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Performing Telecare: Recognizing New Nursing Care Practices

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***Abstract*—Telecare is increasingly becoming a part of nursing care, and also in mental health care. In this paper, we study the effects telecare has on nursing care, by showing the first results of research on care by webcam for SMI (severely mentally ill) patients who live at home. Based on ethnographic fieldwork, we show how the nursing practice is altered by the use of technology. New nursing care practices emerge when care is given at a distance, using a webcam. The changes in care practice are noticed by nurses, but not fully recognized. Even more importantly, the new practices are not shared and discussed. Discussing changing practices among nurses is essential, in order to support nurses to name and purposely use the opportunities technology brings.**

Keywords: nursing telecare; mental health care; ethnography.

I. INTRODUCTION

Nursing care is substantially changing, as it is increasingly performed at a distance with the use of technology. To care at a distance is already commonplace in mental health care; especially Internet therapy is customary for groups of patients [1,2]. The use of webcams is rising as well; for example, for SMI (severely mentally ill) patients who live at home. Where nurses normally visit patients at home [3], the use of the webcam changes routines significantly. Some changes are obvious, as care at a distance first means that patient and care professional are not in the same room. Physical absence means that there is no room for touching, smelling, walking around or observing anything that technology does not cover [4,5]. Some changes might not be so obvious though and alter care into new forms.

When indicating care as changed when technology is used, we draw from Science and Technology Studies, by analyzing the role of the technology. Technology is comprehended as an active participant in the care relationship, besides nurses and patients. Being active means that the technology is not neutral [6,7], but that its design [8] and its (unforeseen) usability [9] influences its environment. In healthcare, this means that the relationships between care professionals and patients changes. Basic examples are technology that takes over the actions of professionals, like a hoist. Other examples show how practices are altered by transferring tasks and responsibilities. Blood pressure can be self-measured for example, by which a patient performs tasks which originally belonged to care professionals [10,11]. Healthcare is redefined by the use of technology [12] as roles, tasks, functions, relationships, places and spaces change.

Last year, in preliminary research [13], focus groups were held in order to find out what experienced telecare users, nurses that is, thought about this new practice. One of the nurses spoke about an experience she had with one of the patients: *One client is actually care-avoiding and with him I am text messaging via an iPad. Like last Friday, I worked all day and he was sending me messages all day and then I responded. And at the end of the day he spilled the beans: he texted that he was very stressed! And I thought: well done!*

In this case, the use of text messaging was an incidental feature, as the aim of the use of the project's iPads was telecare by webcam. It turned out to be of extra value as this client was able, by having frequent, but brief contacts during the day through a messaging app, to gain self-insight into his anxiety, supported by the nurse. In this example the use of technology would seem to have added to new forms of care. The technology is intended for one thing, but actually fulfills another function as well. The nurse and patient seem to have uncovered a new, unforeseen care option, which enables new forms of care. We therefore ask the question whether or not healthcare is not only being redefined but even reinvented.

This paper is based on a research project that aims to improve the use of telecare for care professionals in mental health care. In order to do so this 'Videoconferencing in mental health care' project will develop several online instruments. With these online instruments, professionals can get familiar with telecare and practice specific situations, in order to bring their professional knowledge and experience in line with the new care practice. Seven mental health care organizations, two universities of applied science, a research institution, a hospital and a university are working together in this project. The project aims to add to knowledge on how telecare changes nursing care by analyzing how frontrunners are using nursing telecare. These insights can support nurses in the use of telecare.

In this paper, we want to answer the following questions: What new nursing care practices emerge when using a webcam? Are professionals aware of these new practices and are they purposefully performed?

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II. METHOD

A. The project teams

The mental care organizations mainly participate with FACT teams. FACT stands for Flexible Assertive Community Treatment; its teams are multidisciplinary and consist of case managers (mostly nurses), psychiatrists, psychologist and sometimes social workers [14]. All have their own caseload of patients, but they share responsibility for the total case load. Whenever patients need extra care, for example because of an imminent crisis, they are listed on the so-called FACT board. This board is a tool to follow the patient more closely, a task that is the shared responsibility of the team. All the FACT teams that participate in the project are involved in using telecare to care at a distance with a webcam. The technical systems vary, just as the implementation phases of the teams. Some teams have embraced the new technology fully, in some teams just a few nurses have and there are teams that are still discussing if and how they want to use telecare.

For this article, we drew from material from two teams: team E and team H. Nurses and patients of team E use a dedicated computer with a screen and webcam and in team H an iPad is used. In team H three case managers are forerunners and use a webcam to care at a distance regularly. The web contacts they have are part of planned care. Team E consists of appointed members from several FACT teams. They take turns manning a health care post where from 8 am till 8 pm they are able to receive all unplanned webcam contacts from clients throughout the region.

B. Ethographic research

In order to understand the daily practice of telecare we, a multi-disciplinary research group (ethics, nursing and user-centered design) use ethnographic research techniques. We assume that new care is in the making as telecare is performed. We use techniques that allow us to become part of the care practice, or at least approach the practice closely, so we can recognize and understand these new practices. We observed and talked with nurses engaged in telecare whilst we were in the room. We took field notes while observing webcam contacts with patients. In between, informal interviews were held, subsequent to the webcam contacts, which were taped and transcribed. We have joined the different teams 32 times, during two to four hours each time. We have observed and talked to 18 nurses, who were in contact with 41 patients, some multiple times. The research group has jointly performed the data analysis. The observations and analysis are led by sensitizing concepts, guiding the notes and the coding process [15]. This is not a neutral process, as neither is the observer. Our observations and analyses were shaped by the theoretical notions used by the researchers. The researchers discussed and articulated these notions during the analytical process. In that way we specified what we have discussed they specify what they have seen and discussed with the nurses, in order to describe the new practices [16]. Patients were informed of our presence beforehand and if they did not consent, the researcher left the room. A letter with extra information for patients was available. The independent ethics committee judged this project to be exempt from review.

III. RESULTS

This section presents our results. We identified three different themes which we will discuss here. In each theme we use examples from the data to clarify our points. These examples may be described or quoted from the data; so called thick descriptions, to support understanding of the results.

A. Several roads to Rome?

We found a large variety of ways in which telecare is used. Even more interesting is the variety in how nurses define this usage of telecare. To illustrate this use, we use three quotes, all of which are about patient Bob, who has an anxiety disorder. Bob 'calls in' regularly to the team E. As he contacts them frequently, he sees a lot of different nurses. In the next three quotes, nurses Mary, Daniel and Rudi reflect on the contacts with Bob:

1) Interviewer: What do you think the purpose of telecare is for people like Bob?
Mary: Well, when people get stuck for example. People who are unable to start the day by themselves and then they start calling their case manager every five minutes. With the screen, I feel they can learn to give themselves a signal, like: I get stuck, I have to do five things and I do not know how to start. Structuring your day, that is a perfect way of using it. (20150501OtE)

For nurse Mary, telecare is an excellent way to enable Bob to structure his day. Instead of having to face his doubt all day, he can call in and ask for support when he needs it. Mary feels this helps Bob on a crucial moment and will give room for a better day.

2) Bob calls in. He says: I want to talk a bit.
Daniel: Why?
Bob: I want to get rid of my tension.
Daniel: You always do, but you have to talk to your psychiatrist, I cannot help you.
Bob: I want to know what I can do about it.
Daniel: What do you think?
Bob: I think I will go for a ride on my bike.
Daniel: Good idea!
Bob: I hang up now … and he immediately terminates the call.

Daniel says that all conversations with Bob take this course. He even thinks that whenever Bob calls in and sees that Daniel is there, he quickly comes up with his own solution, like riding his bike. I try to find out if Daniel intents to give Bob little room to show this behavior, but Daniel doesn't know, it is just how it goes. (20150423OtE)

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Whenever Bob has contact with Daniel, conversations take another course than in the first example. Daniel, unconsciously or so it seems, steers Bob into the direction of a self-found solution. The conversations do not have the atmosphere of a quick relief, even though they still might have that effect on Bob.

3) Bob already called in once this morning. He knows what to do, but needs confirmation. Rudi thinks that Bob should be taught how to handle his thoughts himself, without the continuing intervention of others, for example with the help of cognitive behavior therapy. He does not know if that would be an option for Bob or if anything like that has been tried yet. (20150430OtE)

Rudi, finally, reflects upon why Bob would need such quick reliefs and whether he should be able to do this himself, without the telecare. Mary, Daniel and Rudi differ clearly in their opinion on how Bob should use telecare and if and how he would benefit from it. Different lines of thought on care would probably be the case before telecare as well, but this dispute is on the use of telecare, which makes these differences particular to telecare.

B. Part of the plan?

In team E, where most of the care is unplanned, nurses are aware of changes in their practice, even though they found them difficult to name:

Nurse Taco talks about patient Tobias, who told very dark stories after his last admittance. One example was on how Tobias claimed that one of the nurses at the clinic had instructed him to 'go grab that borderline bitch'. Taco tells how much he is affected by such contacts and how difficult these conversations are by webcam.
We discuss this for a bit, but do not seem to get to the heart of the matter. Taco says these contacts seem a kind of stopover, like it is not part of the process. I ask him if it would have been different had he been Tobias' case manager. Taco ponders on the treatment, on how telecare is a part of the care offer and how this is part of the treatment, but that does not seem right to him after all…. It seems clear though that conversations like these with Tobias have a larger effect on Taco because they are by webcam. (20150422OtE)

Nurse Taco is aware of his reaction to intrusive contacts, which he links to the fact that he is not part of the care process of most patients he has contact with by webcam. He finds it difficult to pinpoint the differences with regular care, but he sees it in the context of the treatment plan.

What happens here is that the webcam creates a new form of contact, contact without the context of a treatment plan. And even though the nurses mostly report the contacts they had in the patient's file, especially the ones they (on a professional basis) diagnose as difficult or important, the fact remains the contacts are incidental instead of part of a professional plan. In one way this fits the mental health care paradigm of 'recovery' very well. Patients are the center of care and are encouraged to take charge of their lives and care. Unplanned care fits this seamlessly, but from a professional point of view a new form of care is in the making.

C. Telecare: the intertwining of aid and aim

The cases of how nursing care changes in the above paragraphs are just a few examples of the very rich data we have gathered. Within the data there are many different forms of telecare and many different opinions of nurses on telecare. Apart from the new forms of care that were shown before, another interesting phenomenon has come from the data: the intertwining of aid and aim within care. Nurses talk about telecare as a way of sparing time because they do not have to travel to patients. They also mention how helpful it can be in contact with patients, both care-avoiding and excessively consuming patients, as patients do not have to come to the office for regular appointments anymore:

C [team H]: Well, in that case, I would tell him: we have a deal. I visit you once a week and I could contact you an extra time by telecare at the beginning of the week. This way I try to direct him so to speak and to restrict him in order to make him realize that he has to wait for our planned contacts so he will not keep calling in between.

So, telecare can be very supportive in alleviating logistic obstacles. On the other hand, the nurses mention how telecare enables more frequent, businesslike and concise contacts, which leads to more substantial guidance or supervision of some patients, again both care-avoiding and excessively consuming patients. So sometimes telecare can be used as an aid to solve logistic obstacles and sometimes it is the aim: more frequent contact with patients.

IV. DISCUSSION

We started this paper with the following questions: What new nursing care practices emerge when using a webcam? Are professionals aware of these new practices and are they purposeful performed? We have seen how nursing practice changes when telecare is introduced and we identified three themes within these changes. In the first theme, we saw the different functions of telecare, even for the same patient. Different practices might be common in the everyday practice of mental health care, but these different practices are established with the webcam and not recognized or discussed. The differences we saw between the three nurses is on a new form of care: in what way can nurses offer options for contact to patients with anxiety disorders? And even more important: what do nurses, in their professional opinion, think these options for patient contact should be? The nurses of patient Bob have not discussed his case. They

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belong to different teams and in Team E, only set up to man the webcam, no care-meetings are held. So technology changes practices without any necessary extra adjustments are made.

In the second theme, the webcam created a new form of contact, namely contact that was not part of the treatment plan. Nurses find it difficult founding these contacts, as they occur in a different manner and context than regular contacts. It seems as if the new dynamic and opportunities of these kind of contacts are not explored yet.

And thirdly, we saw how an intertwining of aids and aims in care occurs when webcams come in. This might lead to all kind of hindrances, especially when the logistic profits of patients not coming to the office conflict with a care goal that aims at supporting patients intensively, which may require bodily presences of the nurse.

The technology has brought new opportunities and different ways of working. What is remarkable is that the changes the technology brings about in the care practice are not discussed among nurses. This lack of discussion on the content of telecare might also be the reason that telecare does not seem to be a component of the treatment process. Even when telecare is included in the treatment plan as a tool for contact with the patient, the unplanned, incidental contacts can leave nurses with a distinct idea of the purpose of the contact. In the analyses, both these themes are linked to the problem that aim and aid are intertwined within the telecare practice, which makes it quite difficult for nurses to purposefully use telecare.

So, we have seen so far that new nursing care practices emerge when using a webcam. Nurses are aware of changes in their care practice, but do not have the opportunity to fully understand the changes in order to put them to use in care. We therefore conclude that it is very important to facilitate nurses to discuss these changes in order to name the new practices and purposely use them in care.

As our project is still running, at this moment this research has logically led to first results. Over time, and with possible extra field work, new insights can be gained on other new practices. Other perspectives will be used as well, especially from nursing and care theory. Finally, to name the unsaid is a part of ethnographic research. Observations and reflections on practices do not always cover all that is happening or the unsaid [17]. We will continue to pay attention to this issue.

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