Emergency Oxygen use in Adult patients in the Hospital setting

Recently published 2015 BTS Emergency Oxygen Audit (7th audit since 2008 and also the largest with data from 55,208 UK hospital patients of whom 14% were using oxygen) showed that although practice has improved over recent years, there remains a threat.

Key Findings

1. 42.5% of patients had no valid oxygen prescription (no target range for \( \text{SpO}_2 \), no starting oxygen delivery device, not signed).
2. Only 69% of patients with a prescribed target range had the intended \( \text{SpO}_2 \). 9.5% of patients were below and 21.5% were above the target range.
3. 8.8% of patients using \( \text{O}_2 \) were found to be at risk of iatrogenic hypercapnia due to being above their target range by more than 2% despite prescribed target \( \text{SpO}_2 88-92\% \) or less.
4. Reliable \( \text{SpO}_2 \) documentation during observation rounds (104% of expected frequency) but oxygen was signed for on only 28% of drug rounds (despite being a prescribed medicine).

Updated guidelines are expected in late 2016 but we can improve our patient safety now by:

- Correctly prescribing oxygen in the drug chart to achieve target saturations of 94-98% for most acutely ill patients or 88-92% for those at risk of hypercapnic respiratory failure.
- Appropriate choice of oxygen administration device depending on the need for controlled oxygen therapy or not.
- Adequate monitoring and documentation of target \( \text{SpO}_2 \). Oxygen should be signed for on the drug chart during the drug round and action should be taken if \( \text{SpO}_2 \) is out of the prescribed range.

Remember Oxygen therapy does NOT improve breathlessness in patients who are not hypoxic.


Dr Marina Antoniou (marina.antiou2@york.nhs.uk) Respiratory Team
**Unclear prescription**: Patient was accidentally given 2 grams of paracetamol as the "1 gram" was written unclearly by another doctor and looked like a "2". I clarified with his nurse and she said that she administered 2 grams. Lesson – don’t assume everyone knows the correct dose of paracetamol!

**Antibiotic dosing**: Patient was admitted with abdominal pain. CT scan showed acute appendicitis. The patient was managed with IV antibiotics however prescribed half the dose required for 5 days. She did improve on this dose and was switched to oral antibiotics for 1 day but inflammatory markers worsened. Therefore an abdominal ultrasound was done and showed an infective collection. Correct dose of IV antibiotics were restarted. The patient was informed of the incident and ultrasound guided drainage was performed.

*Thanks to Helen Holdsworth (Deputy Chief Pharmacist) for these messages.*

---

**Dexamethasone in palliative care**

A 74 year old gentleman was diagnosed with lung cancer with cerebral metastases during an inpatient stay in December 2015. He was discharged on dexamethasone 8mg twice a day which was continued by the GP. Five weeks later he was reviewed in the outpatient department and admitted to the medical assessment unit with severe steroid-induced proximal myopathy, shortness of breath, desaturation and right-sided thoracic pain. A chest x-ray confirmed right lower lobe pneumonia. Despite treatment he died of sepsis the following evening. Concerns were raised that the prolonged steroid use may have contributed to the development of pneumonia and may have been implicated in his rapid decline.

A post mortem report concluded the cause of death was due to:-

1a Bronchopneumonia,
1b Carcinomatosis/the effect of dexamethasone,
2 Chronic obstructive pulmonary disease.
Following post-mortem examination the pathologist stated that the deceased had community acquired pneumonia. He would have been predisposed to developing this pneumonia as a result of his tumour but in his opinion, the dexamethasone had contributed to death as a side effect, in that it reduced the body’s ability to withstand infection. In his opinion, death was due to bronchopneumonia due in turn to carcinomatosis and the effects of dexamethasone.

**Recommendations from the Serious Incident (SI) Report:**

1. Guidelines are currently being produced to support prescribing of steroids in Oncology and palliative care; this should include usual doses and duration of therapy.
2. An indication and review date should be annotated on all prescriptions for oral steroids.
3. There should be clear instructions regarding length of oral steroid courses and reducing doses on discharge prescriptions.
4. GPs should not add dexamethasone to repeat prescription lists.

Thanks to Helen Holdsworth (Deputy Chief Pharmacist)

Visit [https://www.gov.uk/drug-safety-update](https://www.gov.uk/drug-safety-update) for more information and updates

**SPONTANEOUS BACTERIAL PERITONITIS & ASCITIC TAP**

Decompensated cirrhosis is a medical emergency with a high mortality. Effective early interventions can save lives and reduce hospital stay. The British Society of Gastroenterologists checklist should be completed for all patients admitted with decompensated cirrhosis within the first 6 hours of admission.

A NCEPOD report 2013 on alcohol related liver disease highlighted that the management of some patients admitted with decompensated cirrhosis in the UK was suboptimal. Admission with decompensated cirrhosis is a common medical presentation and carries a high mortality (10-20% in hospital mortality). Early intervention with evidence-based treatments for patients with the complications of cirrhosis can save lives. The BSG checklist aims to provide a guide to help ensure that the necessary early investigations are completed in a timely manner and appropriate treatments are given at the earliest opportunity. An important element of initial management is a diagnostic ascitic tap.

**BSG CARE BUNDLE**

[Ascitic tap video](#)

Dr William Lea, Dr Kim Chandler, Dr Amy Hicks, Dr Charlie Millson (Gastroenterology)

With over 50 abstracts submitted and 20 exhibitors booked we expect the poster area and exhibition to be lively! For full agenda visit [www.yorkhospitals.nhs.uk/PSconference2016](http://www.yorkhospitals.nhs.uk/PSconference2016)
The National Cardiac Arrest Audit (NCAA) is the national clinical audit of in-hospital cardiac arrests in the UK and Ireland. It is a joint initiative between the Resuscitation Council (UK) and Intensive Care National Audit and Research Centre (ICNARC). York and Scarborough Hospitals take part in this national audit and here are some important findings.

Key Points from our local audit data

- Total number of cardiac arrests has fallen over past 5 years, now 1 per 1000 hospital admissions.
- Fewer CCOT reviews in 2016 audit of NEWS >5 compared to 2012
- Outcome based on presenting rhythm, Asystole 100% mortality, PEA 83% mortality, Shockable rhythm 40% mortality.
- Results show that no DNACPR was made or documented in 45% of cardiac arrest cases.

Dr Jonathan Redman (jonathan.redman@york.nhs.uk) Intensive Care

GROUP REPRESENTATION

We are working to empower and support juniors to attend and contribute to Trust level meetings. Junior doctors and groups will benefit! The following groups are looking for junior representation:

- DNACPR
- EPMA (Electronic Prescribing)
- HIPCG (Infection Prevention)
- Admission Proforma Group
- Deteriorating Patient Group
- Serious Incident Group
- Mortality Steering Group

Contact PatientSafetyMatters@york.nhs.uk for more information or if you want to get involved.

EDITORIAL TEAM

William Lea, Diane Palmer (Patient Safety), Helen Holdsworth (Pharmacy), Donald Richardson (Quality Improvement), Liz Jackson (Patient Safety), Elaine Vinter (Media & Communications)

Follow us on Twitter @PtSafetyMatters

Email PatientSafetyMatters@york.nhs.uk if you have any comments or would like to contribute.

Check out www.yorkhospitals.nhs.uk/patientsafetymatters/ for more information