

Improving Patient Safety with a Mobile Application for Patients with Peripherally Inserted Central Venous Catheters (PICC)

Stephan NÜSSLI^{a,1}, Florian SCHNYDER^a, Raphael ZENHÄUSERN^a, Katharina BOSSHART^b

^a*Institute for Medical Informatics, Bern University of Applied Sciences*

^b*Center Clinical Nursing Science, University Hospital of Zürich*

Abstract. Peripherally inserted central venous catheters (PICCs) are of growing interest because they allow intravenous therapies up to several months. The appropriate management of the PICCs is crucial to minimize complications and largely depends on the right information for everyone who cares for the patient. To reach this goal we develop the mobile application “PICC App” to provide the necessary information for all involved persons in the outpatient setting. We expect to be able to report about the PICC App and the results of the usability evaluation with pilot users.

Keywords. Catheter management, CDSS, PICC, Supportive decision making

1. Introduction

Peripherally inserted central venous catheters (PICCs) are inserted for intravenous therapies up to several months. Only with diligent care and holistic knowhow an ideal exposure time with minimal complications can be reached [1]. Are we able to improve PICC care with computerized clinical decision support systems (CDSS)? It is known that CDSSs can improve practitioner performance and therefore patient safety [2]. The purpose of our project is to develop a CDSS to improve patient safety by providing evidence based information at the right time to everyone who works with the patient.

2. Methods

Students of the Bern University of Applied Sciences develop in collaboration with the University Hospital of Zürich the mobile application “PICC App”. The App provides the necessary information for an appropriate PICC management for all involved persons in the outpatient setting.

¹ Stephan Nüssli, Institute for Medical Informatics, Bern University of Applied Sciences, Höhweg 80, CH-2502 Biel; E-mail: stephan.nuessli@bfh.ch.

3. Results

We expect to be able to report not only about the PICC App, but also results of the usability evaluation with pilot users.

4. Discussion

Whereas typical CDSS are geared towards one user group, we plan our “PICC App” with several facets to train as well health care providers and the patient himself. In the next phase of the project we plan to collect data with the “PICC App” at the point of care to learn more about the significant factors influencing the achievable dwelling time and the incidence of complications.

References

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