Acute exacerbations of chronic obstructive pulmonary disease (AECOPD) account for more than 70% of disease-related costs and negatively impact patients' health status. Pulmonary rehabilitation (PR) is a cornerstone intervention for the management of stable disease with the potential to be equally effective in AECOPD. However, studies assessing PR role during/shortly-after AECOPD have been mainly conducted in inpatient settings, despite most AECOPD being managed in the community, and have been delivering PR with different components, intensities, durations and outcome measures, not considering patients' needs/expectations. This has led to controversial results across studies. To overcome these drawbacks, adequately powered studies delivering well-designed community-based PR programmes and exploring patients' perspectives are urgently needed to guide research and clinical practice. This mixed-methods project proposes to design/implement and evaluate a community-based PR programme specifically tailored to patients' self-reported and clinical needs during AECOPD.

Rehabilitation sciences

## Core Outcome Set for pulmonary rehabilitation in patients with chronic obstructive pulmonary disease (COPD)

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Chronic obstructive pulmonary disease (COPD) is a major cause of morbidity and mortality worldwide. Pulmonary rehabilitation (PR) is fundamental however, response to this intervention varies among patients with COPD. One of the main reasons for this differential response is the heterogeneity of outcomes used and reported, hindering bench-marking between and within PR centres, the conduction of meta-analysis and the scientific/clinical advance of a vital treatment to respiratory patients. This problem can be overcome with the development of a Core Outcome Set (COS) - minimum set of outcomes that should be consistently measured and reported. Thus, this thesis aims to develop a COS for PR in patients with COPD. It will be developed in stages, according to the Core Outcome Measures in Effectiveness Trials (COMET) initiative methodology: i) identify existing knowledge – systematic review of the literature, ii) fill gaps in knowledge if needed – observational studies of effects of PR in overlooked outcomes, iii) elicit views about important outcomes in a consensus process – qualitative study with interviews and Delphi survey, iv) hold a face to face meeting to finalise the recommended COS. Finally, a review of the clinimetric properties of the most used measures for the core outcomes will be conducted, to recommend not only the core outcomes, but also the core measures. This COS is expected to facilitate consistency among trials, lessen the risk of outcome reporting bias and inform clinical and research practice.

Rehabilitation sciences

### Environmental sciences and engineering

# Should future cities be compact or sprawled? Development of an eco-indicator to assess future urban planning strategies

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Environmental sciences and engineering

## SKILLS AND EDUCATIONAL CONTEXTS FOR ECOLOGICAL AND ENVIRONMENTAL LITERACY IN TEACHER TRAINING ON 1ST AND 2ND CYCLE OF BASIC EDUCATION

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#### ABSTRACT

The integration of environmental policies with educational and science policies in teacher training, in formal education and other learning contexts, ensuring the transfer of scientific knowledge "Science for education" and assuring education for sustainable development, both in the initial teachers training, and in the context of continuous training, constitute United Nations Educational, Scientific and Cultural Organization's goals (UNESCO).

Integrated in a school-wide aproach, that promotes the envolvement of schoolar comunity to achive environmental sustainable goals (as required by UNESCO strategic/referential documents transposed to public environmental and educational policies in Portugal), it was