

Provision of care for acute COPD in UK hospitals: survey of acute NIV provision for COPD exacerbations

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ABSTRACT

The UK national audit of acute COPD care in 2003 highlighted deficiencies in resources and organisation of care in some units, including marked variability in acute non-invasive ventilation (NIV) provision and outcomes (ref). A 2nd study (NCROP) in 2007 examined progress in 100 UK units, and looked in more detail at provision of acute NIV for COPD exacerbations.

Results

NIV availability for acute COPD exacerbations in the 87 UK units in both studies was unchanged in 2007 (95%) compared to 2003 (97%).

88% of the 100 units in 2007 offering NIV had written management protocols for use of NIV and 39% had protocols for patients who fail NIV. 78% had a named clinician responsible for the service. 88% had written protocols defining the monitoring, clinical assessment, blood gases and oximetry requirements. Only 74% were always able to deliver NIV in suitable settings (ITU, HDU, admissions unit, dedicated respiratory ward).

56% of units provided an ongoing training programme for all staff involved in delivering NIV care.

55% have a selection of nasal and full face masks, nasal pillows etc available.

41% have formalised arrangements for provision of domiciliary NIV.

19% provided written information for patients on NIV in all areas offering NIV, and only 7% have a policy to provide information to patients when in a stable state eg in clinic or at discharge.

32% units conduct an annual audit of their NIV service.

Conclusions

The results suggest continuing deficiencies in resourcing and organisation of care that might explain the poor outcomes from acute NIV seen in the UK 2003 national audit.

BACKGROUND

NIV has an established role in managing patients with exacerbations of COPD associated with acidosis and type II respiratory failure.

The UK national audit of acute COPD care in 2003 highlighted deficiencies in resources and organisation of care in some units, including marked variability in acute non-invasive ventilation (NIV) provision and outcomes (1).

Recommendations for improving NIV provision and outcomes were made following this audit (2).

The National COPD Outcomes and Resources Project (NCROP) in 2007 examined progress in 100 UK units as part of a peer-reviewed intervention study designed to improve hospital care for COPD patients, and looked in more detail at provision of acute NIV for COPD exacerbations.

13 quality markers were assessed, derived from UK national guidance from the British Thoracic Society (3) and the National Institute for Clinical Excellence (NICE) (4) consensus documents on COPD management.

METHODS

Clinicians from the 100 participating acute units completed a form detailing the acute NIV service provided in 13 domains (table 1). 3 possible responses were allowed for each indicator: fully met; partially met; or not met at all.

RESULTS

	Quality marker	% met in full	% partially met	% not met at all
1	NIV used as treatment of choice	80	19	1
2	NIV delivered in suitable acute setting	74	25	1
3	Named consultant responsible for NIV service	78	15	7
4	Ongoing training programme for ALL staff	56	37	7
5	Staff outside the respiratory unit aware of NIV	40	51	9
6	Written NIV protocol	88	6	6
7	Instructions for managing each patient on NIV	39	47	13
8	Locally adapted protocols for NIV	57	29	14
9	Selection of nasal and full face masks	55	35	10
10	Provision of domiciliary NIV	41	24	35
11	Written information on NIV to patients	19	10	71
12	Policy for providing patient information	7	23	70
13	Annual audit of NIV	32	39	29

Of 100 units in the UK surveyed for the NCROP study, 96 returned completed responses. 87 units had data from both 2003 and 2007

Stated NIV availability for acute COPD exacerbations in the 87 UK units in both studies was unchanged in 2007 (95%) compared to 2003 (97%)

- 80% of acute units provided NIV as the treatment of choice for COPD patients with type II failure
- 88% of units had written management protocols for use of NIV and 39% had protocols for individual patients including escalation of therapy
- 78% had a named clinician responsible for the service. 88% had written protocols defining the monitoring, clinical assessment, blood gases and oximetry requirements. Only 74% were always able to deliver NIV in suitable settings (ITU, HDU, admissions unit, dedicated respiratory ward).
- 56% of units provided ongoing training for all staff involved in delivering NIV care.
- 55% had a selection of nasal and full face masks, nasal pillows etc available.
- 41% had formalised arrangements for provision of domiciliary NIV.
- 19% provided written information for patients on NIV in all areas offering NIV, and only 7% have a policy to provide information to patients when in a stable state eg in clinic or at discharge.
- 32% units conducted an annual audit of the NIV service.

The NCROP study was funded by the Health Foundation and was carried out in collaboration with the British Lung Foundation

Quality criteria for NIV

1	NIV used as treatment of choice for type II respiratory failure in COPD
2	NIV delivered in a suitable acute setting (eg HDU, ICU, respiratory ward)
3	Named consultant responsible for the NIV service
4	Ongoing training programme for ALL staff
5	Staff outside the respiratory unit know how to manage NIV in COPD
6	Written protocol that defines the monitoring of patients receiving NIV
7	Instructions for managing each patient on NIV, ceilings of therapy, etc
8	Local protocols (including weaning) available in all clinical areas
9	A selection of nasal and full face masks and types are available
10	Formalised arrangements for provision of domiciliary NIV
11	All areas provide written information on NIV to patients
12	Provision of patient information on NIV whilst in a stable state
13	Annual audit of the NIV service including suitable patients not treated

CONCLUSIONS

•95% of UK acute units provide an NIV service for acute COPD exacerbations but 1 in 5 cannot provide it to all eligible patients

•The results suggest continuing deficiencies in resourcing and organisation of care that might explain the poor outcomes from acute NIV seen in the UK 2003 national audit

•Provision of written information on NIV to patients is poor

REFERENCES

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