

# **Primary Care Data Report**

## **Connected Care Halton OHT**

**Primary Care Data Working Group**

**December 2021**



# How this Report is Organized

Each report is made up of 4 separate components:

1. **Summary/Overview**
2. **Data (excel)**
3. **Maps**
4. **FAQ**

Two excel data set files are included in this report. Each has **7 sets of tables organized by tab**.

## 1. First Excel file - OHT Specific Data – 2020

1. Attributed population patient characteristics by attachment status, **OHT 2020**
2. Characteristics of attributed patients who had **ED visits** in last 2 years by attachment status, OHT 2020
3. Characteristics of attributed patients who had **hospitalizations** in last 2 years by attachment status, OHT 2020
4. Characteristics of attributed patients who had **frailty** health issues by attachment status, OHT 2020
5. Characteristics of attributed patients who had **long term homecare** by attachment status, OHT 2020
6. Characteristics of attributed patients who had **mental health** issues by attachment status, OHT 2020
7. Characteristics of attributed patients who had received **palliative care** by attachment status, OHT 2020

## 2. Second Excel File - All Ontario Data

1. Attributed population patient characteristics by attachment status
2. Characteristics of attributed patients who had **ED visits** in last 2 years by attachment status
3. Characteristics of attributed patients who had **hospitalizations** in last 2 years by attachment status
4. Characteristics of attributed patients who had **frailty** health issues by attachment status
5. Characteristics of attributed patients who had **long term homecare** by attachment status
6. Characteristics of attributed patients who had **mental health** issues by attachment status
7. Characteristics of attributed patients who had received **palliative care** by attachment status

All tables report on **attachment status of patients by column.**

- Attached: In PEM, VR with >10% COC, CHC, VR -children
- Uncertainly attached with no primary care and with primary care

All tables report on **4 types of Indicators by row.**

1. **Demographics:** Age, sex, rurality, income
2. **Patient Characteristics:** Marginalization, recent immigrant, comorbidity (ADG), morbidity (RUB), chronic diseases (COPD, CHF, Diabetes), frailty
3. **Primary care Indicators:** enrolment model, primary care visits, continuity of care measures, primary care f/up after hospitalization
4. **Health Care Utilization:** Palliative care, long term homecare, mental illness, ED visits, hospitalization, ED and hospital acuity measures (CTAS and ACSC), hospital readmissions

Finally, all tables are presented in tables by row % (7 tabs) and column % (7 tabs).

## Maps

Map 1. All attached patients attributed to OHT (Regional View)

Map 2. All attached patients attributed to OHT (Local View)

Map 3. Uncertainly attached patients attributed to OHT (Regional View)

Map 4. Uncertainly attached patients attributed to OHT (Local View)

Map 5. Uncertainly attached patients attributed to other OHTs (Local View)

\* Patient numbers used for mapping purposes summarized at end of map section

## FAQ

Find commonly asked questions and answers, if you don't see your question here, contact Eliot Frymire, Research Manager, INSPIRE-PHC, at [frymire@queensu.ca](mailto:frymire@queensu.ca)

# Overview

This Primary Care Data Report uses standard health administrative measures in primary care in conjunction with measures for attachment to a primary care provider to deliver a standardized document for Ontario Health Teams (OHT). These reports aim to compare key health system measures specific to jurisdictions and provincial averages. A variety of data metrics, using algorithms predominantly based on billing patterns, have been selected for inclusion in this report in response to detailed feedback from health system stakeholders across Ontario. The information contained in this report is displayed using various tables and maps. The tabular data is organized using column and row percentages (alongside actual number counts), which can be further stratified according to key patient characteristic and health care utilization indicators. The map data provides visual representations of attachment patterns to primary care providers.

We have measured attachment in primary care using a newly validated algorithm alongside the 2020 Primary Care Population (PCPOP) database, derived from the Institute for Clinical Evaluative Sciences (ICES). Our algorithm captures 3 key categories: attached (the patient is either rostered to a physician through an enrolment model or virtually rostered if over half of the physicians seen over a 2-year period are to one doctor), uncertainly attached receiving primary care (those unaffiliated with a doctor and who use primary care), and uncertainly attached without primary care services (those who do not use primary care). To derive these categories, we included: 1) rostering to a family physician/team in an enrollment model, 2) virtual rostering to a family physician having 10% or more continuity of care (referring to seeing the same provider regularly), 3) visits to a community health centre (CHC) in the last 2 years, and 4) assignments of virtually rostered children (under the age of 19) to a pediatrician/family doctor. Any patient who met any of the above 4 categories was classified as attached to primary care. The remaining patients were divided into 2 groups: patients having had any primary care visits in the last 2 years were uncertainly attached receiving primary care, and those uncertainly attached without receiving any primary care.

We prioritized several key standard health administrative measures in primary care for segmenting the population. These measures are associated with at least one of the following groupings: demographics, patient characteristics, health care utilization, and primary care indicators. In relation to demographic information, data on age, sex, rurality, and income are displayed. Regarding patient characteristics, several indicators of marginalization are utilized, including instability (those experiencing high rates of family/housing precariousness), deprivation (access to basic material needs), dependence (lack of income from employment), and ethnic concentration (belonging to a visible minority group). Several of the aforementioned indicators provide critical data related to the social determinants of health, outlining the conditions in which individuals are born, grow, work, live and age culminating in important forces that shape daily life. Furthermore, data on comorbidity (the simultaneous presence of at least two medical conditions in a patient), morbidity (the rate of disease in a population), frailty, and select chronic diseases (chronic obstructive pulmonary disease, chronic heart failure, diabetes) are present. Lastly, data on recent immigrants are also included in the patient characteristics category to partially illustrate population diversity. Regarding health care utilization, indicators include palliative care, long-term homecare, mental illness, emergency department visits (urgent, non-urgent), hospitalization, and primary care follow-up post-hospitalization. Primary care indicators include the enrollment model, consisting primarily of enhanced fee-for-service (services that are predominantly bundled and paid for separately), capitation (salaried health care providers receiving prospective payments), and Family Health Team (a host of interprofessional team members) arrangements. Other primary care indicators include core primary care visits and measures of continuity (to physician and

group). Given the complexity of Ontario's health system, it is essential for OHTs to have a comprehensive understanding in real-time of how services are both organized and utilized by its consumers.

Given that primary care is a core, foundational component to high quality and sustainable health systems, the tracking of key measures is essential. This report provides varying levels of granularity, both general and detailed information on important health system indicators, which will serve as an important resource for applied health services researchers, health care managers and administrators, and health policy decision makers. More specifically, this report can be used as a performance measurement tool to plan health system reform initiatives for the larger purpose of improving the quality of and equitable access to primary care services in specific OHTs jurisdiction.

# Glossary of Terms

## **ACSC related hospitalizations**

Ambulatory care–sensitive condition - a condition for which emergency department use and hospital admission could likely be prevented by interventions in primary care. Ambulatory care sensitive conditions (ACSCs) are chronic conditions which, if treated effectively in the community, should not result in a hospital admission. It is included here as rates of hospital admissions for ACSCs, sometimes referred to as "avoidable hospitalizations", have been used as an indicator to evaluate several aspects of healthcare utilization including the effectiveness of primary care, access to community care, and system integration.

## **Attributed Populations**

Patient attribution numbers in each OHT will vary slightly between MOH attributed numbers and the numbers listed in this report. MOH based numbers are based on the registered persons database (RPDB) from 2019. This report uses data from an April 2020 attachment cohort (PCPOP) where several inclusion/exclusion criteria apply as follows:

- Alive at index date (March 31, 2020)
- Date of last contact (DOLC) is within 7-9 years - the person had some contact with the health care system within 7-9 years of index. The years are picked as to most closely resemble the StatCan population
- Non-Ontario residents are excluded
- Person must be eligible for OHIP at index

For the denominator, the base population from PCPOP April 2020 database is 14,709,408. We excluded all who were in long-term care as part of our attachment algorithm, so then the new N=14,632,575. The most recent OHT data at ICES was based on the Ontario population in FY2019/20 in RPDB. After linking our data with MOH provided OHT data (47 OHTs), the overall as well as OHT specific difference is about 2% - 4%.

## **Chronic disease – COPD, CHF, Diabetes**

Congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), and diabetes were measured using validated cohorts at ICES. The algorithm used to define cohorts varies slightly for each chronic condition, based on the original ICES algorithm for diabetes (i.e., two physician claims or one hospital admission with diabetes within two years). These disease cohorts are cumulative over time.

## **Comorbidity (ADG)**

Johns Hopkins Aggregated Diagnosis Groups (ADGs) are derived by assigning individuals into one of the 32 diagnosis clusters based on five clinical dimensions. We categorized these clusters into 3 comorbidity groups: 0-4 (none/low), 5-9 (moderate) and 10+ (high).

## **Continuity of Care**

Continuity of care refers to ongoing access to the same health care provider or group in last 2 years. It is measured in this report as mean continuity score as well as % of patients with 3+ visits to own physician or group.

## **Core PC visits**

We considered core primary care services based on 22 activity billing codes.

**ED visit in last 2 years**

ED visits for any cause within last 2 years were measured using the National Ambulatory Care Reporting System (NACRS) database.

**ED visits Urgent in last year (CTAS 1-3)**

Triage level was measured using the Canadian Triage and Acuity Scale (CTAS 1-5). CTAS 1–3 was considered high urgency.

**ED visits Non-urgent in last year (CTAS 4-5)**

CTAS 4–5 was considered low urgency.

**Enrollment model**

The model of primary care in which patients in Ontario are rostered (enrolled).

EFFS- Enhanced-Fee-For Service

CAP- Capitation

FHT- Family Health Team

NOG- Not in a PEM

NOP- No primary care

OGP- Other primary care model

**Follow-up within 7 days of discharge**

7-day follow-up was measured by linking OHIP claims for any cause within 7 days of hospital discharge.

**Frailty**

We measured frailty using the Johns Hopkins Adjusted Clinical Groups (ACG) frailty-defining diagnoses indicator. It is based on 10 clusters of frailty-defining diagnoses (ie, malnutrition, dementia, impaired vision, decubitus ulcer, incontinence of urine, loss of weight, poverty, barriers to access to care, difficulty in walking, and falls; The ACG frailty indicator captures patients with multidimensional frailty at the population level and has been shown to accurately identify patients with limitations in activities of daily living.

**Home Care Services.**

An individual was considered a long-stay home care client if the person had a referral for admission to long term home care. This information is recorded in HCD-CLIENTS database. An individual is a long-stay home care client on day A if there exists a record in HCD\_CLIENTS database for which referral was for in-home care. (*REQUEST\_PROGRAM=1*), and Service Care goals at time of submission for open admission was maintenance in-home (*SRC\_ADMISSION=93*) and long-term support in-home (*SRC\_ADMISSION=94*), and Referral was still active, that is, the client was admitted on or before the date in question (*ADMDATE<=A*) and not yet discharged (*DDATE>=A* or *DDATE=missing*).

**Hospitalizations in last 2 years**

Hospital admissions were measured as admission for any cause within last 2 years to any acute care hospital in Ontario using the CIHI-DAD data sets.

**Hospital re-admission within 30 days of discharge**

Hospital readmissions were measured as readmission for any cause within 30 days to any acute care hospital in Ontario using the CIHI-DAD.

**Income quintile**

We derived neighbourhood income using postal codes and the 2016 Canadian Census, divided into quintiles of equal size, with quintile 1 having the lowest income and quintile 5 the highest.

**Mental health illness in last 2 years**

The case-definition algorithm to identify patients with a mental health diagnosis links different databases at ICES DAD and OHIP and is based on having two physician billing claims in OHIP over 2 years or one hospitalization with one of the listed mental health service codes (ICD9/ICD10).

**Morbidity (RUB)**

Expected health care use was assessed using the Johns Hopkins Adjusted Clinical Groups Resource Utilization Bands, with 0 being no health care use and 5 being the highest expected use.

**ONMARG Updates**

The Ontario Marginalization Index (ON-MARG) is a geographically (Census) based index developed to quantify the degree of marginalization occurring across the province of Ontario. It is comprised of 4 major dimensions thought to underlie the construct of marginalization: *residential instability, material deprivation, dependency and ethnic concentration*.

**Palliative care**

Derived from an algorithm using 31 OHIP fee codes. If the physician of a patient had a record of one of these 31 fee codes, the patient was said to have received palliative care.

**Recent Immigrant**

We used first-time registration for health care coverage within the previous 10 years as a proxy for recent immigration, as most recent registrants are immigrants.

**RIO (Rurality Index of Ontario)**

Rurality Index for Ontario is an index that broadly measures rurality based on the dissemination area of a person's postal code. Categories included urban (RIO score 0–9), sub urban (RIO score 10–39) and rural (RIO score  $\geq$  40).