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 (NWAS) 1 YEAR AFTER PUBLICATION OF NEW JRCALC GUIDANCE FOR OXYGEN USE

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A Matthews, C Gavin, B R O'Driscoll. *Salford Royal NHS Foundation Trust, Salford, UK*

We audited oxygen use amongst 443 cases brought to the "majors" A&E area of a university hospital by NWAS 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 NWAS 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 SpO_2 <88% but 12 were given oxygen and 10 developed SpO_2 >92%.

Abstract P231 Table 1

BTS/JRCALC Oxygen category	Number (%) of cases	Percent with low SpO2	Percent given oxygen
1. Critical illness (*Reservoir mask*)	14 (3%)	50%	79%
2. Moderate oxygen (*Target 94–98%*)	52 (12%)	58% *SpO2 <94%*	71%
3. Controlled oxygen (*Target 88–92%*)	14 (3%)	29% *SpO2 <88%*	86%
4. Give oxygen only if SpO2 falls <94%	363 (82%)	12% *SpO2 <94%*	17%
Average	Total 443 cases	19% (*86 cases*)	27% (*120 cases*)

Conclusions The proportion of NWAS 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

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[1]A Gupta, [2]S Church, [1]S Lacey. *[1]StHealth Practice Based Commissioning Consortium, St Helens, UK; [2]St Helens & Knowsley Trust, Whiston, UK*

Introduction Approximately 835 000 people in England have been diagnosed with COPD however it is estimated that over 3 million have the disease[1] 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 annum[3] 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 FEV_1 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 disease[2] 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

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[1]T Robinson, [1]S Shires, [2]C Fletcher, [2]J Parrington, [2]J Norell, [2]S Mabbett. *[1]Harrogate and District NHS Foundation Trust, N Yorks, UK; [2]NHS North Yorkshire and York, N Yorks, UK*

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

debilitating disease. It also results in heavy use of medical services and frequent hospital admissions. Patients need information, self care skills, education and training to be able to self manage their condition. Following extensive consultation with local COPD patients and the respiratory multidisciplinary team (MDT), an individualised management plan was formulated and implemented into primary, intermediate and secondary care.

Aims The aim of the record is to increase the knowledge and control patients have of their disease and provide patients and carers with easily identifiable and accessible sources of support

Methods Fifty COPD patients completed the Bristol COPD Knowledge Questionnaire. The results highlighted many knowledge gaps, despite the mean length of time from diagnosis being >5 years. COPD patients and carers also attended a focus group, where the same knowledge gaps were highlighted. This group also provided advice on how the information should be presented and the type of language and terminology that should be used. A second focus group consisting of members of the respiratory MDT was then held and the final format for the record agreed.

Discussion The information found in the hand-held record is based on identified gaps in knowledge in the local COPD population and includes:

- What COPD is
- Generic COPD management
- Individual patient and carer management
- Goal setting
- Pharmacological management
- Exacerbation management
- End of life supportive care
- Telehealth

The hand-held record has been well received by patients and health care professionals alike. The document is a 'live' document and is being further developed. Patient and carer education groups have been run over a 4-week period.

Conclusion Developing and implementing the COPD hand-held record has highlighted the knowledge gaps in the identification, management and education needs not only in patients with COPD but in health care professionals. Working in an integrated manner with patients, carers and colleagues from primary, intermediate and secondary care has helped bridge the knowledge gaps and led to better outcomes for patients and health care professionals alike.

P234 BLF AND BTS "READY FOR HOME" SURVEY OF THE EXPERIENCES OF PATIENTS ADMITTED TO HOSPITAL WITH COPD. PT2: THE DISCHARGE PROCESS

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J E Scullion, S J Singh, M D L Morgan. *University Hospitals of Leicester, Leicester, UK*

Introduction and Objectives A secure discharge from hospital following an admission for COPD is an important reflection of the quality of hospital care. Information about the discharge process will help inform strategies to prevent unnecessary re-admissions.

Methods An 8-item questionnaire was sent to respiratory departments in all acute hospitals in the United Kingdom. Recipients were asked about their hospital's processes and the provision of information to patients at discharge.

Results 68 hospitals returned the questionnaire. There was coverage of hospitals from all regions of England as well as Scotland and Wales. The majority (69%) of responses came from district general hospitals (DGHs). Catchment populations ranged from 100 000–1 million. Respiratory departments varied in size from <20 beds (10.3%) to >60 beds (11.8%). Almost half the departments (48.6%) have >70 COPD admissions per month. There was an early discharge service in many hospitals (71%), with most being based in the hospital (67%) vs the community. Only 52.9% patients were seen by a respiratory physician before discharge; the majority (69.1%) were seen by a specialist nurse. Most hospitals (52.9%) did not have a formal discharge check list or discharge pack (63.2%). Many hospitals (69%) give patients a copy of the discharge letter, and some refer patients directly to pulmonary rehabilitation (54%) or smoking cessation services (63%) on discharge. Follow-up appointments within primary or secondary care were not universally arranged and there was patchy coverage of educational advice to patients (range: 45%–75%), especially on return to work or sexual relationships.

Conclusions Whilst admissions for exacerbations of COPD are common, preparation for discharge is unsatisfactory. Many patients do not see a specialist or have appropriate post-discharge advice or follow-up arrangements.

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P235 BLF AND BTS "READY FOR HOME" SURVEY OF PATIENTS ADMITTED TO HOSPITAL WITH COPD: THE HOSPITAL EXPERIENCE

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I Jarrold, N Eiser. *British Lung Foundation, London, UK*

Introduction and Objectives The patient experience is an important component of the quality of care. The objective of this survey was to explore the experiences of patients who were admitted to hospital with an exacerbation of Chronic Obstructive Pulmonary Disease (COPD).

Methods Patients were asked about their last hospital admission for COPD using a 14-item, self-administered questionnaire. They were approached through Breathe Easy groups, the British Lung Foundation website and a commercial market research panel

Results 307 COPD patients responded to the survey of whom 83% were aged ≥56 years; 89% had established COPD (diagnosed >12 months), and 39% had been admitted to hospital within the last 12 months. Only 45% were aware that "exacerbation" had been the cause of their admission. 56% had ≥24 h notice of illness prior to admission and 43% initiated the admission themselves, without contacting a health care professional (HCP). Only 25% patients felt 'very' confident that they were ready for their hospital discharge and 26% in their ability to cope at home. 34% patients felt very well informed about their COPD, the reasons for admission and their ability to identify early signs of an exacerbation. Only 37% were very reassured at receiving adequate support at home and only 24% were very positive about the future. 75% patients wanted more information regarding the reasons for their admission, 80% on treatment choices, 68% on COPD patient organisations, 78% on HPC support available at home and 69% on lifestyle, social and other coping problems. More contact from HCP support services and support via a telephone helpline were also requested (75% and 64%, respectively). Despite this, 60% felt 'very' confident about how and when to take their medications.

Conclusions Hospital admission remains a significant risk to patients with established COPD, especially if they have had previous admissions. Data suggest that many patients feel unready for hospital discharge and are poorly prepared for the future management of their COPD. Hospital admission should be taken as an opportunity to provide patients with more information on COPD and available support services.

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