

IS COMMUNITY PULMONARY REHABILITATION (PR) ENVIRONMENTALLY FRIENDLY?

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BACKGROUND

“Climate change is the biggest global health threat of the 21st century” (Watts *et al.*, 2018) and “current emissions trajectories pose an unacceptable and potentially catastrophic risk to human health” (Watts *et al.*, 2015). The aim of chronic disease hubs is to ensure patients receive the right care, at the right time and in the right place (Sláintecare, 2020).

The aim of this study is to analyse the sustainability of community PR.

METHODOLOGY

Step 1

Planning stages

10 patients participated in the 8 week community pulmonary rehabilitation programme.

Step 2

Collecting data

At the assessment patients mode of transport was recorded. CO2 emissions, distance travelled, time and cost were calculated using an online calculator for each patient travelling to community PR and Acute PR (hypothetically).

Step 3

Data Analysis

Only the patients who could drive were analysed. The data collected for each patient travelling to Community PR and Acute PR were compared using Excel. Then the total calculations for each group (Community PR and Acute PR) were compared.

RESULTS

RESULTS:

Seven patients drove, one patient walked and two patients got the bus to Community PR. Community PR resulted in less CO2 emissions being released into the atmosphere and also, less kilometres travelled by patients. Patients saved €577.56 and spent 109 less hours travelling to Community PR compared to if they had to travel to Acute PR.

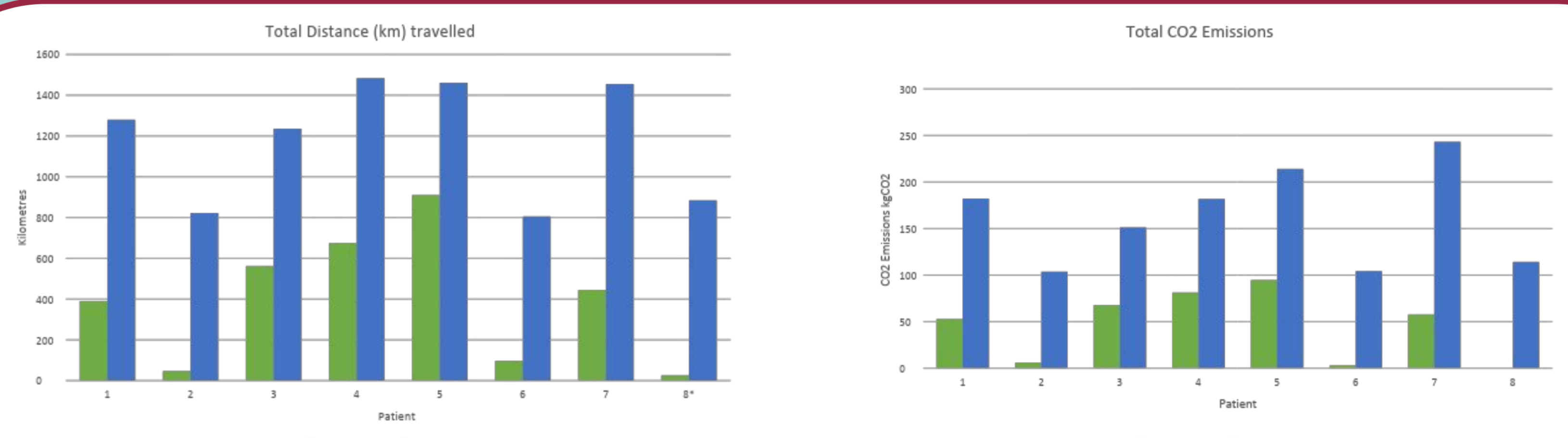


Figure 1. The total distance travelled by patients attending the Community PR vs the distance they would have to drive to PR. *8 indicates the patient who walked to Community PR. Figure 2. The CO2 emissions for each patients journey to community PR vs Acute PR.

	Community PR	Acute PR
Total CO ₂ emissions	363.39 kgCO ₂	1,294.26 kgCO ₂
Total kilometres (km) travelled	3,103.2 km	9,605.2 km
Total cost for fuel (€)	€223.72	€801.28
Total time travelling (hours)	58 Hours	167 Hours

Table 1. Total CO2 emissions, kilometres travelled, cost of fuel and time spent travelling to Community PR versus Acute PR.

CONCLUSIONS / RECOMMENDATIONS

Community PR resulted in significantly less CO2 emissions released into the atmosphere. Community PR is more cost effective and less time consuming for patients. One patient was able to walk to community PR. By providing the right care, at the right time and in the right place we are also providing an environmentally sustainable service, reducing carbon emissions and reducing air pollution. This study audited a small cohort of patients. Therefore, the aim is to complete another audit of patients attending Community PR in a different location and determine whether or not they yield similar results.