

Chronic Obstructive Pulmonary Disease (COPD) Care Path

Screening and Diagnosis

GOLD'S Definition – a common preventable and treatable disease characterized by persistent airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases. Exacerbations and comorbidities contribute to the overall severity in the individual patients.

Consider COPD and perform spirometry if any of the following indicators are present in an individual above the age of 40. These indicators are not diagnostic themselves, but the presence of multiple key indicators increases the probability for diagnosis of COPD. **Spirometry is required for diagnosis of COPD.**

- **Dyspnea** That is progressive over time. Characteristically worse with exercise. Persistent.
- **Chronic cough** May be intermittent and unproductive
- **Chronic sputum production** Any pattern of chronic sputum production may indicate COPD.
- **History of exposure to risk factors** Tobacco smoke (including popular local preparations), Smoke from home cooking and heating fuels, as well as Occupational dusts and chemicals.
- **Family history of COPD**

Classification of Severity of Airflow Limitation in COPD (Based on Post-Bronchodilator Forced Expiratory Value(FEV)₁)

Stage I	Mild COPD	FEV ₁ /FVC<0.70	FEV ₁ ≥ 80% normal
Stage II	Moderate COPD	FEV ₁ /FVC<0.70	FEV ₁ 50-79% normal
Stage III	Severe COPD	FEV ₁ /FVC<0.70	FEV ₁ 30-49% normal
Stage IV	Very Severe COPD	FEV ₁ /FVC<0.70	FEV ₁ <30% normal, or <50% normal with chronic respiratory failure present*

Labs and Imaging:

A chest X-ray is not useful to establish a diagnosis in COPD, but it is valuable in excluding alternative diagnoses and establishing the presence of significant comorbidities such as concomitant respiratory (pulmonary fibrosis, bronchiectasis, pleural diseases), skeletal (e.g., kyphoscoliosis), and cardiac diseases (e.g., cardiomegaly). Radiological changes associated with COPD include signs of lung hyperinflation (flattened diaphragm on the lateral chest film, and an increase in the volume of the retrosternal air space), hyperlucency of the lungs, and rapid tapering of the vascular markings.

Immunizations

- Influenza vaccine every year

Immunizations

- Pneumococcal vaccine if appropriate

Guidelines to help doctors treat people with COPD

- Doctors should suspect COPD in anyone with shortness of breath, chronic cough, and/or a history of cigarette smoking.
- Pulmonary function testing should be done in people who meet these COPD criteria.
- Offer smoking cessation treatment options.
- Treatments should consist of short and long acting bronchodilators as appropriate with consideration for inhaled steroids.
- Treatments should be individualized. Each person should use a drug or combination of drugs that works well.

Once COPD has been diagnosed, effective management should be based on an individualized assessment of disease in order to reduce both current symptoms and future risks. These goals should be reached with minimal side effects from treatment, a particular challenge in COPD patients because they commonly have comorbidities that also need to be carefully identified and treated.

Treatment

The goals of treatment of COPD exacerbations are to minimize the impact of the current exacerbation and prevent the development of subsequent exacerbations. Depending on the severity of an exacerbation and/or the severity of the underlying disease, and exacerbation can be managed in an outpatient or inpatient setting. More than 80% of exacerbations can be managed on an outpatient basis with pharmacologic therapies including bronchodilators, corticosteroids, and antibiotics.

Goals for Treatment of Stable COPD

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| <ul style="list-style-type: none"> ➤ Relieve symptoms ➤ Improve exercise tolerance → ➤ Improve health status | Reduce Symptoms |
| <ul style="list-style-type: none"> ➤ Prevent disease progression ➤ Prevent and treat exacerbations → Reduce mortality | Reduce Risk |

Please note: The Via Christi Health Alliance in Accountable Care, Inc. (the "ACO") in consultation with its affiliated ACO providers developed these care pathways and guidelines based on the most recent evidenced based medicine data. The ACO is continually researching and updating its care pathways and guidelines to reflect the most recent evidence based standards. This information is intended to provide health professionals with information to improve the quality of care and ultimately lower the cost of such care to the patients they serve. By providing this evidence based information, it is not the intention of the ACO to provide specific medical advice for particular patients. Rather we urge each provider to review this material when consulting and evaluating the treatment options suitable for their patients. The ACO affiliated providers are solely responsible for confirming the accuracy, timeliness, completeness, appropriateness and helpfulness of this material and making all medical, diagnostic or prescription decisions.

Potential Indications for Hospital Assessment or Admission

- Marked increase in intensity of symptoms, such as sudden development of resting dyspnea
- Onset of new physical signs (e.g., cyanosis, peripheral edema)
- Failure of an exacerbation to respond to initial medical management
- Presence of serious comorbidities (e.g., heart failure or newly occurring arrhythmias)
- Insufficient home support

Specialist Consult

When to Refer:

- Early evaluation for initial assessment and recommendation
- Unsure of the diagnosis
- Difficult to control disease with frequent exacerbations and chronic oral steroid use

References:

1. From the *Global Strategy for the Diagnosis, Management and Prevention of COPD*, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2014. Available from: <http://www.goldcopd.org/>. Date accessed 7/22/2014.
2. intermountainphysician.org/ClinicalPrograms or intermountain.net/ClinicalPrograms.2013. (Document referred.) Date accessed 7/22/2014.

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