

# Health and social care frontline leaders' perceptions of competence management in telemedicine in Finland: An interview study

Suvi Myllymäki MSc, Project Planner<sup>1</sup> |

Elina Laukka MSc, RN, Doctoral Researcher, Managing Consultant<sup>1</sup>  |

Outi Kanste PhD, RN, Adjunct Professor<sup>1,2</sup> 

<sup>1</sup>Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland

<sup>2</sup>Medical Research Center, Oulu University Hospital, Oulu, Finland

## Correspondence

Elina Laukka, Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland.  
Email: [elina.laukka@oulu.fi](mailto:elina.laukka@oulu.fi)

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## Abstract

**Aim:** This work aims to describe competence management in telemedicine from the perspective of health and social care frontline leaders.

**Background:** The increasing use of services in health and social care is a challenging aspect of modern telemedicine; it requires staff to develop relevant professional competence and good telemedicine practices.

**Methods:** The study was conducted using thematic interviews of frontline leaders from primary health care, specialized medical care and social care ( $n = 10$ ) in the spring of 2021. The data were analysed by inductive content analysis.

**Results:** The following main categories were identified: Activities of frontline leaders while managing competence in telemedicine, promotion of community learning, competence management in determining telemedicine content, and recognizing health and social care professionals' competence in telemedicine.

**Conclusions:** Achieving the goals set for telemedicine requires ensuring that knowledge from leaders is widely disseminated and shared and that staff are adequately trained. The results can be utilized in the practical work of other telemedicine and in the development of their operations.

**Implications for Nursing Management:** Managing competence in telemedicine requires from the leaders an encouraging attitude and improved personal interactions in the work community.

## KEYWORDS

competence, competence management, content analysis, health and social care, knowledge management, telemedicine

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## 1 | INTRODUCTION

The global COVID-19 pandemic has dramatically increased the level and use of telemedicine and transactions in health and social care in many countries among people of all ages, but especially among those at serious risk, such as people with chronic underlying illnesses, mental health problems and dementia (Vergara et al., 2020). The proliferation of remote services and transactions, such as telemedicine, has created a great and urgent need to develop adequate reception practices (Jiménez-Rodríguez et al., 2020) and professionals' competence within that setting (Ministry of Social Affairs and Health, 2016). The responsibility for managing and developing professionals' competence and arranging the necessary training lies with health and social care organisations and leaders (Kujala et al., 2018).

In this study, the term “telemedicine” refers to video-mediated remote communications, in other words real-time contact events between patients and health and social care professionals that occur other than through physical contact. A Telemedicine session may have more than one patient or more than one professional present at the same time (Finnish Institute for Health and Welfare, 2020).

Competence management refers to creating or acquiring, transferring, utilizing and managing human capital to achieve an organisation's strategic goals by combining and promoting planned competency management and learning processes (Kivinen, 2008; Kondratova et al., 2017; Medina & Medina, 2015). Basic competence meanwhile refers to people's knowledge, skills, attitudes and personal qualities that are perceptible and measurable and determine work outcomes (Gunawan et al., 2019; Kondratova et al., 2017; Lunden et al., 2017).

Competence management has been studied in innovative and knowledge-intensive organisations, where employees' competencies are a key resource (Loufrani-Fedida & Aldebert, 2020; Medina & Medina, 2016). It has been found that various factors related to organisational culture can either facilitate or inhibit the development of competencies. An appropriate leadership model, a leader's personal traits and professional competency can help to create an organisational culture that effectively facilitates and generates new competencies (Lunden et al., 2017; Medina & Medina, 2016).

Studies focusing on the digital competences of professionals and telemedicine have identified definite areas of professional competence and good practices (Jiménez-Rodríguez et al., 2020; Konttila et al., 2019; van Houwelingen et al., 2016). On the other hand, a lot of variation has been found in professionals' digital skills. At one extreme, some individuals do not practise telemedicine or use any digital tools at all, while others are far more confident and are mainly waiting for an upgrade to existing technologies or applications. The attitudes of professionals are often influenced by past experiences—good or bad—with technology. The inoperability of equipment, the extra work required by the technology, the better technical skills of the patients and whether the use of the technology is seen as justified in terms of the actual work, in turn, can make attitudes more negative (Koivisto et al., 2019.) It is a complex and nuanced area: the use of technology can lead to frustration and fear of a loss of practical skills, but it may also greatly influence for the better changing practices,

peer support, adequate training and the social atmosphere in the workplace (Konttila et al., 2019).

The extensive digitalization of health and social care that has taken place in recent years requires professionals to have strong professional competence, acute ethical awareness and the ability to combine clinical experience with remote work as well as analytical thinking, knowledge of clinical practices and personal interaction skills (Konttila et al., 2019; van Houwelingen et al., 2016). It is critical to prepare for effective telemedicine by carefully planning its content in advance and making sure that the technology works. During telemedicine encounters, it is important for professionals to pay close attention to nonverbal communication and ensure consensus in all aspects of care (Jiménez-Rodríguez et al., 2020). Coaching skills and a supportive attitude towards patients are emphasized in the literature on telemedicine (van Houwelingen et al., 2016).

The purpose of the study is to accurately describe competence management in telemedicine from the perspective of health and social care frontline leaders. The specific research question was: What kind of perceptions do health and social care frontline leaders have of competence management in telemedicine? The ultimate objective is to produce new information to help improve the management of practical telemedicine work as well as to identify, assess, maintain and extend the competencies required in this context.

## 2 | MATERIAL AND METHODS

### 2.1 | Study setting and data collection

The data for this descriptive qualitative study were collected using thematic interviews. Employing a qualitative study design allowed us to explore the perceptions of health and social care frontline leaders of a phenomenon that is, in a general sense, understood poorly (Polit & Beck, 2017). Purposive sampling was used to recruit participants from three social and health care organisations based in Northern Finland in which the usage of telemedicine is more common than the norm due to the sheer size of their geographical coverage and dispersed settlement patterns (Syrjälä et al., 2004). Ten frontline leaders, who worked either in primary care, specialized medical care, or social care, and who led units that used telemedicine were interviewed. These leaders were responsible for leading and managing the receptions, mental and social care services, rehabilitation or home care. The participants were recruited using email or phone contact. The individual interviews were performed by one researcher (SM) using the Microsoft Teams communication platform. The mean age of the interviewees was 52 years, and their leadership experience varied from two to 20 years. Nine of the interviewees were female and one was male. Of the interviewed leaders, five had backgrounds in health care (nursing or physiotherapy) and five in social care. Three of the participants had a bachelor's degree, six had a master's degree and one had a doctoral degree. Nine of the leaders worked as frontline leaders and one as a profit area manager. The transcripts comprised 94 pages with a line spacing of 1.5, 12-point Times New Roman font.

The thematic interview guide concerned organisation culture, resources, data management processes, management and leadership (Khajouei & Khajouei, 2017; Sibbald et al., 2016), strategy (Huotari, 2009) and patient-centredness (Huotari, 2009; Moisanen, 2018), and these themes were attached to the specific context of telemedicine (Appendix S1). The interview guide was thoroughly pretested with one person, who confirmed that it was understandable.

To provide telemedicine services, the organisations utilized different communication platforms: VideoVisit, Teams and Arctic Communicator. The period of time that the organisations had provided telemedicine ranged from 1 to 3 years, and the number of telemedicine sessions varied remarkably between organisations. At its peak, there were about 1200 telemedicine sessions in one unit in a month. Each unit had provided telemedicine services at some point, but in some units, the number of telemedicine sessions was notably low, and one unit did not provide any telemedicine sessions at all during the interview period. None of the interviewees were able to evaluate the total number of telemedicine sessions in their unit. The number of professionals who provided telemedicine services ranged from three to several dozen.

## 2.2 | Data analysis

Data were analysed using inductive content analysis, which enabled us to describe competence management based on the interviewees' perceptions (Kyngäs et al., 2020). Phrases were used as the unit of analysis and reduced to simplified expressions by first author. These simplified expressions were then abstracted to subcategories, which were further abstracted into categories and finally main categories by first author (see Table 1). Two other researchers gave suggestions and confirmed the final analysis. During the different phases of the analysis process, the abstraction was discussed at length by the researchers.

## 2.3 | Ethical considerations

Research and ethical permissions were granted by each participating organisation. The individual participants received written information and privacy notices concerning the study. Participation was voluntary. Informed consent was obtained from each participant (ALLEA, 2020).

**TABLE 1** Examples of the formation of inductive content analysis

Main category	Category	Subcategory	Simplified expression
The activities of frontline leaders while managing competence in telemedicine	The role of frontline leader	Encouragement by frontline leader	Encourage employees to try
	Characteristics of frontline leader	Accessibility	The leader must be easily approachable
	Professional competence management	Competence assessment	You need to evaluate with the employee what skills he or she needs
Promoting community learning	Managing knowledge related to telemedicine	Sharing information in meetings	The supervisor has held meetings
	Cooperation related to telemedicine	Multiprofessional cooperation	Telemedicine is a multiprofessional activity
	Implementing a strategy for telemedicine	Organisational remote service policies	Top management has set out to increase digital services
Competence management in determining telemedicine content	Patient orientation	Cooperation to identify customers	The working groups consider which customers are suitable for remote services
	Ensuring the quality of each telemedicine session	Defining the content goals of each telemedicine session	The telemedicine session aims to make it the same experience as it would be on the spot
	Arranging telemedicine session	Enabling daily activities	The leader also enables and accepts the job
Recognizing health and social care professional's competence in telemedicine	Information required for telemedicine	Professional competence	They are experienced professionals
	Skills required for telemedicine	Ability to make	Workers feared the use of technology
	Attitudes of professionals	Positive attitude	The staff are experimental and open-minded

## 2.4 | Rigour

The credibility was ensured by ensuring that the participants were appropriate in the terms of this study aim. In addition, the data started to saturate after eight interviews, and thus the sample size seemed sufficient (Kyngäs et al., 2020). Three researchers interpreted the results, which ensured the dependability of the study and respondent validation was not considered necessary. Finally, various quotations were used in result section to demonstrate the authenticity (Appendix S2).

## 3 | RESULTS

As a result, we are able to describe competence management in telemedicine in health and social care through: (1) The activities of frontline leaders while managing competence in telemedicine; (2) their promotion of community learning; (3) their competence management in determining telemedicine content; and (4) their recognition of health and social care professionals' competence in telemedicine (see Figure 1). These main categories included 12 categories.

### 3.1 | The activities of frontline leaders while managing competence in telemedicine

This main category contains three categories: The role of a frontline leader, the characteristics of a frontline leader and professional competence management.

The role of frontline leader is to support, to encourage, to require, be positive and an example. Professional staff needed support and encouragement in their work while providing telemedicine. In addition to encouraging professionals, the interest and support of senior management in telemedicine was important. Encouragement was needed the most during the initial phase of working remotely. Leaders require professionals to switch from regular receptions to telemedicine.

It was evident that leaders' positive attitudes towards telemedicine and technology in general was important. The genuine interest of the leaders in their staff, and the desire to reform and develop the operations clearly contributed to the development of telemedicine activities. The results showed that leaders themselves often run telemedicine and use dedicated technology to give professionals an example of how to act in a new situation.

The characteristics of frontline leaders were also important when supporting the telemedicine provided by professionals. The credibility and easy accessibility of the leaders were important. It was important for frontline leaders to receive feedback on their own activities as well as on the success—or otherwise—of telemedicine events.

Professional competence management means competence assessment, ensuring competence, arranging training and enabling learning. Certain challenges were identified concerning the activities of professionals during telemedicine. However, the assessment of competence during telemedicine was also perceived as challenging. Assessing the need for competence is done by the leaders together with the employees.

The skills required for successful telemedicine were ensured through proper recruitment procedures, the commitment of staff,

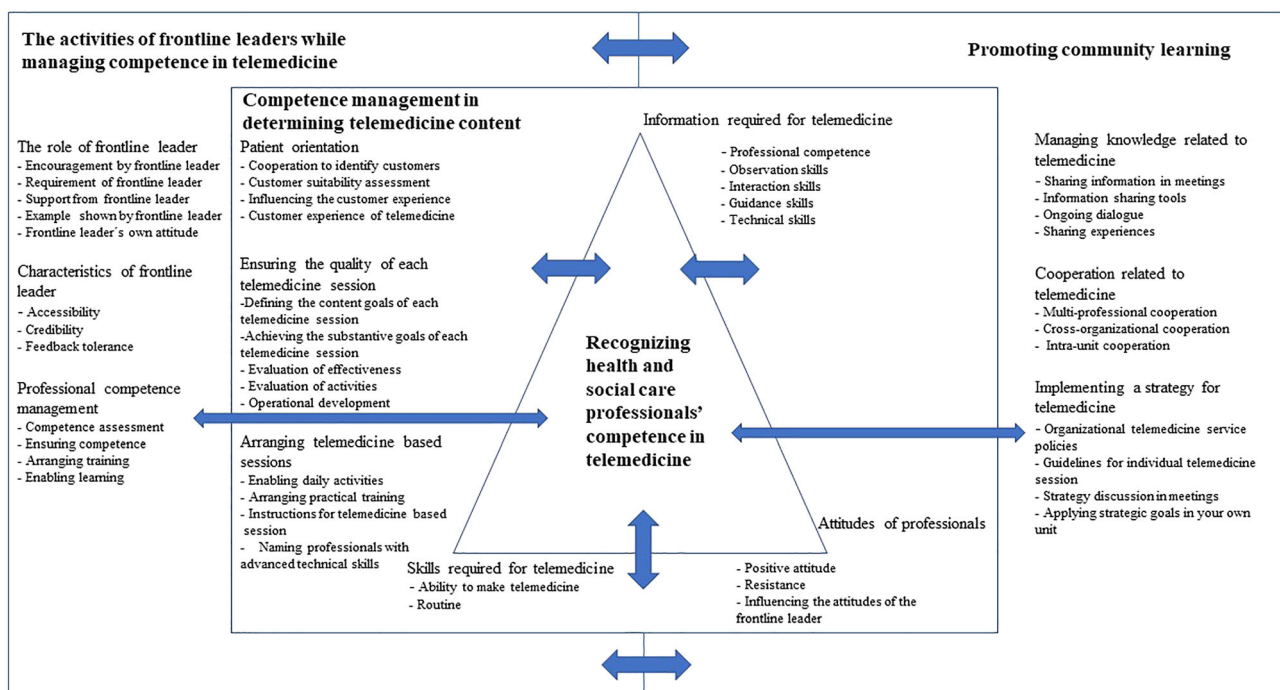


FIGURE 1 Summary of the results

giving people time to learn new things and ensuring an adequate level of technical know-how before starting operations.

Because we are under pressure to hire more caregivers for telemedicine—so how to ensure competence? We have skilled staff there for basic work but we should also have skilled staff for telemedicine. It is definitely a challenge. (I2)

Frontline leaders encouraged employees to participate in training, where, for example, interaction and methodological skills can be increased and improved.

### 3.2 | Promoting community learning

The main category “promoting community learning” includes three categories: managing knowledge related to telemedicine, cooperation related to telemedicine and implementing a strategy for telemedicine.

The basic means of *managing knowledge related to telemedicine* activities are the handling of remote appointments and the regular sharing of information in face-to-face meetings, as well as through electronic means such as Teams, email and the patient information system. Good interaction between the leader and the professionals was seen as a key to successful telemedicine and competence management.

Frontline leaders regularly set aside time for staff meetings to share good experiences and practices. However, these discussions did not shy away from difficult issues where certain things did not work and were not suitable for telemedicine; the experiences of both patients and relatives with telemedicine were also considered in depth. Leaders considered it important to have the opportunity to discuss things face-to-face with professionals, but in the case of highly mobile workers, staff meetings organized remotely facilitated the sharing of information.

... there was deliberate talk in the teams about sharing experiences of how employees have experienced it, and the customer experience has also come to the fore. (I3)

*Cooperation related to telemedicine* was strongly highlighted in the results. Successful telemedicine required input from—in addition to the frontline leaders and professionals—multiprofessional collaborative initiatives involving senior management, digital experts and other experts from the service industries, such as home care service counselors. Telemedicine activities were developed in various pilot projects and working groups whose members originated from several different organisations. The possibility for professionals to participate in such working groups was important for the implementation of telemedicine activities. Teamwork within the unit also played a significant role; the task of the leaders was to strengthen the atmosphere of working together.

*Implementing a strategy for telemedicine* is a part of promoting community learning. The strategic guidelines for telemedicine were perceived as a basic pillar supporting the work of the leaders. The work of frontline leaders was based on their organisation's strategic guidelines for the use of telemedicine and the practices in place during individual telemedicine events. All of the leaders discussed with staff what the strategic guidelines mean in the context of their unit and in the professional's own work.

... we have discussed this strategy in staff meetings, ... in this way, a clear idea is kept by both the supervisor and the staff about what is being done. (I1)

### 3.3 | Competence management in determining telemedicine content

This main category includes three categories, namely, patient orientation, ensuring the quality of each telemedicine session and arranging telemedicine sessions.

The results showed unambiguously that *patient orientation* was key to the success of telemedicine operations. However, determining the patient groups that are right for telemedicine is not straightforward. It requires close cooperation between leaders and professionals, and the suitability of patients for this sort of interaction must be assessed using appropriate criteria. A good way to achieve this is to try out a telemedicine for the patient, and make a decision based on this experience.

... which patients are trying telemedicine, then evaluate it and if we see that this did not work then let us look at some other patient group. (I9)

The patient's own past experience of telemedicine or face-to-face reception often determined the mode of reception. The ability of leaders to influence the patient experience was therefore limited, although frontline leaders did strive to positively influence the atmosphere in the work unit, which is reflected to some extent in the customer experience of telemedicine. On the other hand, some feedback was collected from patients concerning their experiences with telemedicine.

*Ensuring the quality of telemedicine* begins with defining the content goals and evaluating their achievement. The realization of the goals of telemedicine was evaluated from the perspective of both the patient and the professional. Whether or not a telemedicine event was a success was dependent on the specific issues that were being addressed. In some cases, telemedicine was perceived as more suitable for the patient than face-to-face reception. The possibility of achieving the objectives was narrowed by the range of methods suitable for telemedicine.

The quality of telemedicine was assessed through their perceived effectiveness by leaders. Telemedicine services were viewed as the subject of continuous development, which is why frontline leaders

regularly evaluated telemedicine activities. Listening to the reasons for the resistance of professionals is also important for the ongoing development of operations, because by listening it is possible to find problem areas that require a solution.

... as for the feedback from the staff and customers, it must be evaluated and possible changes made on the basis of it. (I8)

In *arranging telemedicine* work the role of the frontline leaders was emphasized as an enabler of daily activities; for example the leaders provided practical training for staff to ensure the smooth and efficient use of technical equipment. In addition to arranging training on practical matters, leaders issued various instructions to support telemedicine activities. The organisations studied here actually have named professionals with advanced technical skills, whose input and guidance are considered particularly important in determining the content of telemedicine.

### 3.4 | Recognizing health and social care professionals' competence in telemedicine

The “recognizing health and social care professionals' competence in telemedicine” main category includes three categories: information required for telemedicine, skills required for telemedicine and attitudes of professionals.

*Information required for telemedicine* is diverse. The leaders highlighted the importance of substantive competence levels among professionals working in telemedicine. The leaders identified the professionals' need for observation and interaction skills as well as guidance skills when advising the patient on technical and therapeutic matters during the telemedicine session. The professional had to monitor the patient more closely in telemedicine, because there were no close-up sensations and perceptions that usually arise from being in close personal proximity with someone.

*Skills required for telemedicine* are the ability to make telemedicine and routine. The leaders had observed a variation in the ability of professionals make telemedicine. Some professionals were very familiar with the use of technology and did not find it difficult to use it competently. On the other hand, some professionals found it difficult to change their way of working and start holding a telemedicine services.

... the IT skills of others were weaker, and for those with not so good (skills), ... are more afraid of using it (IT). (I9)

When telemedicine services were regularly arranged they became routine work, as familiar as any other operational aspect of the workplace, and professionals' technical competence was thereby enhanced. In those work units where telemedicine based services were arranged less frequently, there were no professionals with sufficient experience concerning telemedicine and no routine was formed.

*Attitudes of professionals* varied. The frontline leaders encountered both positive attitudes and varying degrees of resistance from professionals. Those with good digital skills as well as an intense desire to help patients tend to have a positive attitude. However, there were some professionals with negative and skeptical attitudes who had no desire to acquire the new skills required in telemedicine. Attempting to counter this negative skepticism, leaders sought to influence the attitudes of professionals and to impact the atmosphere in the work unit to become more positive towards telemedicine.

## 4 | DISCUSSION

This study yielded new information about competence management in telemedicine from the perspective of health and social care frontline leaders. Competence management in telemedicine was, essentially, described through the activities leaders engaged in while managing competence in telemedicine, their promoting community learning, their competence management in determining telemedicine content and in their recognizing health and social care professionals' competence in the context of telemedicine.

The support and encouragement provided by frontline leaders in the context of telemedicine was seen as a highly meaningful part of competence management. An earlier review verifies this finding by proposing that frontline leaders' support for health care professionals is important in the delivery of digital health services (Konttila et al., 2019). This review also corroborates our findings on the ability of leaders to impact attitudes and improve the atmosphere of the workplace. Cooperation between different professional groups was experienced as very important while implementing digital health services. The support provided by frontline leaders in enabling the participation of the staff and providing sufficient resources has been recognized in earlier studies (Koivisto et al., 2019; Kujala et al., 2018).

The results showed that by setting an example leaders may have an impact on how professionals deal with telemedicine. Another study also shows that leading by example seems to impact on other health care professionals' competence (Lunden et al., 2017). Furthermore, a couple of earlier studies have expressly proposed that leaders should indeed act as role models when implementing new digital tools (Laukka, Huhtakangas, Heponiemi, & Kanste, 2020).

According to the study, knowledge and experiences of telemedicine were shared in staff meetings but also via other information channels, such as the Teams communication platform. Medina and Medina (2016) have also found that it is important to establish a competence-sharing arena, where professionals can participate and learn from each other by sharing good practices, knowledge and experiences.

Our results also suggest that enabling telemedicine is one of the most important tasks of frontline leaders. When acting in this role of enablers, leaders had to provide enough time and resources to create new knowledge and enable knowledge-sharing to advance competence management (Ayatollahi & Zeraatkar, 2020; Khajouei & Khajouei, 2017). Our results indicate that constant dialogue and



exposing telemedicine activities advances the competence of the professionals involved. Here, as in earlier studies (Anonson et al., 2014; Lunden et al., 2017), the leader is seen as a key supporter and a facilitator of community learning, someone who with his/her own actions creates an ongoing dialogue that supports learning.

The most important methods for evaluation are the simple effectiveness of telemedicine and comparisons with face-to-face receptions, especially from the viewpoint of patients' needs. Our results suggest that the way of working should not impact on the way in which the general view of the patient is perceived. Professionals' coaching skills and human-centred attitudes were highlighted as two of the factors affecting patient experience in an earlier study (van Houwelingen et al., 2016). Interestingly, collecting patient experiences was not systematic in the organisations we studied. However, based on the results, the customer experience was valued and used as basis on which to develop the telemedicine operation. A broader collection of customer experiences would be even more beneficial in further developing telemedicine activities.

Patient orientation was identified as one of the most crucial factors in competence management because close observation, careful interaction and coaching competences all had an impact on patient experience and the quality of care provided. The significance of leadership was highlighted when selecting suitable patient groups for telemedicine. Referring to an earlier review strengthens this finding (Ayatollahi & Zeraatkar, 2020). According to our results patient selection requires multiprofessional cooperation and professionals' ability to evaluate accurately which patient groups would benefit from telemedicine. A previous review gave notice that recognizing the patients who might benefit from telemedicine and defining those particular matters which are suitable for telemedicine are essential tasks for health care professionals (Laukka, Huhtakangas, Heponiemi, Kujala, et al., 2020).

Based on our results, competence assessment of professionals was most definitely perceived as challenging. To assess competence in telemedicine, competence maps along with performance and input evaluations could be used (Lunden et al., 2019). Furthermore, leaders have for some time recognized variations in the ability of individual professionals to conduct telemedicine services. In our study, leaders already recognized the many different skills required for telemedicine, so they had the opportunity to assess the competencies of professionals based on them.

The specific areas of competence needed at telemedicine which were identified by frontline leaders in this study are consistent with previous research. According to these studies basic personal competence includes knowledge, skills, attitudes and personal qualities (Gunawan et al., 2019; Kondratova et al., 2017; Lunden et al., 2017). But in the context of telemedicine, professionals' competence expands to include clinical competence and knowledge of digital tools, and the skills necessary to combine these two discrete elements together. The role of interaction, observation and coaching is important to make telemedicine successful.

The leaders recognized that health care professionals required more training concerning the nature of successful personal interaction in telemedicine. Previous studies have also recognized the importance

of adequate training when developing professionals' competence (Koivisto et al., 2019; Konttila et al., 2019; Kujala et al., 2018). Looked at another way, understanding the skills and actions that are needed in telemedicine is important to develop general levels of workplace training (van Houwelingen et al., 2016). Current training practice has mostly focused on technical competence, leaving the other essential competences required in telemedicine much less understood. When there is a lack of nonverbal interaction the importance of spoken interaction becomes emphasized. More training concerning interaction is needed (Laukka, Huhtakangas, Heponiemi, Kujala, et al., 2020).

#### 4.1 | Limitations

Since Finland is ahead of many countries in health care digitalization (European Commission, 2021) transferring practical recommendations to other national contexts should perhaps be done with caution. However, because the participants had various kinds of backgrounds in health and social care, it might increase the transferability of the results. Also, since the interview guide was pretested with only one person, this might impact on the trustworthiness of this study. Finally, all of the units did not succeed in implementing telemedicine in their daily practice, which might have an effect on leaders' perceptions concerning competence management in this context.

### 5 | CONCLUSIONS

The burden of expectations placed on leaders in this field is considerable: They are expected to act as encouragers and supporters and set a personal example for professionals. In order to achieve the goals that are set for telemedicine, leaders should—and indeed must—collaborate closely with nurses and other professionals. Only together can leaders and professionals accurately assess the effectiveness of telemedicine and evaluate which patient groups may benefit from them.

In the future, it would be beneficial to examine competence management in other health and social care fields, such as in assessment of the need for treatment and services. In addition, intervention studies regarding the impacts of competence management are needed, for example, concerning work processes, patients or organisations.

### 6 | IMPLICATIONS FOR NURSING MANAGEMENT

Competence management in telemedicine from the perspective of health and social care frontline leaders requires a concerted effort to improve the workplace atmosphere, an upbeat and encouraging attitude and improved interactions in the work community. According to earlier studies, telemedicine requires various competencies, such as social and communication skills, from health professionals (Konttila et al., 2019; Laukka, Huhtakangas, Heponiemi, Kujala, et al., 2020). Nurse leaders should be able to recognize the required competencies

in order to assess the level of competence and to develop it if necessary. The most important factor behind effective competence management is probably constant interaction—between the professionals, and between the professionals and the leaders. According to Konttila et al. (2019), organisational and leaders' support influences technology usage among health professionals. We believe that competence management represents an example of this sort of support, and it may emphasize the use of telemedicine in daily clinical practices. As a consequence of competence management, it seems likely that the quality of telemedicine, patient care and safety increases.

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interests.

## ETHICS STATEMENT

Research and ethical permissions were granted by each participating organisation. The individual participants received written information and privacy notices concerning the study. Participation was voluntary. Informed consent was obtained from each participant (ALLEA, 2020).

## DATA AVAILABILITY STATEMENT

Research data are not shared.

## ORCID

Elina Laukka  <https://orcid.org/0000-0003-3959-8591>

Outi Kanste  <https://orcid.org/0000-0001-8634-0628>

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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