

**When to suspect COPD:**

- Chronic and progressive dyspnea
- Recurrent wheeze
- Chronic cough
- Recurrent respiratory infections
- Risk factors including exposure to tobacco smoke

**Diagnosis requires spirometry demonstrating post-bronchodilator FEV1/ FVC ratio <0.7 (or LLN).** [Spirometry in Kingston](#)

Is the airflow obstruction reversible with bronchodilators (FEV1 improves by ≥200ml AND ≥12%)

Yes

Diagnosis is more likely to be asthma

No

COPD is confirmed

Determine severity

<b>Mild:</b> FEV1 ≥80% predicted	Consider referring to a respirologist if not responding to treatment as outlined below
<b>Moderate:</b> FEV1 50-80% predicted	Consider referring to a respirologist if symptomatic or FEV1 <70%, document GOC discussion
<b>Severe:</b> FEV1 30-49% predicted	Patient should be seen by a respirologist, document GOC discussion
<b>Very Severe:</b> FEV1 <30%	Patient should be seen by a respirologist, document GOC discussion

**Assessing symptoms – Consider:**  
[COPD Assessment Test \(CAT\)](#)  
[MRC grade](#)

**Refer your patient:**  
[Pulmonary Function Laboratory at KHSC – HDH site](#)

## Initiating treatment for COPD

### Preventative measures

#### For all COPD patients

**Vaccinations:** Pneumococcal vaccine, **yearly** influenza vaccine, **yearly** covid vaccine, Herpes Zoster vaccine

**Smoking cessation:** Counselling, nicotine replacement (STOP program), Bupropion, Varenicline [resources](#)

**Advanced care planning:** Discuss and document goals of care and wishes in the event of an exacerbation

#### COPD action plan:

- For increased dyspnea, cough: **prednisone 40mg po daily x 5 days and**
- If fever or green/brown sputum: **add antibiotics** ex: Amox-Clav 875mg BiD x 5-7 days, Levofloxacin 750mg po daily x 5-7 days; Moxifloxacin 400mg po daily x 5-7 days.
- [COPD action plan template](#)

## Pharmacological treatment for COPD

### Stable COPD management

*If FEV1 ≥ 80% predicted, few symptoms and no previous AECOPD:*

**Prescribe either LABA (formoterol, salmeterol, indicaterol) or LAMA (tiotropium, aclidinium, umeclidinium, glycopyrrolate).**

*If FEV1 <80% predicted and stable COPD without exacerbations but patient has significant symptom burden:*

**Prescribe both LABA AND LAMA or a combination product with both ingredients.**

*If FEV1 <80% predicted and stable COPD without exacerbations but patient has significant symptom burden despite taking LAMA & LABA:*

**Add inhaled steroid by switching to a LAMA/LABA/ICS combination puffer.** In addition to triple inhaled therapy consider referring to pulmonary rehabilitation, which can improve symptoms considerably.

*If FEV1 < 80% and the patient is taking LAMA/LABA/ICS and has had either 2 AECOPD within the last year or 1 AECOPD that sent them to the ER or to hospital admission:*

**Add azithromycin 250mg OD** (consider risk of hearing impairment and QT prolongation with arrhythmias).

### Inhaler examples

**LABA examples:** Salmeterol Diskus 50mcg 1 puff BiD (LU 391) or Olodaterol 2.5mcg/puff 2 puffs OD or Oxeze Turbuhaler 6mcg inhaled Bid or 12 mcg inhaled BiD or Foradil 12 mcg inhaled BiD.

**LAMA examples:** Spiriva Respimat 2.5 mcg/puff 2 puffs OD or Acclidinium 400mcg BiD or umeclidinium 62.5 mcg 1 puff OD

**Combination LAMA & LABA examples:** Acclidinium 400mcg & Formoterol 12 mcg 1 puff BiD (LU 459) or Olodaterol 2.5 mcg & tiotropium 2.5 mcg 2 puff once daily or umeclidinium 62.5 mcg & vilanterol 25 mcg 1 puff OD (LU 459).

**Combination LABA/LAMA/ICS examples:** Trelegy Ellipta (fluticasone 100mcg/umeclidinium 62.5 mcg/vilanterol 25 mcg) 1 puff OD (LU 567) or Breztri Aerosphere (budesonide 160mcg/glycopyrrolate 9mcg/formoterol 4.8 mcg) 2 puffs BiD (LU 638).

## Advanced therapies

### Home Oxygen Therapy

Mortality benefit in patients with chronic hypoxia

Option 1

Oxygen for maintenance  
use  $\geq 15$  hours/day

(i)  $\text{PaO}_2 \leq 55\text{mmHg}$

or

(ii)  $\text{PaO}_2$  56-59 mmHg but the patient has  
**pulmonary hypertension or raised hematocrit.**

Option 2

Oxygen for exercise  
capacity

Significant **improvement in exercise tolerance**  
with the addition of oxygen, in a patient whose  
**SpO<sub>2</sub> falls to  $<85\%$  with exercise.**

Often, there is no improvement with added oxygen  
because dyspnea relates to the respiratory mechanics and  
not to low oxygen saturation.

[Vendors](#)

### Pulmonary Rehabilitation

Patients with **FEV<sub>1</sub>  $< 80\%$**  who are **symptomatic despite inhaled treatment** should be referred to pulmonary rehabilitation.

Teaches breathing techniques, nutrition, self-management, behavioral interventions, psychological support and improves exercise capacity.

Find local programs [here](#)

### Recent hospitalization for AECOPD?

The patient should be seen in  
**person by PCP within 7 days of  
discharge**

Referral to **pulmonary rehabilitation should be  
considered**

If referred, pulmonary rehabilitation should commence  
within one month of hospital discharge.

### Palliative approaches to care for patients with COPD

It is important to have and document a detailed GOC discussion w/ the patient, including:

- patient wishes in the event of deterioration in respiratory status – medical management + symptom relief vs. symptom relief only
- consideration of hospitalization vs. management in the community
- patient wishes for resuscitative measures including non-invasive ventilation, intubation and ventilation, and CPR (in the event of cardiorespiratory arrest)

Consider low dose oral [opioids](#) for refractory dyspnea – e.g. kadian 10 mg PO daily, or morphine 2.5 mg TID-QID

## Resources

### Spirometry sites in Kingston and surrounding area

*Click on the link to find information and referral form*

- [Pulmonary Function Laboratory at KHSC – HDH site](#)
- [Kingston Respiratory Services](#)
- [Lennox and Addington County General Hospital](#) (Outpatient Services)

### Home oxygen vendors

- [InspiAIR](#)
- [VitalAire](#)
- [ProResp](#)
- [Linde](#)
- [Kingston Oxygen Home Healthcare Centre](#)