Designing a digital person-centered self-management support intervention for people with type 2 diabetes

Short title
Designing a self-management support intervention

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Abstract

**Background:** Self-management is a substantial part of treatment for patients with type-2 diabetes (T2D). Modern digital technology, being small, available and ubiquitous has promising properties that might work well in supporting self-management. This study follows the process of designing a digital person-centered self-management support intervention for people with T2D.

**Objective:** The aim of this paper was to explore and describe the preparatory activities and the subsequent choice of digital support for a digital person-centered self-management support intervention for people with T2D treated in primary health care.

**Methods:** A user-centered, mixed-methods approach was used to collect and analyze data from different sources.

**Results:** Results show that the requirements for a digital platform for T2D self-management care is complex and has to be negotiated, often with trade-off relations. It is also shown that the focus on user needs is complicated as nurses’ project organizational and regulatory needs that causes limitations in the design space.

**Conclusions:** A user-centered approach can be useful in identifying goals for design that both show possibilities as highlight challenges and limitations. There are limits in the user-centered approach and thereby we suggest more research to find ways to deal with the nurse-organization perspective.

**Trial Registration:** This study is a preparatory part of a larger randomized intervention project aimed at designing and implementing person-centred interactive self-management support (iSMS) in primary healthcare in northern Sweden. The overall project has a user-centred design, described in this paper and the project is registered at ClinicalTrials.gov, Identifier NCT03165084.

**Keywords:** eHealth; Diabetes Mellitus, type 2; Informatics; Nursing: Person-centered care, Self-management.
Introduction

Using eHealth services as support for self-management in chronic illnesses as type 2 diabetes (T2D), is in many ways a promising way of reducing costs, increase availability of care and to empower patients[1–3]. Regarding self-management of chronic illness, most activities are performed by patients themselves at home. However, these activities are still connected to the healthcare system on a higher level which means that healthcare professionals and their work cannot be ruled out entirely.

The context of this paper is primary health care and focus is on care for people with T2D. Swedish primary health care is responsible for the need in the population without limitations related to various illnesses or ages. Basic medical treatment as well as nursing, prevention and rehabilitation that is not demanding special competences are offered in primary health care. Patients with chronic illnesses as T2D visit the primary health care center on a regular basis. General practitioners, as well as primary health care nurses with special responsibility for diabetes clinics, as well as physiotherapists and occupational therapists are commonly working in teams at primary health care centers. The majority is connected to the public health welfare program.

The reason for a focus on patients with T2D is, that the diagnosis is common and demands a high level of self-management. In Sweden 4-6 percent of the population is estimated to suffer from diabetes, even if about 4% is diagnosed and whereof about 90 % is T2D[4,5]. However, since most people are diagnosed in an age of 60 years and over, the prevalence of T2D is much higher in the older age groups. In the age group of people 65-years and over, the prevalence is reported to be about 12-18 %, the higher among men[6]. The illness is complex and demanding since the basic treatment is dietary changes and increased physical activity besides the pharmaceutical treatment and blood sugar testing. It also commonly involves comorbidities such as hypertension, hyperlipidemia, and obesity and lead to severe complications such as stroke and heart disease, kidney dysfunction, blindness and other problems if not sufficiently treated and self-managed by patients[7].

Self-management is a concept with several definitions in literature. We adhere to the definition by Barlow writing that self-management refers to the individual’s ability to manage their own health and well-being, symptoms, treatment, emotional, physical and psychosocial consequences and life style changes inherent in living with a chronic condition[8]. Other researchers as Lorig and Holman point out that self-management skills include problem solving, decision-making, resource utilization, action planning, self-tailoring and formation of a patient to healthcare provider partnership[9], something that fits well into person-centered care.

The American Diabetes Association (ADA) clarifies that a person-centered approach must be applied in self-management support[10]. It is also recommended in Swedish health care by the Swedish eHealth Agency[11] as well as by researchers [12,13]. Person-centered care is defined in various ways in literature, but several definitions include goals such as respecting people’s values and putting them at the center of care, taking into account people’s preferences and expressed needs, working together to make sure there is good communication, information and education and making sure people have access to appropriate care when they need it, including coordinating and integrating care[14–18].
ADA also highlight the importance of including digital services in self-management support of people with diabetes. In the supply of care and treatment options, eHealth services must be included. There are two main approaches in doing this; through novel design or through using and adopting existing technologies. Looking only at smartphone applications, there are already a plentiful of available applications with functionality that supports different aspects of diabetes care [19,20]. In this paper we explore the process leading up to choosing a specific application and developing necessary supporting functions as well as making adjustments in the existing work practices. A crucial part of this is identifying the needs, challenges and constraints associated to the use of digital resources both from a patient and a care worker perspective.

Earlier studies in the research group have highlighted that people with T2D experienced mixed feelings towards the use of digital health services for self-management support. They expressed potential benefits such as increased involvement, empowerment and security but also concerns regarding ambivalence and uncertainty [21]. On the other hand, district nurses express that caregiving was in the midst of a digital chaos, furthermore that they lacked overview and control in daily work, and had mixed feelings towards digitalization [22]. This was conflicting results and we thought that the preparatory activities performed within this paper could guide us further in the development of the intervention.

The aim of this paper was to explore and describe the preparatory activities and the subsequent choice of digital support for a digital person-centered self-management support intervention for people with T2D treated in primary health care. The purposes of the various activities preparatory for this intervention are described in table 1.

We decided upon a user-centered approach to explore the needs and constraints among future users. This approach is based on the idea that users, in this case both patients and healthcare workers, get involved in the development process to share experiences, hopes, doubts and ideas [23,24]. There is a variety of ways that a user-centered approach can be applied, however, the core philosophy is that users are involved in one way or another [25].

User-centered design (UCD) has been, and is being used, in healthcare contexts to develop technology enhanced interventions that accounts for user perspectives [26] For patients it is about developing technology and care models that are fit for use in everyday life. For healthcare workers' it is about technology that supports not only new routines, but also fits into existing work practices [27].

For a number of years, no shared definition of UCD existed, thereby it became a concept with no real meaning [24]. However, during recent years, attempts are made to define key principles to what UCD is and how it should be applied [28]. Thus, aiming for a distinct definition, difficulties of the approach has been identified [28]. Firstly, whilst users contribute with requirements and input, their skills to participate in concept creation may be limited. Secondly, hence being skilled of a particular context, contribution is difficult in commercial product development when aiming for a broader audience. Thirdly, new technologies require new skills and understanding, which users may or may not have time to incorporate. Finally, a user-centred approach requires an open mind-set in the design team, a willingness to listen to the users.
In particular, critique regards whether or not users’ participation support innovative design [29], accordingly attempts are made to evoke user innovation [30]. However, such attempts are often time and resource demanding. Other approaches, such as co-creation, creates a more innovative and exploratory process [31], conversely, might lack the particularity of a user’s perspective.

By describing the user-centered process of developing a digital person-centered self-management support intervention for people with T2D and thereby identifying challenges related to requirements and use among patients and nurses we anticipated that many obstacles related to implementation could be avoided. A reason for this is that the trend of digitalization also come with many challenges, affecting the users, i.e. both patients [22] and healthcare workers [22,32]. Based on our previous research [22] reporting ambivalence among patients as well as district nurses towards digital technology in T2D care we saw a challenge in developing a user-centered process of designing an intervention. Furthermore, being a cross-disciplinary project involving researchers from informatics, medicine and nursing we have been able to account for several purposes of the project as the benefit of the intervention for people’s self-management of the illness but also to pay attention to the digitalization process.

**Methods**

**Design**

The study uses a mixed-methods approach with several activities and different data sources. *Workshop:* A workshop with patients, family members, researchers and other stakeholders associated with T2D was performed in order to explore needs and expectations in the various groups. This workshop consisted data collection through mentometers (using the tool menti.com where participants use a smartphone or computer to answer a web-based poll where the results can be presented in a simple way) and through group discussions. *Observations:* Observations of nurses’ consultations with patients at diabetes clinics in a primary health care center provided information on the communication as well as the physical and spatial conditions of practice. *Interviews:* Semi-structured interviews with nurses and managers of primary care were performed to better understand current work processes and organizational constraints and in order to evaluate possible transformations.

**Recruitment**

The participants are listed in table 1 below.

<p>| Table 1. Overview of activities, participants, data collection and analysis |
|----------------------------------------|---------------|----------------|------------------|
| <strong>Activities (hrs)</strong> | <strong>Setting/Participants (n)</strong> | <strong>Data collection</strong> | <strong>Analysis</strong> | <strong>Purposes</strong> |
| Workshop (8 hrs) | Primary healthcare Patients (n=5) Spouses (n=2) Diabetes specialist nurses (n=9) | Round table discussion memorandum Field notes | Qualitative thematic content analysis | To explore needs and expectations on a forthcoming intervention |</p>
<table>
<thead>
<tr>
<th>Observations (Four visits = 8 hrs)</th>
<th><strong>One primary health care center</strong></th>
<th>Digital video recording</th>
<th>Qualitative thematic content analysis</th>
<th>To explore nurse-patient communication and the physical and spatial conditions of practice</th>
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<tr>
<td></td>
<td>Diabetes specialist nurses (n=1)</td>
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<tr>
<td></td>
<td>Patients (n=4, 2 men, 2 women)</td>
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<tr>
<td>Interviews (4 hrs)</td>
<td><strong>One primary health care center</strong></td>
<td>Semi-structured interviews</td>
<td>Qualitative thematic content analysis</td>
<td>To understand current work processes and organizational constraints</td>
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strengthen trustworthiness, the steps in the analysis were discussed in the research group until consensus was reached (cf. [33]).

**Video analysis**
The videos were analyzed in sequences, using memos that were down written with the aim in mind during all sequences. The memos and recordings were then read and observed i.e. analyzed together using qualitative content analysis. Themes corresponding to the aim were suggested, and discussed in the research team in order to strengthen trustworthiness of the interpretations [33].

**Results**
The results of the preparatory activities directing the forthcoming intervention are reported below one by one.

**Workshop**
The workshop explored participants' needs and expectations on a forthcoming intervention through round table discussions and related memorandums, field notes by researchers and mentometer surveys. In the first session participants were asked to define what self-management meant for them. The summary of the result showed that self-help, responsibility and knowledge was important components of self-management. We have interpreted these results as patient empowerment [34].

The next step was to explore expectations for the future which revealed that the most important needs related to person-centeredness, accessibility and effectiveness. Person-centeredness meant individually adapted care and treatment suggestions, with good communication. The importance of being seen with respect was highlighted. Both patients, participating spouses and professionals agreed upon this. Accessibility meant that it should be easy and a fast to get in contact with the care professional they needed. Waiting in telephone ques to be contacted later was seen as frustrating when people had acute problems such as hypoglycemias. Besides this, such “small” but important problems were seen as impossible to solve since they cannot wait until the annual visit or even the next day. Effectiveness meant that resources should be effectively used. Time and costs could be saved by reorganizing work at primary health care centers, something that could be beneficial for bot patients and those employed. For example, general practitioners and diabetes specialist nurses could benefit from being more open for e-mail conversations, something that is hard today due to security policies. Answering short questions by e-mail could save time and money and benefit both parts. Many simple questions were by patients not seen as important to regulate with restrictions with regard to issues of confidentiality. Another important issue that was expressed among both nurses and patients were the need of developing an intervention that was not too overwhelming. Balance and control over as well work situation as daily life with diabetes implied that an intervention must taking this into account and not demanding to much from any part. A positive expectation from both parts was that a future intervention should include improved collaboration and partnership between patients and nurses, leading to increased patient empowerment. This was especially important since the care of today was seen as more compliance oriented. Trust and respect for each parts' capabilities was highlighted as important.
Observations
In order to explore communication between the patient and the diabetes specialist nurse as well as the physical and spatial conditions of practice, observations via digital video recording were analyzed. The result of the analysis revealed that the communication was highly one-way directed from the nurse to the patient. Information about test values and advice around diet and physical activities were common. This kind of role taking seemed to be accepted and adapted to also by patients, who rarely opposed. The nurse gave and the patient got information and advice. Even if open ended questions were used in the conversation, the patients rarely took the chance to lead the conversation, talking about the issues that was most important for them. Regarding the physical and spatial conditions of practice in the diabetes clinic, the results revealed that the nurse had a lot of administrative work to perform during visits, but also before and after. The room was more of an office even if the nurse tried to adapt it and move the furniture to better suit the situation. The consequence of this adaptation, where the nurse and patient sat together during the conversation, was that the nurse had to stand up and walk to the computer as soon as the patient asked questions about e.g. electronic record data. Thereby, the meeting was disrupted several times during a visit. Some patients seemed to be disturbed by these disruptions.

Interviews
In order to understand current work processes and organizational constraints in diabetes care, repeated interviews with a diabetes specialist nurse and a manager were performed. The analysis of these interviews revealed obstacles as well as possibilities for future. The obstacles concerned for example the organization of diabetes visits in bi-annual contacts with either a nurse or a physician. This organization imply a focus on measurements and control instead of patient needs and support, and empowerment. Sometimes exceptions are made, but the planned time for diabetes nurse clinic are based on annual visits, whereby exceptions will affect the time planning and visits for other patients. An awareness about the problem of this model for planned visits existed among the nurse as well as the manager but it seems to be hard to change since many other specialities would be affected, as asthma clinic, incontinence clinic etc. It was expressed that “all wants more time for their work”. An awareness also existed that diabetes patients are a diversified patient group. Well educated people, from higher socioeconomic circumstances as well as those with lower education and poorer circumstances are given the same resources despite different prerequisites and needs of self-management support. Education and preparation among personnel to meet the different needs of patients is not enough. Cultural perspectives, gender perspectives, socioeconomic perspectives and age-related perspectives should be taken into account, but education for this is lacking. Continuous education is sparsely offered due to economic limitations. eHealth services are commonly suggested by stakeholders, and in media, to be the solution for shortage of personnel and economic constraints. However, eHealth services were seen as both increasing work load and pressure but also an opportunity, if implemented wisely. Digital resources and eHealth was ideally seen as something that could improve care quality as well as reduce work load in future and thereby also reduce professionals’ stress of conscience related to feelings of giving inappropriate care.

A suggested summary of criterions for digital person-centered self-management support intervention
The results from the different activities were compiled, analyzed and discussed during several research group meetings. The purpose was to come up with a suitable plan for a
digital person-centered self-management support intervention that corresponded to the clinical goals as well as the expressed and observed needs and wishes from the future users.

We summarized the findings into a list of criteria to act as suggested guidelines for setting up digital person-centered self-management support. Implementation of digital person-centered self-management support should:

- improve access to the right care at the right time
- be efficient, both with caregivers and patients time and resources
- reduce administrative tasks
- include continuous training and support for patients and professionals
- challenge the current organization of care and patient visits
- enhance tailored care and support
- strengthen the collaboration between patients and caregivers
- enhance nurse-patient communication
- strengthen patient empowerment
- improve the care environment to integrate technology

**Design of a digital person-centered self-management support intervention**

The preparatory activities, together with our own earlier research [22,35,36] formed the foundation for designing the intervention. Digital support for this group of patients must be modular and adaptable to fit different needs. Therefore, we put together an assemblage of resources, together with changed work processes, so that each patient can get a suitable setup based on individual needs. This assemblage of resources is described below.

Digital person-centered self-management support is meant to be introduced for the patients when they meet their specialist diabetes nurse. To help the nurse in identifying individual needs we have digitalized a newly developed instrument, the Swedish Self-Management Assessment Scale (SMASc) [35]. This is a person-centered, simple-to-use, screening instrument through which patients score and get feedback on their individual self-management status in five areas (Knowledge, Goals for future, Daily routines, Emotional adjustment, Social support). The results can be used as a basis for a discussion between the patient and the nurse and to establish a plan for improving/supporting the area(s) with lowest scores.

In terms of technological infrastructure, this intervention relies on nurses having access to an iPad (or other tablet) and patients having an Android or iOS smartphone with internet access. The nurses use the digital SMASc inquiry on their iPad to screen the patient during a visit to assess their needs of self-management support in the five areas. Thereafter, they show the patient how to access and use the other resources that could strengthen their individual self-management ability. The available resources are: a smartphone application for self-monitoring and a website with diverse information for various needs and an integrated discussion forum.

The website was developed specially for this intervention. It has been structured in way that makes it easy for the diabetes specialist nurse to direct patients to the information and resources that they need based on the results from the SMASc instrument. Information and links offered on the website is evidence based, written and reviewed by diabetes researchers. There are also links offered on the website to other, validated, resources that
correspond to individual needs of self-management support such as web tests regarding diet, alcohol habits and exercise.

The chosen smartphone application was an existing and well-established app (MySugr [37]), designed for diabetes support and is free to use. The user can log activities, blood sugar measurements, food intake and also create reports from collected data. Within the intervention, for example, the blood sugar measurement functionality can be used for patients that need to work with understanding the patterns of their own blood sugar levels related to diet and exercise. Data can be shared with the nurse and thereby work as a basis for discussion regarding self-management support.

**Discussion**

The general aim of the paper was to explore and describe the preparatory activities and the subsequent design of a digital person-centered self-management support intervention for people with T2D treated in primary healthcare.

Our results point at needs to adapt self-management interventions to challenges in the organization as well as within the nurse-patient interaction. We have suggested a list of criteria to act as guidelines for a digital person-centered self-management support based divided into two dimensions; ORGANIZATIONAL and INTERACTIONAL. We will here discuss the implications for design suggested by these dimensions and bring forth the unavoidable challenges. It should be pointed out that these dimensions areas are not strict categories as some of the goals might well be related to both dimensions. Each specific goal has been assessed and distributed into the dimension which is most prominent. Figure 1 illustrates how the goals are associated in different degree to both dimensions. The specific position in the figure are approximations based on our assessments.

Figure 1. Design goals relating to challenges in organization and interaction
Advantages of a user-centered design approach

Using a UCD approach has helped in identifying user needs and goals which is an addition to the clinical requirements of the intervention. What became clear from the result is that there is an organizational and an interactional dimension to the design goals. This has helped in understanding what was achievable by us when designing the resources for the intervention and what we could not achieve without substantial changes of the organization. Each goal is affected by both dimensions but in various degree. This meant that some goals could be addressed with high impact by focusing on user interfaces. On the other hand, some goals could not be addressed without turning attention to extensive organizational changes. At this stage of the study we decided to have as little impact as possible on the organization, but we tried to design the resources in such way that it would allow for organizational changes in the future. Below we give three examples of goals (see fig. 1) in different compositions of these dimensions and the impact of the design. The first shows a goal that balance quite well between the two dimensions. The second shows a goal that is highly limited by the organizational dimension. The third shows a goal related to the interactional dimension and thereby more open for design.

Improve access to the right care at the right time is a good example of a goal where the ideal would be contributions from both the organizational and the interactional dimension. The interactional dimension of this goal was addressed by implementing the website where patients could access valuable information regardless of time and space. Also, the integrated web forum was intended to fulfill parts of this goal as it would provide the users an additional source of communication and information. However, there is also an organizational dimension in this goal. To further develop access and timing of care, the organization must be prepared to make changes in how and when patients can get in contact. Recent developments in online healthcare services can be seen as one way of making such changes in access and delivery of care.

Improve the care environment to integrate technology is an example of a goal where we were limited in how far we could work to reach the goal. This is a goal where organizational decisions and changes must be done in order to better integrate new technology. What we addressed though, was to design in a way that is flexible enough for making changes in the work environment and thereby potentially effect the organizational dimension in the future. The decision to give nurses access to a personal tablet computer was directed by this goal as it allows for the nurses to be more independent of their stationary computers. This in turn would allow for the meeting rooms to be different or even move the meetings outside.

Strengthen patient empowerment is an example of a goal where we had a high degree of freedom in how to work for this goal. The design as a whole is a contribution towards this goal. The interactional dimension was addressed by giving patients access to multiple resources e.g. self-monitoring and self-analytics tools, tailored information, and social contact through a web forum. These resources will hopefully help them towards an increased empowerment as they can learn and know more about their condition. However, the organizational dimension is still present as the organization must adjust their routines in order to meet the empowered patient.

Both dimensions are always present but to a different degree. The results show that in order to succeed with the design of such digital intervention we need to address organizational dimensions as well as interactional. Introducing new technology to a workplace will always start changing the organization [38]. By turning attention towards both the organizational
and the interactional dimension, through studying the current work practice and exploring desirable user interactions, design decisions can be made that both introduce new, useful technology and suggest beneficial changes of the organization [39].

Limitations of a user-centered design approach

One of the strengths with UCD is that it allows for the users to express their goals and influence the final design [40]. There are two prominent groups of users in this study; patients and nurses. The identified goals are aggregated from needs and wishes expressed by both these groups and also stakeholder closely related to these groups. When assessing the goals both these perspectives must be taken into consideration and it is therefore important to understand the basic conditions for each user group.

Patients are individuals and personal needs and requirements can differ from person to person. Goals such as access to care, efficient care, appropriate training in self-management and so forth can all be assessed whether the design achieves these goals on a personal level or not. It is affected by the interface and the organization of care.

In the case of nurses as a user group, nurses are of course also individual users of the design but with a significant difference. The goals cannot be assessed solely from the perspective of an individual user since nurses also are representatives of the healthcare organization. This means that nurses not only express their personal need but also what is regulated by the healthcare organization e.g. the overall organization of care. They are also submitted to political and legal constraints such as reimbursement schedules and patient legislation. The consequence of this is that the organizational perspective must always be taken into consideration.

One good example where different user group needs are conflicting is the goal regarding the efficiency with both patients’ and nurses’ time and resources. For a patient, efficiency would mostly likely be spending as little time as possible attending to ones’ medical condition [41]. Within a self-management context support should be easy to use and not be time consuming. This would mean that the patient can spend less time on the illness and more time getting along with their life. In relation to the healthcare system, patient efficiency would condense into as little waiting time as possible. Efficiency for a nurse would be similar, spending as little time as possible doing things that does not add value to a patient. The ideal would, from an economic standpoint, be that the nurse can have meaningful meetings or other activities related to patient care at a larger amount of their working time. Both user groups want as little waiting time as possible, but this would prove difficult as these goals has a trade-off relation to each other. In order for the patient to get in contact with a nurse at any time and with no delay, there must be an overcapacity of nurses ready to meet the patient. The opposite is also true, that in order for a nurse to spend as much time as possible to care for patients, patients must be queued up so that there is a steady flow of patients to meet. There is no way of meeting both these demands.

There are also conflicts between different goals within user groups. There are for example several goals that promote a design that are simple to use. Reducing administrative task can be achieved through simple interfaces and high degree of automation. Providing training and support would be much easier if the design is easy to use. Both these goals strive for a simplicity of design. However, striving for enhanced tailored care and support suggests a design that can be adapted to individual needs. This calls for a design that incorporates a high degree of flexibility which also implies an increased complexity (more functionality,
more adjustable). The aim for flexibility and the complexity that follows has a clear trade-off relation towards goals that advocate simplicity. There is no way of finding a design that fully satisfy these pairs of opposition.

Using an UCD approach for this study has helped in identifying potential user needs and requirements. However, working with the goals also revealed limitations. Especially the situation with multiple users are problematic as patients and nurses in some cases express widely different goals. We also highlighted that nurses, in addition to personal expectations of the design, express organizational which might be conflicting. This makes design decisions hard and the end result will always be a compromise. The dilemma is illustrated in figure 2.

Fig. 2. The design space in relation to organization, nurse and patient

The nurse is part of the organization and therefore express organizational needs and limitations. Nurses also express personal and individual needs of the design connected to their everyday work practice. These goals do not always correspond with those expressed by patients. Consequently, the intersection between patient and nurse/organization needs, which represents the actual design space, becomes very narrow. Considering that this design is intended to be a self-management support, and therefore closely related to the patient, it is problematic how much constraints comes from the healthcare organization.

Conclusions
There is a need for improved self-management in T2D and a digital person-centered self-management support could be a useful complement to existing care practice. There are however challenges associated to digitalization that must be taken into consideration. By adapting a UCD approach, we explored challenges and identified goals to serve as a foundation for designing a digital person-centered self-management support intervention.

The findings showed a series of goals that worked as a guideline for design, resulting in a set of digital resources for supporting people with T2D towards improved self-management ability. These goals have both organizational and interactional dimensions which has to be negotiated into the final design. There are also limitations related to the strong user focus in the UCD approach. Patient needs are expressed as personal and related to individual requirements, but this is contested by the needs expressed by nurses whom, besides
personal requirements, also include organizational constraints. The implication of this is a limited design space with an overemphasis towards the healthcare organization which would likely lead to a design that neglects patient needs. This is considered as highly problematic when the aim is person-centered self-management support and where, subsequently, the patient should be in focus. UCD is a useful approach but given its limitations in this context there seems to be a need of approaches that not only expose these dilemmas but that also can be part in offering a solution to them.

Methodological discussion
This study was conducted with fairly small number of participants which could be considered as limitation. The number of different data collections has been a deliberate choice in order to deal with this particular limitation. Mixing data collection methods and perspectives allows for a rich dataset which has served the purpose of this study.

Conflicts of Interest
None declared.

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