Background

Oxygen is administered to up to 34% of patients in the pre-hospital setting. 18% of current inpatients receive oxygen during their admission. Both hypoxia and hyperoxia can adversely affect patient outcomes in conditions such as stroke, myocardial infarction and chronic obstructive pulmonary disease.

In 2009, there were 281 incidents of oxygen related harm including 44 deaths in which oxygen played some part. In 2011, only 48.3% of patients’ prescriptions met BTS oxygen prescribing recommendations. Interventions in 1998 showed improved prescribing reduces adverse outcomes.

Aims

To identify:

1) Whether all patient clerked by the acute medical team at UHSM are being prescribed oxygen on inpatient Kardexes in terms of:

   - Oxygen Target Saturations
   - Oxygen Device
   - Oxygen Flow Rate/FiO2

2) The prevalence of adverse incidents related to oxygen (e.g. hypercapnia, type II respiratory failure)

3) Whether prescription accuracy is influenced by past medical history, home oxygen/CPAP use or presenting degree of hypoxia.

Methods

- Prospective audit of 75 patient oxygen prescriptions admitted to the acute medical unit between 1st May 2013 and 1st June 2013
- Results produced using Microsoft Excel and Graphpad QuickCls.

Results

- Mean age (n = 75) = 70.3 years (median 77, range 79)
- 60 (80%) patients presented with a neurological, cardiological or respiratory diagnosis

![Oxygen Saturation Chart]

16 (35.6%) patients had oxygen targets and a device prescribed.
12 (16%) patients encountered an adverse incident related to oxygen

Were more likely to have oxygen target saturations prescribed (31.9% vs 7.7%) p = 0.0218*

Affected 5.6% of patients that were prescribed oxygen target saturations and devices correctly (n = 18)
Affected 19.2% of patients that had incomplete or no oxygen prescription (n = 57), p = 0.2725.

Conclusions

1. The prescription of oxygen is lower (35.6%) than that described in the BTS audit (48.3%) despite previous work in the trust.
2. Hypoxia is being treated but oxygen treatment is not being reviewed
3. Patients have a 13.6% relatively higher risk of an adverse incident related to oxygen when it is not prescribed correctly.

References


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