Shared Health Priorities Year 2 Indicators

Methodology Notes

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Self-Harm, Including Suicide

Indicator Description and Calculation

Description	The rate of self-harm hospitalizations and self-harm deaths (suicides) per 100,000 population age 10 and older For further details, please see the General Methodology Notes.
Calculation: Description	(Total number of self-harm hospitalizations not ending in death for people age 10 and older + Total number of deaths from suicide for people age 10 and older) ÷ Total mid-year population age 10 and older × 100,000
Calculation: Geographic Assignment	Place of residence
Calculation: Type of Measurement	Rate — per 100,000
Calculation: Adjustment Applied	Provincial indicator rates are age-adjusted.
Calculation: Method of Adjustment	Age adjustment based on 4 age groups: 10 to 24, 25 to 44, 45 to 64 and 65+. For each province, age-specific indicator rates for the 4 age groups are calculated. The provincial indicator value is a weighted sum of these rates, with the weights being determined by the age structure of the Canadian population in 2011 (mid-year).
Denominator	**Description:** Total mid-year population age 10 and older
Numerator	**Description:** Total number of self-harm hospitalizations and self-harm deaths (suicides) for persons age 10 and older **Inclusions:** 1. Admission to hospital with self-harm diagnosis (diagnosis type 9, ICD-10-CA codes X60 to X84) for those age 10 and older, sex recorded as male or female, discharged alive • Includes Analytical Institution Type Code = 1 (general hospital) or 5 (psychiatric hospital) from the Discharge Abstract Database (DAD) • Includes Ontario Mental Health Reporting System (OMHRS) records for cases where the OMHRS stay was from an initial emergency department (ED) visit for intentional self-harm (X60 to X84 in the National Ambulatory Care Reporting System [NACRS]) within 7 days 2. Deaths identified from Statistic's Canada's Vital Statistics data due to self-harm (underlying cause of death codes X60 to X84, Y87.0)

Numerator (continued)	*Additional notes on the inclusions:* • Episode building was performed to accommodate multiple abstracts within a single episode of care. • Vital Statistics data is available by calendar year and DAD data is available by fiscal year. Each data set covers 12 months; however, January to March are not aligned. • At this time, we are unable to determine the rate for those not identified as male or female in the data. **Exclusions:** 1. Patients with a discharge disposition indicating medical assistance in dying. There were fewer than 10 cases in the 2018 data.

Background, Interpretation and Benchmarks

Rationale	Self-harm is defined as a deliberate self-inflicted bodily injury or poisoning that may or may not result in death. Completed suicides represent 1 outcome of self-harm. Regardless of suicidal intent, acts of self-harm signal poor outcomes and severe distress among the population. A metric that captures both self-harm and completed suicides is meant to provide a picture of self-harm in relation to access to community mental health care. While some risk factors for self-harm are beyond the control of the health system, a combined indicator can inform a lack of adequate access to mental health services across the country.
Interpretation	Lower rates are desirable as they signal less frequent severe self-harm. This indicator includes both suicidal and non-suicidal self-harm within the hospitalization data. The indicator captures only cases within the hospitalization data where intentional self-harm was noted in the medical chart or abstract by a physician or coroner. Injuries coded as accidental or undetermined are not included in this indicator, even though a portion of these injuries may have been intentional. As such, this indicator underestimates the true number of hospitalizations for self-harm and should be considered a minimum rate of self-harm.
HSP Framework Dimension	Health System Outputs: Access to comprehensive, high-quality health services
Areas of Need	Not applicable
Targets/Benchmarks	Not applicable
References	Not applicable

Availability of Data Sources and Results

Data Sources	DAD, HMDB, OMHRS, NACRS, Canadian Vital Statistics Death Database
Available Data Years	**Type of Year:** Fiscal Year (based on year of discharge date or death date) **First Available Year:** 2018 **Last Available Year:** 2018
Geographic Coverage	All provinces/territories
Reporting Level/Disaggregation	National, Province/Territory, Sex

Result Updates

Update Frequency	Every year
Indicator Results	**URL:** https://www.cihi.ca/en/measuring-access-to-priority-health-services
Updates	Not applicable

Quality Statement

Caveats and Limitations	This indicator does not include cases of self-harm that are not admitted to hospital or do not end in death. Self-harm where no medical care is sought, or where a patient visits only a primary health care provider or emergency department, will not be captured. Thus this indicator cannot be used to estimate the prevalence of all self-harm in the general population. Death data for January to March 2019 is estimated based on January to March 2018 rates to align the time frame with the most recent inpatient data. Suicide deaths in these 3 months are estimated to be about 4% of the indicator's numerator (based on 2017 data).
Trending Issues	2018 death data for Yukon was obtained directly from the Yukon Bureau of Statistics.
Comments	Patients in the Discharge Abstract Database–Hospital Morbidity Database (DAD-HMDB) and OMHRS with invalid postal codes will not be included in the numerator of any province but will be included in the all-Canada numerator. An exception to this is patients who are identified as homeless (DAD-HMDB: diagnosis code = Z59.0 or postal code = XX; OMHRS: residential status code = 8); these patients will be assigned to the province of the facility. This indicator belongs to the Shared Health Priorities portfolio measuring access to mental health and addictions services and to home and community care. More information about this indicator will be available in the companion report on the Measuring access to home and community care and to mental health and addictions services in Canada web page.

Caregiver Distress

Indicator Description and Calculation

Description	The percentage of long-stay home care clients whose unpaid caregivers experience distress in a 1-year period (a risk-adjusted percentage) A caregiver is defined as a person who takes on an unpaid caring role for someone who needs help because of a physical or cognitive condition, an injury or a chronic life-limiting illness. This caregiver can be a spouse, child/child-in-law, other relative or friend, or neighbour who lives or does not live with the client. Caregivers who are distressed are defined as primary caregivers who express feelings of distress, anger or depression and/or any caregiver who is unable to continue in their caring activities. This indicator defines long-stay clients as those who have already been receiving home care for at least 60 days. When a client has more than one home care assessment within a given year, the most recent assessment will be included in the analysis.
Calculation: Description	Unadjusted rate: Total number of home care clients with caregivers who are distressed ÷ Total number of home care clients with caregivers × 100 Unit of analysis: Home care client
Calculation: Geographic Assignment	Place of residence — Province/territory
Calculation: Type of Measurement	Percentage or proportion
Calculation: Adjustment Applied	Adjustment Applied: The following covariates are used in risk adjustment: • Activities of Daily Living Self-Performance Hierarchy Scale (ADL Hierarchy) • Cognitive Performance Scale (CPS) • Changes in Health, End-Stage Disease and Signs and Symptoms (CHESS)
Calculation: Method of Adjustment	Indirect standardization using logistic regression model

Denominator	**Description:** Total number of long-stay home care clients with a caregiver at the time of their most recent assessment in the given year **Inclusions:** Resident Assessment Instrument–Home Care (RAI-HC) or interRAI HC assessments with 1. Valid age, health card number (HCN), assessment date, case opened date and client ID 2. CPS, ADL Hierarchy and CHESS scores that are not missing from the assessment 3. Home care client identified as having an unpaid caregiver **Exclusions:** 1. Assessments with “initial assessment” as the reason for the assessment 2. Assessments conducted fewer than 60 days from the date the case opened to the assessment date 3. Assessments conducted in a hospital setting 4. Assessments of clients younger than 18 years 5. Assessments with a date of assessment that is not the most recent, if a client has more than one assessment in a fiscal year
Numerator	**Description:** Total number of home care clients who, at the time of their most recent assessment in the given year, have an unpaid caregiver who is experiencing distress **Inclusions:** 1. Assessments with a. Caregiver status coded as *unable to continue in caring activities* and/or b. Primary caregiver status coded as *expresses feelings of distress, anger or depression*

Background, Interpretation and Benchmarks

Rationale	This measure may indicate whether individuals receiving home care and their caregivers have access to the sufficient and appropriate level of services and supports. It may also help to identify where additional resources are needed to assist caregivers in order to help prevent burnout and to allow the people they are caring for to stay at home as long as possible. Examples include providing access to more hours of formal home care and different types of services (e.g., meals, housework, respite services) and help navigating the system.
Interpretation	Lower rates are desirable.
HSP Framework Dimension	Health System Outputs: Access to comprehensive, high-quality health services
Areas of Need	Living with illness, disability or reduced function
Targets/Benchmarks	Not applicable
References	1. interRAI. Scales: Status and outcome measures. Accessed April 16, 2018. 2. Canadian Institute for Health Information. Supporting Informal Caregivers — The Heart of Home Care. Analysis in Brief. 2010. 3. Health Quality Ontario. *The Reality of Caring: Distress Among the Caregivers of Home Care Patients*. 2016. 4. Betini RSD, Hirdes JP, Lero DS, Cadell S, Poss J, Heckman G. A longitudinal study looking at and beyond care recipient health as a predictor of long-term care home admission. *BMC Health Services Research*. 2017.

Availability of Data Sources and Results

Data Sources	RAI-HC and interRAI HC data available at CIHI
Available Data Years	**Type of Year:** Fiscal **First Available Year:** 2018–2019 **Last Available Year:** 2018–2019
Geographic Coverage	Newfoundland and Labrador, Nova Scotia, Ontario, Saskatchewan, Alberta, British Columbia, Yukon
Reporting Level/Disaggregation	National, Province/Territory

Result Updates

Update Frequency	Every year
Indicator Results	**URL:** https://www.cihi.ca/en/measuring-access-to-priority-health-services
Updates	Not applicable

Quality Statement

Caveats and Limitations	• This indicator does not capture the experiences of individuals not receiving home and community care services. • Clients receiving home care while residing in assisted living/supportive living, community care residences or private retirement homes are included. It is important to note that caregivers of people who do not reside in their own private home may have different roles from caregivers of those who do, and their distress may differ. • Home care clients identified as having less than 6 months to live are included in this indicator; however, the proportion is small (2%). • Access to services varies across jurisdictions.
Trending Issues	Not applicable
Comments	This indicator belongs to the Shared Health Priorities portfolio measuring access to mental health and addictions services and to home and community care. More information about this indicator will be available in the companion report on the Measuring access to home and community care and to mental health and addictions services in Canada web page.

New Long-Term Care Residents Who Potentially Could Have Been Cared for at Home

Indicator Description and Calculation

Description	The percentage of newly admitted long-term care residents who have a clinical profile similar to the profile of clients cared for at home with formal supports in place. Examples of formal home care supports include help with daily tasks such as bathing, dressing, eating and/or toileting.
Calculation: Description	Unadjusted rate: (Total number of newly admitted residents in a long-term care facility with a completed Resident Assessment Instrument–Minimum Data Set 2.0 [RAI-MDS 2.0] assessment that details clinical characteristics similar to those of home care clients who are living well in the community with formal supports) ÷ (Total number of newly admitted residents with a completed assessment in a given fiscal year) × 100 For more information, please see the appendices.
Calculation: Geographic Assignment	Place of residence or service
Calculation: Type of Measurement	Percentage or proportion
Calculation: Adjustment Applied	Adjustment Applied: Other Adjusted rate: The following covariates are used in risk adjustment: • Individual covariates: age group, sex, schizophrenia diagnosis, bipolar disorder diagnosis, and whether a resident lived alone prior to admission to a long-term care facility
Calculation: Method of Adjustment	Method of Adjustment: Logistic regression

Denominator	**Description:** Total number of newly admitted long-term care residents (incident cases defined as individuals who have not lived in a long-term care facility in the past 92 days*), with completed RAI-MDS 2.0© assessments in a given fiscal year. * For ongoing periods of care, an assessment is due within 92 days of the prior assessment. To best identify these newly admitted residents, we exclude long-term care residents who have had a completed assessment in the previous quarter. **Inclusions:** 1. Assessments completed in a long-term care facility (SECTOR_CODE = 4) 2. Sex coded as male or female 3. First assessment completed in a fiscal year for residents who had not received care in a long-term care facility in the previous 92 days 4. Province/territory code available **Exclusions:** 1. Assessments done in the hospital-based continuing care sector 2. Residents missing any assessments for numerator definition (i.e., Cognitive Performance Scale, ADL (Activities of Daily Living) Self-Performance Hierarchy Scale, falls, verbal or physical abuse, wandering) 3. Residents without valid age recorded, schizophrenia diagnosis, bipolar disorder diagnosis, and living situation prior to admission (these covariates are used in risk adjustment) 4. Residents admitted for a short length of stay: a. Discharge projected within 90 days (Q1C_STAY_SHORT_DURATION = 1 or 2) and b. Length of stay at discharge for the resident (DISCHARGE_LOS_DAYS ≤120 days)
Numerator	**Description:** Total number of newly admitted long-term care residents (incident cases) with a completed RAI-MDS 2.0 assessment that details clinical characteristics similar to those of home care clients who are living well in the community with formal supports, defined by the following inclusions **Inclusions:** 1. Long-term care residents with a completed assessment that details the following combination of characteristics: a) Cognitive Performance Scale = 0, 1 or 2 b) ADL Hierarchy Scale = 0, 1 or 2 c) No falls in the past 30 days d) Not physically abusive in the past 7 days* e) Not verbally abusive in the past 7 days* f) Did not wander in the past 7 days* * The Assessment Reference Date (ARD) is the end of the observation period for items on the RAI-MDS 2.0. The look-back period for most RAI-MDS 2.0 items is 7 days. For more information, please see the appendices.

Background, Interpretation and Benchmarks

Rationale	Delaying or preventing admission to a long-term care facility for persons whose needs could potentially be met through home care programs may help to • Provide better experiences for clients, by supporting the desire of most seniors to remain at home for as long as possible; and • Ensure that long-term care facilities have the capacity to provide care for residents with more complex health needs.
Interpretation	A low percentage is desirable for this indicator. A higher percentage indicates a larger number of newly admitted long-term care residents who potentially could have been cared for at home with formal supports in place. This indicator can help to • Show when additional home supports could potentially delay or prevent early admission to long-term care; • Demonstrate the importance of effective placement policies and services across the health care continuum; and • Provide support for initiatives that help residents remain in their homes for as long as possible.
HSP Framework Dimension	Health System Outputs: Access to comprehensive, high-quality health services
Areas of Need	Living with illness, disability or reduced function
Targets/Benchmarks	Not applicable
References	1. British Columbia Ministry of Health, Canadian Institute for Health Information. *Modelling Impact Changes to the Community Care and Assisted Living Act in British Columbia*. 2018. 2. Canadian Institute for Health Information. *Seniors in Transition: Exploring Pathways Across the Care Continuum*. 2017. 3. Gruneir A, Forrester J, Camacho X, et al. Gender differences in home care clients and admission to long-term care in Ontario, Canada: A population-based retrospective cohort study. *BMC Geriatrics*. 2013. 4. Gaugler J, Yu F, Krichbaum K, et al. Predictors of nursing home admission for persons with dementia. *Medical Care*. 2009. 5. Jutan NM. Integrating supportive housing into the continuum of care in Ontario. *UWSpace*. August 2010. 6. Luppa M, Luck T, Weyerer S, et al. Prediction of institutionalization in the elderly. A systematic review. *Age and Ageing*. 2010. 7. Office of the Seniors Advocate British Columbia. *Home Support: We Can Do Better*. 2019.

Availability of Data Sources and Results

Data Sources	Continuing Care Reporting System (CCRS)
Available Data Years	**Type of Year: Fiscal Year** (based on the date of assessment) **First Available Year:** 2018 **Last Available Year:** 2018
Geographic Coverage	Newfoundland and Labrador, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon For more information, please see the appendices.
Reporting Level/Disaggregation	National, Province/Territory

Result Updates

Update Frequency	Every year
Indicator Results	**URL:** https://www.cihi.ca/en/measuring-access-to-priority-health-services
Updates	Not applicable

Quality Statement

Caveats and Limitations	This indicator is a starting point to measure the percentage of newly admitted long-term care residents who potentially could have been cared for at home with formal supports in place and can be further refined as data collection across provinces/territories improves. • Provinces and territories offer different levels of publicly funded services outside of long-term care; this indicator focuses on persons who could live well at home with access to formal home care supports. • This indicator considers only newly admitted long-term care residents; other long-term care residents could also potentially be supported outside the long-term care setting if other forms of supports were accessible to them (e.g., assisted or supportive living). • This indicator data is not linked, which means we are unable to trace the care pathway of newly admitted long-term care residents (e.g., from hospital or community) to understand their needs prior to admission to long-term care. • The Resident Assessment Instrument–Home Care (RAI-HC)© is used to assess clients in home and community settings who are expected to be on service for 60 days or longer. Clients who received home care services for a shorter period of time and did not receive a RAI-HC assessment may not be included in this indicator. • This indicator includes data submitted by publicly funded long-term care facilities and excludes private long-term care, assisted or supportive living, and retirement homes.
Trending Issues	Not applicable
Comments	This indicator belongs to the Shared Health Priorities portfolio measuring access to mental health and addictions services and to home and community care. More information about this indicator will be available in the companion report on the Measuring access to home and community care and to mental health and addictions services in Canada web page. RAI-MDS 2.0 © interRAI Corporation, Washington, D.C., 1995, 1997, 1999. Modified with permission for Canadian use under licence to the Canadian Institute for Health Information. RAI-HC © interRAI Corporation, Washington, D.C., 1994, 1996, 1997, 1999, 2001. Modified with permission for Canadian use under licence to the Canadian Institute for Health Information.

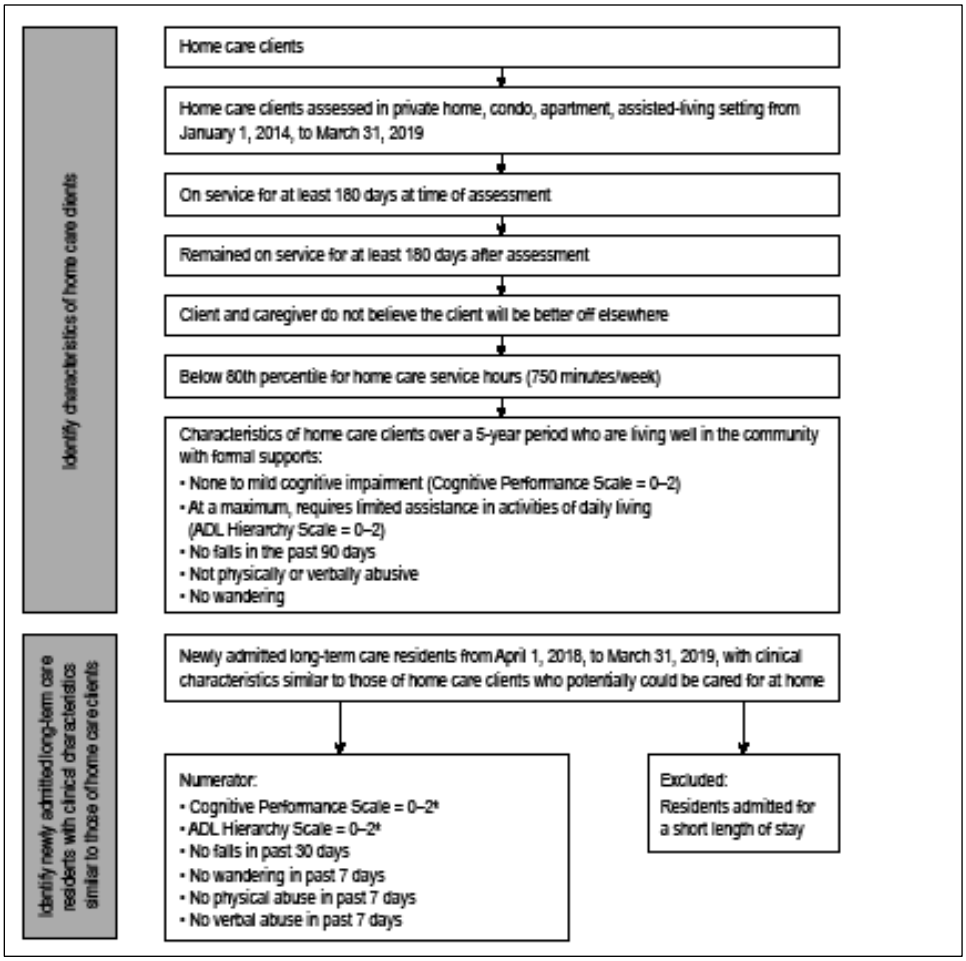
Appendix A: Describing home care clients — numerator definition

Methodological approach: To identify the characteristics of home care clients living well at home through home care programs.

This indicator identifies newly admitted long-term care residents who have a clinical profile similar to that of clients cared for at home with formal supports in place. Examples of formal home care supports include help with daily tasks such as bathing, dressing, eating and/or toileting.

The clinical characteristics of long-term care residents in the flowchart below represent the **numerator** of this indicator.

Figure A1 Clinical characteristics of long-term care residents



Note
* See Appendix B: Outcome scales in RAI-MDS 2.0©.

Text alternative for Figure A1

To identify the characteristics of home care clients who are living well at home through home care programs, we first look at home care clients who were assessed in a private home, a condominium, an apartment or an assisted-living setting between January 1, 2014, and March 31, 2019. From that group, we then identify home care clients who were on service for at least 180 days at the time of the assessment and who remained on service for at least 180 days after the assessment. The client and caregiver must indicate that they do not believe the client will be better off elsewhere. From this group, we then identify clients who are below the 80th percentile for home care service hours (i.e., received less than 750 minutes per week).

We then look at the characteristics of these home care clients who, over a 5-year period, are living well in the community with formal supports: no to mild cognitive impairment (Cognitive Performance Scale = 0–2); at a maximum, requires limited assistance in activities of daily living (ADLs) (ADL Hierarchy Scale = 0–2); no falls in the past 90 days; not physically or verbally abusive; and no wandering.

To identify newly admitted long-term care residents who potentially could have been cared for at home, we look at newly admitted long-term care residents (between April 1, 2018, and March 31, 2019) with clinical characteristics similar to those of home care clients living well in the community with formal supports. These clinical characteristics represent the numerator of this indicator and are as follows: a Cognitive Performance Scale score ranging from 0 to 2, an ADL Hierarchy Scale score ranging from 0 to 2, no falls in the past 30 days, and no wandering or physical or verbal abuse in the past 7 days. Residents admitted for a short length of stay are excluded from this indicator. See Appendix B for more information about outcome scales in RAI-MDS 2.0©.

Appendix B: Outcome scales in RAI-MDS 2.0©

Outcome scale	Description	RAI-MDS 2.0 assessment items	interRAI LTCF assessment items	Score range
Activities of Daily Living (ADL) Hierarchy Scale	This scale reflects the disablement process by grouping ADL performance levels into discrete stages of loss (early loss: personal hygiene; middle loss: toileting and locomotion; and late loss: eating).	4 ADL Self-Performance Hierarchy Scale items: • Personal Hygiene (G1jA) • Toilet Use (G1iA) • Locomotion (G1eA) • Eating (G1hA)	• Personal hygiene (G1b) • Locomotion (G1f) • Toilet use (G1h) • Eating (G1j)	0–6 Higher scores indicate greater decline (progressive loss) in ADL performance.
Cognitive Performance Scale (CPS)	This scale describes the cognitive state of a resident.	5 CPS items: • Comatose (B1) • Short-Term Memory (B2a) • Cognition Skills for Daily Decision-Making (B4) • Expressive Communication (C4) • Eating (G1hA)	• Cognitive Skills for Daily Decision-Making (C1) • Short-term memory OK (C2a) • Making Self Understood (D1) • Eating (G1j)	0–6 Higher scores indicate more severe cognitive impairment.

Notes
RAI-MDS 2.0: Resident Assessment Instrument–Minimum Data Set 2.0.
LTCF: Long-Term Care Facilities.

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