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## 155. The best posters on quality of life and coping styles in COPD

### P1458

**TELEMOLD project: A telemonitoring system that combines oximetry and physical activity quantification to improve long term oxygen therapy**  
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**Background:** Standard assessment to long term oxygen therapy (LTOT) prescription involves periodic clinical tests (arterial blood gas, 6-min walk test and nocturnal oximetry) carried out in several hospital visits. However, there is some evidence that oxygen demand during daily activities may not be correctly estimated by such tests, when compared to continuous ambulatory oximetry.

**Aim:** To evaluate the clinical usefulness of a home telemonitoring system in LTOT optimization.

**Methods:** Thirty five respiratory failure patients (29 with LTOT, 6 under evaluation for LTOT) followed in an University Hospital were real-time monitored with an oximeter sensor (Nonin Avan 4000 system) and an accelerometer (BioPlux motion). Signals were sent via Bluetooth to a mobile phone and then via 3G or GPRS to a server. Continuous and secure access to data through an Internet site was established.

**Results:** Each patient was monitored in average  $7.6 \pm 4.5$  (range 2-19) days, in a total of  $83.0 \pm 66.9$  (4.8-228.8) hours. Percentage of valid records was in average  $65.4 \pm 24.1\%$  (0-100%). Percentages of rest, activity and sleep records per patient were, in average,  $28.4 \pm 21.3\%$ ,  $6.5 \pm 5.5\%$  and  $59.3 \pm 24.6\%$ , respectively. Significant desaturation during rest, activity and sleep was found on 2, 26 and 9 patients, respectively. Patient's user-friendliness was fairly good (75.8% reported it as easy/very easy).

**Conclusion:** Our study suggests that a telemonitoring system combining oximetry and physical activity evaluation may improve LTOT through a more adequate oxygen flow prescription, namely during daily activities.

This project was funded with a grant by Fundação Vodafone Portugal.

### P1459

**Quality of life in patients receiving home oxygen therapy (HOT) for chronic respiratory diseases (CRD)**

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**Introduction:** Health related quality of life (HRQL) is impaired in chronic obstructive pulmonary disease (COPD). Less is known about impacts of HOT on health status in patients with CRDs. We hypothesized that health status would be impaired independent of underlying respiratory disease, and physical and mental health status would be lower than population norms.

**Methods:** Patients receiving HOT from 3 hospitals in South Australia completed Australian Karnovsky Performance Scale (AKPS), Short Form 36 (SF36) and Chronic Respiratory Questionnaire (CRQ). Scores were compared to population norms. Correlations were made with Spearman (skewed) or Pearson (normal distributions). Differences in scores between CRD types were evaluated by Student T-test.

**Results:** Data were available from 197 patients (mean age=74.4; SD=9 yrs; 62% male; 155 (78.6%) with COPD, 32 (16.2%) pulmonary fibrosis (IPF), and 10 (6.2%) other CRDs). No differences in HRQL were seen between COPD and IPF. SF36 emotional dimensions were similar to population norms. Physical health dimensions were substantially lower than population norms. Patients' AKPS performance was on average "requiring occasional assistance" (64.8; SD=12.1). CRQ dyspnoea (3.4; 1.6) and fatigue (3.29; 1.17) scores indicated moderate impairment; emotional function (4.4; 1.24) and mastery (4.4; 1.37) were not impaired. CRQ domains (except emotional function) were highly correlated with AKPS and SF36 dimensions ( $p < 0.001$ ).

**Conclusions:** Patients receiving HOT for respiratory diseases had severe physical disablement, which correlated closely with dyspnoea and fatigue, but their mental and emotional status were similar to population norms.

### P1460

**Influence of patient activation and health literacy on quality of life among patients with COPD**

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**Background:** While many factors contribute to the health status of patients with COPD little attention has been given to the influence of patient activation (PA) and health literacy (HL).

**Objectives:** The purpose of this analysis was to examine the influence of PA and HL on quality of life (QOL) among a sample of patients with COPD.

**Methods:** This was a cross-sectional analysis of baseline data from patients with COPD eligible for pulmonary rehabilitation enrolled in a self-management clinical trial. PA was measured using two questions: confidence on when to seek medical care (ACT1) and frequency of taking a list of medications to doctor visits (ACT2). HL was measured using three questions: confidence in filling out forms, frequency of help needed to read hospital materials, or problems learning about medical condition. QOL was measured using generic (SF-12) and disease-specific (Chronic Respiratory Questionnaire [CRQ]) instruments.

**Results:** Of 218 patients the majority reported being confident/very confident when to seek medical care (ACT1=79.8%) and taking a list of medicines (ACT2=63.8%). The association between levels of PA and QOL was examined separately using linear regression: ACT1 was directly and significantly associated with CRQ, and SF-12 physical and mental composite scores. In contrast ACT2 was only significantly, but inversely associated with CRQ. There was no association between levels of HL and any measures of QOL.

**Conclusion:** These results suggest that a component of patient activation (ACT1) is associated with improved QOL and may offer a specific target for intervention to enhance activation and outcomes.

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### P1461

**The effect of BODE index on quality of life and depressive symptoms in patients with COPD**

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Chronic obstructive pulmonary disease (COPD) is a disorder leading to physical and mental impairment. Aim of the present study was to evaluate the effect of BODE index and its components on depressive symptoms and Quality of Life (QoL). We studied 37 consecutive COPD outpatients (26 M, aged 53-86 years). COPD diagnosis was confirmed by clinical and functional assessment. The patients were classified on the basis of GOLD and BODE stages. QoL was assessed by SF-36 questionnaire through its two components: Physical Health (PCS) and Mental Health (MCS). Depressive symptoms were assessed by the Beck Depression Inventory-II (BDI-II). 14 patients were allocated in GOLD stage I, 18 in II, and 5 in III. No patient was in GOLD stage IV. BODE index ranged 0-6. Median depression value (IQ range) was 7 (4-11). 23 subjects did not present depressive

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symptoms, 8 showed mild depression, and 6 moderate depression. None showed severe depression. Mean PCS and MCS were 46.4 ( $\pm 10.4$ ) and 47.5 ( $\pm 9.6$ ) respectively. PCS and MCS values lower respect to mean value of Italian general population were found in 22 and 17 subjects, respectively. A negative relationship was found between BDI-II and PCS ( $p=0.02$ ). BDI-II was linearly correlated to BODE ( $p<0.0001$ ) but not to GOLD stage. PCS was inversely correlated to BODE ( $p=0.02$ ), but not to GOLD Stage. MCS was not correlated to BODE and to GOLD Stage. Among individual components of BODE, only MRC was a good and direct predictor for depression ( $p=.007$ ), and an inverse predictor for both MCS ( $p=.007$ ) and PCS ( $p=.0002$ ). In conclusion, a greater dyspnea perception, regardless of disease severity, is associated with higher depression score and poorer QoL.

#### P1462

##### Self-efficacy and quality of life in COPD patients

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**Background and purpose:** Chronic obstructive pulmonary disease (COPD) is a complex chronic multi-component disease. Understanding the mechanisms of health related quality of life (HRQL) impairment should help identifying targets of pulmonary rehabilitation (PR). Research has shown positive correlations between efficacy expectations and outcome in patients with COPD (Kaşıkçı MK. Int J Nurs Practice 2011; 17:1-8; Arnold R et al., Behav Med, 2005 31:107-15). This study sought to evaluate the relative role of self-efficacy and socio-demographic variables in the prediction of HRQOL in COPD patients.

**Methods:** A total of 103 COPD patients (60% males, mean aged  $70 \pm 14$  years) before entering a PR program, completed dimensional rating scales on self-efficacy (Perceived Health Competence Scale) and HRQOL (Airways Questionnaire 20). Regression analysis was performed to identify the impact of self-efficacy and demographic variables (gender, age, level of education, and marital status) on HRQOL.

**Results:** Stepwise multiple regression analysis revealed that age and self-efficacy were correlated with HRQOL ( $R^2 = 0.27$ ). These findings suggest that the HRQOL is negatively correlated with age ( $b = -0.30$ ) and positively correlated with self-efficacy ( $b = 0.36$ ), independent of gender, level of education, and marital status.

**Conclusions:** In a chronic diseases such as COPD, it is important to work at improving confidence in the patient's ability to follow a self-care regimen by increasing self-efficacy, especially in older patients, as it may positively affect quality of life. Therefore, clinicians should include careful assessment of self-efficacy in their routine evaluation of patients before entering a pulmonary rehabilitation program.

#### P1463

##### Validation of CAT as an independent assessment tool in pulmonary rehabilitation (PR) for chronic obstructive pulmonary disease (COPD)

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The benefits of PR in COPD are well recognised but the practical assessment of patients undergoing PR can be complex. The COPD assessment test (CAT) is a recently introduced simple, validated 8-item questionnaire designed to assess the impact of COPD symptoms on quality of life (QOL). We hypothesized that CAT could be used as a screening tool and outcome measure to assess QOL in COPD. 60 patients with COPD enrolled in 8 weeks outpatient PR between January 2011 and October 2011 were studied. Patients completed CAT score, chronic respiratory disease questionnaire (CRDQ), hospital anxiety and depression (HAD) at baseline and at 8 weeks. Functional status (6 min walk test (6MWT) and incremental shuttle walk test (ISWT)), dyspnoea (MRCD) and body mass index (BMI) were measured.

52 COPD patients completed the 8 weeks PR and data were available for 37 patients with mean (SD) age 68.7 (9.2) yrs and FEV1 48.64 (20.79) % predicted. There was a significant difference in 6MWT (47.03m), ISWT (47.84m), MRCD (0.3 points), CRDQ (-3.02 points), Anxiety (1.5 points), depression (0.6 points) and CAT (3.63 points) post PR. CAT correlated closely with CRDQ at baseline and following PR whereas there was good correlation only with ISWT, anxiety and depression post PR.

CAT is an independent, simple and highly responsive outcome measure that can also be utilized for screening patients with COPD for PR.

#### P1464

##### Developing a patient reported experience measure for COPD

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**Introduction:** The patient experience and patient outcomes are metrics for quality improvements in healthcare. There is no currently available patient reported experience measure (PREM) for COPD.

##### Study Aim

The aim of the study is to create a valid and reliable PREM for patients with COPD.

**Methods:** Sixty four people with COPD across the community of North East London, North Central London and Essex and 19 with recent hospital experience were interviewed to capture their patient journey with COPD. Analysis of the interview data was by a two layer approach: *content* and then by *affective* (emotive or felt) responses.

**Results:** Eighteen different *affective* responses were described by patients and were grouped as positive, negative or ambivalent. Positive responses included: hope, gratitude, comfort/reassured, acceptance, optimism, altruism, happy and respect. Negative responses included scared, anxiety, fear, frustration, worry, feeling depressed, denial and embarrassment. 'Self-motivation' and control were contextual and could be either positive or negative.

The community patient groups' experience centred around five categories identified in the content analysis: 'Journey to Diagnosis'; 'Smoking'; 'Usual Care'; 'Exacerbation ('flare-up')' and 'My Everyday Life'. The hospital patient experience was categorised as: 'Going to Hospital'; 'On Arrival to Hospital'; 'On the Ward'; 'Discharge from hospital' and 'Follow-up care'. Items based on patients' affective responses were generated from the categories to develop a PREM-COPD scale.

**Conclusion:** Completion of the testing of the PREM-COPD will result in a valid and reliable instrument to be used to measure self-defined important patient experiences when using healthcare services.

#### P1465

##### Correlations between disease-specific and generic health status questionnaires in patients with COPD

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**Purpose:** Aims of this longitudinal study were to determine whether and to what extent a disease-specific health status questionnaire correlates with generic health status questionnaires at 4 different time points in patients with advanced COPD; and to determine the correlation between the changes in these questionnaires during 1-year follow-up.

**Methods:** Demographic and clinical characteristics were assessed in 105 outpatients with advanced COPD. Disease-specific health status (Saint George's Respiratory Questionnaire, SGRQ) and generic health status (EuroQol-5-Dimensions, EQ-5D; Assessment of Quality of Life instrument, AQoL; Short Form-36, SF-36) were assessed at baseline, 4, 8 and 12 months. Correlations were determined between SGRQ and EQ-5D, AQoL and SF-36 scores and changes in these scores. Agreement in direction of change was assessed.

**Results:** 84 patients (80.0%) were included for analysis (61.9% male, age 65.7 (9.2) yrs, FEV<sub>1</sub> 34.2 (13.7)% pred). SGRQ total score and EQ-5D index score, AQoL total score and SF-36 Physical Component Summary measure (SF-36 PCS) score were moderately to strongly correlated ( $r = -0.49$  to  $-0.68$ ). The correlations of the changes between SGRQ and EQ-5D, AQoL, SF-36 PCS and SF-36 Mental Component Summary measure (SF-36 MCS) score were weak or absent ( $r = -0.13$  to  $-0.27$ ). The direction of changes in SGRQ agreed slightly with the direction of changes in EQ-5D, AQoL and SF-36 PCS score (Cohen's Kappa = 0.11 to 0.18,  $p < 0.05$ ).

**Conclusions:** Disease-specific health status questionnaires and generic health status questionnaires should be used together to gain complete insight in health status and changes in health status over time in patients with advanced COPD.

#### P1466

##### Psychiatric comorbidity in COPD and its determinants

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**Background:** Depression and anxiety are prevalent in patients with chronic obstructive pulmonary disease (COPD); however, their etiology and relationship to the clinical features of COPD are not well understood.

**Objectives:** To evaluate the prevalence of psychiatric comorbidity (depression and anxiety) in COPD patients and to examine possible associations with demographic and clinical characteristics as well as health-related quality of life of these patients.

**Design and methods:** A total of 100 clinically stable COPD patients answered the St. George's Respiratory Questionnaire (SGRQ) (assessing HRQoL), the Hos-

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pital Anxiety and Depression Scale (HADS), Modified Medical Research Council (MMRC) Dyspnea Scale. Socio-demographic information, lung function, and other clinical data were collected.

**Results:** The prevalence of depression was found to be 40%, while that of anxiety was 29%. Patients living alone, having a longer duration of COPD diagnosis, lower BMI and more severe disease (as measured by FEV1% of predicted) had more depressive and anxious symptoms. The significant independent predictors of both anxiety and depression were higher MMRC score and worse quality of life.

**Conclusion:** We found that patients with COPD had high prevalence of depressive and anxious symptoms. Clinical and physiologic measures were less important determinants of psychiatric comorbidities in COPD than dyspnea and quality-of-life. Therefore, screening and treatment of these psychiatric comorbidities in patients with COPD may lead to significant improvements in patients' quality of life.

#### P1467

##### Impact of a pulmonary rehabilitation program on psychopathology of patients diagnosed with COPD

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**Introduction:** Psychological comorbidities such as anxiety and depression are common in COPD. Recent studies suggest a decrease in both anxiety and depression in patients with COPD who attended a pulmonary rehabilitation program (RP). However there is insufficient literature on changes in general psychopathology after RP.

**Aims and objectives:** To examine the changes in general psychopathology of patients with COPD after participating in a rehabilitation program.

**Methods:** The participants were patients (80 men and 21 women) with pure COPD who attended a three month RP. The patients' psychopathology was assessed, by the start and by the end of the RP, using the Symptom Checklist-90-R (SCL-90-R), which is a self-report questionnaire widely used in both normal and distressed populations. In order to determine COPD severity a spirometric evaluation before and after bronchodilation was performed.

**Results:** Means of age and of FEV1% of predicted were 64.15±8.13 and 43.51±21.53, respectively. Statistically significant changes (Paired t test) were observed at the end of the RP on the following scales: somatisation (0.70 VS 0.45, p<0.01), obsessive-compulsive (0.75 VS 0.48, p<0.01), interpersonal sensitivity (0.44 VS 0.35, p<0.05), depression (0.81 VS 0.48, p<0.01), anxiety (0.63 VS 0.35, p<0.01), hostility (0.53 VS 0.31, p<0.01), phobic anxiety (0.33 VS 0.17, p<0.01), paranoid ideation (0.43 VS 0.33, p<0.05). However, there was no statistical difference regarding the psychoticism scale (0.15 VS 0.13, p>0.05).

**Conclusions:** A pulmonary rehabilitation program may improve psychopathological symptoms, particularly those of the neurotic spectrum, of COPD patients.

#### P1468

##### Health status and coping skills of carers of patients receiving home oxygen therapy for respiratory diseases

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**Introduction:** Carer burden is well-documented for a range of chronic diseases. Burdens for those who care for people with chronic respiratory diseases (CRD) requiring home oxygen therapy (HOT) have not been reported but would be expected to have a similarly high burden.

**Methods:** Consecutive patient-carer dyads were enrolled over three years from 3 metropolitan hospitals if the patient was receiving HOT for a CRD. Baseline demographic observations and validated questionnaires were collected for Carers: health-related quality of life with Short Form-36 (SF36); Self-Esteem (SE) and Mastery (MS) Scales; Anticipated & Received Social Support (ARSS) and Carer Overload (CO) Scales, and Experiences and Impacts of Fatigue Scale (ICFS).

**Results:** All measures were completed by all 197 carers enrolled. Score results are expressed as mean; SD. Most (68.5%) were female and married (88.3%). Their mean age (67.12 yrs) was significantly lower than their patient (74.5 9 yrs) (p<0.001). Carer SF-36 dimension scores were similar to normative values for age and gender. They had high SE (43.0;5.8) and MS (60.9;), had no perceived overload (7.9; 2.5), and were not unduly fatigued.

**Conclusions:** In this population, patients receiving HOT have carers (mostly marital partners) who generally perceive little undue burden, either physically or emotionally.

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#### P1469

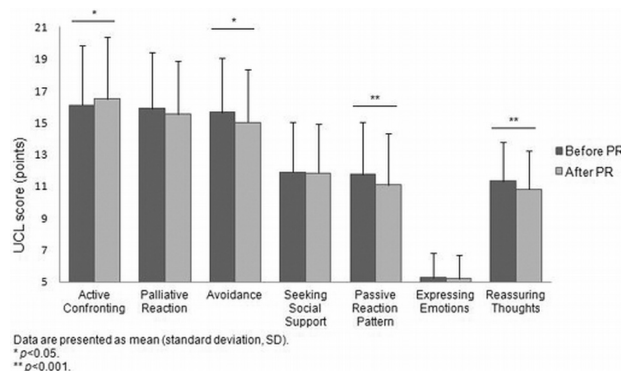
##### Coping styles in patients with COPD before and after pulmonary rehabilitation

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**Background:** Pulmonary rehabilitation (PR) improves physical and psychological symptoms in COPD patients. To date, it remains unknown whether coping styles change following comprehensive PR. This study assessed retrospectively coping styles in COPD patients before and after PR programme.

**Methods:** Coping styles were assessed in 303 COPD patients (53.1% men) before and after 36 PR sessions using the Utrecht Coping List (UCL). Additionally, lung function, St. George's Respiratory Questionnaire (SGRQ), Hospital Anxiety and Depression Scale (HADS-A and HADS-D) and six-minute walking distance (6MWD) were recorded.

**Results:** Mean age was 62.4±8.4 yrs; FEV<sub>1</sub> 47.9±19.5% pred; SGRQ total score 56.2±15.4 pts; 6MWD 441.6±112.2 m; HADS-A 7.4±4.2 pts and HADS-D 7.1±4.1 pts. Mean change scores following PR were SGRQ total -6.3±12.9 pts; HADS-A -1.7±3.6 pts; HADS-D -1.6±3.7 pts (all p<0.001) and 6MWD 28.9±51.2 m (p<0.05). The level of active confronting coping style increased (p<0.05), while the levels of avoidance (p<0.05), passive reaction pattern and re-assuring thoughts coping styles decreased following PR (both p<0.001). Palliative reaction, seeking social support and expressing emotions coping styles did not change (p>0.05).



**Conclusions:** Comprehensive PR results in significant change in coping styles of COPD patients. Further studies are needed to evaluate the outcome of interventions actively targeting coping style domains.

#### P1470

##### An evaluation of the needs of carers of people with COPD

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**Introduction:** Many COPD patients are dependent on carers. Whilst the role of caring can be very demanding, surprisingly little is known about the needs of carers of COPD patients and hence this was the main aim of this study.

**Methods:** 21 patient-carer dyads recruited from databases at Repatriation General Hospital completed questionnaires and carers attended focus group meetings.

**Results:** Carers (mean age 71.1, SD 9.8) completed the Short-Form 36 (SF36: Physical Component Score (PCS) 41.1, SD 11.4; Mental Component Score (MCS) 44.9, SD 9.2), and Hospital Anxiety and Depression scale (HADS: Anxiety 8.9, SD 3.3; Depression 5.1, SD 3). Patients (mean age 75.2, SD 7.6) completed the Chronic Respiratory Questionnaire (Dyspnoea 3.5, SD 1.2; Fatigue 3.5, SD 1.5; Emotional 4.3, SD 1.3; Mastery 4.5, SD 1.4), SF36 (PCS 25.7, SD 7; MCS 47.1, SD 11.9) and HADS (Anxiety 7.5, SD 3.4; Depression 6.5, SD 4). Thematic analysis of focus group transcripts indicated that carers emphasised physical and emotional impacts of their duties and identified social and work-related handicap as consequences. Carers believed that physical and/or emotional problems (either theirs or their patients') as well as a lack of knowledge were significant barriers to their role. A lack of inclusion in patient treatment plans, particularly following hospital discharge, was also noted. Respite support, peer debriefing, counselling and respiratory disease education were identified as areas that would assist carers with their role.

**Discussion:** Carer burden, handicap, lack of inclusion and knowledge were identified as issues that remain under-supported. The findings suggest the potential value of carer recognition, support and upskilling in COPD treatment planning.



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**P1471****A self-management programme of activity coping and education (SPACE) for COPD: Patients perspective**

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**Introduction:** We have developed a self-management programme 'SPACE for COPD' and as part of it's wider evaluation a nested qualitative study was conducted exploring patient's perspectives of self-management before and after completing the programme.

**Method:** Semi-structured interviews were carried out with participants randomised to 'SPACE for COPD' prior to starting SPACE and 6 weeks later. Interviews were transcribed verbatim and thematic analysis was performed supported by NVivo (Version 8). A third researcher analysed a sub-group of interviews to ensure agreement over themes.

**Results:** Four main themes describe patient's beliefs and expectations prior to starting 'SPACE for COPD' - *role of self-management, barriers to exercise, facilitators to exercise, role of healthcare professionals*. Patients had differing perspectives of self-management and were focussed on maintaining current activity levels. All desired more knowledge about COPD.

Analysis of follow-up interviews identified themes - *changing perceptions, the impact of SPACE for COPD, barriers to exercise, facilitators to exercise, the manual as a motivator*. The experience of using SPACE was positive and many described the motivating effect of the manual. Education was an important component of the intervention and self-management skills were demonstrated. At baseline patients anticipating positive results had been encouraged to initiate exercise and at follow-up when positive results had been observed, this further reinforced exercise behaviour. Barriers to exercise identified at baseline remained at follow-up.

**Conclusion:** 'SPACE for COPD' has enabled patients to learn more about their condition and become more active.

**P1472****Do illness beliefs predict depression and quality of life after pulmonary rehabilitation?**

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**Introduction:** Several studies have demonstrated the relevance of illness beliefs for health-related outcomes in chronic diseases. Patients form beliefs about possible causes, controllability and consequences. These illness beliefs are linked to anxiety, distress and coping strategies.

**Aim:** Aim of this study was to examine the role of subjective illness beliefs in chronic obstructive pulmonary disease (COPD) patients on later depression and health-related quality of life after pulmonary rehabilitation (PR).

**Methods:** 96 COPD inpatients (GOLD III/IV; 56 female; M=61.3 yrs±8.7) were tested for measures such as exercise capacity (6MWD) and forced expiratory volume in one second (FEV1% pred.) before and after PR. Additionally, assessment of illness beliefs (Illness Perception Questionnaire-Revised (IPQ-R)), health-related quality of life (HRQL:SF36) and depressive symptoms (Hospital Anxiety and Depression Scale) was included.

**Results:** Biomedical variables showed a significant improvement after PR: 6MWD 66±56m; p<.001 (admission 294±136m) and FEV1 +4.67±8.43% pred.; p<.05 (baseline FEV1 33.52±12.53% pred.). Results of hierarchical multiple regression analyses, after controlling for demographic variables and illness severity, indicated that COPD-patients' beliefs about their illness before PR predicted depressive symptoms ( $\beta=0.46$ ; p<0.001) and health-related quality of life ( $\beta=0.29$ ; p<0.05) after treatment.

**Conclusion:** Patients' illness beliefs before PR strongly influence later health-related quality of life and depression. COPD-patients may benefit from interventions aimed at changing maladaptive illness beliefs to improve outcome of treatment.

**P1473****Evolution of functional capacity and health status 2 years after a pulmonary rehabilitation programme**

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**Background:** Pulmonary rehabilitation programs (PRP) have been shown to improve exercise capacity and health status and to reduce dyspnoea and healthcare resources use, in patients (pts) with chronic lung disease. These benefits have been shown to last for up to 9 months, however appear to decline by 12 months.

**Aim:** Evaluate functional exercise capacity and health status after PRP in pts followed in "respiratory failure day hospital".

**Methods:** Retrospective study of pts integrated in a PRP. After PRP, pts who kept a physically active lifestyle (at least 3 walks of 30 minutes/week) were included in

the active group (AG). The others were considered as control group (CG). Were analyzed demographic characteristics, pulmonary pathology, six-minute walk test (6MWT) and St. George's respiratory questionnaire (SGRQ).

**Results:** Thirty-two pts were included, 24 in the AG and 8 in the CG. 81% of the pts had chronic obstructive pulmonary disease, with mean FEV<sub>1</sub> of 42%.

Immediately after PRP, there was a significant improvement in the 6MWD and SGRQ global score, in both groups. After completing PRP, there was a decline in the mean 6MWD when evaluated at 6 months, 1 and 2 years as well as in SGRQ score. However, after 2 years, the AG continued to show an average improvement of 32m in the 6MWD and at least 4 points in SGRQ comparing with pre-PRP, although in the CG, there was a clinically significant decline in 6MWD (-34m) and SGRQ score (13 points).

**Conclusion:** Despite the progressive decrease of benefits after completing PRP in the AG, these are still significantly positive 2 years after training, which does not happen in the CG. Active lifestyle seems to contribute to maintain the benefits of PRP.

**P1474****Health-related quality of life in hypercapnic COPD patients during an admission for acute exacerbation**

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**Introduction:** Little is known about Health Related Quality of Life (HR-QoL) during an admission in COPD patients with chronic hypercapnic respiratory failure (CHRF) after an episode of ventilation for acute exacerbation. The Mageri Respiratory Failure (MRF-28) and Severe Respiratory Insufficiency (SRI) questionnaires were specifically developed for patients with stable CHRF.

**Methods:** Hospitalized patients still hypercapnic > 48 hours after ending mechanical (invasive or non invasive) ventilation filled in the SRI, MRF-28 and Chronic Respiratory Questionnaire (CRQ), Groninger Activity Restriction Scale (GARS) and Hospital Anxiety and Depression Scale (HADS). Concurrent validity was evaluated by comparing both questionnaires with the CRQ. Construct validity was determined by assessing correlations between the different domains of the MRF-28, SRI, CRQ and both generic physical and psychological questionnaires measured during admission.

**Results:** N= 163 COPD patients (67 men; age 63 yrs; FEV1 0.67Lm(0.26). Total scores and all domains of MRF-28 and SRI correlated (p<0.01) with the CRQ and with its respective domains. Physical domains of all 3 questionnaires correlated strongly with the GARS (r=0.77, 0.74 and 0.52, respectively) and psychological domains of the SRI and CRQ with the HADS (r=0.79 and 0.76).

**Conclusions:** This study shows that SRI and MRF-28 are valid questionnaires in hospitalized patients with CHRF who are still hypercapnic 48 hours after ending mechanical ventilation for an acute COPD exacerbation. As the SRI is more elaborate with also a psychological domain we recommend this questionnaire in this specific group of severe COPD patients.

**P1475****Health related quality of life and family burden in ALS patients. Differences over time**

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The aim of this study was to investigate the health related Quality of Life (HQOL) in ALS patients and the burden on their families over time.

**Methods/Patients:** The SF-36 was used for HQOL estimation in 15 ALS patients and the Family Burden Questionnaire for assessment of objective and subjective burden as well as adaptation strategies in 15 caregivers, with a 6 months interval. Demographic characteristics of all subjects and patients ALSFS were recorded.

**Results:** Patients were aged (66.4±11.4 years) with ALSFS 27.6±8.4. All SF-36 domains had low scores except for pain and no statistical difference was observed after 6 months. Moderate/severe burden was objectively recognized by 42.8% of caregivers in employment, 60% in social activities, 40% in financial and 64.3% in household management, although the subjective burden was lower in most domains. After 6 months the objective and subjective burden was almost constant. A significant negative correlation was observed between caregivers' subjective burden in social activities, employment, patient's physical function (r=-0.596, p=0.019) and social function (r=-.905, p=0.013) respectively. Caregivers' adaptation strategies changed over time in passivity (50% vs. 33.3%), ambivalence (66.7% vs. 60%), guilt (66.7% vs. 80%), resignation (16.7% vs. 26.7%), hopefulness (33.3% vs. 53.3%) and in reorientation of their life (33% vs. 26.7%). Hopefulness was significantly correlated with patients' social function (r=0.648, p=0.009).

**Conclusion:** ALS patients had low QOL. Families experienced a considerable

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amount of burden in all examined domains but also rather negative feelings which seem to relinquish over time and re-organize their life to support the patient.