**Supplementary information**

**e-figure 1: Flow diagram**

All residents in Ontario alive as of Dec 1, 2020 (based on RPDB)

N = 18,835,376

Number of residents in Ontario with OHIP coverage as of index date

N = 15,015,393

Not eligible for OHIP on index date and one year prior

N = 3,819,983

Number of Ontario residents on index date

N = 14,950,082

Not an Ontario resident, not registered as living in Ontario

N = 65,311

Aged 18 to 105 years

N = 12,109,291

Aged <18 years or >105 years

N = 2,840,791

People with at least one health system contact in the last five years

N = 11,517,927

No health care contact in past five years

N = 591,464

People without missing data on ethnicity

N = 11,509,948

Missing data on ethnicity

N = 7,979

Eligible Ontario adults (aged 18-105 years) who received at least one vaccine (N = 10,063,466)

People who did not get any vaccine

N = 1,446,382

**e-table 1**: Variables and definitions used in the study.

|  |  |  |
| --- | --- | --- |
| Variable | Definition | Reference/Diagnostic codes |
| Age, sex | Age and sex recorded on index date from the Ontario Registered Persons Database (RPDB)  |  |
| Ethnicity | Identified using ETHNIC, a surname-based database derived by applying validated lists of South Asians and Chinese surnames to the RPDB.  | Shah BR, Chiu M, Amin S, Ramani M, Sadry S, Tu JV. Surname lists to identify South Asian and Chinese ethnicity from secondary data in Ontario, Canada: a validation study. BMC medical research methodology. 2010 Dec;10:1-8. |
| Receipt of vaccine | Identified using the COVAXON database, the central provincial database developed as a point-of-care system to support COVID-19 related activities obtained from Public Health Ontario.  |  |
| Income quintile | Income quintile is a measure of relative household income using postal information and adjusted for size of household and cost of living. Quintile 1 represents the lowest income while quintile 5 represents the highest. | Alter DA, Iron K, Austin PC, Naylor CD, SESAMI Study Group, SESAMI Study Group. Socioeconomic status, service patterns, and perceptions of care among survivors of acute myocardial infarction in Canada. JAMA. 2004 Mar 3;291(9):1100-7. |
| Rurality | This is categorized as rural or urban using the Postal Code Conversion File flag based on community size. Community size less than or equal to10,000 persons was indicated as rural. | Canada S. Postal code conversion file (PCCF), reference guide. 2006 |
| Charlson comorbidity index (CCI) | The CCI categorizes International Classification of Disease diagnosis codes into 17 comorbid conditions and assigns weight based on disease burden and importance to prognosis. The sum of the weighted points is used to calculate a total score. | Deyo RA, Cherkin DC, Ciol MA. Adapting a Clinical Comorbidity index for use with ICD-9-CM administrative databases. J Clin Epi, 1992 45(6):613-9 |
| Long-term care (LTC) | The Continuing Care Reporting System and the Ontario Drug Database was used to identify persons in LTC homes where care is provided for persons who cannot live independently or require nursing care, supervision, or personal support.  | Ministry of Health and Long-Term Care (MOHLTC) [Internet] Living in a long-term care home, 2022 August 24, [cited 2024 February 28]. Available https://www.ontario.ca/page/living-long-term-care-home |
| **Outcomes** | All outcomes were identified using the hospitalization records and ED visits in the DAD and NACRS respectively with ICD codes within 42 days following vaccination (index) date. |  |
| Bell’s Palsy (outcome) |  | ICD-10 codes: G51.0 |
| Ischemic stroke (outcome) |  | Tu K, Wang M, Young J, Green D, Ivers NM, Butt D, Jaakkimainen L, Kapral MK. Validity of administrative data for identifying patients who have had a stroke or transient ischemic attack using EMRALD as a reference standard. Canadian Journal of Cardiology. 2013 Nov 1;29(11):1388-94.ICD-10 codes: I63.x (excluding I63.6), H34.1 |
| Intracerebral hemorrhage (outcome) |  | Tu K, Wang M, Young J, Green D, Ivers NM, Butt D, Jaakkimainen L, Kapral MK. Validity of administrative data for identifying patients who have had a stroke or transient ischemic attack using EMRALD as a reference standard. Canadian Journal of Cardiology. 2013 Nov 1;29(11):1388-94.ICD-10 codes: I60.x, I61.x |
| Cerebral Venous Sinus Thrombosis |  | ICD-10 codes: G08.x, I67.6, I63.6, O22.5, O87.3 |
| Guillain Barre Syndrome |  | ICD-10 codes: G61.0 |
| Acute Transverse Myelitis |  | ICD-10 codes: G37.3 |