

# Co-creating Technology Supported Interventions - How people can benefit from an enhanced Pulmonary Rehabilitation Service?

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## Background

Pulmonary Rehabilitation (PR) in Ayrshire was limited and delivered centrally in a single traditional class format not suitable, nor easily accessible for everyone.

There is extensive evidence supporting the health and wellbeing benefits of PR and reducing hospital admissions and length of stay for people living with Chronic Obstructive Pulmonary Disease (COPD).

There are over 10,000 people living with COPD in Ayrshire, however very few – 254 in 2017/2018 – are referred for PR.

Only 20% of those patients referred attended for PR assessment, and only 15% of these completed the programme.

Previous work identified that the lack of local classes and length of waiting time to start a programme were key reasons for patients not wishing to be referred. Additionally, clinical staff reported that they were unclear about how to refer, what took place in the PR classes and how patients benefitted from PR.

## Project Aim

To increase access and uptake to PR by providing programmes in local communities, and to test/use technology to provide alternatives to traditional PR.

## What We Did

Following consultation with service users and staff we;

- Made contact with General Practices and related teams to raise awareness of PR content and benefits, clarify referral process and to encourage referral
- Reviewed the process for PR assessment to reduce length of time from referral to assessment – initial contact and conversation with PR physiotherapist
- Carried out assessments and delivered PR programmes closer to individuals' homes
- Explored and tested the use of different formats and technologies to increase access to PR

This enhanced approach was tested initially within East Ayrshire.

## Successes

### Increased referral rate

2017: 3 month period = 21 referrals  
 2018: 3 month period = 58 referrals

### Increased engagement

Change of process initial contact conversation with PR Physiotherapist

	Existing core PR Service	Enhanced PR Project
Waiting time from referral to assessment	31 weeks (East Ayrshire)	Assessment arranged on receipt of referral
Attended for assessment following referral	20%	84%

### Improved completion rate

PR completion rate rose dramatically to 70%, compared with 15% for existing service.

A third of people received PR at home (not previously available).

	Enhanced PR (this project)		Existing core PR Service
Completed Programme (Group or Home)	21	70%	15%
Did not complete programme	8	26%	85%
Deceased	1		
Total	30		

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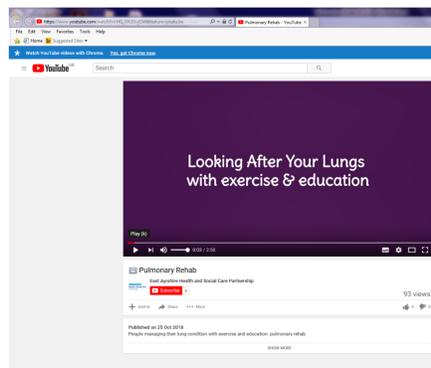
## Reduced admissions/length of stay

Nine (9) patients who participated in the project had numerous hospital admissions in the months prior to participation. Following PR, admissions/length of stay for these patients reduced by 92%.

Number of patient with previous hospital admissions in previous 3 months	Total number of bed days used	Total number of bed days post pulmonary rehab
9	101	8

## Promotional Video

YouTube video produced to encourage new patients to attend PR.



[https://www.youtube.com/watch?v=HQ\\_OK2GvjCM&feature=youtu.be](https://www.youtube.com/watch?v=HQ_OK2GvjCM&feature=youtu.be)

## Challenges

### Using technologies to access PR

Technologies with potential to increase access and reach were identified, however we encountered several challenges that impeded progress during the project period. Discussions are ongoing to resolve challenges and make progress in the near future.

	Results from project	Recent Progress
Attend Anywhere (Near Me) - virtual classes for individuals unable to attend group programme	Intermittent issues with connectivity from hospital sites  One person was very keen to use it however frustrated with connectivity issues  Many individuals who could have benefitted did not have access to internet  Other challenges - lack of digital infrastructure (rural areas), personal choice, digital literacy.	Connectivity tests now progressing for use in patients' homes  Exploring the potential of Attend Anywhere (Near Me) for other aspects of PR service
Use of text reminders to continue engagement during the programme	Unable to trial as the service was being reviewed during the project timeframe	Exploring potential with Technology Enabled Care team
Sourcing My COPD app for patients unable to commit to group PR	Unable to trial during project timeframe due to Information Governance process	Now secured Information Governance approval and funding for 50 licences  Test of change beginning in May 2019

### Other challenges

- Weather - difficulty for staff attending rural classes in the snow/winter conditions
- Finding suitable and affordable venues to provide classes in communities
- Collecting data for evaluation/improvement

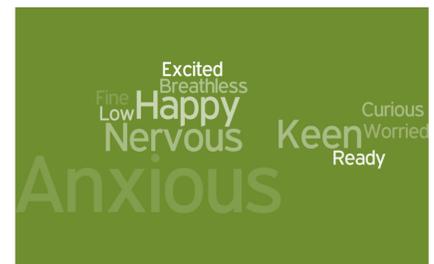
## Patient/Carer Experience & Benefits

### Following participation in PR:

- 100% of participants felt more confident to manage their condition.
- 86% reported using the skills to better manage their condition.
- 86% were better able to make decisions about managing their health.
- Participants found it to be fun, and enjoyed peer support.
- Carers were involved, ensuring maximum understanding of the challenges and the benefits of the intervention

## Pre and Post PR Feelings

Pre PR



Post PR



## Patient Stories

A, B & C had not previously engaged in PR due to their breathlessness. Person D had not been referred to PR previously.

### Person A

Started class being accompanied by his wife and being driven to the class, rarely left the house.

Completed the class, bringing himself on his mobility scooter. Now uses scooter to go to Kilmarnock by bus, on his own, once a week, to meet his granddaughter for a coffee.

### Person B

Rarely left the house, the dog's walk was only to end of garden path and the dog ran round the park himself.

Now confident to walk for papers every day and the dog has at least one walk a day accompanied round the park. Started having a weekly bus trip to Glasgow with people met at the group to have coffee and people watch.

### Person C

Began PR at home with the assistance of Healthcare Support Worker as not confident to attend the class.

Completed PR by attending the class. Now planning a holiday with her daughter

### Person D

Began PR at home due to complex health needs. Previously played guitar and sang in a folk band but unable to continue due to breathlessness. Rarely left home and followed music scene on the internet

Post home PR, using visits and Attend Anywhere, gained confidence to play guitar and sing again and has started attending the local folk club with his wife, and even performed a few 'sets'.

## Developments Since End of Project

- Secured permanent funding for service in East Ayrshire, via transforming respiratory prescribing patterns and resource transfer
- Anticipate further funding this year to deliver similar service in South and North Ayrshire.
- Have identified a cohort of patients who had two or more admissions to hospital in the last year and have offered them PR.

## References

<https://www.chss.org.uk/.../2017/.../2017-pulmonary-rehab-report.pdf>