



PROGRAMME DE LA CONFÉRENCE

Message de bienvenue du RCE AGE-WELL

AGE-WELL, le réseau canadien axé sur les technologies et le vieillissement, est le seul réseau national qui réunit des chercheurs, des personnes âgées, des aidants naturels, ainsi que des partenaires du gouvernement, des groupes communautaires et de l'industrie pour créer et mettre en œuvre des solutions technologiques, y compris des services et des politiques, qui favorisent la bonne santé et le bien-être des personnes âgées et des aidants naturels.

La conférence annuelle EPIC d'AGEWELL, qui en est à sa quatrième édition, est devenue au fil des années le plus important événement destiné aux stagiaires du genre sur la santé, le vieillissement et la technologie. Il s'agit d'un événement mondial, qui regroupe des gens des quatre coins de la planète : cette diversité met en lumière la nature universelle de la mission d'AGEWELL dont l'objectif est d'accélérer la mise en œuvre de solutions technologiques qui contribuent positivement à la vie des personnes âgées et des aidants naturels.

Au cours des neuf prochains jours, vous aurez la chance d'assister à la prise de parole d'étudiants de cycles supérieurs, de boursiers postdoctoraux, de membres du personnel de recherche et de chercheurs en début de carrière provenant d'établissements d'enseignement d'un bout à l'autre du pays. De nombreux innovateurs de demain feront des présentations aux côtés d'intervenants ayant une expérience et une expertise concrètes. Une véritable collaboration avec les divers intervenants, en particulier les personnes âgées et les aidants naturels, de même que les partenaires communautaires et de l'industrie d'AGEWELL, a été essentielle au développement du réseau. Nous tenons à les remercier de nous avoir accordé du temps et de nous avoir fait profiter de leur expertise.

Nous nous réjouissons d'entendre les futures vedettes du secteur des technologies et du vieillissement au Canada à l'occasion de la conférence EPIC 2023.



Alex Mihailidis,
Directeur scientifique et chef
de la direction d'AGE-WELL

Reconnaissance des territoires

Bien que nous nous réunissions virtuellement, nous aimerions saluer les peuples autochtones de tous les territoires que nos conférenciers habitent. Nous le faisons pour réaffirmer notre engagement et notre responsabilité à l'égard de l'amélioration des relations entre les nations et de celle de notre compréhension des peuples autochtones locaux et de leurs cultures. Nous vous encourageons à réfléchir au territoire sur lequel vous vous trouvez et à tenir compte de votre relation avec la terre et avec les peuples qui en sont les gardiens traditionnels.

Le Bureau de gestion du réseau d'AGE-WELL exerce ses activités sur les territoires traditionnels de nombreuses nations autochtones, qui ont leur terre à cœur depuis des milliers d'années, y compris les Anishnabeg, les Chippewa, les Haudenosaunee et les Wendat; et nous saluons les détenteurs actuels des traités, soit la Première Nation des Mississauga de Credit. Ce territoire abrite de nombreux peuples des Premières Nations, des Inuits et des Métis, et il est assujéti à l'entente wampum du « bol à une seule cuillère », soit une entente visant à partager en paix et à gérer la région des Grands Lacs.

Nous sommes reconnaissants d'avoir l'occasion de travailler sur ce territoire aujourd'hui et de souligner notre responsabilité de faire avancer le processus de réconciliation. AGE-WELL s'engage à favoriser des pratiques équitables et inclusives dans l'ensemble de ses programmes et mesures et accueille ouvertement les modes de connaissance et de vie autochtones afin de les intégrer explicitement dans ses programmes de recherche et d'éducation.

Comment participer

La conférence EPIC (2023) est l'occasion pour les AGE-WELL HQP de partager leurs recherches, de mettre en évidence leur impact potentiel et de se connecter avec leurs collègues.

Elle comprendra 8 sessions virtuelles, chacune dédiée à l'un des défis identifiés. De plus, un atelier de renforcement des compétences sera organisé par le Centre pour la mise en œuvre.

Bienvenue à toutes et à tous!

Présentations virtuelles en direct :

Ces 8 sessions seront hébergées sur Zoom et comprendront une introduction au domaine du défi présentée par le président de la session, 3 présentations orales avec un ou plusieurs co-présentateurs des parties prenantes pour discuter de leur expérience. Ces sessions se termineront par une discussion de suivi qui placera ces présentations dans un discours plus large et abordera l'impact potentiel de la recherche.

Inscrivez-vous à toutes les sessions de la zone de défi et à notre atelier EPIC sur la page de la conférence EPIC d'AGE-WELL en cliquant [ici](#).

Code de conduit

La conférence EPIC (2023) a pour but d'accroître l'interaction, l'engagement, la collaboration, la connectivité et le sens communautaire dans un environnement de respect mutuel. Nous reconnaissons que nous avons la responsabilité commune de créer et de maintenir cet environnement dans l'intérêt de tous. Nous demandons aux conférenciers d'encadrer les discussions de la façon la plus ouverte et inclusive possible et d'être conscients de la façon dont le langage ou les images peuvent être perçus par les autres.

Nous sommes reconnaissants de la participation de chaque membre de la collectivité et nous nous efforçons d'offrir une expérience agréable et enrichissante. Les participants à la conférence EPIC doivent se comporter avec intégrité, courtoisie et respect et maintenir le plus haut niveau de professionnalisme à toutes les séances de l'événement. Les perturbations qui nuisent à l'expérience des autres participants ne sont pas tolérées. Tous les participants, conférenciers, organisateurs, partenaires, commanditaires et membres du personnel sont tenus de respecter ce Code de conduite.

Notre conférence vise à offrir une expérience sans harcèlement à tous, peu importe l'identité et l'expression de genre, l'âge, l'orientation sexuelle, le handicap, l'apparence physique, la taille du corps, la race, l'origine ethnique, les croyances et pratiques religieuses ou spirituelles ou les choix technologiques.

Soyez gentil avec les autres. Abstenez-vous d'insulter ou de rabaisser les participants (par exemple en formulant des commentaires agressifs dans les séances de clavardage ou dans l'application de l'événement ou en adoptant des comportements d'intimidation). Le harcèlement sous toutes ses formes, les blagues âgistes, sexistes, racistes ou d'exclusion ne sont pas tolérées dans le cadre de la conférence EPIC. Les participants à la conférence EPIC qui enfreignent ces règles peuvent être expulsés de l'événement, à la discrétion des organisateurs.

Si vous êtes victime de harcèlement, remarquez que quelqu'un d'autre est victime de harcèlement ou avez d'autres préoccupations, veuillez communiquer immédiatement avec l'équipe organisatrice. Vous pouvez communiquer avec le personnel de l'événement par courriel à info@agewell-nce.ca.

Merci de contribuer à faire de la conférence EPIC (2023) un événement accueillant pour tous.



[INSCRIVEZ-VOUS ICI](#)

Ouverture de la Conférence EPIC 2023

Jennifer Campos, Directeur scientifique associé, RCE AGE-WELL Inc.

1:00pm to 1:10 pm ET

Président : Jennifer Campos, Toronto Rehab Institute

Présentations :

Learnings Around Bringing Technology into a Care Home Setting

Laura Ault, Bruyere Research Institute

Long Term Use and Perceived Effectiveness of COOK-My Safety for Older Adults: A Multiple-Case Study

Amel Yaddaden, Université de Montréal

Social Isolation in Older Adults Post Hip Surgery is Correlated with Mobility and Physiological Indicators

Shehroz Khan, Toronto Rehab Institute & Penny Taylor, Patient Partner



[INSCRIVEZ-VOUS ICI](#)

Président : Jeff Jutai, University of Ottawa

Présentations :

Blood Pressure Estimation in Health Smart Homes using Multi-Modal Machine Learning

Hadi Hojjati, McGill University, Olive Bryanton, AGE-WELL's Older Adult and Caregiver Advisory Committee

A Pilot Investigation of Simulated Hip Impacts with a Fall Injury Prevention Bedside Mat

Mayank Kalra, University of Waterloo

"There's lots of living in between:" Uncovering Structures Influencing the Care Experiences of Chinese Canadian Prostate cancer survivors to cultivate cultural safety and relationality in digital health

Karen Young, University of Toronto



INSCRIVEZ-VOUS ICI

Président : Adriana Ríos Rincón, University of Alberta

Présentations :

“It has to meet you where you are”: Older Adult Perspectives on Emotionality in Social Robotics

Jill Dosso, University of British Columbia

Ethical and Legal Issues Related to Alert Systems for Missing Seniors

Adebusola Adekoya, University of Waterloo & Yuriko Ryan, Provincial Health Services Authority

Balancing Safety and Autonomy: Exploring Stakeholder Attitudes Towards Real-Time Location Systems in Long Term Care Homes

Kyle Smilovsky, Wilfrid Laurier University

The graphic features a dark blue background with a network of glowing blue nodes and lines. A white rounded rectangle is centered on the left. Inside the rectangle, the AGEWELL EPIC Conference 2023 logo is on the left, and The Center for Implementation logo is on the right. Below the logos, the text reads: 'EPIC Conference 2023 Workshop', 'Addressing barriers and facilitators to technology implementation', and 'Friday, May 26 | 1:00 - 2:30 PM ET'. A red button with the hashtag '#AWepic2023' is at the bottom of the white rectangle.

**AGEWELL
EPIC
Conference 2023**

**The Center for
Implementation**

EPIC Conference 2023 Workshop

**Addressing barriers and facilitators to
technology implementation**

Friday, May 26 | 1:00 - 2:30 PM ET

#AWepic2023

[INSCRIVEZ-VOUS ICI](#)

Join us for a hands-on workshop will introduce you to the evidence-based practices of knowledge mobilization, dissemination, and implementation. You will be guided through activities to understand the pathways to implementation, spread and scale; map your barriers and facilitators to implementation, and; determine how to select your change strategies.

Registrants who attend the live session will receive a certificate from The Centre for Implementation.

Présentatrice:

Julia E. Moore is the Executive Director for The Center for Implementation and co-founder of the Behavior Elevation Academy. Dr. Moore has a PhD from Penn State in Human Development, where she was trained as an implementation scientist, researching the best ways to implement evidence-based programs. She has worked on over 100 implementation projects.



[INSCRIVEZ-VOUS ICI](#)

Président : Frank Knoefel, Bruyere Research Institute

Présentations :

COMPAs: An app to Break Social Isolation & Promote Person-Centered Communication Between People Living With Dementia and Their Caregivers in Long-Term Care Centers

Barbara Delacourt, Centre de recherche de l'Institut universitaire de gériatrie de Montréal

Time Perceptions in Dementia: A Scoping Review with an Examination of AgeTech Opportunities and Challenges

Natasha Gallant, University of Regina

MATCH: a mixed-reality assistive technology for cognition for older adults with neurocognitive disorders

Guillaume Spalla, Université de Sherbrooke

Commentator :

Genevieve Zletni, person with lived experience



[INSCRIVEZ-VOUS ICI](#)

Président : Claudine Auger, Université de Montréal

Présentations :

A Novel Mobile Application Improves Ambulation Skill in Walking Aid Users

Maureen O'Brien, University of Calgary & Dr. Matt Christison,
Patient-Partner and walking aid user

Navigational Decision-Making in Older Adults with Cognitive Impairment: An Analysis of Real-World Driving Patterns

Reihaneh Derafshi, University of Calgary

Reducing Simulator Adaptation Sickness with the Virage VS500M-R Driving Simulator

Meg Schwellnus, Bruyere Research Institute & Dr. Andrew Frank,
Bruyere Memory Program



[INSCRIVEZ-VOUS ICI](#)

Président : Andrew Sixsmith, Simon Fraser University

Présentations :

Using Social Media to Engage Participants in Dementia Prevention Research: What are the Ethical Implications?

Viorica Hrinco, University of British Columbia

Introducing New Technology to Monitor the Health Data of Older Adults with Multi-Morbidities Related to Dementia in Indigenous Communities (2021-2023)

John Acharibasam, University of Saskatchewan & Victor Star, Star Blanket Cree Nation, Community Research Assistant

Virtual GERAS DANcing for Cognition Exercise (DANCE) for Older Adults: A Feasibility Randomized Control Trial

Patricia Hewston, Hamilton Health Sciences & Spencer Coombe, Co-Founder of Senior Support Care



INSCRIVEZ-VOUS ICI

Président : Arlene Astell, Toronto Rehab Institute

Présentations :

“We are together in different places” – Stay connected via telepresence robots in long-term care

Joey Wong, University of British Columbia & Jim Mann, Dementia Advocate

Co-Creating CIRCA-CA: A Reminiscing Tool Promoting Social Connectedness

Juanita Atton, Toronto Rehab Institute

Supporting LTC Residents with Virtual Activities for Social Connection during the Covid-19 Pandemic: Experiences of LTC Staff in Northern British Columbia

Hui Jun Chew, University of Northern British Columbia



[INSCRIVEZ-VOUS ICI](#)

Président : Janet Fast, University of Alberta

Présentations :

Caring Beyond Borders: Financial Well-being of Transnational Families

Andrew Magnaye, University of Alberta & Kenya Kondo, MatchWork

The Value Trade-Off: Access and Affordability of Active Assisted Living Systems in Older Adult Care

Gaya Bin-Noon, University of Waterloo

Older Adults' Access to Technology: Financial Well-being Matters

Karen Wong, University of British Columbia, & Phil Davis, AGE-WELL's Older Adult and Caregiver Advisory Committee

CCRW Employment Services – Creating a Culture of Inclusion

Selena Jodha, Canadian Council on Rehabilitation and Work (CCRW)

EPIC Conference 2023 Closing :

Josephine McMurray, Associate Scientific Director, AGE-WELL NCE

RÉSUMÉS (par ordre alphabétique)

Introducing New Technology to Monitor the Health Data of Older Adults with Multi-Morbidities Related to Dementia in Indigenous Communities (2021-2023) *John Acharibasam, University of Saskatchewan*

Access to technology and health education can enhance healthy lifestyles that prevent the onset of Young Onset Dementia. Partnering with Star Blanket Cree Nation and AGE-WELL, this research project investigated how access to technology and health education can enhance Indigenous older adults' understanding of the ways nutrition, exercise, and self-management of health issues can impact multiple morbidities and their relationship to Young Onset Dementia. As a result, three technologies: needle-free blood glucose monitor, blood pressure monitor, and smart scales were introduced to 30 Indigenous older adults. The research project adopted Indigenous research methodologies and a community-based participatory research design to guide the research. Specific methods of sharing circles were employed to collect qualitative data. Combined with health education, technology promotes healthy lifestyles that prevent multiple morbidities and Young Onset Dementia. Overall, technologies support Indigenous older adults' health and wellness as it relates to Young Onset Dementia.

Ethical and Legal Issues Related to Alert Systems for Missing Seniors *Adebusola Adekoya, University of Waterloo*

Missing persons with dementia are at risk of being exposed to serious harm. Alert systems allow first responders and the community to work together to locate missing person with dementia, thereby mitigating associated risks. Recent reviews of the literature point to a dearth of research on the ethical and legal issues associated with the release of missing individuals' personal information in alert systems. Our study aimed to explore the stakeholders' perspectives on the ethical and legal issues associated with the release of personal information in alert systems. We conducted in-person and online interviews with 14 participants, including persons with lived experience, first responders, service providers, app developers, lawyers, and policy makers from Canada and the United Kingdom. Thematic analysis guided our analytic approach. Five key themes represent the ethical and legal issues in alert systems: Balancing safety and privacy, risk of vulnerability, social stigma, caregiver guilt and shame, consent, and dementia education and support. Public disclosure of relevant personal information is important in locating and enhancing the safety of missing persons with dementia. However, this can increase vulnerability to harm and must balance the right to privacy and informed decisions. Education and support are critical to addressing the social stigma of dementia and caregiver guilt and shame. Advance directives can help address concerns related to consent and how the wishes of persons living with dementia are respected. Our findings can inform policy and new and existing alert systems.

Co-Creating CIRCA-CA: A Reminiscing Tool Promoting Social Connectedness *Juanita Atton, Toronto Rehab Institute*

Given the increasing rates of dementia amongst Canadians, there is a need for interventions that address the consequences of progressive cognitive decline. While there are currently no disease-modifying therapies available, nonpharmacological interventions can improve aspects of social life by targeting isolation and depression. The Computer Interactive Reminiscence and Conversation Aid (CIRCA) is an interactive multimedia web-based platform developed to support and promote communication between people with dementia and their caregivers. CIRCA provides visual and auditory cues to elicit memories as

topics of conversation, while minimizing the impact of working memory impairment. Previous versions of the program in the UK and Sweden, have demonstrated its efficacy in promoting conversations between persons with dementia and caregivers, in addition to improving quality of life by engendering a sense of autonomy and social connectedness. We are currently co-creating CIRCA-CA, reflecting the unique experiences of Canadian seniors. This multi-site project is co-creating contents for CIRCA-CA with older adults from three Canadian provinces. Using an interactive group approach, older people living with and without dementia, are sharing their lived experiences and proposing contents for CIRCA-CA. CIRCA-CA is being evaluated by 100 older adults living with dementia and both formal and family caregivers. This presentation will i) critically evaluate the evidence supporting the use of cognitive prostheses such as CIRCA in maintaining social relationships for persons with dementia, ii) discuss the importance of including older adults in the process of co-creation of technologies to produce meaningful outcomes in real-world settings.

Learnings Around Bringing Technology into a Care Home Setting *Laura Ault, Bruyere Research Institute*

With the rise in the aging population and their need for assistive living and communal care homes, supportive technology systems are emerging. Unfortunately, in many cases, these homes were not designed around the ability to integrate today's technology and their corresponding infrastructure, creating challenges and barriers both technologically and at the resident level. The TochTech Sleep Sense bed sensor was integrated into 14 rooms in an Ottawa retirement community home. This home is not designed to be a medical care home, and thus does not have a facility wide WIFI network. The building is divided into 4 quadrants, with each having its own residential router to support television in the quadrant common area. The Sleep Sense bed sensors rely on a stable network connection to provide cellphone alerts, which created challenges and learning experiences around creating a strong and secure WIFI network for all devices in each participant room. Other challenges were around consent and assent. Family members or other substitute decision makers were asked to provide consent as the residents are living with dementia and unable to consent for themselves. However, this does not stop residents from seeing the technology, and attempting to move it and/or hide it. By the end of the study, the team had learned the best method to provide a strong and secure WIFI connection, as well as methods to work around confused residents. We wish to share these learnings so others can avoid some of our mistakes.

The Value Trade-Off: Access and affordability of Active Assisted Living systems in older adult care *Gaya Bin-Noon, University of Waterloo*

Active Assisted Living (AAL) refers to internet-connected systems designed to improve quality of life, aid in independence, and create healthier lifestyles. Many valuable AAL solutions exist on the market as "off-the-shelf" consumer devices, which has allowed for flexibility and experimentation but has also lead to a lack of clarity regarding what is worth the substantial upfront investment of purchasing these devices. Moreover, there are multiple definitions for "assistive technologies" (including AAL), which vary within and between provinces and territories. Consequently, there is confusion about what they are and whether procurement of specific technologies is covered under government funded programs. This, in turn, means that AAL procurement requires older adults and their care partners to undertake a significant financial risk, which is not feasible for many. To understand the concerns regarding AAL, 18 semi-structured group interviews were held with stakeholders representing different parts of an AAL ecosystem. Furthermore, a use case for a smart home was explored to provide an estimation of procurement and maintenance costs over one year. This investigation found that there is a critical need to acknowledge the trade-off inherent in AAL use between the benefits of the technology, their encroachment on privacy, and, crucially, their cost in terms of time and finances. This trade-off is influenced by several factors, including the care context and

what resources care recipients have available to them. Assumptions regarding access should be avoided, and methods to offset cost should be considered.

Supporting LTC Residents with Virtual Activities for Social Connection during the Covid-19 Pandemic: Experiences of LTC Staff in Northern British Columbia *Hui Jun Chew, University of Northern British Columbia*

In response to the COVID-19 pandemic, the Ministry of Health of British Columbia implemented new processes and policies to limit the spread of COVID-19 in long term care (LTC) homes. This led to major changes in technology use for persons living in LTC homes, as well as the paid workforce dedicated to caring for them. This study described the role of technology and its impact on the experiences of LTC staff working in Northern British Columbia during COVID-19. Analysis of 53 semi-structured interviews from the LTC Staff Working During COVID-19 in Northern BC study was conducted. Data was analysed using Braun and Clarke's thematic analysis approach. Participants reported that videoconferencing technology was used in virtual visits for LTC residents to see their families. Streaming services from the internet were used in place of live music, spiritual services and other in-person group activities. Participants also reported that LTC residents required significant support from staff to participate in virtual activities. Barriers such as inadequate internet infrastructure and scheduling challenges in the context of severe staff shortages affected technology use. This research provides insight into the perspectives of LTC staff that had to adopt new technologies and new work processes, as well to support LTC residents and their families on technology use during virtual activities. These findings provides actionable insights as to the promoting the adoption of new technologies in LTC for those working in Northern BC or other rural settings.

COMPAs: An app to Break Social Isolation & Promote Person-Centered Communication Between People Living With Dementia and Their Caregivers in Long-Term Care Centers *Barbara Delacourt, Centre de recherche de l'Institut universitaire de gériatrie de Montréal*

Introduction: People living with dementia (PWD) experience communication deficits as soon as the early stages of the diseases, deficits which significantly increase over time. In the last stages, constant communication breakdowns lead to reduced exchanges with caregivers, resulting in the isolation of both communication partners. These difficulties have negative impacts on the quality of life of PWD and their caregivers, who themselves face increasing burden. While communication difficulties in PWD are a core issue in care, few interventions to address this issue have been developed. **Aims:** The present study focused on COMPAs, an app designed to sustain communication between PWD and their caregivers. COMPAS has been shown to trigger emotional communication during the short co-viewing of personalized audiovisual material. **Method:** This was a pre-post intervention study with COMPAs in 2 long-term care centers. Seventeen caregivers used COMPAs in the context of daily routines over eight weeks with 17 residents. Data collection included specific questionnaires and semi-structured interviews to measure effects on communication and caregiver burden. Data analyses combined quantitative and qualitative approaches. **Results:** In caregivers, there was a significant improvement in personal achievement at work. Semi-structured interviews showed an improvement in communication in the dyad and a more empathetic approach to caregiving. **Discussion:** These results indicate that the communication triggered by COMPAs breaks down communication barriers, by creating positive exchanges through personalized emotionally driven exchanges, while stimulating empathy and personalized interventions. Caregivers see COMPAs as an ecological tool to address communication barriers, while facilitating an empathetic caregiving relationship.

Navigational Decision-Making in Older Adults with Cognitive Impairment: An Analysis of Real-World Driving Patterns *Reihaneh Derafshi, University of Calgary*

Driving is a crucial aspect of independence for older adults, but cognitive impairment may affect their driving abilities. This study investigates navigational decision-making in older adults with and without mild cognitive impairment (MCI) while driving in real-world settings. The daily driving patterns of 246 older drivers (aged 65+) were tracked using invehicle GPS dataloggers for 5 years, and Clinical Dementia Rating™ (CDR™) scores were assigned for all participants. Results revealed that the MCI group was less likely to take short and full-cycle trips compared to cognitively intact older adults (CTL). Additionally, the MCI participants were more likely to take their most common route when travelling to their most common destination and less likely to engage in risky behavior when taking these trips. However, in new driving situations, drivers with MCI became more likely to engage in risky behaviors. Specifically, they were more likely to have a "risky trip" when driving to a new destination. These findings highlight the significance of informing individuals about the impact of MCI on their driving and self-regulation techniques. Overall, these findings can contribute to the development of prediction tools that leverage the commonness of a driver's destination to warn them about the possibility and types of errors they may make, which can help prevent accidents and improve driving safety for older adults with MCI.

"It has to meet you where you are": Older Adult Perspectives on Emotionality in Social Robotics *Jill Dosso, University of British Columbia*

Social robots are small, embodied devices – characters or pets – developed for a wide range of populations including older adults and persons living with dementia. Potential users are interested in applications like companionship, entertainment, and health monitoring (e.g., Dosso et al., 2022). However, adoption of these devices is limited by barriers including a lack of emotional alignment between user and robot and concerns about stigma for robot use from peers and care partners. The goal of this work was to gain a better understanding of these barriers directly from the perspectives of potential endusers. We conducted seven online workshops featuring robot demonstrations (pet-like robot MiRo, prototype robot TTOP) with older adults with (n = 2) and without dementia (n = 25) and care partners (n = 17). Participants also completed the Multi-Dimensional Robot Attitude Scale (MDRAS) and the Psychosocial Impact of Assistive Devices Scale (PIADS). Audio recordings were transcribed verbatim and analyzed using inductive content analysis. Results revealed different modalities in which a robot could support connection between people. While many participants agreed that a social robot should match their level of emotion and interactivity, some expressed different preferences for social robot emotional range and display features. Participants discussed the implications of showing a robot to other people; several suggested that a robot could help raise awareness of ageing and dementia while others shared concerns about stigma and attracting negative attention from an audience. This work yielded new insights to inform the design of user-centered, emotionally intelligent social robots for aging.

Time Perceptions in Dementia: A Scoping Review with an Examination of AgeTech Opportunities and Challenges *Natasha Gallant, University of Regina*

A scoping review using ScienceDirect, MEDLINE, PsycINFO, Web of Science, Embase, and CINAHL was carried out to map out the body of literature examining time perceptions in dementia. This search identified 561 studies that were screened and assessed for eligibility. After deduplication (N = 94) and exclusion of articles following titles/abstracts screening (N = 418) and full text reviewing (N = 39), a total of 10 articles were included in this scoping review. Eligible studies included a total of 747 individuals living with dementia categorized as dementia (n=199), Alzheimer's disease (n=190), or dementia with Lewy bodies (n=30). All except one study compared individuals living with dementia to a control group (e.g., individuals

living with mild cognitive impairment, older adults, younger adults; n=328). Most studies found that individuals living with Alzheimer's disease produced more errors in time estimation (N=3) and interval production (N=2) compared to control groups, while other studies found no such effects (N=2). Individuals with dementia with Lewy bodies appeared to underestimate time intervals more than those with Alzheimer's disease (N=1). Moreover, compared to control groups, individuals living with Alzheimer's disease were more likely to feel that their fate was predetermined and plan less for the future. Based on the findings of this scoping review, time perceptions may be an important diagnostic marker or treatment target for dementia. The importance of bringing time perceptions to the development of technological innovations for the assessment and management of dementia will be discussed.

Virtual GERAS DANcing for Cognition Exercise (DANCE) for Older Adults: A Feasibility Randomized Control Trial *Patricia Hewston, Hamilton Health Sciences*

GERAS DANcing for Cognition and Exercise (DANCE) was developed with rehabilitation and geriatric medicine expertise for older adults (age 60+) looking to improve brain health or mobility. Our primary aim of this study was to assess the feasibility of virtual GERAS DANCE. **METHODS:** This study utilized a single-center, prospective, parallel-group randomized controlled trial (RCT) feasibility approach. We recruited 50 older adults. Participants were randomized to receive 6-weeks (1-hour class twice weekly) of virtual GERAS DANCE or usual care. Feasibility was assessed using pre-defined criteria for process, outcomes, and acceptability, and the effect of GERAS DANCE on mood, balance confidence, and fear of falling. **RESULTS:** Our study recruitment period occurred over 8 weeks to recruit 50 older adults (mean age = 75.02(5.89) years, range: 63-92, 92% female). The enrollment-to-screening ratio was calculated as 25:103 and the retention rate of participants was 84%. The average class attendance of the study cohort was 77%. One adverse event was reported unrelated to the study intervention. The program had a high-fidelity score and adhered to the standardized curriculum. Both the intervention and usual care groups improved mood (Depression, Anxiety and Stress Scale – 21). The intervention-group had higher balance confidence and lower fear of falling. **DISCUSSION:** Pre-determined thresholds for feasibility were met for all outcomes providing evidence that virtual GERAS DANCE is feasible, well-accepted, and safe for older adults. Improved balance confidence and reduced fear of falling through dance can have significant implications for fall prevention.

Using Social Media to Engage Participants in Dementia Prevention Research: What are the Ethical Implications? *Viorica Hrinco, University of British Columbia*

Background: Ethical social media use underpins effective online engagement for dementia prevention research. Existing social media guidelines are broad and lack empirical justification reflecting the values and priorities of the dementia community and the considerations specific to prevention research. **Objective:** By engaging professional and community experts, we sought to identify the ethical issues, motivators, and barriers pertaining to social media engagement for dementia prevention research. **Methods:** We conducted semi-structured, qualitative interviews with professional experts working in dementia research (n=15; e.g., researchers) and experts with lived experience (n=14). Experts were from Canada, the USA, the UK, and South America. Discussions were analyzed using thematic qualitative analysis methods. **Results:** Professional experts revealed a dearth of social media guidelines for prevention research, relying on informal sources to supplement ethics board approval. They sought methods of strategic communication for public dialogue (e.g., misinformation, criticism). Experts by experience valued the educational benefits of social media but risks such as diminished online privacy, dementia-related stigma, being targeted for predatory practices, and misinformation were major ethical concerns. Various digital inequities (e.g., age, socioeconomic) dampen social media's reach to diverse publics. Participants acknowledged that younger aging populations have more digital fluency and may benefit more from social media research

engagement. **Conclusion:** Diverse experts identified ethical and contextual factors surrounding social media engagement for dementia prevention, and a need for more guidance. Our results will inform the co-creation of ethical guidelines for brain health research.

Blood Pressure Estimation in Health Smart Homes using Multi-Modal Machine Learning Hadi Hojjati, McGill University

Our project aims to develop a non-invasive framework for blood pressure monitoring that can be integrated into the infrastructure of smart homes. Blood pressure is a critical indicator of cardiovascular health, and early detection of abnormalities in blood pressure can prevent the onset of heart diseases and stroke. But the current blood pressure monitoring methods, such as cuff-based devices, require patient compliance and may not provide continuous monitoring. We aim to develop a system that continuously utilizes data from non-invasive sensors to estimate blood pressure without patient intervention. In this project, we are working on a dataset containing the video and the ECG, BCG, and PPG recordings from various subjects in normal, low-pressure, and high-pressure conditions. It also includes the ground truth values of Blood Pressure. The project's main goal is to develop a customized deep-learning algorithm to analyze the data collected from these sensors and derive accurate blood pressure estimates. The system could be integrated into smart homes with advanced sensors and connectivity infrastructure, enabling continuous monitoring and analysis of multiple vital signs. The proposed system will help physicians and caregivers to remotely monitor patients' health in real-time, allowing early detection and intervention in case of abnormalities. The project's outcome is expected to significantly impact elderly seniors who wish to live independently, enabling early detection and prevention of cardiovascular diseases, improving the quality of life for patients, and reducing healthcare costs.

A Pilot Investigation of Simulated Hip Impacts with a Fall Injury Prevention Bedside Mat Mayank Kalra, University of Waterloo

Falls cause the majority of hip fractures in older adults. Interventions that reduce fall-related impact forces potentially decrease hip fracture risk. While our residential care partner purchases bedside mats to reduce fall-related injury risks, there is limited evidence supporting their purchase decisions. This study aims to characterize the impact force attenuation in a bedside mat utilized by one Schlegel Villages care facility in Waterloo, ON and attest its viability for future work to better inform clinical decisions. A CSA compliant ballistics gel hip form was created and instrumented with a load cell in the femoral neck region. A drop tower with a surrogate pelvis was used to impact the hip at low, medium, and high velocities (1, 2, and 3 m/s) in padded (with mat) and unpadded (without mat) configurations. Peak impact velocities and forces at the femoral neck and force plate were recorded during three trials for each velocity. The mean of each trial was computed. Peak impact velocities were within 0.1%–3.7% of the target velocities and impact trials were consistent with coefficient of variations between 1–4%. The mat reduced peak femoral neck impact forces by 13%–69% depending on the impact velocity. A previous study reported pelvic impact attenuations of 16–23% in the 'medium' and 'high' impact configurations on workplace mats with a similar hip impact simulator. The mat tested in this study is viable in future work to predict hip fractures using a probabilistic model or measure older adult balance and mobility performance.

Social Isolation in Older Adults Post Hip Surgery is Correlated with Mobility and Physiological Indicators Shehroz Khan, Toronto Rehab Institute

Hip fracture affect approximately 30,000 people in Canada costing the Canadian government about \$650 million annually. Older adults post hip-fracture surgery experience social isolation (SI) along with reduced physical mobility, changes in sleeping patterns, and other physiological changes once discharged from

inpatient rehabilitation. Our team has developed MAISON (Multimodal AI-based Sensor platform for Older iNdividuals), a cloud-based multimodal sensor system supporting the collection of physiological, ambient and contextual data from various smart devices. Currently, MAISON consists of a smart watch, a smart phone, a motion sensor and a sleep mattress. Using MAISON, we have collected 24 weeks of raw acceleration data, heartrate, step count, frequency of indoor motion, GPS and sleep metrics from three older adults post-hip surgery living in the community. Additionally, clinical data including three questionnaires (e.g., Social Isolation Scale (SIS)) and two physical tests were collected on a biweekly basis via video calls. From the multimodal sensor data collected, statistical and domain-specific features were extracted with a one-day time window including average heartrate, maximum acceleration, total sleep time, total steps taken, and average number of exits. Using Spearman coefficient, correlation analysis was performed between features from sensor data and the clinical data. The correlation analysis showed a strong positive correlation (>0.5) between SIS and number of exits, variance of acceleration, total sleep time, and heartrate variance. The correlation analysis also resulted in various correlation values between features from all the sensors and SIS, indicating the usefulness of complementary multimodal sensors data in this population.

Caring Beyond Borders: Financial Well-being of Transnational Families Andrew Magnaye, University of Alberta

It has been estimated that by 2041 more than half of the Canadian population will be immigrants or children of immigrants born in Canada. Recently, the Government of Canada outlined a new immigrant plan to fill labour market shortages across the country and help the Canadian economy recover from the impacts of the global pandemic, showing their reliance on the contributions of immigrants to the paid labour force. However, for immigrants in Canada, with children, parents or grandparents in their country of origin with chronic health conditions or other care-related needs, the care for these family members must be negotiated and provided at a distance. Transnational care, or the care provided to family members across international borders is far from a new phenomenon. Researchers have been paying attention to how families are navigating spaces in both countries of origin and destination, as well as the intermediate spaces that are created by family members who migrate and choose to maintain transnational ties. With the focus on financial wellness and employment, this presentation will explore the role of technology in closing the gap between members of transnational families separated by borders and the economic consequences these transnational care families are currently facing. Transnational care offers a burgeoning area for discovering the interconnections between paid work environments, cultural obligations to care and family level contexts when broadening our definitions of what being a part of a “family” means today.

A Novel Mobile Application Improves Ambulation Skill in Walking Aid Users Maureen O'Brien, University of Calgary

Background: Walking aids (WA) are commonly used to facilitate independent mobility in older adults. However, inadequate fitting and training on the use of WAs may increase the risk of pain and falling. To address this, we developed a mobile application called Improving Canadians' Walking Aids skills, Learning, & Knowledge© (ICanWALK©), which teaches appropriate WA use. **Objectives:** 1) To evaluate the effect of the ICanWALK© app on WA users' balance, mobility, and balance confidence. 2) To assess user satisfaction with the app. **Methods:** Four WA users (mean \pm SD age: 57 \pm 14; 3 males) completed the Activities-specific Balance Confidence (ABC) Scale, 2-minute Walk Test (2MWT), Timed Up and Go (TUG), Berg Balance Score (BBS), and Walking Aid Skills Test© (WAST©) at baseline. Participants then used the ICanWALK© on two occasions (baseline, 2 weeks). After the 2-week app session, outcome measures were repeated, and user satisfaction was measured qualitatively. **Results:** After using the app, WAST© score improved (median change +4.8, range 0 to 13.3) and 2MWT distance decreased (-13.1, -24.5 to

+2.0m). There was no effect on ABC (+8.3, -2.2 to +72.1%), TUG (0.1, -1.1 to 0.3s), or BBS (1; 0). One participant reported that the app was “informative”, and another reported that it was “easy to use and understand”. **Conclusions:** Using the ICanWALK© app improves performance of common ambulatory tasks with WA. In this small sample with no control group there was no change in balance or mobility.

Public Policies on Innovative Health Technologies: The Role of Researcher-Developers and the Importance of Ethical Reasoning in Promoting Change Alex Paquette-Guay, Université de Sherbrooke

In the context of home care and long-term care, social assistance robots (SARs) have emerged as an attractive technological solution to meet the needs and aspirations of the elderly. However, these scientific advances could be disrupted or even slowed down by public policies that are inconsistent with or behind the latest technological developments. That said, robotics researchers may become influential players in the integration of SARs into public or private care for the elderly. However, in many health care systems around the world, there remains a significant gap between knowledge generation and its use in real-world settings, and there is little foresight on the impact of research on subsequent public policy. The purpose of this proposal is to present preliminary findings from a qualitative data collection, aimed at describing the relationship between researchers and policy makers in Quebec and Ontario and documenting researchers' strategies and ethical reflexes in promoting policy change. The research results will help guide political and scientific actors in the implementation of coherent public policies regarding technological innovations in health and will highlight the importance of ethical reasoning in promoting these innovations.

Reducing Simulator Adaptation Sickness with the Virage VS500M-R Driving Simulator Meg Schwellnus, Bruyere Research Institute

Introduction: There are two methods for evaluating an older adult's driving risk. The gold standard is an on-road driving test, though it is costly, potentially dangerous, and difficult to access. The second approach is a proxy cognitive test, evaluating aspects of cognition relevant to driving skill. There is need for a third option, which driving simulators may satisfy. They could be a cost-effective, safe, relevant, and reproducible method. However, when using simulators, simulator adaptation sickness (SAS), a type of motion sickness, can occur. **Methods:** A study collecting a normative data set with the Virage VS500M-R driving simulator began in March 2023. The study set out to collect demographic data (age, sex, and driving experience), driving simulator data from a set of driving scenarios, and emergence of SAS symptoms. **Results:** For the first nine participants, 67% (6/9) of participants could not complete the testing session due to emergence of SAS symptoms. Because the rate of sickness was much higher than that found in the literature, a meeting was held with the creators of the simulator. **Conclusions:** The changes to be made to the system include: 1) Changes of test sequence (i.e. increasing break times); 2) Changes of test room environment (i.e. increasing air flow); 3) Changes to the physical simulator (i.e. removing seat motion); and 4) Changes to the “visual flow” (i.e. covering the tops of the side screens). The next steps are to have participants complete the new testing and assess whether these changes reduce the rate of SAS symptoms.

Balancing Safety and Autonomy: Exploring Stakeholder Attitudes Towards Real-Time Location Systems in Long Term Care Homes Kyle Smilovsky, Wilfrid Laurier University

Objectives: Real-time location systems (RTLs) are increasingly being used to track the activities of older adults with cognitive impairment in institutional care settings. Anticipated benefits include higher quality of care and improved safety). Research suggests that there may be “value tensions” between stakeholders when RTLs are implemented in long term care homes. This implementation case study in a privately-owned long term care home (LTCH) in Ontario, explored the attitudes and experiences of residents, care

partners, and organizational decision-makers with the implementation of an RTLS. Using a mixed methods design, residents, care partners, institutional decision-makers, and front-line staff completed a brief survey then participated in two in-depth semi-structured interviews six months apart. Interview questions explored participant values and preferences for RTLS, decision-making with respect to adoption and refusal, and alignment of implementation decision-making and institutional goals and values. Thematic analysis identified inconsistencies between the goals of RTLS and stakeholder values. **Results:** Participants (N=60) demonstrated a limited understanding of the RTLS (e.g., how it could be used, data storage, and issues related to privacy and autonomy). Residents were generally unaware of its purpose, and more concerned with its aesthetics. Care partners acknowledged RTLS were inconsistent with resident values but placed safety and standards of care ahead of privacy. Organisational decision-makers and staff valued different RTLS goals. **Conclusions:** The use of pervasive monitoring technologies in long term care homes to enhance safety and quality of care may be perceived differently by stakeholder groups.

MATCH: a mixed-reality assistive technology for cognition for older adults with neurocognitive disorders *Guillaume Spalla, Université de Sherbrooke*

Introduction: The societal and economic impacts of providing care and services to older adults with neurocognitive disorders (NCD) are significant. One opportunity to mitigate these impacts is to support independence at home for older adults with NCD through assistive technologies for cognition. Mixed reality headsets is an emerging technology with benefits that could be useful in this context, although they are seldom used. **Presentation objectives:** This presentation introduces MATCH, a mixed reality assistive technology for cognition, whose objective is to provide assistances as needed to support the realization of daily activities. First, an overview of the design process will be presented, followed by a demonstration. **Methodology:** The development was done in a user-centered design framework, including analysis of observational data and involvement of experts in the field. **Results and conclusion:** MATCH was developed in seven iterations, each concluded by evaluations with experts or by user tests. MATCH was designed using a generic approach to support various activities. It is context sensitive, providing the user with the necessary and sufficient assistance to continue to perform their activities independently. The assistances (icons, texts, etc.), integrated in the user's environment, have mechanisms to attract the user's attention when needed, and are delivered in a gradual approach to support their residual cognitive abilities. Preliminary results suggest that MATCH adapts to different user behaviors and provides the necessary and sufficient amount of assistance. The next step is to conduct usability testing with healthy older adults and with mild NCD.

Older Adults' Access to Technology: Financial Well-being Matters *Karen Wong, University of British Columbia*

Background: More healthcare and social services are moving online and remotely. Access to technology is becoming a necessity for older adults to access to them. This presentation will discuss the access to the technology of older adults. It will highlight that the financial well-being of older adults matters to their access to technology. **Method:** We explored the topic using qualitative research methods. We interviewed 28 stakeholders, including older adults who are volunteers supporting other older adults, older adult service providers, and policy developers across British Columbia, Canada and observed in service provision sessions. We conducted a thematic analysis following a mix of inductive and deductive approaches. **Findings:** We identified themes and selected those related to the financial well-being of older adults and their access to technology for this presentation. 1. Older adults' access to technology requires technological equipment, the Internet, knowledge, and confidence. 2. There are within-group variations among older adults in access to these resources. Some groups experience more challenges than others in access to these resources, e.g., low-income, socially isolated, and immigrants. 3. Community organizations

play a role in supporting older adults' access to these resources. Yet, community organizations generally are underfunded, and the funding is unstable. **Implications:** The findings of this study have been adopted to support the national advocacy work for older adults' access to affordable Internet and successfully lobbied a telecommunication company to extend their low-cost Internet program for low-income older adults. Co-Authors: Andrew Sixsmith, Leslie Remund

“We are together in different places” – Stay connected via telepresence robots in long-term care Joey Wong, University of British Columbia

Background: Visitation restrictions, multiple COVID-19 outbreaks, and understaffing issues have aggravated older adults' isolation and quality of life in long-term care homes. Frontline staff are strained to provide the best care for residents. Family members, living near or far, strive to balance between caring for their relatives and their personal wellbeing and family responsibilities. There is an urgent call to address loneliness and older adults' unmet needs while supporting family members and healthcare staff. Telepresence robots enable family members remotely to initiate and control the robot without the need for staff assistance. **Methods:** Our research team involves people living with dementia, family partners, frontline staff, researchers and trainees. This patient-oriented research is to explore the impact and challenges of implementing telepresence robots in four long-term care sites in Vancouver, British Columbia. We used purposive sampling to recruit nine residents and their family members. During the 12-40 weeks of robot use, we interviewed residents, family members, and staff and observed some resident-family interactions during the calls. Thematic analysis was performed. **Findings:** We identified five themes: 1) Stay connected, 2) Regain autonomy, 3) Relieve caregiver burden, 4) Environmental and technical issues, and 5) Scheduling concerns. **Implications:** The findings provide insights to researchers and healthcare leaders on the impact of telepresence robots on residents and their families and the barriers to implementation in long-term care. We offer pragmatic recommendations for adopting telepresence robots to support social connections and enhance the quality of life for residents in long-term care.

“There's lots of living in between:” Uncovering Structures Influencing the Care Experiences of Chinese Canadian Prostate cancer survivors to cultivate cultural safety and relationality in digital health Karen Young, University of Toronto

Background: Prostate cancer (PCa) is the most commonly diagnosed non-skin cancer for Canadian men, straining systems to provide care. Virtual care can be one way to relieve this strain, but survivors' care needs and technology use are influenced by intersecting social and cultural structures. Cultural adaptation has been posited as an effective method to tailor existing interventions to better serve diverse communities, including Chinese men. However, cultural adaptations may draw attention away from structural inequities, and inadvertently increase their effects instead. **Objective:** This study used qualitative methods to (1) explore the perceptions and experiences of Chinese Canadian PCa survivors with follow-up and virtual care, and (2) identify implications for the cultural adaptation of the Ned Clinic application. **Methods:** A community-based participatory approach was used, informed by cultural safety and user-centred design principles, to invite Chinese Canadian PCa survivors and their caregivers to share their stories. Data were inductively analysed to explore their unmet needs, common experiences, and levels of digital literacy. **Results:** Unmet needs and technology literacy preferences were similar to broader trends within the wider survivor community. However, participants indicated that they felt uncomfortable, unable to, or ignored when expressing their needs. Systemic changes were identified as necessary to improve care delivery and wellbeing, rather than designing only to accommodate culture.

Long Term Use and Perceived Effectiveness of COOK-My Safety for Older Adults: A Multiple-Case Study *Amel Yaddaden, Université de Montréal*

Our team developed COOK (Cognitive Orthosis for Cooking); an ambient assistive technology that offers support on a touch screen installed at the stove while preventing fires. In a previous study, we conducted usability testing sessions with seniors and various stakeholders anchored in 2 co-design cycles that resulted in the development of a simplified safety-oriented version called COOK-My safety. This version has not yet been tested in seniors' homes over a long period of time. The aims of this study were to identify (1) the main usability issues that may interfere with the use of COOK-my safety by seniors in their homes over a long period of time; (2) how to improve its future larger scale deployment and (3) the facilitators and obstacles to its long-term use. We conducted a multiple-case study combining mixed-methods approaches with 4 seniors living in a residence. They each had a COOK-My Safety installation in their kitchen over a 5-to-6-month period, 2 sessions of errorless training on its use, a bi-weekly follow-up call and 3 to 5 home visits. Barriers and facilitators were assessed via a final individual interview. All the verbatim will be analyzed through qualitative thematic analyses. Preliminary results suggest a significant decrease in the number of usability issues over time. Minor interface modifications were proposed by the participants, including the addition of a remote-control capability for the tablet computer. Further in-depth analysis will provide a better understanding of the drivers of adoption of such technology within this type of institution. Co-Authors: Bottari, C., Couture, M., Lussier, M., Kenfack-Ngankam, H., Giroux, S., Pigot, H., Fillou, R-P., Bier, N.