
CONFERENCE ABSTRACT**User-centered design of integrated eHealth to improve patients' activation
in transitional care**16th International Conference on Integrated Care, Barcelona 23-25 May 2016Oscar Frykholm¹, Maria Flink¹, Marlene Lindblad², Mirjam Ekstedt^{1, 2}

1: Karolinska Institutet, Sweden;

2: Royal Institutet of Technology, Sweden.

Introduction: The burden of chronic diseases is expected to escalate worldwide. Despite extensive use of emergency rooms and specialized care of persons with multiple or chronic diseases, the majority of the time care is managed in the patient's home. For patients, living with chronic illnesses can be highly demanding, requiring them to manage their symptoms, disabilities and complex medical regimens at home. Effectively functioning in the role of self-manager requires a high level of knowledge, skill, and confidence. In order to handle these challenges, new models for care are required.

eHealth solutions, successfully implemented in everyday clinical practice have shown significant effects on symptom management and self-efficacy, improving quality of care. Despite the wide proliferation and everyday use of consumer technology as well as eHealth solutions, the contribution of eHealth solutions in enhancing patients' activation in self-management of their care is an underdeveloped field. Therefore, we undertake a long-term project of developing an eHealth solution where patients and care-givers are active stakeholders, and in parallel, paving the way for clinical ownership of the eHealth solution, in order to evaluate it in a randomized controlled study. The aim of this abstract is to describe the user-centered design in the development of an eHealth service.

Theory and Method: We report process data from an ongoing study; aiming to improve transitional care by focusing on patient activation and participation during the critical post-hospitalization phase. We draw upon principals of the evidence-based Care Transition Intervention, which will be integrated into an eHealth solution, as a 'digital coach' to support patients' self-management. We have identified four pillars that will form the foundation of the eHealth solution: care plan, medication self-management, symptom management, and contact information to relevant care-givers.

In the first phase of the project, we have utilized a user-centered design process by engaging patients and care-givers in interviews, workshops and design activities. Results from these activities are documented in user-centered material such as patient journeys, effect maps, and prototypes of the eHealth solution. This material has been directly fed into the development of the technical solution, making us confident that the proposed solution will solve concrete user needs. At the same time, we make long-term collaborations with the care-

givers and departments, from where the eHealth solution will be distributed to patients in the study.

Progress report: A number of observational and design activities have been conducted with both patients and care-givers, at two different hospitals. User context has been documented in patient journeys, which describe a typical patient's journey from first symptom through medical evaluation and treatment, up to living with the disease or complications of the treatment. The patient journey describes, in different stages, how the patient's feels, their contact with healthcare, what information they receives and requires, and what examinations and treatments they undergoes. Visualizing health care from the patient's perspective in this manner helps identifying gaps in e.g. information needs and to position the eHealth solution in situations where it can solve concrete needs. Furthermore, user needs have been captured in effect maps, which connect hands-on needs or functionality with high-level goals (e.g. ultimately enhanced patient activation and reduced re-hospitalization). As of now, in the second phase of the project, development of technical solution has commenced, and we are planning for pilot testing in the next couple of months.

Discussion and conclusions: eHealth solutions play an important part in improving activation and awareness. However, it is not simply solved by the sheer introduction of eHealth solutions we have learned that it requires:

- Successful implementation in the health care processes, as personnel should feel an ownership of the eHealth solution in order to perceive it as an effective tool in their communication with patients and collaboration with other care givers.
- Presentation of relevant feedback to patients, in order for them to learn about their own disease and symptoms, and to be actively engaged in self-management at home Using motivational gamification in eHealth solutions will help to capture patients' interest to take active role in their own care, and to motivate patients to learn and maintain self-management knowledge and skills.
- Fitting it into the existing eco system of technical solutions for health care as well as patient- and lifestyle-centered applications.

Keywords: sel-management support; patient activation; ehealth; gamification; collaborative research
