

Long-Term Care in Motion (LTCMo)

What is the social innovation?

The primary objective of “Long-Term Care in Motion” (LTCMo) within the project INNOVAGE was to create a social innovation with the potential to promote physical activity (PA)-related behavior in a nursing home (NH) setting. It represents a model project based on a natural lab approach (i.e., investigation of a maximum number of NH residents in their “real ecology”). The project’s activities were based on four main objectives:

1. Examination of the potential of PA interventions among NH residents based on a *systematic review* evaluating previous studies in this field.
2. Development, implementation, and long-term establishment of a *multidimensional intervention program* addressing NH residents (combination of physical exercise approaches) and staff (competence training) in two NHs in Heidelberg (Germany).
3. Exploration of an *innovative mixed-method assessment strategy* to reflect PA-related behavior and life space as well as potential intervention effects among the vulnerable population of NH residents that may become a model for the examination of social innovations in this area in general.
4. *Broad dissemination* of findings to relevant stakeholders and users

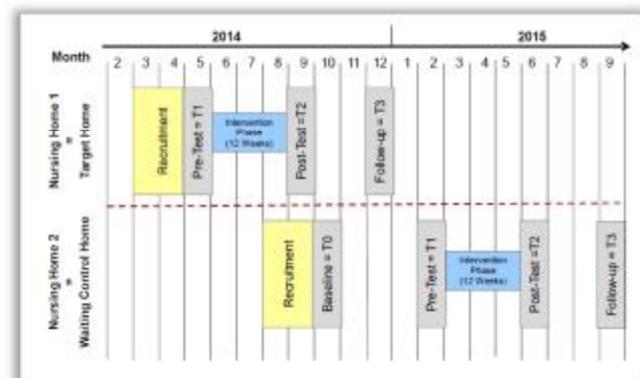
Who will benefit from this innovation?



The primary target group of LTCMo includes NH residents and professionals engaged in activities with residents. Furthermore, LTCMo may be attractive for the NH leading personnel and other research groups as well as organizations / institutions / initiatives interested in promoting active and healthy aging at large. In addition, we hope to sensitize aging researchers in different areas (e.g., geriatric medicine; geropsychology) to now available and promising research and assessment strategies, when social innovations and other interventions in highly vulnerable older populations in long-term care ecologies are the target of analysis.

How has the social innovation been tested?

Based on the findings of a systematic review the intervention program has been developed and piloted. In view of the methodological limitations in previous intervention studies, we decided (1) to use a multimodal approach (resident and staff oriented), (2) a mixed-method assessment strategy, which besides different sources of self-report also includes automated recording tools, and (3) to provide a Guidebook with detailed information about the training components and the implementation. In a next step, the multidimensional intervention program has been implemented in two NHs in Heidelberg (Germany) with over 100 residents each. In both NHs pre-, post-intervention- and follow-up measurements were conducted. Measurements in the second NH additionally included a run-in period (for an overview see Figure 1). Responsible staff members have been integrated and supervised at an early stage to ensure the sustainability of the program. A special feature of LTCMo is that not only self-report but also proxy-rated data have been assessed. Furthermore, highly innovative automated techniques have been used to objectively examine residents’ life-space and PA.



Study design of LTCMo.

These data were collected at all measurement occasions and now represent a unique data space open for a number of data-analytic strategies and outcome evaluations so far not available to our knowledge for such a vulnerable population.

What were the findings?

(1) Systematic review about the SI potential: There are very few randomized control trials with focus on PA promotion in NHs; cognitively impaired persons were often excluded; most available studies reported positive intervention effects on PA; multimodal approaches were most promising.

(2) Examination of the principal capacity to implement an ambitious data assessment and intervention program in the long-term setting: The assessment and intervention program was implemented successfully; this also applies to challenges related to reliably wearing sensor technology in the situation of pronounced loss of physical and cognitive functioning.

(3) Examination of the effects of the intervention based on various sources of primary and secondary outcome measures: Empirical verification that assessments as well as interventions were well received by residents and staff and rated positively overall; support of the hypothesis that our social innovation is able to prolong decline in motor behavior and life-space use in NH residents; substantial evidence supports that our social innovation is effective and may stimulate future research based on classic RCT methodology.

(4) Publications of findings: Based on ongoing data-analysis and a number of publication-based dissertations related with LTCMo, manuscripts have been submitted or are close to submission at this point in time (some outcome oriented publications at least at the submission stage ready until end of 2015).

(5) Guidebook describing the intervention components: We developed a Guidebook based on different insight components of LTCMo, which provides a detailed description of the intervention components and the implementation procedure with the intention to address relevant stakeholders and users. It offers a guideline for practitioners and researchers to make replication as easy as possible.

(6) LTCMo as a part of established education systems in the health and care area: All intervention components of our model project will be integrated in the care routine of other interested NHs. Therefore, training courses will be piloted and included as a regular course in the *Agaplesion Academy*, a well-established care and health educational institution in Heidelberg with nation-wide outreach.

What is required to implement the social innovation?

The implementation of social innovations such as LTCMo is challenged by a series of barriers, particularly in the NH context. NHs represent highly structured institutions with a large number of well-established routines and practical constraints, which are often not obvious for an external person. The developed Guidebook describes barriers, which can hinder a successful implementation of external programs in a NH ecology, but also strategies to overcome them. Furthermore, specific requirements are necessary when planning to implement the physical exercises in a NH setting including personal, organizational, spatial and equipment requirements.

Where can I learn more?

Please visit <http://www.psychologie.uni-heidelberg.de/ae/apa/research/innovage.html>
or <http://www.innovage.group.shef.ac.uk/wp5.html>

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