Decision Tree

Setting up BiPAP for acute hypercapnic respiratory failure

NHS
Brighton and Sussex University Hospitals
NHS Trust

COPD:

pH <7.35, pCO2 >6.5kPa, RR>23
If persisting after broncho-dilators and controlled oxygen therapy

Obesity:

pH <7.35, pCO2 >6.5kPa, RR>23
Or
Daytime pCO2 >6.0 and drowsy/ reduced GCS

Neuromuscular disease:

Respiratory illness with RR>20 if usual VC <1L even if pCO2 <6.5
Or
pH <7.35 and pCO2 >6.5kPa

Seek and treat reversible causes

Are there any contraindications or Red Flags? (see guideline) Ensure BiPAP prescribed

Yes → **STOP** Seek Senior Help

No

Choose appropriate mask size. Check all settings and alarm limits

Initial Settings
COPD

EPAP 4
IPAP 15
Or IPAP 20 if pH <7.25

Titrate IPAP up
over 10-30 minutes
Aim: EPAP 4
IPAP 20

Initial Settings
Obesity hypoventilation syndrome

EPAP 4
IPAP 15
Or IPAP 20 if pH <7.25

Titrate IPAP up
over 10-30 minutes
Aim: EPAP 4
IPAP 20

Initial Settings
Neuromuscular Disease

EPAP 4
IPAP 10
Or 5 above normal setting

Increase IPAP
if clinically indicated
Seek senior help if required

Medical review and ABG one hour after starting BiPAP
See full guideline for ongoing care. Seek senior help if patient not improving