



MOBILIZE

- Personalized exercise therapy and self-management for patients with multimorbidity

Background

Multimorbidity, commonly defined as the presence of two or more chronic medical conditions in an individual, is associated with decreased quality of life, functional decline, and increased healthcare utilization. Multimorbidity affects millions of people around the world and is considered the number one challenge for the health care system in the years to come due to the enormous associated personal and societal consequences. Compared to patients with only one chronic medical condition, patients with multimorbidity are at higher risk of dying prematurely, being admitted to hospital and having longer stays in hospital. The health care system and most research focus on one medical condition at a time, and treatment plans often fail to take a holistic perspective. We know from qualitative research that treating one condition at a time is inconvenient, inefficient and unsatisfactory for the person with the chronic conditions as well as his or her health care provider. Research on effective treatment of multimorbidity is lacking.

The MOBILIZE project

A new 5-year project based at the University of Southern Denmark and Næstved-Slagelse-Ringsted Hospitals is going to change that. The aim of the MOBILIZE project is to empower patients with multimorbidity to take a more active role in their health care through a personalized exercise therapy and education program so that they may reduce symptoms of the individual conditions, increase quality of life and physical function and prevent development of other chronic conditions. Strong interdisciplinary collaboration involving many different scientific methodologies and a high degree of patient involvement throughout the entire research process are at the heart of the project to ensure relevance to the patients and the health care system and to make sure that the project is implementable in clinical practice afterwards. The MOBILIZE project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement No 801790).

Based at the research unit PROgrez in the Department of Physiotherapy and Occupational Therapy at Næstved-Slagelse-Ringsted Hospitals and the Research Unit for Musculoskeletal Function and Physiotherapy in the Department of Sports Science and Clinical Biomechanics at the University of Southern Denmark, and with private practice physiotherapists and municipal rehabilitation centers as collaborators, the project will reach across Region Zealand. The project will hire two full-time researchers (postdocs), a number of pre-graduate research scholars, student employees, evaluators and a research coordinator.

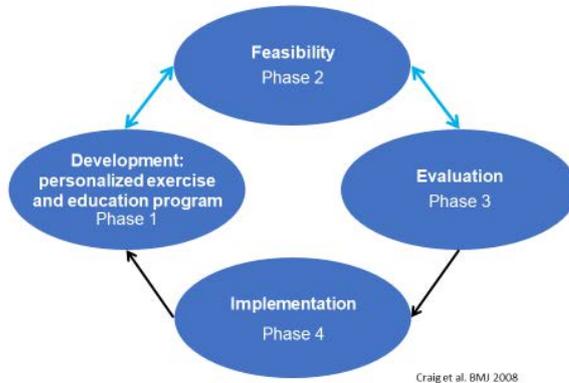
Framework of the project

The project has four phases, see Figure 1. During the first part of the project, outcomes and biomarkers that predict better health outcome from different types of exercise therapy and exercise characteristics associated with a better outcome in people with different combinations of chronic conditions will be identified through an exploratory observational cohort study of people with osteoarthritis who have undergone an 8-week exercise therapy and education program in Denmark (GLA:D) as well as a systematic review and meta-analysis that summarize the existing evidence.





Figure 1 Overall framework for developing and evaluating complex interventions



Subsequently, a 12-week exercise therapy and education program will be developed based on existing recommendations for exercise and strategies to facilitate behavioral changes. To ensure a high degree of patient and provider involvement, focus group interviews will be conducted with patients with multimorbidity, health care providers and other relevant stakeholders to acquire their views on the program. Once this phase is completed, the exercise therapy and education program will be tested in a feasibility trial involving 30 patients with multimorbidity. The same procedures and outcomes as in the subsequent RCT will be used, and data will be collected at baseline and immediately after the intervention (12 weeks). The lessons from the feasibility trial will be used to evaluate and implement any adjustments that need to be made prior to commencing the RCT.

The purpose of the RCT is to investigate the effects of a personalized exercise therapy and education program in comparison with current best practice on self-reported, objectively measured and physiological outcomes in people with multimorbidity. Two hundred and twenty-eight participants fulfilling the eligibility criteria will be recruited from Slagelse Hospital as well as private practice physiotherapists and municipal rehabilitation centers in Region Zealand. The included patients will be randomized to either the personalized exercise therapy and education program or current best practice. Data will be collected at baseline and after 12 weeks. The study hypothesis is that the personalized exercise therapy and education program will improve quality of life and physical function more than current best practice.

If supported by study findings, a model for implementation of the personalized exercise therapy and education program in clinical practice will be developed during the last phase of the MOBILIZE project.

The MOBILIZE project will provide new insight into which treatment is the most effective for patients with multimorbidity. This insight is essential to ensure the best possible treatment for this large and growing group of patients.

Contact info:

Næstved-Slagelse-Ringsted Hospitals and University of Southern Denmark
Associate Professor and Head of Research Søren Thorgaard Skou

+45 23 70 86 40

stskou@health.sdu.dk

[@STSkou](https://twitter.com/STSkou)

