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Juggling Doctor and Patient Needs in Mental Health Record Design

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Abstract. Providing patients access to mental health records is a controversial topic that gains growing attention in research and practice. While it has great potential in increasing the patient engagement, skepticism is prevailing among therapists who fear detrimental effects and face a lack of feasibility when treatment notes are handwritten. We aim at empowering both therapists to new documentation approaches and patients to higher engagement, and develop the collaborative documentation system Tele-Board MED (TBM) as an adjunct to talk-based mental health interventions. We present an evaluation of TBM by comparing four prototypes and testing scenarios, reaching from early simulations to attempts of real-life implementations in clinical routines. This paper delivers a systematic need comparison of therapists as primary users and patients as secondary users, both during and beyond treatment sessions. While patient feedback is thoroughly positive, the therapist needs are only partially addressed; the benefits remain hidden behind the perceived effort.

Keywords. Clinical psychology, patient access to record, user experience evaluation, secondary user

Introduction

It is well acknowledged in mental health care that increasing patient engagement in therapy helps to improve treatment outcomes. While in primary care and medical subspecialties, patient access to medical records is proliferating as a means to engagement, the mental health care domain is mostly excluded due to fear of undesirable patient reactions [1]. Kahn et al. [2] strongly support the idea of showing patients their mental health records and believe in a reduction of stigma and in increasing acknowledgement of health problems when notes are taken in a descriptive, nonjudgmental language. Germany passed a law in 2013, which calls for complete medical record transparency and grants patients the right to obtain electronic copies of their files any time [3]. While this is an opportunity for patients, it presents a challenge for therapists, also because handwritten treatment notes are still common practice in psychotherapy [4]. We aim at bridging the gap of legal requirements and clinical practice by designing a system that empowers both therapists to new documentation approaches, and patients to higher treatment engagement.

We develop the collaborative documentation system Tele-Board MED (TBM) as an adjunct to talk-based mental health interventions. The software system offers a whiteboard-inspired graphical user interface, which allows doctor and patient to take

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notes jointly during the treatment session (Figure 1). The documentation panels can be freely edited and filled with sticky notes, scribbles, and pictures. TBM is based on the web-based application Tele-Board [5] and is usable on different hardware devices. Whereas most computer system interfaces are designed for single users, TBM is designed for a collaborative setting involving two key users – therapist and patient. Therapists are our primary users, because they are frequent hands-on users of the system. Patients are considered secondary users [6], because they rely on the therapist to obtain information from the system and are influenced by their system experience.

This paper illustrates our approach to evaluating the concept and experience of TBM through prototyping and testing. We present four studies and analyze how the prototypes addressed – at times conflicting – needs of our primary and secondary users.

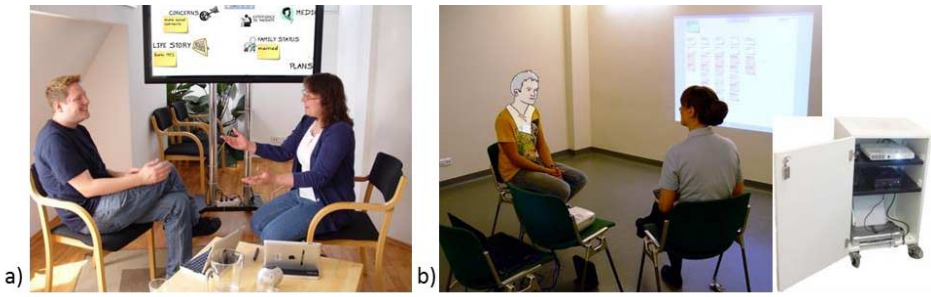

Figure 1. TBM settings with different hardware devices at an a) ambulant clinic and b) inpatient clinic.

1. Methods

We take a meta approach to evaluating the acceptance of TBM by comparing and contrasting different prototypes and testing scenarios, reaching from early simulations to attempts of real-life implementations in clinical routines [4,7,9].

1.1. Video Prototype for Gathering Therapist Feedback

In order to introduce the idea of TBM to therapists working at an ambulant clinic, a 15-min film regarding use cases, setup, features, and interaction was created. We sent out emails including a link to the video and a questionnaire. The survey evaluation has shown that therapists like the support that TBM provides in administrative documentation tasks and in fulfilling the legal requirements [7]. Skepticism was found regarding data privacy issues, a possibly impeded therapeutic relationship due to the use of technology, and the full file transparency requested by law.

1.2. Roleplay Prototype for Gathering Therapist Feedback

We invited therapists to an introductory event in an ambulant clinic, where TBM had been set up. We presented a roleplay of a psychotherapeutic treatment session with patient and therapist using TBM on a digital whiteboard. The participants had the chance to take on the therapist's role. In a survey on documentation habits, we learned that therapists need to find a good balance between giving the patient full attention and simultaneously noting down important contents [4].

1.3. Real-World Prototype at Ambulant Clinic as Attempt to Test Both Perspectives

TBM had been set up at the ambulant clinic. Data security measures were implemented [8] and a dedicated room was equipped with a digital whiteboard and supplementary hardware devices (Figure 1a). The software system was accessible outside of this room, too, on computers connected to the clinic network. After a 3-hour schooling event with therapists and the explicit invitation to use TBM, we waited for reactions, but without success. In retrospect, we identified several obstacles. Therapists were expected to experience a reduced workload with TBM due to the creation of digital notes that are immediately available for official case documents. However, they experienced an increased workload instead; they have to learn how to handle the novel technology. Eventually, therapists want to feel competent in front of their patients; unfamiliar technology both software and hardware seems to bear great risks in this regard.

1.4. Real-World Prototype at Inpatient Clinic for Gathering Patient Feedback

A second real-world prototype was used in a psychiatric inpatient ward [9]. Based on our experiences from the failed test in the ambulant clinic, we used a more basic and flexible setup, consisting of a laptop, a projector, a wireless keyboard with touchpad, and a printer stored in a trolley on wheels (Figure 1b). A member of the TBM team, who is a psychotherapist in training, worked at the psychiatric inpatient ward and experienced TBM with patients suffering from e.g. personality disorder. The joint note taking and the visual presentation led to an increased acceptance of diagnoses and to patient-therapist bonding. The patients were thankful for the print-outs to take home.

2. Results

During the process of repeated prototype creation and user testing we identified various therapist and patient needs. The need collection in Table 1 represents an overview of the common needs, which do not have to be comprehensively valid for each individual therapist or patient. We distinguish between needs that are pronounced during versus beyond a treatment session. Both are crucial to understand why or why not a system is accepted and how well or how poor its adoption works. The during-session needs strongly influence the social interaction of therapist and patient and the shared experience of systems like TBM. The beyond-session needs represent the individual context around a treatment session. Furthermore, the origin of needs differs: they might be personal wishes, or stem from legal or healthcare system regulations.

Table 1. User needs in talk-based mental health interventions both during and beyond treatment sessions.

	Therapist Needs	**Patient Needs**
During Session	Build up good therapeutic relationship	Trustful relationship
	Devote continuous attention to patient	Empathic nonjudgmental atmosphere
	Capture important observations	Being involved in decisions
	Feel competent in front of patient	Agree with treatment notes
Beyond Session	Adhere to legal requirements	Recall treatment session content
	Deliver administrative documents	Recall and do assigned homework
	Reduce documentation workload	Informed conversations with close persons

3. Discussion

While some needs of the primary user (therapist) and the secondary user (patient) are well compatible, such as the establishment of a good therapeutic relationship, there are certain needs that are conflicting and thus challenge the usage of TBM in treatment sessions. Patients have a positive attitude towards collaborative documentation with TBM as they feel involved in decisions and leave the session with a copy of their notes. However, the therapist need of feeling competent in front of patients (and possibly hiding the notes from patients) seems to be in peril when a system like TBM becomes part of the session. Even the prospects of easy fulfillment of legal requirements and quicker creation of official documents hardly make up for leaving the comfort zone and learning to operate TBM. Since our study took place in the context of behavior psychotherapy in Germany, the transferability of results to other cultures is limited.

We followed the design guidelines by Alsos and Svanæs [6] for information systems that involve a secondary user (SU) experience: TBM gives feedback to the SU, since the patient can see what is captured on the documentation panels and is invited to contribute. TBM's physical form, i.e. a digital whiteboard or a wall projection, supports non-verbal communication, because facial expressions and gestures are mutually visible. TBM provides an interface tailored for the SU and supports the use of patient language and representation. The graphical user interface in itself encourages visuals and capturing short texts on sticky notes, and the prepared documentation panels are designed in an intuitive way, so that no medical domain knowledge is required.

We conclude that TBM successfully addresses the needs of patients in talk-based mental health care. However, there is still work to be done to make TBM more attractive to therapists, because when the acceptance of a system is first and foremost dependent on the willingness of the primary users, their individual user experience is of top priority. It is yet very important in system development for collaborative settings, such as medical encounters, to design both user experiences together. However, we experienced that multiple, individual tests each focusing on a certain user group are an effective means to gain feedback and assess technology acceptance.

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