

Enhancing Community Care Through Digital Coordination: A User-Centered Approach to Expanding the Helferportal

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ABSTRACT

Demographic changes are pushing communities of all sizes in Germany, as well as other ageing societies, towards a critical care crisis. Integrative, cross-sectoral care structures that combine the strengths of volunteers and commercial service providers are essential to meet the growing demand for care services and reduce the financial and emotional strain on family carers. For these care structures to be effective, they must be efficiently coordinated to maximize care capacity. A centralized digital coordination tool can transparently connect individuals in need with care providers and volunteers. Ensuring its acceptance and seamless integration into existing community advisory and coordination processes, however, requires careful consideration of the needs of the different actors involved in caring communities. We adopted a user-centered design approach to expand the existing *Helferportal* application. As a first step in this participatory research project, we focused on identifying opportunities for digitization in community care processes as well as defining software requirements and key features.

Method: We conducted semi-structured interviews with ($N = 23$) care advisors, community coordinators, and social service providers in a district town in Germany to gain a detailed overview of community care processes and identify digitization opportunities. Audio recordings of the interviews were literally transcribed and analyzed in MAXQDA by structured qualitative content analysis.

Results: Participants identified significant potential in a software application for the coordination of integrated care structures that include volunteers. A centralized digital booking and coordination system to schedule appointments or recurring services was recognized as essential for improving cross-sectoral care management and reducing phone-based communication in daily work processes. A privacy-compliant communication platform was also recommended to facilitate the spontaneous distribution of support needs among volunteers and professionals. Additional requests included digitizing documents for documenting advisory work and to streamline billing processes. Barriers to adoption included the need to build trust through in-person interactions and high usability requirements, underscoring the importance of a participatory approach in evaluating the future application. The findings underscore the potential of digitization to enhance care structures and to help mitigate the impending care crisis by fostering stronger, more connected communities.

Keywords: User-centered design, Caring community, Agetech, Participatory design, Qualitative data, Interviews

INTRODUCTION

Due to demographic change, the existing and increasing shortage of professional caregivers in Germany and the rising number of people in need of care represent a challenge for society as a whole (BMFSFJ, 2025). An increasing number of older individuals want to remain in their own homes, even if they urgently need assistance with their daily activities. Family carers (defined as unpaid relatives or friends) are frequently responsible for facilitating the wishes of those requiring assistance to “age in place” (Chattopadhyay, 2020). In Germany, around 6.6 million people provide care for their relatives at home (Bundesministerium für Gesundheit, 2021). These actors perform a variety of tasks, including assistance with self-care and daily living activities, emotional support, and the coordination of healthcare providers (Reinhard et al., 2023; Sunde et al., 2025). While caregiving is often fulfilling and meaningful, it can also present significant challenges (emotional, financial, physical) that can cause immense distress to family carers (Genge et al., 2023; Schulz et al., 2020). For a substantial number of family carers, finding information and searching for support (e.g., from their local authorities), as well as the many administrative tasks involved in caring is a major strain (Hudelmayer et al., 2023).

Caring communities and local care structures are addressing the challenges in the care sector and provide comprehensive support by effectively combining the potential of volunteers, service providers, and social actors (BMFSFJ, 2025; Uphoff & Zängl, 2023). The term “local care structure” refers to the establishment of counselling and support services, the integration of individuals requiring care, and the coordination of collaboration among the relevant stakeholders (Theobald, 2023). The growing involvement of volunteers among older and younger people (Simonson et al., 2022) is an indispensable resource in the care structure: They can help with basic support, household-related services, and social integration that professional service providers often lack the capacity to provide. People in need of support and family carers can greatly benefit from the wide-ranging support provided by caring communities (Schelling, 2023). In addition, facilitating voluntary work can strengthen the community by encouraging involvement and social participation, especially among older adults in retirement (Morawski et al., 2022; Simonson & Vogel, 2020). Establishing “caring communities” requires the organization of local networks in close collaboration with municipal authorities, who play a key role in shaping needs-based local care structures (Theobald, 2023). However, building sustainable networks at the local level remains a considerable challenge for many municipalities. The current landscape of care services is highly fragmented, involving a wide range of stakeholders with varying responsibilities and priorities (BMFSFJ, 2025; Hudelmayer et al., 2023).

To alleviate pressure on municipal systems and support the development of resilient care communities, effective coordination among these diverse actors is essential. Digital solutions that are tailored to the specific needs of each stakeholder can support this process by enabling centralized management of services, identifying care needs, and efficiently matching

them with available support. Despite this potential, integrating municipal stakeholders such as community coordinators, care advisors, ambulatory services (e.g., physiotherapists, occupational therapists, podiatrists), home care aides, nursing staff, volunteer organizations, and family caregivers into a unified digital ecosystem remains a substantial challenge (Stamate et al., 2024). Existing digital tools for family carers offer various forms of support, including communication with professional care providers, access to information and training such as online courses, the exchange of information with family and friends, and emergency call functions (Loboiko, 2023). What remains lacking, however, is an application that offers comprehensive support for the daily tasks of caring communities. The current reliance on multiple isolated solutions complicates communication among different actors and hinders the coordination and delivery of support services. This fragmentation often results in considerable delays and organizational effort, for example, through repeated phone calls and time-consuming searches caused by the absence of a centralized overview of available services. The acceptance of digital solutions in this context depends heavily on their overall quality, particularly in terms of usability, accessibility, and ease of learning (Maqbool and Herold, 2023). Beyond technical performance, the functionality and features of such tools must align with the real-world needs and workflows of their users (Genge et al., 2023; Sala-González et al., 2021). A participatory, user-centered development approach is essential to ensure acceptance and seamless integration into existing consultation and coordination practices within communities, ultimately leading to more effective support for all stakeholders.

The overarching goal of this project is to improve the care situation for people in need of assistance and care through the digital coordination of ideally all stakeholders involved in community care. Currently, the existing *Helferportal* primarily serves to coordinate volunteers. The further development of *Helferportal* offers a platform for the central coordination and order management of integrative care structures. The new platform will also facilitate the submission of support requests and the matching with suitable service providers or volunteers digitally. Local care advisors and community coordinators are often the first point of contact for individuals seeking help or support in Germany, and they play a central role in establishing sustainable caring communities. To ensure that the digital solution can be effectively transferred to other local contexts, a user-centered approach was adopted, focusing specifically on the needs and workflows of community-based professionals. The first step of this participatory research project involved identifying how community care processes could benefit from digitization and determining the key requirements and functionalities of a supporting software solution. This approach helps ensure that the resulting tool aligns with existing communal structures and gains acceptance among its primary users.

METHODS

In total, $N = 23$ participants were interviewed in Germany between September 2024 and February 2025. Two people did not complete the

demographic questionnaire and were excluded from the descriptive analysis. The average age of the 13 women and 10 men was 50.8 years old ($SD = 11$). Level of education among participants was high, 71.4% had a university degree. The interviewees provided their consent for the interview to be audio recorded. Semi-structured interviews were conducted with care advisors, community coordinators, and social service providers in a district town in Germany to identify opportunities for digitalization in community care processes. The interviews covered four thematic blocks: The initial section of the study categorized the participants' professional domains and attempted to assess daily work processes in detail (e.g. "Which coordination/counselling procedures do you undertake most frequently in your day-to-day work?"). The second section of the study invited respondents to reflect on technologies currently in use and opportunities for digitization in community care processes. For instance, respondents were invited to consider which functions they would desire in an application to support counselling and/or coordination, how their day-to-day processes might be digitally supported, and possible barriers for the adoption of a digital solution. The concept of the *Helferportal* and its possible applications was discussed in the third section. The last part of the interview focused on the structure of integrated care and the potential of digitalization to enhance the structure of care (e.g. "What motivators and barriers do you see in volunteering?"). The interviews were conducted for an average duration of one hour and were audio-recorded. Transcripts were generated using the speech recognition software *f4x*. These transcripts were then manually checked for accuracy and completeness. Structured qualitative content analysis according to Kuckartz (2018) was performed using MAXQDA 2022 software. The results are presented using direct quotes with references to the coded segments in MAXQDA. A specific format was used, e.g. "S01, 126", where "S01" stands for participant 01 and "S" for the role as a social service provider. Participants primarily responsible for counselling are represented with "C", while those responsible for coordination are represented with "M" for management.

RESULTS

It was acknowledged by all participants that the development of an integrative caring community, in which volunteers and professional service providers complement each other, is a possible solution to the impending care crisis. A small proportion of the respondents expressed concerns regarding the absence of professional training for volunteers. Volunteers may need more guidance when involved in daily work processes which could be a strain for community coordinators.

"But as I said, they (volunteers) can't save the system. They can bring an additional point to it, perhaps make it a little easier for everyone involved and perhaps do something meaningful for themselves." (C06 - Community care advisor)

Digital support of daily processes. The interviews indicated that various actors, including care advisors, are involved in the provision of individualized assistance in seeking support in their daily work processes. According to

the care advisors and community coordinators we interviewed, finding and arranging support was one of the most time-consuming tasks. The coordination of professional service providers primarily relies on phone calls, often requiring multiple follow-ups to resolve ambiguities or concerns. Available software solutions often cover only parts of the day-to-day processes resulting in documentation and invoicing issues that often remain analogue and for this reason were considered an additional time strain. A centralized digital booking and coordination tool for scheduling appointments or recurring services processes was identified as essential for efficiently managing cross-sectoral care structures. The implementation of a functional software solution has the potential to yield several benefits, including the reduction of operational time and the augmentation of supply capacity.

“So what could be a help would be if the providers of domestic care were bundled together and I could simply make requests automatically. I wouldn’t have to spend half an hour on the phone every time, but enter it once and then everyone would be contacted at once (...).” (C08 - Community care advisor)

“So it would be really nice if I didn’t have to be constantly on the phone, if I could just say: Client X has this and that need, which I would have identified beforehand, I need this and that service.” (M04 - Community care worker)

Professional service providers are often working at full capacity, or receive requests that do not match their service profiles, meaning that requests often have to be passed on. Respondents from outpatient care and visiting services expressed a desire for a centralized booking tool that would facilitate cooperation and transferability of patient-related information (e.g., care level) to other service providers or communal actors.

“Each association has its own operational service. There are some guidelines, but everyone fills it with personnel according to their own possibilities. And I also say that because we are always desperately looking for staff, we need to think about whether we can find a cooperative solution where we support each other.” (S01 - Employee of a social organization)

In addition, people in need often receive printed lists of local care providers to help them find support. To reduce the strain on carers, an up-to-date digital overview of the entire local care network with information on availability would contribute to the self-empowerment of those in need of help.

“We also see young people, let me say the children of relatives, who are sometimes only 40/ 50, who are completely overwhelmed. They don’t even know what’s available.” (M04 - Community care worker)

Additional functions. Additional requests for a software solution and mobile app included a privacy-compliant communication platform that enables people with support needs and volunteers to get to know each other, make quick arrangements, and to react more spontaneously to changing demands in community care. In addition, respondents indicated that digitizing documents would be beneficial in day-to-day operations for documenting counselling work and streamlining application and billing processes. An in-app overview of local care and health services was often mentioned. Beyond a booking and coordination platform, some respondents suggested the inclusion of additional resources aimed at family carers. These resources could promote social participation and provide additional information on funding opportunities.

Barriers for implementation. Respondents highlighted that an integrated software solution can contribute to the self-empowerment of people in need. From the perspective of care advisors, however, a software solution could not replace in-person meetings as they were an important part of building trust and ensuring a personal match before caregiving, assistance, or volunteer work can begin. Moreover, respondents emphasized that some of today's older adults in Germany are not well versed in the use of digital technology. Hence, the "digital-gap" was mentioned as a great barrier for independent use and fast adoption of the software solution. Participants often stressed high usability requirements that consider the needs of older users. Some suggested training programs and a customer service for new and untrained users.

"Well, if you now say that customers should also use it, it just becomes difficult for the majority after a certain age. We have 90-year-olds who are great with computers, but we also have 70-year-olds who say: I can't use a smartphone and I can't use a computer online. So, for people like that, who already have a hard time in our digitalized world in all areas, it's something they can't actually use." (S06 - Employee of a social service provider)

DISCUSSION AND CONCLUSION

Caring communities that successfully integrate the efforts of volunteers and professional service providers have been recognized as a promising response to the looming care crisis by our respondents. However, many daily workflows, particularly those of care advisors and community coordinators, still rely heavily on analogue communication methods such as phone calls or printed lists. Since finding and arranging support was mentioned as one of the most time-consuming tasks by community care workers, a software solution that enables to coordinate matching support could significantly enhance the efficiency of caring communities, ultimately helping to maximize available care capacity. For professional service providers, who work at their capacity limits, a centralized booking-tool would facilitate communication with other service providers and the transfer of relevant patient-related information. An up-to-date digital overview of available local care services, which also includes offers for social participation, was

considered important for empowering a caring community and would help with networking beyond the digital space. However, such an overview should be updated regularly and should ideally cover the entire supply network. While digitalization has the potential to transform paper-based processes and to reduce the strain on family carers (e.g., Schwierk et al., 2024), lacking digital literacy and high demands for usability as well as data-privacy were mentioned as a potential barrier for implementation especially among older individuals. While professional actors were concerned to be flooded with information irrelevant for their daily business, people in need of care might be concerned that the implementation of software might reduce social contacts (Kim et al., 2017). These concerns underscore the importance of a participatory approach to ensure a goal-oriented development of a software solution with tailored group-specific frontends that is accepted by future users (e.g., Genge et al., 2023; Stamate et al., 2024). To address barriers related to digital literacy, particularly among users with limited experience using digital tools, tailored training programs should accompany the implementation process (e.g., Stamate et al., 2024). Such training can help reduce fears, foster confidence, and highlight the practical benefits of the software, thereby supporting its wider acceptance and effective use. *Helferportal* currently offers a customer service that can be contacted by telephone if problems arise. To address concerns about a potential reduction in face-to-face contact, it is important to clarify that digital support for caring communities should not only improve the coordination and visibility of available support, but also serve as a bridge to meaningful interpersonal contact and engagement (Genge et al., 2023). Together, the findings highlight how thoughtfully implemented digital solutions can play a pivotal role in strengthening community-based care structures. By empowering family carers, and enhancing the coordination of volunteers and professional actors, digitization offers a promising pathway to mitigate the impending care crisis in ageing societies and build more resilient, inclusive communities.

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