WM QRS West Midlands Quality Review Service

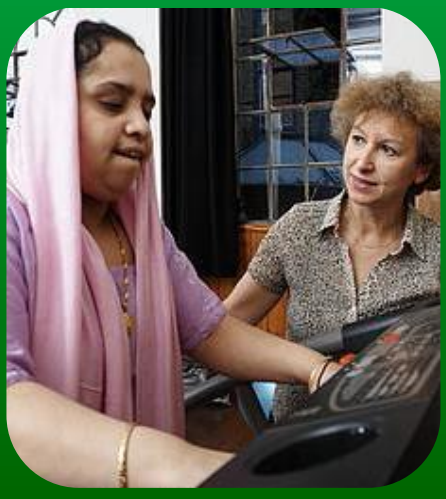
NHS

# Pulmonary Rehabilitation Services Peer Review Visit

## Birmingham Community Healthcare NHS Foundation Trust

## South Doc Services Ltd

Visit Date: 24th October 2018 Report Date: January 2019

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# INTRODUCTION

This report presents the findings of the review of pulmonary rehabilitation services provided by Birmingham Community Healthcare NHS Foundation Trust and South Doc Services Ltd that took place on 24th October 2018. The purpose of the visit was to review compliance with the following national pulmonary rehabilitation standards from the British Thoracic Society:

- British Thoracic Society Standards for Pulmonary Rehabilitation in Adults, MAY 2014 ISSN 2040-2023 BRITISH THORACIC SOCIETY REPORTS VOL. 6 NO. 2 2014.

The aim of the standards and the review programme is to help providers and commissioners of services to improve clinical outcomes and service users' and carers' experiences by improving the quality of services. The report also gives external assurance of the care, which can be used as part of organisations' Quality Accounts. For commissioners, the report gives assurance of the quality of services commissioned and identifies areas where developments may be needed.

The report reflects the situation and information available to the reviewers at the time of the visit. The text of this report identifies the main issues raised during the course of the visit. Any immediate risks identified will include the Providers proposals for actions to mitigate the risk, and WMQRS's response to these proposals. Appendix 1 lists the visiting team that reviewed the services at Birmingham Community Healthcare NHS Foundation Trust and South Doc Services Ltd. Appendix 2 contains the details of compliance with each of the standards and the percentage of standards met.

This report describes services provided or commissioned by the following organisations:

- Birmingham Community Healthcare NHS Foundation Trust (BCHC)
- South Doc Services Ltd (SDS)
- Birmingham and Solihull Clinical Commissioning Group

Most of the issues identified by quality reviews can be resolved by providers' and commissioners' own governance arrangements. Many can be tackled by the use of appropriate service improvement approaches; some require commissioner input. Individual organisations are responsible for taking action and monitoring this through their usual governance mechanisms. The lead commissioner for the service concerned is responsible for ensuring action plans are in place and monitoring their implementation, liaising, as appropriate, with other commissioners, including commissioners of primary care. The lead commissioner in relation to this report is Birmingham and Solihull Clinical Commissioning Group.

## ABOUT WEST MIDLANDS QUALITY REVIEW SERVICE

WMQRS is a collaborative venture between NHS organisations to help improve the quality of health services by developing evidence-based Quality Standards, carrying out developmental and supportive quality reviews (often through peer review visits), producing comparative information on the quality of services and providing development and learning for all involved.

Expected outcomes are better quality, safety and clinical outcomes, improved patient and carer experience, organisations with better information about the quality of clinical services, and organisations with more confidence and competence in reviewing the quality of clinical services. More detail about the work of WMQRS is available on www.wmqrs.nhs.uk

## ACKNOWLEDGMENTS

West Midlands Quality Review Service would like to thank the staff and service users and carers of Birmingham Community Healthcare NHS Foundation Trust and South Doc Services Ltd for their hard work in preparing for the review and for their kindness and helpfulness during the course of the visit. Thanks are also due to the visiting team and their employing organisations for the time and expertise they contributed to this review.

# PULMONARY REHABILITATION

## BACKGROUND

West Midlands Quality Review Service (WMQRS) was asked by NHS Birmingham and Solihull Clinical Commissioning Group to undertake a review of the pulmonary rehabilitation services provided by Birmingham Community Healthcare NHS Foundation Trust and South Doc Services Ltd.

The purpose of the review was to understand the quality of pulmonary rehabilitation services provided across Birmingham. It was agreed that the British Thoracic Society (BTS) Standards for Pulmonary Rehabilitation in Adults 2014 would be used for the review. Each provider completed a self-assessment prior to the review and was asked to provide evidence for each of the BTS standards for reviewers to consider on the day of the visit.

Pulmonary rehabilitation services delivered across Solihull were not included in this review.

**General Comments and Achievements**

This review observed a pulmonary rehabilitation session delivered in the gym at Panel Croft Village Care Home. Other sessions were provided at a community venue in Shard End. Pulmonary rehabilitation was accessible for patients who resided in the west and east of Birmingham.

Reviewers met with staff providing the service and spoke to patients who were attending the session. The session had been specifically arranged to accommodate the review and our thanks go to the patients and staff who had rearranged their commitments to attend the session and speak to the reviewing team.

The review team was impressed with the enthusiasm and honesty of the BCHC team. Staff were clearly committed and passionate about providing the best possible care for their patients, and were keen to use the review process to further improve the care for patients attending pulmonary rehabilitation programmes.

Leadership of the service had recently changed, and reviewers were told of many plans for the future, including providing additional sessions in which the Trust's 'well-being' team would talk to patients about access to other information, support and services. The leadership team were keen to develop and expand the service offered.

All the patients who met with the review team were enjoying the programme and were appreciative of the support and kindness shown to them by the staff.

Reviewers considered that the facilities and equipment in the gym at Panel Croft were very good.

**Good Practice**

1. Clinical support for the programme was very good. Staff had access to a respiratory multidisciplinary team if they needed more advice or wished to discuss patients who had become unwell after starting the programme, prior to them restarting. Patient group directives (PGDs) were also in place, and staff had competences for inhaler provision and the delivery of oxygen.
2. Patients who were resident in the Birmingham City Council area were eligible for free gym membership on completion of the programme. Patients were also given exercise resistant bands to help with home exercises.
3. Staff were proactive in ensuring that the multicultural and language needs of those attending were assessed and met. Reviewers were impressed with the range of languages in which pulmonary rehabilitation information was available. Staff would assess needs prior to the patient attending the first assessment, and interpreters were arranged to attend all the sessions with patients.

**Immediate Risks:** None

**Concerns**

1. **Individually prescribed and progressive aerobic exercise programmes**

   The programme provided was of concern for the following reasons: -

   a. The process of ensuring that all patients had an individually prescribed and progressive aerobic exercise programme was not yet in place.

   b. The '6-minute walk' test was used as an assessment and outcome measure, but records showed that patients were not being progressed until the second or third week of the programme. Reviewers considered that if patients undertook the 'shuttle walk' test (which is defined as the gold standard assessment) as part of their initial assessment, then it would provide information on walking speed and could be used to inform individualised patient exercise prescriptions and improve the level of outcome for the patient.

   c. Patients were observed stopping before becoming exerted, and would sit down or rush to complete all the exercises. Reviewers identified that staff were not 'pushing' patients hard enough to achieve all the

benefits from the pulmonary rehabilitation sessions. Reviewers considered that this could result in patients not changing their behaviour and not obtaining the full benefits of the programme.

d. From the evidence seen, two out of every three patients did not have their rate of perceived exertion (RPE) recorded, and although the documentation on the back sheet of the records was very clear and was colour coded (red, amber, green), it was not routinely completed.

e. Patients were given a home exercise diary, but progress was not routinely discussed with patients when attending the sessions, resulting in lost opportunities to support patients to progress to their full exercise potential.

2. **Data**

Access to data as required by the BTS standards for pulmonary rehabilitation services was not possible for ongoing assessment and review of the service provided. At the time of the visit reviewers were shown data for 2016-17. The service later confirmed that these data actually related to 2017-18, but they were unable to change the data headings. Reviewers were concerned that there was not clear, accurate and available data to support service analysis and development. Data were submitted to the Trust RiO® electronic patient record system, but reporting did not enable any real-time data to be extracted and the team did not have ongoing access to the numbers of patients referred by condition, or data on uptake or on numbers of patients who had completed the programme. Data submitted to the national COPD audit showed that for 2017 only 18 patients had completed a pulmonary rehabilitation programme provided by the Trust. The lead for the service was in discussion with the IT team as to whether access to data could be improved and resolved.

3. **Provision of pulmonary rehabilitation for patients with Interstitial Lung Disease (ILD)**

Limited rehabilitation education was provided for patients with ILD. The information seen by the reviewers indicated that a discussion with the referrer would also be required before a patient with ILD could be accepted. Reviewers were concerned about the low number of patients with ILD who were referred and then accepted, which could indicate inequity in access to pulmonary rehabilitation for patients who were functionally limited with ILD.

**Further Consideration**

1. From the evidence seen, the national service specification, agreed commissioned specification, standard operating procedure and recording forms were inconsistent and would benefit from review.
2. A risk assessment asset register for the equipment being used, including emergency equipment, was not yet in place.
3. From discussions with patients, some were not aware of the free gym membership. Some patients told reviewers that they thought they would need to pay for these future gym sessions.
4. Some of the exercise programme leaflets had been photocopied numerous times which had resulted in the information not being clearly visible.

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## SOUTH DOC SERVICES LTD

**General Comments and Achievements**

This review observed a pulmonary rehabilitation session delivered in the gym at West Heath Medical Centre. Other sessions were provided at two other centres in South Birmingham: Kings Norton and Harborne. South Doc Services also provided a Single Point of Access service for pulmonary rehabilitation across South Birmingham.

Reviewers met with staff providing the service, and spoke to patients who were attending the session. Staff were clearly committed to providing the best possible care for their patients.

All the patients who met with the review team were enjoying the programme and were appreciative of the support and kindness shown to them by the staff.

**Good Practice**

1. Reviewers were impressed that each session was also attended by an 'expert patient' who had completed a pulmonary rehabilitation programme. The expert patient who attended the session observed by the reviewers was clearly enthusiastic and was actively 'pushing' patients to exert themselves whilst exercising.
2. The process for supporting patients who became unwell during the sessions was very good. There was a clear infrastructure for providing emergency help, and the resuscitation bag was very well organised.
3. Patients with lung cancer were also accepted onto the pulmonary rehabilitation programme and were 'fast tracked' so that they did not have to wait to attend the start of the programme.
4. The database was very comprehensive and provided easy access to information for audit and reporting purposes.

**Immediate Risks[1]**

1. **Training, competence and knowledge**

   At the time of the visit the service was provided by two registered nurses and one person designated as a Tai Chi instructor. None of the staff providing the service was qualified as a respiratory specialist health care professional (Level 4 specialist exercise instructor for respiratory disease or equivalent training. This qualification is required for the leader of a pulmonary rehabilitation programme). One nurse had completed training as a Level 3 exercise referral instructor, but had had no further training in delivering pulmonary rehabilitation to the patient population.

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**[1] Summary of responses received following the review visit**

**SDS Response:** 6.11.18 A plan of actions outlining actions to mitigate the immediate risk identified at the visit was received which included discussion with other providers of pulmonary rehabilitation services to provide suitable qualitied support to the SDS programme, recruitment of a suitably qualified pulmonary rehabilitation lead. Review of patient assessment process and use of home exercise diaries. Ongoing discussion with CCG about the delivery of the programme.
14.12.18: Letter received ' …on the basis on the new service model,… SDS has made the decision not to extend our participation in the programme under the current format…'

**CCG Response:** 17.12.18 Service suspended at SDS. CCG working with other providers to ensure patients have continued access to pulmonary rehabilitation

**WMQRS Response to initial action plan:** 6.11.18 We note the plan does not yet address the following points from the immediate risk letter:

- Patients who met with the reviewers said that they would just stop exercising when they had enough. Reviewers observed there were few patients who were being supported to achieve a state of breathlessness (as would be expected to optimise the benefits of the programme) unless they were self-motivated to do this; or unless the expert patient who attended the sessions was encouraging them to do so.
- Reviewers were told by staff that the first session was being used as the baseline/prescribing assessment session and the twelfth session was being used as the completion assessment session. This resulted in patients only completing ten physical exercise sessions.

We note some of the actions are 'require level 4 input'. However, there may be interim actions that could be instigated regarding the above points.

Staff observed during the visit did not appear to have the level of knowledge and understanding expected for the delivery of a pulmonary rehabilitation service; for example, a reviewer overheard one member of staff incorrectly describe to a patient the mode of action of a drug. Staff had limited awareness of the data they were collecting and the meaning of the values they were recording; for example, they did not fully understand the use of the target exercise intensity to 60% $VO_2$ peak in a preliminary progressive maximal exercise test, which was included as part of the agreed service specification.

Staff did not support patients in undertaking an aerobic exercise programme that was individually prescribed and progressive. None of the patients had an individualised exercise prescription/programme to follow; they were just left to choose the exercises they wanted to do. Patients who met with the reviewers said that they would just stop exercising when they had had enough. Reviewers observed that there were few patients who were being supported to achieve a state of breathlessness (as would be expected for optimising the benefits of the programme), except for those who were self-motivated to do so and those who were encouraged to do so by the expert patient who attended the sessions.

Patients' home exercise programmes were not routinely monitored at the clinic sessions. Staff told the reviewers that this was done randomly. Staff were not ensuring that patients were encouraged to maintain their exercise performance in their home environment.

2. **Incomplete rehabilitation programme**

The length of the pulmonary rehabilitation programme did not comply with national best practice, which resulted in patients not receiving the recommended level of pulmonary rehabilitation.

The British Thoracic Society 'Quality Standards for Pulmonary Rehabilitation in Adults' 2014 clearly state (QS4) that *"The benefits of pulmonary rehabilitation have been established for programmes with duration of at least 6 weeks, which include a minimum of twice weekly supervised sessions. The assessment sessions at baseline and on completion should be in addition to this".*

Reviewers were told by staff that the first session was being used as the baseline/prescribing assessment session and the twelfth session as the completion assessment session. This resulted in patients only completing ten physical exercise sessions. Reviewers were clear that this, when coupled with the lack of encouragement for patients to reach breathlessness or exertion, meant that patients were not receiving the full benefit (and therefore potential improvement) from the pulmonary rehabilitation programme.

**Concerns**

1. **Assessment and education programme**

The programme delivered was also of concern for the following reasons: -

a. Rather than the whole assessment being facilitated by a practitioner, part of the assessment process consisted of a questionnaire completed by the patient on their own.

b. The education programme seen by the reviewers did not include the detail expected for a pulmonary rehabilitation programme, the session content appeared brief, and the observed session on inhalers did not appear to follow the written plan for inhaler education. One practitioner was also observed delivering a 1:1 session in addition to the main educational session, which would have reduced the amount of time the patient had to complete their exercise programme for that session.

2. **Data**

Data for 2017/18 showed that 370 patients were referred to the service but only 108 completed the programme. Reviewers were concerned about the high number of patients who did not complete the programme and wondered whether staff were being proactive enough in supporting patients to understand the benefits of pulmonary rehabilitation and to complete the sessions.

3. **Low completion rates**

   Reviewers were also concerned that the data on the number of patients completing the programme may not be accurate if it was based on a six week period that included assessment sessions and only five weeks of exercise attendances.

**Further Consideration**

1. From the service specification, the programme was commissioned for programme participants only. However, on the day of the visit only four of the patients who were attending were on the programme, with the remaining six attendees being patients who would be classed as being at 'maintenance' level. Reviewers were told that patients who had completed the pulmonary rehabilitation programme would only attend if there was capacity. It was not clear from discussions with staff that they had specific training to provide a maintenance level pulmonary rehabilitation service.
2. Although the service could provide pulmonary rehabilitation for patients with Interstitial Lung Disease (ILD) and acute exacerbations of COPD (AECOPD), in practice few referrals were received for patients with ILD, and the local acute Trusts did not refer patients following an acute admission with AECOPD.
3. Patients were also given a DVD entitled *Move on Up*, which showed how they could exercise at home. Reviewers considered that the team may wish to review this process to ensure that patients receive information that is in a suitable format, as one patient who spoke to the reviewers had received a DVD but did not have a DVD player.

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# APPENDIX 1 MEMBERSHIP OF VISITING TEAM

| Visiting Team | | |
|---|---|---|
| Dr Martin Allen | Consultant Physician - Respiratory Medicine | University Hospitals of North Midlands NHS Trust |
| Bob Colclough | User Representative | |
| Jane Newport | Clinical Lead Respiratory (Physiotherapist working in Matron role) | Worcestershire Acute Hospitals NHS Trust |
| Kelly Redden-Rowley | Clinical Operational Lead, Service Manager for Community Respiratory and Heart Failure Team | Sandwell and West Birmingham Hospitals NHS Trust |

| WMQRS Team | | |
|---|---|---|
| Tim Cooper | Director | West Midlands Quality Review Service |
| Sarah Broomhead | Assistant Director | West Midlands Quality Review Service |

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# APPENDIX 2 COMPLIANCE WITH THE BRITISH THORACIC SOCIETY STANDARDS FOR PULMONARY REHABILITATION

Analyses of percentage compliance with the British Thoracic Society Standards for Pulmonary Rehabilitation in Adults (MAY 2014 ISSN 2040-2023 BRITISH THORACIC SOCIETY REPORTS VOL. 6 NO. 2 2014) should be viewed with caution as they give the same weight to each of the Quality Statements. Percentage compliance also takes no account of 'working towards' a particular Quality Standard. Reviewers often comment that it is better to have a 'No, but', where there is real commitment to achieving a particular standard, than a 'Yes, but' where a 'box has been ticked' but the commitment to implementation is lacking. With these caveats, table 1 summarises the percentage compliance for each of the services reviewed.

**Table 1 - Percentage of Quality Standards met**

Details of compliance with individual BTS Standards can be found below. Further detail about the British Thoracic Society Standards for Pulmonary Rehabilitation in Adults can be found in the full document www.brit-thoracic.org.uk

| Service | Number of Applicable QS | Number of QS Met | % met |
|---|---|---|---|
| Birmingham Community Healthcare NHS Foundation Trust | 10 | 5 | 50 |
| South Doc Services Ltd | 10 | 5 | 50 |
| **Health Economy** | **20** | **10** | **50** |

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# PULMONARY REHABILITATION IN ADULTS - BIRMINGHAM COMMUNITY HEALTHCARE NHS FOUNDATION TRUST

## QUALITY STATEMENT 1:

**Referral for pulmonary rehabilitation:**

a. **People with COPD and self-reported exercise limitation (MRC dyspnoea 3-5) are offered pulmonary rehabilitation.**

b. **If accepted, people referred for pulmonary rehabilitation are enrolled to commence within 3 months of receipt of referral**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local pulmonary rehabilitation referral pathways for both primary and secondary care providers.<br>• Evidence that written information about availability and content of local pulmonary rehabilitation programmes is disseminated to primary and secondary care providers.<br>• Provision of clear eligibility criteria to primary and secondary care providers.<br>• Evidence that patient reported exercise limitation (MRC dyspnoea scale) is recorded annually.<br>• Evidence that pulmonary rehabilitation programmes accept referral of patients who have previously undertaken pulmonary rehabilitation.<br>**Process:**<br>• Proportion of eligible patients offered pulmonary rehabilitation.<br>• Proportion of accepted patients enrolled within 3 months of receipt of referral.<br>**Numerator 1**<br>• Number of eligible patients offered pulmonary rehabilitation.<br>**Denominator 1**<br>• Number of eligible patients.<br>**Numerator 2**<br>• Number of accepted patients commencing within 3 months of receipt of referral.<br>**Denominator 2**<br>• Number of patients referred for pulmonary rehabilitation who are accepted for treatment.<br>**Numerator 3**<br>• Number of pulmonary rehabilitation programmes that accept referrals of patients who have previously attended pulmonary rehabilitation.<br>**Denominator 3**<br>• Number of pulmonary rehabilitation programmes. | N | a. People with COPD and self-reported exercise limitation (MRC dyspnoea 3-5) were offered pulmonary rehabilitation (PR).<br>Written information about the programme was available.<br>Referrals were received from GPs and the local acute Trusts. The COPD discharge bundle was in place and included as part of the referral information sent from the acute Trusts.<br>Patients had their MRC dyspnoea scale recorded at each visit.<br>b. Data were not available for reviewers to assess compliance with the Quality Standard. The team were unclear about the numbers of patients who were referred and the number who did or did not complete the programme. The team submitted data onto the Trust RiO® electronic patient record system, but the system did not enable appropriate information to be retrieved for monitoring as defined by the QS.<br>From the evidence seen, the national service specification, agreed commissioned specification, standard operating procedure and recording forms were inconsistent. |

## QUALITY STATEMENT 2:

**Pulmonary rehabilitation programmes accept and enrol patients with functional limitation due to other chronic respiratory diseases (for example bronchiectasis, ILD and asthma) or COPD MRC dyspnoea 2 if referred.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence that pulmonary rehabilitation is available locally and offered to people who are functionally limited by chronic respiratory diseases other than COPD (and people with COPD MRC dyspnoea 2) if referred by their primary or secondary healthcare teams.<br>**Process:**<br>• Proportion of pulmonary rehabilitation programmes that accept referrals for people with chronic respiratory diseases other than COPD (and people with COPD MRC dyspnoea 2).<br>**Numerator**<br>• Number of pulmonary rehabilitation programmes accepting referrals for patients with chronic respiratory diseases other than COPD (and people with COPD MRC dyspnoea 2).<br>**Denominator**<br>• Number of pulmonary rehabilitation programmes nationally | Y | Data were not available to the reviewers at the time of the visit. However, from discussions with staff it was thought that about 95% of patients attending the sessions had COPD.<br>Patients referred with asthma and bronchiectasis were accepted.<br>Patients with Interstitial Lung Disease (ILD) were accepted following discussion with the referring service, although staff who met with the reviewers commented that the number of referrals of patients with ILD was low considering the demographics of the health economy. The information/flyer about the PR service stated that there was limited education available for those patients with ILD, which may be a contributing factor. Reviewers considered that the team may wish to review the information, including the abbreviations and terminology used, which was not particularly patient friendly. |

## QUALITY STATEMENT 3:

**Referral for pulmonary rehabilitation after hospitalisation for acute exacerbations of COPD:**

**a. People admitted to hospital with acute exacerbations of COPD (AECOPD) are referred for pulmonary rehabilitation at discharge.**

**b. People referred for pulmonary rehabilitation following admission with AECOPD are enrolled within one month of leaving hospital.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local pathways for offering and referring people who have been hospitalised with AECOPD to outpatient pulmonary rehabilitation.<br>• Evidence that pulmonary rehabilitation programmes can enrol people referred following hospitalisation for AECOPD within one month of leaving hospital.<br>**Process:**<br>• Proportion of eligible people discharged with AECOPD who are offered pulmonary rehabilitation.<br>• Number of people who accept referral who are enrolled within one month of discharge from hospital.<br>**Numerator 1**<br>• Number of people admitted with AECOPD who are offered pulmonary rehabilitation on discharge.<br>**Denominator 1**<br>• Number of people with a primary discharge diagnosis of AECOPD.<br>**Numerator 2**<br>• Number of people admitted with AECOPD who accept a referral for pulmonary rehabilitation post-discharge who are enrolled within one month of leaving hospital.<br>**Denominator 2**<br>• Number of people who accept referral for pulmonary rehabilitation after discharge from hospital. | Y | Patients were accepted following an acute exacerbation of COPD (AECOPD), and COPD discharge bundles were in place.<br>Referrals were also accepted from community teams and GPs. |

## QUALITY STATEMENT 4:

**Pulmonary rehabilitation programmes are of at least 6 weeks duration and include a minimum of twice-weekly supervised sessions.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence that pulmonary rehabilitation programmes are of at least 6 weeks duration and include at least twice weekly supervised sessions. This does not include assessment sessions, which require additional sessions.<br>**Process:**<br>• Evidence that pulmonary rehabilitation programmes comprise a minimum of 6 weeks intervention and a minimum of twice weekly supervised sessions.<br>**Numerator**<br>• Number of pulmonary rehabilitation programmes offering a programme of at least 6 weeks duration and at least twice weekly supervised sessions (excluding the additional assessments).<br>**Denominator**<br>• Number of pulmonary rehabilitation programmes nationally. | Y | |

## QUALITY STATEMENT 5:

**Pulmonary rehabilitation programmes include supervised, individually tailored and prescribed, progressive exercise training including both aerobic and resistance training.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence that all patients undertaking pulmonary rehabilitation receive an exercise programme which is individually prescribed and progressive.<br>• Evidence that patients enrolled in pulmonary rehabilitation undertake both aerobic and resistance training.<br>• Evidence that professionals providing pulmonary rehabilitation are adequately trained/ experienced in prescribing and supervising exercise training.<br>**Process:**<br>• Proportion of pulmonary rehabilitation programmes that provide assessment of physical performance and prescription of exercise intensity at enrolment.<br>• Proportion of pulmonary rehabilitation programmes that ensure progression of exercise goals at intervals during programme according to individual progress and needs.<br>• Proportion of pulmonary rehabilitation programmes that provide both aerobic and resistance training.<br>• Proportion of patients attending pulmonary rehabilitation who receive an individually prescribed and progressive exercise programme.<br>• Proportion of patients attending pulmonary rehabilitation who receive both aerobic and resistance training.<br>• Proportion of patients attending pulmonary rehabilitation with an individualised aerobic and resistance training prescription in place.<br>**Numerator 1**<br>• Number of people receiving an individually prescribed and progressive aerobic exercise programme.<br>**Denominator 1**<br>• Number of people enrolled onto pulmonary rehabilitation.<br>**Numerator 2**<br>• Number of people receiving an individually prescribed and progressive resistance exercise programme.<br>**Denominator 2**<br>• Number of people enrolled onto pulmonary rehabilitation. | N | The process of ensuring that all patients had individually prescribed and progressive aerobic exercise programmes was not robust.<br>From the evidence seen, two out of three patients did not have their rate of perceived exertion (RPE) recorded, and although the documentation on the back sheet was very clear and colour coded (red, amber, green), it was not routinely completed.<br>Patients were observed stopping before becoming exerted, in order to complete all the exercises, which reviewers considered could result in patients not obtaining the full benefits of the programme.<br>The '6-minute walk' test was used as an assessment and outcome measure, but records showed that patients were not being progressed until the second or third week of the programme. Reviewers suggested that if patients undertook the 'shuttle walk' test (which is defined as the gold standard assessment) as part of their initial assessment, then it would provide information on walking speed and could be used to inform the patients' exercise prescription and outcome.<br>A grip strength dynamometer was not available, but reviewers were told that one had been purchased.<br>The need for an interpreter was assessed before the patient attended the programme. Staff commented that they had good access to interpreters, and on the day of the visit an interpreter was attending to support a patient.<br>The exercise equipment and facilities were very good. |

## QUALITY STATEMENT 6:

**Pulmonary rehabilitation programmes include a defined, structured education programme.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local pulmonary rehabilitation programme arrangements to ensure that all patients who are referred to pulmonary rehabilitation have access to a comprehensive programme of education in line with content set out in the BTS Pulmonary Rehabilitation Guideline.<br>**Process:**<br>• Proportion of pulmonary rehabilitation programmes that provide participants with a structured education programme.<br>**Numerator**<br>• Number of pulmonary rehabilitation programmes providing a structured education programme in line with the BTS Pulmonary Rehabilitation Guideline.<br>**Denominator**<br>• The number of pulmonary rehabilitation programmes nationally. | N | Every PR session included an education component. Data were not available to demonstrate that all patients had attended the lecture sessions. Patients who spoke to the reviewers commented that they felt the education programme was well delivered and informative. |

## QUALITY STATEMENT 7:

**People completing pulmonary rehabilitation are provided with an individualised structured, written plan for ongoing exercise maintenance.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local arrangements to ensure that all people completing pulmonary rehabilitation are provided with an individualised written plan for ongoing exercise after leaving the programme.<br>• The exercise plan should be co-produced by rehabilitation staff together with individuals completing the programme.<br>**Process:**<br>• Proportion of people completing pulmonary rehabilitation who have an individualised written exercise plan.<br>**Numerator**<br>• The number of people completing pulmonary rehabilitation who have an individualised written exercise plan.<br>**Denominator**<br>• The total number of people completing pulmonary rehabilitation | N | Patients who spoke to the reviewers said that they had a list of exercises so that they could continue rehabilitation at home, but none of the patients who spoke to the reviewers had an individualised progressive exercise plan. Patients were given a diary sheet to complete, but, from discussions, not all patients were aware that they should be completing exercises at home, and the diary sheets were not being monitored by staff when patients attended the rehabilitation sessions.<br>Reviewers were impressed that all patients were offered free gym membership following the programme and were given exercise resistant bands to help with exercising if appropriate. |

## QUALITY STATEMENT 8:

**People attending pulmonary rehabilitation have the outcome of treatment assessed using as a minimum, measures of exercise capacity, dyspnoea and health status.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of validated measurement of exercise capacity, dyspnoea and health status at the start and end of a pulmonary rehabilitation programme.<br>**Process:**<br>• Proportion of people who perform an assessment of exercise capacity, dyspnoea and health status at the start and after completion of a pulmonary rehabilitation programme.<br>**Numerator 1**<br>• Number of people completing assessments of health status, dyspnoea and exercise capacity at outset /initial assessment.<br>**Denominator 1**<br>• Number of people attending initial assessment for pulmonary rehabilitation.<br>**Numerator 2**<br>• Number of people completing assessments of health status, dyspnoea and exercise capacity after completion of pulmonary rehabilitation.<br>**Denominator 2**<br>• Number of people completing pulmonary rehabilitation. | N | Records were held for patients who completed all the assessments. The data available only related to 2016/17, and showed that 75 patients had completed the programme. It was not clear from the data available how many patients were initially referred. |

## QUALITY STATEMENT 9:

**Pulmonary rehabilitation programmes conduct an annual audit of individual outcomes and process.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of an annual audit of individual outcomes for each pulmonary rehabilitation programme.<br>• Evidence of annual survey/assessment of patient experience.<br>• Evidence of an annual audit of rates of commencement, adherence and completion.<br>**Process:**<br>• Proportion of people completing pulmonary rehabilitation who achieve satisfactory clinical outcomes for health status and exercise performance. Data to be measured against accepted Minimally Clinically Important Differences (MCIDs) or national audit figures.<br>• Proportion of people enrolled to pulmonary rehabilitation that adhere to and complete the programme and final assessment. Data to be measured against national audit figures.<br>**Numerator 1**<br>• Number of pulmonary rehabilitation programmes who complete an annual audit of outcome measurements.<br>**Denominator 1**<br>• Number of pulmonary rehabilitation programmes nationally.<br>**Numerator 2**<br>• Number of people completing pulmonary rehabilitation who achieve the minimum clinically important improvement in the chosen outcome measures.<br>**Denominator 2**<br>• Number of people enrolled to pulmonary rehabilitation. | Y | An internal audit programme was in place for the services delivered. The audit data seen were out of date.<br>Clinical outcome data were accessible to the service for audit and service improvement purposes.<br>Outcome data for patients who had completed the programme and for patients who had not completed it were available.<br>Patient satisfaction surveys were in use, although none of the patients who spoke to the reviewers was clear about the mechanisms to provide feedback. Data resulting from the patient surveys were not easily accessible in a format that was collated to show trends.<br>Reviewers were told that the service received feedback on patient experience on an annual basis.<br>National audit data for 2017 showed that only 18 patients had been included.<br>Patients who were not suitable for the programme were directed to fatigue, anxiety and breathlessness (FAB) clinics, and all patients were directed to the web-based software programme (App) MYCOPD, which may not always be suitable. |

## QUALITY STATEMENT 10:

**Pulmonary rehabilitation programmes produce an agreed standard operating procedure.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of a documented SOP setting out a delivery framework detailing policies for accessibility, safety, effectiveness and capacity which has been agreed across commissioners, providers and patients.<br>**Process:**<br>• The proportion of programmes producing a documented SOP as described above.<br>**Numerator**<br>• Number of programmes with a documented SOP.<br>**Denominator**<br>• Number of pulmonary rehabilitation programmes nationally. . | Y | A service operational procedure was in place. The policy would benefit from review to be more consistent with the agreed commissioning specification. A risk register was not seen for any of the equipment used. |

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## PULMONARY REHABILITATION IN ADULTS – SOUTH DOC SERVICES LTD

### QUALITY STATEMENT 1:

**Referral for pulmonary rehabilitation:**

**a. People with COPD and self-reported exercise limitation (MRC dyspnoea 3-5) are offered pulmonary rehabilitation.**

**b. If accepted, people referred for pulmonary rehabilitation are enrolled to commence within 3 months of receipt of referral**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local pulmonary rehabilitation referral pathways for both primary and secondary care providers.<br>• Evidence that written information about availability and content of local pulmonary rehabilitation programmes is disseminated to primary and secondary care providers.<br>• Provision of clear eligibility criteria to primary and secondary care providers.<br>• Evidence that patient reported exercise limitation (MRC dyspnoea scale) is recorded annually.<br>• Evidence that pulmonary rehabilitation programmes accept referral of patients who have previously undertaken pulmonary rehabilitation.<br>**Process:**<br>• Proportion of eligible patients offered pulmonary rehabilitation.<br>• Proportion of accepted patients enrolled within 3 months of receipt of referral.<br>**Numerator 1**<br>• Number of eligible patients offered pulmonary rehabilitation.<br>**Denominator 1**<br>• Number of eligible patients.<br>**Numerator 2**<br>• Number of accepted patients commencing within 3 months of receipt of referral.<br>**Denominator 2**<br>• Number of patients referred for pulmonary rehabilitation who are accepted for treatment.<br>**Numerator 3**<br>• Number of pulmonary rehabilitation programmes that accept referrals of patients who have previously attended pulmonary rehabilitation.<br>**Denominator 3**<br>• Number of pulmonary rehabilitation programmes. | Y | South Doc Services provided a Single Point of Access for pulmonary rehabilitation (PR) for South Birmingham residents. Referrals were also accepted from other areas. Information about the programme was sent to patients, and information for referrers and patients was accessible via the service website.<br>The referral form defined eligibility criteria and the reason for the patient's referral to the programme.<br><br>At the time of the visit the service did not receive referrals from University Hospitals Birmingham NHS Foundation Trust.<br><br>Patients who were re-referred for PR were not accepted until 12 months had elapsed, although they could attend maintenance sessions if there was capacity. |

## QUALITY STATEMENT 2:

**Pulmonary rehabilitation programmes accept and enrol patients with functional limitation due to other chronic respiratory diseases (for example bronchiectasis, ILD and asthma) or COPD MRC dyspnoea 2 if referred.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence that pulmonary rehabilitation is available locally and offered to people who are functionally limited by chronic respiratory diseases other than COPD (and people with COPD MRC dyspnoea 2) if referred by their primary or secondary healthcare teams.<br>**Process:**<br>• Proportion of pulmonary rehabilitation programmes that accept referrals for people with chronic respiratory diseases other than COPD (and people with COPD MRC dyspnoea 2).<br>**Numerator**<br>• Number of pulmonary rehabilitation programmes accepting referrals for patients with chronic respiratory diseases other than COPD (and people with COPD MRC dyspnoea 2).<br>**Denominator**<br>• Number of pulmonary rehabilitation programmes nationally. | N | Patients with Interstitial Lung Disease (ILD) or COPD MRC dyspnoea 2 were not accepted on the PR programme, as agreed in the contract with the CCG.<br>Patients with COPD or chronic asthma were accepted on the PR programme.<br>The service also accepted patients for pulmonary rehabilitation pre- and post-surgery for lung cancer (ROC – Removal of Cancer programme). |

## QUALITY STATEMENT 3:

**Referral for pulmonary rehabilitation after hospitalisation for acute exacerbations of COPD:**

**a. People admitted to hospital with acute exacerbations of COPD (AECOPD) are referred for pulmonary rehabilitation at discharge.**

**b. People referred for pulmonary rehabilitation following admission with AECOPD are enrolled within one month of leaving hospital.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local pathways for offering and referring people who have been hospitalised with AECOPD to outpatient pulmonary rehabilitation.<br>• Evidence that pulmonary rehabilitation programmes can enrol people referred following hospitalisation for AECOPD within one month of leaving hospital.<br>**Process:**<br>• Proportion of eligible people discharged with AECOPD who are offered pulmonary rehabilitation.<br>• Number of people who accept referral who are enrolled within one month of discharge from hospital.<br>**Numerator 1**<br>• Number of people admitted with AECOPD who are offered pulmonary rehabilitation on discharge.<br>**Denominator 1**<br>• Number of people with a primary discharge diagnosis of AECOPD.<br>**Numerator 2**<br>• Number of people admitted with AECOPD who accept a referral for pulmonary rehabilitation post-discharge who are enrolled within one month of leaving hospital.<br>**Denominator 2**<br>• Number of people who accept referral for pulmonary rehabilitation after discharge from hospital. | Y | Patients with acute exacerbations of COPD (AECOPD) would be accepted on the PR programme, but in practice the acute Trusts did not refer patients with AECOPD to the PR services provided by South Doc Services. |

## QUALITY STATEMENT 4:

**Pulmonary rehabilitation programmes are of at least 6 weeks duration and include a minimum of twice-weekly supervised sessions.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence that pulmonary rehabilitation programmes are of at least 6 weeks duration and include at least twice weekly supervised sessions. This does not include assessment sessions, which require additional sessions.<br>**Process:**<br>• Evidence that pulmonary rehabilitation programmes comprise a minimum of 6 weeks intervention and a minimum of twice weekly supervised sessions.<br>**Numerator**<br>• Number of pulmonary rehabilitation programmes offering a programme of at least 6 weeks duration and at least twice weekly supervised sessions (excluding the additional assessments).<br>**Denominator**<br>• Number of pulmonary rehabilitation programmes nationally. | N | The pulmonary rehabilitation programmes ran for 6 weeks, but the course duration included the assessments before and after each programme, which should count as additional sessions. This resulted in patients only receiving five weeks of twice-weekly supervised exercise sessions.<br>Reviewers were impressed that an 'expert patient' attended the sessions.<br>Staff were flexible if patients needed to rearrange any of the sessions. Some patients who met with the reviewing team had been attending for as long as two years. There was also the option for patients to return after their course on an ad hoc basis. |

## QUALITY STATEMENT 5:

**Pulmonary rehabilitation programmes include supervised, individually tailored and prescribed, progressive exercise training including both aerobic and resistance training.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence that all patients undertaking pulmonary rehabilitation receive an exercise programme which is individually prescribed and progressive.<br>• Evidence that patients enrolled in pulmonary rehabilitation undertake both aerobic and resistance training.<br>• Evidence that professionals providing pulmonary rehabilitation are adequately trained/ experienced in prescribing and supervising exercise training.<br>**Process:**<br>• Proportion of pulmonary rehabilitation programmes that provide assessment of physical performance and prescription of exercise intensity at enrolment.<br>• Proportion of pulmonary rehabilitation programmes that ensure progression of exercise goals at intervals during programme according to individual progress and needs.<br>• Proportion of pulmonary rehabilitation programmes that provide both aerobic and resistance training.<br>• Proportion of patients attending pulmonary rehabilitation who receive an individually prescribed and progressive exercise programme.<br>• Proportion of patients attending pulmonary rehabilitation who receive both aerobic and resistance training.<br>• Proportion of patients attending pulmonary rehabilitation with an individualised aerobic and resistance training prescription in place.<br>**Numerator 1**<br>• Number of people receiving an individually prescribed and progressive aerobic exercise programme.<br>**Denominator 1**<br>• Number of people enrolled onto pulmonary rehabilitation.<br>**Numerator 2**<br>• Number of people receiving an individually prescribed and progressive resistance exercise programme.<br>**Denominator 2**<br>• Number of people enrolled onto pulmonary rehabilitation. | N | Patients attending the programme did not have an individually prescribed and progressive aerobic exercise programme. Patients were observed stopping before becoming exerted. Staff were not observed supporting patients, and the patients were left to decide themselves which exercises they did. There did not appear to be many exercises for them to undertake that addressed the large muscle groups. Reviewers considered this would result in patients not obtaining the full benefits of the programme. Patients were given an exercise list and shown how to use the equipment and complete the exercises.<br>The expert patient who attended the session on the day of the visit was observed supporting and encouraging patients to exercise until they were breathless.<br>Patients were given a diary sheet to use at home, but patients who spoke to the reviewers were not completing exercises at home. Staff did not monitor compliance with the home exercise programme when patients attended the sessions. Patients were also given a DVD entitled *Move on Up* which showed how they could exercise at home. Reviewers considered that the team may wish to review this process to ensure that patients understood the benefits and had the equipment to use this resource, as one patient who spoke to the reviewers had received a DVD but did not have a DVD player. |

## QUALITY STATEMENT 6:

**Pulmonary rehabilitation programmes include a defined, structured education programme.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local pulmonary rehabilitation programme arrangements to ensure that all patients who are referred to pulmonary rehabilitation have access to a comprehensive programme of education in line with content set out in the BTS Pulmonary Rehabilitation Guideline.<br>**Process:**<br>• Proportion of pulmonary rehabilitation programmes that provide participants with a structured education programme.<br>**Numerator**<br>• Number of pulmonary rehabilitation programmes providing a structured education programme in line with the BTS Pulmonary Rehabilitation Guideline.<br>**Denominator**<br>• The number of pulmonary rehabilitation programmes nationally. | N | The education session observed during the visit was not to the expected depth, and inhaler models were not used to support the information being given.<br>From the evidence seen, reviewers considered that the education programme was not comprehensive and did not include the level of detail expected for a PR programme as defined in the BTS Guideline. See also main report. |

## QUALITY STATEMENT 7:

**People completing pulmonary rehabilitation are provided with an individualised structured, written plan for ongoing exercise maintenance.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of local arrangements to ensure that all people completing pulmonary rehabilitation are provided with an individualised written plan for ongoing exercise after leaving the programme.<br>• The exercise plan should be co-produced by rehabilitation staff together with individuals completing the programme.<br>**Process:**<br>• Proportion of people completing pulmonary rehabilitation who have an individualised written exercise plan.<br>**Numerator**<br>• The number of people completing pulmonary rehabilitation who have an individualised written exercise plan.<br>**Denominator**<br>• The total number of people completing pulmonary rehabilitation | N | Patients did not have an individually prescribed and progressive aerobic exercise programme on leaving the programme.<br>If the session had capacity, then ex-patients were allowed to attend classes. For the session observed, four patients were attending as part of the PR programme, and the remaining six attendees had already completed a PR programme. |

## QUALITY STATEMENT 8:

**People attending pulmonary rehabilitation have the outcome of treatment assessed using as a minimum, measures of exercise capacity, dyspnoea and health status.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of validated measurement of exercise capacity, dyspnoea and health status at the start and end of a pulmonary rehabilitation programme.<br>**Process:**<br>• Proportion of people who perform an assessment of exercise capacity, dyspnoea and health status at the start and after completion of a pulmonary rehabilitation programme.<br>**Numerator 1**<br>• Number of people completing assessments of health status, dyspnoea and exercise capacity at outset /initial assessment.<br>**Denominator 1**<br>• Number of people attending initial assessment for pulmonary rehabilitation.<br>**Numerator 2**<br>• Number of people completing assessments of health status, dyspnoea and exercise capacity after completion of pulmonary rehabilitation.<br>**Denominator 2**<br>• Number of people completing pulmonary rehabilitation. | Y | However, during discussions it was not clear to the reviewers that staff fully appreciated the role of the initial assessment in developing the exercise prescription.<br>Ongoing assessment during the programme of exercise was not robust. |

## QUALITY STATEMENT 9:

**Pulmonary rehabilitation programmes conduct an annual audit of individual outcomes and process.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of an annual audit of individual outcomes for each pulmonary rehabilitation programme.<br>• Evidence of annual survey/assessment of patient experience.<br>• Evidence of an annual audit of rates of commencement, adherence and completion.<br>**Process:**<br>• Proportion of people completing pulmonary rehabilitation who achieve satisfactory clinical outcomes for health status and exercise performance. Data to be measured against accepted Minimally Clinically Important Differences (MCIDs) or national audit figures.<br>• Proportion of people enrolled to pulmonary rehabilitation that adhere to and complete the programme and final assessment. Data to be measured against national audit figures.<br>**Numerator 1**<br>• Number of pulmonary rehabilitation programmes who complete an annual audit of outcome measurements.<br>**Denominator 1**<br>• Number of pulmonary rehabilitation programmes nationally.<br>**Numerator 2**<br>• Number of people completing pulmonary rehabilitation who achieve the minimum clinically important improvement in the chosen outcome measures.<br>**Denominator 2**<br>• Number of people enrolled to pulmonary rehabilitation. | Y | Some data were collected, but not data covering clinically significant parameters; for example, data for key performance indicators to enable adequate quality monitoring against the agreed commissioning specification were not collected. Saturation spirometry data were collected when patients enrolled on the programme. |

## QUALITY STATEMENT 10:

**Pulmonary rehabilitation programmes produce an agreed standard operating procedure.**

| Quality Measure | Met? Y/N | Comment |
|---|---|---|
| **Structure:**<br>• Evidence of a documented SOP setting out a delivery framework detailing policies for accessibility, safety, effectiveness and capacity which has been agreed across commissioners, providers and patients.<br>**Process:**<br>• The proportion of programmes producing a documented SOP as described above.<br>**Numerator**<br>• Number of programmes with a documented SOP.<br>**Denominator**<br>• Number of pulmonary rehabilitation programmes nationally. | Y | A standard operational procedure was in place covering the requirement of the Standard, but see main report on the implementation of this policy. |

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