

MASTER THESIS User interface for registering and sharing health data for patients with chronic diseases

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Digitizing communication in healthcare

POPULAR SCIENCE SUMMARY **Niklas Andersson**

Digitization of the healthcare has the potential of saving costs while increasing patient adherence. This project focuses on the needs of the patients to develop a prototype of how a digital interface for registering and sharing health data could be designed.

The need for digitizing the healthcare has become increasingly more apparent as the cost keeps growing and the so called patient centered care is becoming a higher priority. Digitization would let the patient have increased communication with the healthcare professionals, cutting costs and increasing the patient responsibility of the treatment. One of the most resource demanding patient groups - patients with chronic diseases have been identified to be linked to upwards of 85% of all healthcare costs. Chronically ill patients are often times advised to self-monitor their health in between visits at the hospital to follow the development of the disease and adherence to the treatment. However, this is in a majority of cases done in a notebook missing the opportunity of seeing day-to-day changes in the patients' well being.

In my master thesis I have developed a prototype of how a digital interface can be used by patients to register and share health data with their physicians making it easier for follow-ups and more efficient appointments. The prototype was developed using a human centered design process where the end user is at the focus from the start. Patients with chronic diseases were interviewed in an early stage to gain insight how a digital tool would best suit their wants and needs. The design process was iterative where the results from the four activities: observation, ideation, prototyping and testing were evaluated before continuing. Figure 1 illustrates the iterative design process.

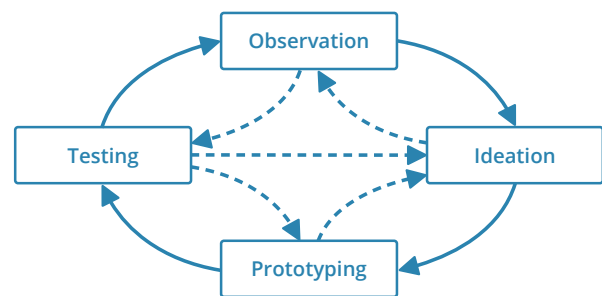


Figure 1: The human centered design process.

The prototype was based on the company Engaging Care's cloud based platform. The patient can register health measurements, see trends in the data, add notes with important information and share the data with their physician. The interface was designed to work for patients with varying degrees of involvement in their treatment, making it usable as an e-patient and as a reluctant patient only wanting to minimize the usage. The prototype was evaluated with common usability tests using seven test subjects. From the tests the overall impression of the prototype and improvement opportunities were identified. The overall comments were positive and the mean result from a system usability scale evaluation showed that the prototype yielded a score of 86.7 or 'excellent' on the adjective scale.