

Redesigning an eHealth application for Medicine Men

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Telemonitoring and self-management are increasing in the healthcare industry. It allows patients to do measurements from home and monitor their health without going to a care institution. Telemonitoring and self-management help to identify health problems quickly, reducing hospital admissions and costs. Medicine Men is a company in Utrecht that builds such self-care solutions. Their Emma application is an eHealth application used by patients with chronic illnesses, such as chronic obstructive pulmonary disease (COPD), hypertension, oncology, heart failure, asthma, diabetes, and more, to monitor and manage their health. Over the past years, Medicine Men noticed that they have been adding more and more interventions to their platform. In order to emphasize that their platform is a "one-stop-shop" for digitizing the care paths of all kinds of diseases, Medicine Men wanted to redesign their brand, including their name. This research, therefore, focused on redesigning the Emma app for patients so that it better complies with possible new needs of patients and to answer the research question:

“How can the Emma application be redesigned to fit the needs of the users?”

The research was conducted through a combination of desk and empirical research, focussing on the design of existing eHealth applications and aspects of eHealth applications such as reminders, customisation, functionality, interface design, data logging, and visualisation. Furthermore, interviews have been conducted with users of the Emma application to find their specific needs. Points of improvement in the current application (Figure 1) have been identified. From the research, a list of requirements was created that has been used to design an application that fits its users' needs.

During this research, Medicine Men decided to change their Emma application's name to Viduet and change their brand. Because of this change, it was possible to immediately

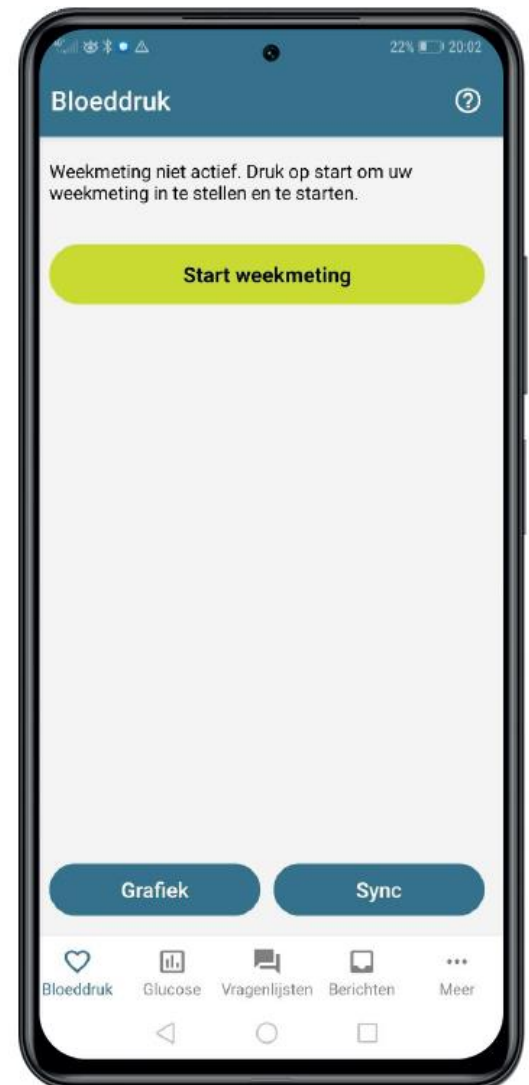


Figure 1: Current application

implement accessibility suggestions that I made, including a new colour scheme based on a colour study. Based on the requirements, a new list of functionalities was created, divided into five prototypes. This division of functionalities into different prototypes was based on literature and a card sorting session with patients who use Emma. This formed the base for five prototypes.

First, the prototypes' visual design was determined so it could be used for each prototype. Then, the design was implemented in a "Login and Registration" prototype to show the design. The design was evaluated and discussed with the company Medicine Men and approved before developing the prototypes. Each of the prototypes was then created through the same process. First, a user flow was created to understand what actions a user would take on a page. Then, based on the user flow, sketches were made to ideate different layouts and features. These sketches were then used to create various concepts in Figma, a prototyping tool. The prototypes were then tested in two parts. Furthermore, the complete prototype (Figure 2) has been evaluated with the list of requirements.

Concluding, the research question has been answered by desk and empirical research. The redesigned application has been evaluated and tested with users to confirm that it does fit the user's needs. Additional user testing and evaluation with a medical expert still need to be conducted to validate the results. Furthermore, recommendations have been given to meet additional needs of the user. These could be implemented in the future.

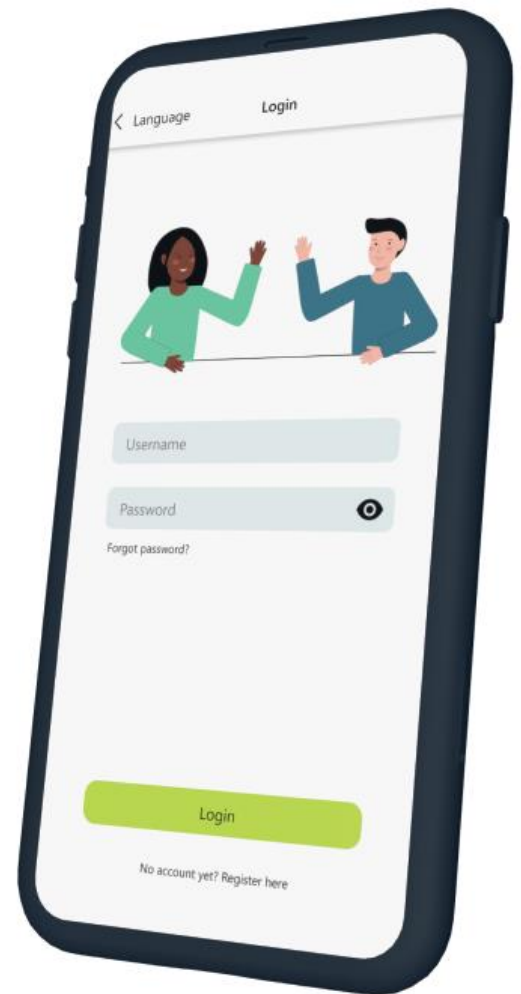


Figure 2: Redesigned application