



**Guidance for setting up Virtual Pulmonary
Rehabilitation for Asthma and COPD during the
Covid 19 pandemic**

National Clinical Programme

Respiratory April 2020 Version 3



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Glossary of Terms

PR	Pulmonary Rehabilitation
VPR	Virtual Pulmonary Rehabilitation
PRP	Pulmonary Rehabilitation Programme
COPD	Chronic Obstructive Pulmonary Disease
LOLH	Our Lady of Lourdes Hospital
NCP	National Clinical Programme
LCH	Louth County Hospital
IPF	Idiopathic Pulmonary Fibrosis
PAH	Pulmonary Artery Hypertension
IT	Information Technology
MRC	Medical Research Council
HEP	Home Exercise Programme

1. Introduction

1.1 Telerehabilitation

Remote delivery of pulmonary rehabilitation is an ideal model to support on-going respiratory services during this period. It enables continued access/prevent service interruption for those who are situated in rural and remote settings, as well as for those in quarantine or where social distancing measures have been enacted or recommended.

It is important to make an informed decision to offer telerehabilitation; practitioners should ensure that they know and comply with related practice requirements, per their local regulator, and have the appropriate technological capability to ensure safety and privacy. Patient's privacy and consent are primary importance in offering telerehabilitation services.

We strongly recommend you seek experts in the field and read all guidelines proposed by the HSE, colleges and your associations prior to launching this delivery model.



Checklist before implementation

Issues to be considered prior to implementing telerehabilitation services:

1. What is your “big picture” goal for this remote session; consultation? Education? Assessment? Treatment?
2. Is telerehabilitation appropriate for this client?
3. Which platform will allow you to provide the same quality care as face-to-face?
4. Does this client have the required technology to support remote delivery?
5. Does this client need technical support or in-home support to facilitate your session?
6. Is the setting on the client’s end a safe, secure, and confidential environment?
7. Do I have the skills and training to provide remote pulmonary rehabilitation to my clients?
8. Am I providing evidence-based informed remotely delivered pulmonary rehabilitation?
9. Is my environment appropriate for this delivery model (high speed internet, confidential setting, consent, and compliant platform, etc.)?
10. Am I following all of the required guidelines from the HSE?
(CPA 2020)

1.2 Pulmonary rehabilitation

PR can be defined as an interdisciplinary program of care for patients with chronic respiratory impairment that is individually tailored and designed to optimize each patient's physical and social performance and autonomy. PR programmes comprise of individualized exercise programs and education (NICE 2010) and traditionally have been delivered as face to face group encounters/sessions running over a 6-12 week period.

Pulmonary rehabilitation (PR) has established itself as a key management strategy in the treatment of people with chronic respiratory disease (BTS 2014). It is one of the most cost effective treatments for Chronic Obstructive Pulmonary Disease (COPD) after smoking cessation and the flu vaccine (London Respiratory Network, 2014). PR leads to an increase in exercise capacity as well as improved quality of life, resulting in a decrease in emergency admissions and hospitalization rates (Ozmen et al., 2018). For Asthma patients it has been shown to decrease airway hyper responsiveness, decrease weight and improve their psychological wellbeing (Osadnik et al, 2019).

The normal face-to-face course entails patients attending a hospital/community setting twice a week for an exercise and educational session including a pre and post PR assessment.



As pulmonary rehabilitation provides a vital role in the management of people with chronic lung disease it is important to provide PR services to maintain good health and decrease health care utilization within this patient population. In a previous study, Virtual Pulmonary Rehabilitation was found to be non-inferior to a conventional programme (face to face sessions). Benefits were reported in the 6MWT and Symptoms score. The programme was reported to be safe and well tolerated (Bourne et al, 2017). Video-conferencing has been used in conjunction with standard PRP's and have been found to be a feasible option and safe. They have shown equal benefits in terms of short-term clinical gains. Other potential benefits include increased throughput, a reduction in staffing ratios and significantly less travel time (Knox et al, 2019).

In November 2019 an innovative project of Virtual PR, the first in Ireland, was launched in Our Lady of Lourdes Hospital, for patients living with COPD. Virtual Pulmonary Rehabilitation (VPR) is a live and interactive class which allows patients to exercise in the comfort of their own home with the guidance of a physiotherapist. Patients logged into the live class from their home twice weekly for 7 weeks. The project utilised both the patients own resources and those of the HSE.

This alternative model of PR demonstrated a positive completion rate, positive clinical outcomes and was well accepted by patients. Unpublished results from O'Reilly, M and Gillen, C., (2020) demonstrated that

- 100% of patients who enrolled in VPR completed the course
- 80% of patients improving their exercise tolerance
- 100% of patients reported an improvement in their COPD health status
- 100% of patients reported that the programme met their expectations, they would continue to exercise and enjoyed exercising at home and would recommend the programme to others
- Patients saved over 1900 KM and 42 hours in travel expenditure and avoided 70 presentations to the acute hospital setting



2.0 Aims

A pulmonary rehabilitation service is designed to provide the following:

- A structured and supervised exercise programme
- Patient education and behavioural programme
- Patient assessment and outcome measures
- Recommendations for home based physical activity

This guidance document aims to outline the VPR programme to be provided by all teams providing this service during the COVID Global Pandemic and beyond. This will include:

- The referral pathway for the programme
- Roles and responsibilities of the team members
- Outline the structure of the VPR

3.0 Objectives

The following objectives are required to achieve the aim of virtual Pulmonary Rehab:

- Put systems in place that will ensure the safe and effective delivery of a service.
- The VPR platforms will provide a facility for the exercise and the educational component of PR, the core components of rehabilitation.
- Identify outcome measures which are safe and easy to collect via virtual technology
- Outline the role of each key stakeholder in the programme
- Ensure standards of practice are maintained in line with national and international guidelines.
- Ensure evidence based practice.
- Facilitate the sharing of information for future service development
- Comply with GDPR (technology and information sharing and consent)

4.0 Scope

The guidance contained in this document is intended for line managers and clinicians working to establish VPR services as part of this national drive including:

- Senior Respiratory Physiotherapists working in Respiratory Integrated Care (RIC), and Chronic Obstructive Pulmonary Disease (COPD) Outreach services
- Pulmonary Rehabilitation Co-ordinators
- Respiratory Consultant Leads in RIC and/or COPD Outreach



- Physiotherapy line managers.
- Respiratory Clinical Nurse Specialists (CNSp) who are involved in the delivery of PRP
- Nurse line managers
- Members of the MDT who deliver the educational components of PR

5.0 Patient Population

This VPR programmes are designed for patients with chronic respiratory disease who are currently on pulmonary rehabilitation waiting lists or are suitable for a new referral and meet the inclusion criteria as outlined below (Table 1). These patients will be identified locally and will have a diagnosis of either COPD or stable Asthma.

6.0 Outcomes

Continued provision of VPR will provide patients with the opportunity to continue an exercise programme and also to alleviate the strain on secondary and primary care services. The deliverable outcomes of this programme are:

- A safe and effective pulmonary rehabilitation programme delivered through a virtual platform
- An alternative choice in service provision, provided in particular for those patients who traditionally may have been unable to attend PR due to transport issues

7.0 Resources Required for VPR

In order to participate in PR the patient must also fulfil the requirements for the virtual component of the PR.

Required patient resources are:

- access to an I.T. device- smart phone, tablet or laptop
- internet access
- an email address



- disclaimer in which they agree that they are voluntarily taking part in the exercise class at their own risk and assume all risk of injury themselves.

Hospital/community resources:

- Systems should be put in place locally so that patients can return questionnaires without cost.
- A large SMART TV screen IT device with cables to connect TV and access platform if not already available
- Appropriate HSE approval for platform and systems to support VPR including Webex, Microsoft Team, Zoom and Salaso etc

8.0 Roles and Responsibilities

- **Lead Consultant Respiratory Physician**

The Respiratory Consultant lead provides support and Clinical Governance to the Virtual Pulmonary Rehabilitation Programme Team. They will oversee and maintain clinical responsibility for the PRP team and will be available to discuss patient care if required. The Respiratory Consultant is responsible for decisions made by the team and for the performance of the service. The Respiratory Consultant will aid with the outcomes process and the analysis of statistics and reports for the NCP Respiratory.

- **Senior Physiotherapist**

- ❖ VPR Co-ordinator
- ❖ Deliver the exercise class twice weekly
- ❖ Deliver care in line with programme guidelines.
- ❖ Record dataset for patients and keeping abreast of latest developments in PR evidence.
- ❖ Send monthly statistics template to NCP Respiratory for data collation.
- ❖ Report outcomes to management, Lead Consultant

- **Respiratory Clinical Nurse Specialist**

- ❖ Support the referral assessment and education pathways
- ❖ Support the clients during the exercise component of the programme
- ❖ Input into the future development of the service locally



- **Physiotherapy Manager**
 - ❖ Support the programme and VPR team
 - ❖ Line manager for the senior physiotherapist

- **Nurse Managers**
 - ❖ Support the programme and VPR team
 - ❖ Line managers for Respiratory CNS

- **All staff referring to the PRP service**
 - ❖ All staff referring to the service must be familiar with the referral process to the service, with particular reference to the inclusion / exclusion criteria. Referrals for all patients to the PRP service must be received in a timely manner.

9.0 Referral pathway for VPR

Patients currently on waiting lists for PR classes will be recruited for enrolment in VPR. All patients are referred via the pathway explained below:

9.1 Referral Source

The referral source will be determined locally as hospital and community sources may differ. For the standard cohort of patient, the following recommendations are made by the Australian Pulmonary Rehabilitation [Toolkit](#):

- Respiratory specialists including physicians, surgeons, physiotherapists and nurses.
- General physicians.
- Other health and social care professionals.
- Community health professionals.

In all cases a standard PRP referral form should be completed (Appendix 1)



Table 1

9.2 Inclusion/Exclusion Criteria for Virtual PR Programmes

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> ▪ confirmed diagnosis of asthma or COPD by Spirometry or functionally limited by dyspnoea despite optimal management (mMRC3). ▪ Motivated to participate and change lifestyle. ▪ Ability to exercise independently and safely. ▪ Balance ABC score >67% ▪ Email/IT access and phone access 	<ul style="list-style-type: none"> ▪ uncontrolled cardiovascular conditions limiting participation in an exercise programme ▪ Significant orthopaedic, psychological or neurological conditions that reduce mobility or cooperation with physical training. ▪ Suspected underlying malignancy ▪ No new signs of COVID-19 symptoms* ▪ Interstitial Pulmonary Fibrosis

- *If patients who meet the eligibility criteria and have had a hospital admission with COVID 19 please consult with patients Consultant or GP

Locally agreed inclusion/exclusion criteria, together with a clear group understanding of the contraindications to exercise is vital and should be clearly documented in local departmental guidelines. Patients with an mMRC2 (MRC≤3) should be considered for referral if there is a respiratory limitation to exercise.

Patients may still participate in the education component of the PRP if unable for the exercise component.

9.3 VPR Recruitment Process

- Patients on existing PR waiting lists will be contacted over the phone. The structure and purpose of VPR will be explained to them and they will then be asked if they would like to take part.

If a patient is interested in taking part in VPR they must fill the following criteria:

- ❖ Access to a I.T. device
- ❖ Internet access
- ❖ Email address
- ❖ Agreeable to download the application for accessing the I.T. platform



- ❖ Agreeable to a disclaimer in which they agree that they are voluntarily taking part in the exercise class at their own risk and assume all risk of injury themselves.
- ❖ Agreeable to a pre and post assessment via video-link
- ❖ Motivated to log in twice weekly for the duration of the programme
- Patients who fulfil the above criteria will then be asked about their falls history and The Activities-Specific Balance Confidence Scale (ABC) Questionnaire (Appendix 2) will be completed over the phone with them to determine if they require another person present in the house during the exercise class. A score of <67% on the ABC Questionnaire indicates an increased risk of falling and these patients must have another person present in the house to take part in the exercise class.
- Patients who fulfil the above inclusion/exclusion criteria will be sent a document via email with instructions on how to access the platform.
- A pre-assessment time will be agreed.
- Patients will be sent information to include the following:
 - A disclaimer (Appendix 3) and a Safe Home Exercise Checklist (Appendix 4) which they must read and reply via email that they agree to the terms and conditions.
- Patients will be sent information on the safe self-monitoring tests during exercise (BORG score, talk test and pursed lip breathing)

9.4 VPR Pre-Assessment

- The VPR assessment form (Appendix 5) is completed with the patient via the platform.
- The assessment includes:
 - ❖ A review of past medical history with special regard for respiratory history and co morbid conditions such as orthopaedic, neurology and cardiovascular conditions that may affect participation in programme.
 - ❖ Documentation of pulmonary function tests.
 - ❖ A review of inhaled medications to ensure they are optimal for the disease stage and a review of their inhaler technique to ensure it is adequate.
 - ❖ Subjective assessment including respiratory symptoms.
 - ❖ Measurement of dyspnoea at rest and during activity using the BORG and MRC.



- ❖ Measurement of exercise capacity: 1min Sit to Stand Test
 - ❖ Measurement of health status using the COPD Assessment Tool (CAT) for COPD patients only, and a generic QOL score and mood questionnaires; i.e. the PHQ-7 and GAD-7, for all patients.
 - ❖ Exacerbation rates pre and post rehab for up to 12 months post Virtual PRP
 - ❖ Agreed goals (when appropriate)
 - ❖ Review of the Safe Home Exercise Checklist
 - ❖ Emergency contact phone number
 - ❖ Discussion and advice on position and placement of patient's I.T. device during the exercise class to avoid the disclosure of personal information and for optimal viewing.
- Patients enrolled in VPR will be posted a copy of the exercise programme and a class schedule.
 - Patient's exercising on their own will be asked to supply a contact number for a person in case of an emergency.
 - Outcome measures required per person
 - ❖ Pre and post specific outcome measure results
 - ❖ basic demographics age, respiratory conditions,
 - ❖ FEV1 if known,
 - ❖ If person drives
 - ❖ If person lives alone
 - ❖ Track drop outs during VPR course and reason
 - ❖ Record information on patients who are unable to enrol and why, i.e. not interested no device, no broadband, lives alone and at risk of falls.

9.5 VPR Exercise Class structure

- Patients log into the live class from their home twice weekly for between 6-12 weeks (timeline decided locally).
- Class participants must check their symptoms prior to each class and be advised not to exercise if they have a fever or systemic illness or have become suddenly unwell. The patient must be made aware that they have a responsibility to monitor their own symptoms prior to attending classes and to seek medical advice when appropriate.



- If medical intervention is required, the individual will be able to recommence the programme upon receipt of a medical clearance note from GP or medical team.
- The patient must be made aware that they have a responsibility to monitor their own symptoms prior to attending classes and to seek medical advice when appropriate.
- *Mpower monitors may be available during the Covid 19 pandemic, please check with the NCP Respiratory.
- Once enrolled patients will log into the exercise classes twice weekly for between 6-12 weeks. Patients are also encouraged to walk daily if possible and, where possible, use pedometers to measure their daily steps 5 days a week excluding weekends.
- Exercise classes involve aerobic and endurance training. Intensity for aerobic training is monitored using the BORG score with the aim of moderate and somewhat severe intensity (BORG 3-4 = moderate to somewhat severe) level of dyspnoea. Interval training is used (for example, 30sec exercise – 30sec rest progressing to 1min exercise 1min rest with between 8 – 10 stations). For endurance training the patients are asked to use a standard can of food e.g. tin of beans. Classes include a warm-up and cool-down session with stretches and balance exercises.
- Depending on the platform used, the physiotherapist to patient maximum ratio recommended is 1:8 for exercise training. A second person for IT and emergency support may be required.
- Patients are advised that if they report increased breathlessness or worsening symptoms prior to the exercise class they need to delay exercise until this has improved. Patient will be triaged as appropriate. A patient BORG of 5 during the exercise programme would indicate a need to modify the training the intensity downwards.
- Patients are advised to stop exercise immediately if they experience air hunger, if chest pain develops or dizziness, nausea, extreme shortness of breath, excessive wheezing or coughing up blood occurs. Patients are advised to have their reliever inhaler nearby and a glass of water.
- If patients are prescribed Glyceryl Trinitrate spray they are advised to have it nearby during the class.
- Diabetic patients are advised to have a glucose supplement nearby in-case of a hypoglycaemic events occurs.



- In the case of an emergency event during the class:
 - ❖ The class is stopped
 - ❖ All patients except for the unwell patient exit the platform.
 - ❖ The person in the house with the patient is advised on how to deal with the patient OR the patient's emergency contact person is notified by the physiotherapist or CNS.
 - ❖ It is essential for the health care professional giving the class to have the eircode for each patient in the class in case they need to contact an ambulance. is required the physiotherapist/CNS will contact it
 - ❖ The physiotherapist will remain in contact with the patient via video-link until they are stable and/or have received medical attention
 - ❖ Local areas will adopt their own local safety/emergency policy.

9.5 VPR Education

- Education is a core component of PR. Patients may be emailed a link to videos of the talks during the programme or alternatively members of the MDT may be able to deliver live interactive educational sessions. Examples of education sessions are as follows:
 - ❖ Chronic Lung Disease and Self-Management
 - ❖ Medications and inhalers
 - ❖ Chest Clearance
 - ❖ Breathlessness
 - ❖ Exercise
 - ❖ Diet
 - ❖ Smoking cessation
 - ❖ Swallow and Voice
 - ❖ Aids and Appliances/Energy Conservation Strategies

Other local arrangements for the provision of the educational sessions/topics may be put in place

9.6 VPR Post-Assessment

- At the end of the programme patients will video-link via the platform for a post assessment where the measurements of exercise capacity, breathlessness at rest and during activity and health status are repeated.
- A discharge summary is sent to the patient's consultant, G.P. and/or referrer.



- The patient's pre and post outcome measures are inputted on the PR database.
- Patients will be posted a Satisfaction Survey and Stamp Addressed Envelope to return anonymously.
- Patients will be advised that they may be contacted up to 12 months in the future to check their exacerbation rates.

9.6 Pulmonary Rehabilitation for COPD and Asthma patients who do not have access to I.T.

Pulmonary rehabilitation Home Exercise programme may be an alternative

- Patients who are contacted and report that they do not have access to an I.T. device or internet access will be screened to take part in an unsupervised home exercise programme (HEP) if they are interested.
- Patients must fit the following criteria to reduce their risk of being frail as frail patients are at an increased risk of falls injury
 - ❖ < 70 years old
 - ❖ mMRC = 2 (MRC = 3)
 - ❖ GOLD Stage \leq 2
 - ❖ Age-Adjusted Charlson Index <5
 - ❖ > 67% on the ABC Questionnaire or must have another person present in the house while doing their unsupervised HEP.
- Patients will complete a pre-assessment via telephone contact including self-reported outcome of an exercise capacity test, for example the 1-minute Sit to Stand Test, Breathlessness score (BORG and mMRC), and the appropriate health status questionnaire for examples CAT, GAD-7, PHQ-9, and a generic QOL questionnaire.
- Patients will be posted out a disclaimer to sign and a stamped addressed envelope to return it.
- Once the patient returns the disclaimer the HEP will be posted out to them to commence.
- Patients will receive a text and phone call once per week to encourage and motivate them to continue the HEP and to answer any queries in relation to the HEP.
- Patients will also be encouraged to walk as much as possible, and use a pedometer to help keep track of their daily steps five days a week.
- Patients will complete a post-assessment via telephone contact including self-reported outcome of the pre assessment tests and health status questionnaire.



- A discharge summary is sent to the patient's consultant G.P. and referrer.
- The patient's pre and post outcome measures are inputted on the PR database.
- Patients will be posted a Satisfaction Survey and stamp addressed envelope to return anonymously.
- The patient may be contacted up to 12month in the future to collect data on exacerbation rates post rehab.

10.0 Monitoring Audit and Evaluation

Health care professionals have a clear responsibility to the patients in their care and should ensure the standard and delivery of that care is adequately meeting the need of patients. Health care professionals have responsibilities not only in planning care but also in re- evaluating patient outcomes, and demonstrating the ability to change current practices and interventions to effectively respond to the identified need of the individual patient. This service will be monitored and audited at a local level through reports to the physiotherapy manager and respiratory consultant lead, illustrating the performance of the programme.

Patient's pre and post PRP outcome measures will be collected. Patient's exacerbation rate pre and post PRP may also be reviewed.

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- ❖ Our Lady of Lourdes Hospital Drogheda SOP for Virtual Pulmonary Rehabilitation during The COVID-19 Global Pandemic.
- ❖ End to End Model of care for COPD 2019 (HSE)



12 Appendices



Appendix 1 Referral form

Pulmonary Rehabilitation

Program Referral Form

Name:

Address:

• Date of Referral: __/__/__ • Diagnosis: _____ • PFTs: Date: __/__/__ %FEV1/FVC _____
 FEV1 _____% FVC _____% DLCO _____% • MRC Score: __/5 • if MRC <3 but patient requires education please tick box

Grade	Degree of Breathlessness Related to Activities
1	Not troubled by breathlessness except on strenuous activity
2	Short of Breath when hurrying on level ground or walking up a slight hill.
3	Walks slower than most people on the level, stops after a mile or so, or stops after 15 minutes walking at own pace.
4	Stops for breath after walking about 100 yards or after a few minutes on level ground.
5	Too breathless to leave the house, or breathless when undressing

Inclusion Criteria (Please tick):

- Diagnosis of COPD or Asthma
- MRC score 3-5
- No evidence of unstable asthma, ischaemic heart disease, decompensated/unstable heart failure, severe or uncontrolled systemic arterial hypertension, neuromuscular or musculoskeletal disorders or other disabling diseases that could affect exercise training.
- No suspected underlying malignancy
- Motivated to attend a 7-week out-patient exercise and education program in a group setting.
- Safe and independent with or without mobility aid and has the ability to exercise independently with supervision

Optimisation of Respiratory Medications: Yes No

Please List Medications: _____

Have you discussed Pulmonary Rehabilitation with the patient? Yes No

Smoking Status: Current Smoker Ex-Smoker Never Smoked

If Smoker, has patient been referred to Smoking Cessation Officer? Yes No

Home Oxygen: Yes No ____L/min ____hrs/day

Portable Oxygen: Yes No ____L/min ____device

NB: It is essential that each patient has also been screened for the above criteria by their **Consultant/Registrar/Respiratory CNS/ANP /Respiratory Physiotherapist** and signed below.

Signature

PRINT NAME and Bleep Number

Send Completed forms to:

If patient has MRC < 3 but requires education, they will be invited to monthly education event only. INCOMPLETE REFERRALS WILL BE RETURNED



The Activities-Specific Balance Confidence (ABC) Scale

Patient Name: _____ DOB: _____ Date: _____

For each of the following activities, please indicate your level of self-confidence by choosing a corresponding number from the following rating scale:

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
No confidence _____ Completely confident

"How confident are you that you will not lose your balance or become unsteady when you...

1. Walk around the house? _____%
2. Walk up or down stairs? _____%
3. Bend over and pick up a slipper (or item) from the front of a closet floor _____%
4. Reach for a small can off a shelf at eye level? _____%
5. Stand on your tiptoes and reach for something above your head? _____%
6. Stand on a chair and reach for something? _____%
7. Sweep the floor? _____%
8. Walk outside the house to a car parked in the driveway? _____%
9. Get into or out of a car? _____%
10. Walk across a parking lot to the mall (store)? _____%
11. Walk up or down a ramp? _____%
12. Walk in a crowded mall where people rapidly walk past you? _____%
13. Are bumped into by people as you walk through the mall? _____%
14. Step onto or off an escalator while you are holding onto a railing? _____%
15. Step onto or off an escalator while holding onto parcels such that you cannot hold onto the railing? _____%
16. Walk outside on icy sidewalks? _____%

Instructions for Scoring:

The ABC is an 11-point scale and ratings should consist of whole numbers (0-100) for each item. Total the ratings (possible range = 0 – 1600) and divide by 16 to get each subject's ABC score.

Total Score: _____



Appendix 3 Disclaimer



Disclaimer

I agree and consent to the following:

I am voluntarily participating in a 7 week Virtual Home-Based Pulmonary Rehabilitation programme.

I understand that this is a new initiative and the background and benefits of the programme have been explained to me.

I understand that when participating in any exercise there is a risk of injury.

I am taking part at my own risk and assume all risk of injury to myself.

The HSE and physiotherapists on this programme accept no liability.

I have read and will adhere to the Safe Home Exercise Checklist.

My data may be used anonymously in any post project reporting.

Name (in print)

Signature

Date



ASTHMA

Appendix 4



COPD

Safe Home Exercise Checklist

- 1) A stable surface to put your computer device on.
- 2) Ample Safe Space to do the demonstrated exercises.
- 3) A family member, friend or carer if advised.
- 4) A supportive chair for doing exercises from and resting on.
- 5) Avoid any rugs or mats that may be a trip risk.
- 6) A glass of water or water bottle
- 7) No pets present that may cause you to trip or fall.
- 8) Stop exercising immediately if you experience any of the following:
chest pain, dizziness or feeling faint, extreme shortness of breath,
excessive wheezing or coughing up blood.



Appendix 5 Virtual Pulmonary Rehabilitation Assessment

Name:		Date of Assessment: __/__/__	
DOB: __/__/__		MRN:	
Address:		Medical card no.:	
		Phone no.:	
		Emergency Contact no.:	
		Consultant:	
		GP:	
EIRCODE:			
Email address:			
Respiratory diagnosis:			
Other past medical Hx:		Social Hx: Lives alone / with _____ Two-Storey or Bungalow Mobility: Transportation: Occupation:	
Medications:		Baseline Respiratory function:	
Inhaler Technique Checked: Yes <input type="checkbox"/> No <input type="checkbox"/>		Mobility distance: Cough: Sputum:	
Home Neb: Yes <input type="checkbox"/> No <input type="checkbox"/> _____		Wheeze: Other:	
Home O2: No <input type="checkbox"/> Yes <input type="checkbox"/> ___ L/min ___ hrs/day		Stress incontinence: _____ Referral to WH: _____	
BiPAP: Yes <input type="checkbox"/> No <input type="checkbox"/> Settings: IPAP: ___ EPAP: ___		Vaccines: Flu <input type="checkbox"/> Pneumonia <input type="checkbox"/>	
		Portable O2: No <input type="checkbox"/> Yes <input type="checkbox"/> Device ___ Setting ___	
		Smoking Hx: Never/Ex/Current Pack year Hx: _____	
Spirometry	Date __/__/__	Exacerbation Rate in Past 12 months	
FEV1		No. of admissions for Resp. Disease:	
FVC		No. of acute treatment at home:	
Ratio		Recent: weight loss/gain/Stable weight _____	
% predicted		Height: _____	Weight: _____
DLCO		Poor appetite: Y/N	
TLC		Dry mouth: Y/N	
Reversibility			
1-min STS	Pre-rehab Ax Date: __/__/__	Post-rehab Ax Date: __/__/__	
Pre-test BORG			
No. Reps Completed			
Post-test BORG			
CAT (for COPD pts only)			
MRC			
GAD-7			
PHQ-9			
Falls History			
ABC Questionnaire			
Safe to exercise Alone	Yes <input type="checkbox"/> No <input type="checkbox"/>		



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