

Ethics & DEI

Anticipating and Mitigating Ethical Challenges in the Design and Deployment of Real-Time Location Systems in Dementia Care M. Liougas, A. Grigorovich, A. Bianchi, L. Haslam-Larmer, L. Shum, A. Iaboni, J. McMurray. *Gerontechnology* 25(s)

Purpose With the increased use of technological supports in residential long-term care homes, there is growing interest in real-time location systems (RTLS) to enhance resident safety and streamline care [1]. This presentation examines the ethical tensions arising from the implementation of RTLS in long-term care settings for people with dementia, critically assessing whether a principlist bioethics approach is sufficient for guiding ethical decision-making [2]. It further demonstrates how a feminist bioethics framework can more effectively address issues of autonomy, consent, relational care, and epistemic injustice [3,4]. **Method** A qualitative ethical analysis informed by feminist bioethics was used to examine tensions related to autonomy, beneficence, non-maleficence, and justice in the use of RTLS. The analysis is grounded in a composite case study developed from a multi-site research project, called Space-Time Indices for Clinical Support (STICS), which examined RTLS implementation in two urban care settings in central Canada: an inpatient hospital unit specializing in behavioural and psychological symptoms of dementia and a long-term care home [5]. The composite case was constructed through iterative engagement with empirical material generated during the implementation process, including observations of care practices, documentation of organizational policies and consent procedures, and interactions with stakeholders. These stakeholders included residents with dementia, their substitute decision-makers, care staff, and administrative and clinical leaders. Ethical analysis proceeded in two stages. First, the composite case was examined using a principlist bioethical framework to identify core ethical tensions. This analysis was then extended through feminist bioethics concepts, particularly relational autonomy, ethics of care, and epistemic injustice, to foreground power relations, relational dynamics, and the lived experiences of residents and staff that are often obscured in technology-driven care settings. **Results and Discussion** The analysis demonstrates that the implementation of RTLS in dementia care generates ethical tensions that are inadequately addressed by principlist bioethics alone. While RTLS is commonly justified as promoting beneficence and safety, the findings reveal that reliance on one-time proxy consent overlooks residents' ongoing expressions of assent or dissent. In the composite case, such practices contributed to resident distress and staff moral distress among those tasked with enforcing RTLS use, given the lack of clear implementation guidance. Applying a feminist bioethics approach introduced concepts, including relational autonomy, that demonstrated power asymmetries among residents, substitute decision-makers, staff, and organizations, as well as forms of epistemic injustice in which people with dementia were treated as unreliable knowers of their own experiences. RTLS use also extended surveillance into intimate spaces without clear demonstrable benefit, raising concerns about privacy, data governance, and the prioritization of operational efficiency over person-centred care. The analysis further shows that inadequate staff training and unclear policies regarding data use intensified staff workload and undermined professional judgment. In response, the presentation advances recommendations for ethically responsible RTLS use, including continuous consent mechanisms, transparent and iterative data governance, enhanced ethics-focused staff training, and deliberate efforts to counter epistemic injustice. Integrating feminist bioethics provides a robust framework for aligning RTLS implementation with dignity, relational autonomy, and person-centeredness in dementia care.

References

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Figure 1. The RTLS bracelet used in the implementation.