

Aging in Place at Home using Virtual Care

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Summary

- As New Brunswick's population ages, more older adults prefer to age in place at home.
- This can lead to risks such as loneliness, social disconnection, and a lack of the person-centred care that older adults require as they age.
 - Collaboration between older adults' informal and formal caregivers may become challenging, leading to gaps in preventative care and social supports in the community. Older adults' healthcare needs may also become more complex as they age, and their informal caregivers may lack the support and information they need to provide the desired level of care.
- Providing older adults and their caregivers with the care planning and digital health connectivity required to medically manage their health and age in place at home could help reduce emergency room visits and hospitalizations while increasing older adults' connections with their friends, family members, and informal caregivers.
- The program applied a 24/7 virtual healthcare management tool, known as a Virtual Care Platform, to explore whether this innovation equips New Brunswick older adults to age in place at home.
 - The platform used real-time data in the homes of aging New Brunswickers to conduct remote assessment, monitoring, planning, implementation, and evaluation of care needs and supports.
 - Informal caregivers (including spouses) were linked with formal caregivers (including nurses, support physicians, and community agencies) to collate health data and understand whether the platform informs, medically manages, and supports older adults with responsive quality care in the home.
- Virtual Care Platforms were provided to 58 older adults (40 women, 18 men) in New Brunswick who were identified as at-risk for hospitalization or rehospitalization. Data was also collected from 4 of the older adult participants' informal caregivers.

HSPF Focus Area	Using supportive technologies to foster healthy aging at home and in our communities
Project Start & End Date	February 14, 2022 – March 31, 2023
Organization/Agency	Routinify Inc., Inflammation Metabolism Physical Ability Research Translation (IMPART)/Dalhousie University, Faculty of Medicine
Location	Saint John, Fredericton, Moncton
Principal Investigator(s)	Dr. Keith Brunt

Indicator	Impact / Outcome / Result	Quote
Safety	<ul style="list-style-type: none"> • Based on survey results, the project reported <u>increased self-reliance</u> by older adult participants for health monitoring, in turn supporting care discussions between older adults, informal caregivers, and healthcare providers that <u>facilitated</u> preventative interventions and referrals to specialists. • The project also reported <u>improved</u> measures of anxiety, loneliness, sleep, self-efficacy, and healthy habits for older adult participants. <p><i>Long-term impacts on health outcomes and resource utilization cannot be evaluated until the platform is deployed at scale for a longer duration in real-world implementation into standard primary care.</i></p> <p><i>Given the small older adult sample size (n = 58), results should be interpreted with caution.</i></p>	<p><i>"It is a daily reminder to take good care of my health and wellbeing."</i></p>

Indicator	Impact / Outcome / Result
Caregiver Burden	<ul style="list-style-type: none"> Based on survey results, the project reported <u>decreased</u> informal caregiver time, developmental, physical, social, and emotional burden as well as caregiver exhaustion. Informal caregivers also reported an <u>increase</u> in caregiver preparedness. <p><i>Given the small caregiver sample size (n = 4), results should be interpreted with caution.</i></p>
Repeat Usage	<ul style="list-style-type: none"> No older adult participants transitioned to a higher level of care during the project. <p><i>The meaning and significance of these results cannot be assessed without a comparison to participants' baseline data on healthcare utilization.</i></p>

Methods and Comparison

Older adult and informal caregiver participants completed surveys before, during, and after the implementation of the Virtual Care Platform to assess health outcomes, level of healthcare utilization, and experiences with the technology.

Conclusions and Lessons Learned

- Older adults provided with a Virtual Care Platform used it reliably to help with self-monitoring and engage with informal care providers, friends, and family.
- Virtual Care Platforms must be turn-key (i.e. internet-connected, including mobile cell and/or independent Wi-Fi routers) and compatible with external health monitoring devices (e.g., blood pressure cuffs, accelerometers, or glucose monitors).
- Formal or in-home care providers may be reluctant to participate in models that incorporate virtual care because they feel that these tools compete with their existing business models.
- Direct feedback and/or partnership from healthcare policy- and decision-makers at all stages of a pilot project may support the adaptability, sustainability, and suitability of the intervention to address current healthcare needs.

Recommendations

- Conduct further research with a larger group of older adults and informal caregivers to assess:
 - The potential for scale-up of the virtual care technology; and
 - The group of older adult users that the technology benefits most (e.g., older adults with early dementia, cognitive impairment, or multiple chronic diseases that require self-monitoring).
- Explore options for the optimal "first adopters" of the technology (e.g., implementing the technology as part of extramural care or home care services with a defined number of users and care managers).

Next Steps

- Although the virtual care technology used in the project is scaling in the United States, the project has not secured additional funding to provide services in New Brunswick.
- The project has submitted proposals to the National Research Council Canada and to outfit homes in the Waterloo Village Smart Living Community with virtual care technology.

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