

Sensors and Robotics In Elderly Care: Perspectives From Small-Town, Suburban And Rural Areas

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Structural investment in healthcare matching standards in commercial sectors and refined development of technology is inevitable to be able to meet the support needs in health care.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
- As population ageing increases care demands, maintaining quality of life for older adults and caregivers is essential - Although technology is seen as a key solution, adoption remains challenging - This study explored the perceived potential of sensors and robotics to identify priority support needs and support implementation	Mixed-method study in the Netherlands with formal caregivers (ethical approval: ethical committee of University Medical Center Groningen (UMCG), NL; reference number: METc 2025/044) Two phases (participants recruited via University Elderly Care Network of UMCG) 1. <u>Survey</u> (n=32): - Ranking of importance of care domains: (1) <i>Daily care tasks</i> (2) <i>Cognitive support</i> (3) <i>Socio-emotional support</i> (4) <i>Monitoring/safety</i>, (5) <i>Entertainment</i> - Usefulness of sensors and robotics per care domain 2. <u>Focus group</u> (n=5): Validation and expansion of survey findings Analysis: - Survey data: Descriptive - Focus group data: Qualitatively	<u>Survey:</u> <u>Importance care domains:</u> High across all domains <u>Perceived usefulness sensors and robotics:</u> Lower than domain importance, especially social-emotional support <u>Focus group discussion points:</u> - Equal importance of domains explained by their interconnectivity - Barriers: implementation difficulties and limited resources - Development of innovative technologies to meet support needs - Challenges: Client loneliness, safety, caregiver burden, dementia care, communication - Future technology should support caregivers, preserve human contact, and promote independence	- Interconnected care needs require holistic (technological) support - Current technologies do not fully match everyday care needs, highlighting the need for both better technology and broader healthcare support - Resource constraints and implementation barriers limit near-term adoption	World Health Organization. (2022). Aging and health. Retrieved 20.09.2024 from https://www.who.int/news-room/fact-sheets/detail/ageing-and-health Baig, M. M., Afifi, S., GholamHosseini, H., & Mirza, F. (2019). A Systematic Review of Wearable Sensors and IoT-Based Monitoring Applications for Older Adults - a Focus on Ageing Population and Independent Living. J Med Syst, 43(8), 233. https://doi.org/10.1007/s10916-019-1365-7 Wu, Y. H., Wrobel, J., Cornuet, M., Kerherve, H., Damnee, S., & Rigaud, A. S. (2014). Acceptance of an assistive robot in older adults: a mixed-method study of human-robot interaction over a 1-month period in the Living Lab setting. Clin Interv Aging, 9, 801-811. https://doi.org/10.2147/CIA.S56435 CONTACT  Maren Salzwedel m.h.salzwedel@umcg.nl  ALZHEIMER'S ASSOCIATION AAIC>26