# A demonstration of how community care pulmonary rehabilitation has supported people with chronic respiratory conditions to avoid hospitalisation between 2021 and 2023- Evidence from a single centre study in Ireland.


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Enhanced Community Care

Respiratory Integrated Care
Pulmonary Rehabilitation

## Introduction

Hospital admission for respiratory diseases in Ireland account for 10.6% of the all-hospital admissions[1] costing the Irish economy billions every year with spendings of up to €22.5 billion being paid out on health care costs in a single year [2]. The Enhanced Community Care (ECC) program aims to reduce hospital visits for chronic conditions by providing care outside of the hospital environment by community specialist ambulatory care teams (hubs) [3,4] . Pulmonary rehabilitation (PR) is one such service which offers one of the most cost-effective treatment plans for both patient and the health care system[5].

## Study Aim

To assess how pulmonary rehab in Sligo/Leitrim community services has supported people with chronic respiratory conditions to avoid hospitalisation.

## Methodology

**Study Design**
- Observational Cross Sectional

**Population**
- Sample Size n=136

**Inclusion Criteria**: Patients with a minimum pre & post assessment.
**Exclusion Criteria**: Patients with only a pre assessment.
- Pre assessed patients n=135
- Post assessed patients n= 101
- 6-month assessed patients n= 48
- 1-yr assessed patients n= 14

**Outcome Measure**
- Analysis of patient files of pre & post assessment following the PR programme & again at follow-up 6 months & 1-year.
- Assessments preformed by the Pulmonary Rehab Team

**Data Analysis**
- IBM SPSS for statistical analysis

## Descriptive Results

Area of patient residence in accordance with CHN's. CHO1: Leitrim, S. Donegal & Sligo. Formerly Roscommon and Mayo were accepted to Sligo but now have their own local hubs established.

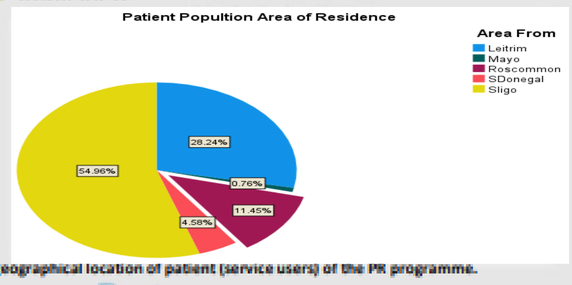


Figure 1: Outlines the geographical location of patient (service users) of the PR programme.

## Attendance Rates

90 patients (64.8%) completed the PR programme(attended >9 classes), 13 patients attended all 16 classes (9.8%). Reasons for non-attendance included drop out, cancelled for covid or health issues, did not attend and cancelled with no reason.

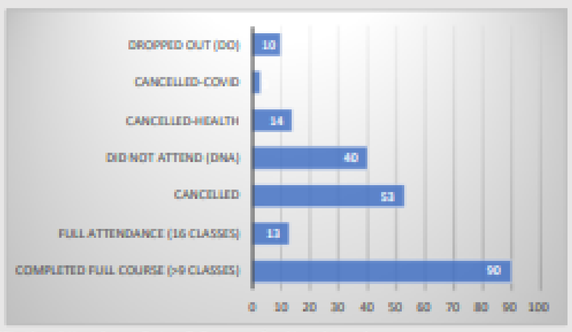


Figure 2: Pulmonary Rehabilitation Attendance Rates & Reasons for Non-Attendance.

COMMUNITY HEALTHCARE
CAVAN DONEGAL LEITRIM MONAGHAN SLIGO

Integrated Care Programme for the Prevention and Management of Chronic Disease

## Quantitative Results

The main findings indicate hospital admissions decreased for 55 patients, 6 min walk test (6MWT) improved by 50.44 metres, 5 rep sit to stand test decreased by 5.36 seconds all from pre to post assessment. Quality of life scores of HADS improved initially and then rose at 1 year assessment and CAT scores decreased by 4.4 and ACT had no change .

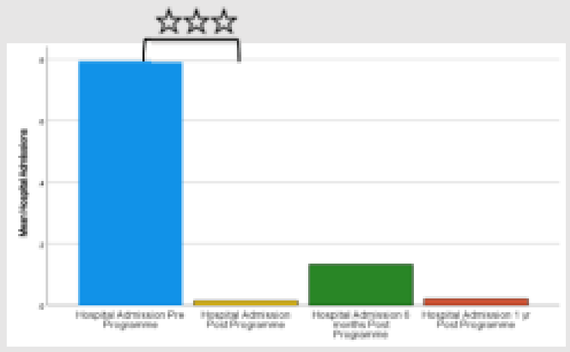


Figure 3: Mean Hospital Admissions

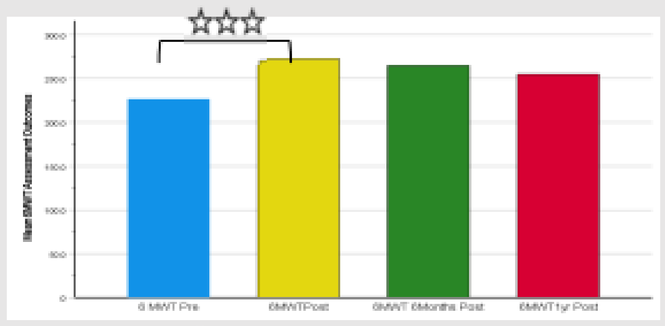


Figure 4: 6 Minute Walk Test Results

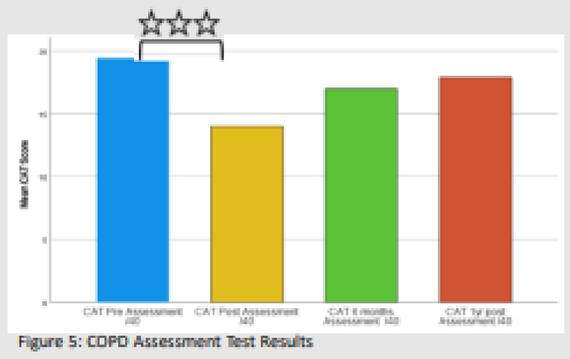


Figure 5: COPD Assessment Test Results

Hospital admissions decreased significantly from pre to the post pulmonary rehabilitation assessment. *** This was found to be highly statistically significant p=0.001.

6 MWT had statistical and clinically significant improvements from pre to post assessment ***at a highly significant level p=0.001 with mean increases of 50.44 metres, surpassing the minimum clinical important difference of 30 metres. Cohen's d shows a large effect of 0.81.

COPD assessment tool (CAT) had statistical and clinically significant decreases from pre to post and at 6-month assessment. *** at a highly significant level p=0.001 and p=0.003, with mean score decreases of 4.4 and 3.2, respectively.

## Conclusion

Pulmonary rehabilitation has supported patients with chronic respiratory conditions by improving their cardiorespiratory and muscular fitness. Improving symptoms of their condition for those with COPD, aided in reducing their anxiety and depression, improved their overall quality of life and most importantly reduced their hospital admissions. With the re- commencement of support groups, community exercise programmes, decreases in Covid cases and the expansion of the RIC teams in the community it is expected that these figures will continue to move in an upward trajectory.


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NATIONAL CLINICAL PROGRAMME RESPIRATORY

For further information on Chronic Disease: https://cnh.hseland.ie/icpcd/about/

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