

Trust Guideline for the Distribution of Oxygen Alert Cards to Adult Patients with or at risk of Hypercapnic Respiratory Failure

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	Department of Respiratory Medicine		
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None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

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Consultation

The following were consulted during the development of this document:
Consultant Nurse, Consultant Physician, Senior Matron

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline; please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

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Quick reference

Patient identified according to selection criteria:

- PaCO₂ > 6.5kPa on admission
- Stable patients with PaCO₂ > 6.5kPa

Suitability for Oxygen Alert Card identified by Respiratory Nurse Specialist or Respiratory Consultant

Respiratory Nurse Specialist (RNS) issues Oxygen Alert Card to patient with instructions for use and information leaflet.

Alert Card Register to be maintained by RNS team secretary

RNS/secretary to ensure alerts placed on patient's hospital record and emailed to the GP for the Shared Care Record

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1. Introduction

To provide guidance for medical and nursing staff caring for breathless patients at risk of hypercapnic respiratory failure and to help ensure safe and effective delivery of oxygen therapy to vulnerable patients.

1.1. Rationale

The administration of high oxygen concentrations in acute chronic obstructive pulmonary disease (COPD)/emphysema and other conditions (chronic musculoskeletal and neurological disorders, obesity-hypoventilation syndrome) may lead to worsening of hypercapnic respiratory failure and respiratory acidosis.

This has typically occurred when these patients present to the emergency services with acute breathlessness and exacerbation of their condition, prior to measurement of arterial blood gases and before a definitive diagnosis is known. Optimal oxygen therapy during transfer to hospital, assessment in Emergency Department (ED) and admission to hospital is crucial but ambulance teams may not be aware of the presence of high risk conditions. Uncontrolled oxygen therapy in patients with impaired respiratory drive may result in severe respiratory acidosis, particularly if a prolonged rural ambulance journey is required, and is associated with a significant increase in complication rate during admission.

The original guideline was developed in association with Norfolk Respiratory Interest Group (NRIG) to reduce the risk of hypercapnia from over-oxygenation in at risk patients by ensuring selected patients are issued with an Oxygen Alert Card. Trustdocs ID 12466.

1.2. Objective

The objective of this guideline is:

- To reduce the risk of worsening or inducing hypercapnia

1.3. Scope

Patients will be identified to be given an Oxygen Alert Card according to the following criteria:

- Evidence of underlying disorder resulting in chronic hypercapnic respiratory failure.
- Admitted with a raised PaCO₂ (>6.5kPa).
- Stable patients with a PaCO₂ greater than 6.5kPa.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
CO ₂	Carbon dioxide
COPD	Chronic obstructive pulmonary disease
ED	Emergency Department
NRIG	Norfolk Respiratory Interest Group

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GP	General Practitioner
HCP	Healthcare professionals

2. Responsibilities

Paula Browne Senior Respiratory Specialist Nurse
Elizabeth Wootton respiratory Specialist Nurse

3. Processes to be followed

- Patients will be issued with the Oxygen Alert Card by the Respiratory Nurse Specialist. They will be provided with an information leaflet explaining the role of the Oxygen Alert Card (appendix 1)
- The patient will be advised to show the Oxygen Alert Card to a healthcare professional attending in an emergency.
- The patient will be advised that they should be treated with oxygen via Venturi mask, to maintain oxygen saturations within a target range of 88-92% until arterial blood gases are checked.
- The Oxygen Alert Card will be added as an alert on PAS.
- The patient's GP will be informed by email and asked to add to the Patient Shared Care Record under alerts for easy access for all HCP to access.

4. Training & Competencies

Respiratory Nurse Specialist will have comprehensive knowledge of hypercapnic respiratory failure and be able to interpret the arterial blood gas.

5. References

Durrington HJ et al Initial oxygen management in patients with an exacerbation of chronic obstructive pulmonary disease. QJM 0; 98 (7): 499-504

Gooptu B et al (2006) Oxygen alert cards and controlled oxygen; preventing emergency admissions at risk of hypercapnic respiratory acidosis receiving high inspired oxygen concentrations in ambulances and A&E departments. Emerg Med J; 23:636-8

Hale K et al (2008) Audit of oxygen use in emergency ambulances and in a hospital emergency department. Emerg Med J; 285, 773-776.

Murphy R et al (2001) Emergency oxygen therapy for the breathless patient. Guidelines prepared by the Northwest Oxygen Group. Emerg Med J 2001; 18: 421-423

NICE. (2010) Chronic obstructive pulmonary disease in over 16s: diagnosis and management. Clinical guideline CG101 <https://www.nice.org.uk/guidance/CG101>

O'Driscoll BR, Howard LS, Earis J et al (2017) BTS guideline for oxygen use in adults in healthcare and emergency settings. Thorax; 72 (suppl I): i1-i90

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6. Audit of the process

Compliance with the process will be monitored through the following:

Key elements	Process for Monitoring	By Whom	Responsible dept	Frequency of monitoring
Oxygen alert given to patient, GP informed, added to PAS	Check PAS	Respiratory Specialist Nurses	Respiratory Medicine	On admission


The audit results are to be discussed at relevant governance meetings to review the results and recommendations for further action. Then sent to Sub-Board who will ensure that the actions and recommendations are suitable and sufficient.

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7. Appendices

Appendix 1: Oxygen Alert Card

Oxygen Alert Card

INFORMATION FOR EMERGENCY MEDICAL TEAMS	NOTES FOR PATIENT:
<p>I am at risk of type II respiratory failure with a raised CO₂ level.</p> <p>Please use a Venturi mask to achieve an oxygen saturation of 88-92%</p> <p>Use compressed air to drive nebulisers with nasal oxygen at 2 l/min</p> <p>If compressed air not available limit oxygen-driven nebulisers to 6 minutes</p> <p><small>With thanks to the North West Oxygen Group & James Paget Healthcare NHS Trust.</small></p>	<p>Please carry this card with you at all times and show it to Ambulance staff or Emergency Department doctors.</p> <p>Name _____</p> <p>Case Note No: _____</p> <p>Norfolk and Norwich University Hospitals  <small>NHS Foundation Trust</small></p>

Introduction

If you have a sudden worsening of your breathing (usually due to a chest infection) it is essential that you do not receive too much or too little oxygen. Too much oxygen can cause a rise in the level of carbon dioxide in your blood and this can make you drowsy and slow your breathing. Too little oxygen can also be dangerous.

What the card is for

The purpose of the oxygen alert card is to make sure that the doctors or ambulance staff are made aware of your special needs regarding oxygen therapy. The card recommends the appropriate amount of oxygen therapy for you based on your previous blood gas tests.

Instructions for use:

- **Carry the card with you at all times**
- **If you need to call the ambulance service or attend the hospital accident and emergency department present this card to the GP, paramedics, doctor or emergency department staff looking after you as it provides them with essential information regarding your personal oxygen needs**

Your GP and local ambulance service will have access to this information. For advice please contact the Respiratory Nursing Service 01603 289779 (answer phone out of hours)

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8. Equality Impact Assessment (EIA)

Type of function or policy	Existing
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Division	Medicine	Department	Respiratory
Name of person completing form	Elizabeth Wootton	Date	27/07/2024

Equality Area	Potential Negative Impact	Impact Positive Impact	Which groups are affected	Full Impact Assessment Required YES/NO
Race	No		N/A	No
Pregnancy & Maternity	No		N/A	NO
Disability	No		N/A	NO
Religion and beliefs	No		N/A	NO
Sex	No		N/A	NO
Gender reassignment	No		N/A	NO
Sexual Orientation	No		N/A	NO
Age	No		N/A	NO
Marriage & Civil Partnership	No		N/A	NO
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?	N/A			

<ul style="list-style-type: none"> A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service The policy or function/service is assessed to be of high significance
IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED
The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.