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Respiratory Health Implementation Group

GIG CYMRU NHS WALES

Wales Acute NIV Guidelines

Clinical Pathway

Time (hours)

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Wales Acute NIV Guidelines

STEP 1: DIAGNOSIS AND ASSESSMENT

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1. Confirmed acute respiratory acidosis (pH < 7.35, PCO_2 > 6.5 KPa)
2. Document ceilings of care
3. Contra-indications

STEP 2: INITIAL MANAGEMENT

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1. Controlled oxygen therapy: FiO_2 to keep saturations 88-92% throughout
2. Nebulisers/chest physiotherapy/steroids/antibiotics if indicated (mainly COPD group)

Repeat ABG pCO_2>6.5 kPa pH<7.25	Repeat ABG pCO_2>6.5 kPa pH7.25-7.35
Setup MAU/AE Discussion with ITU if suitable (escalation categories 1 or 2)	Setup MAU/AE Transfer to appropriate local area

STEP 3: TREATMENT

	COPD/chest wall/ bronchiectasis	Neuromuscular	Obesity/obesity + Other (overlap)
STARTING PRESSURES	IPAP 15 EPAP 4	IPAP 8 EPAP 4	IPAP 15 EPAP 6
AIM TARGET PRESSURES 1ST HOUR	IPAP 20-25 EPAP 4	IPAP 10 EPAP 4	IPAP 20-25 EPAP 8

2

Recheck ABG after 1 hour (30mins with neuromuscular), check mask fit, synchronisation. If pH<7.35, increase pressures to target below

3

AIM TARGET PRESSURES 2ND HOUR	IPAP 25-30 EPAP 4	IPAP 12 EPAP 4	IPAP 25-30 EPAP 8
AIM TARGET PRESSURES 3RD HOUR	IPAP 30 EPAP 4	IPAP 16 EPAP 4	IPAP 30+ EPAP 8

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STEP 4: REFER

Failure to correct pH after 3 hours with adequate pressures needs ITU referral or earlier if pH or clinical state deteriorating

STEP 1 INFORMATION: ASSESSMENT

Documentation of care decisions:

1. Requires immediate intubation + ventilation
2. Suitable for NIV and escalation to ITU/intubation
3. Suitable for NIV, but not ITU/intubation
4. Not suitable for NIV, but for full active medical treatment
5. Palliative care

Contra-indications to NIV

Absolute
- Vomiting
- Facial burns/trauma/recent surgery
- Fixed upper airways obstruction
- Undrained pneumothorax

Relative (see care decision)
- Life threatening hypoxaemia
- Severe co-morbidity
- Confusion/agitation
- Inability to protect airway
- Haemodynamically unstable
- Copious secretions

STEP 2 INFORMATION: INITIAL MANAGEMENT

Setup MAU/AE

Use Full face Mask. A good fit is crucial to effective NIV

STEP 3 INFORMATION: TREATMENT

Aim target pressure 1st hour

Increase pressures by 2cm H_2O every 10 minutes, except neuromuscular by 1cm

Aim target pressures 3rd hour

3 hour target pressures are dependant on toleration of NIV. Check mask fit and synchronisation

Designed by The Institute of Clinical Science & Technology

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