

**Conclusions** These data indicate there is no significant difference between ILD and COPD patients' walking distances. ILD patients with a reduced exercise tolerance should be included and referred to PR programmes.

**P42 DOES PULMONARY REHABILITATION IMPROVE EXERCISE CAPACITY AND HRQOL IN PATIENTS WITH ASTHMA?**

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**Introduction** Pulmonary rehabilitation (PR) benefits patients with COPD, however to date there is limited evidence demonstrating its effectiveness in patients with chronic asthma.

We hypothesised that patients with asthma would have a significant improvement in exercise capacity and HRQOL following a standard PR programme. The aim of this study was a) to evaluate the impact of PR on exercise capacity and HRQoL in patients with asthma and b) to identify the factors influencing attendance and completion.

**Methods** We retrospectively audited PR outcome in a cohort of asthmatic patients referred for PR at the Royal Brompton Hospital between 2008 and 2012. Exercise capacity (ISWT), quadriceps maximal volitional contraction (QMVC) and HRQoL (HADS, SGRQ, LINQ, MRC) were assessed before and following PR. Logistic regression analysis was used to determine factors predicting PR completion.

**Results** 49 patients were referred of whom 25 completed (69.2% female; mean age: 58.7 ± 12.5 years; mean BMI: 31.27 ± 30.1) Completers were moderately obstructed (mean FEV<sub>1</sub>% pred: 57 ± 22.9, FEV<sub>1</sub>/FVC: 0.63 ± 0.14). 4% of them were current smokers and 8% were ex-smokers (mean history of 11.25pack/yrs). Mean classes attended were 15.3 1 ± 5.4 per patient. There was a significant improvement in QMVC (p = 0.02) and ISWT (p = 0.036) following PR. Other than LINQ score (p = 0.016), there was no improvement in HRQoL measures following PR. Patients with a higher%Fat, according to bioelectrical impedance, were less likely to complete PR once they had been referred. No other statistically significant differences were found between completers and non-completers.

**Conclusions** Asthmatic patients benefit from attending a PR course in terms of functional capacity and muscle strength. Further prospective studies utilising asthma specific quality of life indices are required to evaluate disease specific benefits of PR and delineate factors predicting successful PR.

**Does pulmonary rehabilitation improve exercise capacity and HRQoL in patients with asthma?**

**Abstract P42 Table 1. Patient characteristics pre and post PR.**

	Pre PR	Post PR
Number	25	25
ISWT (m)	220 (210)	370 (302)*
Best QMVC (kg)	21.8 (10)	24.4 (9.9)*
HAD A	8.85 (4.3)	8.63 (5.1)
HAD D	6 (5)	6 (7)
SGRQ Total score	49.6 (14.1)	48.9 (14.9)
LINQ	7.85 (2.86)	6.11 (2.5)*
MRC	3.23 (0.92)	3.08 (0.68)

Data presented as Mean (SD) or Median (IQR). \*P<0.05

**P43 PATIENTS' EXPERIENCES OF EARLY POST-HOSPITALISATION PULMONARY REHABILITATION: A QUALITY IMPROVEMENT INITIATIVE**

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**Background** Early post-hospitalisation pulmonary rehabilitation (PR) following acute exacerbation of COPD (AECOPD) improves health-related quality of life, increases exercise capacity and reduces rate of hospital readmission. However, only a minority of eligible patients are referred to or receive this intervention (Jones *et al* Thorax 2013). We explored patient acceptability for post-AECOPD PR and the referral process through face-to-face audio- and video-taped interviews.

**Methods** Ten patients were interviewed using experience based co-design (EBCD) methodology: six PR "completers", one PR starter who subsequently withdrew, and 3 patients who declined PR. The films were analysed and edited to represent the common themes. A patient-staff event was held to co-design a patient information leaflet and video.

**Results** Overall, the patient completers were positive about their experience. They most liked: the atmosphere; the equipment; group social interaction; doing more exercise than they thought they could; learning how to manage their lung condition. They least liked: getting there; being 'shattered' afterwards; no tea and coffee break; no introductions. For patients who declined, the reasons given were: "I don't know what rehab is ..... no-one has explained it"; "I was never offered rehab"; "It is too far away- I would go if transport was paid for." A recurring theme was that patients had poor recall of information provided during hospital admission.

**Conclusion** The findings highlighted the complexity of interactions between patient and healthcare professionals. In response to this, an information leaflet and video are being produced using the filmed interviews and feedback from the patient staff co-design event to facilitate the referral process. The best timing and delivery of patient information is currently being evaluated. Other themes were improving PR accessibility and enhancing social aspects of PR. Two new community sites were opened to provide wider coverage of the borough and refreshments are now offered routinely during education classes. Furthermore, patients and staff are introduced to each other routinely at the beginning of PR classes. 159 referrals for post-AECOPD PR have been made in the past 18 months and patient satisfaction rates are 98%. The EBCD approach was ideal in engaging patients in the co-design of service improvements.

**P44 MAINTENANCE OF SPACE FOR COPD (A SELF-MANAGEMENT PROGRAMME OF ACTIVITY, COPING & EDUCATION): A SIX MONTH QUALITATIVE STUDY**

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**Introduction & Objectives** Few self-management interventions for COPD have conducted qualitative interviews on completion of such a programme and none have followed participant's longer term. This study conducted interviews with participants allocated to the SPACE FOR COPD self-management programme as part of an RCT. We aimed to gain insight into how the programme was utilised over a 6 month period. Earlier analysis of interviews carried out at 6 weeks highlighted the value of the education material<sup>1</sup>.

**Method** Semi-structured interviews were carried out with participants (n = 24) receiving SPACE for COPD six months after receiving the intervention. Interviews were transcribed verbatim and a constant comparison approach was taken to analysis supported by NVivo software (Version 10) by 2 researchers with experience in qualitative methods.

**Results** Following preliminary analysis, four main themes describe the challenges and conducive behaviours that influenced participant's self-management behaviours during 6 months of using SPACE FOR COPD - *continuing to utilise the manual, establishing an exercise routine, social support & multiple burdens*. Many participants describe continuing to use the SPACE FOR COPD manual (e.g. for breathing control techniques and to refresh memory) and establishing an exercise routine early on with the intervention. Social support was utilised for informational (advice), instrumental (help with tasks) and emotional reasons and largely consisted of family members. Challenges to continued regular exercise at home included barriers of time and weather and wider ranging burdens (e.g. other family member's ill-health, life events, such as moving house).

**Conclusion** Participants reported continued use of the manual and acknowledged that establishing a regular exercise routine was instrumental to encouraging continued exercise and this behaviour may have increased feelings of personal control over their disease. However, the challenges identified could disrupt these patterns of self management and further healthcare professional support may be required to help participants cope with these. Participants viewed the telephone support they had had favourably.

## REFERENCES

1. L Apps, S Harrison, J Williams, M Steiner, M Morgan & S Singh. (2012). A self-management programme of activity, coping & education (SPACE) for COPD: Patients perspective. ERS Annual Conference 2012

### P45 INVESTIGATING THE FEASIBILITY OF AN ON-LINE HEALTH RESOURCE INTEGRATED WITH NURSE COACH SUPPORT FOR THOSE WITH ADVANCED COPD

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**Background** Self-management may improve health status in chronic disease. It is not routinely embedded into COPD care. Pulmonary rehabilitation provides behaviour change opportunities but is not available to all.

**Aims** To test the feasibility of a combined intervention (online health resource 'The Prevention Plan' (TPP) with nurse coach support) with a key aim to identify impact on activation for self-management. Secondary outcomes of interest were health-related quality of life, emotional functioning, information needs and exercise capacity.

**Method** 17 patients were recruited (FEV1 < 75% predicted (range 15–74, mean 38.01, SD 17.92). Hardware and internet access were provided. Patients had unlimited access to TPP, home visits, telephone contacts and email with the nurse coach. The nurse coach supported behaviour change through patient-led goal setting and techniques to enhance self-efficacy. Outcomes were followed up at 9–29 weeks (mean = 15) after joining the programme. Measures were patient activation (PAM), health-related quality of life (CRQ), anxiety and depression (HADS), information needs (LINQ) and GAIT test.

Semi-structured interviews were conducted. Qualitative analysis is underway and results will be reported separately.

**Results** Mean age was 61.4 years (range 46 to 79), 9 female, 8 male. 14 patients completed follow-up assessments. 1 patient withdrew due to illness and two were unable to complete follow-up.

Statistically significant improvement was found for activation (p = 0.0035, t = 3.56, df = 13), CRQ-fatigue (p = 0.0427, t = 2.25, df = 13), anxiety (p = 0.0444, t = 2.22, df = 13), information needs (p = 0.0001, t = 6.09, df = 13).

**Conclusion** The intervention supported patients to become more activated for self-management. Patients showed increased confidence to manage their condition and strengthening of belief that taking an active role in managing their COPD was important. Secondary benefits related to fatigue, anxiety and feeling more informed about COPD. Qualitative analysis will illuminate these findings and explore intervention factors that led to greatest benefit.

### P46 SUPPORTED SELF-MANAGEMENT FOR PATIENTS WITH MODERATE TO SEVERE COPD AT OR SHORTLY AFTER DISCHARGE FROM HOSPITAL: A SYSTEMATIC REVIEW OF THE EVIDENCE

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**Introduction and objectives** Guidelines recommend that COPD patients admitted to hospital with an exacerbation should be assessed and considered for supported self-management interventions although it is not known how effective or cost-effective such an intervention would be when instigated during admission or shortly after discharge. We conducted a systematic review and evidence synthesis to answer this question.

**Methods** Key databases eg MEDLINE, EMBASE, CENTRAL, were searched up to May 2012 for studies of any design where patients admitted with an acute exacerbation of COPD were included in a supported self-management intervention (or important components) within 6 weeks of discharge. Citation lists were checked and authors of relevant conference abstracts since 2010 were contacted. There were no language restrictions. Data were extracted and risk of bias assessed independently by 2 reviewers.

**Results** Of over 16000 initial search hits, 14 papers have been provisionally included which report 8 randomised controlled trials (RCTs), 1 controlled clinical trial and 4 pre-post studies/arms. Study quality was variable and interventions heterogeneous. Of the RCTs, 4 described multi-component self-management packages, 1 was a cluster RCT providing support to both nursing home staff and patients, 1 was a home-based exercise trial and 2