Innovation and digital transformation to support clinical care and prevent osteoporosis related fractures

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tion coming from multiple sources. However, few are focused in validating these tools and in answering to our research questions – are those ICTs useful and cost-effective? Can we support osteoporosis patients at home? Are they usable by the elderly? What are the ethical concerns and the added value of monitoring health variables? We consider that the “e-health and m-health concept” can be used to develop tools to assist osteoporosis patient long-term self-management, increasing treatment adherence and health literacy.

In the last years, our research team has been dedicated to understand the practical use of ICTs among rheumatic diseases patients and testing its use to improve clinical outcomes. The Healthy Bone TV app was based on our previous project that has already shown results: a TV program (available on all Portuguese TV operators) aimed at improving elderly life styles that was developed in a co-creation approach. Seniors, physiotherapists, nutritionist, physicians, psychologists and engineers, contributed to this tv program development. Every day senior individuals were given tasks and tips to improve their physical condition, diet and lifestyles16. The new challenge now is to validate and release to the market a unique multimodule TV platform, specifically designed as a home-based intervention program to improve treatment adherence, lifestyles and health literacy in high-risk fracture patients.

In the Healthy Bone TV project we will conduct a pragmatic, unblinded, two-arm, parallel, randomized, controlled pilot study to assess the effectiveness and safety of a 52-week home-based program containing a combination of patient education, treatment reminders and lifestyles tips delivered through a TV app on OP treatment adherence, among post-fragility fracture community dwelling seniors. Recruitment will start in march 2020 and the project will be finished in 2022.

In conclusion, ICTs are delivery in a fast pace. But sometimes the clinical validation and cost-effectiveness analysis of ICTs is forgotten. Clinical validation through randomized controlled studies are warranted to assess the effectiveness and safety of ICTs and home-based programs. There is an imperative need to prevent and proper treat high risk fragility fractures patients and ICTs can be useful tools to support multidisciplinary teams to provide excellent patient care. In our project, we will hopefully reveal that the Healthy Bone program is an effective strategy to optimize OP care and improve overall outcomes, minimizing the consequences of the disease to patients and society.

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