

lung cancer; 2 via the general chest clinics and 1 following re-referral with persistent haemoptysis.

Conclusion We have shown that almost a quarter of RALC referrals did not adhere to strict referral protocols and would have been better served by a more appropriate referral elsewhere. We are working to educate our primary and secondary care colleagues to ensure that the only appropriate cases are referred to the RALC in order to reap the maximum benefit from this resource intensive service.

P231 **AUDIT OF PRE-HOSPITAL OXYGEN THERAPY BY NORTH WEST AMBULANCE SERVICE (NWS) 1 YEAR AFTER PUBLICATION OF NEW JRCALC GUIDANCE FOR OXYGEN USE**

doi:10.1136/thx.2010.151068.32

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We audited oxygen use amongst 443 cases brought to the "majors" A&E area of a university hospital by NWS ambulance teams in May–July 2010. We compared the findings with our 2007 audit conducted before publication of the BTS emergency oxygen guideline in 2008 and JRCALC guidance in 2009 (Hale K. *Emerg Med J* 2008;25:773).

Results 90% of cases had oximetry recorded by ambulance teams in 2007, rising to 96% in 2010. 19% of cases were hypoxic in 2010 and 27% were given oxygen compared with 34% in 2007 (see Abstract P231 Table 1). The proportion given oxygen fell from 31% in the initial 4 weeks to 24% in the final 5 weeks of the audit when feedback was given to ambulance teams. The "ideal" figure for these cases was about 21% based on JRCALC guidance. 86% of cases were treated in accordance with JRCALC guidance in terms of receiving or not receiving oxygen and 73% were treated in full compliance (correct device and flow rate). The overall compliance rate was 4.4% higher (95% CI –2.3% to 11.0%) during the feedback period and full compliance rose by 9.9% (95% CI 1.6 to 18.2%) following feedback. Eight percent of cases received oxygen inappropriately and 3% were denied oxygen inappropriately. Our audit revealed that NWS ambulance crews were unable to give controlled oxygen to COPD cases because Venturi masks were not carried. Several COPD cases received high dose oxygen from nebuliser masks throughout the journey because air driven nebulisers and nasal cannulae were not available. Only four of 14 cases with AECOPD had SpO₂ <88% but 12 were given oxygen and 10 developed SpO₂ >92%.

Abstract P231 Table 1

BTS/JRCALC Oxygen category	Number (%) of cases	Percent with low SpO ₂	Percent given oxygen
1. Critical illness (<i>Reservoir mask</i>)	14 (3%)	50%	79%
2. Moderate oxygen (<i>Target 94–98%</i>)	52 (12%)	58%	71%
		SpO ₂ <94%	
3. Controlled oxygen (<i>Target 88–92%</i>)	14 (3%)	29%	86%
		SpO ₂ <88%	
4. Give oxygen only if SpO ₂ falls <94%	363 (82%)	12%	17%
		SpO ₂ <94%	
Average	Total 443 cases	19% (86 cases)	27% (120 cases)

Conclusions The proportion of NWS cases receiving oxygen in pre-hospital care has fallen from 34% in 2007 to 27% in 2010 following publication of BTS and JRCALC oxygen guidelines. 86% of cases were treated in broad compliance with JRCALC guidance and 73% were in full compliance. There is potential for further slight reduction in oxygen use in ambulances, especially for COPD

patients. This may be enhanced by feedback to ambulance crews and by providing a wider range of oxygen delivery equipment in ambulances.

P232 **THE EARLY DETECTION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE**

doi:10.1136/thx.2010.151068.33

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Introduction Approximately 835 000 people in England have been diagnosed with COPD however it is estimated that over 3 million have the disease¹ and those cases that are diagnosed are mainly moderate or severe in nature.² The direct cost of COPD to the UK healthcare system is estimated to be between £810m and £930 m per annum³ and without change is set to grow

Methodology It is essential that we offer good quality early diagnosis but the numbers involved are huge so a screening programme and pathway were developed. Patients at risk of COPD were initially defined as being aged over 40 with a smoking history. Vitalograph COPD6 devices, which measure FEV₁ were used across 22 practices to screen the target population at an average test time of 5 min compared to full spirometry of 20 min. All abnormal results were followed up with full spirometry, performed by an accredited health care provider.

Results To date 2055 patients have been screened. 841 (41%) demonstrated an abnormal result on COPD6 screening. Of these so far 376 have had COPD confirmed by spirometry. That is 18.3% of the target population and 45% of the group who had abnormal COPD6 results. It is estimated that, nationally over 2 million people have undiagnosed COPD and of those over 50% are diagnosed with moderate to severe disease² however the results available to date suggest that early detection leads to the majority of patients being identified while their condition is still mild. Results to date demonstrate that 75% of diagnoses were mild, 18% moderate and 3.2% severe. We are still awaiting confirmation of the remaining 3.8%. The project is ongoing.

Outcomes Mild COPD costs approximately 50% less to treat than moderate COPD and 90% less than severe COPD.⁴ Therefore in addition to improving outcomes for patients, early detection will also reduce the burden of care to the NHS and socioeconomic costs.

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P233 **COPD AND ME: THE DEVELOPMENT AND IMPLEMENTATION OF AN INDIVIDUAL PATIENT MANAGEMENT PLAN AND HAND-HELD RECORD**

doi:10.1136/thx.2010.151068.34

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Background People with chronic obstructive pulmonary disease (COPD) face multiple challenges living with a progressive and