PII-22: Surveillance Robots: Augmenting Home Care of Frail Older Adults

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Abstract: Chronic illness, functional limitations and complex medical needs reduce quality of life and increase mortality in many frail, community-based older adults. For many, due to functional limitations, accessing support for care needs is very difficult. Telehealth technologies have the potential to increase the efficiency of home-based care via remote interactions among providers, patients, and caregivers. The remotely maneuverable surveillance robot provides video and audio communication similar to a webcam, allowing providers to conduct fall risk, medication, and nutrition assessments and provide social support. However, before applying surveillance robots to remote care, they must be assessed carefully to identify the most effective ways of adapting surveillance robots to address the care needs of elders without placing additional burden on providers and caregivers.

Method(s): Five use-case simulations will be used to assess the utilization of robots in remote home care settings: Fall risk assessment, medication reconciliation, nutrition assessment, remote collaborative caregiving, and social support. Observational data will be collected during patient home visits to refine and formulate strategies for implementing the use-cases. Recruitment from home health agencies that provide skilled nursing services to rural community-dwelling adults will include 10 elders, 10 providers, and 10 caregivers (N=30). A qualitative follow-up assessment will be conducted with participants to obtain feedback on the surveillance robots, including perceived ease of use and most satisfying/effective features.

Results: Results of the assessments will inform when, where, and how the surveillance robots could potentially be used to augment home care of elders. Potential implementation barriers will be identified, and improvements to the technology developed.
Discussion & Conclusions: Surveillance robots have excellent potential to augment home care of frail, community-dwelling older adults. This study will help address whether these robots are more or less burdensome to caregivers, how care is impacted by their use, and whether patients and caregivers are comfortable using or interacting with surveillance robots.

Abstract History:

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