QUALITATIVE HEALTH COMMUNICATION
VOLUME 5, ISSUE 1, 2026
ISSN: 2597-1417

The digital care convoy: Exploring the impact of increased digital communication in the primary care sector

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ABSTRACT

Background: The digitalisation of care services has significantly altered communication among healthcare professionals, care recipients and their families. Interactions now rely heavily on digital documentation, which affects interpersonal engagement. Digital communication plays a central role in care delivery, from the reading of patient records before visits to the composition of detailed reports afterwards. **Aim:** This article examines the role and perception of digital communication and documentation in the care of older individuals, focusing on the challenges of increased reliance on written digital communication, as well as time constraints, literacy barriers and reduced direct verbal interaction. **Methods:** The study is based on 14 interviews conducted in 2023 and 2024 with professional caregivers and 20 interviews with individuals aged 75 or older receiving care at home or in residential facilities and five interviews with their relatives, friends and family members. The analysis is primarily based on the 14 interviews with professional caregivers. **Results:** Three key challenges were identified: (1) Reading, writing, and categorisation are cognitively demanding and require caregivers to process large amounts of information while managing tasks. (2) Written communication, although intended to be clear and efficient, is often misinterpreted, which necessitates verbal clarification. (3) Documentation serves both communication and accountability purposes, thus increasing administrative burdens. **Discussion:** Although digital communication systems enhance efficiency and transparency, they also limit access for informal caregivers, which leads to communication gaps. **Conclusion:** Written digital communication is challenging for professional caregivers and is part of a complex communication landscape that, in order to function optimally, also includes oral communication and analogue letters and documents.

KEYWORDS

Communication dynamics, digitalisation, digital communication, healthcare documentation, homecare sector, literacy skills, oral communication.

BIOGRAPHIES

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Introduction

In a public nursing home in Denmark, Sarah, a dedicated caregiver, moves between inhabitants with practiced ease. Often, she finds herself at the computer, fingers hovering over the keyboard. The task is always the same: a mountain of documentation that requires her attention. The daily reports, care plans, medication logs – each detail must be carefully recorded. Although Sarah's main role is to provide compassionate care, her responsibility extends to ensuring that every patient's journey is accurately documented. The duality of her role reflects a larger trend in the care sector, in which the need for digital documentation has become an integral part of patient care.

Sarah is part of the Danish care service, which is the main provider of professional care for older individuals. The municipalities assess the needs of the older individual by sending a 'visitator' (visiting health professional) to their home to determine the required level of assistance. Once this assessment is made, and if assistance is granted, the older individual is free to choose between private or public providers for their care. The assistance provided can range from a brief visit every second week to help with medication intake or a few hours of cleaning to an apartment in a nursing home where 24-hour care is available. Over the latter half of the 20th century, Denmark witnessed significant growth in homecare services. This expansion was driven by policies encouraging older individuals to remain in their own homes for as long as possible to avoid the costs associated with nursing homes (Kamp & Hansen, 2018; Platz, 1987).

Most professional caregivers in homecare services hold vocational qualifications as 'social and healthcare helpers' or 'social and healthcare assistants', obtained through courses lasting two years and two months or three years and ten months, respectively. Although some professional caregivers in homecare services may lack formal education and training, every homecare service is required to have staff members with the more extensive education (social and healthcare assistants) in care services, who are authorised to administer medication (Hansen & Kamp, 2018).

Regardless of educational level, documentation is a central part of working in care services; in the contemporary care service in Denmark, professionals report spending an average of 50 minutes per day on documenting and journaling information about patients. Three out of four professionals perceive this to be a disproportionate amount of time (FOA, 2022).

The dire need for documentation follows from years of political initiatives that aim to ensure high quality and transparency in communication. Documentation is also necessary for evaluation purposes (Hansen & Kamp, 2018) and is usually conducted by means of writing in computer systems (Demsash et al., 2023). Consequently, a significant portion of the daily work of care professionals involves documentation and reading documents.

With the care sectors becoming increasingly digitalised in Denmark, new challenges arise for the humans involved. The digitalisation of care services and communication

within the care sector underpins a noticeable practice within the care service: the interaction among sectors, professions and citizens relies heavily on digital communication, which alters interpersonal interaction within the service (Nielsen & Grønning, 2025). From the careful reading of patient records before visits and

consultations to the composition of detailed reports and notes afterwards, the care landscape is now saturated with digital communication of different kinds. Our article investigates the perception of digital communication (such as digital messaging and documentation) involved in the care of older individuals, and we pose the following research question:

How do caregivers perceive the role of (written) digital communication in the collaborative practices within the care convoy?

Literature review: The care convoy supported by digital communication

To facilitate the understanding of the communicative practices in the care of older adults, we utilise the concept of the 'care convoy', which builds upon the convoy model of social relations proposed by Kahn and Antonucci (1980). The care convoy model suggests that individuals are positioned in evolving networks through which they both give and receive support (Antonucci et al., 2014; Hackett et al., 2023; Kemp et al., 2018). This model rejects the notion of a single caregiver (e.g. the professional caregiver) and instead emphasises that care is provided by a network or convoy of individuals (Kemp et al., 2017). Care convoys are described as dynamic collections of individuals who may or may not have close personal connections with the care recipient or with each other but are involved in providing various forms of care, including assistance with daily activities, socio-emotional support, skilled healthcare, monitoring and advocacy (Kemp et al., 2017; Lambotte et al., 2020). Care convoys include both formal and informal caregivers, including family members, friends, home care workers and healthcare providers (Burgess et al., 2022; Reckrey et al., 2024). The structure of care convoys varies based on individual preferences, needs, the availability of support from family and community and access to local health and aged care services (Petersen et al., 2024). The quality of the care convoy is highlighted as being more crucial for an individual's well-being than the quantity of contacts within the convoy (Ho et al., 2022).

In essence, the care convoy model provides a framework for understanding the complex network of relationships and support networks that surround individuals in need of care. By conceptualising care provision as a collaborative effort involving multiple individuals with diverse roles and relationships, the care convoy model offers insights into how care is distributed and exchanged, as well as the impact of the care convoy on the well-being. In this respect, it can therefore be advantageous to apply the care convoy framework to the digital landscape of modern care systems in highly digitalised countries such as Denmark and other Nordic countries.

Effective communication within the care convoy is important for providing optimal care to older citizens (Kemp, 2020) by enhancing collaboration and consensus among formal caregivers, families and others. Professional caregivers play a crucial role within the care convoy by providing essential support and expertise to both the care recipient and the informal caregivers, particularly for older citizens without relatives and friends or without strong ties to relatives and friends. The professional caregivers are important actors as gatekeepers and collectors of past experiences in meetings involving the system, the older individuals and their relatives and friends (family caregivers).

Professional caregivers can offer guidance and assistance to family caregivers and help them navigate their new caregiving roles while being sensitive to their commitments and emotions (Coolbrandt et al., 2015). In addition, professional caregivers are legally obliged to provide documentation of their work, which has to be readable for the care recipient, other parties of the care convoy as well as for healthcare professionals of various kinds. As documentation methods evolve, understanding how social spaces adapt to digital communication in the care of older people becomes essential. It is well described how electronic care journals are not just neutral artefacts; they actively shape the care provided in general (Berg, 1999; Berg 1996). Electronic care journals can be understood as active participants in the collaboration between citizens, relatives, and healthcare professionals. By mediating communication, structuring workflows, and shaping access to information, these technologies influence roles, responsibilities, and power relations within care practices. For example, patient portals and care coordination platforms can empower citizens and relatives by providing transparency and a sense of shared decision-making, while simultaneously guiding the practices of healthcare staff through embedded protocols and data flows. In this way, digital systems function as "actors" that co-produce the dynamics of care networks, aligning with perspectives from actor–network theory, which highlights how human and non-human entities jointly construct social practices (Latour, 2005). Building on this perspective, we regard the digital solution primarily as a communication tool rather than an autonomous actor. Our emphasis lies on the interpersonal relations within the care convoy, where differences between professional and non-professional participants and differences between communication modes are central. While digital infrastructures undoubtedly shape opportunities and constraints for interaction, our analytical focus is not on the system's agency but on how communication practices between human actors are mediated through it. By applying the concept of the care convoy to include both professional and non-professional participants, we find it imperative to investigate how digital communication used by professional caregivers facilitates or hinders exchanges within the convoy, as well as how caregivers themselves perceive and evaluate this mode of communication.

Documenting routine health practices is crucial for patient care, legal defence, reimbursement, professional communication and improving diagnoses and treatments (Bargaje, 2011). Originating in the medical field—where diagnoses, medications, and treatment plans have traditionally been thoroughly documented and play a central, defining role (Berg, 1996) - the practice of documentation has extended into homecare settings. However, in these environments, the focus is less on medical tasks and more on daily, 'softer' aspects of care. Most importantly, professional caregivers are obligated to maintain accurate, clear, relevant and timely patient records. Research shows that electronic (digital) systems are preferred for saving time and improving documentation quality (Kent & Morrow, 2014). Moreover, a recent (quantitative) study showed that "[k]nowledge, training, using an electronic system, availability of standard documentation tools and lack of motivation are statistically significant factors for routine practice documentation" (Demsash et al., 2023, p. 6).

Documentation serves as a standardised method for recording ongoing patient care, including key health information and care plans, such as evaluations, test results, reports, subjective notes and the reflections of professionals (Demsash et al., 2023). Regardless of whether the documentation is paper-based or digital, it should be

"patient-focused, accurate, relevant, clear, permanent, confidential and timely" (Demsash et al., 2023, p. 2).

From a historical perspective, in Denmark, digital development in healthcare has been driven by digitalisation strategies published regularly since the 1990s (Ministry of Health, 1999). Since then, documentation requirements and other bureaucratic procedures have been a focus in public sector modernisation. Thirty-five years after the first formal public strategy was implemented, digital documentation has become an integral part of practice in municipal health and the care of older people. It is widely believed that the rules and documentation demands for citizen-focused welfare services are steadily increasing, a trend also reflected in the public debate (Ejersbo et al., 2023). Several studies indicate that through the practice of health professionals sharing information with each other, documentation ties processes together for the citizen and serves as an overall overview of the citizen's course of care (Duval Jensen, 2024; Kuusisto et al., 2023).

Nevertheless, it is argued that digital documentation practice contributes to the fragmentation of care in municipal healthcare (Duval Jensen et al., 2023a). Duval Jensen et al. (2023a) point to the fact that the practice of documentation is characterised by invisible work (p. 11). In their study, based on field observations and interviews during 2021, they focus on how healthcare professionals make sense of the abstract political and managerial ideas in their concrete documentation practice. Moreover, research has described how digital healthcare documentation stands uncontested as the solution to three major problems in the context of the municipalities: lack of coherence between health services in a complex healthcare system, lack of accessible data for management and political prioritization, and inefficiency in the healthcare system (Duval Jensen et al., 2023b). In their comprehensive document analysis, Duval Jensen et al. (2023b) emphasize that "[i]t is silenced that documentation can occur in other media than digital, for example, on written paper notes in homes or offices" and that "(...) collaboration with families is not described in any of the central documents" (Duval Jensen et al., 2023, p. 6).

Building on this knowledge, we find it necessary to ask how healthcare professionals co-operate with the citizens themselves and with their relatives, friends and family – and how the healthcare professionals perceive this practice. The healthcare professionals are expected to work closely with the citizen's care convoy, and they are often dependent on important information about the citizen from the citizen's relatives, friends and family (the care convoy). As digital documentation has become an integral part of health practices, the care convoy must be studied and discussed as a digital care convoy.

Methods

This study is part of the larger project "Healthy Ageing in a Digital World" involving scholars from Denmark, Finland, and Sweden, which focuses on digital health among citizens aged 75 and over. It is a qualitative project following an ethnographic approach. The current study focuses on the daily professional care of older citizens and the digital, written communication among care professionals and between professionals and citizens. The data material used in this study consists of interviews

conducted in 2023 and 2024. We conducted 14 individual interviews with care professionals from Denmark, 20 interviews with citizens over the age of 75 and five interviews with relatives of citizens receiving care. The analysis is primarily based on the 14 interviews with professional caregivers. According to The Danish National Committee on Health Research Ethics, ethical committee approval was not needed for this type of study (VMK & NVK, 2024). Informed consent was obtained from all interviewees, and research permission was applied for and granted from the home care service providers from which the interviewees were recruited.

To recruit participants, we initially contacted the heads of care services in six different municipalities. They referred us to managers of nursing homes and home care services, who in turn directed us to relevant staff members. To ensure diversity in organizational types and perspectives, we also reached out to privately operated nursing homes. This recruitment strategy provided access to both public and private care settings, as well as to employees at different organizational levels. The 14 recruited care professionals were employed by three different home care service providers and in three different nursing homes in Denmark, in both rural and urban areas. The healthcare professionals had diverse educational backgrounds, including social and healthcare assistants (SSA) with authorisation to administer medication (4), social and healthcare helpers (SSH) without authorisation to administer medication (4) and nurses (4). One was a former teacher, now working as a social and healthcare helper without any formal education, and one was a support worker. One participant took part in two interviews, as the first session did not allow sufficient time for her to convey all of her perspectives, data from both interviews was used in the analysis. The interviews lasted between 45 and 60 minutes, except for one interview that only lasted 17 minutes due to a busy schedule for the interviewee. Thirteen participants were female, one was male and the age span ranged from 22 to 61 years, with a mean age of 46 years. The interview guide was developed in cooperation with researchers in the Healthy Ageing in a Digital World-project from Finland and Sweden and focused on the following topics: 1) Communication with citizens and relatives, 2) Digital media and health, 3) Assisting citizens with technology, 4) Older citizens and digital media, 5) Personal perspectives on digitalisation and 6) Digital competencies.

The 20 interviewed citizens were aged between 75 and 92 years old, with a mean age of 85 years; seven lived in assisted housing facilities, five received extensive home care services and eight received only a little help with cleaning and other domestic chores. Three citizens were interviewed twice. The interviews lasted between 45 and 90 minutes, with a mean of 60 minutes and had four overall themes: (1) Establishing where the participant is on the user/nonuser spectrum, (2) Specifics of digital media use, (3) Digital media and health, (4) Participation, feelings and experiences in health.

The five relatives were aged between 22 and 75 years old, with a mean age of 48 years, and all were part of a care convoy for a relative over the age of 75. The interviews with relatives lasted between 35 and 65 minutes. The interviews with relatives were focusing on their experiences with assisting people above the age of 75 with digital services in the care sector and with co-action with care services in general.

The analysis is primarily based on the 14 interviews with professional caregivers, however all interviews were transcribed verbatim by a research assistant. The transcripts were pseudo-anonymised and coded manually in two phases: an initial open coding, including notetaking, abstracting and comparing; and checking and

refining in an abductive process following Kozinets' netnographic approach (2015). Initial coding was discussed by the Nordic research team to refine and identify broader conceptual patterns. This initial process led to the focus on the care convoy, digitalisation strategies and communication practices. Secondly, deductive thematic coding was carried out by assigning the three sub-themes (1) Reading and writing and categorisation as cognitively demanding, (2) Writing as clear and efficient communication and (3) Documentation as a burden.

Results

In the following, we describe and frame each sub-theme using examples from our interviews. All quotations in this article were translated from Danish into English by the authors.

Reading and writing and categorisation as cognitively demanding

The interviews with the professional caregivers centred around the electronic care system called Nexus. The system serves as the primary platform for communication and documentation among professional caregivers and provides caregivers with information about which clients to visit, which tasks to perform during visits and specific details to be mindful of. Additionally, caregivers document all actions taken and important information relevant to colleagues within the care unit. The electronic care system also facilitates communication between healthcare professionals, allowing them to send messages to doctors or therapists. Care recipients and their relatives have the right to access the information recorded about them in the system. In certain municipalities, care recipients and their relatives can request direct reading-only access to the system. The electronic care system is not primarily a communication tool for care recipients and their relatives, and verbal communication, written e-mails or post-it notes are often used as well. However, Nexus and similar digital systems play a crucial role in the care convoy, as they are the primary tools used for communication between professional caregivers. Given that professional caregivers are central to formal caregiving in this context, the analysis begins with the electronic care system. First, being a professional caregiver requires a great deal of reading and writing. One caregiver, who previously worked as a language teacher, highlighted the unexpected difficulty of writing and reading in this profession:

> I have never in my life had to do as much writing and as much reading as I have in this job. And I used to be a Danish teacher, an English teacher, a Danish-as-a-second-language teacher and a dyslexia teacher. It is the most difficult writing-related job. And that is completely absurd. Plus, there are really, really, really many of my colleagues who are challenged when it comes to reading and writing. […] For example, when you have to give pills, right? Then you must go in and find a word called: "medicine administration". I have several colleagues; they cannot read that word.
>
> PID10, Caregiver with no formal education, Home Care service 1

This example illustrates how the literacy demands of care work can be unexpectedly high, even for those with strong language skills. For some caregivers, the extensive documentation requirements, professional terminology, and digital systems create barriers that affect both efficiency and confidence. Colleagues often support each

other informally in interpreting and completing written tasks, revealing how literacy challenges are negotiated collectively within the care team.

Beyond the volume of reading and writing, categorising documentation correctly poses additional challenges. Caregivers must ensure that information is classified under the appropriate category to make it accessible for colleagues:

> You have to categorise the different things. So if it's about… that is, something with… faeces and bowels, then you get to write the note there [in that category]. So, when the nurses look for this history of illness, which concerns them, whether it's about the stool or something else, then they look under it [the category], and then they can find it.
>
> PID9, SSH, Home care service 1

This process requires extra cognitive effort and the care worker must momentarily step back from the immediacy of the care situation and reflect: What kind of knowledge does this note represent? Particularly in the midst of busy home visits this can be challenging:

> Ideally, it's a good idea that there is this categorisation. But it puts your brain in a tricky spot, I mean… while you're out doing a visit and you're handling many things. Both some relational work and getting things to function, and 'tuning in' to what it is… The small nuances and quirks of this person, and then getting all those practical things to work. Uh, so you also have to simultaneously think, is this something that should be documented in the journal?
>
> PID9, SSH, Home Care service 1

In a busy workday, the mental demand of categorisation adds cognitive load. The worker must recall institutional guidelines, weigh whether an observation belongs to one category or another, and anticipate how future readers might interpret the note. Such reflective judgment is cognitively costly compared to straightforward descriptive writing.

Writing as clear and efficient communication

Much of this reading and writing or typing relates to the fact that every action conducted by the professional carer must be documented and must be readable for the recipient of the care, their relatives, other care professionals involved in the same tasks and healthcare professionals in other domains. Written digital communication is intended to be an efficient form of communication between healthcare professionals. Typed messages allow caregivers to communicate critical information without waiting for phone calls:

> If it is something that has arisen urgently, then we call [the doctor], like all other people who call their doctor. But if it is something that can wait, then we write to them in what is called Medcom, which is a message in our communication system where the doctor can write to us and we can write to them. […]. Then I can write a message to the doctor, and then a message will come back without me wasting time sitting in a telephone queue.
>
> PID1, SSA, Nursing home A

Additionally, digital communication enhances transparency, as every interaction is logged:

> I log in with my own individual code, which is associated with my ID. When I type, people can see who it is. What it is that I have written. At the same time, I also feel that when I write to the doctor, there is such a standard that I am a social and healthcare assistant, 'so I do not have to write every time that it is my title, and I can just write whatever I need to write.

PID1, SSA, Nursing home A

These examples illustrate how written communication functions as both a practical and symbolic tool of professionalization. On one hand, it streamlines information flow and reduces time-consuming coordination. On the other, it embeds care work within a bureaucratic and digital infrastructure that continuously records and attributes responsibility. In this way, writing becomes an integral part of how care, trust, and professional identity are enacted.

Despite these advantages, written communication is not always clear. Even for those proficient in reading and writing, conveying the intended meaning can be challenging:

> Written words can also be extremely difficult [...] I think what I've written... it's understandable for everyone. After all, I know the home and I think what I have written is logical. And then comes the other colleague who says that they didn't understand what they were supposed to do there.
>
> PID 13, SSA, Home Care service 2

Because written documentation can be misinterpreted, additional verbal exchanges are often necessary to ensure clarity. Some workplaces hold shared reading sessions in which messages are read aloud:

> Then the rest of the staff arrives and at 7 o'clock, we start reading messages. What has been written in the last 24 hours. And I read it out, so in principle, they can all read together, but so we have some common reflections about it. It takes about a quarter of an hour.
>
> PID3, Nurse, Nursing home C

However, in other workplaces, this practice has been discontinued due to time constraints:

> Previously, [...] when I was a substitute, we had half an hour's overlap, i.e. when the day shifts ended and the evening shifts came in. There were 30 minutes when we could make handovers to each other. That time has been cut away now, because now it is only a written handover.
>
> PID10, Caregiver with no formal education, Home Care service 1

Instead, dedicated morning meetings can be replaced by fewer, more focused meetings:

> Then we also have a meeting with the nurses. Where they come in for a quarter of an hour. Yes, often it turns into 20 minutes or half an hour. Where we can dot [select] a citizen digitally, and then it comes up on a digital large board inside the office. And then the nurse can sort of pull out these names of the day.
>
> PID 9, Care assistant (SSH), Home care service 1

Although written documentation is cognitively demanding, it is often insufficient as a communication tool between professionals. In home care services or nursing homes, communication between professionals frequently requires additional verbal exchanges to ensure effective information sharing:

> But we also talk to each other. After all, not everything goes on over Nexus [Electronic Care system]. But by virtue of the fact that you are obliged to read on Nexus when you enter. Then there's a lot going on there, right... That's where all the information will typically be.
>
> PID2, Care assistant (SSH), Nursing home B

Documentation as a burden

Care professionals are required to document their actions, not only for communication reasons but also for accountability and transparency. All information documented by care professionals is accessible to the citizens concerned and, when permitted, to their relatives. In many cases, citizens must request access to their data (access is always granted). However, in some administrative regions, both citizens and their relatives have direct read-only access to the data:

> Yes, our citizens and our relatives, they can of course [...] get access to Nexus. [...] Then you might be asked, "Can't you just call a relative because they just need to talk about some things and stuff," and then that's the way you do it, and someone posts a note and you answer a note.
>
> PID13, SSA, Home Care Service 2

However, regarding written digital communication in care practices, it is important to note that documentation practices have been the subject of extensive discussion, both politically and in many workplaces. Some care professionals express frustration with the increasing administrative burden:

> There is too much documentation... But um... Unfortunately, times have become such that you have to document everything. Things have changed... Also... How should I tell... Things have changed... Also in what people demand. What relatives demand. It has changed a lot. So um... We have to. But it's a lot. It is. And the nurses have a lot [to do].
>
> PID2, Care assistant (SSH), Nursing home B

This care worker highlights that relatives today are more demanding, and perhaps also more actively involved in the care process, than in the past. This increased involvement creates heightened expectations for transparency and accountability. As a result, the care worker emphasises the importance and necessity of the thorough documentation of all actions and decisions taken in the care process – and the burden that is put on the care workers. Comprehensive documentation serves as both a communication tool and a safeguard, ensuring that relatives are informed and reassured while also providing a clear record of the care provided. This shift reflects broader changes in expectations from all involved. Although documentation serves as a safeguard, ensuring that care processes are transparent and accountable, it also places a significant burden on caregivers, who must balance administrative responsibilities with the provision of direct care. Ultimately, although systems such as Nexus are crucial for record-keeping and communication, they also introduce additional cognitive demands, challenges in clarity and time-consuming administrative work. These factors shape the daily experiences of professional caregivers and influence the effectiveness and efficiency of care services.

Discussion

By examining the nuances of written digital communication within care services, this study explores how such communication is experienced and interpreted by different actors in the care convoy. Rather than seeking to establish measurable impacts, the analysis focuses on how staff, managers, and – indirectly – relatives describe the ways in which digital documentation practices shape everyday communication, collaboration, and responsibility-sharing. From the erosion of direct verbal

engagement to the challenges posed by written documentation requirements, this shift has far-reaching implications for professionals, patients and public institutions alike.

Writing is often understood as clear and efficient communication, and digital communication systems are essential in facilitating efficient and effective communication among convoy members, including formal caregivers, families and other support networks. Electronic care systems, such as the Nexus system used by most of the participants in this study, play a crucial role in supporting communication within the care convoy by enhancing coordination, information sharing and collaboration among formal caregivers, families and other support networks (Shade et al., 2012). However, digital communication potentially provides an unequal relationship between the participants of the care convoy. The electronic care system is a working tool for professional caregivers and shape the way they work (Håland, 2011). They are bound by law to use it, and the system serves multiple purposes, including communication with other members of the care convoy. In contrast, the other participants do not have equal access: some only have reading access, and some do not have access at all. This is because even if the citizens and their relatives have a right to gain access to the electronic care system, it is not always the case that the relatives do seek access. In addition, this study shows how oral discussions of the written text are important for the professional caregivers – this information is not accessible for the informal caregivers in the care convoy. The mix of verbal communication, post-it notes and communication in the digital systems makes it difficult for the relatives to follow the detailed information about the older citizen. The complexity of the communication increases the likelihood of misunderstandings and a lack of communication. As part of the care convoy, the relatives must participate in all kinds of communication about the citizen, including digital communication. Our findings are in line with newer studies (Simonsen, 2025; Simonsen, 2022), which have emphasized the complexity of professional work with digital communication technologies and how care is embedded and enacted in everyday interactions between the care staff at the home.

Although the digital mediation of the care convoy has shown significant potential in enhancing the delivery of care to older adults, its implementation often remains limited (Wolff et al., 2017, Antonio et al., 2020). The digital care convoy system could leverage a broad array of technologies, such as mobile applications, telehealth services, real-time communication tools and wearable health monitors. These technologies have the capability to facilitate a continuous flow of information among caregivers, healthcare providers and the individual receiving care. In theory, such a system could offer an integrated approach to managing the well-being of older adults, promoting greater efficiency, accessibility and personalised care.

However, despite these technological advancements, the functionality of the digital care convoy is often constrained by several key challenges. One significant issue arises when essential actors in the care convoy are excluded from the flow of communication or have limited access to critical information. As we have seen in this study, certain participants in the convoy have "read-only" access to the digital platform. This restricted access undermines the collaborative potential of the system, as these actors cannot actively contribute to decision-making, provide input on care plans or respond to urgent situations in real time. In such instances, the convoy is metaphorically “not firing on all cylinders”, with certain critical support mechanisms either operating in

isolation or failing to engage in the essential feedback loop that enables dynamic, responsive care. Other limitations, such as restricted access due to limited digital literacy and unfamiliarity with technological devices, can pose significant challenges for older adults and their care partners (Wolff et al., 2022). Many older individuals, particularly those with cognitive, sensory or socioeconomic vulnerabilities, may struggle to navigate digital health platforms effectively (Olsson et al., 2019). Similarly, care partners who assist in managing health-related tasks may encounter difficulties if they lack the necessary technical skills or resources. The increasing reliance on digitalisation in healthcare, although offering numerous benefits, may inadvertently exacerbate disparities in access and engagement, thus potentially leading to reduced participation in healthcare decision-making and poorer health outcomes.

The adoption of electronic clinical information systems has other potentials than facilitating the digital care convoy. It has the potential to allow healthcare professionals to dedicate more time to the management of resident care by streamlining administrative tasks, thereby improving the efficiency of care provision (Alexander & Madsen, 2009). However, as we have seen in this study, carrying out documentation in these systems can be seen as a tedious task instead of being a useful and effective communication tool.

Reading, writing and categorisation are seen as cognitively demanding tasks distinct from the primary task of caregiving and as integral components of care. The participants in this study recognised the necessity of communication within the care convoy but did not always view documentation as part of this communication. The effectiveness of documentation practices depends on professional caregivers' willingness to perform them correctly, which is only facilitated when caregivers perceive documentation as a communication practice within the care convoy (Puustinen et al., 2021) instead of viewing documentation as a task to be completed merely for its own sake. Translating thoughts and practices into writing is cognitively demanding, and for professional caregivers, it would often be much easier to forego this task (Tindle & Longstaff, 2015).

Moreover, the integration of clinical information systems, such as electronic medical records, documentation and decision support systems, has become a critical benchmark for achieving healthcare organisational reform priorities, including home care and integrated care networks, thereby promoting seamless communication and information flow within the care team (Paré et al., 2011).

Finally, another important topic for further investigation is the recent (rapid) development of artificial intelligence (AI) in the healthcare system. In terms of documentation and reducing the cognitive load, AI-driven speech-to-text or natural language processing systems could assist caregivers by converting spoken reports into structured documentation, thus reducing the burden of reading, writing and categorisation. AI could help bridge communication gaps within the digital care convoy by summarising key points from digital records for informal caregivers, personalising notifications or even translating medical jargon into understandable language. Moreover, AI-powered decision support systems, such as decision support and predictive analytics, could help healthcare professionals by flagging urgent concerns, predicting care needs or recommending interventions based on patient data trends.

Conclusion

This study highlights the complex role of digital communication systems within the care convoy, revealing both their potential to enhance collaboration and the inherent challenges they pose. Although digital communication tools such as the Nexus system streamline information sharing and coordination among professional caregivers, they create an unequal dynamic by limiting access for informal caregivers, such as family members and other relatives. This lack of inclusion, coupled with the demanding nature of documentation, often hinders the system being perceived as a valuable communication tool and alters the interpersonal interaction in all parts of the care convoy.

These documentation practices significantly impact care for older adults by shaping communication, care coordination and access to health information. The complexity of the documentation practices can create barriers, leading to confusion about treatment and reduced care convoy engagement. Clear, accessible documentation enhances care coordination, reduces errors and supports informed decision-making, and privacy controls ensure appropriate access for care partners. Addressing these challenges is essential to strengthen equitable, person-centred care. We see a risk of increased inequity if parts of the communication are not accessible for the convoy.

For digital systems to truly support the care convoy, caregivers must view documentation as integral to communication, not as a burdensome administrative task. Future innovations, such as AI-based speech-to-text and text-to-speech technology, should be investigated as potential solutions to mitigate these challenges. By reducing the cognitive load of documentation and bridging gaps in accessibility, such tools could transform digital communication systems into more inclusive and effective frameworks, fostering better collaboration among all participants of the care convoy and leading to a more coherent digital care convoy.

Limitations

The study has certain limitations that should be considered when evaluating the findings. First, the interviewed care professionals represent different professions and constitute a heterogeneous group with varied educational backgrounds. Furthermore, they were recruited from diverse healthcare and homecare settings across Denmark. As a result, the findings are tied to a specific organizational and regional context. It is possible that the results might have differered if participants had been recruited from other parts of the country. Likewise, focusing on one particular professional group, for instance, nurses, could have produced more consistent accounts and potentially led to different insights.

Second, the study design captures a snapshot in time. The digital care convoy is an evolving phenomenon, and professionals' experiences and practices may change as digital infrastructures, organisational routines, and patient needs develop. A longitudinal design would have allowed for a deeper understanding of how engagement with digital care convoys changes over time.

Finally, the researcher's positionality and interpretive role must be considered. The analysis was shaped by the researcher's theoretical framing and prior assumptions,

which may have influenced how data were coded and interpreted. Efforts were made to mitigate this through reflexivity and systematic coding, but some degree of interpretive bias is inevitable in qualitative research.

Declarations

Acknowledgments

The research project has been funded by the Kamprad Family Foundation (grant no 20212004) via SLS in Finland and the Future Challenges in the Nordics Research Programme.

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QUALITATIVE HEALTH COMMUNICATION

VOLUME 5, ISSUE 1, 2026