

7.10 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). Therefore, the aim of this study is to analyse the sustainability of community PR.

Methods: 10 patients participated in an 8 week community PR programme. At the assessment patients mode of transport was recorded. CO₂ emissions, distance, time and cost were calculated for each patient travelling to community PR and Acute PR (hypothetically). Only the patients who could drive were analysed.

Results: 7 patients drove, 1 walked and 2 got the bus to PR.

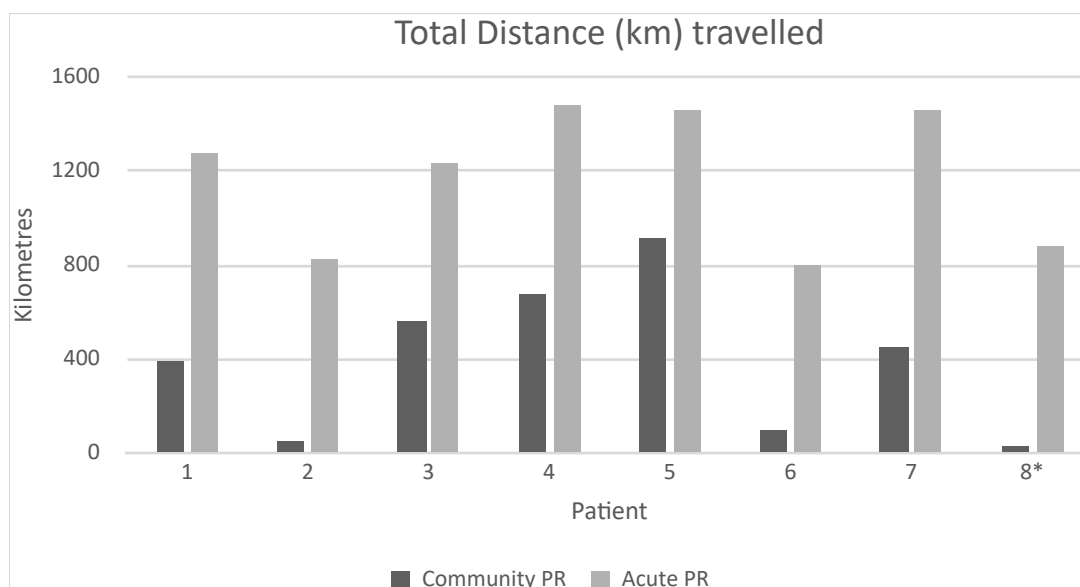


Figure 1. The total distance travelled by patients attending community PR vs the distance they would have to drive to acute PR. 8* indicates the patient who walked to Community PR.

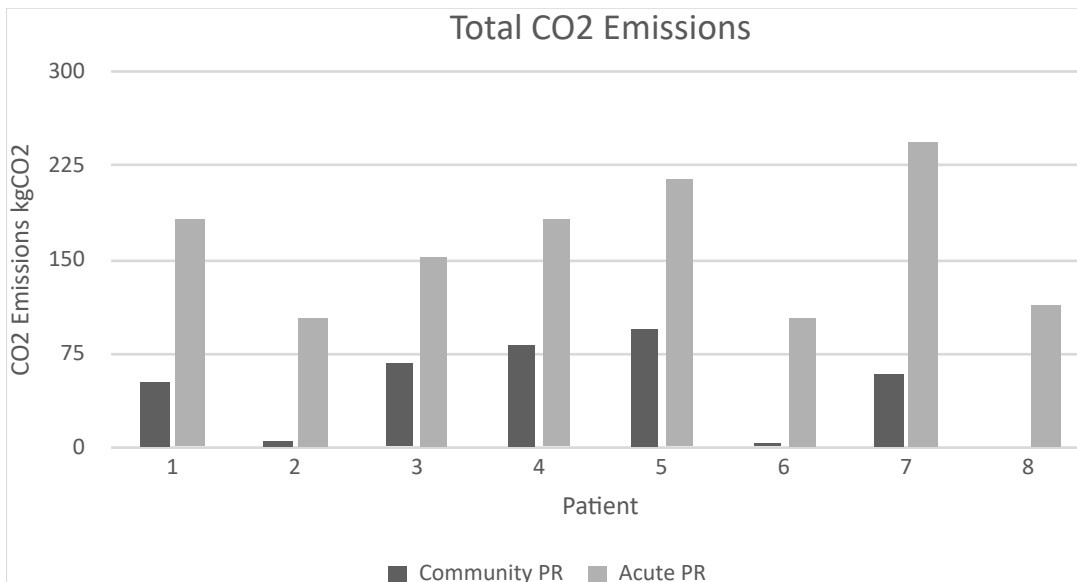


Figure 2. The CO₂ emissions for each patients journey to community PR vs acute PR.

| | Community PR | Acute PR |
|--|--------------------------|----------------------------|
| Total CO₂ 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 Tuam vs MPH.

Conclusions: In conclusion, 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 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.

Keywords: Climate change, pulmonary rehabilitation, CO₂ emissions, sustainability.

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