HOSPITAL MANAGEMENT OF ACUTE EXACERBATION OF COPD

Assess severity

Moderate OR Severe

- More short of breath than usual
- Able to speak in sentences
- Usually have wheeze
- Some chest/neck indrawing
- SpO_2 near usual level
- Normal level of consciousness

- Very short of breath
- Only a few words per breath
- Severe chest/neck indrawing
- Tripod positioning
- SpO_2 well below their usual level
- May be agitated

Life-threatening OR Imminent respiratory arrest

- Extremely short of breath
- Unable to speak
- May not have a wheeze
- May be no chest/neck indrawing
- SpO_2 rapidly falling
- Severe agitation and/or falling level of consciousness

Initial Management

- Salbutamol via inhaler & spacer, up to 5 individual puffs
- Controlled oxygen, if needed, aiming for SpO_2 88-92%
- Oral prednisone 40mg
- Oral antibiotics if change in sputum or evidence of infection

Reassess after 15 - 30 minutes

- Good response to initial management?

Responding?

- **NO** → Add Nebuliser
- **YES** ↓

Continue treatment and reasses after 2 hours

- Good response to initial management?
- Not breathless or tachycardic at rest?
- Able to manage/ adequate support at home?

Is admission required

- **YES: Patient deteriorating** → Add Nebuliser
- **NO: Patient responding and discharge appropriate** → At Discharge
- **YES: Patient responding, but discharge not currently appropriate** → Continue treatment

Initial Management

- Air-driven nebuliser: Salbutamol 2.5mg **AND** Ipratropium 500mcg
- Controlled oxygen, aiming for SpO_2 88-92%
- Oral prednisone 40mg
- Oral antibiotics if change in sputum or evidence of infection

Add Nebuliser

- Air-driven nebuliser: Salbutamol 2.5mg **AND** Ipratropium 500mcg

General Considerations

In patients not responding to treatment, consider alternative diagnoses (heart failure, acute coronary disease, pneumonia, pneumothorax, pulmonary embolus). Suggested investigations:

- Chest X Ray and ECG
- Biomarkers (troponin, BNP, +/- d-dimer where appropriate)

Consider NIV

In all patients with life-threatening exacerbation or who are requiring supplementary oxygen:

- Obtain arterial blood gas and assess for hypercapnic respiratory failure
- Consider any advance care plan, and patient/whānau preferences

Is NIV indicated?

- **YES** → Start NIV
- **NO** → Continue treatment

Start NIV

- Start NIV if pH <7.35 and pCO_2 > 6 kPa /45mmHg
- Ensure escalation plan and goals of care are documented in all patients at point of starting NIV

Continue treatment

- Repeat Salbutamol 2.5mg nebuliser as needed
- Step down to SABA via inhaler & spacer once stabilised

Document resuscitation status and consider ceiling of care for all patients

Ongoing management:

- Complete 5 days of prednisone
- Complete 5 to 7 days of antibiotics, if indicated
- Salbutamol as-needed via inhaler & spacer
- Continue regular inhalers unless contraindicated

Consider:

- Sputum clearance
- Early mobilisation

→ **Admit Patient**

At Discharge

- Provide education and updated COPD action plan
- Ensure clear follow-up plans are in place
- Primary care follow-up within 2 weeks
- Ensure that there is sufficient support at home
- Refer to pulmonary rehabilitation unless completed recently or contra-indicated
- Prescribe prednisone and antibiotics if indicated, to complete course.

→ **Discharge Patient**

Asthma + Respiratory FOUNDATION NZ

Full NZ COPD Guidelines available at ***nzrespiratoryguidelines.co.nz***