

Dementia and Technology

Deploying location tracking systems in dementia care: Lessons learned from a failed implementation

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Purpose Despite interest in using Real-Time Location Systems (RTLS) to improve quality and efficiency of care, and to collect data for the development of algorithms for clinical care, research on their implementation and use in long-term care homes is scarce [1, 2]. This study examines RTLS implementation in one long-term care home identifying failure points, ethical tensions, and socio-technical misalignments that led to abandonment. **Method** Semi-structured interviews were conducted with 47 participants (residents, care partners, direct care staff, managers, administrators) across two time points; all also completed a demographic survey. Thematic analysis [3] of the data was guided by the Non-Adoption, Abandonment, Scale-up, Spread and Sustainability (NASSS) framework [4], and Socio-Technical Systems theory [5]. **Results** Initial enthusiasm for RTLS stemmed from safety and efficiency expectations, but misaligned functionalities, limited staff engagement, and ethical tensions undermined adoption. Stakeholders anticipated real-time monitoring and fall detection, neither of which were provided. Residents frequently removed the wearables, citing discomfort and privacy, while staff encountered barriers due to the system's limited integration into workflows. Ethical tensions emerged as residents' autonomy and preferences were overridden by care partners. **Discussion** These failures underscore the need for iterative and participatory approaches to implementation, transparent communication, and stakeholder alignment. The findings highlight the socio-technical and ethical complexities of implementing surveillance technologies in long-term care. Ethical concerns surrounding resident autonomy, workforce surveillance, and data governance and transparency, must be addressed in future implementations to ensure that RTLS supports rather than compromises the dignity and rights of residents and staff. This research study demonstrates the critical value of holistic and participatory approaches to the design and deployment of RTLS that include the following: 1) Iterative and collaborative design processes that meaningfully engage all stakeholders throughout the design and implementation phases to ensure the technology genuinely aligns with their needs and expectations; 2) Development transparent policies governing data use, ownership, and privacy protections must be clearly established to build stakeholder trust; and 3) Comprehensive and tailored education and training for all stakeholders as part of the implementation and deployment to align their expectations with RTLS capabilities and limitations. Absent of these three critical elements, implementation of RTLS will continue to face challenges that significantly limit its value and sustainability in LTC settings.

References

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Keywords: Long-term care, Artificial Intelligence; Evaluation; Surveillance Technology, Socio-technical Systems

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Acknowledgement: This research was supported by an AMS Healthcare Fellowship in Artificial Intelligence and Compassion (AG) and AGE-WELL NCE grant (AI).