

COPD Exacerbation Algorithm

A primary care clinical guide for home-based management of acute COPD exacerbations in the community setting. Designed for use alongside the patient-facing COPD Action Plan.

COPD exacerbation

Defined as acute changes in the patient's baseline dyspnoea, cough, and/or sputum that exceed normal day-to-day variations. Signs of a COPD exacerbation may include:

- More breathless than usual (using more reliever than normal)
- Usual activities or exercise feel harder than normal
- Coughing more than usual
- More sputum (phlegm or mucus) than usual, or if it is a different colour, taste, or consistency

Start with non-pharmacological

- Breathing techniques
- Breathlessness episode recovery plan
- Postures and positions
- Airway clearance
- Handheld fan or cool air
- Energy conservation

Use non-pharmacological management strategies at every step, including when well

Increase reliever

Salbutamol 100mcg, up to 8 actuations (one at a time) via pMDI with spacer

OR

Terbutaline 500mcg, 1 or 2 actuations via DPI

OR

Ipratropium 21mcg, up to 4 actuations (one at a time) via pMDI with spacer

Repeat as required up to every 3-4 hours

NOT improving (e.g. after ~2-3 days)

Improving

Consider short-course medication^{NOTE}

For escalating dyspnoea
Worsening breathlessness that is significantly limiting usual daily activities

Prednisolone

Oral prednisolone 30-50mg daily for 5 days

For signs of infection
(e.g. increased volume and/or purulence of sputum with or without a fever)

Antibiotics

Oral amoxicillin or doxycycline for 5 days

NOT improving (e.g. after ~1-2 days)

Improving

Priority review

Same-day or urgent GP appointment

Signs of emergency → Hospital

- Sudden, severe worsening breathlessness
- Confusion, slurred speech, or drowsiness
- Cyanosis (blue or grey lips or fingers)
- SpO₂ <92% (or below baseline)
- Any major concerning features
- Not responding to outpatient treatment

Complete treatment course

Step down reliever inhaler

Follow-up review

- Document exacerbation in clinical record
- Review inhaler technique and adherence
- Reinforce COPD Action Plan
- Consider suitability for rescue pack^{NOTE}
- Consider step-up in maintenance therapy (or referral) if exacerbations are frequent or severe (e.g. resulting in hospitalisation or emergency department presentation)

NOTE Short-course prednisolone and/or antibiotics may be self-initiated if a rescue pack is prescribed as part of a COPD Action Plan. A rescue pack may be suitable for those able to:

- Identify signs of exacerbations and infections **AND**
- Understand when to initiate and complete a 5-day course of one or both medications **AND**
- Follow an individualised specific self-management plan agreed with their clinician **AND**
- Inform their healthcare professional when starting one or both medications (to document the exacerbation in the clinical record and to schedule a follow-up review)

ABBREVIATIONS: COPD = chronic obstructive pulmonary disease; DPI = dry powder inhaler; pMDI = pressurised metered-dose inhaler; SpO₂ = oxygen saturation.

Note to reader: This resource features a selective list of PBS-subsidised medicines and dosages that align with the guidance in COPD-X. This information is intended as a general guide only and is not intended or implied to be a substitute for professional medical advice or treatment. While all care is taken to ensure accuracy at the time of publication, Lung Foundation Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided. Always consult with your doctor about matters that affect your health.