

**Applicant**

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**Project Title**

Measuring the burden and the complex interdependencies of multimorbidity in Canada

**Project Summary**

Many people in the general population are affected by multiple chronic diseases. This burden of chronic disease increases with age and is responsible for poor medical outcomes. Researchers remain uncertain on how to measure the overall burden of chronic disease in an individual. The current proposal will continue our ongoing work to develop and refine a "multimorbidity index", a numerical score that quantifies the burden of chronic disease for an individual. Such an index should accurately predict a person's future health and well-being. In addition, the current proposal will use "graphical models", a novel application of machine learning, to graphically illustrate the relationship between numerous measures of health and disease. Applying graphical models to the CLSA dataset is a unique opportunity to understand the complex relationships between health and disease in the general population.

**Keywords**

Chronic disease, Multimorbidity, Comorbidity, Graphical models, Prognostic index