Good practice

my-AHA: My Active and Healthy Aging

Working Group: Health

Member States and other countries: Austria, Germany, Italy, Netherlands, Portugal, Spain, United Kingdom, Australia, Japan, South Korea

Thematic areas: Competitiveness and Innovation, Quality of Life and Equal Access to Services

Basic project details

Lead organisation:

Università degli Studi di Torino (University of Turin) - Italy

Partner organisations:

- Associacao Fraunhofer Portugal Research
- Deutsche Sporthochschule Köln
- Gestio Sociosanitaria al Mediterrani SL
- Institut für Experimentelle Psychophysiologie GmbH
- Instituto de Biomecánica de Valencia
- Fondazione LINKS - Leading Innovation & Knowledge for Society
- Johanniter Österreich Ausbildung und Forschung Gemeinnützige GmbH
- Kaasa Solution GmbH, Loughborough University, Universität Siegen
- IP Health Solutions BV, JIN Co., Ltd., Seoul National University
- National University Corporation Tohoku University
- University of the Sunshine Coast

Project duration: January 2016 - March 2020

Overview and objectives

The My Active and Healthy Aging (my-AHA) project aimed to develop and validate an Information and Communications Technology (ICT)-based solution for early risk detection and intervention to support active and healthy aging. The project focused on preventing cognitive impairment, frailty, depression, and falls among older

adults by using unobtrusive longitudinal behavioural sensing and personalised interventions. The my-AHA platform integrated various existing and future ICT tools to provide comprehensive monitoring and support for the elderly, promoting their independence and well-being. The main aim of my-AHA was to reduce frailty risk by improving physical activity, cognitive function, psychological state, social resources, nutrition, sleep, and overall well-being. This empowered older citizens to better manage their own health and improve their quality of life, resulting in healthcare cost savings. The project focused on early risk detection using advanced ICT tools, provided personalised interventions based on individual risk factors, and promoted active and healthy aging to enable older adults to remain independent.

Context

The project intended to tackle the increasing prevalence of frailty and related conditions, leading to higher healthcare costs and reduced quality of life among the elderly. Frailty assessment methods often missed early identification of at-risk individuals. Existing diagnostic criteria focused primarily on physical conditions and neglected non-physical aspects such as cognitive and psychological factors. Additionally, the growing elderly population requires more affordable healthcare solutions and personalised interventions that allows each individual to address risk factors and promote active, healthy aging.

Target groups

The target groups of the my-AHA project were primarily older adults who were at risk of developing frailty, cognitive impairment, depression, and other age-related conditions.

Actions

The project involved several types of actions, including early risk detection using ICT tools and methodologies to identify early signs of frailty and other age-related risks. Data collection and analysis were conducted using wearable devices and fitness apps to improve risk detection and intervention strategies. The project included clinical trials to test the effectiveness of the my-AHA platform and interventions. Additionally, it involved collaboration and dissemination efforts with healthcare authorities, non-governmental organisations (NGOs), businesses, and other stakeholders to demonstrate the effectiveness of the my-AHA system and promote its adoption. Field experiments, data collection, and personalised recommendations were integral parts of the project.

Financial allocation

Total budget: EUR 5 200 000

EU co-funding: Yes

Sources of funding: Horizon 2020 research and innovation programme

Working Group Insights

"This good practice was selected because it empowers older adults to promote their health and well-being through incorporating technology and ensuring they are not left behind in the digital age. Promoting active and healthy aging helps older adults remain independent and enhances their quality of life. Early risk detection and personalised interventions through digital tools can reduce the burden on healthcare systems, support interprofessional collaboration and communication, and streamline care management.

The my-AHA project was relevant for attracting, retaining, and developing talent in the region because it employed advanced analytical concepts for early health monitoring and disease prevention, creating opportunities for remote service delivery. As such, it addressed the problem of medical deserts and helped to deliver certain services regardless of the patient's location. This could improve the attractiveness of remote regions, where access to health services may be limited".

LISA WETZLMAIR-KEPHART
Council of Occupational Therapists for the European Countries (COTEC)

Results

The my-AHA project developed ethical protocols, commenced Randomised Controlled Trials (RCTs), and investigated system portability and usability. The project created a flexible and usable ICT platform for early risk detection and personalised interventions, tested across different cultures and languages. Significant results were obtained for cognitive function and Quality of Life, which led to partnerships with stakeholders, Small and Medium Enterprises (SMEs), NGOs, and insurance companies. The system's scalability was proven, and new models of frailty were designed, including a cumulative frailty index (My-AHA FI).

Success factors

The success factors of the project were the use of commercial and non-stigmatising devices to collect data from all frailty domains, allowing real-time behaviour monitoring. Employing machine learning algorithms allowed the early detection of pre-frailty and frailty. My-AHA provided personalised interventions based on detailed user characteristics and individual risk. Additionally, it developed middleware to connect end users and healthcare providers, facilitating the inclusion of new services and products. Finally, it supported at-home care, helping to reduce the workforce gap.

Implementation challenges

The main challenges included coordinating the diverse range of international partners and ensuring consistent communication across different time zones and cultural contexts. Additionally, integrating various ICT tools and ensuring their usability for older adults posed significant technical and user-experience challenges. The project also faced difficulties in maintaining participant engagement over the long term and ensuring the ethical management of sensitive health data.

The conclusion of our expert Lisa Wetzlmair-Kephart, Council of Occupational Therapists for the European Countries (COTEC)

“The my-AHA platform solved two issues with one solution: It improved access to health services and enhanced the quality of life for the elderly in the participating countries, by promoting their independence and well-being through the use of ICT. My-AHA addresses physical and social challenges associated with aging and enables a holistic and person-centred view. It also enabled at-home care, thus reducing the impacts of the health workforce gap”.

Useful sources

Official website: https://www.activeageing.unito.it/

https://cordis.europa.eu/project/id/689592

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/projects-details/31045243/689592/H2020

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