

Identification of Frailty using EMR and Admin data: A complex issue

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Introduction

Frailty is a state of vulnerability to diverse stressors emphasizing the importance of identifying the frail to support them. The burden of frailty in Canada is steadily growing. Today, approximately 25% of people over age 65 and 50% past age 85 – over one million Canadians – are medically frail.

support health service planning. The lack of agreement between the results obtained from EMR and administrative data definitions suggests that further refinement is necessary. Identification of frailty remains complex.

Objectives and Approach

To develop an administrative data definition of frailty to facilitate clinical and health system planning. We will validate the definition by linking the administrative data to electronic medical records (EMR) data. The EMR definition is based on a Machine Learning binarized frailty flag for patients with a Rockwood Clinical Frailty Score > 5 on physician chart audit. The sensitivity of the Machine Learning was disappointing: 28% (95% CI: 21% to 36%). specificity was: 94% (95% CI: 93% to 96%), positive predictive value: 53% (95% CI: 42% to 64%), negative predictive value: 86% (95% CI: 83% to 88%).

Results

There was little overlap between the EMR and administrative data definitions using the same population. Of the 29,382 eligible administrative data community dwelling patients over 65 years old, with a linkable EMR record, 2398 (8.15%) were identified as frail using the administrative data definition, but only 16.1% of these were frail according to the EMR definition. Of the 2396 who were identified as frail in EMR data, only 375 (15.7%) were identified as frail using the administrative data definition.

Conclusion/Implications

We are not yet able to develop a reliable administrative data definition of frailty to identify community living individuals to

