

Can Linked Electronic Medical Record and Administrative Data Help Us Identify Those Living With Frailty?

Wong, S¹, Katz, A^{2,3}, Williamson, T⁴, Peterson, S⁵, Taylor, C², and McGrail, K⁵¹BC Primary Care Sentinel Surveillance Network²University of Manitoba³Manitoba Centre for Health Policy⁴University of Calgary⁵University of British Columbia

Introduction

Frailty is a combination of factors that increase vulnerability to functional decline, dependence and/or death. Frailty cannot easily be defined by comorbidities or medical treatment alone. Accurate detection of frailty in practice and at a population level is needed. This may be achieved using a combination of data sources.

Objectives and Approach

We construct algorithms that can identify frailty using electronic medical record (EMR) and administrative data. We linked EMR data from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) nodes and the administrative (e.g. billings, hospitalizations) from Population Data BC and the Manitoba Health Policy Centre. Frailty was defined as individuals 65+ who were receiving home services, had specific chronic conditions, received specific diagnoses, and/or had specific lab or other clinical indicators. We describe sociodemographic characteristics, risk factors, prescribed medications, use and costs of healthcare for those identified as frail.

Results

People were identified as frail in 2014 and all analysis was completed with 2015 data. Among those who were > 65 years, who had a record in both EMR and administrative data, 5%-8% (n=191 of 3,553, BC; n=2,396 of 29,382, MB) were identified as frail. There was a higher likelihood of being frail with increasing age and being a woman. In BC, those identified as frail have higher contacts with primary care (n=20 vs. n=10) and more days in hospital (n=7.4 vs. n=2.0) compared to those who are not frail. Twenty two percent of those identified as frail in 2014 died in 2015, compared to a mortality rate of 2% among those who are not frail.

Conclusion/Implications

Identifying and reporting on those who are frail in primary care as well as in communities could enable targeted communications with patients and families and community based resources in order to improve patient care, patients' and caregivers' quality of life and better use of the healthcare system.

