Appendix (online-only), table e1: Description of ICES linked Administrative Databases and The Johns Hopkins ACG® Case-Mix System Version 10.0

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| --- | --- |
| Canadian Institute for Health Information (CIHI)-Discharge Abstract Database (DAD) | The CIHI-DAD is a national database that containsDemographic, clinical, and administrative data for acute inpatient hospital hospitalizations. |
| CIHI-National Ambulatory Care Reporting System (NACRS) | The CIHI-NACRS contains data for all ambulatory care including emergency department visits, and day surgery outpatient clinics. |
| Ontario Health Insurance Plan (OHIP) | The OHIP data cover all services and procedures provided by health care providers who can claim under OHIP (physicians, laboratory services). |
| Ontario Mental Health Reporting System (OMHRS) | The OMHRS collects, analyzes and reports on information about individuals admitted to designated adult mental health beds in Ontario. Some mental health patients are recorded in the CIHI-DAD. |
| Registered Persons Database (RPDB) | The RPDB is a population registry with data on demographic information including age, sex, postal code, death information and neighbourhood income quintile derived from Statistics Canada census estimates for income  |
| The Johns Hopkins ACG® Case-Mix System Version 10.0 | The Johns Hopkins Adjusted Clinical Groups (ACGs) are a person-focused, diagnosis-based method of categorizing subjects’ illnesses. The ACG system assigns each International Classification of Disease (ICD) code (9 version, 9-CM version, or 10 version) to 1 of 32 diagnosis clusters known as Aggregated Diagnosis Groups (ADGs). Individual diseases or conditions are placed into a single ADG based on 5 clinical dimensions: duration of the condition, severity of the condition, diagnostic certainty, etiology of the condition, and specialty care involvement. The ADG/ACG definitions do not rely solely on the use of inpatient health administrative data, but also use data contained in ambulatory health care records |

Appendix (online-only), table e2 : Hazard Ratios for the full population Cox regression model of association of ADG 23,24 and 25 with mortality, for covariates age, sex, neighbourhood income quintile, and urban/rural residence (n =11,246,910).

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| --- | --- | --- | --- | --- | --- |
| Variable | Value | Hazard Ratio | Lower 95% CL | Upper 95% CL |  p-value |
|  |  |  |  |  |  |
| Age |  | 1.094 | 1.094 | 1.095 | <.0001 |
|  |  |  |  |  |  |
| Sex | F | Reference group |  |  |
|  | M | 1.4 | 1.388 | 1.413 | <.0001 |
|  |  |  |  |  |  |
| Neighbourhood Income quintile | 5 - highest | Reference group |  |  |
|  | 1 - lowest | 1.355 | 1.335 | 1.374 | <.0001 |
|  | 2 | 1.193 | 1.176 | 1.211 | <.0001 |
|  | 3 | 1.154 | 1.137 | 1.171 | <.0001 |
|  | 4 | 1.083 | 1.067 | 1.099 | <.0001 |
|  | Unknown | 1.403 | 1.314 | 1.499 | <.0001 |
|  |  |  |  |  |  |
| Residence | Urban | Reference group |  |  |
|  | Unknown | 0.249 | 0.194 | 0.321 | <.0001 |
|  | Rural | 1.225 | 1.21 | 1.241 | <.0001 |

Appendix (online-only), Figure e2 – a) Kaplan Meier Survival Curves in disease-specific cohort with Chronic Obstructive Pulmonary Disease (COPD)

b) Kaplan Meier Survival Curves in disease-specific cohort with congestive heart failure(CHF)

c) Kaplan Meier Survival Curves in disease-specific cohort with hypertension

d) Kaplan Meier Survival Curves in disease-specific cohort with cancer

e) Kaplan Meier Survival Curves in disease-specific cohort with asthma

f) Kaplan Meier Survival Curves in disease-specific cohort with rheumatoid arthritis

g) Kaplan Meier Survival Curves in disease-specific cohort with diabetes mellitus

h) Kaplan Meier Survival Curves in disease-specific cohort with Crohn’s disease/ulcerative colitis

i) Kaplan Meier Survival Curves in disease-specific cohort with Human Immunodeficiency Virus (HIV) disease

j) Kaplan Meier Survival Curves in disease-specific cohort with myocardial infarction