Generalized compared to disease-specific outpatient rehabilitation in people with multimorbidity: feasibility outcomes from a pilot randomized controlled trial.

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Background:
Multimorbidity (the co-existence of two or more chronic conditions) is a growing healthcare burden. Level 1 evidence supports rehabilitation provision in chronic disease management. However, exercise prescription frequently doesn't account for the presence of multiple chronic conditions. The study objective was to test the feasibility of comparing generalized rehabilitation to disease-specific outpatient rehabilitation in people with multimorbidity.

Methods
We conducted a pilot feasibility randomized controlled trial with concealed allocation, assessor blinding and intention-to-treat analysis. Sixteen individuals with a diagnosis of a single chronic disease eligible for usual care disease-specific rehabilitation (e.g. pulmonary, cardiac, heart failure rehabilitation) and at least one other chronic condition were enrolled. Exclusion criteria included medical instability and an inability to walk 50 metres. The intervention group attended generic chronic disease outpatient exercise rehabilitation. The control group attended usual disease-specific outpatient exercise rehabilitation according to primary diagnosis. Participants attended twice weekly exercise and weekly education for eight weeks. Exercise consisted of aerobic, upper and lower limb resistance exercises. The primary outcome was change in functional exercise capacity (six-minute walk test). Secondary outcomes included quality of life. Feasibility measures included numbers screened, recruited and completed.

Results
Fifty-nine patients were screened to recruit sixteen participants; mostly male (63%) with mean (SD) age 69 (9) years, BMI 29 (6) and functional comorbidity index 6 (2). Ten have completed the intervention period. Main presenting conditions included heart disease (44%) and chronic obstructive pulmonary disease/asthma (38%). Baseline 6MWT distance was 397 (129) metres. Nine and seven patients were randomized to intervention and control and completed median (IQR) 16 (11 – 16) and 10 (8 – 13) sessions respectively. One participant dropped out after commencing rehabilitation (control).

Discussion
This trial was feasible and will inform the development of a large non-inferiority randomized controlled trial.

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