questionnaire is responsive to a chronic lung disease's population undergoing rehabilitation. A prospective study is now required to expand the application of the CAT to the general assessment of patients with chronic lung diseases.

REFERENCES

1. **Jones PW,** *et al*. Development and first validation of the COPD assessment test. *Eur Respir J* 2009;**34**:648–54.
2. **Dodd JW,** *et al*. The COPD assessment test (CAT): response to pulmonary rehabilitation. A multicentre, prospective study. *Thorax* 2011;**66**:425–9.

P147 OUTCOMES OF PULMONARY REHABILITATION IN SEVERE ASTHMA

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Objectives Structured physical training programmes are a key component of pulmonary rehabilitation (PR) and have consistently been shown to be of significant benefit to patients with COPD. It is unclear whether the application of similar principles provides similar health improvements in patients with severe asthma. We aimed to assess this by studying the effects of pulmonary rehabilitation in a group of patients with severe asthma and significant disability who have completed our standard 7 week PR programme.

Methods 111 patients with a physician diagnosis of severe asthma who have completed our standard PR programme were studied. Assessments including spirometry, chronic respiratory questionnaire (CRQ), hospital anxiety and depression scores (HAD) and incremental and endurance shuttle walk testing (ISWT, ESWT) were performed at baseline and completion to determine the effect of PR. Baseline demographic and spirometric data were compared with a larger population of patients with severe asthma attending our difficult asthma clinic (DAC).

Results Following rehabilitation, statistically significant improvements were seen in MRC dyspnoea score (mean (95% CI) improvement −0.35 (−0.13 to −0.57), p=0.003); HADS anxiety (−1.4 (−0.4 to −2.3), p=0.007); HADS depression (−1.2 (−0.2 to −2.2), p=0.026); CRQ dyspnoea (+0.72 (+0.33 to +1.1), p=0.001); CRQ fatigue (+0.92 (+0.65 to +1.2), p<0.001); CRQ Emotion (+0.64 (+0.36 to +0.92), p<0.001); CRQ mastery (+0.47 (+0.13 to +0.81), p=0.007); Incremental shuttle walk test (ISWT) (+63 m (49.5 to 76.5), p<0.001); and Endurance shuttle walk test (ESWT) (+339.7 m, (249.7 to 429.7), p<0.001). Interestingly however, patients with severe asthma who completed pulmonary rehabilitation were older (66 vs 48 yrs p<0.01), more likely to have smoked (69.5% vs 43.5%, p<0.01), and tended to have more severe fixed airflow obstruction (FEV_1% predicted 55.9 vs 71.9, p=0.28) than our DAC population. This may be because clinicians were more likely to refer patients with asthma who had a COPD-like phenotype or because patients with severe asthma were more likely to drop-out of the programme.

Conclusion Pulmonary rehabilitation may offer significant benefit to patients with severe asthma though further work is needed to identify the patients mostly likely to benefit and the optimum training required.

P148 THE ADAPTATION AND EVALUATION OF THE LIVING WELL WITH COPD PROGRAMME FOR PULMONARY REHABILITATION

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Introduction Mechanisms and materials to support the delivery of the education component of pulmonary rehabilitation are not widely available. The aim of this study was to adapt the Living Well with COPD (LWWCOPD) programme for embedding in pulmonary rehabilitation and to conduct a process and outcome evaluation.

Methods *Adaptation*: Modifications to the LWWCOPD programme were informed by focus groups, current practice, relevant research and guidelines, and in collaboration with the authors of the LWWCOPD programme. The study used a cohort before-after design which incorporated the principles of a process evaluation. *Evaluation*: Sites administered their usual pulmonary rehabilitation programme with the exception of the LWWCOPD programme for pulmonary rehabilitation to deliver the education component. Health professionals and patients completed evaluation questionnaires to assess their acceptance. Patients completed the Understanding COPD (UCOPD) questionnaire and the Bristol COPD Knowledge Questionnaire before and after pulmonary rehabilitation. *Analysis*: Feedback and comments on the programme were collated and categorised. Changes in the UCOPD questionnaire and BCKQ were examined using paired t-tests.

Results *Adaptation*: Amendments to the LWWCOPD programme included reducing the number and length of education sessions, incorporating additional information/techniques, materials to link the education and exercise sessions and a COPD action plan. *Evaluation*: 25 health professionals and 57 patients with COPD from eleven pulmonary rehabilitation programmes evaluated the LWWCOPD for pulmonary rehabilitation. The mean (SD) duration of the education sessions was 41 (9) min. The health professionals felt that the education sessions were either excellent (n=16/65, 25%) or good (n=40/65, 62%), and that they were comprehensive, evidence-based and utilised a good combination of teaching strategies for example, "Easy to follow and deliver". They reported that the programme would require modification for non-COPD patients. Patients commented on improved knowledge and self-efficacy, peer support and relevant content for example, "Better understanding of action to be taken". They requested supplementary information for family members. The UCOPD questionnaire and the BCKQ improved significantly: mean change (95% CI): UCOPD questionnaire: 26.8 (21.7 to 31.8)%, BCKQ: 10.6 (6.9 to 14.4)%.

Conclusion The LWWCOPD programme for pulmonary rehabilitation is a feasible, effective and versatile way to deliver the education component of COPD pulmonary rehabilitation.

P149 PILOTING AND EVALUATING POST-PULMONARY REHABILITATION (PR) LONG-TERM EXERCISE (LTE) FOR COPD PATIENTS

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Introduction There is evidence that regular exercise profoundly affects both the course and outcome of COPD. While PR is well established for COPD patients limited by breathlessness, there is currently no evidence-base for follow-on LTE, which takes into account expressed desires of patients to continue exercise regularly. This pilot study aimed to evaluate an easily accessible, disease appropriate, regular LTE for COPD patients who complete PR, to

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