Ontario
Palliative Care
Network

TECHNICAL SPECIFICATIONS FOR INDICATORS IN THE ONTARIO PALLIATIVE CARE NETWORK SYSTEM-LEVEL MEASURES REPORT

TECHNICAL APPENDIX

July 4, 2018

Ontario Palliative Care Network

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INTRODUCTION

This technical appendix provides general information on the data sources and analytical methodologies for the cohorts and indicators presented in the Ontario Palliative Care Network system-level measures report.

Please note the methodologies included in this appendix may undergo refinements and modifications in future releases.

DATA SOURCES

The system-level measures report presented in the Excel tool were provided by the Ontario Palliative Care Network and Cancer Care Ontario (CCO) based on analysis of administrative databases. The data sources for each metric are listed in the technical details below.

The following data sources were used for analysis:

- Health Shared Services Ontario (HSSO): HCD, RAI-CA, RAI-PC, RAI-HC
- Continuing Care Reporting System (CCRS): Long Term Care (LTC) and Complex Continuing Care (CCC)
- Discharge Abstract Database (DAD)
- National Ambulatory Care Reporting System (NACRS)
- National Rehabilitation Reporting System (NRS)
- Ontario Health Insurance Plan (OHIP)
- Ontario Mental Health Reporting System (OMHRS)
- Registered Persons Database (RPDB)

SYSTEM LEVEL MEASURES DETAILS

The following section provides methodology details for each of the measures used in Ontario Palliative Care Network system-level measures report.

1: CAREGIVER SURVEY RATE

Data not available.

2: PALLIATIVE HOME VISITS IN THE LAST 90 DAYS OF LIFE

NAME

Palliative care at home at end of life

ALTERNATIVE NAME

Percentage of decedents who received physician visits at home and/or palliative home care services in their last 90 days of life.

INDICATOR DESCRIPTION

DESCRIPTION

This indicator measures the proportion of people who received care in their home at the end of life

QUALITY DIMENSION

Ontario Palliative Care Network

Effective, Timely

MEASURE TYPE

Process

SECTOR

Home Care, Primary Care

TOPIC

Palliative/End-of-life

DEFINITION AND SOURCE INFORMATION

UNIT OF MEASUREMENT

Percentage

CALCULATION METHODS

The percentage is calculated as: numerator divided by the denominator times 100

NUMERATOR

The number of non-institutionalized (community dwelling) decedents who received at least one palliative home care service or any physician home visit within their last 90 days of life.

Palliative home care visits are described as follows:

- Palliative home care: from the Home Care Database (HCD):
    - Service_RPC = 95: Service care goal of end of life; patient provided service under end of life designation, OR
    - For any service record within the 90 days, consider it palliative if:
        - SRC_admission = 95: Service recipient code (i.e., classification) of end of life on admission OR
        - SRC_discharge = 95: Service recipient code of end of life on discharge
- Decedents received one or more home services of any type except 10 and 14. (Home Care Database (HCD): services variable SERVICE)

SERVICE = Type of service provided (home care service)

ID	description
1	NURSING - VISIT
2	NURSING - SHIFT (HOUR)
3	RESPIRATORY SERVICES
4	NUTRITION/DIETETIC
5	PHYSIOTHERAPY
6	OCCUPATIONAL THERAPY
7	SPEECH LANGUAGE THERAPY
8	SOCIAL WORK

9	PSYCHOLOGY
10	CASE MANAGEMENT
11	PERSONAL SERVICES (HOUR)
12	HOMEMAKING SERVICES (HOUR)
13	COMBINED PS AND HM SERVICES (HOUR)
14	PLACEMENT SERVICES
15	RESPITE
16	MENTAL HEALTH AND ADDIDCTION NURSING VISIT
17	Nurse Practitioner Palliative Visit
18	Rapid Response Nursing Visit
19	Primary Care Clinics
20	Pharmacy
21	Health Promotion Education and Symptom Management
22	Other Combined Clinics
23	Telehomecare
24	Primary Care
99	OTHER

Physician home care visits are described as follows:

- G511: Telephone management regarding a patient receiving palliative care at home
- B966: Travel premium for palliative care (billed with B998/B996)
- B998: Home visit for palliative care between 07:00 and 24:00 (Sat, Sun, and holidays) or
- B997: Home visit for palliative care between 00:00 and 07:00
- A901: House call assessment (GP/FP)
- B990: Special visit to patient's home (weekday/daytime or elective home visit)
- B992: Special visit to patient's home (weekday/daytime), with sacrifice to office hours, non-elective
- B993: Special visit to patient's home (Sat, Sun and holidays) between 07:00 - 24:00, non-elective
- B994: Special visit to patient's home, non-elective, (weekday/evenings)
- B996: Special visit to patient's home, night time, first patient of the night
- A900: Complex house call assessment (GP/FP)
- B960: Travel premium - Special visit to patient's home (weekday/daytime or elective home visit)
- B961: Travel premium - Special visit to patient's home (weekday/daytime), with sacrifice to office hours, non-elective
- B962: Travel premium - Special visit to patient's home, non-elective, (weekday/evenings)
- B963: Travel premium - Special visit to patient's home (Sat, Sun and holidays) between 07:00 - 24:00, non-elective
- B964: Travel premium - Special visit to patient's home, night time, first patient of the night
- B986: Travel premium - Geriatric home visit, weekdays with or without sacrifice to office hours, or Sat, Sun, holidays (07:00 - 24:00) and nights (00:00-07:00)

- B987: Geriatric home visit, nights (00:00-07:00)
- B988: Geriatric home visit, weekdays with or without sacrifice to office hours, or Sat, Sun, holidays (07:00 - 24:00)

DENOMINATOR

Number of non-institutionalized (community dwelling) decedents in Ontario who died in a fiscal year.

EXCLUSION CRITERIA

Patients who were in an institution for their last 90 days of life. The purpose is to exclude decedents who were admitted to an institution for the duration of the time period of study and would thus not be eligible to receive home care services nor physician home visits.

The types of institutions included are:

- Inpatient acute hospitals
- Inpatient mental health
- Complex continuing care (CCC)
- Inpatient rehabilitation
- Long term care (LTC)

Decedents are determined to have been within the institution in their last 90 days of life as follows:

- If the total length of stay of a person, across all institutions' data sources is less than the time frame being considered, then the person is considered community dwelling, otherwise the person is considered to have been in an institution for the duration of time under consideration. NOTE: for acute care (DAD) records, 'episodes of care' are considered, not individual discharge records.

ADJUSTMENT (RISK, AGE/SEX STANDARDIZATION)- GENERALIZED

None

DATA SOURCES

- Decedent cohort
- CCAC Home Care Database
- Discharge Abstract Database (DAD)
- OHIP Claims History Database
- Continuing Care Reporting System (CCRS: Long Term Care, Complex Continuing Care)
- Inpatient Mental Health (OHMRS)
- Inpatient Rehabilitation (NRS)

REPORTED LEVELS OF COMPARABILITY /STRATIFICATIONS (DEFINED)

- Province
- LHIN of the patient

OTHER RELEVANT INFORMATION

CAVEATS AND LIMITATIONS

- The data doesn't include information on the quality of the care, clinical details, health care needs, preferences and appropriateness of the house call.
- The data shows the number of palliative care patients that had at least one house call. There is no evidence of what is the appropriate number of house calls to which this could be compared
- The indicator doesn't capture home visits with other providers
- The data don't show information on the details and quality of the home care, health care needs, preferences and appropriateness of the care
- The data shows the number of palliative care patients that had at least one home care service, which may not be sufficient. There is no evidence of what is the appropriate amount or mix of home care services for palliative care patients to which this could be compared.
- The data do not show if palliative care patients had any other support or a caregiver.

ENVIRONMENTAL SCAN

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- Hodgson C. Cost-effectiveness of palliative care: A review of the literature. Prepared for Canadian Hospice Palliative Care Association. Ottawa (ON). [Date unknown]. Available from: http://hpcintegration.ca/media/24434/TWF-Economics-report-Final.pdf
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- Barbera L, Sussman J, Viola R, Husain A, Howell D, Librach SL, et al. Factors associated with end-of-life health service use in patients dying of cancer. Healthc Policy. 2010 Feb;5(3):e125-143.
- College of Physicians and Surgeons of Ontario. Planning for and Providing Quality End-of-Life Care. CPSP Policy statement #4-15. Toronto (ON). 2016 May. Available from: http://www.cpso.on.ca/CPSO/media/documents/Policies/Policy-Items/End-of-Life.pdf?ext=.pdf

3: EMERGENCY DEPARTMENT VISITS IN THE LAST 30 DAYS OF LIFE

NAME

Unplanned emergency department visits at end of life

ALTERNATIVE NAME

A. Percentage of decedents who had one or more unplanned emergency department visits in their last 30 days of life.
B. Percentage of decedents who had two or more unplanned emergency department visits in their last 30 days of life.

INDICATOR DESCRIPTION

DESCRIPTION

A. This indicator measures the percentage of decedents who had one or more unplanned emergency department (ED) visits in their last 30 days of life.
B. This indicator measures the percentage of decedents who had two or more (more than one) unplanned emergency department (ED) visits in their last 30 days of life.

QUALITY DIMENSION

Effective, Timely

MEASURE TYPE

Outcome

SECTOR

Acute Care/Hospital

TOPIC

Palliative/End-of-life

DEFINITION AND SOURCE INFORMATION

UNIT OF MEASUREMENT

Percentage

CALCULATION METHODS

The percentage is calculated as: numerator divided by the denominator times 100

NUMERATOR

A. The number of decedents who had one or more unplanned emergency department visits in their last 30 days of life.
B. The number of decedents who had two or more unplanned emergency department visits in their last 30 days of life.

DENOMINATOR

Number of people in Ontario who died in reporting period who were not in an acute care hospital in the last 30 days of life.

EXCLUSION CRITERIA

Exclude patients who were hospitalized in an acute care facility for the last 30 days of life.

If the sum of all episodes of care in acute care facilities during the last 30 days of life equals or exceeds 30 days, the patient is considered hospitalized for the duration of interest, and is excluded.

ADJUSTMENT (RISK, AGE/SEX STANDARDIZATION) - GENERALIZED

None

DATA SOURCES

- Decedent cohort
- National Ambulatory Care Reporting System (NACRS)
- Discharge Abstract Database (DAD)

REPORTED LEVELS OF COMPARABILITY /STRATIFICATIONS (DEFINED)

- Province
- LHIN of the patient

OTHER RELEVANT INFORMATION

CAVEATS AND LIMITATIONS

- Missing the information on clinical details, health care needs, preferences and appropriateness of the unplanned emergency visits.
- Hard to interpret as there are no benchmarks or targets on the acceptable rate of ED visits in this patient population.

4: DEATHS IN HOSPITAL

NAME

Hospital deaths

ALTERNATIVE NAME

Percentage of decedents who died in hospital.

INDICATOR DESCRIPTION

DESCRIPTION

This indicator measures the proportion of people who died in hospital (inpatient, ED, CCC, rehab).

QUALITY DIMENSION

Efficient

MEASURE TYPE

Outcome

SECTOR

Acute Care/Hospital

TOPIC

Palliative/End-of-life

DEFINITION AND SOURCE INFORMATION

UNIT OF MEASUREMENT

Percentage

CALCULATION METHODS

The percentage is calculated as: numerator divided by the denominator times 100

NUMERATOR

The number of decedents died in hospital during the reporting time period.

Hospital includes the following facilities:

- Acute inpatient hospitals
- Emergency departments
- Inpatient mental health
- Complex continuing care
- Inpatient rehabilitation

DENOMINATOR

Number of people in Ontario who died in the reporting period.

EXCLUSION CRITERIA

None.

ADJUSTMENT (RISK, AGE/SEX STANDARDIZATION) - GENERALIZED

None.

DATA SOURCE

- Decedent cohort

REPORTED LEVELS OF COMPARABILITY /STRATIFICATIONS (DEFINED)

- Province
- LHIN of the patient

OTHER RELEVANT INFORMATION

CAVEATS AND LIMITATIONS

- The data show the location of the death, but not the location where care was received before death (i.e. the death may have occurred in the ED but in general the care may have been provided in LTC).
- No information of the preferred place of death is provided.

ENVIRONMENTAL SCAN

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2. Jayaraman J, Joseph KS. Determinants of place of death: a population-based retrospective cohort study. BMC Palliat Care. 2013 May 1;12(1):1.
3. Health Quality Ontario. Team-based models for end-of-life care: an evidence-based analysis. Ont Health Technol Assess Ser [Internet]. 2014 December;14(20):1–49. Available from: http://www.hqontario.ca/evidence/publicationsand-ohtac-recommendations/ontario-health-technology-assessment-series/eol-team-based-models

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DECEDENT COHORT

The end-of-life (also referred to as "decedent") patient population/cohort was developed based on similar work conducted in Ontario, including the Health Quality Ontario (HQO) *Palliative Care at the End of Life* report, Ontario Ministry of Health and Long-Term Care (MOHLTC) Health Analytics Branch *In-Focus – Palliative Care in Ontario* report, and studies of palliative care by the Institute for Clinical Evaluative Studies (ICES), led by Dr. Peter Tanuseputro.

Description	Number of patients who died in Ontario in the reporting period.
Rationale	To capture the location and date of death for Ontario decedents.
Logic Overview	
Calculation	The total number of deaths in Ontario as recorded in the administrative data sets listed below (logic for determining death is defined for each data set): • RPDB: Death date in the reporting period • DAD: Discharge_Disposition = 07 • NACRS: Visit_Disposition = 10 or 11 • OMHRS: discharge_reason (X90) = 2 or 3 • NRS: Discharge_reason_code = 8 • CCRS-CCC/LTC: DISCHARGE_TO_FACILITY_TYPE = 11 When a patient appears in multiple sources, a hierarchal approach is used to determine the Date of Death and Setting of Death. The following order is applied: • DAD, OMHRS, NACRS, CCC, NRS, LTC, RPDB, OHIP Sex, Postal Code & Date Of Birth are determined based on RPDB.
Data Sources	RPDB, DAD, NACRS, OMHRS, NRS, CCRS-CCC, CCRS-LTC, OHIP
Exclusion/Inclusion Criteria	Exclusion Criteria Applied to all data sources: • Health Care Card Province of issue is Ontario • HIN NOT IN ('0', '1', '9', 'ZZZZZZZZZZ') Applied to specific data sets: • DAD: MCC = 19 • NACRS: Diagnostic Code IN ('S', 'T', 'V', 'W', 'X', 'Y') • OMHRS: x90 = 1
Methodology Notes on Individual Datasets	
RPDB	Select all Death Records. Remove duplicate records
DAD	For multiple records with differing death dates, take the Maximum Death Date. If multiple records appear with the same Death Date (only 1 instance of this occurring), select the first appearing record.
NACRS	For multiple records with differing death dates, take the Maximum Death Date. If multiple records appear with the same Maximum Death Date and information differs between them, take the first appearing record.

CCRS-LTC	For multiple records with differing death dates, take the Maximum Death Date. If multiple records appear with the same Maximum Death Date and information differs between them, take the first appearing record.
CCRS-CCC	For multiple records with differing death dates, take the Maximum Death Date. If multiple records appear with the same Maximum Death Date, take the first appearing record.
OMHRS	For multiple records with differing death dates, take the Maximum Death Date.
NRS	No Duplicate Records
OHIP	For multiple records with differing death dates, take the Maximum Death Date.

ASSIGNING DECEDENTS TO LHINS AND LHIN SUB-REGIONS

To assign a patient's home LHIN and LHIN sub-region at time of death, the postal code was assigned using the RPDB when available. A patient's postal code at time of death may not be in the same region as the care provider(s).

To determine which LHIN and LHIN sub-region each decedent resided in, decedents' postal codes were mapped to LHIN and LHIN sub-region using a crosswalk file provided by the MOHLTC, which contains data copied under the license from the Canada Post Corporation and Statistics Canada.

There are some cases where a postal code mapped to a LHIN sub-region in the cross-walk file, but not a LHIN. In this case, the sub-region's LHIN was assigned as the LHIN.

Additionally, postal codes that could not be mapped to any LHIN/LHIN sub-regions using the crosswalk file are excluded from LHIN level reporting but are included in the Ontario level data. Therefore, Ontario counts will not match the sum of LHIN counts.

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