appropriate care settings to minimise unscheduled care and improve patient access and care.

## **REFERENCE**

1 Royal College of Physicians. Why asthma still kills: the National Review of Asthma Deaths (NRAD). Confidential Enquiry Report. May 2014

P89

ATTENDANCE OF SECONDARY CARE RESPIRATORY OUTPATIENT APPOINTMENTS IN ILLICIT DRUG USERS WITH RECURRENT HOSPITAL ADMISSIONS WITH 'COPD' AT A CITY CENTRE TEACHING HOSPITAL

R Huang, AM Collins, N Williams, N Garner, T Perry, H Burhan. Royal Respiratory Research (RRR), The Royal Liverpool and Broadgreen University Hospital Trust, Liverpool, UK

10.1136/thoraxjnl-2014-206260.230

Introduction Non-attendance at outpatient appointments (OPA) costs the NHS an estimated £600 m a year, with over 94,000 missed (first) OPAs in England from 2013 to 2014. We reviewed the arrangement and attendance of OPAs for illicit drug smokers, after hospital re-admission with an 'exacerbation of chronic obstructive pulmonary disease (COPD)'.

Methods All illicit drug smokers re-admitted between January 2009 and September 2011 with a presumptive diagnosis of 'exacerbation of COPD' were included. Planned respiratory OPAs were reviewed retrospectively from our COPD admission database to determine the number attended or unattended. Unattended OPAs were classified as (a) hospital cancellation (b) patient cancellation (c) patient did not attend (DNA) or (d) 'unknown'.

**Results** Of 89 patients, no OPA was arranged in 28 (31.5%). 334 respiratory appointments were made for 61 patients (mean = 5.5 per patient); of these, only 86 (25.7%) were attended (see Table).

Conclusion High recurrent admission rates suggests that these patients should all have specialist respiratory OPAs arranged at discharge, with the aim of preventing re-admission and improving their respiratory health. In our cohort we noted poor OPA attendance with a DNA rate of 52.0% compared with around 8.6% for first OPAs overall in England in 2012.<sup>2</sup> This suggests alternative approaches are needed in order to engage with these patients such as community based secondary care outreach services. We will now study the effects of an intensive community-based secondary care outreach services; involving smoking cessation, targeted pulmonary rehabilitation, specialist respiratory (consultant and nurse) involvement, vaccination, inhaler technique reviews, medication concordance checks/ prescription and health trainers.

## **REFERENCES**

- 1 Department of Health (2014). Referrals and Attendances for Outpatient Appointments: Hospital Activity Statistics. London: DH
- 2 Department of Health (2013). NHS inpatient elective admission events and outpatient referrals and attendances, quarter ending December 2012. Available from: http://www.england.nhs.uk/statistics/2013/02/22/nhs-inpatient-elective-admission-events-and-outpatient-referrals-and-attendances-quarter-ending-december-2012

Abstract P89 Table 1				
Not attended (n = 248)				
Reason	Hospital cancelled	92 (37.1%)		
	Patient cancelled	8 (3.2%)		
	DNA	129 (52.0%)		
	'Unknown'	19 (7.7%)		

## P90 CATCH – COMMUNITY ACCESS TO CT CHEST

<sup>1</sup>CS Moorcroft, <sup>1</sup>G Kamalatharen, <sup>2</sup>S Elliot, <sup>3</sup>A Walsham, <sup>3</sup>A Sharman, <sup>3</sup>SCO Taggart. <sup>1</sup>Manchester Medical School, Manchester, UK; <sup>2</sup>Salford Clinical Commissioning Group, Salford, UK; <sup>3</sup>Salford Royal NHS Foundation Trust, Salford, UK

10.1136/thoraxjnl-2014-206260.231

Introduction Rates of lung cancer diagnosis for two week wait (2WW) referrals are low although referrals are increasing. Many 2WW's are potentially exposed to unnecessary anxiety as the referral requires the G. P. to inform the patient of the possibility of cancer. CATCH (Community Access To CT Chest) is a new protocol of care that has been developed by the Salford lung cancer team in collaboration with the Salford C. C. G. whereby abnormal "low risk" CXR reports are communicated to G. P.s with instructions for them to request a CT scan, which is then fast tracked allowing rapid performance and reporting of the scan with appropriate advice to the GP.

Methods A d-base was set up to capture the performance of CATCH from its introduction on 05.02.2014 to 05.07.2014. Demographic details were collected for dates of CXR, CXR report, CT request, CT report, relevant outcomes and 2WW activity for same time (2011–2014). Participating patients were interviewed by telephone using a structured questionnaire (supported by a postal questionnaire for non-responders).

Results 53 patients underwent an abnormal CXR with advice to enter into the CATCH protocol and of these 7 bypassed CATCH having been referred directly into the 2WW system by their G. P.s. For the 46 patients completing CATCH, seven (15%) urgent 2WW referrals were recommended. In the remaining 39 patients, 28 required no follow up, 9 non-urgent referral to the chest clinic and 2 repeat community CXRs. Timelines for performance of CT scans were acceptable (see Table) and detected cancer in 5/46 (10.9%) and were normal in 8/46 (17.4%). 23–26 patients interviewed to date rated the service overall as either very good or excellent. During same points in 2011, 2012, 2013 and 2014

2WW numbers were 69, 84, 89 and 81 respectively.

Conclusions Our provisional data support the role of CATCH as a new system of care for managing "low risk "CXR reports that might otherwise be referred into growing 2WW clinics. Thus far, the protocol moves at a rapid pace and has been well received by the patient (although we await the results of the postal survey in due course).

Abstract P90 Table 1	Mean time for various CATCH outcomes
CXR performed to CXR report	3.1 days
CXR report to CT request	5.1 days
CT request to CT appointment	5.8 days
CXR report to CT appointment	13.0 days

P91

DEVELOPMENT AND IMPLEMENTATION OF A STRUCTURED, ANNUAL 'COMPREHENSIVE RESPIRATORY ASSESSMENT' FOR INDIVIDUALS WITH ADVANCED COPD

N Toms, NJ Greening, R Free, JE Williams, RA Evans, MC Steiner. *Glenfield Hospital, Leicester, UK* 

10.1136/thoraxjnl-2014-206260.232

Introduction Disease burden, polypharmacy, co-morbidities and complex social needs are significant in patients with advanced COPD and predict morbidity, mortality and health care

Thorax 2014;**69**(Suppl 2):A1–A233

utilisation. Our first aim was to develop a structured annual assessment for patients with advanced COPD: the 'Comprehensive Respiratory Assessment (CRA)' to systematically assess disease burden, co-morbidities and social care needs akin to the 'Comprehensive Geriatric Assessment'. The second aim was to use the CRA in an out-patient setting to inform an individualised care plan. We report our first year experience of implementing an Advanced COPD Clinic with an annual CRA.

Methods A multi-disciplinary team developed the Comprehensive Respiratory Assessment (CRA) for patients with advanced COPD which was defined as an FEV $_1$  of <50% predicted with one of the following: MRC ≥ 4, Respiratory Failure, ≥2 hospital admissions with an acute exacerbation of COPD, current smoking history, and a low BMI or significant weight loss. A bespoke electronic patient record (the airways disease database [ADD]) was developed to support the CRA. The CRA was performed annually by an advanced COPD nurse and subsequently reviewed in an out-patient clinic by a respiratory physician supported by a multi-disciplinary team whereby an individualised care plan was agreed with the patient. Ethical approval was sought and written consent provided.

Results The Advanced COPD service and CRA was established in June 2013 in Leicester, UK. The CRA is categorised into four principal domains which are: (1) exercise and activity, (2) exacerbations, (3) co-morbidities and extra-pulmonary manifestations, and (4) prognostic indicators and end of life care needs. At one year 155 referrals have been made with 71 annual CRAs completed to date. The baseline data of the patient cohort are described in Table 1.

Conclusion The innovation of an advanced COPD service, with a multi-disciplinary team, supported by an annual Comprehensive Respiratory Assessment and bespoke electronic patient record is feasible and allows systematic assessment, development of individualised treatment plans, and further characterisation of this cohort.

Abstract P91 Table 1 Characteristics of an advanced COPD cohort

Baseline Characteristics	Mean (SD)
Age (years)	66 (9)
Gender (% male)	51%
MRC Grade (median and IQR)	4 (4-4)
FEV1 (% predicted)	32 (12)
Body Mass Index (kg/m²)	25.5 (7.7)
Current smokers (%)	25%
Pack years (years)	39 (17)
Living arrangements (% living alone)	31%
Oxygen use (% LTOT)	39%
Number of exacerbations in previous year (median and IQR)	4.5 (2.0-8.0
Number of hospitalisations in previous year (median and IQR)	0.5 (0.0-1.0
Incremental shuttle walk test (m)	128 (91)
Quadriceps strength (Kg)	19 (9)
CAT score	25 (7)
Chronic Respiratory Questionnaire (CRQ)	
CRQ dyspnoea	2.1 (0.7)
CRQ fatigue	2.9 (1.2)
CRQ emotion	3.7 (1.4)
CRQ mastery	3.7 (1.5)
HADS anxiety	9.5 (4.4)
HADS depression	8.1 (3.5)

MRC: Medical Research Council, FEV1: Forced Expiratory Volume in 1 sec, CAT: COPD Assessment Tool, CRQ: Chronic Respiratory Questionnaire, HADS: Hospital Anxiety and Depression Scale

P92 IMPROVING DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH COPD IN THE ACUTE MEDICAL ADMISSION UNIT: A "RIGHT CARE" APPROACH

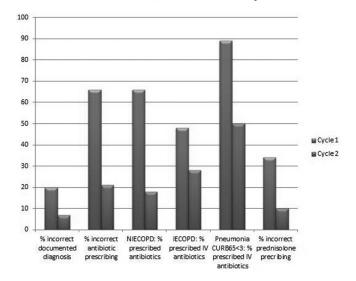
Z Rutter-Locher, V Patel, K Taylor, P Kelly, I Patel. Kings College Hospital NHS Trust, London, UK

10.1136/thoraxinl-2014-206260.233

Introduction COPD is the second most common cause of emergency admission and 5th cause of readmission to hospital. Appropriate identification and treatment is crucial to make every bed day count and reduce the burden of COPD. Characterising COPD exacerbations (ECOPD) and excluding differential diagnoses in acutely unwell co-morbid patients can be challenging. This study aimed to evaluate the accuracy of diagnoses/management of patients on the acute medical unit (AMU) in an inner London teaching hospital with 300 ECOPD admissions/yr, and to develop an improvement plan.

Methods Admission records for COPD patients admitted acutely with increased shortness of breath, cough and/or wheeze over 6 weeks (Jan/Feb 2014) were reviewed. Diagnostic criteria and treatment were compared to national standards. 21 AMU junior staff completed a COPD knowledge questionnaire. An ECOPD pathway was developed, highlighting diagnostic and treatment differences between infective (IECOPD), non-infective COPD exacerbations (NIECOPD) and community acquired pneumonia (CAP), supported by electronic prescribing order sets. An online learning module was developed to support junior doctors.

Results 44 COPD patients (26M, 18F) were admitted to AMU. 20% had an incorrect diagnosis. Of NIECOPD patients (20%): 66% received antibiotics; 11% did not receive prednisolone. Of IECOPD patients (47%): 65% received iv or incorrect oral antibiotics; 14% did not receive prednisolone. Of CAP patients (32%): in CURB <3 89% received iv antibiotics. 5 CAP patients were documented as IECOPD; 2 were undertreated. 2 IECOPD patients were diagnosed with CAP and over treated. Only 13/21 (62%) of AMU junior doctors understood the difference between NIECOPD, IECOPD and CAP. After the improvement plan, incorrect diagnosis fell from 20% to 7%. Of NIECOPD patients (28%): only 18% received antibiotic therapy; 100% received prednisolone. Of IECOPD patients (48%): 74% received correct antibiotics; 100% received prednisolone. Of



**Abstract P92 Figure 1** Accuracy of diagnoses and management of NIECOPD, IECOPD and CAP on AMU before and after a right care approach

A116 Thorax 2014;**69**(Suppl 2):A1–A233