This integrated care pathway is for patients with acute pulmonary oedema suitable for treatment with CPAP

Note: If considering CPAP, inform SENIOR CLINICIAN now

Inclusion Criteria
☐ Patient with acute pulmonary oedema
☐ ABG showing acidosis pH<7.35
☐ Pulmonary oedema on CXR
☐ Emergency Department Consultant (or MG out of hours) informed and has reviewed patient

Absolute Contraindications
☐ Cardio / Resp arrest
☐ Acute exacerbation of COPD or Asthma
☐ Recent upper GI or cranio-facial surgery
☐ Facial / airway burns
☐ Vomiting / aspiration risk

Relative Contraindications
☐ Excess bronchial secretions
☐ Confused and unco-operative
☐ GCS < 8
☐ Hypotension SBP < 90mmHg
☐ SOB secondary to infective process / pneumonia

Time/date of arrival in Emergency Department: ____________________________
Name of assessing clinician: _______________________________________
MG/consultant involved in patient’s care: ______________________________
# ONGOING MEDICAL MANAGEMENT

**Resuscitate patient / ABCs / IV access / Bloods**

1. High flow Oxygen
2. ABGs
3. Avoid OPIOIDS – these will depress respiratory drive
4. GTN infusion if systolic BP >100 mmHg,
   - 50mg GTN in 50mls NSaline, 5ml bolus then run at 5mls/hr, adjust according to BP.
   - If BP maintained increase infusion every 10-15 mins, if SBP drops <100mmHg stop then reduce infusion rate.
5. Portable CXR
6. ECG
7. Decide ceiling of treatment
8. Repeat ABGs after 30 mins on CPAP
9. Consider need for inotropes
10. Refer to inpatient team: Team: _________________ Time referred: ________________

## SETTING UP CPAP

**Attach full monitoring**

1. Baseline observations
2. Obtain verbal consent
3. Select appropriate mask size for patient
4. Change over oxygen flow meter to VYGON CPAP oxygen flow meter
5. Connect tubing from flow meter to mask
6. Turn flow up to 20
7. Attach mask to patient via close fitting straps with minimal leak around face
8. Check pressure via pressure monitor, adjust flow accordingly, to achieve 5 cmH2O pressure
9. Increase pressure at 2-3 minute intervals to a maximum of 10 cmH2O, according to clinical response and tolerance of patient.
INITIAL INVESTIGATION RESULTS

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Time</th>
<th>Result</th>
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<tbody>
<tr>
<td>CXR</td>
<td></td>
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<tr>
<td>ECG</td>
<td></td>
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<tr>
<td>Bloods ( do not delay starting CPAP for these)</td>
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</tbody>
</table>

Alternative diagnosis excluded? Yes [ ] No [ ]

ECG

Bloods (do not delay starting CPAP for these)

Hb........ WCC........ PLT........

Na........ K........... Ur......... Cr............

MANAGEMENT PLAN

If no contraindications, discuss and agree the management plan with ED Consultant (or ED middle grade out of hours), placing patient into 1 of 3 groups:

First you must decide:

☐ Is patient appropriate for CPAP?
☐ Is the patient suitable for escalation of therapy and ICU?
☐ What is the patient’s resuscitation status?

1. **Patient is suitable for CPAP and can escalate to intubation / ICU if needed**

   Consultant signature: ________________

2. **Patient is suitable for CPAP but not for escalation of treatment**

   Maximal level of therapy: ________________________________

   Reason for limiting treatment: ________________________________

   Consultant signature: ________________

3. **Patient for maximal medical therapy only, not for CPAP**

   Maximal level of therapy: ________________________________

   Reason for limiting treatment: ________________________________

   Consultant signature: ________________
**PROFORMA FOR PATIENTS ON CPAP**
– To be completed for **ALL** patients

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>D.O.B.:</th>
<th>RM2:</th>
<th>Indication for CPAP</th>
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<tbody>
<tr>
<td>Patient label:</td>
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</table>

**Decision if CPAP fails**
(Circle as appropriate & document in notes)

<table>
<thead>
<tr>
<th>Involving I.C.U.</th>
<th>Supportive Care</th>
<th>Doctors name, Grade &amp; Signature:</th>
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**D.N.R. decision?**
(Circle as appropriate & document in notes)

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<tr>
<th>For Resuscitation</th>
<th>D.N.R. Form Completed Yes / No</th>
<th>Doctors name, Grade &amp; Signature:</th>
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<tr>
<th>Arterial Blood Gases</th>
<th>Base line ABGs</th>
<th>30 mins post CPAP set up</th>
<th>1 hour post CPAP set up</th>
<th>30 mins post CPAP set up</th>
<th>1 hour post CPAP set up</th>
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<td>Signature of Doctor:</td>
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- ABG’s should be checked 30 minutes after initiating CPAP,
- Check ABGs 30 mins after any changes in PEEP or FiO2
- Repeat ABG’s after 1 hour, in patients who are not improving clinically
Initiate CPAP

Attach VYgon Oxygen flow meter

Turn flow to 17 mmHg

Use pressure gauge to check pressure, start with 5 cmH2O

Increase pressure

- Turn flow up in 2 mmHg steps
- at 2-3 minute intervals
- over the first 10-15 minutes

Maximum pressure 10 cm H2O according to clinical response and patient tolerance

Check ABG after 30 minutes and 30 minutes after any change to pressure setting

Continue with GTN infusion
Refer to inpatient team