ICT4Life description

Summary

ICT4Life is a three-year project financed under Horizon 2020, the EU Framework Programme for Research and Innovation, that started in January 2016 with the ambition to provide new services for integrated care employing user-friendly ICT tools, ultimately increasing patients with Parkinson's, Alzheimer's and other dementias and their care-givers' quality of life and autonomy at home.

This initiative brings together nine partners representing academia, industry and users' groups, all committed in improving patients' lives and advancing Europe's leadership role in personalised services for integrated care.

The motivation behind ICT4Life comes from the need to find solutions aimed at developing the concepts of self-care, active patients and integrated care. To reach this goal, ICT4Life will conduct breakthrough research and radical innovation and will implement the ICT4Life platform which is aimed at facilitating patient empowerment, supporting care-givers and establishing cooperation channels within professionals for integrated care.

Description

Name: ICT services for Life Improvement for the Elderly.

Website: http://www.ict4life.eu/

Country: Belgium, France, Greece, Hungary, Netherlands and Spain.

Star date: 2016

End date: 2018

Aims:
ICT4Life aims at increasing the quality of life and the autonomy of elderly people in their own homes, nursing homes, day care centres and hospitals by providing proactive and patient centred care from either formal or informal care-givers' remote stations;

ICT4Life platform will deliver a series of innovative services which will connect elderly people with cognitive impairments and other dementias, Alzheimer's and Parkinson's diseases, clinicians and formal and informal care-givers;

ICT4Life radical innovations for integrated care will be implemented by means of an efficient and cost-effective ICT-based Health Service Platform which exploits latest technological advances.

Drivers:
ICT4Life project will provide a new model of integrated care shifting from reactive service delivery to preventive, proactive and patient-specific care. ICT4Life intends to offer personalized models focused on early prevention, independence and wellbeing of senior citizens, especially when they live by themselves.

Target user: Care Recipients;
Informal carers;
Paid assistants;
Formal carers.

Target user (details):
ICT4Life project is addressed not only to the categories of end-users listed above but also to patients and health professionals. The end users will have an active role in the development of the ICT technologies. Their feedbacks will be used to deliver a highly flexible and reusable platform, with components that can drive the eHealth ecosystem.

Typology of ICT: Independent living;
Information and learning for carers;
Personal support and social integration for carer;
Care coordination.

The kind of service provided through ICT:
ICT4Life will implement an innovative platform delivering services increasing the quality of life and autonomy of old people in their own homes, nursing homes, day care centres and hospitals.

This solution will support health professionals, formal and informal care-givers in the provision of integrated care to people affected by cognitive impairment.

The platform is based on the use of robust and secure communication channels and dedicated digital interfaces for elderly people with mild cognitive difficulties, like early stage Alzheimer's, dementia or Parkinson's.

ICT4Life platform will be extensively tested in real operating environments, through specifically designed pilots.

The ICT4Life technologies will allow to:

- Monitor the patients in real-time to alarm and call for early intervention;
- Prevent fall risk, social isolation, depression, poor well-being and inadequate medication management;
- Promote patient's independency, safety and social involvement;
- Provide on time support to care-givers, helping them to feel less stressed.

The ICT devices used:
The ICT4Life platform will be developed following a user-centred methodology and tested in real life scenario. The tools used are: connected TV; sensors, camera and Kinect; smartphones and tables; web platform.

Operational information

Funding: Public only.

Type of public funding: European and international funds for research, development and implementation of innovative initiatives.

Public funding details: Horizon 2020

Organisations involved (details): Ártica Telemedicina;
Universidad Politécnica de Madrid;

Asociación Parkinson Madrid;
Netis Informatics Ltd.;
E-seniors;
Centre for Research and Technology Hellas;
Maastricht University;
European Hospital and Healthcare Federation – HOPE;
University of Pécs – Medical School.

Professionals/persons involved:
The consortium gathers together professionals with multidisciplinary backgrounds, representing industry, SMEs, academia, research organisations; end users and policy making organisations.

Number of users reached: N.A. (yet)

Promotion strategy:
The dissemination and communication strategy of the project results is formalised in the *Dissemination and communication with stakeholders' plan*, which highlights the activities to put in place in this regards as well as the tools to be employed. The plan illustrates the dissemination objectives and the project's main target groups and contain the methodology for their identification. Moreover, the document describes the ICT4Life visual identity and each of the tools and activities foresees and the methodology for monitoring the dissemination and communication activities performed by the consortium and an overview of partner-specific dissemination plans.

Evaluation

Impact of the service on the quality of life of end-users:

- Improvements in the daily activities and quality of life of older people through effective use of ICT;
- Patient empowerment by deploying self-treatment and self-observation allowing him/her to be partially responsible for certain tasks or treatments;
- Higher satisfaction of patients, carers and professionals;
- Better working conditions for carers and professionals in terms of care provision effectiveness.

Impact of the service on the organisations providing care, companies and labour market:

- Reduced admissions and days spent in care institutions;
- Better coordination of care processes;
- Decrease of emergency interactions between care staff and patients for non-emergency reasons;
- Increase of innovation capacity of companies by integration of new knowledge and the development of innovative cost-effective platform for the provision of services for integrated care.

Impact of the service on public authorities, health and social care services:

- Extraction of a large variety of information on end-users through ICT4Life services which could be used to make the system of care more effective;
- Creation of a system gathering information from all end users that will constitute the basis for the integration of care;
- More efficient and cost-effective diagnostics;
- Scientific results about co-morbidities relationships between chronic diseases.

SWOT analysis: N.A. (yet).

Scalability and transferability: the objective of ICT4Life is to create a platform able to give a wide set of services to patients, care-givers and professionals in order to help them in the continuous care that all individuals need when dealing with a chronic disease. Despite the platform is addressed to patients with Parkinson's, Alzheimer's and other forms of dementia the technical approach in its development is flexible enough to enable cost-effective personalisation to other scenarios after the project ends. The platform will indeed target services to individuals and care organisations which need to deal with chronic care.

More information

Publications:

"Using Kalman filter and tobit kalman filter in order to improve the Motion recorded by Kinect sensor II", K. Loumponias, N. Vretos, P.Daras & G.Tsaklidis.

"Using Tobit Kalman filtering in order to improve the Motion recorded by Microsoft Kinect", K. Loumponias, N. Vretos, P.Daras, G.Tsaklidis.

"Landmark-based multimodal human action recognition, Multimedia Tools and Applications", Springer (2016), Asteriadis, S. & Daras, P.

Blog articles:

The integration of care in Europe: policy initiatives and implementation trends.

Integrated Care, the future of care systems.

Why does Integrated Care need ICT?

Improving quality of life: a treatment for Dysphagia, Deglupark.

Contact

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