with their condition. Patients thought telling others about improved well-being and that there was much to gain from PR and nothing to lose would encourage others to participate. This new information could be used to stimulate patient engagement.

Abstract P76 Table 1 Results of thematic content analysis

Question 1: What were the most useful aspects of the course?

Main Theme	Example
1. Exercise and Improvements in Fitness	"The use of the weights. Better breathing, walking"
2. Motivation to exercise	"Encouragement to exercise especially walking more"
3. Learning and gaining information through the Education sessions. Gaining coping skills.	"Learning about lung disease, how to cope with it. Getting information which I should have been given years ago. Also knowing what other options there are."
4. Increasing confidence to self-manage.	"Giving me confidence to deal with the problem."
5. Importance of the Role of Healthcare Professionals	"Having someone there to encourage you to push your limits while still feeling safe."
6. Meeting other patients with similar conditions	"Meeting people with the same condition and realising how lucky I am and enjoying their company."

Question 2: Do you have a comment that we could use for promotion of the program which would encourage other patients to participate?

Main Theme and Sub Themes	Example
1. Wellbeing	I. "The course is very beneficial in many ways with breathing, walking, strength and education talks and it helps you to cope with your illness."
II. Coping with condition	"It is well worth doing as it has helped me very much with my life."
III. Meeting similar others	II. "It is inspiring to meet people with similar problems."
IV. Increase in Confidence	III. "Increased my confidence in walking +being more active."
V. Improved fitness	IV. "The course has encouraged me to be more active and progress on to the next level to improve my fitness."
2. Just do it, nothing to lose	"If you get the chance to take part in this course – 'go for it' it can only do good."

P77 SHUTTLE WALK TESTS: ARE THEY JUST AN OUTCOME MEASURE?

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Introduction Exercise tests are a keystone in assessing patients for Pulmonary Rehabilitation (PR). Behavioural research has suggested that performing an outcome measure may influence the outcome.¹ This has not been explored in respiratory disease in relation to performing an exercise test. Performing an exercise tests could improve confidence and alter subsequent exercise behaviour.

Aim To assess if completing a single incremental shuttle walk test (ISWT) increases patients' confidence in walking at home; managing breathlessness, or completing a shuttle walk test.

Methods Patients attending a PR assessment were asked to score their confidence levels according to the above criteria prior to their first ISWT, and then again following their 1 st ISWT. Patients answered the following questions before and after completing an ISWT with regards to their confidence in the following conditions: 1)Walking at home(Q1), 2)Managing breathlessness(Q2), and 3)Completing the ISWT(Q3). All questions were graded on a VAS scale of 0–10.

Results 90 patients (Mean age- 68.51 years; 48 Males; FEV1- 1.46 L; MRC median- 3) with respiratory disease answered the questions. There were statistically significant differences in confidence pre and post ISWT in all 3 questions (p=0.00). Pre-ISWT the values were (Q1) 5.74, (Q2) 6.25, (Q3) 7.07, the mean changes were: (Q1) +1.51; (Q2) +0.92; (Q3) +1.13 points. No significant changes in distance covered in the second ISWT were noted (21.2 m). There was no correlation between the change in confidence and change in distance covered between the two tests (r^2 = (Q1) 0.001, (Q2) 0.003, (Q3) 2.50, $p \geq 0.05$)

Conclusion Performing the ISWT increased patients' perceived confidence levels to manage their breathlessness and walking at home. This may have implications when designing clinical trials particularly in the control group where the performance of an ISWT may alter exercise behaviours. Further research is required to investigate the effects of completing outcome measures in clinical trials.

REFERENCE

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P78 CARDIOVASCULAR AND MUSCULOSKELETAL PHENOTYPES AND THE CLINICAL OUTCOMES IN COPD: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Systematic reviews examining the relationship between cardiovascular and musculoskeletal phenotypes and relevant clinical outcomes in chronic obstructive pulmonary disease (COPD) are currently lacking. We have systematically summarised and examined the predictive value of selected phenotypes that could be utilised in clinical practice. We identified 61 cohort studies with longitudinal data collection. Meta-analysis indicated that the 6 min walking distance (6 MWD; HR 0.83, 95% CI 0.79 to 0.87), resting heart rate (HR 1.09, 95% CI 1.02 to 1.15), C-reactive protein (HR 1.24, 95% CI 1.08 to 1.40), fibrinogen (HR 4.18, 95% CI 1.13 to 7.22) and tumour necrosis factor-alpha (HR 0.91, 95% CI 0.82 to 1.00) were independent predictors of clinical outcomes in stable COPD patients, after adjusting for sex, age, body mass index and smoking status. Very few studies examined the association between musculoskeletal phenotypes such as the short physical performance battery, quadriceps maximum voluntary contraction, and sniff nasal inspiratory pressure and clinical outcomes in COPD. With the limited adoption of the 6 MWD in clinical practice there is a need for faster and simpler tests to identify COPD patients at an increased risk for adverse events in an early stage of disease.

Update in paediatric lung disease

P79 CHILDREN WITH COMPLEX CONGENITAL HEART DISEASE: WHO NEEDS A PRE-FLIGHT HYPOXIC CHALLENGE TEST?

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Introduction Commercial airplanes fly with an equivalent cabin FiO_2 of 0.15 leading to reduced oxygen saturation (SpO_2) in passengers. Although guidelines exist, the evidence-base for recommending supplemental O_2 when flying in children with complex congenital heart disease (CHD) is practically non-existent. We conducted hypoxic challenge tests (HCT) to determine which children need a pre-flight assessment.

Methods Children <16 years with complex CHD were recruited; exclusions were $\text{SpO}_2 < 75\%$; pulmonary hypertension; oxygen requirement; or concomitant respiratory disease. Children had a standard HCT in a sealed body plethysmograph with FiO_2 of 0.15. We measured SpO_2 , pulse rate, transcutaneous CO_2 (PtcCO_2), corrected QT interval (QTc), and total Hb by co-oximetry (SpHb). Supplemental O_2 was given (which meant a 'failed' test) if (1) children with baseline $\text{SpO}_2 95\% - 100\%$ desaturated to 85%, (2) or baseline $\text{SpO}_2 85\% - 94\%$ desaturated to 15% of their baseline; (3) or baseline $\text{SpO}_2 75\% - 84\%$ desaturated to 70%.

Results There were 68 children, mean age 3.3 years (range 10 weeks to 14.5 years); 53% were boys. Grouping by normal ($\geq 95\%$) vs abnormal baseline $\text{SpO}_2 (75\% - 94\%)$, both groups had a significant fall in SpO_2 ($p < 0.0001$). 3/38 (8%) children failed with normal baseline SpO_2 vs 5/32 (16%) with abnormal baseline (non-significant difference). In terms of cardiac status, both groups had a significant fall in SpO_2 ($p < 0.0001$); however in those with no residual for potential R-L shunt 0/27 failed vs those with residual potential R-L shunt or who had not undergone repair or who had palliative surgery in whom 8/41 (20%) failed ($p < 0.02$). PtcCO_2 did not change significantly (i.e., no-one hyperventilated to compensate for hypoxia); pulse rate and QTc were not different between groups, and unaffected by the hypoxic state.

Conclusions This is the first evidence to help inform which children with CHD need a pre-flight HCT. We suggest all children with residual potential R-L shunt or who have not undergone repair or who have only had palliative surgery should be tested (as 20% are expected to need supplemental O_2), whereas those with no potential for R-L shunt need not be. Baseline SpO_2 does not help predict who will need supplemental O_2 when flying.

P80 ASSESSMENT OF ASSOCIATION BETWEEN DURATION OF OXYGEN THERAPY IN CHILDREN WITH CHRONIC LUNG DISEASE OF PREMATURITY (CLDP) AND MANAGEMENT OF PDA

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Background The presence of hemodynamically significant Patent Ductus arteriosus (PDA) is associated with the development and severity of chronic lung disease of prematurity

(CLDP). Pulmonary hypertension (PHTN) is also associated with CLDP, may precede and contribute to its development and severity. We explored the relationship between the flow rate as well as the duration of home oxygen therapy (Home O_2) (surrogate for severity of CLDP) in children with CLDP and interplay between the presence or absence of PDA, mode of managing PDA as well as PHTN.

Setting Tertiary CLDP service.

Methods Retrospective observational study All infants (median gestational age 26 weeks, range 23 to 35), born between 2009 and 2016, were included ($n=172$; 96 males). We excluded data for infants where there were incomplete records for ECHO or loss of follow-up due to management of further care in other centres. The date oxygen was discontinued by following a structured weaning protocol is prospectively recorded to calculate the length of home oxygen therapy. The presence or absence of PDA and if present whether this was managed medically or surgically as well as the presence or absence of PHTN (assessed by echocardiography) was recorded.

Results

Abstract P80 Table 1

		Number of babies (%)	Mean duration Home O_2 in days ($\pm$ sd)	Median oxygen flow rate in litres per minute (IQR)
PDA	Present	112	180 ($\pm$ 117)	0.3 (0.2–0.5)
	Not present	43	189 ($\pm$ 150)	0.3 (0.2–0.5)
	Medically managed	39	191 ($\pm$ 107)	0.3 (0.2–0.5)
	Surgically managed	13	168 ($\pm$ 63)	0.3 (0.2–0.5)
	Pulmonary hypertension	19	218 ($\pm$ 186)	0.3 (0.2–0.5)
	Absent	124	176 ($\pm$ 101)	0.3 (0.2–0.5)

* no significant difference

Conclusions In our cohort, there was no significant difference between the duration of home oxygen therapy and the presence or absence of PDA and if present whether it was medically or surgically managed. Similarly, there was no significant difference between duration of home in presence or absence of pulmonary hypertension.

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P81 WHAT IS THE IDEAL TARGET PRETERM POPULATION THAT MIGHT BENEFIT FROM THE EXPENSIVE PALIVIZUMAB PROPHYLAXIS?

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