British Thoracic Society

COPD Emergency Assessment Pathway

This COPD assessment pathway describes 4 high impact actions to deliver the best clinical outcome for patients presenting to hospital with an acute exacerbation of COPD, based upon the risk associated with their exacerbation. The pathway is designed to be used for patients on arrival to hospital (not just ED), and through their care to Respiratory Review. AECOPD = Acute Exacerbation of Chronic Obstructive Pulmonary Disease. AHRF = acute hypercapnic respiratory failure. NIV = Non-invasive ventilation.

Patient cohort : adults (18+) presenting to emergency care with an acute exacerbation of COPD.

Time: **For life threatening COPD, time to NIV should be within 1 hour of diagnosis of persistent acute hypercapnic respiratory failure** (which has not responded to initial treatment) OR within 2 hours of arrival at hospital.

Patient sticker/Provider Signature/
Date of Arrival/Date of Completion

NSSI

COMPLETE FOR PATIENTS ON ARRIVAL

ACTION 1:
RISK ASSESSMENT
(ON ARRIVAL/TRIAGE)
Start Clock
All Patients: RR, HR, SpO2, VBG, ACVPU

Life Threatening Risk (25% inpatient mortality) initially managed in resus or respiratory support unit

- Decompensated type 2 respiratory failure on VBG pH<7.35, raised pCO2 >6.5 kPa
- May require urgent ventilatory support (typically NIV but also consider invasive ventilation) ☐

High Risk: initially managed in majors or medical admission bed

- Evidence of systemic stress e.g. acute confusion, NEWS2 scale 2 score ≥5 (or ≥3 in any single parameter) ☐
- New or worsening respiratory failure - sats <88%, VBG pH ≥7.35
- Unable to ambulate or manage at home

Moderate Risk: potentially managed in ambulatory care setting ☐

- No evidence of systemic stress NEWS2 scale 2 score <5
- No evidence of new respiratory failure - sats ≥88%
- Able to perform daily activities

ACTION 2:
INITIAL MANAGEMENT AND INVESTIGATIONS
Immediate in Life Threatening Risk COPD exacerbation

Life Threatening Risk AECOPD | **High Risk AECOPD** | **Moderate Risk AECOPD**

Give Prednisolone 30mg + Salbutamol 2.5mg nebulised +/- Ipratroprium 500mcg nebulised. **Give** antibiotics if bacterial infection suspected.
Prescribe and administer **controlled oxygen therapy** to target saturation 88-92%.
Determine and document escalation status; ascertain if there is an existing advance care plan.

Investigations to exclude alternative diagnosis:
Perform: Bloods, CXR, and ECG. Review available spirometry to confirm COPD. ☐

ACTION 3:
REASSESSMENT OF RISK
Within 1 Hour for Confirmed Life Threatening, and aim for 4 Hours for High Risk or Moderate Risk exacerbation

Life Threatening Risk: NIV Decision

- Initial VBG pH <7.35, **perform ABG/CBG within 1 hour** of optimal medical therapy to assess for AHRF
- If **ABG/CBG pH <7.35 and $PaCO_2$ >6.5 kPa**, diagnose AHRF and **initiate NIV within 1 hour** if appropriate** ☐
- If pH <7.25, consider Critical Care review
- If pH ≥7.35, manage as High Risk

High Risk: Admission Decision

- Reassess for Life Threatening Risk AECOPD
- Admit if: ongoing High Risk features
- Improving: See Moderate Risk ☐

Moderate Risk: Discharge Decision ☐

- If improved– consider discharge/follow up per local COPD Discharge Pathway
- If worsening– reclassify as High Risk

ACTION 4:
DECISION TO DISCHARGE OR ADMIT, CONFIRMATION OF DIAGNOSIS

Life Threatening Risk/NIV? ☐
Refer to medical team and/or RSU
HDU/Resp/Outreach informed for ongoing care
Admitting team request Respiratory review within 24 hours

Admitted? ☐
Admitting team refer for Respiratory Specialist review within 24 hours

Discharged? ☐
Prednisolone 30 mg 5 days +/- antibiotics
Discharge letter to GP
Follow up as per local respiratory pathway
Consider BTS COPD Discharge Bundle

**NIV Inappropriate if contraindicated or patient declined/not suitable for Level 2 Care