

Title: Exploring multimorbidity trajectories in the Canadian population.

Introduction:

Multimorbidity, defined as the coexistence of two or more chronic conditions in the same individual, is a public health concern in Canada and internationally, and has been associated with negative health outcomes and increased health care utilization and costs. Understanding how multimorbidity develops over time can help policy makers to develop appropriate preventive and treatment strategies. This study explores different trajectories to multimorbidity in the Canadian population and how these trajectories are associated with healthcare utilization.

Methods:

The Canadian Institute for Health Information (CIHI) has recently included in its population grouping methodology (POP Grouper), an output file to identify all the chronic conditions captured in the POP Grouper, including an index date identifying when the condition was first diagnosed.

This 10-year longitudinal study focused on three common chronic conditions (diabetes, cardiovascular disease, and respiratory disease) and people aged 40-75 in 2010. This cohort was followed over a 10-year period, using sequence clustering techniques to create a sequence of disease states and to identify the most common multimorbidity trajectories. POP Grouper outputs will also be linked with hospitalization data and logistic regressions will be used to explore differences in the likelihood of hospitalization between different clusters.

Results:

The CIHI POP Grouper allowed us to track chronic conditions longitudinally. With 3 health conditions of interest, we have a total of 8 possible states as well as 2 additional states to account for people that moved out of the province/country or died. The descriptive analyses illustrated the multiple trajectories to comorbidity. The results from the cluster analysis and logistic regressions are still in progress and will be discussed during the presentation.

Conclusion:

A better understanding of the different trajectories to multimorbidity and their association with healthcare utilization is of critical importance. This will help policy makers to provide target preventions and interventions and improve the care and services provided.