PreDirCam. Obesity prevention & treatment

A eHealth technology platform designed to facilitate the treatment and monitoring of people with obesity.

Contact information

Address: ETSI de Telecomunicación – UPM, Avenida Complutense, 30, Ciudad Universitaria, 28040, Madrid
Phone number: 910671900
Website: etsit.upm.es
Email: jose.tapia.galisteo@upm.es

Technological Offers type

Technological solutions

Research and innovation areas

- Digital Technologies, Artificial Intelligence, Cybersecurity, 5G, Robotics

ODS

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Where?

Bioengineering and Telemedicine Group Center for Biomedical Technology

Keywords: | obesity | prevention

Brief description of the technology solution and the added value it provides

PREDIRCAM is an eHealth technology platform designed to facilitate the treatment and monitoring of people with obesity, with food registration modules, nutritional analysis, physical activity monitoring, anthropometric variables and decision support. It has been developed by the Biomedical Engineering and Telemedicine Centre of the Universidad Politécnica de Madrid with nutritionists and endocrine professionals of the Santa Creu I Sant Pau Hospital in Barcelona.

Its efficacy is being evaluated in the multidisciplinary and intensified treatment of obesity, DM2 prevention and cardiovascular risk in a controlled clinical trial with more than 100 patients in two hospitals. At the same time, a mobile application has been developed, in the beta phase, that allows to take advantage of the potential of the platform Predircam with mobile technologies.

Description of the technological base

This solution integrates in a web platform the different modules with which it is intended to empower users in the registry of nutritional intakes, physical activity and their anthropometric measures. It has visual information and structured in an efficient way, endorsed and developed in common with health professionals. It also provides access for these professionals, being able to register clinical variables, visualize behavior reports and a messaging system with users.

This solution seeks a personalized treatment for each person, with a plan adapted to his/her needs, a system of notifications and recommendations, with a high content of educational and instructive value.

"Monitoring of life habits for self-management of health and empowerment of users, assistance in the decision for the medical professional through Web and mobile technologies of Widespread "

Market demands

In industrialized countries, health systems face significant challenges: increased health care costs, aging of the population, increasing demands and expectations of citizens, incorporation of new technologies, commitment to quality, etc.

Health

- Cardiovascular diseases are the 1st cause of death in the world causing more than 17 M deaths a year.
- 39% of the world's population is overweight, while 13% are obese exceeding more than twice the prevalence of obesity in 1980 and causing this condition 2, 8M deaths a year.
- Huge economic burden for the system. In 2009 the cardiovascular disease had an approximate cost of 106.000M€ in the EU. In Spain, in 2014, diabetes represented a disbursement of 2000M€.
- A system demand
- Management of the chronicity. Tools that provide support for comprehensive care of the patient.
- Increase efficiency and productivity. Monitoring of parameters in everyday life.
- Empowerment of the patient. Accessibility to information and mechanisms for the self-care of health

"Increase of chronic diseases such as obesity, makes necessary and immediate solution allowing to empower the patient in the self-management of health, with subsequent discharge from the health care sector"

Competitive advantages

- Reduction of resources needed by the healthcare sector by more than 30% (tested on more than 100 patients during 3 months).
- More than 900 food ingredients, 200 dishes and a Bank of 2000 images to facilitate the registration of the diet, to optimize the time spent and the accuracy of the register.
- High value training and educational content, (recipes, recommended physical activity, nutritional tips, etc.) created with approval and supervision of medical personnel.
- Synchronization of devices. Wearables for automatic quantification of physical activity.

Previous references

- Clinical study in the Hospital de La Santa Creu i Sant Pau in Barcelona and La Fe de Valencia.

- www.predircam.org

Development stage

- Concept