

Clinical delivery of pulmonary rehabilitation

P115 EVIDENCE OF POST-CODE LOTTERY IN THE AVAILABILITY OF PULMONARY REHABILITATION (PR) IN THE EAST OF ENGLAND (EOE)

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10.1136/thoraxjnl-2014-206260.256

Introduction and objectives Pulmonary Rehabilitation (PR) should be made available to all suitable people with COPD and various other chronic respiratory conditions.¹ Recommendations have been made on the quality of the provision and commissioning of PR. Indicative benchmark rates have been developed² to support commissioners determine local need. We compared the local availability of PR across the EoE.

Methods A regional PR group was formed to promote best practice, offer peer support and enable improvements through the collection of meaningful regional data. Data was collected from 17/18 (94%) providers on the number of PR places commissioned per CCG(s). In 13 providers PR was commissioned. In 4 providers PR was provided under Payment by Result and in these maximum capacity was calculated using a 1:8 staff:patient ratio. Comparison was made between availability and indicative benchmark rates in each locality. Where providers covered more than one CCG, data was aggregated for analysis purposes.

Results In the EoE the average number of people expected to benefit from PR/year is 11,748 (192 per 100,000 population/year).³ However, our data showed a maximum of 6,165 PR places were available (101 per 100,000/year). Local provision varied 2.8-fold across the CCGs, ranging between 60 per 100,000/year and 171 per 100,000/year. This was not explained by local variation based on local need as actual provision/local target varied 3.1-fold [27.2%-85.4%].

Conclusions There was evidence of post-code lottery in the provision of PR with a 2.8-fold variation between localities. There was also an overall insufficient availability throughout the region (average 52.5% of the proposed target). Provision compared to local targets varied more than 3-fold. Provision was less than 50% of local target in 50% of localities. This data will be shared with local commissioners and providers, so that this deficiency can be addressed.

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P116 DIFFERENCES IN PATIENT OUTCOMES BETWEEN A 6, 7 AND 8 WEEK PULMONARY REHABILITATION PROGRAMME

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10.1136/thoraxjnl-2014-206260.257

Background NICE (2010) recommend that pulmonary rehabilitation programmes run between 6–12 weeks in duration. To date, there is no consensus in the research to the optimal duration of a programme.

Objectives To investigate changes in patient outcomes over time for 6, 7 and 8 week pulmonary rehabilitation programmes.

To investigate differences in patient outcomes between 6, 7 and 8 week pulmonary rehabilitation programmes in order to identify optimal duration.

Setting: Community based pulmonary rehabilitation programmes in the East of England.

Participants: In total 363 participants completed one of the three pulmonary rehabilitation programmes. Patients with a chronic respiratory condition showing a commitment to the pulmonary rehabilitation programme and had no contraindications to exercise were included.

Intervention: Pulmonary rehabilitation twice a week for 6, 7 or 8 weeks.

Main outcome measures: St Georges Respiratory Questionnaire (SGRQ), Clinical COPD Questionnaire (CCQ), Hospital Anxiety and Depression Score (HADS) and Incremental Shuttle Walk Test (ISWT).

Results The t-tests indicated a statistically significant improvement in patients' exercise capacity (measured by the ISWT) for all 3 programmes ($p < 0.001$). Patients attending the 8 week programme improved the most (increasing by 74.43 metres), followed by the 6 then 7 week programme (increasing by 57.24 and 48.96 metres respectively). The minimal clinically significant change for the ISWT is 47.5 metres so all the programmes improved by a clinically significant amount. When controlling for baseline ISWT scores the 8 week programme showed statistically significant improvements on post-rehabilitation ISWT scores above the 6 or 7 week programmes ($F_{(2,341)} = 6.72, p = 0.001$).

Abstract P116 Table 1 Means (SDs) and T-tests for all measures pre and post intervention for each programme

Measure	6 week pulmonary rehabilitation			7 week pulmonary rehabilitation			8 week pulmonary rehabilitation		
	Mean (SD)		t (df)	Mean (SD)		t (df)	Mean (SD)		t (df)
	Pre	Post		Pre	Post		Pre	Post	
SGRQ	55.44 (17.48)	54.27 (16.93)	1.17 (129)	50.96 (17.96)	49.93 (17.55)	0.80 (76)	54.54 (17.20)	53.24 (17.25)	1.36 (124)
ISWT	110.13 (79.47)	168.37 (86.39)	-14.20 (131)***	173.25 (107.29)	222.21 (114.09)	-7.45 (76)***	167.43 (123.90)	241.86 (134.46)	-15.12 (135)***
CCQ	2.87 (1.36)	2.75 (1.20)	1.27 (135)	2.69 (1.15)	2.60 (1.20)	1.18 (75)	2.94 (1.23)	2.66 (1.21)	3.39 (138)**
HADS Anxiety	6.17 (4.23)	6.13 (4.11)	0.14 (135)	5.78 (4.03)	5.60 (4.22)	0.63 (76)	5.70 (3.91)	5.76 (3.82)	-0.29 (138)
HADS Depression	7.04 (3.75)	6.62 (3.67)	1.75 (135)	6.72 (3.38)	6.86 (3.81)	-0.54 (75)	7.32 (3.77)	7.07 (3.31)	1.04 (138)

Conclusions Findings show that greatest improvements in terms of exercise capacity may be seen from 8 week pulmonary rehabilitation programmes, but that improvement for the ISWT can be obtained from 6, 7 or 8 week programmes.

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National Institute for Clinical Excellence. Commissioning a pulmonary rehabilitation service for patients with COPD. 2010. [http://www.nice.org.uk/usingguidance/commissioningguides/pulmonaryrehabilitationforserviceforpatientswithcopd/commissioning.jsp] Accessed 13/07/13

P117 PULMONARY REHABILITATION IN THE EAST OF ENGLAND – 2.5-FOLD VARIATION IN COMPLETION RATES

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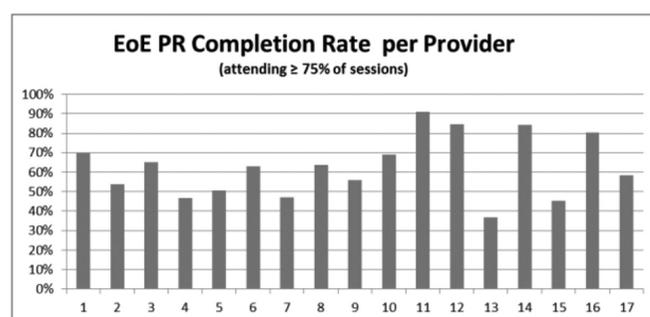
10.1136/thoraxjnl-2014-206260.258

Introduction and objectives Pulmonary Rehabilitation (PR) should be made available to all suitable people with COPD and various other chronic respiratory conditions.¹ An abundance of guidelines has been produced making recommendation on the quality of both the provision and commissioning of PR. Limited data is available on PR programme adherence rates and most study rates post COPD exacerbation. Recent IMPRESS Guidance suggested a target completion rate of 75% of offered sessions and stated the national average being less than 50%.² Our aim was to get an accurate regional perspective of completion rates of all PR service providers to use as a lever for improvement.

Methods Prior to 2013/14 a regional PR group was formed to promote best practice, offer peer support and enable improvements through the collection of meaningful regional data. A data set was agreed and defined and during 2013/14 quarterly data was collected from 17/18 (95%) providers across all CCGs. The number of PR starters and completers (attending a minimum of 75% of the offered sessions) was collected. Data from all providers was compared.

Results During 2013/14 4,737 patients started PR and 2935 patients attended at least 75% of the offered sessions. The average completion rate across the EoE was 62% with programmes varying more than 2.5-fold from 37% to 91%. 24% of providers had a completion rate of $\leq 50\%$, however another 24% had a completion rate of $\geq 75\%$.

Conclusions Completion rate varied widely with a 2.5-fold variation between the best and worst performers. 24% had a completion rate of $\leq 50\%$. The regional average of 62% was below the suggested target rate of 75%. The reasons for this variation are not known, but will be investigated by the EoE PR group.



Abstract P117 Figure 1

REFERENCES

- NICE. COPD: management of COPD in adults in primary and secondary care. 2010 [http://www.nice.org.uk/guidance/CG101]
- Impress (BTS and the primary care respiratory society – UK). Impress Guide to Pulmonary Rehabilitation. 2011. [www.impressresp.com/index.php?option=com_docam&task=doc_view&grid=41&Itemid=82] Accessed on 07/07/13

P118 QUANTITY AND QUALITY OF REFERRALS TO PULMONARY REHABILITATION FROM PRIMARY CARE FOLLOWING INCLUSION IN THE QUALITY AND OUTCOMES FRAMEWORK (QOF) IN WALES

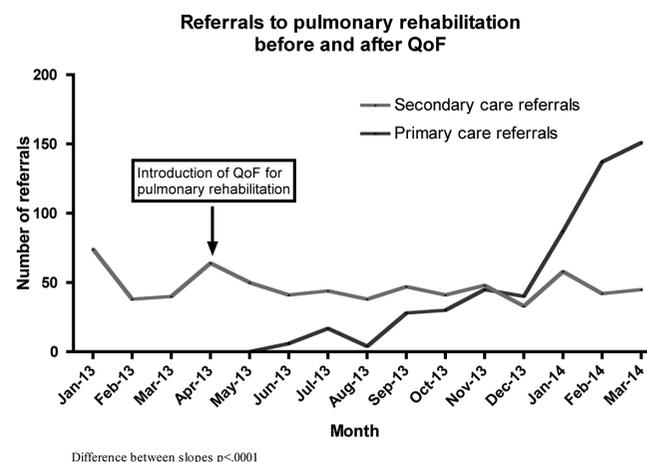
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10.1136/thoraxjnl-2014-206260.259

Introduction Referring suitable patients for Pulmonary Rehabilitation (PR) has formed part of the Quality and Outcomes Framework (QOF) reward for General Practitioners (GPs) in Wales since April 2013. Patients with Chronic Obstructive Pulmonary Disease (COPD) that have a Medical Research Council (MRC) dyspnoea score of 3 or above, or those with an MRC score of 2 and recently discharged from hospital for COPD are eligible. We sought to determine the impact of this change on the referral pattern to our PR programme, which traditionally had only accepted referrals from secondary care respiratory consultants.

Methods A standardised form was prospectively designed and distributed to enable primary care providers to refer suitable patients to the PR programme. Data on patient demographics, respiratory diagnosis, co-morbid conditions, MRC dyspnoea score, exacerbation frequency and current medication were collected. Referring GPs were also asked to provide recent spirometry values for patients that were referred. An assessment was made based on the information provided as to whether the patient could be listed immediately for pulmonary rehabilitation, whether further assessment was required, or whether the referral was inappropriate.

Results A sample of 250 GP referral forms out of a total of 545 were evaluated of which 51% of patients were male and the mean age was 69 years (range 31–90). 40.8% of GP referrals could be listed immediately for PR, 34.8% of referrals needed further assessment and 24.4% were inappropriate. 22.4% of all patients referred did not have COPD based on the spirometry results supplied. Compared with the baseline referral rate to PR from secondary care consultants, the rate of referral from GPs



Abstract P118 Figure 1 Referrals to pulmonary rehabilitation before and after QoF