

# More Stamina

## Pilot testing digital therapies for people with Multiple Sclerosis

OULU, FINLAND, February 9<sup>th</sup>, 2023, **A pilot study has started at the Oulu University Hospital (OYS) to explore how a digital health fatigue management solution for people with multiple sclerosis (MS) can be used.** The pilot is part of a program funded by the Finnish Innovation Fund (Sitra) for digital therapeutic solutions and participants will use the More Stamina app for 2 months, during which time patients with MS will report on their experiences and share feedback.

Multiple sclerosis is a neurological condition that affects more than 12,000 Finns and almost 3 million people worldwide. While people with this disease suffer a wide range of symptoms, fatigue is the most common, overwhelming, and often disabling problem.

«Fatigue is a very common and important problem in MS, and we are always interested in finding new ways to improve the lives of people living with this condition», says **Dr. Mervi Ryytty**, a neurologist at the **Oulu University Hospital**. «Careful evaluation and scientific validation are key for these kinds of solutions».

As healthcare is rapidly becoming more digitalized, patients are increasingly turning to digital means to address their health issues. However, there is limited evidence that these tools are effective in improving patient care. **Digital therapeutics** are a type of medical interventions that use evidence-based digital tools such as apps, wearables, or other digital solutions to help diagnose, treat, or manage medical conditions. **The goal of More Stamina is to provide a self-management tool that empowers patients to better manage their energy levels.**

Neurologist **Dr. Johanna Krüger** commented: «The Oulu University Hospital is an innovative medical institution, and we are proud to be active in exploring how technology can be used to improve health outcomes». While the current study focuses on discovering what kind of issues emerge from integrating the digital health solution, **Dr. Johanna Krüger** highlights the need for rigorous testing before any conclusions can be drawn about More Stamina's effectiveness.

More Stamina is a gamified self-management tool that represents a person's energy levels as a progress bar indicating their remaining energy for the day. The user sets the tasks that they want to accomplish, and the app uses data from the phone's sensors and context information to provide personalized recommendations. **The solution has been developed through an iterative participatory design process by a multidisciplinary team with technical, medical, and business backgrounds**, from the University of Oulu's Faculty of Medicine and Faculty of Information Technology and Electrical Engineering. People with MS and their family members have been actively involved in the process. In addition to Sitra's funding for the pilot, the "More Stamina" project has also received funding by Business Finland and the Riitta ja Jorma J. Takanen Foundation.

«The project is significant not only because of what we are learning about this digital health solution in particular, but also for its potential impact on improving the adoption of mobile health to help patients and optimize healthcare pathways», says **Prof. Minna Isomursu** from the **Faculty of Information Technology and Electrical Engineering** at the University of Oulu.

**More Stamina has signed collaboration agreements with MS Ireland, MS Spain, and MS Croatia**, further expanding the reach of the project and its potential impact on the MS community. There is work in progress to test for health outcomes in these countries.

«We are thrilled to have the opportunity to test More Stamina with patients from the Oulu University Hospital», says **Dr. Guido Giunti, More Stamina project leader and Director of the Centre for Health and Technology** at the University of Oulu. «Our goal is to create sustainable solutions that can be fully integrated into the healthcare system and empower people to manage their conditions more effectively».

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**Selected publications**

- Giunti G, Kool J, Rivera Romero O, Dorrnoro Zubiete E. Exploring the Specific Needs of Persons with Multiple Sclerosis for mHealth Solutions for Physical Activity: Mixed-Methods Study. <https://mhealth.jmir.org/2018/2/e37/>
- Giunti G, Mylonopoulou V, Rivera Romero O. More Stamina, a Gamified mHealth Solution for Persons with Multiple Sclerosis: Research Through Design. <https://mhealth.jmir.org/2018/3/e51/>
- Giunti G, Rivera-Romero O, et al. Evaluation of More Stamina, a Mobile App for Fatigue Management in Persons with Multiple Sclerosis: Protocol for a Feasibility, Acceptability, and Usability Study. <https://www.researchprotocols.org/2020/8/e18196/>
- Giunti G, Haverinen J, Reponen J. Informing the product development of an mHealth solution for people with Multiple Sclerosis through Early Health Technology Assessment. <https://ebooks.iospress.nl/doi/10.3233/SHTI220258>
- Yrttiaho T, Isomursu M, Giunti G. Experiences Using Patient and Public Involvement in Digital Health Research for Multiple Sclerosis. <https://ebooks.iospress.nl/doi/10.3233/SHTI220574>