



Provision of oxygen services for patients with COPD in UK hospitals

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ABSTRACT

Introduction

Following a national audit of acute COPD care in UK hospitals in 2003, a further survey (as part of the NCROP study) was undertaken in 2007 to document other areas of service provision which impact on COPD care, including oxygen (O₂) services. 100 UK acute units took part. Results were analysed in the context of national (NICE) and Specialist Society (BTS) guidance.

Results

75% of UK acute Trusts offer a long term oxygen therapy (LTOT) assessment service and 59% offer ambulatory O₂ assessment (51% provide ambulatory O₂). 73% provide short burst O₂ to suitable patients but only 54% units do a formal assessment for short burst O₂. 59% use a concentrator to deliver the oxygen for LTOT assessment and 87% optimise flow to achieve Pa O₂ >8kPa. Follow up was done according to BTS guidelines in 57% units for LTOT and 44% for FU for ambulatory O₂. 71% units use oximetry screening in outpatients to detect saturations <92%, and 48% screen for suitability for ambulatory O₂ prior to referral. In 58% units, all hospital based O₂ prescriptions are routed through respiratory dept, 66% provide written information to patients receiving O₂. 43% audits conduct regular audits of O₂ prescribing.

Conclusions

The results suggest that O₂ assessment services are below recommended standards in many units.

BACKGROUND AND METHODS

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 outcomes (1).

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 oxygen services for COPD exacerbations.

During an expert workshop, quality markers for oxygen services were derived from UK national guidance from the department of Health, British Thoracic Society (2) and the National Institute for Clinical Excellence (NICE) (3).

Clinicians from the 100 participating acute units completed a form detailing the oxygen assessment and provision service provided in 15 domains (table 1). 3 possible responses were allowed for each indicator: fully met; partially met; or not met at all.

Table 1. Quality criteria

	Quality criterion	Fully met %	Partially met %	Not met %
1	There is a LTOT assessment service	75	22	3
2	Screening to detect SaO ₂ <92%	71	25	4
3	Optimisation to PaO ₂ >8 kPa	87	12	1
4	LTOT assessment using concentrator	59	9	32
5	Follow up according to BTS guidelines	57	32	11
6	Contact for queries	82	15	3
7	Ambulatory oxygen provided	51	33	16
8	Screening for ambulatory assessment	48	26	26
9	Ambulatory follow up according to BTS guidelines	44	19	37
10	Education for ambulatory oxygen	58	17	25
11	Written information to all patients	66	22	11
12	All hospital prescriptions routed via respiratory dept	58	29	13
13	Short burst O ₂ for suitable patients	74	16	10
14	Assessment for short burst O ₂	54	37	9
15	Regular audits of oxygen prescribing	43	28	30

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

RESULTS

A maximum of 98 responses were obtained. 97% of units provided some form of oxygen assessment, but quality was variable – see table above.

DISCUSSION

Provision of oxygen assessment and therapy across the UK is variable and often incomplete. Many units are unable to provide services as recommended by national bodies due to inadequate resources. Recent changes to UK oxygen services were often not properly resourced or commissioned by PCTs and services have been developed within existing resources.

It is likely that many patients are not properly assessed for oxygen leaving them at risk from hypoxia, or from inappropriate oxygen therapy. By directing the right type of delivery device to the right patient and preventing inappropriate use of oxygen, proper assessment is highly cost effective.

CONCLUSIONS

Provision of oxygen services across the UK is variable and often incomplete, and organisation of services is often below recommended standards in many units.

REFERENCES

1. Price et al. *Thorax* 2006; 61 (10): 837-42
2. BTS guidelines. *Thorax* 2002; 57; 192-211
3. NICE COPD guidelines. *Thorax* 2004; 59 (suppl 1); 1-232

