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AI in ambulatory care: Stakeholder needs, challenges and anticipations towards a hybrid, multimodal interaction AI-system

T. Roos, C. F. Purps, K. Michael, N. I. Schmidtman, M. Woelfel, C. Kunze

Purpose As the global population ages, there is a growing need to provide personalized, sustainable and effective care for elderly individuals, particularly during pandemics. The challenges of a pandemic disproportionately affect older people with care needs and their families. Due to contact restrictions, many voluntary and semi-professional support services (e.g. everyday support) cannot be provided (Horn & Schweppe, 2020). This creates an additional barrier to often already fragile care arrangements. Limited contact can lead to an increased risk of social isolation and loneliness for those in need of care and their relatives, which can be associated with considerable physical, cognitive and psychological health problems (Naito et al., 2023). One potential solution to address this issue is the use of systems using artificial intelligence (AI) to support their daily living. The digital care assistant KARE, as a hybrid multimodal interaction system, helps to support contact-reduced healthcare on site and enable interpersonal interaction that is conducive to maintaining health. AI-systems like KARE provide personalized care and support to elderly individuals and their caregivers, even during times of limited contact. **Method** The study aimed to gain insights into the requirements for an effective AI system that supports the elderly in their daily lives while providing valuable assistance to their caregivers. To understand the specific needs of elderly recipients and other stakeholders in ambulatory care in relation to AI systems, stakeholders were invited to participate in various activities. The study involved conducting interviews to explore the potential benefits and challenges of integrating AI systems into the day-to-day business of providing outpatient care. Participants were asked about their daily routines, the challenges they face when giving or receiving care, and how AI systems could help address these issues. Workshops were also held to discuss the differences between telepresence and telecare, as well as to assess and design interactions in ambulatory care (Roos et al., 2023). **Results and Discussion** The study's results identified important considerations for AI systems that support the daily lives of elderly recipients of ambulatory care and their caregivers. The development and implementation of AI systems should prioritize the relational values and moral commitments of Care-About-Relationship. This means that the AI systems should prioritize the human connection and treat stakeholders in the care process as active agents rather than passive objects. The study emphasized the importance of supporting independence in elderly recipients through AI-systems. This includes empowering older adults to maintain control over their daily activities and decision-making processes. Additionally, AI-systems should provide personalized and tailored care to meet the specific needs and preferences of elderly recipients. This input was important in refining the functionalities of the KARE system to ensure it meets the specific needs and preferences of elderly individuals and their caregivers. By taking this user-focused approach, the system aims to not only attend to practical needs but also promote companionship and social interaction to alleviate negative impacts such as social isolation and loneliness.

References

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Affiliation: Care and Technology Lab, Furtwangen University, Germany

Email: tobias.roos@hs-furtwangen.de; **ORCID ID:** 0009-0004-5588-0145

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Figure 1. Impressions from a stakeholder workshop identifying and assessing interactions in ambulatory care