the following medication options)
- ☐ Nicotine Patch (NICODERM CQ) 14 mg apply topically qAM - for less than 10 cigarettes daily (1/2 pack)
- ☐ Nicotine Patch (NICODERM CQ) 21 mg apply topically qAM - for 10 or more cigarettes daily
- ☐ Nicotine Inhaler 10mg 1 puff q30min PRN, max of 16 cartridges in 24h period

Machine Settings

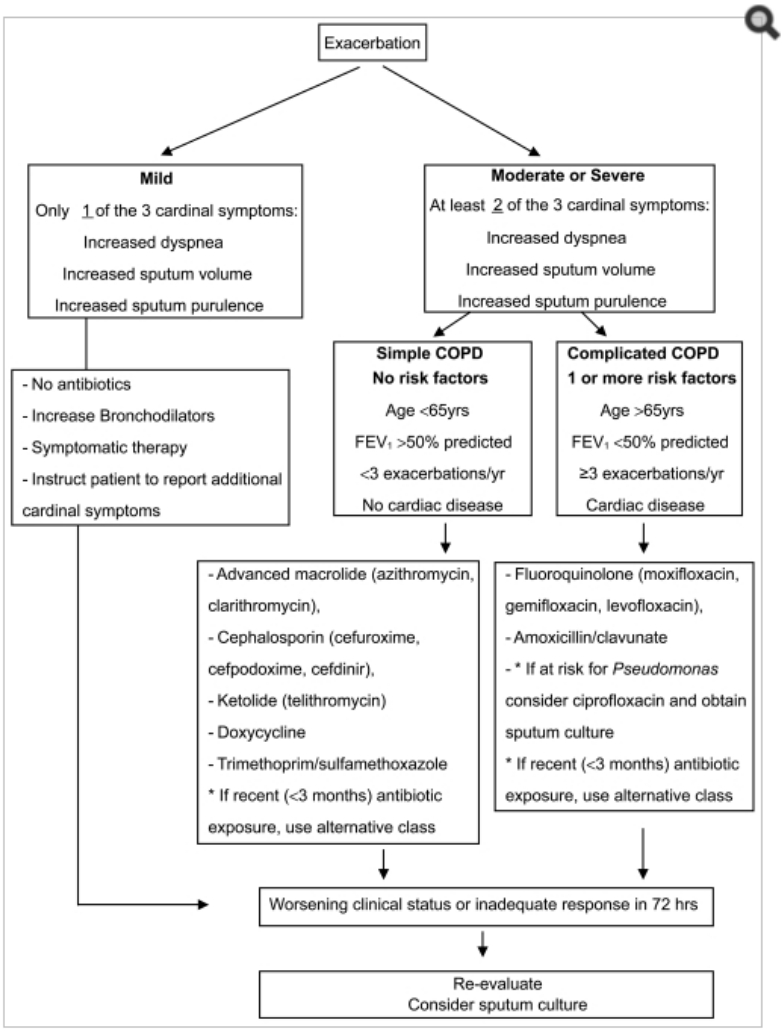
CPAP Settings

If CPAP is used, start with low pressures (5 cmH_2O) and increase in increments of 2 cmH_2O as tolerated by the patient. Respiratory goals may include an exhaled tidal volume greater than 7 mL/kg, a respiratory rate of less than 25, oxygen saturation greater than 90%, and perhaps most important, patient comfort.[28]

BiPAP Settings – 10/5 consider

With BiPAP, the IPAP setting may range from 4-24 cmH_2O, while the EPAP setting may vary from 2-20 cmH_2O. Typical initial settings for BiPAP are levels of 8-10 cmH_2O IPAP and 2-4 cmH_2O EPAP. These settings presume that the lower pressures will allow patient tolerance and training.

When using BiPAP, remember that the inspiratory pressure must be maintained higher than the expiratory pressure at all times to ensure bi-level flow. Flow must be synchronized with patient respiratory efforts.

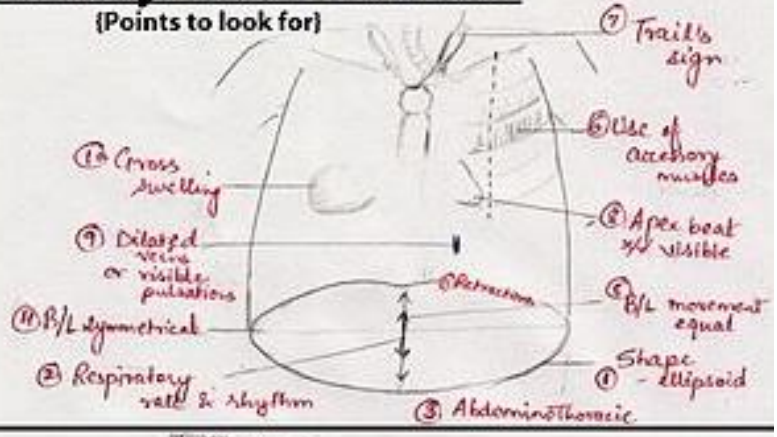


Respiratory Examination

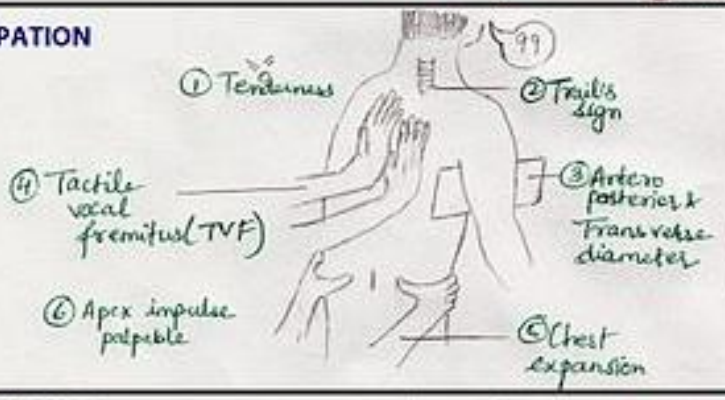
(Points to look for)

1) Exposure
2) Lighting, Position

3) INSPECTION



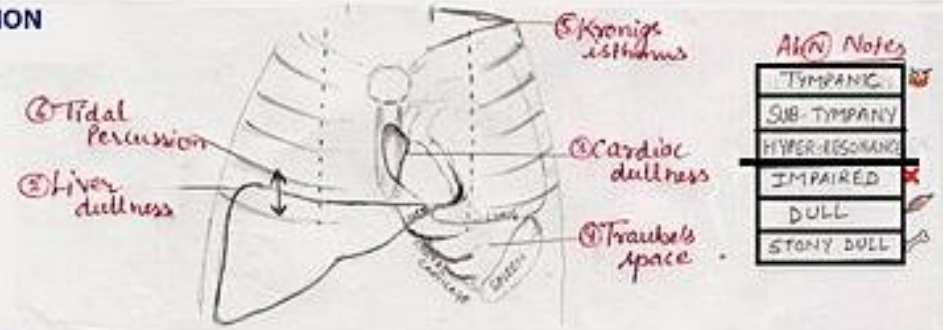
4) PALPATION



REGIONS

5) PERCUSSION

Percuss all areas in the intercostal spaces and look for abnormal notes



6) AUSCULTATION

Vesicular (Normal sounds)

Bronchial (with Alveolar gap)