

CONFERENCE ABSTRACT

Using etechnology to create quality care for seniors

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Problem statement: Does integrated etechnology enhance quality and safety of seniors' care?

Practice change implemented: Slow changes in seniors' health status (e.g. weight loss over time) are often not detected until they escalate, leading to unnecessary admissions to the emergency room or hospital. Monitoring seniors' health status more regularly may allow earlier detections in changes, thus improving seniors' health outcomes. We used wireless devices that allowed healthcare staff to weekly monitor blood pressure, oxygen saturation, weight and hydration. Data was saved in a common data hub; staff received immediate alerts when data fell outside of a desirable range or changed significantly from the last measurement. We also created care pathways for staff to respond to abnormal values or changes.

Aim: Our aim was to understand if wireless devices can enhance seniors' safety and quality of care by detecting changes in health status early. Monitoring technology was implemented with 30 seniors in an assisted living facility in Alberta, Canada.

Timelines: This 1-year study included several phases: readiness assessment at the care facility, procuring and implementing the monitoring devices, developing the alert software, training healthcare staff to use the devices, weekly monitoring for six months.

Highlights: Weekly measurements are ongoing; early data suggest that there is value in monitoring subtle changes in health status (e.g. water retention or dehydration, poor oxygen saturation) that allows staff to be more proactive in their care management. Staff can take immediate action following defined care pathways, which may help prevent admissions to the emergency room or hospitalization.

Sustainability and transferability: After initial technical challenges, staff and residents are comfortable with the new monitoring routine. Some devices (e.g., body composition scale) may not be suited for all elderly residents due to their inability to stand without help. The technology will be easy to transfer to other facilities. It is imperative that researchers work with each facility to understand their needs and current process to ensure there is value added in implementing new technology.

Conclusion: One of the big successes was our ability to engage staff and residents. Staff were keen to try the technology and their feedback helped fine-tune the devices, training materials, and measurement process. The standardized response pathways will ensure appropriate action is taken when residents' health status changes.

Discussions: The longer-term goal of our study is to link the monitoring data and alerts with the facility's electronic medication administration system, resulting in an integrated electronic record for each resident. This is an important step for sustainability but was not possible within our short timeframe. An integrated record will enhance the quality of care and keep seniors safer in their environment.

Lessons learned: It took longer than anticipated to procure suitable devices, set up the software, and recruit residents. This limited the data collection period. Future studies should dedicate more time to implementation and propose studies with longer timelines.

Keywords: seniors; echnology; assisted living; care pathways
