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**Project Title**

A Model of Health: Using data modelling techniques to improve health outcomes for older Canadian adults by optimizing the development and delivery of physical activity interventions

**Project Summary**

Older Canadian adults do not get enough physical activity, increasing their risk of developing numerous chronic diseases. The economic burden of these diseases exceeded \$10 billion in Canada in 2015, much of which is avoidable if older adults were more active. Our research will quantify the relationship between various levels of physical activity, disease outcomes, and healthcare costs. We will use methods from epidemiology and marketing analytics to build statistical models that use individual-level data from the CLSA in order to predict health and cost outcomes of physical inactivity. We will show how these models can be used to optimize and target the delivery of physical activity interventions. Our research will be the first to predict health and cost outcomes for older adults based on individual-level data. This will allow healthcare decision makers to offer, and to make an economic case for, cost-beneficial physical activity interventions for older Canadian adults.

**Keywords**

Physical inactivity, primary prevention, secondary prevention, older adults, economic burden of illness