

Medplan: an interactive patient-healthcare professional medication management tool

H. Anglada^{a1}, M. Martin^a, M. Rovira^a, J.M. Sotoca^a, V. Escudero^b, A. Herranz^b and C.Codina^a

^aPharmacy Service, Hospital Clinic, Barcelona

^bPharmacy Service, Hospital Universitario Gregorio Marañón, Madrid

Keywords. Medication adherence, mobile application

Lack of medication adherence is a prevalent issue which affects 50-60% of chronic patients. We present Medplan, a platform addressed to patients/caregivers and healthcare professionals (HCP), aimed to enhance medication adherence, patient's medication knowledge and to facilitate communication between patients and HCP.

A systematic review was conducted to know the state of the art in this field. Subsequently, Medplan platform was designed and developed by a multidisciplinary team composed of hospital pharmacist, primary care physicians, specialist physicians, patients and developers. Medplan was then tested by creating 5 fictitious patients using the white and black-box testing. Once the platform was validated, it was deployed into the hospital servers to ensure security of the data .

Medplan platform is comprised of a website addressed to HCP and an app which is installed on patient's phones. The platform is available in Spanish, Catalan and English. All data are encrypted in transit and users must introduce its credentials (username and password) to gain access to the platform.

Patient's medication plan is introduced by the HCP and is interfaced into the app. For each medicine, an icon representing the indication of the treatment, the trade name, active ingredients, dose and route of administration are displayed. Information about drug administration considerations (e.g. to take on an empty stomach), side effects or healthy lifestyle can also be provided. Further app functions include a medication reminder alarm system, where patients confirm whether they have taken or not the drug. Patients can self-track their medication adherence and all collected data are sent automatically to the website so HCP can analyze it. Weekly motivation messages are sent to encourage medication adherence. In addition, an interactive communication tool between patients and HCP (primary care or hospital care) is also included. The app also allows informing their HCP about over-the-counter drugs to check its suitability.

These capabilities may significantly improve patient's medication management. A pilot study is being conducted to test whether Medplan is useful and effective.

¹ Corresponding Author.