DISCOVER + ADOPT
CALL FOR INNOVATION

The Centre for Aging + Brain Health Innovation (CABHI) is seeking solutions on behalf of six Ontario-based healthcare organizations enrolled in the Discover + Adopt (D+A) program (https://www.cabhi.com/discover-and-adopt/).

If you are an innovator with a solution that can address one or more of the organizations' needs listed below, apply here: baycrest.blitzen.com/form/DA-Innovator-Intake-Form.

Calls for Innovation:

1. A virtual platform that healthcare professionals can use to easily manage patients and to support appropriate medication use by older adults receiving virtual geriatric care.

2. An automated system that enables the monitoring and replenishment of medical supplies on nursing units.

3. A solution that increases the social participation and engagement of residents in senior care organizations.

4. A remote care monitoring solution that improves safety and reduces adverse events for those living in the community with responsive behaviours.

5. A solution that enhances risk assessment and monitoring of older patients so they can be safely discharged following an emergency department visit.

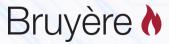6. A solution to reduce the workload related to meal service in the dining room in senior care organizations.

Interested?

See 'Call for Innovation Package' below for further details about the six organizations' needs. **If you are an innovator with a solution that can address one or more of these organizations' needs, apply here: baycrest.blitzen.com/form/DA-Innovator-Intake-Form by December 9, 2022.**

Note: The host organizations reserve the right to not move forward with innovators who submit an application at their full discretion.

For any questions, please contact Jenna Pirmohamed, Knowledge Broker, Centre for Aging + Brain Health Innovation at jpirmohamed@cabhi.com.

CALL FOR INNOVATION 1

PROBLEM STATEMENT:

This Ontario-based healthcare organization is seeking a virtual platform for healthcare professionals to easily manage patients and perform medication optimization (i.e., increase adherence and reduce errors) to improve the frequency and quality of care for at-risk older adults.

DESIRED OUTCOMES:

1. Increase staff satisfaction by 10-15% in delivering virtual care for this population.
2. Expedite medication optimization (increase medication adherence and reduce errors) for patients while they are waiting to see a geriatrician.
3. Increase patient satisfaction by 10-15% in receiving geriatric services faster and in the convenience of their own home, reducing patient and caregiver burden for transportation.

BACKGROUND & CONTEXT:

Staff frequently care for complex older adults living with frailty and high rates of polypharmacy. The prevalence of potentially inappropriate prescribing in the general older adult population is estimated to be around 21-79%, and is higher in the high-cost healthcare user (HCHU) subpopulation. It is important to target this HCHU subpopulation as they account for the largest proportion of HCHUs and are frequently admitted to hospital often displaying comorbid mental illness and high risk of mortality. Identifying opportunities to optimize health service delivery and medication use can help prevent development of HCHU in our older adult population.

The current wait time for an appointment with a geriatrician is one year at our outpatient clinic. This extended wait time can increase the deconditioning and the frailty cascade in this population. Virtual care (specifically, remote automated monitoring which remotely obtains patient biophysical variables such as heart rate) has been attempted at this Ontario-based healthcare organization to reduce acute post-surgical care in discharged patients (McGillion et al., 2021). This involves using a Virtual Case Manager Station where case managers can assess clients at home (rather than requiring patients to go to the clinic). This type of virtual care has been shown to be a promising way to improve patient outcomes and manage the backlog of patients waiting for care (McGillion et al., 2021). It may also address the barrier of transportation that many older adults face with regards to attending their healthcare appointments (especially during the winter season). The delivery of this type of virtual care can be further enhanced by a virtual platform healthcare professionals can use to improve medication use by older adults.

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CALL FOR INNOVATION 2

CENTRE FOR AGING + BRAIN HEALTH INNOVATION
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PROBLEM STATEMENT:

This Ontario-based healthcare organization is seeking a supply room replenishment system that allows for real-time data on the medical supplies on the nursing units, that requires minimal intervention by clinical staff, and limits the movement and intervention of support staff responsible for this task.

DESIRED OUTCOMES:

1. Increase productivity of nurses and supply management team.
2. Reduce stock out events and time clinical staff spend on requesting supplies.
3. Eliminate supply management hours spent in the replenishment process.
4. Reduce inventory level and optimize mix of product on the nursing unit

CONSIDERATIONS:
The system must provide sufficient data to allow for an initial one-time reduction in inventory, limit storage space to a minimum, and reduce stock outages. By optimizing the information that the supply management team receives on the real time status of supply levels, the system should reduce the number of hours dedicated to scanning and delivering the orders and maintaining the system. In addition, the system would be easy to use for nursing staff and save nursing staff time by reducing events where they need to request supplies due to outages. Lastly, the system should include the use of RFID technology, Wi-Fi or other technology to improve automation of replenishment process.

BACKGROUND & CONTEXT:
Nursing staff constantly struggle to find the right product, as it is hard to find or out of stock, which affects the quality of patient care. A homemade double bins system was implemented 7 years ago but the system is inefficient and untidy. Although some software on the market can solve part of the problem, they are too expensive for most hospitals.

If you are an innovator with a solution that can address this organization's need, apply here: baycrest.blitzen.com/form/DA-Innovator-Intake-Form by December 9, 2022.

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CALL FOR INNOVATION 3

CENTRE FOR AGING + BRAIN HEALTH INNOVATION
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PROBLEM STATEMENT:

This Ontario-based healthcare organization is seeking a solution to improve the social experience of long-term care residents, with for declining cognitive abilities and/or differing communication abilities, through engagement and activation strategies that are tailored to their individual needs and interests.

DESIRED OUTCOMES:

1. Increase social participation and engagement of residents by 20% from baseline.
2. Improve quality of life of residents (increase QoL survey score related to meaningful activities by 10%).
3. Improve family satisfaction with engagement of residents through proposed solution (more than 60% of families agree that the solution is beneficial to their loved one; 10% increase on QoL survey score related to meaningful activities).

BACKGROUND & CONTEXT:

Engaging residents living with dementia in meaningful social activities can be challenging in a long-term care environment. The interests and abilities of this population are different than those residents without dementia, including cognitive and communication skills. Further, there are residents who (for a variety of reasons, not always related to dementia) are less likely or able to participate in traditional recreational activities and as a result, become more socially isolated.

A person-centered approach to care must include the needs of the whole person. This includes optimizing a person's quality of life by not only caring for their physical needs, but also their social and emotional needs. A long-term care home is a person's home, and as such, it is important to provide opportunities for engagement and stimulation that supports individual needs. Additionally, COVID has shone a light on the importance of socialization, engagement, and human contact. For a more vulnerable and frail population such as those living in long-term care, they are not always able to advocate for themselves and to seek out opportunities. Therefore it is important to ensure that residents are not only offered opportunities to engage, but that these activities are meaningful and tailored to their individual needs.

If you are an innovator with a solution that can address this organization's need, apply here: baycrest.blitzen.com/form/DA-Innovator-Intake-Form by December 9, 2022.

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CALL FOR INNOVATION 4

PROBLEM STATEMENT:

This Ontario-based healthcare organization is seeking a Remote Care Monitoring (RCM) solution that will support people living in the community with responsive behaviours to stay safe and reduce adverse events (e.g. wandering, missed medications, falls) leading to poorer health outcomes and higher care utilization.

DESIRED OUTCOMES:

1. Reduce adverse events reported over time by 20% (e.g. trends/trajectories of incidents of wandering, falls, and medication adherence).
2. Increase ability of clients/family to manage chronic medical conditions.
3. Increase ability of clients/family to access healthcare system.
4. Increase number of referrals to RCM program.
5. Decrease number of police interactions for wandering.
6. Decrease number of 911 calls, unnecessary emergency room visits and hospitalizations related to adverse events.
7. Enable clients to live in the community longer.

BACKGROUND & CONTEXT:

This Ontario-based healthcare organization is interested in testing and adopting the use of technology that enhances the safety and reduces risk for our clients and families living at home with responsive behaviours. In particular, we are interested in decreasing incidents such as wandering (often leading to police calls), missed medications and falls (leading to ED visits and hospitalization), and other adverse events that hinder safe living in the community which leads to earlier placement to LTC, poorer health outcomes and care experiences.

We know that older adults living in the community with multiple comorbidities are at risk for adverse events such as missed medications, falls and wandering. We also know that devices have been developed to remotely monitor clients to live safely in their home. There is potential for remote monitoring to support older adults to live in the community longer and avoid Alternative Level of Care designation and long-term care placement. Although Remote Care Monitoring has been well studied, it has not been studied for our clinical population of clients with moderate to severe dementia with active responsive behaviours.

This has been an ongoing challenge for all health organizations who service complex older adults to live safely in the community. Until recently, there has been no scalable solution that offers teams the ability to support clients and caregivers remotely while integrating best practices of specialized teams. By collaborating with Remote Care Monitoring companies and clinical specialized programs, we are able to evaluate the efficacy and scalability of this innovative approach to care.

If you are an innovator with a solution that can address this organization's need, apply here: baycrest.blitzen.com/form/DA-Innovator-Intake-Form by December 9, 2022.

CALL FOR INNOVATION 5

CENTRE FOR AGING + BRAIN HEALTH INNOVATION
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PROBLEM STATEMENT:

This Ontario-based healthcare organization is seeking a solution to support older patients return to home safely following an emergency department visit, and in turn reducing unnecessary overnight admissions and return visits to the emergency department within 72 hours.

DESIRED OUTCOMES:

1. Increase patient satisfaction with the availability, accessibility, and use of the solution during care discussions.
2. Staff satisfaction as related to accessibility of the solution and integration into clinical workflow, including: (a) maintenance of the solution and (b) potential downtime.
3. Reduce unnecessary overnight admission to the ward of older patients.
4. Reduce the number of return visits by older patients to the emergency department within 72 hours.
5. Reduce the average length of stay in the Emergency Department for older patients who can be discharged safely to the community.

BACKGROUND & CONTEXT:

As the population serviced by this Ontario-based healthcare organization continues to age, with now over 15.6% of the Toronto population being over the age of 65+, emergency departments are seeing a rise in visits and hospital admissions by older adults. In many cases, older patients are admitted to the emergency department as they are noted to be struggling to manage their own care needs with no or limited supports within the community. Given this reason for admission, it is challenging to safely discharge patients back to the community, especially if the discharge happens during what are typically perceived as "off hours" (e.g. evenings and weekends) when limited community supports are available and often cannot be arranged within such short notice. In turn, staff will often admit these patients to the hospital, a costly and inefficient solution, resulting in increased stress on an already over-capacity healthcare system.

Given the appropriate monitoring or oversight, many of the older patients visiting the Emergency Department may be able to be safely discharged home, avoiding an unnecessary admission and/or potentially delaying the need for long-term care. Prior to the pandemic, many organizations reported high rates of Emergency Department visits by older adults within the context of overall high capacity rates in the hospital, impacting bed access. This issue has only been exacerbated during the pandemic, related to the high surgical and medical backlog that increased over time as the healthcare system as a whole tried to manage the increased number of hospitalizations related to COVID-19. At this time, our current solutions are falling short of meeting the needs of our patients and alleviating strain on an over-burdened health care system, indicating a pain point where we can focus our efforts on how to do better.

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CALL FOR INNOVATION 6

PROBLEM STATEMENT:

This Ontario-based healthcare organization is seeking a solution to reduce the workload related to meal service in the dining room in senior care organizations.

DESIRED OUTCOMES:

1. Reduce walking distance and/or steps taken by dietary team members by at least 60% during a single meal.
2. Reduce the amount of time dietary team members spend carrying trays of plates by at least 60%.
3. Reduce the amount of time required to serve a seating in the dining room.
4. Reduce the amount of time required to clear the dining room per seating.
5. Increase resident mealtime satisfaction in at least 80% of residents.
6. Increase team member mealtime satisfaction in at least 80% of team members.

BACKGROUND & CONTEXT:

Workload includes physical workload in the form of carrying trays with full and empty plates between the servery and the dining room, but also psychological workload as a result of working short.

With the workforce challenges our industry is facing at this time, it has been especially difficult to find hospitality team members. Existing team members often work short-handed which results in increased workload for existing team members, many of whom have left because of the workload. We have tried to address team member workload associated with ordering meals, but nothing related to serving meals. Some villages have also tried to reallocate team members from elsewhere in the village to the dining room during mealtime to add more people to help in the dining room. However, this creates pain points elsewhere in the village by removing team members from other areas of the village.

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