Appendix 5

Insert Trust Logo

NHS

Name _____

Date of birth _____

Address _____

_____

_____

District or NHS Number _____

NIV Prescription

Identifying Patients who will benefit from NIV

Acute hypercapnic respiratory failure (AHRF) is defined by a pO_2 <8 kPa, pH <7.35 and pCO_2 >6.5 kPa

pH <7.25 and pCO_2 > 6.5 Consider immediate invasive ventilation

Call ICU

Patient has acute hypercapnic respiratory failure on Initial ABG ?

pH _____ pCO_2_____ pO_2 _____

HCO_3_____ spO_2_____ FiO_2_____

Date:_____ Time: _____

Background of asthma or evidence of pneumonia and no underlying Respiratory disease?

Consider immediate invasive ventilation. Call ICU

pH < 7.35 and pCO_2 > 6.5 and history of COPD or bronchiectasis or chest wall deformity
Or
pH >7.35 and pCO_2 > 6.5 with a background of neuromuscular disease or obesity
Or
Known or probable OHS/OSA daytime pCO_2 > 6.0 and somnolent

Patient has had maximal medical therapy for 1 hour?

- Controlled oxygen therapy aiming O_2 sats 88-92%
- Antibiotics, nebulisers and steroids as indicated
- Drugs discontinued as appropriate

****1 in 5 patients improve on medical management alone and avoid NIV**

Repeat ABG shows resolution of AHRF

Continue medical treatment

Repeat ABG shows acute hypercapnic respiratory failure?

pH _____ pCO_2_____ pO_2 _____ HCO_3_____

spO_2_____ FiO_2_____Date:_____ Time: _____

Diagnosis

Asthma?
Isolated pneumonia without COPD/ bronchiectasis
Acute pulmonary oedema
Intubation & ventilation available/appropriate
Guillian-Barre syndrome/Botulism

What is the diagnosis?

- ☐ COPD (AHRF, not ITU candidate)
- ☐ Definite or possible OSA/OHS (AHRF and somnolent)
- ☐ Spine/chest wall deformity (acidotic AHRF)
- ☐ Neuromuscular disease (hypercapnia)

D/W ICU or cardiology

CPAP is the optimal treatment for patients with isolated pulmonary oedema and AHRF

Contraindications? (see page 4)

Y / N

Name _____ Signed _____

Patient for NIV? Y / N

Name _____ Signed _____

Time _____ Date_____

Acknowledgements: Sherwood Forest Hospitals NHS Foundation Trust

Starting patients on NIV

Call hot week Respiratory consultant between 9-5 on weekdays with the following information: (Edit as required)

- Arterial or capillary blood gas result taken within the last 30 minutes
- Recent CXR (taken during current admission)
- Recent inflammatory markers (taken during current admission)
- Previous spirometry
- GCS
- Smoking history
- Assessment of Pre-morbid functional status: walking distance and MRC dyspnoea score

If accepted or out of hours call on call Medical SpR (Edit as required)

NIV settings

Starting pressures 12/5 ☐ Own domiciliary NIV settings _____ /_____

Target pressures 20/5 ☐ Other _____ / _____

Maximum IPAP should be titrated against tolerability. Patients with neuromuscular disease or frail patients may require lower IPAP.

Signed _____ Name _____ Time _____ Date_____

Escalation and Handover

ITU candidate if NIV fails? ☐
NIV ceiling of care? ☐

Plan discussed with patient and/or relatives?
AND completed Y / N

Signed _____ Name _____ Time _____ Date_____

Continue to increment pressures as tolerated and repeat ABG at 1 hr

pH _____ pCO_2_____ pO_2 _____ HCO_3_____ spO_2_____

FiO_2_____Date:_____ Time: _____

Repeat ABG shows improvement or resolution of AHRF?

Continue current treatment and repeat ABG at 4 + 12 hrs

Repeat ABG shows no improvement or deterioration?

- ☐ Refer to seniors
- ☐ Refer to ICU if appropriate
- ☐ Check pressures/target SaO2
- ☐ Check medical management prescribed
- ☐ Consider physiotherapy
- ☐ Check synchronisation/mask leak
- ☐ Review NIV trouble shooting guide

Repeat ABG at 4 hr

pH _____ pCO_2_____ pO_2 _____

HCO_3_____ spO_2_____ FiO_2_____

Date:_____ Time: _____

Repeat ABG shows improvement or resolution of AHRF?
Continue NIV as much as possible until Respiratory review

NIV Treatment Log

Target pressures

IPAP ____ EPAP ____

Location	Date	Time Commenced	Time finished	IPAP	EPAP	O_2	Total Time	Print Name	Sign Name
		(0 hr)							
		(1/2 hr)							
		(1 hr)							
		(2 hr)							
		(4 hr)							
		(8 hr)							
		(12 hr)							
		(18hr)							
		(24hr)							

Perform ABG at 1, 4, 12 and 24 hours after starting NIV to determine if the patient is improving