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BACKGROUND

Frailty is a medical syndrome that is associated with increased adverse health events and healthcare spending. Yet, primary care settings do not regularly assess frailty as standard clinical practice.

We developed an algorithm using administrative data in BC and Manitoba that can identify frail patients. This poster describes the development used to derive a frailty algorithm in community dwelling seniors, in addition to results on the location of diagnosis, use, and spending of frail patients.

METHODS

A modified definition of frailty was developed based on previous work by Dalhousie University researchers and the BC Ministry of Health definition. We focused on applying three identification rules in those ≥ 65 years:

1. Resident in a long-term care of assisted living facility;
2. Terminally ill; and
3. At least two indices from the Edmonton Frail Scale.

Administrative data was provided by Population Data BC:

- Physician claims;
- Hospitalization records; and
- Prescription medications.

We examined healthcare use and costs for those who were identified as frail in 2013 compared to those with no chronic conditions or associated events indicating medical complexity (i.e. healthy).

RESULTS

- More female patients were identified as frail and had a higher mean age compared to male patients (Figure 1).
- A higher percentage of frail patients were identified in long-term care (LTC) settings, compared to community and hospital care settings (Figure 2).
- Health care costs (Figure 3) and use (Figure 5) increased in frail patients compared to healthy patients.
- Frail patients had longer lengths of stay in hospitals and higher number of acute hospitalizations (Figure 3).
- Patients identified as frail in hospitals had higher costs (Figure 4) and longer hospital stays (Figure 6) compared to patients identified in community and LTC settings.

CONCLUSIONS

The study identifies frailty algorithms that could be used with administrative data. Identification of frailty could be of use for health services planning and delivery of primary and community services.

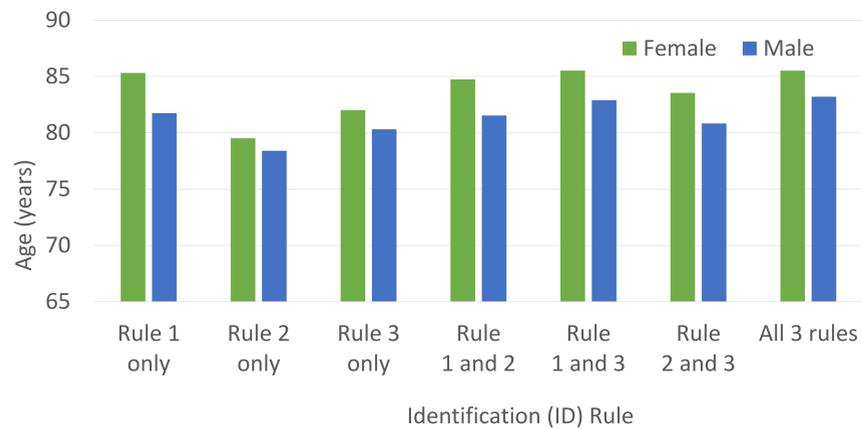
This study demonstrates the ability to identify frailty using administrative data and differentiate the place where people are identified as frail.

ONGOING WORK

Electronic medical record data collected by the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) will be used to supplement data, including:

- Abnormal laboratory values;
- Records of 10+ visits in 12 months;
- Age; and
- Multiple morbidities.

Figure 1. Mean Age of Frail Patients (≥ 65 years) by ID rule, 2013



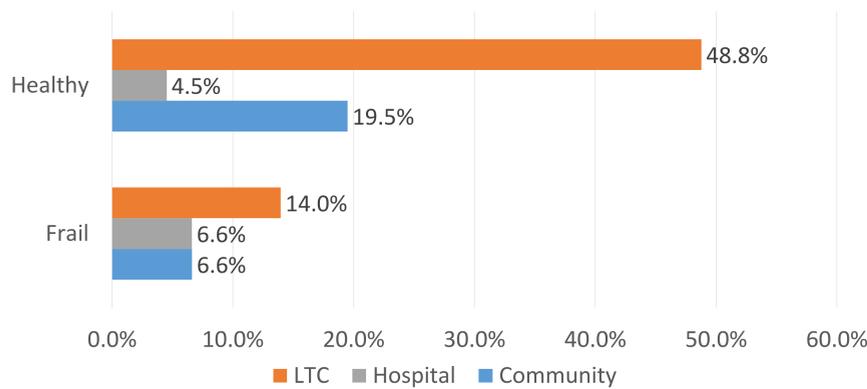
8.4 %

of BC population ≥ 65 years is frail

83

mean age of frail patients

Figure 2. Percentage of Patients (≥ 65 years) by Location of Identification, 2013



4.6

average number of chronic conditions

10.7

average number of prescriptions

Figure 3. Mean Healthcare Costs (≥ 65 years), 2013

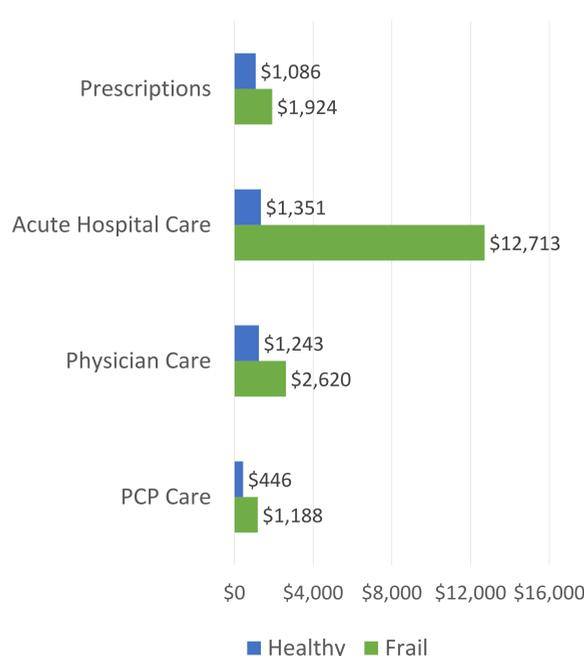


Figure 4. Mean Healthcare Costs of Frail Patients (≥ 65 years) by Location of Identification, 2013

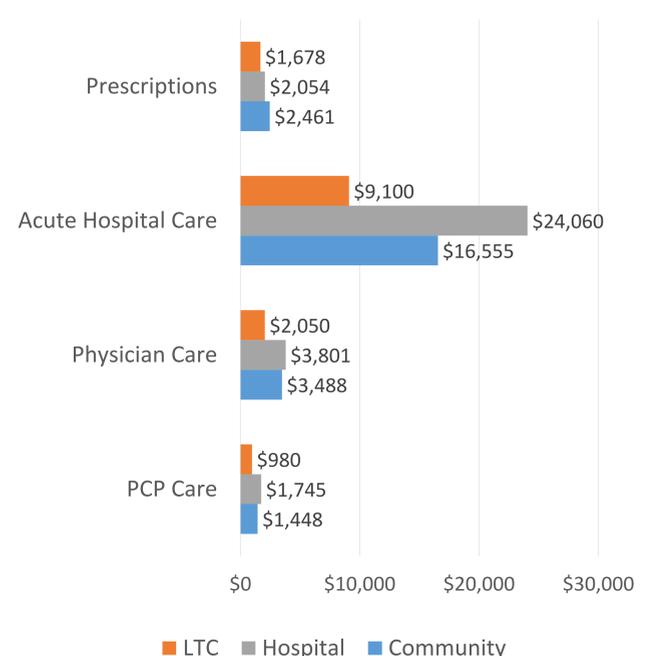


Figure 5. Healthcare Use by Patients (≥ 65 years), 2013

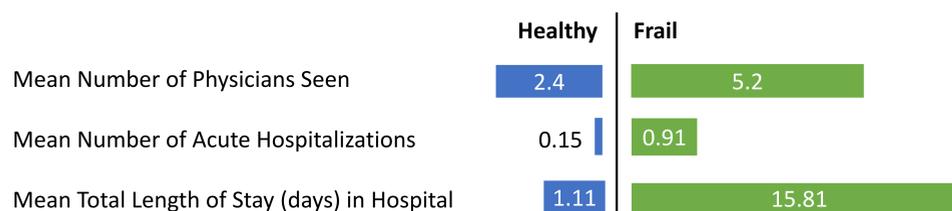


Figure 6. Mean Healthcare Use of Frail Patients (≥ 65 years) by Location of Identification, 2013

Healthcare Use	LTC	Hospital	Community
Mean Number of Physicians Seen	4.2	7.9	6.4
Mean Number of Acute Hospitalizations	0.6	2.0	1.1
Mean Total Length of Stay (days) in Hospital	11.6	29.5	20.1