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#### Conference Abstract

## Prevention & treatment of pressure ulcers and nutritional status in elderly population

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### Abstract

It is important to develop new working techniques in nursing homes, not only to guarantee good quality care services, but also to achieve homogeneity in performed procedures. Furthermore, the introduction of technological advances and IT tools in geriatric care is a challenge for the coming years that will help us to achieve these objectives.

In this paper, we present a solution which helps/guides the health professional to make a decision about the prevention and treatment of pressure ulcers (PU) and the nutritional status (NS) of persons in elderly homes. This solution is composed of a mobile device and a website.

The mobile device is an essential tool that allows the health professionals to: 1) Collect information at the bedside. The collected information includes patient's personal data and a list of questionnaires such as Mini Nutritional Assessment (MNA), Pressure Ulcers Braden Scale and other scales about risk situations. 2) Obtain an immediate assessment on real time. After the data collection, a real-time analysis is performed in the mobile device. This generates a list of recommendations associated with clinical stage of the ulcer, nutritional status and identified risks. These recommendations can be:

- 1) Nutritional treatment instructions. If there is any problem, the malnutrition type will be shown in the mobile device and its seriousness will be analyzed.
- 2) Preventive recommendations for PU risk situations.
- 3) PU monitoring. Following simple instructions, a PU can be recorded (stage and features). In order to monitor an established PU, the Pressure Ulcer Scale for Healing (PUSH) will be used, which is based on the damaged surface, the presence of exudates and the tissue type.

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The website is part of the solution, both in PU and in NS allows not only to record and generate reports based on all the collected data (questionnaires, scales, preventive cares and treatment) but also allows to personalize the analysis in order to obtain alarms with various levels and priorities. The idea is to improve the management of the information thanks to the triage done automatically; the health worker can focus on those situations which require more urgent intervention. On the other hand, the website is also a collaborating space that offers the opportunity to shared case information with PU specialized units that could offer advice about the most appropriate way to approach difficult clinical situations.

Monitoring the NS and PU care might be related not only with a specific care of these health problems but also might lay the foundation for helping in other associated health problems.

This ICT based solution offers a tool to achieve this objective, due to the fact that it allows health workers to exchange information among them at any time, making decisions on real time and using a care and intervention strategy within a coordinated team.

### **Keywords:**

automatic process, m-health

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