Received: 25 April 2020 | Revised: 30 September 2020 | Accepted: 27 October 2020

DOI: 10.1002/nop2.687

RESEARCH ARTICLE

NursingOpen Open Access WILEY

Video consultation as nursing practice during early in-home care for premature infants and families viewed from the families' homes'

Mai-Britt Hägi-Pedersen[1,2] | Hanne Kronborg[2] | Annelise Norlyk[2]

[1]Department of Pediatrics, Slagelse Hospital, Region Sjælland, Slagelse, Denmark

[2]Department of Public Health, Faculty of Health, Aarhus University, Aarhus, Denmark

Correspondence
Mai-Britt Hägi-Pedersen, Department of Pediatrics, Slagelse Hospital, Region Sjælland, 4200 Slagelse Denmark.
Email: mhp_research@haegi.dk

Funding information
This study was financed by Aarhus University, the Danish Foundation TrygFonden grant number: 111286, the Health Foundation grant number; 15-B-0013, the Danish Nurses' Organization, the Region Zealand Health Scientific Research Foundation and the local research foundation of NSR hospital in Denmark.

Abstract

Aim: This study examined how communication between nurses and families in video consultations in a neonatal early in-home care program unfolded in the context of parents' homes.

Design: A qualitative study based on focused observations supported by audio-recorded video consultations.

Methods: The data were collected through nine video consultations between nurses and families in an early in-home care program. The transcribed material was examined using inductive content analysis.

Findings: The analyses revealed the following themes: "Setting the scene," "Weight as a point of reference" and "The pros and cons of technology." The video consultations unfolded in a relaxed atmosphere, but also as one-way communication dominated by nurses, with the infant's weight as the focus. The study finds that a focus on training in video communication is needed to take full advantage of video consultations' potential.

KEYWORDS

communication, nurses, nursing, nursing home care, observation, preterm, telenursing

1 | INTRODUCTION

Premature infant birth, defined as birth before gestational age 37 weeks (Broedsgaard & Wagner, 2005), is increasing worldwide (The Partnership for Maternal, Newborn, & Child Health, Save the Children, & World Health Organization, 2012). Premature infants need care and treatment in neonatal wards due to their immature and underdeveloped organs in the time after birth (Broedsgaard & Wagner, 2005) until they are stable, when the family gradually takes over primary care (Ortenstrand et al., 2001). Families of stable premature infants are offered early in-home care to smooth the transition from admission to discharge (Brodsgaard et al., 2015; Evanochko et al., 1996; Hägi-Pedersen et al., 2020; Holm, Clemensen, et al., 2019; Lundberg et al., 2016; Ortenstrand et al., 1999, 2001; Sturm, 2005). Early in-home care allows infants to stay at home for tube feeding and the establishment of breastfeeding (Brodsgaard et al., 2015) with close contact and support from neonatal nurses. Early in-home care started with home visits based on the possibility

Abbreviations: HSDPA, High Speed Downlink Packet Access; LTE, Long-term Evolution.

Clinical trial registration: REG-113–2014 and SJ-431.

TABLE 1 The characteristics of the infants and early in-home care

	Infant	Infant	Infant	Infant	Infant
Infant age at birth, gestational weeks	32 + 3	27 + 5	30 + 0	34 + 6	32 + 4
Number of recorded consultations, *N*	2	2	2	1	2
Number of planned consultations, *N*	10	4	6	2	9
Number of unplanned consultations, *N*	0	1	0	2	3
Location of ward	Zeeland	Zeeland	Zeeland	Jylland	Jylland
Length of in-home care, days	34	29	33	10	30
Exclusive breastfeeding one month after discharge	+	+	–[a]	+	+

[a]Never started breastfeeding.

of close, hands-on contact with the infant and family (Ortenstrand et al., 1999). However, hospitals with broader catchment areas often needed to offer in-hospital consultations due to organizational and distance-related challenges.

In Denmark, early in-home care programs are becoming standard care. The reorganization and centralization of health resources have generated a need to rethink how this care can be provided. The use of video consultations has been implemented in the last few years in the Danish context of early in-home care for premature infants (Hägi-Pedersen et al., 2020; Holm, Clemensen, et al., 2019). The potential of the use of video technology (Johansson et al., 2017) as a consultation method provides expanded opportunities, such as the advantages of visual contact and non-verbal cues between the parties, compared with the use of telephones. Video consultations are supposed to be efficient and convenient (Donaghy et al., 2019) for users; however, it is not known how technology affects the communication between nurse and family in the neonatal setting and how video consultations unfold.

Most neonatal wards adhere to the model of family-centred care (FCC) (Brodsgaard et al., 2015; Dellenmark-Blom & Wigert, 2014), defined as "a philosophy of care that fundamentally is about supporting and respecting the family's participation in their child's care through a partnership approach. Partnership is described by Coyne et al. as an approach to healthcare decision-making between the family and health care provider" (Coyne et al., 2018) based on the idea that families build on their strengths by participating in experiences that enhance control and independence through the recognition of each family's unique needs, resources and skills. Studies have shown that nurses are in control of the degree of partnership (Brodsgaard et al., 2015) and that early in-home care is consistent with the concepts of FCC, where parents are the infant's primary caregiver and the nurse serves as a consultant (Dellenmark-Blom & Wigert, 2014). Thus, FCC relies on well-established communication between nurse and family. Accordingly, the communication between the neonatal nurse and family is essential in the setting of early in-home care. Further studies have shown that families feel that video consultations during in-home care empower them in their roles as parents (Brodsgaard et al., 2015; Holm et al., 2019).

In summary, it seems that video consultations might succeed in supporting communication between parents and nurses. However, there is a lack of knowledge concerning how video communication unfolds in early in-home care. Consequently, the aim of this study was to describe how communication between nurses and families in video consultations in a neonatal early in-home care program unfolded in the context of families' homes.

2 | METHOD

The study takes its inspiration from Spradley's focused observations (Spradley, 1980) supported by recordings of the communication between families and nurses during video consultations in a neonatal early in-home care program.

2.1 | Early in-home care program

Care in the neonatal wards was provided by nurses (RNs). The parents were informed about the early in-home care program on admission to the neonatal ward. When an infant started breastfeeding or bottle feeding and the family wished to go home and fulfilled the criteria for early in-home care, the family was offered the early in-home care program (Hägi-Pedersen et al., 2020). During early in-home care, the family handled the care of the infant, including tube feeding until the infant was fully breastfed or bottle-fed. Families had two to three planned video consultations per week that involved communication and the exchange of information and knowledge, including receiving advice on the infant's nutrition, the infant's current weight and bottle/breastfeeding, among other topics, from the nurses in the wards. In addition to the planned video consultations, families could contact the ward at all hours of the day.

TABLE 2 An example of the meaning unit, codes, category and theme

Meaning unit	Codes	Category	Theme
pumping equipment sitting out to dry	Sterilization	The location of the consultations	Setting the scene
boy is playing on the floor	Playing		
mother asks the father to find her notes	Preparation	Pausing daily life	

2.2 | Participants

The families were recruited from two neonatal wards located in different regions of Denmark. Neonatal nurses emailed a list of potential candidates to the first author when the candidates were ready to go home as part of the purposive sampling strategy (Polit & Beck, 2018) that we adopted to recruit families with infants with diverse gestational ages, lengths of admission and complexity to support the collection of varied and nuanced data. Infant/family characteristics are shown in Table 1. The first author contacted the families by telephone or text message and asked for permission to participate in their consultations. Five families were included. The participating nurses were females aged 32–63 years and their neonatal experience ranged from 2.5–20 years.

2.3 | Participant observation and recorded communication

To cover both the video consultations and how they unfolded in the context of the families' homes, the data collection consisted of both observations and audio recordings of the nurses' and families' communication during the video consultations. The observation and recording took place from June 2017–July 2018. The observations were conducted in the families' homes mainly during the first and second planned video consultations between a nurse and a family. In total, nine consultations were observed. The observations were carried out by the first author, who has been a neonatal nurse for 8 years.

The observations were based on passive participant observation (i.e. focused observations) (Spradley, 1980). During the consultations, the observer sat near the family but in the background, so the focus of the observation remained between the nurse and family. To support the collection of data on how communication between nurses and families unfolded during the video consultations, a field note guide was created based on Spradley's dimensions—space, actor, activity, object, act, event, time, goal and feeling—to provide a rich description of the social situation (Spradley, 1980). The observations started approximately 10 min before the scheduled consultation. After each observation, the observer wrote prose text containing her immediate thoughts about the situation.

The video consultations were performed through the encrypted applications CareRoom and LiveCare provided by ViewCare a/s Søborg, a system with an interface that resembles that of FaceTime or Skype. Smartphones equipped with LTE/HSDPA were provided to the families by the wards (Hägi-Pedersen et al., 2020). The families communicated from these Samsung smartphones and the nurses communicated from an iPad Air mini.

The recorded consultations lasted between 10–28 min (median = 19 min) and were transcribed verbatim. All the transcribed data material, that is the prose text from the field notes and the transcribed consultations, were transferred into the NVivo 10 software program to support the organization of the analysis.

2.4 | Data analysis

Inductive content analysis was performed based on the approach of Graneheim and Lundman (2004). Initially, all the transcribed text was read several times to gain a sense of the whole. Then, the transcriptions were ordered in meaning units by asking "what the text says" (Graneheim & Lundman, 2004) about the communication between the nurse and family and how the video consultations unfolded.

The meaning units were labelled with codes according to the study aim of describing how communication unfolded between nurses and families in video consultations in an early in-home care program in the context of parents' homes since labelling meaning units with a code allows the data to be thought about in new and different ways (Graneheim & Lundman, 2004). The analysis continued through the ordering and grouping of the codes into subcategories, with similar content organized into broader categories according to meaningful patterns. After the broader categories were identified, the meaning units were read again and compared with the categories to ensure links between them. Finally, the underlying meaning, that is, the latent content of the categories, was formulated into themes (Graneheim & Lundman, 2004). During the whole process, all the authors discussed the emerging categories and themes until consensus was reached. The analysis process is illustrated in Table 2. Text samples from the transcribed material are used to support the findings of the analysis.

2.5 | Ethical considerations

The study was registered with the Danish Protection Agency, file number REG-113-2014 and the Danish National Committee on Health Research Ethics, file number SJ-431. The ethical principles of

the Declaration of Helsinki were followed. All the participants were contacted by the first author to ensure they consented to the participation of the first author during the consultations with the nurses. Written consent was obtained from the families and the nurses before participation. Anonymized transcription and reporting were used to ensure the anonymity of the families and nurses.

2.6 | Findings

The analysis of the material revealed three themes: "Setting the scene," "Weight as a point of reference" and "The pros and cons of technology". The themes are elaborated by categories.

2.7 | Setting the scene

This theme covers the context where the video consultations unfolded in the families' homes in the early in-home care program.

2.7.1 | Category: The location of the consultation

The mother was home with the father and/or the infant's older siblings. They had already planned where the consultation would take place. Usually, the families had made a few notes with questions and specific information they needed:

> In my walk through the kitchen, I see breast pumping equipment sitting out to dry. The big boy is playing on the floor in the living room. The family chats while the mother is breastfeeding the infant on the couch. The mother asks the father to find her notes. The father heads to the table and hands the notes to the mother and sits down with the big boy on the floor…
>
> (Field note)

The infant played a central role in the determination of where the video consultation would occur, often near the infant's crib/nest. The homes were filled with artefacts of home life: laundry, sterilized nipple shields and bottles, toys, coffee cups, etc. There was often a scale near the infant's changing place, with a piece of cloth on it, indicating that it had been used recently. The families' homes and their surroundings exuded peace and serenity. As the set time for the consultation approached, the families gathered around the phone on the sofa or around the dining table together with their prepared notes. The parents instructed older siblings to be quiet during the conversation with the nurse.

Thus, for the mother and father, involvement in early in-home care was a joint project. The consultations appeared important as daily life were put on standby when the consultations were taking place. For example, the television would be paused with a "frozen" picture, or laundry might be left partially folded.

2.7.2 | Category: Pausing daily life

Although daily life was on standby, the video consultations allowed the families to engage in activities around the consultations. For example, an older sibling might want the father to perform gymnastics with her or to obtain coffee from the kitchen. Additionally, during the consultations, the mother and father comforted or fed the infant or talked to or comforted the other siblings. After finishing the consultations, the families resumed their daily lives, for example eating breakfast and they talked little about the consultations after they had ended the video call. When the parents talked about the video consultations, they reminded each other that their baby was doing well.

2.8 | Weight as a point of reference

Communication in the video consultations followed a specific pattern where the nurse asked most questions, and it was primarily one-way. The questions were mostly related to factual information, such as nutrition and weight and less about the well-being of the family and infant; however, the nurse always reminded the families that if they were the slightest bit uncertain, they were welcome to go to the hospital. The nurses asked questions about topics such as breastfeeding and elimination, but overall, the nurses' navigation from the start to the end of the consultations was anchored in questions related to the infants' weight.

2.8.1 | Category: The infant's weight

The consultations all started with the nurse asking, "How are you doing?" or commenting on the infant's weight: "Have you weighed him today?" "How is he doing with his weight?" "When did you last weigh him?". Hence, the nurses seemed to refer to the infant's weight to obtain factual information about the infant's well-being and provide or modify advice. The families also used the infant's weight to make decisions about the infant's nutrition and determine how much the infant had grown. The families responded to questions such as "How is the infant doing?" with answers about the infant's weight gain or current weight. One mother commented on her infant's weight as follows: "…well, we also weighed him an extra time because we were so completely, it cannot be true…" Thus, the infant's weight acted as a very important point of reference for both the nurses and families.

At the beginning of the consultations, the infant's weight was talked about either positively, for example "…he is busy getting big now" and "You have a boy who is getting big?", or less positively, for example "Yes, it's only 18 grams that he has put on in the last

3 days". These positive comments by the nurse and the parents' acknowledgment of the infant's thriving created a relaxed tone during the consultation.

2.8.2 | Category: Short and closed questions

The questions asked by the nurses were primarily short and closed. The parents answered with nods, "yes" or "no" responses or short comments that seemed to be a recognition of the nurses' advice or questions. Accordingly, the conversation shifted quickly between the participants. During the communication between the nurses and parents, the nurse often thought aloud when giving advice on the next step(s) in the care of the infant. This strategy seemed to have several purposes, ranging from buying time to formulate advice and determine how to present it to filling awkward pauses in communication.

> Nurse: So that's why I think you should give him uhh… (pauses to check the computer) a period when you don't put food in it [the tube]; uhh… maybe you should start at 12 noon or at 2 p.m. and then let him eat in the evening instead of in the morning uhh … do you understand what I mean?

As illustrated above, the nurses followed up with a closed question concerning the parents' understanding and acceptance of the advice given.

When the nurses did not have any more questions for the parents, they invited them to ask questions or talk about any difficulties: Nurse: "Okay, that's fine. And what else do you think we should talk about today?" This kind of invitation opened up the communication and the families responded with longer sentences or asked their prepared questions.

2.8.3 | Category: Acquaintance

In the consultations, the nurse's acquaintance with the family was important in establishing a relationship with the family. Accordingly, the depth of the questioning in the consultation seemed to vary in relation to the nurse's knowledge of the family and the infant's history. The nurse's preparation and/or acquaintance with the family meant that the nurse did not (have to) ask for factual details about the infant or about how long the family had been at home. Thus, nurses who knew the families started asking questions about the infant's status and it made it easy for the parents and the nurses to smile, use humour and joke together. (*Laughing*) Nurse: "Does it work well at home?' Mother: 'Yes, it does; it is great – great to come home'. Nurse: 'It looks cozy. Mother: 'Thank you'". In contrast, nurses who did not have factual knowledge of the families started by asking several questions about the infant's status and weight and said they needed to read from the computer while they were talking. This approach to the consultations influenced the communication, making it more formal and superficial and the consultations shorter.

2.9 | The pros and cons of technology

Several disruptions occurred during the consultations. Change in direction during the communication was often caused by a disturbance due to technology. For example, the camera might be turned in a different direction, the alarm for the infant's next meal might go off, or something might happen on the screen. These disturbances created ruptures in the communication.

2.9.1 | Category: Keeping the consultation on track

The nurses or the parents had to repeat themselves or were distracted from the topic being discussed. However, the disruption could unintentionally change the consultations. In one instance, the nurse and the mother had just talked seriously about breastfeeding issues, when the nurse unintentionally turned the screen and as the nurse fumbled to turn the screen back again, the mother and nurse had a longer, funny, informal talk about this: *Mother:* "Nice moving boxes (laughs). Hope no one has left their shoes (ed: a Danish term for dying)…" The nurse returned to dealing with the infant, but the topic changed. In another situation, the father was running around the room chasing a wasp. The mother was distracted and grinning while trying to keep her eyes on the screen. In such comical situations, nurses were sent on a detour: they found these situations amusing but often returned to formal conversations with a new question. Thus, interruptions and detours affected the communication and could lead to unfinished communication about potentially important issues.

2.9.2 | Category: Confidence with the technology

Often, loss of contact occurred during the consultations due to the technology and the nurses had to call the families again. The challenges usually concerned problems hearing each other. This could mean that some of the consultation time was used to change settings on the phone or looking for a headset to ensure good sound during the consultations. Nonetheless, both parties joked about the sound difficulties (e.g. "Dad says, 'It's good when it (ed: technology) works'") or attributed these challenges to a poor Internet connection/network in the area.

The nurses' confidence with video also influenced the communication. When nurses used video to see the infant sleeping in the crib or in the mother's or father's arms, video appeared an opportunity to engage in pleasant communication despite not being present in person in the family's home. This approach of seeing the infant through the camera was met with recognition in the form of smiles and quiet laughter by the parents.

However, some nurses seemed less confident with video or less attentive to the location of the camera, perhaps commenting on their own appearance on the screen. In other cases, the nurses did not point the screen at themselves but rather only showed a small portion of themselves or did not show themselves at all. On one occasion, the consultation started rather oddly. The nurse had forgotten to turn the camera towards herself, so the camera was pointed at the nurse's feet during the consultation. The family could not avoid noticing this but did not comment on it. Instead, the family acted as if they could see the nurse, holding the screen in front of them during the consultation. Nonetheless, the consultation had the same progression as others in terms of the questions.

3 | DISCUSSION

The findings of how communication between the nurses and families in video consultations unfolded in the early in-home care program showed a relaxed atmosphere in the families' homes. They also showed that the video consultations were one-way communication dominated by the nurses with the infant's weight as the central topic. The communication between the nurses and families was influenced by detours and disturbances.

The theme "setting the scene" indicated that families had become settled at home by the time of the consultations. Family life had begun with all the practical concerns in parenting a premature infant and being at home seemed to create a relaxed atmosphere. This is supported by previous interview studies that reported families emphasizing that coming home from the hospital allowed them be in a free and unrestricted area, which provided freedom and greater independence and made them feel relaxed (Dellenmark-Blom & Wigert, 2014; Holm, Brodsgaard, et al., 2019). As illustrated in our findings, families prepared for the consultations and paused their daily lives before and during the consultations. This indicates that the consultations were significant, as also noted by Holm, Brodsgaard, et al. (2019) and Lindberg (2013). According to Lindberg (2013), parents consider video consultations a source of assistance and still maintain bonds with the staff at the unit.

Our findings also highlighted that parents were familiar with the importance of the infants' weight, illustrating an apparent mutual understanding of the significance of premature infants' weight and weight gain in the neonatal period, as also stated by MedlinePlus (2020), Moro et al. (2015) and Ortenstrand et al. (1999). Studies providing knowledge for early in-home care have all recommended weighing the infant to confirm that he or she is doing well and developing as he or she should (Brodsgaard et al., 2015; Hägi-Pedersen et al., 2020; Holm, Clemensen, et al., 2019; Ortenstrand et al., 1999). Weight is an objective, simple, non-invasive method (Schlegel-Pratt & Heizer, 1990) of gathering important information about infant thriving. However, our study highlighted that the status of weight as a point of reference deeply influenced how the communication between the nurses and families unfolded during the video consultations. Our findings suggested that this focus on the infant's weight combined with the nurse-dominated consultation could convey that the consultation is primarily founded on the paradigm of medical science. Our findings indicated that this approach to communication, where nurses primarily collected information through standardized questions, could mean that nurses only used video to a limited extent to gather further information about the infant or family. Instead, they primarily used video to create a positive relationship with the family. This finding is in line with Lindberg et al. (2009), who found that nurses did not find video significant during consultations as issues parents raised often did not require the use of video. This indicates that the potential of video is not only to gather important information, such as breastfeeding positions or the infant latching on to the breast.

The theme "Weight as a point of reference" illustrated that early in-home care video consultations were primarily nurse-dominated one-way communication. This finding is supported by Dorell et al. (2016), who also found that nurses considered themselves the leaders of video conversations; they felt that these conversations were difficult but became easier after several times. Our findings showed that parents accepted the way the consultations worked, as parents rarely asked questions or asked for further information and discussion about the advice given. According to the theory of active listening, closed questions only allow very limited responses (Rogers & Farson, 1957) and limited responses could therefore have resulted from the nurses' use of closed communication. However, the use of closed communication combined with the nurses' frequently thinking aloud in the consultations could also have been a response to the unstable technology and the need to resume the consultations. The nurses' domination of the consultations and the way they communicated might also indicate an asymmetry of power between nurses and parents in early in-home care video consultations. As argued by Delmar (2012), parents' room for action may be constrained by paternalistic administration when parents are not given the chance to talk about topics and phenomena that concern them. Our findings regarding the nurse-dominated consultations could therefore indicate that parents were not given the chance to open up about their potential concerns or questions due to a power asymmetry between themselves and the nurses. However, our findings also indicated a relaxed atmosphere in the families' homes. Thus, the parents' being in the unrestricted space of their homes may have tended to neutralize these power relations. Furthermore, our findings showed that the primary interest of both parties was the well-being of the infant and according to Burbules (1986), if there is no conflict of interest, a potential power asymmetry will not develop.

Our finding that the consultations were dominated by closed communication could indicate that the video consultations did not offer room for the nurses to use FCC. This might be of concern as studies have concluded that nurses view FCC theory as a frame of reference for the partnership to involve the family in decision-making (Coyne et al., 2011). Additionally, interview studies of parents of premature infants have shown that parents felt empowered and that they were being heard by the nurses concerning their observations of their infants (Brodsgaard et al., 2015; Holm, Brodsgaard,

et al., 2019). Consequently, it could be argued that our findings suggest that the nurses were not practicing FCC due to the domination of this one-way communication consisting of closed questions related to infants' thriving. However, our findings might not have indicated a lack of FCC. Rather, they may have illustrated the needs of parents who were empowered by being at home with their infant and therefore only required limited support. This idea is supported by a study stressing that parents felt supported by knowing that they were welcome in the hospital if they had any uncertainties (Holm, Brodsgaard, et al., 2019). Hence, further studies are needed to shed light on how parental empowerment is developed and achieved in the context of early in-home care.

The theme "keeping on track" showed that video consultations are two-sided. On the one hand, video provided easy and quick access to communication. On the other hand, communication through video was difficult to keep on track. Our findings showed that although video consultations offered easy access to the families, they were vulnerable to interruptions that could change the order of topics or prematurely terminate communication about potentially important topics.

Our findings also highlighted that face-to-face visual contact was sometimes limited due to nurses not being confident with the technology. Similarly, Clemensen et al. (2008) found that communication through video phones constrains the natural flow of conversation in terms of delays and difficulties in interpreting non-verbal cues and expressions. The importance of face-to-face contact was supported by Hammersley et al. (2019), who reported that both health professionals and patients rated face-to-face contact as better than only telephone as patients found that being listened to, treated with care and concern and taken seriously were best achieved through face-to-face consultations. Hence, in communication through video, information sharing may be limited when the consultation is not face to face—for example when the nurse is not visible to parents, which sometimes occurred in our study—as it is difficult to read body language and non-verbal cues.

Additionally, and similarly to other studies about telecommunication and video communication (Lindberg et al., 2009; Østervang et al., 2019), our findings illustrated nurses' lack of confidence using video. Consequently, our findings stressed that the use of video consultation requires a focus on training in video communication and confidence with the use of video.

3.1 | Study limitations

Combining participant observation with recording of the communication enabled us to gain in-depth insight into how the video communication unfolded in early in-home care and enabled thorough description of the context. Thus, we could establish credibility by providing a truthful and in-depth description of how the communication between nurse and parents unfolded. However, this study is limited by the number of participants and does not represent all families receiving video consultations. Furthermore, the families with potential to participate in the study had to fulfil several criteria to enter early in-home care, resulting in the exclusion of families requiring extra focus on relational challenges between the infant and parent. Nonetheless, the intention of the study was not to make generalizations about video consultations but to offer new insights that contribute substantially to current understandings about how video consultations unfold in the context of families' homes.

The observer tended to avoid influencing the consultations by placing herself in a position where she could see both the family and the nurse on a family's screen while remaining invisible to both parties. However, former relationships between the nurse and the family and the nurse's possible preconceptions of the family may have influenced the communication observed.

As the authors had different backgrounds, critical questions were continuously addressed throughout the study to avoid possible influence of the observers' preunderstandings. Furthermore, all the authors discussed each step together in the analysis process to enhance dependability through reflexivity in the author group (Graneheim et al., 2017; Graneheim & Lundman, 2004).

4 | CONCLUSION

This study provided insight into how communication during video consultations unfolded in the context of families' homes. The study highlighted that the participating families were doing well at home and had begun their daily lives with the infants at the time of the consultations. The study showed that the consultations were dominated by the nurses and primarily focused on factual information with the weight of the infant as the focus of the communication.

The video consultations provided easy and pleasant access to in-home care for families, but the supposed potential of video to gather information about the infant or family, such as breastfeeding positions, was used only to a limited extent. The video consultations were subject to disturbances, which made it difficult for the nurses to keep the consultations on track. Furthermore, the study suggested that the use of video consultation requires a focus on training in video communication and confidence with the use of video.

5 | IMPLICATIONS

This study showed that using video consultations during early in-home care for premature infants and families has the potential to fully succeed in the future. Based on our findings, we recommend the following:

- At the nurse level, there should be a focus on training in communication and the importance of using the medium to interact with families.
- At the policy level, stable video technology with enhanced screens and devices to meet the need for wider visual contact must be developed.

ACKNOWLEDGEMENTS

We extend our greatest gratitude to the parents and nurses who contributed to this study.

CONFLICT OF INTEREST

There are none to declare.

DATA AVAILABILITY STATEMENT

Due to the nature of this research, participants of this study did not agree for their data to be shared publicly, so supporting data are not available.

ORCID

Mai-Britt Hägi-Pedersen https://orcid.org/0000-0002-4349-4755
Hanne Kronborg https://orcid.org/0000-0002-1042-6748
Annelise Norlyk https://orcid.org/0000-0002-8512-228X

REFERENCES

Brodsgaard, A., Zimmermann, R., & Petersen, M. (2015). A preterm lifeline: Early discharge programme based on family-centred care. *Journal for Specialists in Pediatric Nursing*, *20*(4), 232–243. https://doi.org/10.1111/jspn.12120

Broedsgaard, A., & Wagner, L. (2005). How to facilitate parents and their premature infant for the transition home. *International Nursing Review*, *52*(3), 196–203. https://doi.org/10.1111/j.1466-7657.2005.00414.x

Burbules, N. C. (1986). A theory of power in education. *Educational Theory*, *36*(2), 95–114. https://doi.org/10.1111/j.1741-5446.1986.00095.x

Clemensen, J., Larsen, S. B., Kirkevold, M., & Ejskjaer, N. (2008). Treatment of diabetic foot ulcers in the home: Video consultations as an alternative to outpatient hospital care. *International Journal of Telemedicine and Applications*, *2008*, 132890. https://doi.org/10.1155/2008/132890

Coyne, I., Holmstrom, I., & Soderback, M. (2018). Centeredness in healthcare: A concept synthesis of family-centered care, person-centered care and child-centered care. *Journal of Pediatric Nursing*, *42*, 45–56. https://doi.org/10.1016/j.pedn.2018.07.001

Coyne, I., O'Neill, C., Murphy, M., Costello, T., & O'Shea, R. (2011). What does family-centred care mean to nurses and how do they think it could be enhanced in practice. *Journal of Advanced Nursing*, *67*(12), 2561–2573. https://doi.org/10.1111/j.1365-2648.2011.05768.x

Dellenmark-Blom, M., & Wigert, H. (2014). Parents' experiences with neonatal home care following initial care in the neonatal intensive care unit: A phenomenological hermeneutical interview study. *Journal of Advanced Nursing*, *70*(3), 575–586. https://doi.org/10.1111/jan.12218

Delmar, C. (2012). The excesses of care: A matter of understanding the asymmetry of power. *Nursing Philosophy*, *13*(4), 236–243. https://doi.org/10.1111/j.1466-769X.2012.00537.x

Donaghy, E., Atherton, H., Hammersley, V., McNeilly, H., Bikker, A., Robbins, L., Campbell, J., & McKinstry, B. (2019). Acceptability, benefits and challenges of video consulting: A qualitative study in primary care. *British Journal of General Practice*, *69*(686), e586–e594. https://doi.org/10.3399/bjgp19X704141

Dorell, A., Ostlund, U., & Sundin, K. (2016). Nurses' perspective of conducting family conversation. *International Journal of Qualitative Studies on Health and Well-Being*, *11*, 30867. https://doi.org/10.3402/qhw.v11.30867

Evanochko, C., Jancs-Kelley, S., Boyle, R., Fox, M., Molesky, M., & Byrne, P. (1996). Facilitating early discharge from the NICU: The development of a home gavage program and neonatal outpatient clinic. *Neonatal Network*, *15*(8), 44.

Graneheim, U. H., Lindgren, B. M., & Lundman, B. (2017). Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today*, *56*, 29–34. https://doi.org/10.1016/j.nedt.2017.06.002

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, *24*(2), 105–112. https://doi.org/10.1016/j.nedt.2003.10.001

Hägi-Pedersen, M. B., Norlyk, A., Hristo, S., Dessau, R., & Kronborg, H. (2020). Comparison of video and in-hospital consultations during early in-home care for premature infants and their families: A randomized trial. *Journal of Telemedicine and Telecare*, 1–13. https://doi.org/10.1177/1357633X20913411 [Epub ahead of print].

Hammersley, V., Donaghy, E., Parker, R., McNeilly, H., Atherton, H., Bikker, A., Campbell, J., & McKinstry, B. (2019). Comparing the content and quality of video, telephone and face-to-face consultations: A non-randomised, quasi-experimental, exploratory study in UK primary care. *British Journal of General Practice*, *69*(686), e595–e604. https://doi.org/10.3399/bjgp19X704573

Holm, K. G., Brodsgaard, A., Zachariassen, G., Smith, A. C., & Clemensen, J. (2019). Parent perspectives of neonatal tele-homecare: A qualitative study. *Journal of Telemedicine and Telecare*, *25*(4), 221–229. https://doi.org/10.1177/1357633X18765059

Holm, K. G., Clemensen, J., Brodsgaard, A., Smith, A. C., Maastrup, R., & Zachariassen, G. (2019). Growth and breastfeeding of preterm infants receiving neonatal tele-homecare compared to hospital-based care. *Journal of Neonatal-Perinatal Medicine*, *12*(3), 277–284. https://doi.org/10.3233/NPM-18143

Johansson, A. M., Lindberg, I., & Soderberg, S. (2017). Healthcare personnel's experiences using video consultation in primary healthcare in rural areas. *Primary Health Care Research & Development*, *18*(1), 73–83. https://doi.org/10.1017/S1463423616000347

Lindberg, B. (2013). Access to videoconferencing in providing support to parents of preterm infants: Ascertaining parental views. *Journal of Neonatal Nursing*, *19*(5), 259–265. https://doi.org/10.1016/j.jnn.2012.10.001

Lindberg, B., Axelsson, K., & Ohrling, K. (2009). Experience with videoconferencing between a neonatal unit and the families' home from the perspective of certified paediatric nurses. *Journal of Telemedice and Telecare*, *15*(6), 275–280. https://doi.org/10.1258/jtt.2009.090112

Lindberg, B., Axelsson, K., & Öhrling, K. (2009). Taking care of their baby at home but with nursing staff as support: The use of videoconferencing in providing neonatal support to parents of preterm infants. *Journal of Neonatal Nursing*, *15*(2), 47–55. https://doi.org/10.1016/j.jnn.2009.01.004

Lundberg, B., Lindgren, C., Palme-Kilander, C., Ortenstrand, A., Bonamy, A. K., & Sarman, I. (2016). Hospital-assisted home care after early discharge from a Swedish neonatal intensive care unit was safe and readmissions were rare. *Acta Paediatrica*, *105*(8), 895–901. https://doi.org/10.1111/apa.13393

MedlinePlus (2020). *Neonatal weight gain and nutrition*. U.S. Department of Health and Human Services National Institutes of Health, U.S. National Library of Medicine. Retrieved from https://medlineplus.gov/ency/article/007302.htm

Moro, G. E., Arslanoglu, S., Bertino, E., Corvaglia, L., Montirosso, R., Picaud, J. C., Polberger, S., Schanler, R. J., Steel, C., van Goudoever, J., Ziegler, E. E., & European Society for Pediatric Gastroenterology Hepatology and Nutrition (2015). XII. Human milk in feeding premature infants: Consensus statement. *Journal of Pediatric Gastroenterology and Nutrition*, *61*(Suppl 1), S16–S19. https://doi.org/10.1097/01.mpg.0000471460.08792.4d

Ortenstrand, A., Waldenstrom, U., & Winbladh, B. (1999). Early discharge of preterm infants needing limited special care, followed by domiciliary nursing care. *Acta Paediatrica*, *88*(9), 1024–1030. https://doi.org/10.1080/08035259950168568

Ortenstrand, A., Winbladh, B., Nordstrom, G., & Waldenstrom, U. (2001). Early discharge of preterm infants followed by domiciliary nursing care: Parents' anxiety, assessment of infant health and breastfeeding. *Acta Paediatrica*, *90*(10), 1190–1195. https://doi.org/10.1080/080352501317061639

Østervang, C., Vestergaard, L. V., Dieperink, K. B., & Danbjørg, D. B. (2019). Patient rounds with video-consulted relatives: Qualitative study on possibilities and barriers from the perspective of healthcare providers. *Journal of Medical Internet Research*, *21*(3), e12584. https://doi.org/10.2196/12584

Polit, D. F., & Beck, C. T. (2018). *Essentials of nursing research: Appraising evidence for nursing practice*. Wolters Kluwer.

Rogers, C., & Farson, R. (1957). *Active listening*. Industrial Relations Center of The University of Chicago.

Schlegel-Pratt, K., & Heizer, W. D. (1990). The accuracy of scales used to weigh patients. *Nutrition in Clinical Practice*, *5*(6), 254–257. https://doi.org/10.1177/011542659000500625 4

Spradley, J. (1980). *Participant observation*. Wadsworth Cengage Learning.

Sturm, L. D. (2005). Implementation and evaluation of a home gavage program for preterm infants. *Neonatal Network*, *24*(4), 21–25. https://doi.org/10.1891/0730-0832.24.4.21

The Partnership for Maternal, Newborn & Child Health, Save the Children, & World Health Organization (2012). *Born too soon: The global action report on preterm birth*. Retrieved from http://www.who.int/pmnch/media/news/2012/preterm_birth_report/en/?utm_source=LifeSiteNews.com+Daily+Newsletter&utm_campaign=05d7e64240-LifeSiteNews_com_Canada_Full_Text_06_04_2012&utm_medium=email

How to cite this article: Hägi-Pedersen M-B, Kronborg H, Norlyk A. Video consultation as nursing practice during early in-home care for premature infants and families viewed from the families' homes'. *Nurs Open*. 2021;8:824–832. https://doi.org/10.1002/nop2.687