

Invited Speaker Abstract

Official Language: English

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Title of Presentation

Lifelong Food and Nutrition Assistance: LIFANA solution

1. Abstract

Introduction: Many elderly suffer from nutritional problems that can cause (or can be caused by) a number of complications such as weakened immune systems and chronic health conditions, such as diabetes type 2, high blood pressure, cardiovascular diseases, stroke or even osteoporosis. Through appropriate adjustments in their diets, on the basis of nutritional advice, the burden of established diseases as well as the risks of developing further conditions can be diminished.

Objectives: The goal of our proposed project LIFANA is to develop and evaluate the LIFANA Nutrition Solution to support healthy nutrition through all phases of ageing – from active seniors to elderly users and patients in need of daily care. Individual meal recommendations and decision support in the supermarket will assist the users to change their eating habits in order to maintain a healthier lifestyle and increase their quality of life.

Methodology: Our objective is to integrate, adapt and extend existing components for meal-planning (Fraunhofer Nutrition app, FhP) and shopping assistance (WikiFood, LIST) from the research partners into our business partner GOC's existing smartphone software, which targets the special needs of elderly users (GoLivePhone®) and caregivers (GoLiveAssist®). The LIFANA Nutrition Solution will be co-created with primary end-users through the help of end-user organisations in the Netherlands (KBO) and Portugal (SCML), but also tailored towards the needs of secondary end-users, such as professionals from healthcare organisations, represented in LIFANA by our Swiss clinical partner CER. In the end, the LIFANA solution will be marketed by GOC as part of their GoLive product family.

Results: We expect significant improvement of well-being and a reduced risk of malnutrition during the field trials with 280 participants in three countries.

2. key references

- Schuetz P et al. Individualised nutritional support in medical inpatients at nutritional risk: a randomised clinical trial. *The Lancet*, April 25, 2019 [https://doi.org/10.1016/S0140-6736\(18\)32776-4](https://doi.org/10.1016/S0140-6736(18)32776-4)
- Rondanelli M et al. Beyond Body Mass Index. Is the Body Cell Mass Index (BCMI) a useful prognostic factor to describe nutritional, inflammation and muscle mass status in hospitalized elderly?: Body Cell Mass Index links in elderly. *Clin Nutr*. 2018;37(3):934-939. doi: 10.1016/j.clnu.2017.03.021.
- Arens-Volland AG, Spassova L, Bohn. Promising approaches of computer-supported dietary assessment and management-Current research status and available applications. *Int J Med Inform*. 2015;84(12):997-1008. doi: 10.1016/j.ijmedinf.2015.08.006.

3. key messages

1. Personalised nutrition towards utilisation of mobile technology
2. Self-monitoring, realistic expectations, and continued follow-up can help a person maintain dietary changes
3. Integration and collaboration with Food Delivery Services