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## **Understanding needs and expectations of heart failure patients and their caregivers regarding digital health - the PASSION-HF project**

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## **Title: Understanding needs and expectations of heart failure patients and their caregivers regarding digital health - the PASSION-HF project**

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### **Background/Introduction**

Current heart failure (HF) healthcare services are not sufficient to meet needs. Due to demographic changes and subsequent increases in comorbidities and disease complexity, along with unequal distribution of medical care in rural and urban regions, alternative healthcare approaches must be sought. E-Health applications have the potential to address the resource-limited burden on healthcare services and simultaneously improve the treatment of patients. The “PASSION-HF” project aims to develop a digital decision support system – a virtual doctor – that provides solutions based on current clinical guidelines. Patient independence is maximized through 24/7 access to personalized HF management. Furthermore, the application (named DoctorMe) defines processes and decision points where medical professionals need to be included in the process.

### **Purpose**

To understand the needs and requirements of HF patients and their informal caregivers in regard to a virtual doctor.

### **Methods**

We conducted an exploratory mixed-method study within the Netherlands, United Kingdom, Ireland and Germany. Qualitative, guided interviews were supplemented by a standardized questionnaire. The interviews focused on acceptance factors, motivation to use a decision support system and satisfaction with their current health care situation. The interviews were analysed using the content analysis according to Mayring (2010) with the help of “Atlas.TI” software. Additional information was sought through the questionnaires on self-management of HF-patients, the role of the informal caregivers, technology acceptance, and decision making.

### **Results**

A total of 49 patients and 33 informal caregivers were interviewed for this study. Most of the patients were male (76%) aged between 60 and 69 years (43%). The three main requirements in regard to an e-Health product included ; 1) Reassurance: patients often feel uncertain about their condition and their symptoms. Therefore, they want an aid, such as DoctorMe to help monitor their health 24/7, be able to spot deteriorations before they occur and give them instant feedback about their current health status; 2) Personalized advice: patients want DoctorMe to adapt medication, sport activities and food recommendations to the current health status; 3) Transparency: patients want to know the source, reasons, and individualized interpretation of any recommended changes by the EHealth product. The interview results also show that most patients have a desire to adapt their lifestyle to the needs of HF, but they require help to remain motivated to achieve this goal.

## **Conclusion**

These findings provide valuable information for the development and implementation of eHealth solutions. Patients want reassurance 24/7, independently of the availability of healthcare services, combined with personalized medical advice regarding day-to-day management of their HF. In a next step, we are planning a multicentre clinical trial to test the first prototype of the eHealth product (DoctorMe)