Patient-centered mobile health interventions in chronic complex populations

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Introduction

Nowadays there exists more than 350,000 mobile applications (Apps) to health management. Nonetheless, this number decreases considerably when considering Apps that are: clinically validated, integrated with the information systems and that meet adequate regulatory, security and privacy standards [1]. The Hospital de la Santa Creu i Sant Pau (HSCSP) has been actively engaged in this field since 2013, accumulating valuable expertise in analysing, designing, validating and implementing mobile health digital therapies as a means to implement value-based healthcare tools in daily practice through the collection of PROMs and PREMs.

Methods

Cross-sectional descriptive study including all mobile health projects initiated since 2013, at any phase of the healthcare innovation cycle for digital health solutions [2] and performed using the MoviSalud platform at HSCSP.

The collected data were: health condition, number of active patients, number of expected patients, total target population treated at the centre and the main outcomes addressed. Additionally, the project status, competitive grants obtained, and the number of publications and participation in relevant congresses to date, were also considered.

Lastly, the study recorded whether each project was multidisciplinary (≥2 departments involved in patient follow-up).

Results

Currently, there are 23 mHealth projects related to PROMs and PREMs collection and using the MoviSalud platform in HSCSP, in which over 800 patients have been participating, with the potential to reach a target population of 15,000 patients. Of these projects, 13 (56.5%) are in the prototyping and/or clinical validation phase, 8 (34.8%) in the ideation and/or design phase, and 2 (8.7%) are already implemented in clinical practice.

The platforms that have been developed to date and the number of patients who receive clinical follow-up through the apps are: mHeart, for cardiac transplant patients (161 patients); MyPlan, for chronic polypathological patients including HIV, endometriosis, migraine, cardiovascular risk, among others populations (386 patients); and EmmaSalud, for oncological andhaematological patients (329 patients). Twenty-two (95.7%) projects had a multidisciplinary approach.

The main outcomes addressed in the different projects have been: health outcomes improvement (23; 100%), user experience (22; 95.7%); patient empowerment (20; 86.9%) and health prevention and promotion (20; 86.9%), among others.

Currently, there are 7 published articles, 5 awarded prizes, and 16 national and 5 international communications regarding the implementation of mHealth applications in the HSCSP ecosystem [3,4,5,6]. Last but not least, HSCSP is leading the deployment of mHealth interventions in over 60 hospitals in Spain, in collaboration with the Spanish Society of Hospital Pharmacy (SEFH).

Conclusions

Evaluating and incorporating patient feedback through PROMs and PREMs is crucial to maximize the value of mHealth tools in the healthcare process and enhance patients' quality of life. The results obtained using mHealth strategies to promote patient engagement and empowerment in their own health journey, supports the implementation of these value-based healthcare tools in daily practice.

The next steps include unifying the different versions of the technology into a single multi-pathology app, improving the integration of information in a structured way into the hospital's medical record, as well as establishing a hospital strategy for the implementation of projects that have brought value to the ecosystem.

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