

P84 THE IMPACT OF A MULTIDISCIPLINARY EDUCATIONAL PROGRAMME ON THE PRESCRIBING OF OXYGEN IN AN ACUTE TRUST

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Introduction and objectives Following the publication of the BTS guideline¹ and NPSA rapid response report² on the use of oxygen, a multidisciplinary educational programme was developed to improve the prescription of oxygen in a large London teaching hospital. The aim of this project was to assess the impact of the educational programme.

Methods Following a baseline audit of oxygen prescribing, posters were introduced to promote and improve the prescription of oxygen. A second audit demonstrated that no improvement in adherence to guidelines had occurred. In response to this, a Trust wide oxygen policy, development of an oxygen sticker and a comprehensive multi-disciplinary educational programme was delivered, aimed at all medical, nursing, physiotherapy and pharmacy colleagues. The programme involved a series of practical sessions and presentations tailored to each discipline and delivered by pharmacy, physiotherapy and medical representatives. To assess the impact of the interventions, prospective data was collected assessing patients on oxygen against the following criteria:

- ▶ Has oxygen been prescribed?
- If so, have the following been indicated:
- ▶ Target saturations
- ▶ Starting device and flow rate
- ▶ Continuous or when required oxygen
- ▶ Signed and dated by doctor
- ▶ Nurse signature for administration
- ▶ Clinically screened by pharmacist

Results The baseline audit demonstrated that oxygen was prescribed in only 23% of cases, of these 50% had target saturations prescribed. All those with an oxygen prescription had regular saturations and administration of oxygen recorded. Re-audit following introduction of educational posters demonstrated only 6% of patients had oxygen prescribed and target saturations documented (n=1). On delivery of the educational programme, a further audit recruited 563 patients, of which 83 patients (15%) were administered oxygen, 30 (36%) had oxygen prescribed appropriately, 73% with target saturations and 77% of which used the newly designed oxygen sticker (Abstract P84 Table 1).

Conclusions We have demonstrated that when changing clinical practice educational posters alone were not effective, however, a structured multidisciplinary teaching programme improved the prescription of oxygen to above national standards. Whilst further improvement is required, a rolling educational programme may further support this.

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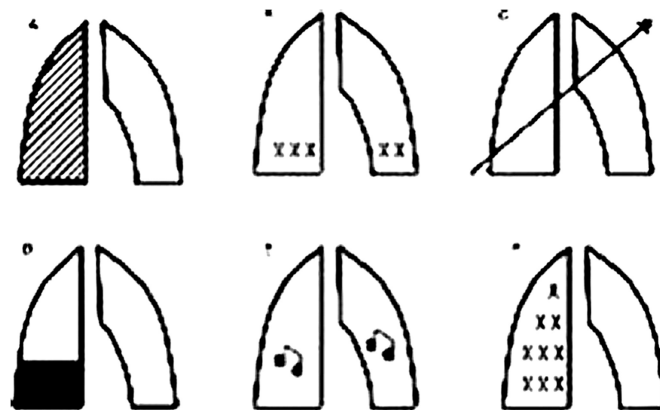
P85 PICTORIAL REPRESENTATION OF RESPIRATORY EXAMINATION IN HOSPITAL NOTES

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Good record keeping maximises patient safety and quality of care. The Royal College of Physicians recommends that 'medical records should have a standardised structure and layout' (*RCP Generic Record Keeping Standards* 2007). Pictorial representation of respiratory examination using a cartoon of the lungs annotated with lines, squiggles, crosses and musical notes is commonplace despite lack of standardisation and formal teaching. Our study aimed to assess the accuracy of interpretation and the rationale behind use of pictorial representation.

Methods Questionnaire survey correlating six common pictorial representations A–F (see Abstract P85 Figure 1) with clinical findings as follows: 1=coarse crepitations, 2=wheeze, 3=bronchial breath sounds, 4=decreased bronchial sounds, 5=pneumothorax, 6=pleural effusion, 7=rhonchi, 8=fine end inspiratory crepitations, 9=bibasal crepitations, 10=transmitted upper airway sounds, 11=absent breath sounds, 12=pneumothorax, 13=other(specify). Multiple responses were allowed for the same picture.



Abstract P85 Figure 1

Results 88 clinicians completed the survey (Foundation Year n=44, Specialist Trainee n=10, Specialist Registrar n=13, Consultant n=16, other n=3). 74/88 (84%) admitted to routinely drawing pictures. Of these 71/74 (96%) also recorded findings in written text. 23/71 (32%) could not provide a reason for their use of drawings

Abstract P84 Table 1 Results of three audits carried out and comparison with national standards

	Oxygen prescribed (in patients receiving oxygen)	Prescribed using the oxygen sticker	Target saturations indicated	Device & flow rate indicated	Continuous or when required oxygen indicated	Signed & dated by the Dr	Signed by nurse for administration	Clinically screened by the pharmacist
1st Audit January 2009	23%	NA	50%	0%	100%	NA	50%	NA
2nd Audit August 2009	6%	NA	0%	0%	100%	NA	0%	NA
3rd Audit June 2010	36%	77%	73%	40%	20%	50%	37%	60%
National Standards 2009	18.4%	69%	40%	62%	74%	NA	27%	NA

though 26/71(37%) reported that it aided communication. Most learned their behaviour from senior colleagues (22/76), own observation (16/76) or medical school (27/76). The closest associations were for Pictures C (77/78 responses, 99%=normal) and E (94/102,92%=wheeze/rhonchi combined). Crosses were commonly interpreted as crepitations in Pictures B (89/101,88%=fine and bibasal combined) and F (66/94, 70%=coarse). Pleural effusion was most commonly linked to Pictures A (35/107, 33%) and D (75/98, 77%) though both of these had an additional eight and four interpretations respectively.

Conclusion The majority of doctors use pictorial representation to record respiratory examination. Lack of standardisation leads to variation in annotation and potentially alternative interpretation by others. With the exception of Picture C, the use of pictures alone is unreliable. Reassuringly for patient safety, most doctors also write down their findings. Pictorial representation is most often informally learned and appears to be well established in UK medical practice.

P86 CHEST DRAIN INSERTION TRAINING; IS SIMULATION TRAINING THE ANSWER?

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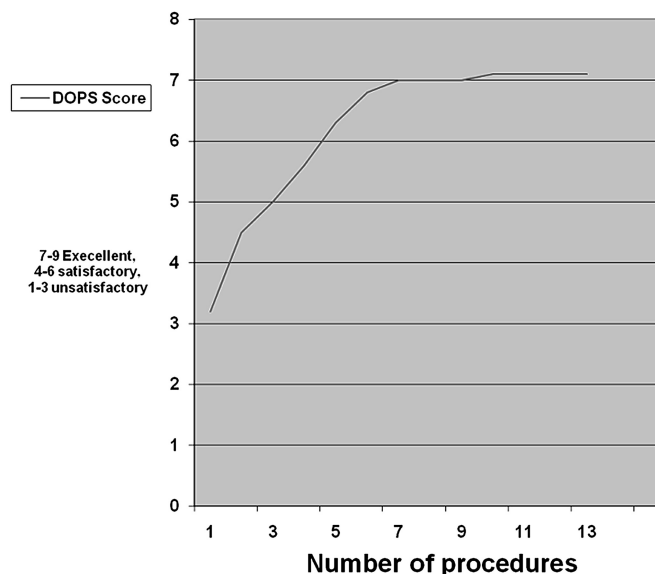
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Background The West Midlands Deanery is running a training module in Chest Drain insertion for all CMT trainees using Simulation training in a Porcine-Resin Model. Between Feb 2009 and Feb 2010, 176 trainees have completed the training module. Universal feedback (95%) was good. Our concerns were that analogous to driving, experience on the road is necessary to produce a competent trainee. We present this study evaluating two cohorts of trainees derived from the original pool after 6 months of their simulation training.

Methods One cohort consisted of 12 CMT Trainees who were paired with a trainer who is a Consultant or SpR in Respiratory Medicine. The trainees were selected depending on the availability of trainer rather than their enthusiasm to participate. The other cohort of 18 trainees was randomly selected from the general pool, which was originally advised to seek experience in their trust during routine work. Both cohorts were asked about their confidence in chest drain insertion as well as number of procedures they have done in the last 6 months. In the supervised cohort, we have analysed the DOPS score and plotted the learning curve for chest drain insertion.

Results On average the trainees in the mentored group have done 10.5 procedures in the last 6 months while trainees from the general cohort have done only 2.2 procedures. Disappointingly universal feedback from the general cohort was that they quickly lost the confidence and skill. They have pointed out number of reasons; the prominent ones are lack of opportunity, radiologists taking the routine work, lack of supervision. It took about five procedures for trainees in the mentored group to get up to satisfactory level in the DOPS score and after seven procedures there was a definite plateau in the learning curve.

Conclusion Simulation training imparts confidence and familiarisation with the seldinger chest drain insertion but at least five to seven further supervised insertions on patients is required to do the procedure with out direct supervision. This needs further work on a larger group which is on going. What is clear is that close mentoring is essential to master the skill and Consultant time must be set aside formally to sustain the training programmes.



P87 EVIDENCE-BASED EMERGENCY OXYGEN GUIDELINES ARE NOT BEING FOLLOWED IN THE EMERGENCY DEPARTMENT

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Introduction and objectives The first Emergency Oxygen Guidelines were published by the BTS in October 2008¹ and were endorsed by 21 professional bodies, including the College of Emergency Medicine. The 2009 BTS audit² showed improvement in the use of target saturations in the inpatient setting. We are concerned that uptake has been less impressive in the emergency department (ED).

Methods A retrospective cohort study was performed in a London Hospital of patients aged 16–70 attending the ED. Three time periods were chosen; immediately prior to and after guideline publication (1/7/08–30/9/08 and 1/11/08–31/1/09, respectively) and 18 months after publication (1/4/10–30/6/10). Oxygen use was reviewed for all patients attending the ED with acute coronary syndromes (ACS), stroke, transient ischaemic attack (TIA) or with a known diagnosis of COPD. Patients requiring emergency intubation or on home long-term oxygen therapy (LTOT) were excluded. Patients with known COPD with a diagnosis of ACS/stroke/TIA on that attendance were included in ACS/stroke/TIA category to avoid double counting.

Results A total of 253 individual attendances were reviewed. Initial observations of 58 (23%) patients were performed on oxygen. Abstract P87 Table 1 summarises the use of oxygen in the groups studied.

Conclusions Oxygen is frequently used inappropriately in the ED and there has been no improvement since the guideline publication. Excess use of oxygen is the most common reason for not following the guidelines. This is consistent with historical practice in the ACS/stroke/TIA group, although there appears to be a non-significant (p=0.09) trend towards improvement. One third of COPD patients also inappropriately received excess oxygen. Many patients have their first recorded saturations performed on oxygen which may suggest that guideline adherence within the ambulance service is also sub-optimal. Uptake of the guidelines has not been as good as in the inpatient setting. This may be due to lack of awareness outside the medical specialities. This trust currently has no oxygen champion, and this appointment should improve the situation, as would a programme of education within the ED, which we intend to instigate.