Disease Questionnaire (CRDQ) (Dodd et al 2011). As increasing numbers of non-COPD patients are referred for PR we investigated whether the CAT is responsive to PR in these populations.

**Methods** 365 consecutive patients (255 COPD, 110 non-COPD) completing an eight week outpatient pulmonary rehabilitation programme were recruited. For the non-COPD group, disease classifications included interstitial lung disease (n=27), asthma (n=37), bronchiectasis (n=29), extrathoracic restriction (n=12) and thoracic surgery for lung cancer (n=5). CAT, CRDQ and incremental shuttle walk (ISW) were collected prospectively. Paired t-tests were used to assess the CAT in COPD and non-COPD patients, and a Pearson's correlation coefficient used to assess the relationship between change in CAT and change in CRQ with PR for non-COPD and COPD patients.

**Results** Following PR there was a significant improvement in the CAT, CRDQ and ISW in both non-COPD and COPD (p<0.001). There was a similar improvement in the mean (95% confidence interval) CAT score in both non-COPD and COPD patients (non-COPD: -2.1 (-1.0, -3.2) versus COPD: -3.0 (-2.2, -3.8); p=0.19). Change in CAT was significantly correlated with all domains of the CRQ in non-COPD patients (all p<0.01 see Table 1).

**Conclusions** As in COPD patients, the CAT is immediately responsive to PR in non-COPD patients. Even in unselected patients undergoing PR, the CAT is a practical but robust health status instrument.

Abstract P104 Table 1 Relationship between change in CAT and change in CRQ with PR for non-COPD and COPD patients

Non-COPD	r	p-value
$\Delta$ CRQ Dyspnoea	-0.29	0.003
$\Delta$ CRQ Fatigue	-0.33	0.004
$\Delta$ CRQ Emotion	-0.38	< 0.001
$\Delta$ CRQ Mastery	-0.25	0.009
COPD	r	p-value
$\Delta$ CRQ Dyspnoea	-0.32	< 0.001
$\Delta$ CRQ Fatigue	-0.38	< 0.001
$\Delta$ CRQ Emotion	-0.43	< 0.001
$\Delta$ CRQ Mastery	-0.39	< 0.001

 $<sup>\</sup>Delta=$  Change with PR; CRQ = self-report Chronic Respiratory Questionnaire; r=Pearson Correlation Coefficient.

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## IDENTIFYING MISSED OPPORTUNITIES FOR REFERRAL TO PULMONARY REHABILITATION

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**Introduction and Objectives** UK COPD standards require that patients are referred to pulmonary rehabilitation (PR) following hospitalisation for acute exacerbations of COPD (AECOPD).

The Hillingdon pulmonary rehabilitation service established a "fast-track" route for patients admitted to Hillingdon Hospital with AECOPD in November 2011.

Knowledge of current referral patterns and identification of missed opportunities can provide a strategy for improving access to PR services

**Methods** Data including residential postcode and registered GP were extracted for patients that were admitted to an acute hospital with AECOPD during a 6 month period (November 2011 to April 2012). Data were cross-referenced to referrals to the PR service.

Admissions were mapped by residential postcode to provide a geographical distribution of patients that were referred to PR and those that were not.

Admissions and subsequent referral status were analysed by GP practises; identifying practises with relatively high AECOPD admissions and low PR referrals

**Results** There were 240 admissions during the 6 month period of analysis and 36 (15%) of the patients were referred to the pulmonary rehabilitation service via the "fast-track" route.

Admissions mapped by residential postcode demonstrated a clustering of admissions in parts of the south of the borough, compared to the north. Although absolute numbers of PR referrals were similar in the north and south of the borough, there were far fewer in the south as a proportion of admissions.

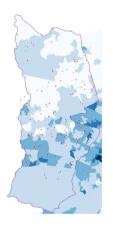
Analysis of admissions and PR referrals by GP practise identified a number of "high-value" practises that could be targeted to improve PR referrals.

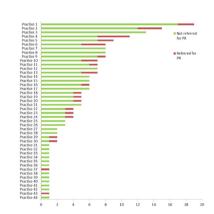
 ${\bf Conclusions}$  Improving access and the uptake of PR remains challenging within the post-hospitalised AECOPD patient group.

Analysing local data can generate an understanding of the bottlenecks in the system and develop strategies improving access and uptake.

Transport is an often cited reason for patients declining referral. Analysis of geographical data can inform decisions on the location of community PR services.

Identifying GP surgeries for targeted intervention to improve PR referral provides an opportunity to engage with GPs and support them in delivering high-quality, evidence based care.





Abstract P105 Figure 1 A) demonstrates geographical spread of admissions highlighting those that were referred (light gray) and those that were not referred (dark gray) to PR. B) Shows the distribution of patients admitted for AECOPD during the period of analysis by GP surgeries and the proportion referred to PR.

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## VALIDITY OF THE CLINICAL COPD QUESTIONAIRE (CCQ) IN NON-COPD PATIENTS

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**Background** The Clinical COPD Questionnaire (CCQ) is a 10-item health status instrument that takes only two minutes to complete, and has been shown to be reliable and valid in patients with COPD (van der Molen T et al 2003, Damato S et al 2005). In COPD patients, the CCQ correlates with established health status instruments such as the Chronic Respiratory Disease Questionnaire (CRQ), COPD Assessment Test (CAT) and St George's Respiratory

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