

Abstract P134 Table 1 A comparison between Two-Legged (TLC) vs. One Legged (OLC) Constant Work Rate (CWR) exercise tests

Peak values	TLC-CWR	OLC-CWR	p
Duration, min	6.1 (3.7)	22.7 (15.0)	0.001
Power, W	68.5 (24.3)	34.3 (12.2)	<0.001
Work, kJ	26.7 (20.6)	53.4 (48.3)	0.02
VE Peak, L/min	70.0 (23.0)	61.6 (28.1)	0.03
HR, beats/min	118 (20)	108 (20)	0.04
Borg Score, Dyspnoea *	6 (2)	5 (3)	0.13
Borg Score, Leg Effort *	15(3)	17 (4)	0.02
SpO ₂ %	87 (7)	89 (6)	0.03

Mean SD, * = median IQR, SpO₂ = oxygen saturation by pulse oximetry.

Conclusion OLC at the same muscle-specific power compared to TLC enabled patients with IPF to achieve almost double the work in a simulated exercise training session. Future research should investigate OLC as a potentially efficacious aerobic training strategy for patients with IPF.

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P135 PHYSICAL ACTIVITY PROFILE OF PATIENTS WITH COPD DURING AN EXERCISE CLASS: WHAT ARE PATIENTS ACTUALLY DOING EARLY IN THE REHABILITATION COURSE?

¹T Maheswaran, ²L Houchen-Wolloff, ³SJ Singh. ¹Kettering General Hospital, Kettering, UK; ²Centre for Exercise and Rehabilitation Science (CERS), Leicester, UK; ³National Centre for Sports and Exercise Medicine (NCSEM), Loughborough, UK

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Introduction and objectives Pulmonary rehabilitation (PR) is recommended by the British Thoracic Society for patients that suffer from COPD; it is typically delivered in supervised sessions. Daily physical activity (PA) is often recorded as an outcome following PR, with variable results. National guidelines recommend that older adults should accumulate 150 min of moderate intensity activity in bouts of 10 min or more. We wanted to objectively measure the amount and intensity of PA, which patients actually accumulate during 1 PR session. This is the first study to profile PA during a PR exercise class in this way and could be useful for home training and general PA advice.

Methods We conducted a prospective study on patients diagnosed with COPD that were enrolled for PR at Glenfield Hospital, Leicester. 12 PR sessions include walking [85% speed derived from the incremental shuttle walk test (ISWT)], leg/arm bike, and resistance training. We placed Sense-Wear™ monitors (SWM) on the patients' arm during session 2 only. Analysis took place on Innerview™ computer software.

Results The patient cohort consisted of 20 patients: 60% female, mean age of 70.1 years (SD = 8.3 years), BMI 28.6 (SD 7.9), FEV₁/FVC ratio 60.8 (SD 17.3). 90% of the patients were either smokers or ex-smokers. The baseline ISWT of the group was 199.5 (SD 145.0) metres.

Table 1 shows that in our cohort, patients were exercising in the 0–1.5 METs range for 52% of the time (sedentary activity),

1.5–3 METs – 31% of the time (light activity) and for 17% of the time, they were exercising above 3 METs (moderate activity).

Abstract P135 Table 1

	Mean	Std. Deviation
On Body Time (mins)	42.3	7.4
Total Energy Expenditure (cals)	96.0	30.1
Steps	653.8	539.1
Average METS	1.9	0.4
–1.5 MET time (mins)	22.3	9.0
1.5–3 MET time (mins)	12.9	6.6
>3 MET time (mins)	7.1	5.9

Conclusion The results highlight that, early in the PR programme COPD patients were not achieving 10 min of moderate intensity activity during 1 PR session, as recommended in national guidance. However, documented inaccuracies of the SWM, for instance at slow speeds of walking and when the arm is fixed may account for these results. Future work should aim to discover if the time spent above 3 METs increases later in the programme. In addition, we could use the PA profile of each patient to tailor home and class training progression.

P136 DO STRUCTURED EXERCISE CLASSES FOR INPATIENTS WITH COPD INCREASE COMMUNITY PULMONARY REHABILITATION (PR) REFERRAL AND COMPLETION RATES?

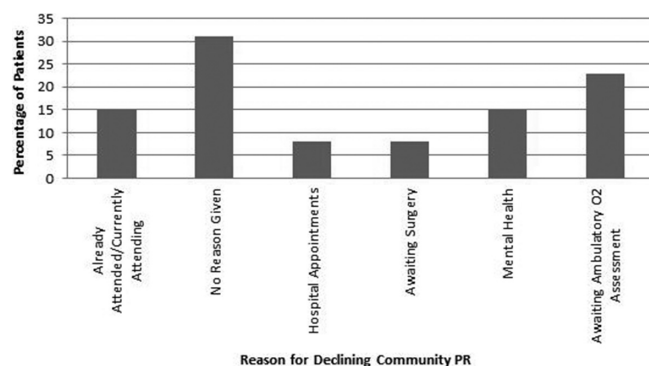
TC Avent, RC Colclough, RG Edgar, C Owen, KH Swindells, S Gompertz. *Queen Elizabeth Hospital Birmingham, University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK*

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Introduction NICE recommends community PR as an essential component of chronic obstructive pulmonary disease (COPD) management,¹ although nationally mean uptake is only 15%.² PR has been proven to improve quality of life and to be cost effective.¹ Our team routinely assess and refer COPD inpatients to PR, however, many decline referral. We piloted an inpatient exercise class with the objective of increasing referrals to PR and explored the reasons patients declined referral.

Methods Patients admitted with an acute exacerbation of COPD (June–November 2014) were given the opportunity to attend a Physiotherapy-led exercise class twice weekly. Baseline referral and completion rates to PR were calculated over two separate months during 2013–2014 and comparisons made with rates for the class attendees.

Results Baseline referral rate to PR was calculated at 25%. 50 patients were offered in-patient exercise during the study; 30 agreed (60%). PR referral rate for patients who attended the inpatient class was 57% compared with 40% of those who did not. Baseline PR completion rate was 15%. In those exposed to in-patient exercise, completion rose to 18%. In the group declining inpatient exercise only 13% completed PR. The reasons for declining subsequent referral to PR are outlined in Figure 1.



Abstract P136 Figure 1 Reasons why patients who attended the inpatient exercise class declined subsequent referral to community PR

Discussion Whilst not achieving statistical significance the referral rate to PR was higher amongst patients exposed to an inpatient exercise class, suggesting an effect on the initial uptake to PR may be improved with this intervention. Completion rates of PR were similar but sample size was insufficient to reliably detect this and it is acknowledged this was a small preliminary study. As an improvement in referral rate to PR was observed the feasibility of providing a routine exercise class warrants further investigation in a larger cohort. Further investigation is also required into why many patients decline PR referral and find it difficult to express reasons why.

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P137 'I REALLY LIVE FOR COMING HERE'. THE EFFECT OF A LONG-TERM SINGING GROUP ON CONTROL OF BREATHLESSNESS, SOCIAL EMPOWERMENT AND PSYCHOLOGICAL WELLBEING OF PATIENTS WITH RESPIRATORY DISEASE: A QUALITATIVE STUDY

¹R Thomas, ¹H Williams, ²M Stern. ¹University College London Medical School, London, UK; ²Department of Respiratory Medicine, Whittington Health, London, UK

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Introduction Community singing programs may improve quality of life for breathless people with long-term respiratory disease but there has been limited formal exploration of its social and psychological importance. This qualitative study aimed to investigate the impact of a long-term weekly singing group on empowerment, breathlessness, psychological wellbeing and social engagement of respiratory patients at an inner city London hospital.

Methods Patients attending a weekly, 1-hour singing group led by a music therapist and open to all patients with respiratory disease were recruited. Demographic, disease severity and self reported health care resource utilisation data were collected from those who consented to participate. Semi-structured interviews (Figure 1), were used to collect qualitative data which were analysed using grounded theory methodology.

Interview Schedule:

1. How would you describe your experience of joining the singing group?
2. What is the best thing about it?
3. Is there anything which challenges you?
4. How has the group affected you in terms of your physical and mental health?
5. Is there anything which you can do now which you found difficult before you started singing?
6. How has the group affected your social life?
7. What effect, if any, has the group made on your breathlessness?
8. Would you recommend the group to other respiratory patients?

Abstract P137 Figure 1

Results 16 patients (4M:12F, mean (range) age 72.6 (50–92) years) were interviewed. Diagnoses included COPD (11/16), asthma (2/16), bronchiectasis (2/16) and fibrosis (1/16) with mean (\pm SD, range) FEV1 1.31(\pm 0.54, 0.69–2.58,) litres, FEV1 54% predicted (\pm 22.01 range 26% - 96%). All were non-smokers (ex-smokers 12/16); 12/16 (75%) had previously attended pulmonary rehabilitation. 10/16 lived alone and 8/16 had a history of mental health comorbidity requiring treatment. Duration of singing group attendance (mean \pm SD) was 15.3 \pm 6.5 months. Four themes were identified from the qualitative analysis of the semi-structured interviews: 1. 'Control of Symptoms', 2. 'Community and Friendship', 3. 'Psychological Benefits', 4. 'Mastery of Illness'. The singing group improved breathlessness symptoms, enabled access to further sources of support and formed new friendships. Self reported primary care (GP) visits were (non-significantly) fewer in the year following commencement of singing. There was no difference in hospital admissions in the year after starting singing compared to the year before.

Conclusion The singing group had a profound impact on this group of patients with moderate chronic respiratory disease, a high prevalence of anxiety and depression and social isolation. The dominant effects were improving mood, providing a sense of mastery (control) over breathing to better cope with breathlessness, and tackling social isolation. These findings should help to inform commissioners of the value of singing groups as an effective, low-cost, non-pharmacological long-term therapy for patients with chronic respiratory disease.

P138 EARLY VS DELAYED REHABILITATION: A RANDOMISED CONTROLLED TRIAL

¹O Revitt, ¹S Ward, ¹MD Morgan, ¹SJ Singh, ²SJ Singh. ¹Centre for Exercise and Rehabilitation Science, Pulmonary Rehabilitation Department, University Hospitals of Leicester NHS Trust, Leicester, UK; ²School of Sport, Exercise and Health Sciences, Loughborough University, Loughborough, UK

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Introduction Providing outpatient Pulmonary Rehabilitation (PR) following hospitalisation for an acute exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD) has been found to improve exercise capacity, quality of life and a reduction in unplanned hospital admissions and mortality (Puhan, 2011). These positive effects, although studied in the short term, have led to national and international guidelines supporting the provision of post exacerbation PR (PEPR). However, uptake is poor with less than 10% of hospital discharges for AECOPD completing PEPR (Jones, 2014).