

POSTER SESSION 2

Digital training as medicine

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Sandsund et al. (2020). *Gerontechnology* 19(suppl); <https://doi.org/10.4017/gt.2020.19.s.69955>

Purpose Regular physical activity has a great potential for prevention of disease in the aging population and for the most prominent diseases. Use of regular physical activity is also an effective treatment for several age-related diseases (Pedersen & Saltin, 2015; Ross et al., 2016). The digital tool and training app MyworkoutGO is based on 25 years of research at the Norwegian University of Science and Technology (NTNU) and guides on how to train effectively. The app estimates maximum oxygen uptake and biological age, parameters that describes a person's physical health risk. The purpose of this project is to further develop, evaluate and verify MyworkoutGO 2.0 as a new product including services for tomorrows exercise as medicine and prevention of chronic diseases. **Method** Central research and development challenges includes technological developments within the MyworkoutGO app and development of a service model linked to the technology to develop a tailored function for medical care. Homebased exercise with a minimum requirement for equipment will be developed to make it possible to quantify muscular leg strength and to carry out effective exercise that develops leg strength with no other assistance than an app. Muscle strength will be related to normalized values for a similar age group and gender, which does not exist today. Homebased exercise with a minimum requirement for equipment will also be developed to make it possible to quantify cardiovascular capacity and to carry out the most effective exercise for endurance/cardiovascular capacity. The quantification of cardiovascular capacity is supposed to be compared to the capacity and risk for lifestyle diseases and early death in the general population, expressed as biological age (bio-age). This possibility does not exist today. It will be tested out and compared how digital exercise support for endurance and muscular strength, as the most important parameters for risk for disease and early death, might reduce the need for manual therapeutic assistance for implementation of effective exercise. The innovation includes development of new products along with new services. The project will secure the possibilities for good health and quality of life, independent of age and gender, and contribute to a realization of two of UN's sustainability goals: Good health (goal 3) and Innovation and infrastructure (goal 9). The development is planned reached through a close cooperation between research (SINTEF, Myworkout AS) and business (Myworkout AS, Storebrand Helse AS, Klinikk for Alle AS) and use of scientific methods within technology, medicine, physiology, service design and user-controlled innovation. **Results and Discussion** This three-year project started in 2019, and results from the development of the app and associated service will be presented at the conference.

References

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Keywords: physical activity, chronic diseases, digital tool, service design

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