



# CONFERENCE PROGRAM

## **Welcome Message from AGE-WELL NCE**

Now in its 3rd year, the AGE-WELL EPIC Conference has grown to be the largest trainee conference at the intersection of health, aging, and technology. We welcome a truly global audience and are delighted by the continued support we receive from partners and attendees worldwide – it underscores the universal natures of AGE-WELL’s mission to accelerate the delivery of technology-based solutions that make a meaningful difference in the lives of older adults and caregivers.

Over the next 10 days, you will hear from graduate students, postdoctoral fellows, early career professionals, and research staff from institutions across Canada. Many will be presenting alongside stakeholders with lived experience and expertise. True collaboration and participation with network stakeholders – especially older adults, caregivers, and AGE-WELL community and industry partners – has been fundamental to the development of the network and we would like to thank each one for their time and expertise.

In addition to research panels, you will hear and participate in a series of expert panels, discussions, workshops, and networking events hosted by AGE-WELL partners. We encourage you to participate in as many of these sessions as you can and learn more about the wider AgeTech community.

The future of the Canadian AgeTech sector has never been brighter. We look forward to hearing from sector’s brightest stars and the innovators of tomorrow during the EPIC Conference 2022.



Alex Mihailidis,  
AGE-WELL Scientific  
Director and CEO

## **Land Acknowledgement**

Although we are meeting virtually, we would like to acknowledge the Indigenous Peoples of all the lands our speakers inhabit. We do this to reaffirm our commitment and responsibility in improving relationships between nations and to improving our own understanding of local Indigenous peoples and their cultures. We encourage you to reflect on the land on which you're located, and to consider your relationship to the land and to the people who are the traditional keepers of that land.

The AGE-WELL network office operates on the traditional territories of many Indigenous Nations, which have cared for the land for thousands of years, including Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples; and we recognize the current treaty holders, the Mississaugas of the Credit First Nation. This land remains home to many diverse First Nations, Inuit, and Métis peoples, and is subject to the Dish with One Spoon Wampum, which is an agreement to peaceably share and care for the Great Lakes region.

We are grateful to have the opportunity to work on this land today and acknowledge our accountability and responsibility to further the reconciliation process. AGE-WELL is committed to fostering equitable and inclusive practices across all of its programs and practices and explicitly welcomes and strives to incorporate Indigenous Ways of Knowing and Being throughout our research and education programs.

## **How to Participate**

The EPIC Conference (2022) is an opportunity for AGE-WELL HQP to share their research, highlight their potential impact, and connect with colleagues.

It will comprise of 8 virtual sessions, each dedicated to one of the identified challenge areas. Additional sessions will include 4 French language sessions, and Friday AGE-WELL partner-hosted sessions with 2 expert panels, a workshop and an EPIC networking event.

**All are welcome to attend.**

## **Live Crowdcast Presentations:**

These 8 sessions will be hosted on Crowdcast and comprise of an introduction to the challenge area presented by the session chair, 3 oral presentations with one or more stakeholder co-presenter to discuss their experience. These sessions will close with a follow up discussion that places these presentations into the larger discourse and addresses potential research impact.

Register for all challenge area sessions on AGE-WELL's Crowdcast page [here](#). Once you are registered you may use the chat and post questions prior to the session. Use the 'Ask a Question' section to get your questions up-voted.

Check out Crowdcast's reference guide [here](#).

## Live Partner Hosted Sessions:

Friday, June 3 and Friday, June 10, additional sessions will include an EPIC networking event hosted by Jennifer Polk (From PhD to Life), an APPTA policy workshop, a MIRA panel that discusses how to build equity in AgeTech, and a STAR Institute roundtable on how to get published. Register for these Zoom sessions using the individual links on the pages to follow.

AGE-WELL partners are hosting 4 sessions en français that highlight the research and innovation of our French-speaking trainees, ERCs, and investigators from across Canada. Two sessions are co-listed in collaboration with the INTER-REPAR Summer School on Technology. [Register for French language sessions here](#) or on the pages to follow.

We would like to sincerely thank our AGE-WELL partners (below) for contributing sessions for EPIC Conference (2022).



## Code of Conduct

AGE-WELL's EPIC Conference 2022 is designed to increase interaction, engagement, collaboration, connectivity and community in an environment of mutual human respect. We recognize a shared responsibility to create and hold that environment for the benefit of all. Speakers are asked to frame discussions as openly and inclusively as possible and to be aware of how language or images may be perceived by others.

We value the participation of each member of the community and endeavor to deliver an enjoyable and fulfilling experience. EPIC Conference participants are expected to conduct themselves with integrity, courtesy and respect for others and maintain the highest level of professionalism at all event sessions. Disruptions that interfere with the event experience for other attendees are not permitted. All attendees, speakers, organizers, partners, sponsors and staff are required to observe this Code of Conduct.

Our conference is dedicated to providing a harassment-free conference experience for everyone, regardless of gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religious or spiritual beliefs and practices, or technology choices.

Be kind to others. Do not insult or demean participants (e.g., aggressive commentary in session chats or in the event app; bullying behaviours). Harassment in any form, ageist, sexist, racist, or exclusionary jokes are not condoned at the EPIC Conference. EPIC Conference participants violating these rules may be expelled from the event at the discretion of the event organizers.

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact the organizing team immediately. You can contact event staff via email at [info@agewell-nce.ca](mailto:info@agewell-nce.ca).

Thank you for helping to make this a welcoming event for all.



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**EPIC Conference 2022 Opening**

Josephine McMurray, Associate Scientific Director, AGE-WELL NCE  
12:45pm to 1:00 pm ET

Chair: Jeffrey Jutai, University of Ottawa

**Presentations:**

**Do pandemics change how older adults fall on stairs? – Differences between 2019 and 2020 in the circumstances and frequency of stairway falls involving hospitalizations in older adults**

*Vicki Komisar, University of British Columbia, and Paul Lea, Dementia Advocate*

**Community Connectors: Community coming together to assist older adults who are socially isolated and lonely**

*Lyne Ouellet, University of New Brunswick and Betty Daniels, Meals on Wheels Fredericton Inc.*

**TRILL - A Pandemic Work in Progress**

*Richard Barham, Université Laval*



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Chair: Don Juzwishin, University of Victoria

Presentations:

**Developing Spatiotemporal Features from Real-Time Location System Data to Assess Social Engagement in People with Dementia**

*Elham Khodabandehloo, Toronto Rehab Institute, University Health Network*

**Policies to support older adults' health self-management using information and communication technologies**

*Amélie Gauthier-Beaupré, University of Ottawa*

**Investigating the challenges of accessing senior healthcare services for aging adults with developmental disabilities**

*Samuel Neumark, University of Toronto, and Sandy Stemp, Reena*



**AGEWELL**  
Conférence 2022  
**EPIC**

**INTER**  
INGÉNIERIE DE TECHNOLOGIES  
INTERACTIVES EN RÉADAPTATION

**REPAR**

**Conférence EPIC 2022**  
**Innovation responsable et utilisabilité des  
technologies en réadaptation**

Mardi 31 mai  
17h30 - 18h30 ET

**#AWepic2022**

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This conference session, given as part of the INTER-REPAR Summer School, will address the following questions:

- What are the important values to consider in the development of responsible health innovations?
- How does one evaluate the usability of a rehabilitation technology?

This session will present and discuss a framework for responsible health innovation. Additionally, available tools will be presented that support engineers and clinicians in integrating components that address ethical, economic, social and ecological societal challenges into the design of a new technology.

**Speakers:**

**Marie-Pier Gagnon**, PhD, Faculty of Nursing, Laval University

**Claude Vincent**, PhD, Department of Rehabilitation, Laval University

This session will be in French.



**AGEWELL**  
Conférence 2022  
**EPIC**

**INTER**  
INGÉNIERIE DE TECHNOLOGIES  
INTERACTIVES EN RÉADAPTATION

**REPAR**

**Conférence EPIC 2022**

**Une visite virtuelle du 3IT axée sur les  
technologies d'assistance et d'entraînement**

**Mercredi 1 juin**  
**9h00 - 10h00 ET**

**#AWepic2022**

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During this workshop, attendees will virtually visit the laboratories of the 3IT (Institut interdisciplinaire d'innovation technologique) at the University of Sherbrooke. Several research teams will present assistance and training technologies, such as interactive robots of all kinds. This session is given as part of the INTER-REPAR Summer School.

**Speakers:**

**François Michaud**, Eng. PhD., 3IT, Université de Sherbrooke

**Éléonor Riesco**, Eng. M.Sc., 3IT, Université de Sherbrooke

**Mathieu Hamel**, Eng. M.Sc., 3IT, Université de Sherbrooke

**Dominic Létourneau**, Eng. M.Sc., 3IT, Université de Sherbrooke

**François Grondin**, Eng. PhD., 3IT, Université de Sherbrooke

**François Ferland**, Eng., PhD., 3IT, Université de Sherbrooke

This session will be in French.



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Chair: Lili Liu, University of Waterloo

Presentations:

**Locator Technology and the Human Rights of People Living with Dementia**  
*Adebusola (Busola) Adekoya, University of Waterloo*

**Lessons Learned Implementing SMARTech for Older Adults to “Live More” in Continuing Care**  
*Carlee MacNeill, Dalhousie University, and Ian Goldman, SMARTech Project*

**Co-Creating Digital spaces to share Elders and Knowledge Keeper Stories**  
*Violet Ignace, University of British Columbia*



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Chair: Julie Robillard, University of British Columbia

**Presentations:**

**Assessing the Best Buy Assured Living Sensor System: Sensors as part of the aging journey**

*Laura Ault, Bruyère Research Institute*

**A neuroscience-guided smartphone app to improve memory for everyday events**

*Bryan Hong, University of Toronto*

**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, and Mr. Victor Starr, Star Blanket Cree Nation*

The banner features a dark blue background with a network of glowing blue nodes and lines. On the left, there is a white rounded rectangle containing the event details. The AGEWELL EPIC Conference 2022 logo is on the left, and the 'From PhD to Life' logo is on the right. The event title and date are centered in the white box, and a red button with the hashtag #AWepic2022 is at the bottom.

**AGEWELL  
EPIC  
Conference 2022**

**From  
PhD to Life**

**EPIC Conference 2022 Networking**  
**Making Connections: An EPIC Networking Event**

Friday, June 3 | 12:00 - 1:00 PM ET

**#AWepic2022**

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Meeting people virtually is easy, but how do we make meaningful connections? This EPIC Networking Event is your opportunity to practice your personal pitch and build connections in a welcoming space of like-minded HQP and members of the AGE-WELL community. Jennifer Polk (From PhD to Life), career coach and educator, will demystify networking and guide participants through a brief exercise to help you determine what will work best for you. Then, you will practice networking in small groups with the goal of making lasting connections!

Networking Objectives:

- Practice clearly communicating about your strengths and skills
- Build confidence when talking about yourself
- Learn to ask questions to connect and include others
- Make 2 connections to follow-up with post-session

Speaker:

**Jennifer Polk**, PhD, is a career coach and educator. She regularly facilitates professional development workshops and delivers presentations for students and postdocs. Her University Affairs blog was a three-time gold winner from the Canadian Online Publishing Awards. Jen's essays have also appeared in *Inside Higher Ed*, the *Chronicle of Higher Education*, the *Globe and Mail*, *Academic Matters*, as well as in three books. More recently, she was an expert panelist for the 2021 Canadian Council of Academies report, [Degrees of Success](#), on the challenges PhDs face transitioning to employment. In addition, Jen currently serves on the board of directors for CAGS, the Canadian Association for Graduate Studies. She earned her PhD in history from the University of Toronto. Find Jen online at [From PhD to Life](#).

The graphic features a dark blue background with a network of glowing blue nodes and lines. On the left, a white rounded rectangle contains the following text and logos:

- AGEWELL EPIC Conference 2022 logo
- AGEWELL APPTA POPRAVIT logo with the text "NATIONAL INNOVATION HUB • CENTRE NATIONAL D'INNOVATION" below it.
- EPIC Conference 2022 Workshop**
- Bridging the gap: Engaging in the policy space as a health researcher**
- Friday, June 3 | 1:30 – 2:30 PM ET
- A red button with the text **#AWepic2022**

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AGE-WELL HQP have successfully applied their research to inform policies that directly affect older adults and caregivers. Overcoming research and government sector silos is a major challenge to the development of real-world policies. In this interactive workshop, we will highlight the research to policy gap, introduce the 6 P's of policy development, and discuss methods and strategies we can use as researchers to understand where and how research evidence can inform public policy.

Join this workshop to:

- Understand where and how research evidence can inform public policy
- Discuss your research and its possible policy applications
- Develop an issue statement with the support of the APPTA team

**Speakers:**

**Jenna Roddick**, Manager of Operations, AGE-WELL National Innovation Hub – APPTA

**Patrick Patterson**, Knowledge Broker, AGE-WELL National Innovation Hub – APPTA

**Norma Chinho**, Knowledge Broker, AGE-WELL National Innovation Hub – APPTA



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Chair: Marla Beauchamp, McMaster University

Presentations:

**Evaluation of a web-based intervention for wheelchair follow-up and training of older adults and their caregivers**

*Adib Boudaouara, Université de Montréal*

**Imperceptible Vibration Effect on Sensorimotor Function in Older Adults with Diabetic Neuropathy**

*Changki Kim, University of British Columbia*

**Balance Rehabilitation for People with Dementia: Clinician Experts Informing Exergame Design**

*Erica Dove, University of Toronto, and Olive Bryanton, Older Adult and Caregiver Advisory Committee*



## Conférence EPIC 2022

**Des perspectives et des domaines différents unis pour un même objectif en robotique pour les personnes âgées**

Mardi 7 juin  
12h00 - 13h00 ET

**#AWepic2022**

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In Canada, the SMART project team is exploring ways to use social assistance robots (SARs) to facilitate the care of older adults. However, bringing them into society is not without its challenges. This session will focus on three areas for consideration:

- Proposing SARs that can be useful and tailored to individual need.
- Identifying strategies that will allow public policies to evolve and be more in line with the state of research in this technological sector, and facilitate dialogue between decision makers and researchers.
- Knowing and understanding the regulation of robotics and artificial intelligence systems.

#### Moderator:

**Adina Panchea**, Université de Sherbrooke

#### Presenters:

**Marc-Antoine Maheux**, PhD student, Robotics, Université de Sherbrooke

**Alex Paquette Guay**, PhD student, Practical Philosophy in Applied Ethics and Politics, Université de Sherbrooke

**Alexandra Bouchard**, PhD student, Law, Université de Sherbrooke

This session will be in French.



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Chair: Andrew Sixsmith, Simon Fraser University

Presentations:

**Feasibility of a remote clinical trial in older adults with type 2 diabetes: findings from the MOTIVATE T2D Trial**

*Jonathan Low, University of British Columbia*

**Effects of Virtual Reality Mindfulness Meditation in Older Adults: The protocol of a Pilot Randomized Controlled Trial**

*Harmehr Sekhon, McGill University*

**Honouring Traditional Healers in Indigenous-led Health Service Partnerships: A Two-Eyed Seeing Integrative Review of Indigenous Health Services**

*Viviane Josewski, University of British Columbia*

**Examining the Intersection Between Sex-and Gender-Based Considerations and Exercise-Based Telerehabilitation among Individuals with Stroke: A study proposal**

*Elise Wiley, McMaster University, and Jennifer Monaghan, Stroke Survivor*



**AGEWELL  
EPIC  
Conference 2022**

**7** **Staying  
Connected**

**Wednesday, June 8  
1:00 – 2:30 PM ET**

**#AWepic2022**

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Chair: Ron Beleno, Older Adult and Caregiver Advisory Committee

Presentations:

**Mobilizing person-centered media environments in long-term care**

*Sarah Wagner, University of Victoria, and Miranda Cary, Vancouver Island Health Authority*

**Aging In Place with Online Communication Assistive Technology during COVID-19. The Benefits of Social Connection on Mental Health.**

*Matilde Cervantes, University of Victoria, and Paul Green, CanAssist*

**Usability of a Mobile Technology to Support Caregivers of Older Adults and Persons Living with Dementia in Care Facilities**

*Hector Perez, University of Waterloo*



The banner features a dark blue background with a network of glowing blue nodes and lines. On the left, the AGEWELL logo is displayed in red and white, with 'Conférence 2022' and 'EPIC' below it. To the right are three logos: 'Réseau Québécois de Recherche sur le Vieillessement' (a stylized 'V' with a green dot), 'Centre de recherche iugm Institut universitaire de gériatrie de Montréal' (a stylized 'iugm' with a green dot), and 'Centre de recherche interdisciplinaire en réadaptation du Montréal métropolitain' (CRIR, a stylized 'CRIR' with a yellow and red figure). The main text is centered in white and red: 'Conférence EPIC 2022', 'Le développement de technologies avec et pour les personnes âgées : l'effet catalyseur des laboratoires vivants', 'Jeudi 9 juin', and '12h00 - 13h00 ET'. A red button at the bottom contains the hashtag '#AWepic2022'.

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A living lab is generally defined as an ecosystem of partners working collaboratively to develop an innovation. Living Labs allow for the needs of a range of stakeholders in the field of technology and aging to be considered and addressed, thereby fostering the development of sustainable solutions. This session of presentations aims to illustrate, in a concrete way, how living lab projects are conducted, the challenges and strengths of this approach, and recommendations for the future of research in the field of technology and aging.

**Moderator:**

**Amel Yaddaden**, Université de Montréal

**Presenters:**

**Maude Viens**, Université de Sherbrooke; Research Centre on Aging of the CIUSSS de l'Estrie-CHUS; AMORA.

**Aline Aboujaoudé**, Université de Montréal; Le16.

**Nancy Azevedo**, Centre for Interdisciplinary Research in Rehabilitation of Greater Montreal (CRIR), VITALISE project



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Chair: Virginie Cobigo, University of Ottawa

Presentations:

**MCI@work: the adaptive technological strategies to sustain employment among people with MCI or young onset dementia in the workplace**

*Kristina Kokorelias, Sunnybrook Health Sciences*

**Can technologies help prevent financial abuse?**

*Golnaz Ghaderi, University of Ottawa, and Carol Holmes-Kerr, Caregiver*

**"I can do it all, I think?..": Building the Business Case in Support of Employed Caregivers**

*Andrew Magnaye and Choong Kim, University of Alberta*

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**AGEWELL  
EPIC  
Conference 2022**

McMaster  
University

Institute  
for Research  
on Aging

**EPIC Conference 2022 Panel**

**Bridging the digital divide:  
Equity in aging, health and technology**

Friday, June 10 | 11:00 AM - 12:30 PM ET

**#AWepic2022**

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Digital technology is transforming the ways we work, interact, access health and social services, and how we experience aging. Mobility in the digital world mirrors “real world mobility”; barriers to access services and programs can restrict older adults’ ability to age well and experience optimal social, physical, community, financial and digital mobility. As the pandemic has made clear, digital platforms presenting complex and conflicting information have impeded individuals’ ability to assess risk, and make informed and optimal decisions. Technologies — such as smart devices, the internet of things, wearables, remote monitoring, virtual care platforms, artificial intelligence, and big data analytics— can improve independence, quality of life and health outcomes. As increasingly powerful platforms are developed, we must consider how issues related to ethics, fairness, design, and data impact how older adults experience aging.

Participants will learn to:

- Define data poverty and identify approaches to improve representation in health data systems.
- Describe how wearable sensors can monitor and assess mobility, and identify potential issues in the development of current technology which limit their application to older adults.
- Understand the role of accessibility in engagement of older adults, and the importance of context in older adults’ engagement in digital literacy training.

**Moderator:** Audrey Patocs, McMaster Institute for Research on Aging (MIRA)

**Presentations:**

**Equity in aging: Bridging the digital divide by ensuring representation in data-driven systems**

*Cynthia Lokker, McMaster University*

**Technology for aging is still young**

*Dylan Kobsar, McMaster University*

**Access and Adaptability: Learning from Community Based Literacy Projects for Older Adults**

*Tara Larose, McMaster University*

A promotional banner for the EPIC Conference 2022 Panel. The background is dark blue with a network of glowing blue nodes and lines. On the left, there is a white rounded rectangle containing the AGE-WELL EPIC Conference 2022 logo, the STAR INSTITUTE logo (Science and Technology for Aging Research, Simon Fraser University), the text 'EPIC Conference 2022 Panel', 'Get Published', 'Friday, June 10 | 2:00 - 3:00 PM ET', and a red button with the hashtag '#AWepic2022'.

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Publishing is a fact of academic life. In this session learn how to maximize your publication potential and work with AGE-WELL to contribute to grow the AgeTech field. You'll hear from former AGE-WELL Scientific Director, Andrew Sixsmith about the ways in which you can work with AGE-WELL to get your work published and learn directly from a panel of HQP who worked with us to successfully publish their work as both academic books and journal articles.

**Panelists:**

**Dr. Charlene Chu** is an Assistant Professor at the Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto (2019), and an Affiliate Scientist at KITE Toronto Rehab at the University Health Network. She is also cross-appointment (status only) with the Factor-Inwentash Faculty of Social Work's Institute for Life Course & Aging at the University of Toronto.

**Dr. Mei Fang** is a Lecturer in the School of Health Sciences, University of Dundee and Adjunct Professor in the Department of Gerontology at Simon Fraser University, Canada. Dr Fang's primary research contributions have focused on progressing community-based participatory research concepts, theory, and methods for co-designing inclusive and age-friendly environments.

**Dr. Noelannah Neubauer** is a postdoctoral fellow in the Faculty of Health at the University Waterloo and is an occupational therapist at Lacombe Hospital and Care Centre. Neubauer's developing research program focuses on the creation and implementation of policies and strategies to enable older adults to age in place.

**Dr. Andrew Sixsmith** is the AGE-WELL Network Advisor, Evaluation and Impact. He is also the Director of the Science and Technology for Aging Research (STAR) Institute at Simon Fraser University (SFU), and a professor in the SFU Gerontology Department. He is past President of the International Society of Gerontechnology and was previously Director of the Gerontology Research Centre and Deputy Director of the IRMACS Centre at SFU.

**EPIC Conference 2022 Closing** with Jennifer Campos, Associate Scientific Director, AGE-WELL NCE

# ABSTRACTS (alphabetical)

**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 health tools and education can support Indigenous older adults living in remote communities to understand the ways nutrition, exercise, multiple morbidities, and self-management of health issues relate to early-onset dementia and their capacity to shape health outcomes. In partnership with Star Blanket Cree Nation and AGE-WELL, Morning Star Lodge is exploring how technology can be used to help manage and monitor multi-morbidities that increase the risk of early-onset dementia. The main objective of the community-based project is to investigate how health technology can support Indigenous older adults' health and wellbeing, as well as mitigate Young Onset Dementia. Three new technologies, including a needle-free blood glucose monitoring kit, blood pressure monitor, and a smart scale are being introduced to 30 Indigenous older adults in Star Blanket Cree Nation. Indigenous research methodologies and a community-based participatory research design have been adopted to guide the research, where sharing circles have been employed to collect data. The findings show that the technologies are supporting Indigenous older adults' overall health and wellbeing. As a result, most of the co-researchers acknowledge the value of the technologies and are eagerly adopting the needle-free blood glucose monitors and the blood pressure monitors. Specifically, this presentation highlights how the adoption of health technologies enhances Indigenous older adults' overall health and wellbeing.

**Locator Technology and the Human Rights of People Living with Dementia** Adebusola (Busola) Adekoya, University of Waterloo

Locator technology such as the Global Positioning System (GPS) tracking device can enhance the lives of people living with dementia by enabling them to live independently and safely in their communities. However, the use of locator technology has raised questions about the implications for human rights. There has been little analysis of implications of locator technology done using a human rights framework. This paper examines the literature to understand how the use of locator technology supports the human rights of people living with dementia, as articulated in the United Nations Convention on the Rights of Persons with Disabilities. Although the use of locator technology can promote the rights of people living with dementia to liberty of movement and independence, it has the potential to undermine their autonomy and intrude into privacy. There are concerns that the rights of people living with dementia to privacy may be violated when they are monitored, and their personal information is shared with a third party. There is a need for legal measures to ensure the use of locator technology consistently supports the human rights of people living with dementia. People living with dementia have the right to make their own decisions about using locator technology and should be provided with necessary information and support to make informed decisions. Adequate safeguards should be put in place to address concerns related to data sharing and privacy in the use of locator technology.

**Assessing the Best Buy Assured Living Sensor System: Sensors as part of the aging journey**

Laura Ault, Bruyère Research Institute

With the aging population, supportive home technology systems are emerging. Unfortunately for older adults, technology is not seen as second nature. It is important to ensure the technology introduced is easy to install, easy to work with and easy to grow along side as individuals needs change. These home technologies can also provide a level of comfort for the informal care partners, whether they live with the person of concern or elsewhere. The Best Buy Assured living system was installed in 5 homes around Ottawa. 1 of the homes included an older adult pair living together with their remote care partner child living remotely. 2 of these homes included one person living with Early Onset Dementia and their spouse. The other 2 homes had 1 older adult living alone and their care partner living remotely. Each participant had 2 systems installed, the base system and the expanded system. The base system comprised of motion sensors for each room, doorway sensors on exit doors and a bed mat. The expanded system included all the sensors from the base system, as well as contact sensors placed around cupboards and pantries in the kitchen, combined with a camera to detect kitchen activity and the ground truth. The systems were installed for 3 months. At the end of the study, participants were asked about their overall thoughts on the system and if it is something they could see being of use for their current situation or something they would find helpful in the future.

**TRILL - A Pandemic Work in Progress** Richard Barham, Université Laval

An AgeWell Catalyst initiative recently explored digital technology to support collaborative music-making in a care home. The Soundbeam system and Apple iPads successfully showed that digital technology, by translating simple hand gestures into musical notes, can enhance the lives of seniors with diverse cognitive and physical challenges. The project was cut short by the pandemic and seniors have been isolated from these creative activities ever since. Many care homes have not caught up with basic virtual communication, let alone creative needs of residents. It is the goal of the TRILL project to get the Catalyst initiative back into the care home by offering a fully portable, plug-and-play music-making/communication unit that can be set up by a single caregiver with minimal training, yet allow group participation from afar. After receiving AgeWell funding last fall, TRILL has since become an interesting work in progress. This presentation will introduce and explore the ups and downs and funding/administrative/technical challenges of turning an idea into a working prototype.

**Evaluation of a web-based intervention for wheelchair follow-up and training of older adults and their caregivers** Adib Boudaouara, Université de Montréal

**Introduction:** The web-based program MOVIT+ was designed as a resource-efficient solution to provide training and follow-up for mobility device users and their caregivers by optimizing telemonitoring. The system enables early detection of nine post-procurement problems – 1) non-use of device, 2) pain caused by the use of the device, 3) change in skin condition, 4) positioning issues, 5) incidents such as falls or bumping into obstacles, 6) psychosocial issues related to the device, 7) restricted participation in activities with the device, 8) limited skills and knowledge, and 9) technical problems. The system sends tailored resources to users and caregivers, alerts

professionals if needed, in order to increase the independence of older adults and promotes their social participation in the community. **Objective:** This pilot study evaluated the impact of the MOVIT+ intervention among wheelchair users, and their caregivers. **Methodology:** A sample of 40 wheelchair users was recruited in four Quebec-based rehabilitation centres, among community-based adults aged 65 and up. This study compares pre-acquisition (T0) and 3-month post-intervention (T2) period with structured questionnaires (QUEST: Quebec User Satisfaction with Technology; WhOM: Wheelchair Outcome measure; and CATOM: Caregiver Assistive Technology Outcome Measure). **Results:** A clinically significant increase in satisfaction with participation (WhOM) was observed, particularly for activities performed outdoors. Consumers were quite satisfied with their mobility aids (QUEST). Family caregivers had a low burden (CATOM) since obtaining the mobility aid. **Conclusion:** These results are promising for the clinical evaluation and feasibility of the evaluation protocol for this new digital intervention.

### **Aging In Place with Online Communication Assistive Technology during COVID-19. The Benefits of Social Connection on Mental Health.** Matilde Cervantes, University of Victoria

This study is part of a larger Michael Smith Foundation for Health Research-Implementation Science Team (MSFHR-IST) grant-funded project that is currently examining the scale-up, spread and sustainability of assistive technologies (ATs) for older adults in British Columbia to improve their health and well-being. Here, we explore how a tablet-based, online communication assistive technology, CanConnect (developed by our knowledge user partner CanAssist), is able to support the mental health needs of community-dwelling older adults on Vancouver Island during COVID-19, and contribute to their well-being, resilience, and quality of life. The sample consists of 10 participants who used CanConnect for 6 weeks. Each participant was interviewed three times (baseline/pre-implementation, follow-up, and an exit interview). After the qualitative interview data was collected and transcribed, the team performed a thematic analysis. Preliminary results showcase that the pandemic due to COVID 19 negatively impacted older adults' well-being. CanConnect addresses mental health needs by enhancing the social connection with their loved ones. Besides, the use of CanConnect has contributed to their digital literacy, experiencing more comfortability and confidence using assistive technology. The findings provide insight into the factors that influence the acceptability and usability of CanConnect by older adults. In conclusion, CanConnect is an effective technology-based communication solution for older adults to stay connected to their support networks while contributing positively to their mental health. Remaining socially connected is especially important for older adults living in rural and remote settings in order for them to successfully age in place and stay healthy, socially active.

### **Balance Rehabilitation for People with Dementia: Clinician Experts Informing Exergame Design** Erica Dove, University of Toronto

People living with dementia experience greater impairments in balance, which in turn puts them at a greater risk of falls, compared to cognitively healthy older adults. Falls among older adults with dementia can lead to serious injuries (e.g., hip fracture), hospitalization, and mortality. Exercise has been shown to improve balance among older adults with dementia, but physical rehabilitation and/or exercise interventions for this population are limited. This gap could be met through exergames, which are increasingly being used in rehabilitation with various populations, (e.g., children with disabilities, adults after stroke). To develop accessible and clinically relevant

exergames for people living with dementia requires stakeholder input; specifically, from clinicians (e.g., physiotherapists) who provide rehabilitation services to this population and other populations (e.g., older adults with osteoporosis). Clinicians were interviewed by a researcher to gather perspectives on balance and dementia, specific exercises prescribed to impact balance in rehabilitation, and barriers and benefits of using exergames in rehabilitation. In this presentation, given jointly by a researcher and rehabilitation physiotherapist, we will discuss: (i) the lack of physical rehabilitation available for people with dementia; (ii) the potential of exergames to promote rehabilitation among this population; and (iii) clinical perspectives on designing exergames that produce meaningful clinical outcomes for people with dementia. Clinical insights, along with input from people with lived experience and other stakeholders (e.g., game designers), are paramount to developing exergames which can be easily implemented and deliver clinical impact in real-world settings.

### **Policies to support older adults' health self-management using information and communication technologies** Amélie Gauthier-Beaupré, University of Ottawa

Policies on health self-management have evolved greatly over time. In Ontario, their focus has been around chronic diseases and diabetes with limited attention on the diverging needs and challenges of older adults who engage in self-management. As individuals who may age into disease and disability, older adults can receive great benefits from self-management such as improved well-being and quality of life. Tools like technologies that support self-management are becoming increasingly popular and relevant in self-management strategies. There is a need to better understand how current policies meet the needs of older adults that are users of technologies and that self-manage their conditions. This project engages with policymakers in Ontario to better understand the policies, including programs and services, to support these individuals. Policymakers (n=10) have been recruited from within the government of Ontario to partake in a one-on-one semi-structured interview to share insights on the development, implementation and evaluation of policies related to older adults' self-management using information and communication technologies. This presentation will report on work in progress and preliminary results of this engagement. Future implications for this work could help identify areas where innovation in policies may be warranted within a continuously evolving technological and aging era.

### **Can technologies help prevent financial abuse?** Golnaz Ghaderi, University of Ottawa

*Financial abuse is the most frequent form of abuse among older adults. The risks increase when the person has cognitive challenges resulting, for example, from dementia or intellectual and developmental disabilities. This is in part explained because they often rely on others to help them with their finances. The objectives of this presentation are to: (1) provide an overview of how older adults who have a cognitive disability might understand and recognize financial abuse, (2) discuss technology-based solutions to prevent financial abuse. We will present findings from an ongoing project consisting of semi-structured interviews with 12 persons with mild intellectual disability (ranging from 30 to 60 years of age) and 14 support providers. We presented a series of vignettes on different forms of financial abuse (i.e., explicit, implicit and no abuse) and asked them to tell us how they perceived the situation, and how they would react in such a situation. The*

interviews were analyzed using thematic analysis to identify important concepts and extract meaningful interpretations in relation to the research objectives. Preliminary findings suggest that persons with intellectual disabilities interpret situations to be abusive considering several factors including the pattern of perpetrators' behaviours, the type of relationship between the victim and the perpetrator, sympathy for the perpetrator, and individuals' own judgement and personal experiences. We will discuss how technologies support financial well-being among older adults and prevent financial abuse. Increasing the cognitive accessibility and usability of technologies, such as online banking systems, would reduce the reliance of older adults on others when completing financial transactions, and therefore increase their autonomy.

**A neuroscience-guided smartphone app to improve memory for everyday events** Bryan Hong,  
University of Toronto

Approximately one third of retirees report dementia as one of their greatest concerns. Over half a million Canadians currently live with Alzheimer's disease, a number projected to almost double by 2030. Memory loss is arguably the most debilitating symptom resulting from Alzheimer's disease or dementia. Memories are critical for our self-identity, and consequently, the deterioration of memories produces a downward spiral of disengagement: reducing confidence and psychosocial wellbeing, which combine to raise the risk of depression, further exacerbating memory loss. HippoCamera provides an enjoyable, easy-to-use digital platform to mitigate memory loss by allowing users to create and review personalized multi-media reminiscence cues. HippoCamera is designed to mimic the hippocampus, a brain region critical to memory that is affected during aging. Furthermore, it integrates keystone neurocognitive principles from decades of memory research. Our research shows that HippoCamera led to over a 50% boost in event-specific detail compared to control when asked to describe the events associated with their cues. Memories were still enhanced even when participants were tested three months after discontinuing HippoCamera use, suggesting that these memories were not dependent on the app itself. Using fMRI, we found that replaying cues with HippoCamera changes the way associated events are being represented in brain regions that are critical for memory retrieval, including the hippocampus. We are currently working on developing Memory Coach, a novel reminiscence program revolving around HippoCamera, to provide participants with a structured environment to learn how to use HippoCamera and apply memory strategies in their own day-to-day lives.

**Co-Creating Digital spaces to share Elders and Knowledge Keeper Stories** Violet Ignace,  
University of British Columbia

Indigenous Elders and Knowledge Keepers are teachers beyond their communities and have the insight of Traditional teachings and life experiences to offer folks of all walks of life. Indigenous Peoples for millennia have used varied technologies to innovate sustainable change for the mutual benefit of individuals and communities, including but not limited to the environment. This research intends to build on existing partnerships with six Friendship Centres and Métis Centres in British Columbia. The focus of these partnerships is to support the creation of technological/digital spaces for local Elders and Knowledge Keepers to share their knowledge and stories. The goal is to support healthy aging for Elders and Knowledge Keepers who are often older adults. A key component of this project is to support the Elders enabling them to effectively use social media technology to share their stories and help identify what experiences through technology. The

process and methodology, such as Indigenous methodology and Two-Eyed Seeing, must ensure their ownership, control, and decision-making relating to sharing their knowledge. Digital communication technologies done in a good way with Indigenous perspectives and ownership are vital for protecting and preserving sacred knowledge and culture today to situate and honour gathering and sharing (disseminating) information far into the future.

**Honouring Traditional Healers in Indigenous-led Health Service Partnerships: A Two-Eyed Seeing Integrative Review of Indigenous Health Services** *Viviane Josewski, University of British Columbia.*

In response to five British Columbia Interior Friendship and Métis Center communities' request for Traditional Healers in co-designed culturally safe tele-diabetes and obesity clinics, we (a team of four Indigenous and non-Indigenous researchers/students) are conducting a review of the literature to (1) explore evidence/knowledge of Traditional Healers' involvement in the delivery of Indigenous health care, and (2) identify contextual differences and pertinent issues. The review is guided by Two-Eyed Seeing, which honours the strengths of both Indigenous and Western knowledges and ways of knowing. The search strategy considered involvement of Traditional Healers within any health care setting relating to Indigenous Peoples in North America, Australia and New Zealand. Searches were performed in MEDLINE (Ovid), CINALH, and Web of Science, as well as in iPortal, and a list of government and Indigenous organization websites. Ninety-three articles underwent full-text review using Two-Eyed Seeing with one Indigenous and one non-Indigenous team member to ensure inter-rater reliability. Emerging themes will be reached by consensus and discussed with a view to informing policy, research, and practice. Given the lack of availability yet significant demand by Indigenous peoples for Traditional healing and practices, coupled with the increasing interest of Western health care providers, findings will make an important and timely contribution to the current state of knowledge for promoting Traditional and Western Indigenous-led health services partnerships. Co-Authors: Koersen, B., Jeffry, T., Kurtz, D., Jones, C.

**Developing Spatiotemporal Features from Real-Time Location System Data to Assess Social Engagement in People with Dementia** *Elham Khodabandehloo, Toronto Rehab Institute, University Health Network*

Studying the social behavior patterns of people with dementia living in aged residential care is of value in helping to identify those people who would benefit from more support with social engagement (SE). SE reflects interest, ability and opportunity for involvement in social activities and is an important contributor to quality of life, physical and mental health. Various technology solutions have been proposed for monitoring behavioral and health status of people with dementia. A simple and inexpensive technology with broad applications in aged residential care are real-time locating systems (RTLS) which gather moment-to-moment location data for long-term care residents and provide valuable information about changes in behavioral patterns. Few studies have used RTLS for studying social behaviors, and none have validated features of RTLS data using clinical measure of SE. In this study, I will present my preliminary analysis of spatiotemporal data collected from 17 research participants with dementia on a psychogeriatric unit to derive features that are descriptive of various social behaviors. These features include dwelling time in social locations vs private spaces, proximity of a participant with respect to

others, the number and frequency of contacts, and approach vs avoidance patterns of movement. The results showed that within individuals, the pattern of social behaviours were fairly consistent over time, but that there was substantial variability between individuals in social behaviours. As a next step, these features will be used in machine learning models to predict clinical SE scores rated twice daily, and 8-hour direct observation of SE behaviors.

### **Imperceptible Vibration Effect on Sensorimotor Function in Older Adults with Diabetic Neuropathy** Changki Kim, University of British Columbia

As of 2019, 19.2% of older adults (>65 years old) and 11.2% of middle-aged adults (50-64 years old) in Canada were living with diabetes. About 50% of people with diabetes experience diabetic neuropathy (DN) within 10 years of the onset, and aging increases the risk of developing DN. The most common symptoms attributed to the disease are peripheral sensory loss and pain. Thus far, non-pharmaceutical clinical devices for DN have focused on pain reduction, not on sensation recovery, even though sensory loss can compromise mobility and cause infections and injuries. Therefore, treatments that improve impaired sensation are needed for effective rehabilitation in older adults with DN. Imperceptible random vibration (white noise below sensory threshold) is a relatively new and simple technique, but it consistently demonstrates effectiveness in improving sensorimotor function in stroke survivors and healthy adults. This project aims to determine the effect of imperceptible vibration on sensorimotor function in individuals with DN. Twenty DN patients with peripheral sensory loss and 20 age and sex-matched controls will undergo sensorimotor function tests with vibration on 4 areas of the foot at 3 intensities (40, 60, and 80% of sensory threshold) and without vibration (baseline). Vibration sensory threshold test, monofilament test, and two-point discrimination test for touch pressure, ankle strength and force control, gait speed, and postural control will be measured. The results of this study will serve as the knowledge basis for developing an innovative therapeutic tool to improve sensorimotor function in DN patients.

### **MCI@work: the adaptive technological strategies to sustain employment among people with MCI or young onset dementia in the workplace** Kristina Kokorelias, Sunnybrook Health Sciences

Little is known about the strategies individuals living with mild cognitive impairment or young onset dementia (MCI/YoD) use to sustain employment following the onset of symptoms. Their use of technology has been examined as part of the MCI@work project, an international program examining the situation of people with MCI/YoD in Sweden, Finland and Canada. First, we reviewed the academic literature to understand the experiences of family caregivers who provide care to individuals with MCI/YoD. Next, 14 Canadians (12 persons with lived experience and 2 family caregivers) participated in semi-structured interviews regarding their experiences with employment or supporting someone in employment. Preliminary results showed that participants self-adapted technological solutions to support changes in work performance (e.g., memos, to-do lists, computers). Notably, participants selected technological systems they were already comfortable with and adapted them to their changing needs. Caregivers report strain to their own occupational roles as they try to balance caregiving and paid employment and education. Unlike individuals living with MCI/YoD, caregivers did not report using technology to support their caregiving roles (in either the interviews or literature). The results provide important insights into

the current and adaptive use of technology by people with MCI/EOD in the workplace. By understanding how persons living with MCI/YoD adapt and use technology, recommendations for resources for supporting individuals with MCI/YoD and their caregivers in the workplace can be made. Future research should consider technology that can support caregivers to sustain meaningful occupations.

### **Do pandemics change how older adults fall on stairs? – Differences between 2019 and 2020 in the circumstances and frequency of stairway falls involving hospitalizations in older adults**

*Vicki Komisar, University of British Columbia*

Falls are the leading cause of injury-related hospitalizations in adults over 65 years, and ~13% of injurious falls in older adults occur on stairs (Public Health Agency of Canada, 2014). Population-wide declines in health with the COVID-19 pandemic may increase the risk for injurious stairway falls, and require different strategies for injury prevention. We analyzed the United States Consumer Product Safety Commission's public database, which documents injury-related hospitalizations from stairway falls across 96 US-based hospitals, and can guide aspects of injury prevention in Canada. We compared falls in adults >65 years treated in 2019 versus 2020, from April to December to avoid seasonal effects. The number of stairway fall hospitalizations decreased by 17% from 2019 (n=4900) to 2020 (n=4074). However, long-term hospital stays only decreased marginally (2019: n=1363; 2020: n=1292) and deaths increased (2019: n=6; 2020: n=16), suggesting that older adults were less likely to access treatment unless the injury was severe. Stairway falls in 2020 were 1.3-fold more likely to involve alcohol (odds ratio=1.34; 95% confidence interval=1.09-1.65 by Chi-square), and 1.8-fold more likely to occur at home (1.75; 1.48-2.07). Decreasing social isolation may help reduce alcohol consumption and associated stairway falls. Our findings on the greater risk for stairway injuries at home are informing discussions with the National Building Code of Canada, to support safer building standards for stairs in private homes (e.g., longer step lengths; narrower, grippable handrails) that are harmonized with public stairs (which have stricter safety requirements) and international building standards.

### **Feasibility of a remote clinical trial in older adults with type 2 diabetes: findings from the MOTIVATE T2D Trial** Jonathan Low, University of British Columbia

The execution of clinical trials can be expensive and present logistical challenges regarding recruitment, engagement, and retention of participants, especially among the older adult population. Innovative research design fostering convenience by eliminating research facility visits may enhance recruitment, engagement, and retention. We examined the feasibility of a remote clinical trial in older adults living with type 2 diabetes (T2D). Older adults with recently diagnosed T2D were recruited across the UK and Canada to the MOTIVATE T2D trial (NCT04653532); a feasibility randomised controlled trial investigating two exercise and physical activity interventions. Participants received a self-testing kit, via mail, at baseline and post-intervention (6 months). Measures included, HbA1c, lipid profile, anthropometrics and blood pressure and 14-day flash glucose and physical activity monitoring. Between Jan 2021 and Jan 2022 286 patients were eligible, of whom 110 (UK n=63, Can n=47, male n=58, white n=95) consented. Mean journey time from research facilities was <1h in 18%, 1-2h in 50% and >2h in 33% of participants. Availability of outcome data will be presented. Remote testing resulted in benefits to

recruitment and good participant retention and protocol adherence. As such, remote clinical trials are feasible in older adults with T2D and future clinical trials should consider a remote clinical trial based approach as an alternative to conventional designs.

### **Lessons Learned Implementing SMARTech for Older Adults to “Live More” in Continuing Care** *Carlee MacNeill, Dalhousie University*

The SMARTech project has transformed Nova Scotia’s largest continuing care organization - Northwood, into a living lab to demonstrate the potential for SMART technology to foster healthy aging and independence for older adults aging with or into disability. Our transdisciplinary team of researchers, technology industry professionals, continuing care providers, and older adults wanted to offer an innovative, person-centered technology solution to support the independence and autonomy of those living in continuing care. Our objectives were to determine: 1) the lived experience, needs and desires for well-being among older adults with complex conditions in continuing care settings; 2) the feasibility and effectiveness of implementing an innovative SMART technology solution to address well-being that is customized, supported and sustainable; and 3) how to incorporate person-centered technology solutions that result in scalable outcomes including policies, procedures, programs and care planning. We learned many lessons as we adapted technology built for the domestic home into a health care facility. We share our lessons learned related to the needs of individuals in continuing care, the feasibility of implementing SMARTech into continuing care, and the barriers and facilitators to scalability for this and future AGETECH innovations. Highlights include support needs, information and communication infrastructure, and the policy context. Innovations in access to care require strong transdisciplinary partnerships to build broad understanding of these lessons learned to inform future project design and implementation. Together, we can create a sustainable community that inspires a self-directed experience, restoring the “power of choice”, so disabled adults can truly “live more”.

### **"I can do it all, I think?..": Building the Business Case in Support of Employed Caregivers** *Andrew Magnaye & Choong Kim, University of Alberta*

The COVID-19 pandemic has tested all of our limits in terms of the boundaries we set between our work and family lives. In 2018, there were over 5.2 million employed caregivers between the ages of 19 to 70 in the Canadian labour force who were balancing their paid work with family care responsibilities. The past two years have brought forth many different challenges, but also opportunities to see how we can change our approaches to supporting employed caregivers in the home, workplace and other settings. Our presentation will focus on the impact of family caregiving on employment from our findings of the analysis we are conducting on the 2018 General Social Survey on Caregiving and Care Receiving, and insights we have garnered from discussions with employers and employed caregivers. With the theme on 'Financial Wellness & Employment', our presentation will take a look at employers' perspectives on their employees with caregiving responsibilities, how employers and employees have dealt with the pandemic, and the opportunities for employers to better support employed caregivers in the workplace (via technology, education, and caregiver-friendly workplace policies). With the combination of nationally representative data on employed caregivers, and firsthand accounts from employers

and employed caregivers on integrating paid work with family life, we hope to build the strongest business case possible to show why family caregiving is not just an 'individual' issue, but a 'workplace' issue.

### **Investigating the challenges of accessing senior healthcare services for aging adults with developmental disabilities** Samuel Neumark, *University of Toronto*

**Introduction:** Individuals with developmental disabilities are living longer because of advances in healthcare and community support services. This situation introduces new problems and challenges for healthcare workers and institutions. Many services are not designed to accommodate the needs of adults with disabilities, creating systemic barriers to access care. The goal of this project is to explore the challenges of accessing healthcare services among aging individuals with developmental disabilities to inform future research and innovations. **Method:** We conducted this project as part of a course in the Translational Research Program at the University of Toronto, in partnership with a stakeholder organization, Reena. We used the Toronto Translational Framework as an innovative approach to investigate this issue. Placing the patient at the centre of the problem, our team gathered information by reviewing literature, networking, and informal conversations with stakeholders to discover unmet needs, identify knowledge gaps, and contextualize real-world problems. **Results:** Our team identified and verified with stakeholders six main themes: eligibility criteria, two-way communication, diagnosis and referrals, education and awareness, staff training, and funding. These themes summarize the problems associated with aging adults living with developmental disabilities accessing services in Ontario. **Conclusion:** There is a clear need to improve access to healthcare services for aging adults with developmental disabilities. This project demonstrates the importance of engaging stakeholders and industry partners early in study design. Future research should include the voices and experiences of those living and caring for older adults with developmental disabilities to develop recommendations and co-create innovations. Co-Authors: Sandy Stemp, Jaspreet Randhawa, Ellis Gao, Alexander Moore, Melanie Yang, Jamie Block, and Richard Foty.

### **Community Connectors: Community coming together to assist older adults who are socially isolated and lonely** Lyne Ouellet, *University of New Brunswick*

Many across the world are now acquainted with a taste of what it is like to be socially isolated and lonely, given measures put in place to mitigate the consequences of the Covid-19 virus. For many older adults, this was a reality pre-pandemic. It was called an epidemic by the US Surgeon General in 2017 and in Canada, it estimated that as many as 30% of older adults were at risk of social isolation and as many as 50% of older adults were lonely. These have been associated with an increased risk of dementia, cardiovascular disease, and even mortality. In the fall of 2019, approximately 50 community leaders gathered to discuss how best they might help their fellow residents. They recognized that there were many "unseen" older adults that were not being reached. They approached the academic sector and a partnership was born. A Community Connector program is now being developed. Everyone in this strategy has a role. Taxi drivers, grocery store clerks, healthcare professionals and more can be trained to identify older adults who might be socially isolated and/or lonely, how to initiate a conversation and to make a recommendation for an existing community resource. It will be supported by an online knowledge

hub, housing information on training materials and resources that are available to all residents in the community. By tapping into the strengths of existing community resources, many who might be socially isolated and lonely can be reached, making a real difference in their lives.

### **Usability of a Mobile Technology to Support Caregivers of Older Adults and Persons Living with Dementia in Care Facilities** *Hector Perez, University of Waterloo*

**Introduction:** Information and communication technologies can support healthy aging and caregiver activities. Mobile technologies can enhance health care aides' workflow and assist family members in their roles as caregivers by improving communication and supporting person-centred care. An understanding of factors influencing the usability of these technologies can facilitate implementation of new tools that support health care aides and family caregivers. **Objective:** We evaluated the acceptance and usability of a mobile application intended to support caregivers using the Unified Theory of Acceptance and Use of Technology Model. **Methods:** We developed a mobile application and followed a mixed-method approach to evaluate its acceptance and usability. We recruited 87 participants (60 health care aides and 27 family caregivers) who trialed the technology for one month and completed initial and exit questionnaires. We also conducted two focus groups with health care aides and two with family caregivers. We used univariate, bivariate, and partial least squares in quantitative analysis and content analysis to examine the qualitative data. **Results:** Acceptance of the mobile application for both groups of caregivers was high. The application was portable, simple, and functional. Health care aides reported the usefulness as the predictor of use. For family caregivers, the technology's ability to improve caregiving activities related to the intention to use it. **Conclusion:** High usability of new mobile technologies is key to facilitating adoption. This study affirms the value of mobile technologies to support the workflow of health care aides and family caregivers' interactions and communication with residents and staff. Co-Authors: Antonio Miguel-Cruz, Christine Daum, Aidan Comeau, Emily Rutledge, Sharla King & Lili Liu.

### **Effects of Virtual Reality Mindfulness Meditation in Older Adults: The protocol of a Pilot Randomized Controlled Trial** *Harmehr Sekhon, McGill University*

**Introduction.** Mental health disorders affect 10-15% of older adults, and have a high cost of geriatric mental health disorders (\$15 billion CAD/annually). Mindfulness meditation has been found to improve mental health outcomes including depression in older adults. Focus and engagement are barriers to meditation, virtual reality is an immersive technology that can enhance mindfulness meditation. Although VR has been studied in younger and older adults, there is a need for data on VR mindfulness meditation and mental health in older adults. **Methods.** A virtual reality mindfulness meditation program is being created with original 360 videos. This is a case series and pilot randomized controlled trial (RCT) of a virtual-reality mindfulness meditation intervention (n=30) in stressed older adults (>60 years of age). This study will evaluate the VR interventions effects on stress (primary outcome), depression and anxiety (secondary outcomes), and assess the feasibility and acceptability of this intervention, as well as the quality of life, insomnia, and mindfulness (exploratory outcomes). **Conclusion.** If successful, virtual reality mindfulness meditation may be an immersive, accessible and scalable intervention to improve stress and mental health outcomes in older adults. Co-authors: K.Cinalioglu; P.Lavín; M.Bein; J.Gruber; J.Se; M.Lesage; S.Bukhari; N.Sasi; H.Noble; O.Beauchet; M.Andree-Bruneau; C.Launay;

B.Battistini; S.Bouchard; B.Khoury; P.Fallavollita; I.Vahia; S.Rej

**Mobilizing person-centered media environments in long-term care** Sarah Wagner, University of Victoria

Long-term care (LTC) residents are now more dependent on digital technologies for social connections than ever before. New digital practices among LTC residents have brought about new roles and responsibilities for device management and technology support. This project partners with Vancouver Island Health Authority to respond to the current need at LTC sites to develop sustained and person-centered support systems for residents' digital technology use. The project collaborates with residents, staff, and family caregivers at three LTC sites on Vancouver Island to build knowledge about residents' everyday needs and wants for communication media. Methods include digital storytelling, planning and reflecting meetings, in-depth interviews, and asset mapping workshops. The interview procedure combines narrative inquiry and communicative ecology mapping. The methods are designed to co-produce an understanding of residents' lived experiences through reflection and creative practice and to problem-solve and identify pathways to change. This presentation will (a) provide background on the current challenges faced by LTC sites on Vancouver Island to deliver effective digital support, (b) describe the rationale of the research design and in particular, the value of narrative work to the research goals, and (c) report preliminary results from interviews with LTC residents. Person-centered care approaches are widely used in LTC settings and have been found to improve residents' quality of life. This project expands the person-centered approach to LTC media environments; it addresses how media-related services, practices, and policies can better support residents to have choice and agency over how they stay connected.

**Examining the Intersection Between Sex-and Gender-Based Considerations and Exercise-Based Telerehabilitation among Individuals with Stroke: A study proposal** Elise Wiley, McMaster University

**Background:** Telerehabilitation has emerged as a viable modality for delivering lower extremity rehabilitation after stroke, particularly when access to in-person services is limited. At present there is no study on the differences in stroke telerehabilitation outcomes by sex and gender. The objective of this study is to examine sex- and gender-based differences in the effectiveness and feasibility of an exercise-based telerehabilitation program, TeleRehabilitation with Aims to Improve Lower extremity recovery post-stroke (TRAIL) among adults  $\geq$  12 months of stroke. The specific hypotheses are that: i) males will exhibit clinically meaningful superior lower extremity function than females across all timepoints; and ii) men will have greater success in feasibility indicators than women. **Methods:** In this parallel group, assessor-blinded randomized attention-controlled trial, we will recruit 96 participants from 5 sites across Canada. Participants will be allocated to either the 4-week TRAIL or the EDUCATION program for self-management for stroke risk factors. Participants will be evaluated pre- and post-intervention (0 and 4 weeks), and at 3- and 6-month follow-up. Gender characteristics will be assessed through the GENESIS-PRAXY questionnaire. The primary clinical outcome is functional mobility (Timed Up & Go Test). Feasibility indicators of retention rate, treatment fidelity and adherence will be compared between men and women. Mixed models analyses will be conducted to determine if sex-based differences in clinical

outcomes are present over time. **Study Implications:** This research will help us understand how telerehabilitation programs can help individuals with different sexes and genders recover after stroke, which may inform targeted interventions.