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Introduction Patients admitted to intensive care units (ICUs) with an exacerbation of chronic obstructive pulmonary disease (COPD) are thought to have poor outcomes. Few studies have reported the impact of ICU admission on long-term outcomes. We aimed to describe the epidemiology of patients admitted to all Scottish ICUs with an exacerbation of COPD, and to ascertain the importance of admission on long-term mortality and hospital readmission rates.

Methods We used a retrospective cohort design linking the Scottish Intensive Care Society Audit Group national database of ICU admissions to the national Scottish hospital discharges and death registry databases. The study cohort comprised all patients admitted to Scottish ICUs in 2005 aged =35 years with a primary ICU admission diagnosis of COPD, or respiratory infection/sepsis as the primary and COPD as the secondary diagnosis. Mortality was defined as death within 4 years of ICU admission. Logistic regression identified factors independently associated with mortality. Hospital readmission rates for the 3 years prior to and following discharge from the index hospitalisation were calculated.

Results 249 of 7727 (3.2%) first admission episodes to Scottish ICUs in 2005 were with an exacerbation of COPD. Mean age: 67 years; female: 52%; median admission Simplified Acute Physiology Score II: 35 (IQR 26−45). 83% of patients received mechanical ventilation; 24% required tracheostomy. Mean duration of ICU and hospital stays: 6.9 and 28.0 days, respectively. Mean duration of ventilation: 5.7 days (ICU survivors 5.9, non-survivors 5.2). Mortality at ICU and hospital discharge was 23.8% and 34.7%, respectively. It was 46.4% at 1 year and 66.1% at 4-year spost-ICU admission. Only age (p<0.001) and previous COPD admission (p=0.01) were independently associated with 4-year mortality. The mean hospital readmission rate during the 3-year follow-up period was twice that of the period before index hospitalisation (1.4 vs 0.7 readmissions/person-year for all admissions, 0.7 vs 0.3 for COPD admissions, Abstract P73 figure 1).
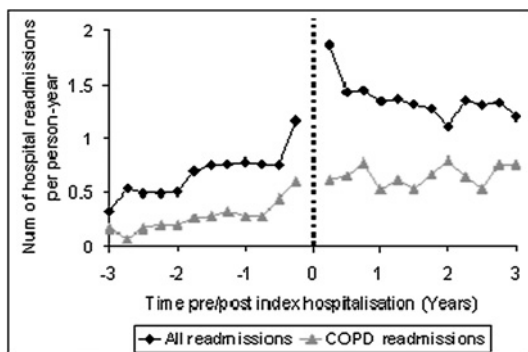
Abstract P73 Figure 1 Hospital readmission rates before and after ICU admission due to exacerbation of COPD. Data points are number of readmissions per person-year for each 3-month period. For the post-index hospitalisation period, the person-year denominator includes only those alive at the start of each 3-month period.

Conclusion This Scottish national cohort had comparable short-term mortality rates to those seen in a general ICU population. The poorer long-term mortality rate and increased readmission rates after hospital discharge may be useful to consider alongside other factors when deciding on ICU admission for patients with COPD.

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Introduction Aintree University Hospital was one of the first acute Trusts to develop a multidisciplinary MET team in the UK. It was created in 2009 to manage acutely ill and deteriorating patients safely in keeping with the NICE 50 (2007) guidance. The MET team records data on each callout and this study analyses the use of oxygen in this cohort of patients.

Methods The MET team records (1) any patient who is not on O_2 with an SpO_2 below 94% and (2) patients already on oxygen with a low SpO_2 necessitating a change in flow rates. Following the experience of the first 6 months a simple laminated sheet outlining the actions needed before the MET team is called was prepared for all wards. This clearly states the BTS target ranges for SpO_2 and oxygen prescription. This aide memoire was in use for 12 months before the second 6-month analysis period.

Results In the 19 months of its existence the MET has responded to 1717 calls. Of these 536 patients needed O_2 initiating (32%) because of low SpO_2 and a further 685 had the O_2 flows changes (38%). The Abstract P74 table 1 shows comparison between the first 6 months with the 6 months to April 2011 (post educational intervention). The number of calls has increased between these two time blocks from an average of 2.44 to 3.33 per day and the number of patients who needed oxygen starting decreased from 38% to 29%.

Abstract P74 Table 1

	Total Calls	O2 Started	O2 changed
Initial 6 months	444	169 (38%)	187 (42%)
Post Intervention 6 months	538	159 (29%)	217 (41%)

Conclusions This study confirms the results of the BTS National Audits 2008 and 2010 and the NPSA Rapid response Report September 2009 that emergency oxygen is poorly administered in the NHS. The simple intervention of providing an aide memoire on the wards has improved the situation but it still remains unsatisfactory. Because of this UHA has now introduced a new Patient Group Direction for the administration of O_2 by first level registered nurses. This will empower nurses to initiate oxygen in deteriorating patients with a low SpO_2 while waiting for assistance from the MET team.

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Introduction In 2008 the BTS published the first National Emergency Oxygen Guidance. Subsequent national audits in 2008 and 2010 have shown poor compliance with these guidelines. In order to improve the use of emergency oxygen Liverpool Medical School has included this topic in a new Patient Safety Programme (PSP) developed to provide practical skills for the 335 fifth year students as a preparation for their Foundation Programme.

Methodology (1)Computer based knowledge test (CBKT) of 60 MCQ questions, based on the BTS guidance and BNF are accessed on-line by the students. Each student has to correctly answer 80% of