RETIREMENT CONCEPTS INNOVATION CENTRE

Innovation Centre for Healthy Aging
Welcome to RCIC
RC Innovation Centre

A multi-user research center in Surrey bringing scientists and clinicians across disciplines from SFU, BCIT, UBC, Fraser Health to quickly advance technologies and innovation in healthy aging and independence.
RC Innovation Center

Innovation in Technologies – focus on assistive devices, integrated communication systems and care-enabling technologies specific to supporting independence and advanced care and services for aging adults.
It is an Imperative

- Population will double by 2036
- The public system has no capacity
- We must work in new collaborative partnerships
- We need to disrupt conventions

Andrew Wilkinson, Minister of Technology, Innovation and Citizens’ Services

“Technology has the power to transform the way we live and age, and the type of research and innovation that will be undertaken at the new Retirement Concepts Innovation Centre for Healthy Aging will make a very real and positive difference in people’s lives,”
Our Vision

- We are committed to being an global leader in the development and deployment of practices and technologies that will do the following:
  - improve health outcomes,
  - enhance quality of life for older adults and
  - drive cost effective, sustainable solutions toward improved housing, care and service

- Through collaboration with seniors, caregivers and families, we assist in the design and engineering of innovative technologies as a research and learning environment
Independent Living Technologies
Embedded Labs.
Independent Living Technology
Health Technology Impact Today

Real life applications and making a difference
Improving Quality of Care

The Retirement Concepts Innovation Centre for Healthy Aging (RCIC) optimizes the benefits of collaborative partnerships and innovative technologies to design and develop high-quality sustainable health-service solutions for aging adults in Canada.

Our Vision

We are the global leader in the development and deployment of sustainable, advanced solutions for aging adults, designed to improve quality of life. To achieve this vision, we will optimize unique and collaborative partnerships, assist in the engineering and design of innovative technologies, and be an inspiring and creative research and learning environment. Each Retirement Concepts campus is an environment that inspires learning and creativity towards:

- Quality improvement
- Excellence in care and service delivery
- Collaborative learning and discovery
- Development of innovative solutions improving lives of aging adults

A Key Node in the Innovation Boulevard Technology Test-bed

A growing network of clinically embedded technology focused nodes
Dr. Ryan D’Arcy

Dr. Ryan D’Arcy’s portable device that measures brain signal activity is under development to monitor and prevent injury to elderly and vulnerable individuals. The device uses brainwave technology to detect changes in brain function and alert caregivers to potential injury. The technology is being tested in a clinical trial with promising results.

Dr. Carolyn Sparrey

Dr. Carolyn Sparrey’s research focuses on the development of a wearable device that can monitor changes in gait and balance. This technology has the potential to prevent falls and reduce the risk of injury in elderly individuals. The device is currently being tested in a clinical trial.

Dr. Siamak Arzanpour

Dr. Siamak Arzanpour’s research is focused on the development of a portable device that can monitor and prevent falls. The device uses machine learning algorithms to analyze data from sensors worn on the body and alert caregivers to potential falls.

Dr. Carlo Menon

Dr. Carlo Menon’s research is focused on the development of a portable device that can monitor and prevent injuries to elderly individuals. The device uses machine learning algorithms to analyze data from sensors worn on the body and alert caregivers to potential falls.

Dr. Maryam Sadeghi

Dr. Maryam Sadeghi’s research is focused on the development of a wearable device that can monitor changes in gait and balance. This technology has the potential to prevent falls and reduce the risk of injury in elderly individuals. The device is currently being tested in a clinical trial.

Dr. Stephen Robinovitch

Dr. Stephen Robinovitch’s research is focused on the development of a portable device that can monitor and prevent injuries to elderly individuals. The device uses machine learning algorithms to analyze data from sensors worn on the body and alert caregivers to potential falls.
Projects
Our current projects are designed to develop leading edge technologies and services that improve quality of life and create partnerships between researchers and seniors.
Cutting edge research in DEMENTIA

Close partnership and collaboration with multi-national world leading companies in bring innovative health-care solutions to the world
Brain Vital Signs

A mobile device will allow healthcare workers to monitor medication efficacy for persons with cognitive impairment (dementia)
Digital Health – at HOME
Mobile Wound-care Solutions
Mobile Wound Monitoring

Developing a Tele-medicine System for Monitoring and Managing Pressure Ulcers in Long-term Care Facilities

Maryam Sadeghii, Rowena Rizzotti

1. Director, Digital Health Hub, Simon Fraser University, Canada, msadeghi@sfu.ca
2. CEO and Co-Founder, MetaOptima Technology Inc.
3. Vice President of Operations, Retirement Concepts

Plan & Objectives
In line with The Innovation Boulevard’s focus on medical technologies, this project combines digital health technologies with the need for advanced technologies for long-term care facilities.

- Implement a pilot project with Retirement Concepts using the communications and archiving system developed by MetaOptima
- Conduct a research project focused on preventing pressure ulcer wounds in a close partnership with Retirement Concepts and the Digital Health Hub

Background Review
- Pressure Ulcers are caused by the continuous compression of skin by the weight of the individual (also known as bed sores)

Digital Photography and Tele-monitoring of Wounds
- We provide mobile imaging and telemedicine consultations
- The accuracy of a picture can assist in appropriate assessing the extent of healing
- Allow for more efficient and effective monitoring of wound healing
- Improve communications between the specialists and the primary care provider
- Increase access to specialists
- Strengthen existing documentation processes of wound care management
- Result in rapid assessment and treatment of potential complications
- Wounds can be labelled and placed on a 3D body map for easy tracking
- Wounds can be monitored over time to assess the healing process

Pressure Ulcers are caused by the continuous compression of skin by the weight of the individual (also known as bed sores)

Outcome and Evaluation of Results
- Quantitative and qualitative assessment of efficacy of healing time, and management of complications
- Giving patients access to, and more control over their health records, and providing access to the treatment process in order to evaluate effectiveness
- Reducing prevention and management costs for wound prevention for Retirement Concepts
- Improving quality of life and quality of care
- Commercializing our technology will have a direct economic impact as one of the first projects of Innovation Boulevard in Surrey

Conclusion
Computertized wound measurement systems enable clinicians to assess, document, and individualize the treatment plan given to each wound patient, saving time and resources, and improving outcomes and quality of care for patients.
SFU Applied Sciences

- **Tremor suppression**
  - Assistive technology
  - Independent living
  - Individuals with Essential Tremor

- **EEG-controlled exoskeleton**
  - Unsupervised rehabilitation
  - Assistance
  - Stroke and Spinal Cord Injury
Social Connectedness
Senior-friendly communication
Life is Art – Our first publication
Gerontology Research Center

- AGE-WELL
- National Centre of Excellence
Attention: Seniors, Families, and RC Employees

THIS IS YOUR INVITATION TO PARTICIPATE

Help shape the future of healthy seniors and leave a legacy for independent living

We would like to invite you to participate in various Research & Development projects at the Retirement Concepts Innovation Centre with regards to projects aimed at improving the independence, quality of life & care for aging adults in our communities.
INVIATION TO PARTICIPATE

We would like to invite you to participate in various Research & Development projects at the Retirement Concepts Innovation Centre with regards to projects aimed at improving the independence, quality of life & care for aging adults in our communities.

Engage with aging adults and families, clinicians and researchers around opportunities that will improve quality of care through offering leading edge and efficient services for our populations.

Collaborate and participate in the learning and discovery process as it evolves. Including care providers, services and families.

By filling out the below form, you are allowing us to contact you in order to discuss your area of interest in any of our developing research or innovation opportunities. We thank you in advance for your interest in improving healthy aging in our communities. Please note, all participation is on a purely voluntary basis and you may choose to withdraw at any time.

Fields marked with an * are required

I am:
- [ ] A Family Member of a Resident/Tenant
- [ ] A Resident in Residential Care
- [ ] A Resident in Assisted Living
- [ ] A Family member of a resident in assisted living/independent living
- [ ] A Staff or Community Manager

A staff member - Facility:

Member of the Community: Please explain

First Name *

Last Name *
Through partnerships and collaboration with clinicians and researchers, Retirement Concepts Innovation Centre for Healthy Aging brings senior care together to improve the independence and quality of life for aging Canadians.

WWW.RCINNOVATION.COM

Questions
Thank you!