



Republic of the Philippines
PHILIPPINE HEALTH INSURANCE CORPORATION
 Citystate Centre, 709 Shaw Boulevard, Pasig City
 Call Center (02) 441-7442 Trunkline (02) 441-7444
www.philhealth.gov.ph



PhiHealth Circular
 No. 007-2015

TO : ALL ACCREDITED HEALTH CARE PROVIDERS,
 PHILHEALTH MEMBERS, PHILHEALTH REGIONAL
 OFFICES AND ALL OTHER CONCERNED

SUBJECT : Policy statements on the Diagnosis and Management of Chronic
 Obstructive Pulmonary Disease in Exacerbation (ECOPD) as
 reference by the Corporation in ensuring quality of care

I. RATIONALE

The revised Implementing Rules and Regulations of the National Health Insurance Act of 2013 (RA 10606) under Title V (Quality Assurance and Accreditation), Rule 1 (Quality Assurance), Section 51 provides the implementation of quality assurance standards as reference for ensuring quality of care services.

Compliance to clinical practice guidelines (CPGs) shall be one of the strategies in the implementation of quality assurance standards. The CPG recommendations based on best available evidence shall be translated into policy statements and shall be used primarily to provide guidance to doctors, hospitals and patients as to what tests, medicines, and procedures are strongly recommended if benefits clearly outweigh the harms. It shall be used by the Corporation as one of its references in assessing the quality of care rendered by PhilHealth-accredited health care providers to members through performance monitoring and other activities when necessary.

Chronic obstructive pulmonary disease (COPD) is considered as one of the top illnesses in claims reimbursement. Those cases in acute exacerbation require admission because of the need for intravenous treatment, close observation, or respiratory failure. The latest CPGs on the diagnosis and management of COPD in exacerbation (ECOPD) developed by Global Initiative for Chronic Obstructive Lung Disease (GOLD) in 2014 and Philippine College of Chest Physicians (PCCP) Council of COPD and Pulmonary Rehabilitation in 2009 were reviewed and appraised. The policy recommendations based from the aforementioned guidelines were approved by the PhilHealth Quality Assurance Committee (QAC) as one of the references by the Corporation in ensuring quality of care.

II. POLICY STATEMENTS

A. DEFINITION

Exacerbation of COPD (ECOPD) is defined as “an event in the natural course of the disease characterized by a change in the patient’s baseline dyspnea, cough, and/or sputum that is beyond normal day-to-day variations, is acute in onset, and may warrant a change in regular medication in a patient with underlying COPD.

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Basis: Clinical Practice Guidelines in the Diagnosis and Management of Chronic Obstructive Pulmonary Disease (COPD) in the Philippines 2009, p.44.

B. DIAGNOSIS

The diagnosis of an exacerbation relies exclusively on the clinical presentation of the patient complaining of an acute change of symptoms (baseline dyspnea, cough, and/or sputum production) that is beyond normal day-to-day variation. In the future, a biomarker or panel of biomarkers that allows a more precise etiologic diagnosis would be desirable.

Basis: GOLD Updated 2014, p.40.

C. ASSESSMENT

1. The assessment of an exacerbation is based on the patient's medical history and clinical signs of severity and some laboratory tests, if available.

Assessment of COPD Exacerbations: Medical History
<ul style="list-style-type: none">• Severity of COPD based on degree of airflow limitation• Duration of worsening or new symptoms• Number of previous episodes (total/hospitalizations)• Co-morbidities• Present treatment regimen• Previous use of mechanical ventilation

Assessment of COPD Exacerbations: Signs of Severity
<ul style="list-style-type: none">• Use of accessory respiratory muscles• Paradoxical chest wall movements• Worsening of new onset central cyanosis• Development of peripheral edema• Hemodynamic instability• Deteriorated mental status

Basis: GOLD Updated 2014, p.41.

2. The following tests may be considered to assess the severity of an exacerbation:

a) Pulse oximetry

It is useful for tracking and/or adjusting supplemental oxygen therapy. The measurement of arterial blood gases is vital if the coexistence of acute or acute-on-chronic respiratory failure is suspected ($\text{PaO}_2 < 8.0 \text{ kPa}$ (60 mmHg) with or without $\text{PaCO}_2 > 6.7 \text{ kPa}$ (50 mmHg) breathing ambient air). Assessment of acid-base status is necessary before initiating mechanical ventilation.

b) Chest radiographs

It is useful in excluding alternative diagnoses.

c) Electrocardiograph (ECG)

It may aid in the diagnosis of co-existing cardiac problems

d) Whole blood count

It may identify polycythemia (hematocrit $> 55\%$), anemia, or leukocytosis.



e) Sputum culture and antibiotic sensitivity

The presence of purulent sputum during an exacerbation can be sufficient indication for starting empirical antibiotic treatment. Hemophilus influenza, Streptococcus pneumonia, and Moraxella catarrhalis are the most common bacterial pathogens involved in exacerbation; in GOLD 3 and GOLD 4 patients Pseudomonas aeruginosa becomes important. If an infectious exacerbation does not respond to the initial antibiotic treatment, a sputum culture and an antibiotic sensitivity test should be performed.

f) Spirometry

Spirometry is NOT recommended during an exacerbation because it can be difficult to perform and measurements are not accurate enough.

Basis: GOLD Updated 2014, p.41.

D. TREATMENT OPTIONS

The goals of treatment for 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, an 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.

Potential Indications for Hospital Assessment or Admission*
<ul style="list-style-type: none"> • Marked increase in intensity of symptoms, such as sudden development of resting dyspnea • Severe underlying COPD • 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) • Frequent exacerbations • Older age • Insufficient home support

**Local resources need to be considered*

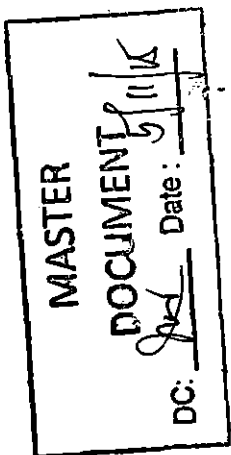
Pharmacologic Treatment

The three classes of medications most commonly used for exacerbations of COPD are bronchodilators, corticosteroids, and antibiotics. Other drug classes used are Methylxanthines and Mucolytics.

A. Short-acting Bronchodilators

1. Short-acting inhaled beta2 agonists with or without short-acting anticholinergics are usually the preferred bronchodilators for treatment of an exacerbation. (Level of Evidence C)

Basis: GOLD Updated 2014, p.42.



B. Systemic corticosteroids

1. The use of systemic corticosteroids shortens recovery time, improve lung function (FEV1), and arterial hypoxemia (PaO2). (Level of Evidence A)

Basis: GOLD Updated 2014, p.42.

2. Systemic corticosteroid reduces the risk of relapse, treatment failure, and length of hospital stay. A dose of 40 mg prednisone per day for 5 days is recommended. (Level of Evidence B)

Basis: GOLD Updated 2014, p.42.

3. It is prudent to use the oral route in the administration of systemic corticosteroid for ECOPD patients who can tolerate it. Otherwise, clinicians would have to administer systemic steroids parenterally until such time when the patient may be able to take the drugs orally. (Level of Evidence B)

Basis: Clinical Practice Guidelines in the Diagnosis and Management of Chronic Obstructive Pulmonary Disease (COPD) in the Philippines 2009, p52.

4. Inhaled corticosteroids are NOT currently recommended in the management of patients with ECOPD. (Level of Evidence B)

Basis: Clinical Practice Guidelines in the Diagnosis and Management of Chronic Obstructive Pulmonary Disease (COPD) in the Philippines 2009, p52.

C. Antimicrobials

1. The use of antimicrobials is beneficial in the following patients with ECOPD:

- a. Patients with all 3 of the following symptoms: increased dyspnea, sputum volume, and sputum purulence. (Level of Evidence B)
- b. Patients with 2 of the cardinal symptoms, if increased sputum purulence is one of the two symptoms. (Level of Evidence C)
- c. Patients who require mechanical ventilation (invasive or non-invasive). (level of Evidence B)

Basis: GOLD Updated 2014, p.42.

2. The recommended length of antibiotic therapy is usually 5-10 days duration. (Level of evidence D)

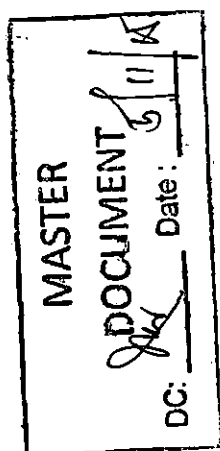
Basis: GOLD Updated 2014, p.42.

D. Other drugs

1. Methylxanthines

Intravenous methylxanthines (theophylline or aminophylline) are considered second- line therapy, only to be used in selected cases when there is insufficient response to short-acting bronchodilators. (Level of Evidence B)

Basis: GOLD Updated 2014, p.42.



2. Mucolytics

Mucolytics have NO proven benefit in the management of ECOPD.

Basis: Clinical Practice Guidelines in the Diagnosis and Management of Chronic Obstructive Pulmonary Disease (COPD) in the Philippines 2009, p64.

Role of non-invasive ventilation

In selected patients, non-invasive ventilation (NIV, NPPV) reduces the need for intubation, improves in-hospital mortality rates, and decreases the length for hospital stay of ECOPD patients. (Level of Evidence A)

Table 2: Indications and relative contraindications for NIV

Indications and relative contraindications for NIV	
Selection criteria <ul style="list-style-type: none">Moderate to severe dyspnea with use of accessory muscles and paradoxical abdominal motionModerate to severe acidosis (pH 7.35) and/or hypercapnea (pCO₂ >45 mmHg)Respiratory frequency >25 breaths per minute	Exclusion criteria (any may be present) <ul style="list-style-type: none">Respiratory arrestCardiovascular instability (hypotension, arrhythmias, myocardial infarction)Change in mental status; uncooperative patientHigh aspiration riskViscous or copious secretionsRecent facial or gastroesophageal surgeryCraniofacial traumaFixed nasopharyngeal abnormalitiesBurnsExtreme obesity

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Date: 5/11/14
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Basis: Clinical Practice Guidelines in the Diagnosis and Management of Chronic Obstructive Pulmonary Disease (COPD) in the Philippines 2009, p66.

E. Prevention

COPD exacerbations can often be prevented. Smoking cessation, influenza and pneumococcal vaccination, knowledge of current therapy including inhaler technique, and treatment with long-acting inhaled bronchodilators, with or without inhaled corticosteroids, and treatment with a phosphodiesterase-4 inhibitor are all interventions that reduce the number of exacerbations and hospitalizations (Level D).

Basis: GOLD Updated 2014, p.40 and QAC expert opinion, July 23, 2014 Minutes of Meeting.

The above-mentioned policy statements shall be incorporated as standards of practice in relation to PhilHealth Circular No. 31, s.2014 (Health Care Provider Performance Assessment System).

All other issuances inconsistent herein are hereby revised, modified, or repealed accordingly.

ALEXANDER A. PADILLA
President and CEO