CONFERENCE ABSTRACT

Efficacy of a smartphone app (WhatsICS) for communication amongst health care professionals attending patients with chronic diseases

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**Background:** Provision of care to patients with chronic diseases remains a great challenge for modern health care systems. The smartphone's applications are indicated as one of the strategies which could improve care delivery to this group of patients. The main objective of this study is to evaluate the efficiency of using a proprietary app, called WhatsICS, within a complex patients attendance team, that offers a similar messaging service than WhatsApp, but adds the security and patient privacy that lacks in WhatsApp.

**Methods:** At the health care center of Tona, in Catalonia, nurses and family medicine doctors attending complex patients, with multiple chronic diseases, were provided with the app installed on their smartphones. From November 2015 onwards, the professionals participating in the study, start using smartphones and itsWhatsICS application as a communication method amongst their team for various aspects of patient management. We will measure the types and clinical domains of communication events, the different response times and the impact of this new system on patients scheduled visits. For that, we will register different kind of communication as predictors related to the times of responses, scheduled visits and complexity indexes of the patients. We will also analyze professional categories use and its perceived usefulness in making professional health-related decisions.

**Results:** This study investigates how such a communication system operates within professionals attending patients with chronic diseases and quantifies the direction and type of communication between the members of the team. Most communication was initiated by nurses and was about team’s coordination or clinical questions. There were no difference in time of response depending on type of communication and this may be because of their similar complexity. When comparing type of communication with adjusted clinical risk groups and complexity, Advanced chronic disease patients (MACA), Clinical risk group (CRG) 8 - 9 or Adjusted morbidity groups (GMA) 4 - 5 have most communication events for team’s coordination, while complex chronic patients (PCC) or having a CRG between 6 - 7 have acute event communications more associated. The chronic questions were more associated to GMA 3 and social questions to MACA patients. Most part of communications related to a patient is associated to a single scheduled visit and that visit corresponds mainly to the communication’s sender and from a home care visit.
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Discussion: The increase in the fluidity of personal health information on-line may lead to an increase of patient privacy breaches. Although the interconnectedness of smartphones can be useful clinically, access to the vast amount of information available on the network can be misappropriated for other non-work-related purposes. The solution to these problems is evolving and introducing proprietary apps, like WhatsICS, that are considered secure, with password protection and encrypted Communications can be very helpful on this matter. The social appropriateness of smartphones in health care settings is changing as clinicians feel more comfortable in using their smartphones also for work.

Conclusions: The findings of this study provide a detailed examination of the communication between members of a clinical team. The team, attending patients with chronic diseases, make their job mainly at patients’ homes and a tool to facilitate communications among them, many times in the distance, which offers security and quickness, seems too precious to be refused. The app represents an efficient and cost-effective communication technology and provably will demonstrate to be even more secure, cheap, quick and easy to operate than others.

Keywords: mhealth; health care; chronic disease; mobile use; whatsapp