

Volume 15, 27 May 2015

Publisher: Uopen Journals

URL: <http://www.ijic.org>

Cite this as: Int J Integr Care 2015; Annual Conf Suppl; [URN:NBN:NL:UI:10-1-116993](https://nbn-resolving.org/urn:nbn:nl:ui:10-1-116993)

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Conference Abstract

Telemedicine services for diabetes in Andalusia – patient empowerment and condition joint-management

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Abstract

Introduction: Prevalence of diabetes is increasing. There is the need to bring healthcare services closer to the patients where and when they need them, becoming active stakeholders in the management of their condition. The Andalusian PALANTE pilot aims to provide people with diabetes with tools needed for decision-making about their condition, promoting joint management with their healthcare professionals. These tools aim to achieve effective collaboration between patient and clinician, promoting a more active role in monitoring their condition, through information sharing and ICT.

Context and objective: The PALANTE project (PATients Leading and mANaging their healThcare through EHealth) is coordinated from Andalusia and co-funded by the European Commission, within the Competitiveness and Innovation Programme (CIP-PSP) [1]. The project includes the implementation of 7 pilots and 2 additional already existing experiences in two other countries, spread across Europe. One of the pilots is carried out in Andalusia. PALANTE's overall goal is to empower patients so they are able to make informed decisions about their health, take an active role in their care and collaborate effectively with their healthcare team thanks to the use of ICT. Andalusia has an increasing prevalence of diabetes. The Andalusian pilot aims to develop an online monitoring system for people with diabetes in order to improve the quality of life of those users, prevent the onset of complications associated with diabetes and promote the involvement of patients in a joint management of their condition with their healthcare team.

In this scenario, empowerment of the patient is considered a potential tool for improving the efficiency of health systems, enhancing quality of healthcare and reducing costs. This is a priority within the Health Strategy of the European Union, both nationally and regionally. The PALANTE project [2], and the Andalusian pilot itself, aim to move forward in this direction using eHealth tools and to evaluate their results.

Targeted population: As already mentioned, this pilot focuses on people with diabetes. Diabetes mellitus is a health condition suffered by over 10% of the population and can lead to the onset of serious health problems such as blindness, end-stage kidney failure, amputations and cardiovascular disease. There are around 700,000 people with diabetes in Andalusia [3]. The population to be included in the new services to be piloted is 1% of this patients, around 7,000, both type 1 (500) and type 2 (6500), which are being enrolled into the study by their healthcare teams (both at primary care and hospitals).

Highlights: Within the project PALANTE, the Andalusian pilot includes an online tracking system through an extension of the EHR citizen web portal Clic Salud, a tool that allows citizens to access their clinical information and that is available through the Virtual Office of the Andalusian Public Health System using the citizen's digital certificate. These new services allow specific customisation in their nature and frequency of use according to the needs and characteristics of each patient. Services include monitoring treatment adherence, both pharmacological, physical exercise and balanced diet. They also allow the collection of biomedical parameters, measurements of blood glucose, blood pressure, heart rate, weight and height (to calculate BMI) and waist circumference, either manually or through embedded devices as tensiometers and glucometers [4]. In addition, the implemented design is oriented to facilitate the inclusion of new conditions and the integration with other measuring devices [5]. A communication tool (wall) facilitates the interaction between patients and professionals.

Up to this moment more than 3000 patients have been enrolled. The different services are used, being the collection of biomedical data the most widely used (50000 measurements uploaded, 25000 blood glucose ones) followed by questionnaires (1800), messages on the wall (1000 by patients and 1800 by professionals) and educational games (900). The impact of the use of these new services in their empowerment is being assessed using PAM (Patient Activation Measure) and TAM (Technology Acceptance Model) scales. The impact on the reduction of face to face consultations and the evolution of some clinical parameters will be checked for these patients too. The set of anonymised data will provide an excellent basis for analysis.

The expected impact of this pilot is:

- For patients: a better control of their health status and a more productive interaction with the healthcare team.
- For Health Professionals: a closer follow up and monitoring the patient's condition, as well as the decrease of non-necessary face-to-face consultations.
- For the Health System: the optimization of the available resources and the increase of quality and efficiency of service provision.
- For the eHealth market in the EU: the strengthening of its position in this strategic market.

Transferability and Conclusions: The experience and the results of the assessment of the pilot are expected to be transferable to the rest of European regions:

(a) The role of citizens' increased autonomy and participation in decision-making about their health is an opportunity to change the relationship model between patient and health professionals.

(b) In this pilot, the Andalusian Public Health System takes a step towards transparency and citizens' autonomy, allowing them to benefit from access to a summary of their EHR and the capacity to provide information to it and have a new means of communication with their healthcare professionals.

(c) From an organisational point of view, the services deployment throughout the whole region and the patients' enrolment processes in the PALANTE Andalusian pilot represent an excellent case study for other regions to build upon. They have involved coordination of the pilot core team with healthcare professional representatives and healthcare professionals spread in more than 1500 primary care centres and 47 hospitals.

Keywords

telemedicine; diabetes; patients' empowerment

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