Implementing and Learning to Use Video Meetings in Mental Health Hospital Departments

Therapists' Experiences from Internal and External Meetings. A Qualitative Study

Monika K. Gullslett
Norwegian Centre for E-health Research
University Hospital of North Norway
Tromso, Norway
e-mail: monika.knudsen.gullslett@ehealthresearch.no

Elin Breivik
Norwegian Centre for E-health Research
University Hospital of North Norway
Tromso, Norway
e-mail: elin.breivik@ehealthresearch.no

Line Silsand
Norwegian Centre for E-health Research
University Hospital of North Norway
Tromso, Norway
e-mail: line.silsand@ehealthresearch.no

Etty R. Nilsen
Faculty of Health and Social Sciences
University of South-Eastern Norway
Porsgrunn, Norway
e-mail: etty.nilsen@usn.no

Abstract—**Over several years, e-consultations and the use of Video Meetings (VMs) in the follow-up of patients in mental health services have become more and more common. During the winter and spring 2020, the pandemic accelerated and increased the use of VMs also in mental health services. The objective of this study has been to develop and advance comprehensive knowledge about therapists' use of VM in specialized mental health services. The therapists' external and internal collaboration is studied, as well as how their work is influenced. The study uses a qualitative approach, based on hermeneutic-phenomenological methodology. 33 interviews with therapists and management in three mental health hospital departments were carried out (using VMs) from March 2020 - February 2021. A semi-structured interview guide was used to encourage reflections on use of VMs. Overall, VMs as a communication tool is seen as efficient, in particular in remote areas. The results are presented in the following themes: lack of strategy for implementation and training, meeting structure and suitability of VMs for learning, security and safety measures pertaining to physical context, and managers' facilitation of VMs.**

Keywords-implementation; organizational learning; mental health service; therapist; digital meetings; video meetings.

I. INTRODUCTION

Opportunities for new work methods have emerged for healthcare personnel during the pandemic and have caused a rapid increase in the use of video meetings (VMs) both in consultations with patients and with collaboration partners within mental health. Traditionally, therapists in mental health work in collaboration with their patients and collaborating partners through physical meetings. The focus of this article is the experiences of therapists in mental health hospitals of the use of VMs in meetings with collaboration partners.

Treatment and consultation via VMs represent a range of challenges for both therapists, patients and other partners involved [1]. We study the impact of using VMs through three different theoretical lenses: organizational learning, virtual communities of practice, and, finally, implementation of technology in organizations.

Organizational learning can be seen as collective processes of learning and knowledge sharing, and the focus is on the work situation as a shared context, and on the social processes in this context [2]. The shared context represents an opportunity for learning and knowledge sharing. A shared context facilitates learning, since knowledge, and especially tacit knowledge, cannot be counted on as flowing freely between the members of an organization if they do not interact or see each other work [3].

In the literature, shared contexts and situations are referred to as communities of practice [4], organizational spaces [5], and learning spaces [6]. The communities will vary along dimensions such as type of workplace and occupational group [7]. The increased use of technology (here VMs) has actualized the discussion of physical space vs. virtual spaces for the purpose of learning and sharing knowledge, and some studies pre-covid have investigated virtual communities of practice [8][9].

Where communities of practice are seen as emergent based on interest, and often informal, in the work environment, virtual communities of practice require initiative. They rarely have the feature that face-to-face communities of practice have, in that employees can bump into each other, or take an initiative with low effort and planning – like contacting the colleague next door.

Implementation of technology generally initiates a change process in organizations and has the potential to alter the way we work and the power relations in an organization. However, many change initiatives fail due to poor preparations and lack of training, and are slow to be implemented [10]. During the last two years, the pandemic accelerated and increased the use of VMs, also in mental

health services [1]. Previous studies show that training is one of the situational factors that can hinder intention to use technology [11]. The pandemic has led to extensive use of VMs in various contexts. When lockdowns, social distancing and working from home due to COVID-19 were introduced, VMs were used to a large extent for all types of meetings, with or without patients, as well as within or between organizations. Over the last two decades a high number of studies has been published that identify barriers and opportunities for the implementation of VMs in health organizations, and lately studies that address the use of VMs during the pandemic. Practically, and in terms of saving time and being able to gather people from various organizations in the same meeting, the VMs are popular and considered efficient, in particular in remote areas.

Still, there is a knowledge gap to fill, particularly concerning the interaction and organizational learning when health professionals collaborate by using video technology. The aim of this study is to develop and advance comprehensive knowledge about therapists in specialized mental health hospitals and their experiences in using VMs in collaboration with different parts of the service, and how the use of VMs influences their interactions and organizational learning.

The research questions in this paper are 1) What are the barriers for interaction and organizational learning in internal and external VMs? and 2) How do the therapists experience both interorganizational interaction and interaction with collaboration partners in VMs?

The paper is organized as follows: In Section 2 we give an account of the Method and Study Design. This is followed by a presentation of the Results in Section 3. Section 4 contains the Discussion, and this is followed by the Conclusion in Section 5.

II. METHOD AND STUDY DESIGN

A. Research design

A qualitative and explorative study, using in-depth interviews, was conducted at three sites, all departments in different mental health hospitals. The study's methodological approach was based in the social sciences, using an iterative process between inductive and deductive strategy that aimed to uncover—and then interpret—knowledge about the actors in question [12]. This entailed exploring how the therapists experienced, understood, and created a context for using VMs in therapeutic meetings and interaction with colleagues and external collaborators. This perspective works well with the hermeneutic-phenomenological approach employed in our analysis; moreover, our choice of research strategy was integrated into the objectives of the study and the research questions under investigation [13][14]. The researchers' hermeneutic position will, even if the data gathering and analysis were done with a reflexive and open-minded view, affect the results based on the theoretical approach and researchers' preconceptions.

TABLE I.   INFORMANTS IN THE STUDY - AN OVERVIEW

Participants	Number interviewed	Interviews	Researcker
Hospital 1	14	Video interviews	MKG
Hospital 2	13	Video interviews	MKG
Hospital 3	6	Video interviews	MKG
In this context the concept "therapist" is used about mental health professionals, who are trained to provide treatments in different ways. There was diversity in age, gender, and professional background among the informants in all the hospitals: psychologists, psychiatrists, milieu therapists (nurses and social workers), all with at least three years of university education. The informants were 27-66 years at the time of the interviews.			

B. Interviews

Semi-structured interviews were conducted from late March 2020 to mid-February 2021. The interviews were carried out as VMs. The first author of the paper conducted all the interviews and opened each interview by asking the therapist to tell a story about when, how, and why they had implemented VMs in their mental health service for the first time. An interview guide was developed beforehand and sent out to all informants prior to the interview. When the Covid-19 restrictions were implemented, one of the recommendations for mental health workers was to follow up their patients by using VMs [15]. We had already planned a qualitative study at the hospital on different aspects regarding the organization and implementation of VMs during normal circumstances. When the societal lockdown occurred, we accelerated the process to investigate the therapists' experiences of being rushed into a large-scale implementation of VMs in the hospital environment. We sent a request for participation to the management at the first hospital on 20 March 2020. The management redistributed the request to everyone in the mental health departments, stating that participation should be given priority. The second hospital got the request in May 2020, and the third in October 2020. A similar procedure was followed at each site. We recruited a total of 33 employees from different disciplines and departments.

C. Analysis

All interviews were recorded and transcribed verbatim. The transcriptions were undertaken by a professional firm just after the interviews were completed. To validate the content, the first author read all the transcriptions and compared them to the recorded interviews. The analysis was conducted through a reflexive, open-minded and abductive process, which enabled an intuitive understanding of the meaning of the text as a whole [16]. Following the initial in-depth reading of the interviews, the content was categorized and grouped together to identify important themes according to the research questions. The themes in the analysis emerged through an iterative process of reading and interpreting, to identify meaningful units [12][16]. All

authors conducted the analysis and reflected on the findings together with the first author, who read the most central nodes coded in NVivo. All authors contributed to the writing of the paper's background, discussion sections, and its revisions.

D. Ethical approval and considerations

The study was approved in advance by the ethical committee (PVO), Helse Nord (project ID 2462). The participants were given both written and verbal information about the study, before agreeing to participate. The included informants sent their consent via mail to the first author, and these were stored without any connection to the gathered data material. The participants signed an informed consent form. The data are anonymized in the presentations.

E. Authors' contributions

All authors made significant contributions to the manuscript. The study was conceived by MKG, and was drafted in close cooperation with ERN, LS and EB. MKG collected data and MKG, LS and EB contributed to the analysis. The manuscript was written by MKG, ERN, LS and EB, and all authors read and approved the content of the final manuscript.

III. RESULTS

The focus of the paper is the therapists' experiences with implementation and use of VMs, and, in particular, their opportunities for interaction with collaboration partners and learning when video technology sets premises for practice. In this study we focus on how the therapists experience their interorganizational interaction, as well as their interaction with external collaboration partners. Furthermore, we investigate barriers for communication, interaction, and organizational learning in VMs. The following main themes emerged from the analysis: A. Learning and training when implementing VMs in the organization (shared context), B. Content and context – barriers and drivers in VMs, and C. Culture and structure in VMs.

A. Learning and training when implementing VMs in the organization (shared context)

The informants in the study were asked about the training they received when the hospitals rushed into a large-scale implementation of VMs, due to the societal lockdown during the covid pandemic.

The informants distinguish between two types of training, where the first encompasses being able to use the video technology and to set up and connect to VMs. The other concerns how to interact both with internal and external partners in VMs. Informants from one of the organizations had been trained and had used VMs regularly during the last years prior to the pandemic. However, most of the informants had received training during test periods, for instance as part of a research project:

"*We received training together with colleagues to test VMs for a period of time to learn how to use VM in connection with a research project. [...] It was up to the staff if they wanted to use it further…*".

All in all, few of the informants have used VMs in their professional practice prior to the pandemic. In some clinical units, super-users have been qualified and given the responsibility to train colleagues. In other units, training was often limited to support from colleagues. Independent of the type of training and previous experiences with VMs, the start-up phase was characterized by trials and errors. Several informants emphasized continuous training as important to become familiar with the VM tools. The sharing of experiences between colleagues was highlighted as essential in this process.

"*S*ome of us colleagues got access to and training in use of VMs and we passed on training to the others. (...) We carried out training within the team, and we simply learned a little from each other. (...) Gradually it became more systematized, but at the very beginning of the pandemic, there was a lot of trial and error*"*.

Informants with different degrees of experience in using VMs, reported frequent technical problems as a main challenge. Technical problems are a common source of frustration and an obstacle for continuing use of VMs after the pandemic. These problems are time and energy consuming during meetings, as the following quote illustrates:

"*You spend a lot of time and energy getting the technology and different solutions to work together; someone falls out, comes in, does not hear, the image freezes… So, it creates laughter and also a lot of frustration. It is unfortunate when addressing an important issue. If the digital tool had been effortless, then it would have been something that you should definitely continue with, because you otherwise spend a lot of time traveling or others have to come in here*".

This quote also illustrates the connection between technical problems and lack of technical proficiency on one hand, and the serious character of the content in the meetings on the other. This is a matter that we will return to further down.

B. Content and context – barriers and drivers in VMs

Apart from learning how to use the technology; another type of learning revolves around how VMs should be accomplished. The informants reflect on the need for training and structures that help to achieve a safe environment with meaningful and valuable discussions in VMs, and not only focus on efficiency.

"Hmm… It´s like a voice in my head says no, VMs can never replace physical meetings. But I don't know if it's just because it's different to meeting digitally. Because we are taught to meet in physical rooms, right? We have never been trained in digital evaluation or digital assessment or digital treatment. It has never been a topic".

Uncertainty related to context and content may be a barrier to using VMs. Nevertheless, training in how to communicate and interact in digital meetings has never been raised as an issue in most departments. An important issue raised by several of the informants' concerns safety and privacy when actors from different organizations connect and collaborate through VMs. The informants were specifically concerned with protecting patient privacy, being exposed to conversations about patients, often connected to persons present in the room who should not be part of the meeting. This is particularly important when sensitive patient issues are discussed, and particularly pertinent in a health care setting, as the following quote shows:

"It turned out that there was another person in the room that I was not aware of being there. It was actually a bit uncomfortable. I thought I knew who was in the room ...".

The quote below underscores this point further: using VMs for discussions of sensitive information requires that the organization has prepared physical rooms suitable for VMs and can be difficult to comply with when healthcare personnel work from home. This might appear as an oxymoron, since VMs are introduced to make the physical location less important.

"Last week I had a meeting with a colleague when she was in the home office. It was the child welfare service and the two of us who had a meeting. Suddenly she started moving (the person moved to another room), and I heard someone coming in, so it was a bit of an awkward situation. And I thought that if I had been a patient, I would have had the feeling; who is it in the room now? It was very inappropriate."

Many informants pointed out that it was difficult to address complicated issues, especially if there are many participants in the meeting. In-depth discussions about for instance professional matters. were by many perceived as less suitable for VMs.

"It is not so easy to communicate when there are more than 5-6 people. Then it becomes difficult to communicate and discuss. But if a leader is only going to give information about things that are important for us to know, then it works with many in the same meeting, because then we mute and listen".

VMs work well for giving and receiving information, as well as for addressing administrative matters. Several participants in this study shared that it is easier to plan meetings and ask for advice from collaborating partners, when meeting digitally. VMs demand less time when there is no need to travel to a physical meeting, and less time is used for small talk compared to physical meetings.

"I think it (VMs) is very suited for information exchange. A bit also because there are so many participants and finding a time that suits everyone is difficult. I have many patient consultations during the day, so it is easier for me to find three quarters of an hour - an hour between consultations than having to travel to the school or the health centre".

C. *Culture and structure in VMs*

Another issue brought up by the informants, was meeting culture and meeting structure when using VMs. Several informants found that VMs are well structured (by nature), and that they are allowed to speak without being interrupted. Furthermore, as VMs are often shorter and more to the point than physical meetings, it is easier to find time for them.

"I feel like it is either it's working or not (VMs). It works very well with the persons you are used to working with, and who use the same technology as you. Then I think it works well".

However, some of the informants address the need for a new and different awareness of each other when participating through VMs. The changed awareness referred to the above-mentioned structure in meetings, and that all participants get their time to speak during meetings, since it is difficult to observe body language through a video camera.

"The challenge in VMs is that often everybody is talking at once. Because, when everybody is sitting in the room you see very quickly if someone is going to say something, but you do not do that [in VMs] until they have started talking. So, it becomes challenging to get the discussion to flow".

In meetings with many participants, most turned off their cameras. This made it hard for the chair of the meeting to judge how the information was received. Some of the informants emphasized that it is challenging to exercise good leadership and to chair in VMs because of less feedback from the participants, compared to physical meetings. A concern is that it in the long run, the interaction between colleagues and collaborators will be affected, and there is a danger that the work environment will deteriorate.

"(...) I miss the meetings where we all gather (...) I also believe that during the pandemic, many people has been "locked inside" their own little bubble and is busy with their own stuff. The consequence is, that we can act and do things without any influence from our colleagues or collaborators – and that is not a good thing".

IV. DISCUSSION

The study has displayed a series of challenges for the use of VMs in mental health service meetings, internally and externally. These challenges pertain to implementation and learning, more particularly to

- Lack of strategy for implementation and training
- Meeting structure and suitability of VMs for learning
- Security and safety measures pertaining to physical context
- Managers' facilitation of VMs.

This study demonstrates that the experiences of the therapists' concern at least two areas: (1) learning the technological skill, and (2) learning how to carry out a successful VM. Successful is described by the informants as creating a safe environment with meaningful and valuable discussions. Implementation of technological tools for digital meetings, like the use of VMs are thoroughly researched within the IS field (see for instance [17][18]) and findings from the present study largely matches extant research on several matters: The strategy for training varied, from (1) training super-users, and expect the skills that the superusers acquire to trickle down, to (2) learning by doing. The continuous and iterative learning and support, both in the initial adoption phase and in the continuance, called for by research [19], was lacking, particularly in the initial phase. Despite the often lacking or flawed strategy for learning, the training phase of implementation within the organization offered an arena for rapid learning and co-creation amongst colleagues. The pandemic provided the urgency called for in change management [20].

Part of the implementation, as experienced by the therapists, was learning how to make the VMs work. As shown in previous studies, the technology in itself provides resistance in that it often does not work at all, or not according to its purpose [21]. In inter and intra organizational meetings, which additionally are interdisciplinary and cross-professional, and where the topic is, for instance, treatment plans for specific patients, thus highly sensitive, a digital field for learning across professions and organizations is created [4][22]. In VMs, however, the meeting structure, or lack thereof, becomes strongly visible since use of VMs demands more planning and structure than face-to-face meetings. Lack of structure appears to harm the interaction. The informants call for more structure, but a strict structure might on the other hand harm learning processes and development of innovative solutions.

The informants view the use of VMs as efficient, less costly, and easy to organize. However, when asked about the implementation and the content of the meetings, a number of barriers and challenges emerge from the data and there appears to be limitations as to the suitability for VMs in particular situations. Both inter-organizationally and with external actors, the meeting participants in this setting work interdisciplinary and inter-professionally. When the various professions and disciplines contribute with their knowledge, the meeting is an arena for learning and for sensemaking through interaction [23][24]. However, VMs differ from face-to-face meetings in several aspects, and require attention paid to structure and culture in a different manner for the participants to be heard and seen.

Several stages in the transfer from physical meetings to VMs appear to happen randomly and without a strategy, and this particularly affects the need to take security and safety measures. In the healthcare context, where they constantly handle sensitive information and personal data, two dimensions of safety emerged: (1) the digital safety and (2), ironically, the physical safety. During the pandemic, a part of the hospital's practice is moved to the private sphere: the homes. During treatment, it is the home of the patient in one end of the conversation and the home-office of the therapists in the other [1]. In this study, the therapists interact with each other and with other professional groups and individuals, within or outside their organization. Security and safety measures are similarly relevant since the conversations evolve around treatment of vulnerable individuals.

Encryption does not ensure what we have coined as *physical safety*, meaning securing the physical environment where the therapists are situated when s/he works from home. Ensuring the physical safety, for example who is present, is an organizational and managerial issue, and points to lack of facilitation and control on the management's part, in order to create a safe and evolving digital community.

VMs are not a static form of collaboration. On the contrary, the study shows that interaction through VMs take place in a new context, and organizational learning, including transfer of tacit knowledge, does not take place automatically, as the partners are not present in the same physical environment.

V. CONCLUSION

In this study, the context, which is therapists in the mental hospital and their interaction, expands extant research and underscores the salience of context in the process of implementing and using technology. It demonstrates that training cannot be seen as 'one size fits all'. In this sense it is salient to raise the question of how each individual learn. Being digital and handling VMs successfully, is a skill that must be learned through training and use.

To further develop digital collaboration, in this case VMs, the organizations must focus on which organizational processes should be changed. e.g., whether it requires a change in workflow and whether changes in power relations occur.

Managers on all levels in the organizations must be involved in the implementation process with a clear strategy. To plan and perform useful VMs require managerial facilitation and considerations that are novel compared to regular physical meetings.

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