The **Labarge Optimal Aging Initiative** has transformed the research landscape in aging at McMaster University. By supporting interdisciplinary research projects, the Initiative has stimulated uniquely collaborative approaches to answering critical questions in optimal aging and has positioned McMaster researchers well for external funding competitions. By supporting the creation of a robust knowledge translation enterprise, the Initiative has enhanced McMaster’s reputation for strength in supporting evidence-based decision making, particularly through the McMaster Optimal Aging Portal, which provides older adults with access to evidence-based information about healthy aging that they can trust.
Patrick Deane

Suzanne Labarge eloquently articulated the issues facing the aging population in her 2016 editorial in the Globe and Mail: The challenges of aging are so commonplace that we have accepted them as normal, yet so potentially catastrophic that we can no longer afford to ignore them. Through the support of the Labarge Optimal Aging Initiative, McMaster researchers have been working to find new ways to identify and address these critical challenges.

This innovative work in aging research will be accelerated with the establishment of the Labarge Centre for Mobility in Aging, a new research centre launched this year as the result of an incredible $15M donation to McMaster. Housed within the McMaster Institute for Research on Aging, the Centre will allow McMaster researchers to focus their considerable research strength on the array of physical, social and environmental factors associated with maintaining mobility within an aging population.

We are grateful to Suzanne for her investment and her confidence in us. She noted in her editorial: I find hope in our universities, which are doing research and teaching to produce solutions and skills to smooth the approaching tsunami. It is through the generous support of Suzanne Labarge that we are able to sustain this hope and continue to develop evidence-based approaches to manage the challenges ahead.

Dr. Patrick Deane
President and Vice-Chancellor

Paul O’Byrne

It has been a pleasure for me to watch the steady growth of our expertise in aging research from afar, and now I am delighted to play a more active role in its evolution as the new Dean and Vice-President of the Faculty of Health Sciences. The generosity of Suzanne Labarge has allowed McMaster researchers to pursue innovative approaches to address the growing needs of our aging population, and the impact of this support is becoming more evident. Our researchers have been able to secure millions in funding from external partners for their Labarge-initiated projects, and the use of the McMaster Optimal Aging Portal is growing at an astounding rate.

I invite you to review the progress of the work supported by the Labarge Optimal Aging Initiative detailed in this report. McMaster’s leadership position in research and knowledge translation on the broad topic of aging has been enhanced through the Initiative, and will only continue to grow as we focus our attention on the critical issue of mobility through the new Labarge Centre for Mobility in Aging.

Dr. Paul O’Byrne
Dean and Vice-President, Faculty of Health Sciences

Susan Denburg

This has been a transformative year for aging research at McMaster. Our goals to build capacity in aging research and education, introduce new partnerships, position our researchers for success in external competitions, and enhance our reputation for excellence in research and knowledge translation have motivated faculty, staff and students at the University to “roll up their sleeves” and capitalize on new opportunities and collaborations thanks to the support of the Labarge Optimal Aging Initiative.

The growth in the McMaster Optimal Aging Portal in particular is outstanding. The Portal has enhanced the breadth and comprehensiveness of its offerings for members of the public, and has reached an impressive audience, with usage statistics that continue to grow.

We are now poised to begin the next challenge: to generate evidence, offer new educational opportunities, and influence collective thought and policy on mobility through the Labarge Centre for Mobility in Aging. I look to the future of aging research at McMaster with confidence and share the hope that Suzanne Labarge has expressed for our institution.

Dr. Susan Denburg
Associate Vice-President Academic, Faculty of Health Sciences
The goal of this project was to develop a user-centred design process that considers the needs of older people in vehicle design. This year the focus was on analyzing our project findings and translating both the knowledge and approach to other potential areas of design that promote the safe mobility of older adults. For instance, our research team chaired a symposium at the 18th annual Human-Computer Interaction Conference (HCI) which showcased McMaster’s leadership in this burgeoning area. Moreover, Dr. Vrkljan is leading an initiative (supported by McMaster’s Interdisciplinary Research Fund) that brings together a community partner (Thrive group) with graduate students from different Faculties to examine the issue of falls in older adulthood. It is an exciting project that sets the stage for a unique graduate training program in the newly established McMaster Institute of Research on Aging, where students will exchange ideas and develop hands-on skills necessary to transform today’s challenges into opportunities that will keep older Canadians safe and mobile in our communities for as long as possible.

**MEDIA HIGHLIGHTS**

**The Agenda on TVO**
tvo.org/video/programs/the-agenda-with-steve-paikin/seniors-on-the-road

**The Globe and Mail**

“Funding from the Labarge Initiative has been instrumental in setting the stage for interdisciplinary collaboration across the University. Canada’s aging population offers many opportunities for innovation, particularly when it comes to mobility. At McMaster, we are training the next generation of Canadian leaders who are ready to address these important issues.”

Brenda Vrkljan
The global rise in chronic disease combined with an aging population has led to an increase in disability and has created a significant public health problem. Physiotherapists and occupational therapists can support patients in self-monitoring their physical function and can provide rehabilitation interventions to prevent physical functional decline and promote optimal aging. The purpose of this study is to explore the use of technology, specifically the Personal Health Record (PHR), to engage patients with and without chronic conditions in self-monitoring their physical function as a form of self-management in primary care settings. This project is in its third year and data collection is near completion. Results of this study will inform the way that technology can be used to deliver rehabilitation services remotely to patients with and without chronic disease. This project will be completed by March 2017.

Julie Richardson
Lori Letts

INVESTIGATORS:

Julie Richardson
Lori Letts
David Chan
Lehana Thabane
Henry Siu

“Funding from the Labarge Initiative has helped people aging with and without chronic conditions to track changes in their physical function using their personal health record, and collaborate with therapists to implement strategies to maximize their ability to continue the activities that they enjoy.”

Julie Richardson

Labarge-funded researchers have submitted or published 31 academic papers, participated in 55 conference presentations related to their work in aging, and created over 80 new knowledge translation tools or resources.
The loss of skeletal muscle mass and strength with aging, also known as sarcopenia, results in loss of independence and an increased incidence of injury often associated with falls, resulting in diminished quality of life and increased risk for all-cause mortality. Adequate nutrition and traditional resistance exercise training are effective strategies to counteract sarcopenia. We are currently testing a newly developed complex nutritional supplement with and without exercise in older adults. Fifty healthy older men were enrolled in a randomized, double-blind intervention trial, during which subjects were asked to consume the newly developed nutritional supplement. The final 12 weeks of the trial included intense supervised exercise training at McMaster University. Data collection for this study has been completed and we are currently analyzing the research results.

The Labarge funding has allowed McMaster researchers to expand their research programs, initiate new interdisciplinary partnerships, develop new analytical tools, leverage existing knowledge to tackle new research questions and obtain preliminary data to boost success rates within other grant competitions.

“Results from our project will allow us to establish guidelines that will maximize strength gains in the elderly following an exercise program to improve mobility, independence and ultimately quality of life.”

Gianni Parise
Unique Adult Day Services (ADS) models have the potential to become important components in the health care continuum, mitigating the susceptible period of time of discontinuity and potential adverse events for older adults during the transition period from hospital to home. Phase 1 of the study has now been completed. Focus groups and semi-structured interviews have explored the experiences, including barriers and facilitators, of Goldies2Home (G2H) participants and their caregivers, G2H staff, and Community Care Access Centre coordinators. System- and participant-level challenges were identified, such as the need for funding and decreasing waitlist times, as were many positive and valuable aspects of the G2H program, such as the services offered, interdisciplinary staff and beneficial outcomes for the well-being of participants both physically and socially/emotionally. Phase 1 results have been used to inform and refine Phase 2, a 6-month mixed methods study which is now underway.
The Canadian workforce is aging. The purpose of this study was to examine the impact of an exercise program, delivered within the workplace, on work ability and resilience, as well as physical function and symptoms among older workers with osteoarthritis (OA). Twenty-four McMaster employees with clinical signs of knee and/or hip OA participated in this 2-arm randomized controlled trial in which they were randomized to either 12-weeks of exercise or no exercise. Significant improvements in self-reported outcomes, including pain, physical function, self-efficacy and depression were present following 12-weeks of exercise. Further, while exercise-induced improvements in strength and mobility performance were present, differences were not significant. Alternatively, as expected, there were no significant changes in physical outcomes or self-reported symptoms in the no exercise group, with the exception of a significant decline in work ability at follow-up. Thus, the results of this trial support exercise in the workplace to improve osteoarthritic symptoms. A manuscript is currently being reviewed before being circulated to co-authors for submission to a peer-reviewed journal.

“\textbf{The Labarge funding helped us initiate a formal collaboration with Ford Motor Company to implement this randomized controlled trial at the Oakville Assembly Plant. This new partnership, arising from our Labarge project, will allow us to expand our research impact and increase the visibility of our research beyond McMaster.}”

Monica Maly
Older adults with limitations in mobility present a common, costly problem to our health care system. For this reason, it is increasingly important to identify those at risk for functional decline and provide interventions that will preserve physical function. The purpose of this pilot study is to determine the impact of a Mobility Self-Management Program on older adults in the stage of preclinical mobility limitation (PCLM). Now in its second year, recruitment for this project is complete and the final wave of participants has been enrolled in either the Mobility Self-Management Program or the Stand Up Program (Control). Project completion is set for July 2017 and results will be used to apply for the funding of a fully-powered randomized controlled trial.

Sinéad Dufour, Jenny Ploeg, and Holly Reimer

INVESTIGATORS:
Sinéad Dufour
Julie Richardson
Jenny Ploeg
Maureen Markle-Reid
Lehana Thabane
Carrie McAiney
Holly Reimer

Older adults with limitations in mobility present a common, costly problem to our health care system. For this reason, it is increasingly important to identify those at risk for functional decline and provide interventions that will preserve physical function. The purpose of this pilot study is to determine the impact of a Mobility Self-Management Program on older adults in the stage of preclinical mobility limitation (PCLM). Now in its second year, recruitment for this project is complete and the final wave of participants has been enrolled in either the Mobility Self-Management Program or the Stand Up Program (Control). Project completion is set for July 2017 and results will be used to apply for the funding of a fully-powered randomized controlled trial.

“Moving Up Stream: Preventative Approaches to Preclinical Mobility Limitation for Community-Dwelling Older Adults

Sinéad Dufour, Jenny Ploeg, and Holly Reimer

“We received an overwhelming response... over 350 older adults in the Hamilton area called for more information or to volunteer as study participants. We have been able to recruit a total of 89 older adults and offer the Stepping Up Program to 44 participants since April 2015.”

Sinéad Dufour

Sinéad Dufour (left), Jenny Ploeg (center) and Holly Reimer (right)
This interdisciplinary team is exploring how advanced vehicle technologies (AVTs) (e.g., back-up camera) are reshaping the driving experience. In-depth interviews were conducted with 35 older adult drivers and the results showed that older drivers assign complex and contradictory meanings to AVTs, describing them as simultaneously comforting and uncomfortable, helpful and a hindrance, and welcome yet undesirable. Our participants were found to be capable, yet critical adopters of technology, who used AVTs in selective and creative ways to ensure they felt comfortable and safe while driving. Even though older drivers had concerns about the technology, they readily emphasized the positive impact on their driving performance and, more specifically: 1) feelings and improvements about comfort and safety and 2) assistance in completing complex driving-related tasks. Notably, the participants in our study experienced AVTs to make them feel more comfortable about their driving performance because they were thought to compensate for health-related changes.

“Through the Labarge funding, our team has explored the many possibilities and concerns that automobile innovation raises for older drivers. We now have a better understanding of how seniors experience, utilize, and ascribe meaning to advanced vehicle technologies in the ‘driver cockpit’. We look forward to further discovering how these advancements are changing the relationship between seniors and their automobile.”

Jessica Gish

INVESTIGATORS:

Amanda Grenier
Jessica Gish
Brenda Vrkljan
Antonio Páez

Technology for Optimal Aging: An Exploratory Study of the Effects of Automobile Innovations on the Lived Experience of Older Drivers, their Mobility, and Social Policy
Osteoarthritis (OA) is an inflammatory condition. Chronic inflammation is likely responsible for an increased risk of heart disease, stroke, diabetes and depression among adults with OA. In this pilot study, we sought to explore whether (i) women with knee OA would demonstrate elevated levels of circulating inflammatory markers relative to age-matched controls at a single time-point; and (ii) whether a 12-week exercise intervention would reduce the presence of these markers relative to an attention-control intervention.

At a single time-point, no meaningful differences were found between women with or without knee OA in markers circulating in blood, contrary to our initial hypothesis. However, we found that the production of the markers was complex: women with knee OA had a lower number of circulating monocytes but these monocytes were more “activated”, so produced more inflammatory markers per cell. This finding is unique, and will be the focus of further investigation.

Moreover, we found that exercise did not reduce the presence of inflammatory cytokines circulating in serum, which was contrary to our initial hypothesis.

“We believe these findings are completely novel in the knee OA literature and will form the basis for an ongoing collaboration to explore this phenomenon in a larger sample. We are excited to build on these early results and enhance our collaborative efforts to understand the inflammatory markers of aging.”

Dawn Bowdish
Providing Recommendations from Guidelines for Healthy Aging through the McMaster Optimal Aging Portal

INVESTIGATORS:

Nancy Santesso  Holger Schunemann

The McMaster Optimal Aging Portal is an excellent way to reach people with valuable health information. Our goal for this project is to make guidelines for health, which are typically available to health care providers, accessible to the public through the Portal. Our research team has conducted focus groups and interviews with members of the public who are interested in information about healthy aging and searching for this information on the Internet. We began by asking people about their knowledge of guidelines and recommendations, and when we discovered that many people do not know about guidelines, we asked whether they want this information. The answer was “Yes, we do!”

Because the Portal has a variety of ways to communicate health information, such as summaries or blogs, the research team has tested out different versions of guidelines written for the public. As this work continues, the team is very excited to involve new graduate students as we focus on how we can personalize the information in guidelines, so that people can see how it could help them with their own healthy aging.

The McMaster Toolkit for Working with Older Adults has received over 1900 pageviews by almost 400 unique visitors.

“Citizens have told us what they would like to see and how it should be presented; based on this feedback, we are finalizing a format tailored for the public with the support of the Labarge Optimal Aging Initiative.”

Nancy Santesso
This project enriches the citizen-focused content of the McMaster Optimal Aging Portal by integrating material from a citizen-focused evidence database of patient decision aids through a collaboration with the University of Ottawa. A new category called ‘Patient Decision Aid’ has been created as part of the Portal’s Web Resource Rating content. More than 500 patient decision aids have been selected and are being assessed for quality (evidence-based, transparency, usability), using the Web Resources Rating Tool developed by the McMaster Optimal Aging Portal team. Inclusion of these additional resources is expected to occur by the end of 2016. This new feature of the Portal will provide users with additional resources in making evidence-based decisions about their health.

John N. Lavis and Anthony Levinson

“The Labarge Initiative has allowed us to enhance the content that the Portal provides to citizens, so that they can be evidence-informed when making decisions about their health.”

John N. Lavis
Older adults are at higher risk of developing osteoporosis and osteoarthritis conditions and consequently suffer from a variety of adverse health outcomes such as poor mobility or physical function, severe body pain and a poor quality of life. Among the non-pharmacological and non-surgical interventions such as different types of exercise, vitamin and mineral supplements and education, identifying the most effective combination of interventions may provide a cheap and sustainable alternative to standard drug therapy or surgery for each outcome. This project aims to identify such an optimal combination of interventions to prevent or manage each of seven different osteoporosis and osteoarthritis related outcomes using a series of network meta-analyses. Dr. Joseph Beyene and his team have developed the final search strategy for the systematic review of evidence from randomized trials for each outcome. Data from eligible articles were collected for the outcomes of physical function and body pain in osteoarthritic patients and network meta-analyses have been performed. The data extraction and analysis is expected to be finished in early 2017.

“With support from Labarge Initiative, we will be able to identify an optimal combination of complex interventions that is a relatively cheap and sustainable alternative to drug therapies and surgery for older adults who have or are likely to develop osteoporosis or osteoarthritis.”

Joseph Beyene
Chronic obstructive pulmonary disease (COPD) is highly prevalent among older adults and is a leading cause of death, disability and hospitalization in Canada. There is a growing body of evidence demonstrating that older adults with COPD have important problems with their balance and a high incidence of falls compared to those of a similar age. Our pilot study is exploring the feasibility and preliminary efficacy of a tailored 6-month home balance exercise program for reducing falls in older adults with COPD. Our study is now underway and in the active recruitment phase. We developed the home exercise program and produced an exercise DVD to help our participants adhere to their program. This exercise video is also publicly available online.

Results of this pilot study will inform a larger-scale multi-centre trial of fall prevention for older adults with COPD with increased fall risk.

**INVESTIGATORS:**

Marla Beauchamp  
Dina Brooks  
Roger Goldstein  
Stewart Pugsley  
Julie Richardson

"If the tailored home program is feasible and shows evidence of efficacy on intermediate outcomes linked to falls, this approach will represent a novel strategy for fostering resilience in the event of a fall and for reducing risk of future falls for the large population of older Canadians with COPD."

Marla Beauchamp

**IMPACT**

"We were able to leverage the pilot trial to help us obtain funding of over $900K from CIHR for a larger scale trial of fall prevention as part of respiratory rehabilitation."

Marla Beauchamp
Multimorbidity is the most common condition affecting older adults, who now take an average of seven regular medications. Morbidity and mortality rates from drug side-effects in seniors are as high as those from many chronic diseases and include falls, cognitive impairment, poorer nutrition, fatigue and poorer mobility. Adverse drug effects requiring medical care affect 13% of Canadian seniors on five or more medications, of which one-third are estimated as preventable. Mitigating the harms of polypharmacy to increase quality of life in seniors by maximizing the beneficial contribution of medications to optimal aging is a crucial focus for medical care for older Canadians.

Professor Dee Mangin and team continue their study testing a systematic approach to reducing polypharmacy to improve the health of older adults. The project is designed to support collaboration between patient, family doctor and pharmacist, and is supported by a new electronic program developed for the project, TAPERMD. The pilot work supported by this grant has led to the team securing a grant of nearly $1M from the Canadian Institutes of Health Research (CIHR).

“The Labarge funding has allowed us to expand this work across Canada, and has extended our collaborations with other groups at McMaster University. This would not have been possible without the funding from the Labarge Initiative, which provided a wonderful opportunity to move research in this area forward.”

Dee Mangin
Screening for possible cognitive impairment and dementia is a critical piece in health care for older adults. This project is intended to develop a novel screening test for dementia that may have more specificity than currently used tests, and is much less confronting a challenge. Our work so far has been investigating the validity and reliability of this alternative test in a wide range of older adults, including those who are cognitively healthy, or with mild or moderate cognitive impairment, to those with diagnosed dementia. The test is also being compared to current screening tests in populations of older adults with hearing impairments, as our test does not place demands on speech perception in the same way that other tests do.

Funding from the Labarge Initiative has allowed our team, including a PhD student and several undergraduate research students, to go into the community and interact with seniors, while also carrying out the applied psychological scientific research that can help to improve cognitive screening for seniors everywhere.

Karin Humphreys

"Funding from the Labarge Initiative has allowed our team, including a PhD student and several undergraduate research students, to go into the community and interact with seniors, while also carrying out the applied psychological scientific research that can help to improve cognitive screening for seniors everywhere."

Karin Humphreys
Hip fractures are a significant concern for older Canadians, with 54% of women over 50 sustaining an osteoporotic fracture in their life, and 24% of these dying within one year of the fracture. In order to provide targeted protective interventions, a clinical method is needed to identify those most at risk of these injuries. Our research team has been working to investigate how to use standard clinical scans to build subject-specific computer models to better assess an individual’s risk of hip fracture.

Work to date has focused on developing experimental methods to test cadaveric femurs under a range of loading configurations representative of falls. This will allow investigation into factors that affect a person’s injury tolerance. Our ongoing efforts are focused on determining the optimal method to extract both geometry and material properties from these scans for modeling purposes, which will form the bulk of the work for the remainder of this project.

“The overall goal of this project is to allow identification of those most at risk of injury from falls, so that interventions can be implemented prior to them sustaining a devastating fracture.”

Cheryl Quenneville
McMaster Optimal Aging Knowledge Translation Enterprise

The McMaster Optimal Aging Portal has seen significant growth in the number of users, endorsements and overall visibility in the past year. Older adults, caregivers and health professionals from around the world are visiting the Portal as a trusted resource for credible, evidence-based information about healthy aging.

Growth in Numbers

Monthly unique visitors have grown by over 300% in 2016, with users from 10 different countries including Canada, the U.S., England, Australia, New Zealand, India, Singapore, Spain, Ireland and Mexico.

“Thanks Mac and all involved—you cannot imagine how important the McMaster Optimal Aging Portal is to us!”

Alan Drummond
Portal user
Partner and Media Endorsements

Dr. Yves Joanette, Scientific Director of the Canadian Institutes of Health Research Institute of Aging, endorsed the Portal saying, “I encourage you to visit the McMaster Optimal Aging Portal, and refer it to those you know would benefit from its resources. Remember we’re all aging, so let’s age optimally!” Partners, old and new, continue to support and recommend the Portal including MedicAlert, the Canadian Association of Retired Teachers, the Physical Activity Resource Centre of Ontario, YMCA of Hamilton, Burlington, Brantford and the Ontario Retirement Communities Association. The Portal has also been featured in the Globe and Mail, on CH Morning Live and TVO, and in Senior City and Home and LongTerm Care Magazines.

Praise for the Portal

Everyday citizens like Joe T. applaud the Portal saying, “For us seniors, the web is a scary place. Thank you for creating this very useful tool.” And Stephanie V., who consulted the Portal to prepare for a biopsy appointment and subsequent radiation, and felt that the Portal made her a better informed patient.
Connecting Aging News with Evidence

The Portal’s team of dedicated experts continues to evolve the site to engage new and returning visitors with topical content and valuable insights. New content features added to the line-up in 2016 include: ‘Hitting the Headlines’, a weekly news summary that connects aging headlines with the best available related research evidence on the Portal, and ‘Trending Resources’, a weekly round-up of the most popular resources on the Portal.

With the aim of engaging the public in important discussions around healthy aging, the Portal team hosted three public talks in 2016. The talks (featuring keynotes Michael Landsberg, Dr. Geoff Fernie, and Mark Tewksbury) highlighted important issues facing older adults, including depression and mental health, mobility, and the benefits of exercise and social engagement. Over 900 people from across Canada and around the world attended the talks or watched the live webcasts.

The public talks are one part of the knowledge translation focus of the Portal, which has also included workshops about how to use the Portal, student events, three citizen panels and a stakeholder dialogue. The citizen panels and stakeholder dialogue addressed the issues of strengthening care for frail older adults in Canada; strengthening care for people with chronic diseases; and building a primary-care ‘home’ for every Ontarian. These events help to fuel action for improving health outcomes and to inform policymaking.
McMaster Optimal Aging Portal Facts

Total users to-date: 108,188
Total sessions*: 129,904
Total pageviews*: 268,985

Social Media

Twitter followers: 1,530
All-time Twitter impressions: 14.9 million
Facebook reach*: 1.2 million

Content

Scientific articles for professionals: 31,000
Blog posts: 108
Evidence summaries: 486
Web resource ratings: 1208

*Jan-Sept 2016
The McMaster Optimal Aging Portal was launched in 2014 to increase public access to trustworthy health information. The Portal helps readers to access evidence-based resources, identify trustworthy messages, and understand scientific findings. Now we want to know whether using the Portal changes what people know and do to stay healthy and mobile as they age.

This project will help us to:

- Understand how older adults (age 65+) use the Portal to obtain information about maintaining and improving mobility
- Evaluate whether or not use of the Portal results in a change in knowledge or behaviour that may help maintain or improve mobility with age.
Multiple diseases, multiple medications, and age predispose seniors to drug toxicity which increases the risk of mortality and impairs mobility and cognition. GeriMedRisk-TAPERMD is a comprehensive multilevel approach to polypharmacy that integrates a geriatric pharmacology consultation service and a clinical pathway for systematic medication reduction that incorporates teamwork between patient pharmacist and physicians. It integrates patient priorities, electronic screening for potentially harmful medicines, supporting evidence tools and a monitoring pathway to support medication reduction. This project will:

- Examine the feasibility of GeriMedRisk-TAPERMD in the long term care setting
- Assess GeriMedRisk-TAPERMD’s potential to decrease drug-related hospital visits and falls
- Assess the potential for reversal of polypharmacy-associated mobility impairment following deprescribing using the TAPERMD clinical pathway.

INVESTIGATORS:

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<tr>
<th>Joanne Ho</th>
<th>Andrew Costa</th>
<th>Anne Holbrook</th>
<th>Julie Richardson</th>
<th>Lehana Thabane</th>
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<td>Dee Mangin</td>
<td>Gordon Guyatt</td>
<td>Reza Mirza</td>
<td>Justin Lee</td>
<td>Kristina Frizzle</td>
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Optimal Prescribing to Enhance Mobility Among Seniors: A GeriMedRisk-TAPERMD Collaboration
The Optimal Aging Portal is a valuable source of health research information for aging Canadians. Feedback suggests that alternative ways of communicating Portal Evidence Summaries may be needed to better address diverse older adult user needs. This project will:

- Engage older adults to co-design a communication toolbox (i.e., technology, content focus and format) for delivering evidence-informed health content to older adult Portal users
- Apply the resulting design requirements to the production of a new communication toolbox (up to three new information and communication tools) for Evidence Summaries
- Evaluate the process of older adult engagement in collaborative design and whether the new toolbox meets initial expectations.

**Co-Design and Production of a User-Optimized Communication Toolbox for Delivering Research Evidence to Older Adults**

**INVESTIGATORS:**

- Alfonso Iorio
- Rebecca Ganann
- Stephen J. Gentles
- Ruta Valaitis
- Cynthia Lokker
There is emerging evidence regarding the health benefits of simultaneous cognitive and physical training. Dance is a promising optimal aging strategy as it incorporates both cognitive and physical components and the social aspects may additionally contribute to adherence and effectiveness. In partnership with the YMCA, the intervention will be delivered as twice weekly dance classes for six-months. The program features a collection of ballroom dances that will be tailored to the group and increase progressively in complexity.

The DANCE study will:
- Recruit pre-frail older adults with early impairments in cognition and mobility
- Assess the feasibility of a dance intervention
- Examine whether the intervention reduces frailty and improves cognition, mobility and quality of life.
For older drivers, maintaining safe, independent mobility is vitally important for self-sufficiency, quality of life, and self-esteem. How do good drivers adapt to maintain safe performance on the road as they age? This project will lead to a better understanding of the neural and behavioural changes involved in driving and aging so that we can develop strategies to safely maintain self-sufficiency and mobility for aging drivers by:

- Using physiological and brain-imaging techniques in a multisensory (visual, auditory, proprioceptive, and vestibular) driving simulator
- Examining how age-related enhancement of multisensory integration may be critical for older drivers.
Driving is the preferred mode of transportation in North America and many older adults, particularly those in rural and suburban areas, rely on driving to access the people and places that keep them healthy and active. Ensuring their behind-the-wheel skills match the demands of the driving environment is important. This project brings together leading experts in aging, health, and driving from the Faculties of Social Science and Health Sciences to:

- Examine a novel training program targeting healthy older drivers that provides tailored feedback
- Explore the perceptions of older male and females when it comes to their driving ability, confidence and how this corresponds with their performance and attitudes towards driver retraining.

**Investigators:**

| Brenda Vrkljan | Jessica Gish | Lauren Griffith |

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**Improving Confidence and Behind-the-Wheel Skills: Evaluating the Feasibility of an Older Driver-Health Promotion Intervention to Optimize Safe Mobility**
By 2030, one in four persons in Canada will be aged 65 years or over, placing significant pressure on the healthcare system. It is vital that future healthcare providers receive practical experiences early in their career that help prepare them to care for older adults. The research team is piloting and evaluating the impact of a unique practical learning experience outside the traditional clinical setting. In this project, nursing and medical clerk students are paired with experienced Health TAPESTRY community volunteers to visit older adults living at home to collect information about their health goals and needs to share with their primary care team. Students then join the care discussion at the primary care clinic and get first-hand experience of the inner workings of interprofessional primary care team communication and care planning. The students also prepare for their placement with face-to-face practice in interviewing older adults and in the use of innovative eHealth materials such as the online Health TAPESTRY Volunteer Learning Centre and the McMaster Toolkit for Working with Older Adults. The research team is evaluating the impact of this experience on trainees’ attitudes toward, and confidence in, working with older adults, as well as the knowledge and skills needed for their careers. The goal is to understand how this experience can enhance the current curriculum and serve as a template of structure and knowledge necessary for building future practical course offerings for students in primary care. Students have received their training and will be starting home visits in October 2016.

**INVESTIGATORS:**

Ruta Valaitis
Heather Waters
Doug Oliver
Larkin Lamarche
Lisa Dolovich

“This experience has the potential to shape nursing and medical students’ understanding of the lived experience of aging and the ways that an interdisciplinary primary care team can work together with older adults to promote their health and assist them to live at home as long as possible.”

*Ruta Valaitis*

**BHSc Project**

“Because of funding from the Labarge Foundation, we were able to provide undergraduate students with access to training modules in the McMaster Optimal Aging Portal which are a perfect match for the problem-based learning approach of my Bachelor of Health Sciences course. Students are provided with a unique learning opportunity while gaining valuable transferable skills in information gathering and communication.”

*Jane Foster*

HTH SCI 4BB3 Instructor

Over the past year, the project team has developed a mutually beneficial partnership with the Bachelor of Health Sciences (BHSc) Program through an initiative that offers unique opportunities for skill development to BHSc students while cultivating sustainable and efficient methods of content creation for the McMaster Optimal Aging Portal.

The team has produced 13 online ‘nano courses’ that teach students how to identify and rate research articles and websites that are relevant to an audience interested in optimal aging, and to prepare evidence summaries and blog posts based on research evidence. The nano courses have been integrated into five courses, with plans for an additional eight in the new year. There are plans for expansion into more courses, and to develop similar partnerships with other academic programs.

The development of the nano courses has also led to broader interest in the Portal. The team has initiated a partnership with the Hamilton Public Library (HPL) with a plan to offer workshops for community librarians at HPL and members of the community on the benefits of the content found on the Portal. A training workshop has now been held for 17 community librarians, and a series of 13 workshops have been scheduled through the HPL for members of the community.
Engagement of Patients and Family Caregivers in Research

INVESTIGATORS:

Ruta Valaitis
Carrie McAiney
Maureen Markle-Reid
Rebecca Ganann

“The workshop was excellent. The wealth of information that came from the community members... it really gave a “window” into how they can enhance research with their important perspective and experience.”

Researcher

“ACHRU has always been informative and accessible. This two-day session moves the benchmarks on the fit between research to impact on policy and funding.”

Patient/Caregiver

We know patient and public engagement (PPE) in research is important for positive impacts on health and health services. But how do we go about it, evaluate it and embed it in our research practice? These are some of the questions the Aging Community and Health Research Unit (ACHRU) wanted to explore with funding from the Labarge Foundation. The ACHRU hosted a three-day event in September 2016 with world renowned expert Dr. Patricia Wilson from the University of Kent. Dr. Wilson gave a public presentation, followed by an open discussion on the implications of PPE for the local community and researchers. Her lecture was followed by a two-day workshop where patients, caregivers, funders, decision makers, researchers and students came together to explore the value and impact of PPE in research, discuss the policy implications, gain practical insight into putting PPE into practice, and consider the best approaches to evaluation. Participants gained a better understanding of how to plan and strategize so PPE can be more meaningfully and effectively incorporated in health research.

The research team will use the knowledge learned from the workshop to assist them in implementing and evaluating a plan to engage patients and public in the CAST (Community Assets Supporting Transitions) study which focuses on older adults with multiple long-term health conditions and symptoms of depression who will be transitioning from hospital to home. Patients and caregivers will be involved in the study’s organizational structure, and the study design includes evaluation of the process used to engage patients and caregivers in this research.

McMaster Toolkit for Working with Older Adults

“The McMaster Toolkit for Working with Older Adults was developed with an interdisciplinary group of learners in mind. We believe that it will be broadly applicable and we are enthusiastic about its potential use beyond McMaster.”

Alan Neville

The McMaster Toolkit for Working with Older Adults was developed by an interprofessional group of researchers and clinicians at McMaster University. The goal of the Toolkit is to build competence in older adult care by providing instruction and resources focused on increasing comfort levels and enhancing communication skills. The Toolkit is free to use, and consists of an online course, a trigger video to prompt group discussion, and a website with additional resources. The Toolkit can be found at: machealth.ca/programs/mcmaster-toolkit/.

The toolkit is currently under review in some of the academic programs at McMaster, and the team is looking for external partners who may also be interested in using the curriculum, such as college training programs and professional bodies affiliated with the healthcare professional education and training. The focus for the coming months will be to disseminate McMaster’s toolkit broadly among these groups.
Suzanne Labarge, a former vice-chairman of the Royal Bank of Canada, is chancellor of McMaster University, which is home to the Labarge Optimal Aging Initiative.

I spent decades in banking, and I keep coming back to a day 45 years ago when I was the assistant manager of our bank’s main branch in Ottawa.

It was pouring rain, and an elderly man came in to redeem the annual coupons from his Canada Savings Bonds, a vital source of his and his wife’s income. They had saved and planned well, or so it had seemed to them.

I asked if he would be taking a taxi home because of the rain. No, he said. That would be too expensive. He and his wife had lived longer than they had expected and were worried about outliving their savings. Out he trudged into the rain.