

Policy for Pulmonary Rehabilitation 'Just Breathe'

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1.0	20 th April 2004	Ange Price	Final	A new policy was required in line with the guidance and template published by the British Thoracic society and NICE guidelines.
2.0	14 th July 2009	Nipa Patel/ Timi Ogunlowo	Revised Draft	Scheduled update incorporating best current best practice guidelines.
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1. INTRODUCTION

Chronic Obstructive Lung Disease (COPD) is one of the most common respiratory diseases in the UK. It usually only starts to affect people over the age of 35, although most people are not diagnosed until they are in their 50's.

The Global Initiative for Chronic Obstructive Lung Disease (GOLD) defines COPD as follows: "Chronic obstructive pulmonary disease (COPD), a common preventable and treatable disease, is characterized by airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases. Exacerbations and comorbidities contribute to the overall severity in individual patients." (1)

It is thought there are more than 3 million people living with the disease in the UK, of which only about 900,000 have been diagnosed. (2)

COPD is the fifth biggest cause of death in the UK. 24,816 people in England and Wales died as a result of COPD in 2008. (3) The disease kills more people in the UK than bowel cancer, breast cancer or prostate cancer (4)

The onset of COPD is insidious, and by the time COPD is diagnosed a large amount of lung function has already been lost. Therefore management is aimed at controlling symptoms and also to improve quality of life.

Pulmonary rehabilitation (PR) programmes are clinically effective and cost effective in improving health and quality of life, reducing length of hospital stay and reducing the number of hospital re-admissions for people with COPD. Physiotherapists are an essential part of the multi-disciplinary teams that run these programmes.

Pulmonary rehabilitation has been defined as a "multi-disciplinary program of care for patients with chronic respiratory impairment that is individually tailored and designed to optimize physical and social performance and autonomy." (5)

The National Institute for Health and Clinical Excellence (NICE) has produced various documents supporting the use of pulmonary rehabilitation programmes in a variety of settings, including the community, as well as making the case for commissioning.(6,7) NICE has stated that all those with COPD suitable for pulmonary rehabilitation should receive it. (6)

Results of a randomised controlled trial (RCT) found that for patients chronically disabled by obstructive pulmonary disease, an intensive, multidisciplinary, outpatient programme of rehabilitation including Physiotherapy is an effective intervention, in the short term and the long term, that decreases hospital length of stay. (7)

A study in 2010 evaluating the effect of pulmonary rehabilitation delivered post COPD exacerbation showed a reduction in re-admissions by 26% with cost effectiveness demonstrated (8)

A study in Canada(9) found that over one year, pulmonary rehabilitation was associated with decreased health service utilisation, reduced direct costs and improved health status of COPD patients. The health status of patients enrolled in the programme improved significantly following pulmonary rehabilitation, irrespective of the severity of disease. The average reduction of total costs before and after the program was \$34,367 (£16,985.56) per 100 person-years or approximately \$344 (£170.02) per person per year.

2. THE AIMS OF THE POLICY

To provide a framework on which to deliver pulmonary rehabilitation to patients with COPD residing in the London Borough of Newham

3. OBJECTIVES

1. To identify patients who would benefit from pulmonary rehabilitation
2. To deliver a programme of pulmonary rehabilitation for these patients
3. To give information about the disease and its management, empowering the patient to self-manage their disease
4. To offer guidance regarding positive lifestyle changes
5. To increase exercise tolerance and reduce dyspnoea
6. To improve muscle strength and endurance to improve function
7. To improve patients quality of life
8. To reduce number of bed days and/ or admissions
9. To improve patients sense of control over the impact of their disease
10. To offer information and guidance to carers
11. To facilitate main access to main stream exercise opportunities within the borough.
12. To signpost patients referred to the Pulmonary Rehabilitation programme to appropriate services.

4. Principles:

The pulmonary rehabilitation team and Roles:

Staff to patient ratio to supervise exercise class 1:7 depending on availability of space.

- Physiotherapist: To screen and assess the referred patients prior to starting the programme, from the results of these assessments together with the patient identify a common goal. To develop and supervise an individual exercise programme to enable the patient to reach their goal, including the delivery of the education components. To act as resource to other team members and to the patients and carers attending the programme. To liaise with other agencies i.e. GP as required. To coordinate the educational programme. To perform discharge assessments and liaise with patient care providers as required.
- Occupational therapist: To attend one session and give advice on accessing help for patients with problems with activities of daily living.

- Breathe Easy: To attend one session and provide advice and support for those leaving the programme.
- Dietician: To attend one session and provide advice on nutrition for patients with COPD.
- Psychologist: To give advice and education regarding psychological techniques to manage anxiety and breathlessness

5. Service delivery:

The Pulmonary Rehabilitation will be delivered within the London Borough of Newham. All referred patients with a diagnosis of COPD, Medical Research Council Breathlessness (MRC) score of 2 – 5 and medically stable will be accepted for an assessment to join the programme.

Pulmonary Rehabilitation is delivered in 3 locations within the London Borough of Newham (LBN). The sites are:

1. 29 Romford Road Gym, London. E15 4LY.
2. East Ham Care Centre, Shrewsbury Road, E7 8QP.
3. Balaam Street Leisure Centre E13 8AQ- Maintenance class

5.1 Referral criteria:- Appendix A

Referrals are accepted from Medical Doctors, Practice Nurses, Physiotherapists, Respiratory nurse specialists and self-referrals.

If the referral is made by the Patient or any other Health Professional the GP is made aware of the referral and invited to comment if the patient is NOT suitable for exercise.

- Patients with diagnosed Chronic Obstructive Pulmonary Disease (COPD)
- Limited exercise tolerance due to breathlessness with MRC score 2 – 5.
- Cardiovascularly stable
- Able to take part in group activities
- Medically stable with optimal medications and Doctors certifying patient to exercise.
- Willing to commit to the whole programme.
- Patients must be registered with a GP within LBN.

All patients referred will have pre-course assessments carried out by the Physiotherapist. Assessment will include vital signs measurement, incremental shuttle walk test (ISWT), completing a measure of disease impact questionnaire, Hospital Anxiety and Depression (HAD) score & MRC score.

5.2 Exclusion criteria:- Referral form:- Appendix B

- Severe cardiac disease
- MI in last 6 weeks
- Inability to participate in group activities
- Any other medical problem that which may prevent patient from safely participating in group activity.

Exclusion from the programme is a clinical decision. Patients are not excluded because of race, age, gender, religion, sexual orientation or disability.

5.3 Assessment Tools: Assessment form:- Appendix C

Medical Research Council Dyspnoea scale

Incremental Shuttle walk test- to measure exercise tolerance

Questionnaires –self reported

Pulmonary rehabilitation assessment form

Peripheral oxygen saturation, Blood pressure and Heart rate

Hospital Anxiety and Depression score

Smoking history

BORG breathlessness score

Assessments are performed both prior to joining the class and at the final discharge assessment.

5.4 Programme delivery:

A six to eight week programme with one - two supervised sessions of exercise and one education session each week, the literature demonstrates that exercise programmes with two supervised exercise sessions are more effective than one per week. Patients are given a choice as to which programme they are enrolled.

5.5 The contents of the programme:

Through the educational process, patients can become more skilled at collaborative self-management and more adherent to their treatment plan (10)

The education component covers a wide range of issues related to COPD as recommended by Garrod, 2003. (11)

5.6 Example Education Rota:- Appendix D

The education sessions include:

How our lungs work

What can go wrong with our lungs?

Signs of infection

Coping with breathlessness

Clearing secretions

Medications for respiratory problems

Healthy eating

Energy conservation

Relaxation

Holidays and travel

Benefits advice

Smoking cessation advice and support

Breathing exercises

What happens when I finish pulmonary rehabilitation?

5.7 Exercise classes:

This is directed towards achieving individualised patient goals, aims are to improve strength and exercise tolerance, posture and balance. Appendix E.

5.8 Referral and assessment procedure:

On receipt of referral patients are screened by a Physiotherapist for eligibility criteria. Their details are then entered into the Pulmonary Rehabilitation data base and placed on the waiting list.

Appropriate patients are contacted to arrange for an initial assessment.

Patients who decline to arrange an appointment are discharged. If telephone contact fails the patient is sent an appointment letter. If they do not wish to take up the offer of a place they are discharged and a letter sent to the referrer and patient.

Patients excluded from the programme on screening will not be contacted directly. Then referrer will be informed, and the patient discharged.

5.9 Session format:

Patients with respiratory disease usually experience worse symptoms in the morning. As the day goes on, they find they can better cope with general activities of daily living, for this reason pulmonary rehab classes are best held in the afternoon.

Start of class:

- Patients arrive- Alcohol hand gel provided
- Patients asked about any changes in health or medications
- Peripheral oxygen levels measured and documented
- Warm up
- Exercise class (see Appendix E for details)
- Cool down

Total 60 minutes

In addition once weekly

- Education (see appendix D for details)

Total 60 minutes

5.10 Medications:

Patients are advised to bring their reliever medications with them to every session.

Oxygen is available during each class except the Maintenance class.

If oxygen is required during the exercise session (or if patient is on LTOT) it will be administered via a non-re-breathe bag or via nasal cannula as required. If a patient desaturates below 85% during exercise oxygen Therapy will need to commence.

Ambulatory Oxygen Therapy (AOT) should be offered to patients for use during exercise in a pulmonary rehabilitation programme or during an exercise programme following a formal assessment by the Oxygen service demonstrating improvement in exercise endurance. (12)

5.11 Monitoring:

Patients will be monitored during each session

Physiotherapist will monitor:

Physical appearance

Ability to exercise

Reports of patient complaints of problems

Dyspnoea via BORG score

Pulse oximetry

Patients' ability to self-monitor exercise progression and breathlessness

5.12 Equipment required setting up pulmonary rehabilitation:

Access to a room at least 15m long (for shuttle walk test)

Stethoscope

Sphygmomanometer or Electronic BP machine

Oxygen cylinders

AED/ Resuscitation equipment

Stopwatches

Cycle ergometer

Free weights

Ankle weights

Cones/ Markers

Pulse oximeters

Assessment tools

Workbooks/ clipboards

Drinking water supply

5.13 Evaluation:

The course is run over six- eight weeks and on the last day post course assessments are completed where possible.

Patients are also asked to anonymously evaluate the programme using patient evaluation form.

Patients are encouraged to continue exercising either at the maintenance class run from Balaam Street Leisure centre or mainstream exercise opportunities.

6. Risk Management and Strategy implementation

6.1 Implementation and dissemination

New EPCT and appropriate specialist therapies staff are made aware of this document at local induction.

The document will be published on the Trust intranet/ website, circulated via email and as part of induction and training sessions.

6.2 Training and support

It is the individual practitioner's responsibility to ensure relevant training and knowledge of the following:-

1. COPD, including causes, symptoms and treatments for the disease
2. The concept of Pulmonary Rehabilitation, including safe and effective programme delivery and expected outcomes
3. Resuscitation policies and procedures including Basic Life Saving qualification.
4. Local guidelines and policies relating to Health & Safety and Infection Control.
5. Local guidelines relating to Privacy and Dignity, Consent and Confidentiality issues.
6. National Guidelines (National Institute for Clinical Excellence, 2010)

6.3 Document Control and Archiving Arrangements

All procedures must be reviewed every three years. A director may decide to set a shorter review period, if appropriate/required. There may also be a need to review a procedure in advance of a planned review date, i.e. due to changes in national policy/legislation.

The director identified will be responsible for the review process. All reviews and revision to any procedural document must be approved.

The Associate Director of Governance will be responsible for maintaining the Trust library of procedural documents.

Master copies of all procedural documents will be published on the Trust intranet.

Directors must submit all approved procedures and the supporting documentation to the Associate Director of Governance for updating the Trust library.

An archive of procedural documents will be kept in the Corporate Records file in the K (shared) drive.

On receipt of a revised procedure, the Associate Director of Governance or his nominated deputy will enter this into the Trust library and move the previous version to the archive file.

All directors (and other staff on request) have access to the archive file (Shared Drive/Corporate Records/Policies and Procedures). Alternatively, copies of archived documents can be requested from the Associate Director of Governance.

Implementation Table

Target Audience	EPCT Physiotherapists
Shared by	Email
In-service training	2016/17 – Quarter 1

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7. References

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10. Australian Lung Foundation (2006). Pulmonary Rehabilitation Kit.
11. Garrod, R (2003) .The effectiveness of pulmonary rehabilitation: evidence and implications for physiotherapists. Chartered Society of Physiotherapy.
12. Hardinge M, et al. *Thorax* 2015;70:i1–i43. doi:10.1136/thoraxjnl-2015-206865

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Appendix A

Just Breathe

Pulmonary Rehabilitation for Newham



Referral criteria:

These criteria are strict and any patient not fitting these criteria may not be accepted for the programme

- 1. Any chronic respiratory condition (COPD) where exercise tolerance is limited by dyspnoea. (Please note patients who do not have a diagnosis of COPD may not be included into the program.)**
- 2. CVS stable (no evidence of heart disease)**
Exclusion: Unstable Angina/ Hypertension, Angina more than 1 episode a week or at rest/night, Uncontrolled cardiac arrhythmias, Poorly controlled Diabetes, Severe Heart Failure, Cardiac event in last 6 weeks.
- 3. Medically stable with optimal medications**
- 4. No other medical conditions that limit exercise tolerance e.g. severe OA, CVA affecting mobility, dementia, unable to participate in group activities.**
- 5. Motivated to attend classes**
- 6. Consent from medical practitioner to undertake exercise.**
- 7. Please include lung function tests performed in the last 6/12 only.**
- 8. The referral will be returned if not completed fully please include diagnosis, referrer details and inclusion/exclusion criteria.**

Just Breathe Referral Form

Patient details:

D.O.B: NHS No: Hosp. No:

Surname: First Name(s):

Address:

Post Code: Tel No:

Clinical details

Diagnosis

(Please note if Patient does not have COPD they will not be included into the programe)

Functional ability (e.g. walking distances, exercise tolerance)

Inclusion criteria (please tick)

Stable chronic lung disease

Limited functional ability due to breathlessness

Motivated to exercise

Exclusion criteria

Unstable cardiovascular disease/
Severe heart failure

Any other medical problem that which may prevent patient from exercise (e.g. CVA/OA/dementia)

Essential information (please indicate)

Requires transport? Yes/No

Has had lung function test? Yes/No Please enclose result

Is patient on LTOT? Yes/No

Preferred language?

(Essential)

Name of referrer:

Signature:

Date:

Spirometry Date of test:

Pre post predicted

FEV1

VC

FEV1/VC%

ABG if known:

Please send to: Lead Respiratory Physiotherapist

Vicarage Lane Health Centre, 10 Vicarage Lane, Stratford, E15 4ES

via fax on: 0208 475 2146

For more information or to discuss a referral please call on:

Tel: 0208 709 5555

[Type text]

Appendix C

Second Wind

Pulmonary Rehabilitation for Newham

Pulmonary Rehabilitation Assessment

NHS Number ----- Therapist-----

Information Given:

COPD booklet given Pulmonary Rehab booklet given

Name	GP
Address	Address
Post Code	Post Code
Tel:	Tel: Fax:
DOB:	Next of Kin
Religion:	Relationship:
Male <input type="checkbox"/> Female <input type="checkbox"/>	Name
Marital Status:	Address
M <input type="checkbox"/> S <input type="checkbox"/> W <input type="checkbox"/> D <input type="checkbox"/>	Post Code
Ethnic Origin:	Tel:
Language Spoken	
Interpreter Required YES/NO	

HPC:	PMH:
<p>Falls: (if >50 years)</p> <p>MRC: Exercise Tolerance:</p>	

[Type text]

Symptoms:

Cough Y/N

Chest Pain Y/N

Sputum Y/N

Amount:

Colour:

Haemoptysis Y/N

24 hour pattern:

Panic Attacks Y/N

Wheeze Y/N

Relieved by inhaler?

Spirometry

Date	Forced Expiratory Volume in 1 second (FEV ₁) %	Forced Vital Capacity	FEV ₁ /FVC	Peak Flow in litres /min
Expected Value				
Date				
Type of Inhaler Used				

Respiratory Medication

Medication	Dose	Inhaler	Frequency

Other Medication:

Oxygen Y/N

Type:

Hours/day:

Flow Rate:

Rescue Pack Y/N

Inhaler Technique Checked Y/N

Advice:

[Type text]

Smoking Status:

Current Never Unknown Ex-smoker Gave up when? -----

Age Started ----- Age Stopped -----

Type of tobacco smoked:

Roll ups Cigarettes Cigars Cigarillos Pipe

Amount smoked ----- Rack years? -----

Smoking Cessation Advice:

Mentioned Discussed Not Applicable

Referred to Cessation Advisor Referred to Cessation Clinic

Social History:

Goals:

Achieved

1)

2)

3)

4)

Signed:

Name:

Designation:

[Type text]

Appendix D

Pulmonary Rehabilitation Education Sessions

East Ham Care Centre August-October 2015

Date (Tuesday 3pm)	Topic	Speaker
August 4th	Anxiety	Psychology
August 11th	Managing breathlessness	Physio
August 18th	Infection management/ Secretion clearance	Physio
August 25th	COPD	Physio
September 1st	Energy Conservation	Occupational Therapy
September 8th	Diet	Dietitian
September 15th	Medications	Pharmacist
September 22nd	Breathe Easy Exercise	BLF Representative Physio
September 29th	Anxiety	Psychology
October 5th	Managing Breathlessness	Physio
October 13th	Infection management/ Secretion clearance	Physio
October 20th	COPD	Physio
October 27th	Diet	Dietitian

[Type text]

Appendix E

Endurance		Date	BORG Breath		Date	BORG Breath		Date	BORG Breath		Date	BORG Breath
Walking/ Treadmill	Time Speed Incline			Time Speed Incline			Time Speed Incline			Time Speed Incline		
Leg Cycling	Time Level			Time Level			Time Level			Time Level		
Step Ups	Time Weight			Time Weight			Time Weight			Time Weight		
Arm Cycling	Time Level			Time Level			Time Level			Time Level		
Arms			BORG Muscle			BORG Muscle			BORG Muscle			BORG Muscle
Side Raise	Number Weight			Number Weight			Number Weight			Number Weight		
Biceps	Number Weight			Number Weight			Number Weight			Number Weight		
Backward Row	Number Band/ Weight			Number Band/ Weight			Number Band/ Weight			Number Band/ Weight		
Legs			BORG Muscle			BORG Muscle			BORG Muscle			BORG Muscle
Quads	Number Weight			Number Weight			Number Weight			Number Weight		
Sit-To-Stand	Number Weight			Number Weight			Number Weight			Number Weight		

[Type text]

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