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**Feasibility of home-based cardiac rehabilitation in frail patients**

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**Topic(s):**
Cardiovascular Disease in Special Populations - Other

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Background: Cardiac rehabilitation (CR) in frail patients is challenging, and current guidelines do not include specific recommendations for this population. Furthermore, participation rates of frail patients in CR are low. An important barrier to participation is that most CR programmes are hospital-based. Home-based CR has been suggested as an alternative, but feasibility has not been studied in frail patients.

Purpose: To study perceptions of physical therapists (PTs) on feasibility and required adaptations to home-based CR in frail patients with cardiovascular disease.

Methods: This pilot study consisted of structured observations and semi-structured interviews. Thirty PTs in primary care were selected, based on experience in cardiovascular disease, home-based treatment or geriatric patients. PTs were trained to perform an in-house developed home-based CR-programme in frail patients. Patients were selected during hospital admission for cardiac disease or cardio-thoracic surgery, admission of 48 hours or longer and safety risk score (VMS) = 1 for age 80+ and = 2 for age 70+. To evaluate adherence and adaptations to the programme we observed treatment sessions by PTs. Afterwards, we interviewed these PTs to assess their perceptions on feasibility of the programme. Two researchers separately coded observations and interviews into categories based on a theoretical framework (Gurses 2010) and supplemented with open coding (Grounded theory). We used axial and selective coding to look for central themes. Data saturation was reached after six interviews.

Results: We observed and interviewed eight PTs, mean age 43.1 years (SD 17.2), mean work experience 19.3 years (SD 15.6), experienced in: CR (n=4), geriatric treatment (n=7), home-based treatment (n=8) and multidisciplinary work (n=7). All PTs reported home-based CR to be feasible and reported no adverse events. In addition PTs said these patients wouldn’t have participated in hospital-based CR, thereby forfeiting its benefits. We identified three main themes for tailoring home-based CR to frail patients: adaptations to exercise intensity and exercise testing, stimulating patients’ motivation and self-regulation and structural monitoring of risks for readmissions. In addition, PTs described facilitators (e.g. financial support) and barriers (e.g. limited time) for long-term implementation.

Conclusion:

Home-based cardiac rehabilitation for frail patients seems to be a feasible alternative to hospital-based cardiac rehabilitation. Our study is a first step in improving care for frail patients with cardiac disease and can be used to tailor home-based cardiac rehabilitation to frail patients.
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