AVOID FRAILTY | PROGRAM FOR HEALTHY AGING

Frailty is a medical condition of reduced function and health in older individuals. However, **frailty is not an inevitable part of aging**. Over 1.6 million Canadians are currently living with frailty, and this number is projected to exceed 2.5 million over the next 10 years. Factors like inactivity, poor nutrition, social isolation or loneliness, and multiple medications contribute to frailty. The risk of becoming frail increases with age, but age itself is not synonymous with frailty. Those living with frailty are at higher risk for deterioration of their health and death than what is expected based on their age alone.

Older adults living with frailty and their families, friends, and caregivers need holistic approaches that treat the entire person and health challenges in a coordinated, caring manner. **Our team is working on such a coordinated approach, supported by a software platform.**

Our work builds on an extensive record of interdisciplinary research, with experts from the Health Sciences, the Social Sciences, Science and Engineering, in the area of **digital technologies for health**, specifically designed to support seniors**.**

- With support from UAlberta's Health Sciences Council, and in collaboration with the Glenrose Rehabilitation Hospital, a Smart Condo™ simulated learning environment was established that produced a prototype demonstrating the feasibility of sensor-based unobtrusive monitoring of Activities of Daily Living.
- In the context of the AGE-WELL NCE, we developed Vibrant Minds, a set of tablet-based games that exercise and improve reaction, short-term memory and language. Our studies demonstrated that people with moderate dementia maintain some ability for procedural learning and can enjoy these games.
- Starting with AGE-WELL support and later CABHI, we developed Virtual Gym, a virtual reality platform for exergames that help seniors improve their balance, strength and flexibility.
- In the context of UAlberta's Computational Psychiatry research group, we have been working on extracting indicators of neurodegenerative and mental health conditions from speech.
- In the past two years, we have been working with the Canadian Frailty Network to develop a software platform that implements AVOID, an intervention for frailty prevention.

We recently obtained funding to support the integration of all the above projects in a **holistic approach to support older adults to avoid and mitigate frailty symptoms;** an overview presentation of our envisioned platform can be found at Digital Technologies for Healthy, Independent Aging.

To ensure that our platform will fit well with the Alberta context, will meet the needs of Alberta's seniors, and will provide them with practical tools to help them delay frailty and live independently longer, we are seeking to establish partnerships with organizations that serve Alberta's seniors.

Your voice matters and will shape our work. If you are interested in learning more about our work and getting involved in our project, please contact Dr. Eleni Stroulia stroulia@ualberta.ca.

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