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PATIENT AND PHYSICIAN PERSPECTIVES ON NUTRITIONAL MONITORING USING A SMARTPHONE APPLICATION FOR CANCER OUTPATIENTS

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In recent years, the number of mobile health (mHealth) applications available have increased dramatically. These applications register data related to a person's mental and/or physical state, e.g. for disease self-management, cessation of unhealthy habits, and promotion of healthy behaviour. Given the increased use of such applications, a potentially huge amount of personal health information (PHI) is generated. Besides self-management of health, PHI from mHealth applications could also help to improve the quality of healthcare delivery. In this study, we evaluate a system that integrates PHI from a nutritional monitoring mHealth application for cancer outpatients with data gathered in clinical routine, for the use in a clinical decision support system (CDSS) for nutritional triage. In a clinical pilot study, we recruited 25 oncology outpatients to use a forementioned mHealth application. Data recorded from this application were forwarded to a data repository of the Medical University of Vienna, where they were processed by the CDSS. The results could be accessed directly from the Vienna General Hospital information system. Afterwards, a qualitative questionnaire was taken among patients and medical experts involved with the system. Among patients (N=25), 91% found the application useful as a remote tool for detecting cancer-related malnutrition, and about 75% indicated it should be institutionalized. Among clinicians (N=5), the CDSS was perceived a useful, and enabled them to initiate nutritional interventions sooner. However, its usefulness was limited still as regular nutrition monitoring is not a compulsive part of the overall care workflow.

Biography

Jeroen S. de Bruin is graduated from Leiden University, The Netherlands, as a PhD in biomedical informatics, with specialties including medical data mining and ontologies. Later on he started his post-graduation at Leiden University Medical Center with the subject workflow optimization in proteomics. In 2011, he started working at the Medical University of Vienna, where he has continued his research into clinical decision support systems and mobile health, thereby focusing on infection control in the intensive care setting.

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