

Applicant

Dr. Shehroz Khan, University Health Network

E-mail Address

shehroz.khan@uhn.ca

Project Title

Development of Machine Learning Models to Characterize Homebound Status in Older Adults in Canada

Project Summary

Homebound status is defined as never or rarely leaving the house, or only being able to leave the house with assistance. Homebound older adults (OAs) are high users of healthcare services, and are typically frail, sedentary and socially isolated, with significant adverse effects on their physical and mental health. Most previous studies of homebound OAs have used small cross-sectional or longitudinal datasets to examine correlates of homebound status. We hypothesize that the development of homebound status in OAs is a complex process and simple combination of manually chosen health indicators may not be sufficient to build accurate machine learning classifiers to detect it. In this project, we propose to use the baseline wave of the Comprehensive cohort in the CLSA dataset to develop and validate a homebound definition, and then to use it to 1) determine the prevalence of homebound OAs at baseline, and 2) determine the incidence of homebound OAs after the first three-year follow-up.

Keywords

Machine learning, Homebound, Mental health, Gerontology, Aging