POLICY TITLE: Observation Unit AECOPD Pathway		POLICY NO.:
Approved by: Henry Ford Hospital Clinical Operations Team		
ORIGIN DATE:	**REVISED DATE:**	**REVIEW DATE:**

1. **Philosophy/Purpose:** Patients with mild to moderate acute exacerbation of chronic obstructive lung disease (AECOPD) may be safely and efficiently managed in the Observation Unit **(OU)** for additional monitoring and treatment to determine whether they need further care in the inpatient setting or if they can be discharged. This policy defines the proper selection and care of these patients.

2. **Scope:** This policy applies to the selection and care of patients with mild to moderate AECOPD at the Observation Unit of Henry Ford Hospital in Detroit.

3. **Responsibility:** It is the responsibility of the Observation Unit physician to ensure that patients are accepted to the unit in accordance with this policy.

4. **Policy:**

4.1. Inclusion Criteria

4.1.1. Patients presenting with signs or symptoms suggestive of mild to moderate and uncomplicated acute exacerbation of COPD, based on all of the following:

4.1.1.1. Symptoms of dyspnea or wheezing, with or without cough

4.1.1.2. History of smoking

4.1.1.3. No known asthma

4.1.2. **AND** persistent wheezing following initial therapy in the ED with $\geq$ 3 doses of short-acting beta-agonist, **OR** persistent wheezing associated with sustained sinus tachycardia $\geq$ 100 bpm

4.2. Exclusion Criteria

4.2.1. On long-term home oxygen supplementation

4.2.2. Unstable vital signs

4.2.2.1. HR > 120 bpm

4.2.2.2. SBP $\leq$ 100 mmHg

4.2.2.3. RR > 30 /min

4.2.2.4. SaO_2 < 89% or PaO_2 < 60 mmHg

4.2.2.5. Temperature > 38.3 ^{o}F

4.2.3. Persistence of severe signs and symptoms following initial bronchodilators:

4.2.3.1. Inability to complete phrases or words (conversational dyspnea)

4.2.3.2. Agitation or drowsiness

4.2.3.3. Use of accessory muscles or labored breathing

4.2.3.4. Diffuse loud wheezing throughout inhalation & exhalation

4.2.4. $PCO_2 \geq$ 45 mmHg or pH < 7.35

4.2.5. Use of BiPAP in the Emergency Department

4.2.6. Presence of complications such as pneumonia, pneumothorax, etc.

4.2.7. Presence of heart failure exacerbation

4.2.8. Patients who are excluded based on the observation unit general inclusion and exclusion criteria (see separate policy)

4.3. Required Testing Prior to Acceptance to OU

4.3.1. Complete blood count
4.3.2. Chest radiograph
4.3.3. Oxygen saturation
4.3.4. Arterial blood gas if initial clinical presentation is severe

4.4. Required Treatment Prior to Transfer to OU

4.4.1. Establish intravenous (IV) access
4.4.2. Administer bronchodilators, up to 3 doses; unless with sustained sinus tachycardia $\geq$ 100 bpm
4.4.3. Administer systemic steroids (may be given oral)
4.4.4. Demonstrate sustained response to treatment for at least 60 minutes following bronchodilator therapy

5. Assessment and Care in the Observation Unit

5.1. Physician and Advance Practice Provider (APP)

5.1.1. Perform clinical assessment and complete Observation Unit History and Physical Examination (electronically), Medication Reconciliation, and Observation Unit Orders
5.1.2. Supplemental oxygen to maintain oxygen saturation $\geq$ 92% or arterial $PO_2 \geq 60$ mmHg, or to maintain baseline
5.1.3. Bronchodilators. Short-acting inhaled $beta_2$-agonists with or without short-acting anticholinergics are the preferred bronchodilators, administered every 4 hours (may use metered-dose inhaler with spacer if appropriate)
5.1.4. Oral Corticosteroids. Systemic corticosteroids have been shown to shorten recovery time, improve lung function and arterial hypoxemia, and reduce the risks of early relapse, treatment failure, and length of hospital stay. The recommended dose of oral prednisone is 40-60 mg daily.
5.1.5. Empiric antibiotics, when used in the appropriate setting, are associated with decreased mortality and reduced risk of adverse outcomes, including treatment failure or subsequent exacerbation. For simple AECOPD, a course of either doxycycline or azithromycin should be given to patients:
5.1.5.1. With the all three cardinal symptoms: increased dyspnea, increased sputum volume, increased sputum purulence
5.1.5.2. With increased sputum purulence and one other cardinal symptom
5.1.6. Patients should be counseled on smoking cessation
5.1.7. Patients should be offered immunization against influenza and pneumonia

5.2. Nursing

5.2.1. Provide supplemental oxygen to maintain O_2 saturation $\geq$ 92% or arterial $Po_2 \geq$ 60 mmHg, or to maintain baseline

5.2.2. Perform initial assessment and continue care per Observation Unit Orders

5.2.3. Monitor vital signs, including pulse oximetry, every 4 hours and as needed

5.2.4. Patients should be counseled on smoking cessation

5.2.5. Patients should be offered immunization against influenza and pneumonia

5.2.6. If the patient develops worsening dyspnea, chest pain, syncopal episode or altered mentation, notify physician or APP promptly

5.2.7. Replace potassium and magnesium as needed using the parenteral route (preferably) per "GPU Electrolyte Replacement Protocol" (see Hospital Policy NM-36)

5.2.8. Review the patient's clinical progress after the 8th and 16th hour of stay and report if there are any delays or barriers to physician or APP

5.2.9. Discuss the plan for discharge with the physician or APP

5.2.9.1. When the goals for discharge are met (see item 6.1 below)

5.2.9.2. At the 23rd hour of stay

6. Disposition and Follow-up

6.1. Patients may be discharged home once all of the following goals are met:

6.1.1. Stable vital signs

6.1.2. Resolution of symptoms of exacerbation or return to baseline status

6.1.3. Ability to maintain oxygen saturation of $\geq$ 91% on room air or on baseline home FiO_2 after walking twice the length of the I-1 South hallway

6.2. Patients will be admitted for higher level of care:

6.2.1. Unstable vital signs

6.2.2. Progressive or worsening symptoms

6.2.3. Lack of improvement after 24 hours of bronchodilators given every 4 hours

6.2.4. If any other clinical condition that requires inpatient care develops or is recognized, e.g. pneumonia

6.3. Patients discharged home will be referred to their primary care physician (and/or community agency) for follow-up within 7-10 days

6.4. Oral prednisone (40-60 mg daily) should be continued to complete a total of 10-14 days, without tapering.

6.5. The usual duration of empiric antibiotic treatment is 3-7 days, depending upon the clinical response.

6.6. Home medications should also include the following:

6.6.1. Long-acting beta-agonists (LABA)

6.6.2. Long-acting antimuscarinic agents (LAMA)

6.6.3. Inhaled corticosteroids (ICS)

7. References:

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