User Interface Development of a COPD Remote Monitoring Application - A User Centred Design Process

By Berglind Smaradottir, Martin Gerdes, Rune Fensli, Santiago Martinez


The co-authors are Martin Gerdes, Rune Fensli and Santiago Martinez. The paper is a part of the EU-project United4Health and describes how the users were involved in the design and development of a tablet application for remote monitoring of COPD. The User-centred Design process effectively included users’ needs in the design and development process through workshops and user evaluations. The workshop with representative end-users allowed gathering key information regarding data visualisation and system requirements. The evaluation comprised iterative user tests that led to the refinement of the GUI and functionality of the system. In addition, a field trial in home environment provided both real-time evaluation and continuous observation of the fully developed tablet application.

Several scientific papers are published based on research work during development of the United4Health solution implemented within the secured Norwegian Health Network:


Smaradottir Berglind, Gerdes Martin, Fensli Rune, Martinez Santiago. The EU-project United4Health: User-Centred Design and Evaluation of a Collaborative Information System for a Norwegian Telehealth Service. 1-page poster, accepted for publication at 15th World Congress on Health and Biomedical Informatics “eHealth-enabled Health” (MEDINFO2015) 19-23 August 2015.


Berglind Smaradottir is a Ph.D. Research Fellow at the University of Agder in Norway, where she started her work in 2010 with the research topics User-centred Design and Usability Evaluation within Health Informatics. She has background from health care services with a Master Degree in Telemedicine and eHealth. An important part of her PhD work has been to apply User-centred Design in the development of software for a wireless tablet solution for patients with COPD, and she was a part of the development team in Norway for the United4Health project. Her supervisors are Professor Rune Fensli and Professor Vladimir Oleshchuk at Department for ICT at the Faculty of Engineering and Science.

http://www.uia.no/senter-og-nettverk/senter-for-ehelse-og-omsorgsteknologi

www.united4health.no

Norwegian project partners: