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# CIHI Long-Term Care Data User Guide

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Canadian Institute  
for Health Information

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# Summary

This guide provides context and information, including an assessment of data quality as defined by CIHI’s Information Quality Framework, to facilitate the understanding and use of hospital-based and residential continuing care/long-term care data submitted to the Canadian Institute for Health Information (CIHI).

This data is collected via CIHI’s Continuing Care Reporting System (CCRS) and the Integrated interRAI Reporting System (IRRS) module for the interRAI Long-Term Care Facilities (LTCF) © instrument, which is a newer version of the long-term care data standard used by CCRS. This IRRS-LTCF module was developed to eventually replace CCRS, and several jurisdictions across Canada are in the process of transitioning from CCRS to IRRS.

CCRS and IRRS-LTCF capture longitudinal demographic, clinical and functional information on residents who receive continuing care services in hospital-based facilities and long-term care homes in Canada that have 24-hour nursing available. Both databases include administrative information about residents and their stays, as well as information derived from clinical assessments.

The clinical standard for CCRS is the Resident Assessment Instrument–Minimum Data Set (RAI-MDS 2.0) ©. It is a validated clinical assessment developed by interRAI, a collaborative network of researchers in more than 30 countries committed to improving care for persons who have disabilities or are medically complex. The IRRS-LTCF uses a newer version of the clinical assessment known as the interRAI LTCF. Both the RAI-MDS 2.0 and the interRAI LTCF instruments have been modified by CIHI for use in Canada, with permission from interRAI.

The information collected using either clinical standard supports care planning and monitoring at the point of care. In addition, once data is submitted to CIHI, it is made available across Canada to help stakeholders plan programs, improve the quality of care, allocate resources and understand population needs.

Users should be aware of the following when using CCRS/IRRS-LTCF data:

- The admission criteria for long-term care and the services provided vary across the country. Jurisdictions tailor their admission criteria and service provision for long-term care toward the local needs of their populations based on a number of factors, including the availability of other services such as home care and assisted-living settings to keep people living in the community.
- The population of interest<sup>i</sup> for CCRS/IRRS-LTCF is all residents of all publicly funded or subsidized continuing care facilities (long-term care homes) in Canada that have 24-hour nursing available. CCRS additionally collects information from some hospital-based complex continuing care units.

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i. The population of interest is the group of units for which information is wanted.

- In 2021–2022, Canada (excluding Quebec) had 1,630 long-term care homes where health care was either entirely or partially funded by the provincial or territorial government. Of these, 1,405 reported to CCRS or IRRS-LTCF.
- Given that the CCRS/IRRS-LTCF populations of reference<sup>ii</sup> do not currently contain all provinces and territories (or all providers in submitting provinces and territories) that make up the population of interest, caution should be used when interpreting results, as the data may not be representative of all continuing care facilities in Canada.
- CCRS was launched in 2003–2004, and participation varies by jurisdiction and year. IRRS-LTCF was launched in 2019–2020, though it has received historical data collected prior to that year. At the time of writing, IRRS contains interRAI LTCF data from 2 jurisdictions, New Brunswick and Saskatchewan, which both previously submitted data to CCRS. As a result, any time series changes must be interpreted carefully.
  - Recommendations on how to map and compare data collected via the RAI-MDS 2.0 and interRAI LTCF are available in CIHI’s [eStore](#) as part of the [IRRS reference materials](#). This mapping resource may be useful to data users looking to trend or compare data collected using both CCRS and IRRS-LTCF.
- CCRS and IRRS-LTCF contain longitudinal data from the RAI-MDS 2.0 and interRAI LTCF assessments, respectively, which should be completed approximately every 3 months throughout a resident’s stay in a continuing care facility.
  - RAI-MDS 2.0 full assessments are completed within 14 days of admission, and then annually within the same episode of care (or after a significant change in clinical status). Shorter quarterly assessments are completed every 3 months, between full assessments.
    - When using this data, users should be aware that not all data elements will be available on all assessments, as the data collected depends on the reason for assessment.
  - interRAI LTCF first/return assessments are recommended to be completed within 4 days of admission, and routine assessments are completed each quarter. All clinical items are completed in full each quarter.
- CCRS and IRRS-LTCF do not contain assessment information about all residents. Completing a RAI-MDS 2.0 assessment is voluntary if a resident stays in a continuing care facility less than 14 days; similarly, completing an interRAI LTCF first assessment is voluntary if a resident stays less than 4 days. Therefore, for residents with shorter stays in long-term care, only demographic and administrative data may be available.
- The structure of CCRS and IRRS-LTCF longitudinal data is complex. CCRS includes more than 400 assessment items from the RAI-MDS 2.0 and IRRS-LTCF includes more than 300 items from the interRAI LTCF; there are also additional data elements derived by CIHI in both databases. Supporting documentation is available in CIHI’s [eStore](#) to help with understanding and interpretation.

Please email [specializedcare@cihi.ca](mailto:specializedcare@cihi.ca) with any feedback or questions.

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ii. The population of reference is the group of units for which information is available.

# Introduction

## Data and information quality at CIHI

Quality is at the heart of everything CIHI does. It is embedded in our mandate and vision: Better data. Better decisions. Healthier Canadians.

### Information Quality Framework

CIHI's Information Quality Framework provides an overarching structure for all of our quality management practices related to capturing and processing data and transforming it into information products.

For further information on the Information Quality Framework, including CIHI's information life cycle, quality dimensions and quality principles, please visit the [data and information quality section of our website](#).

### Provincial/territorial data quality reports

CIHI produces annual data quality reports to assess the contribution of each province and territory to a number of CIHI's databases (including CCRS and IRRS) and to inform on data advancement in key areas. These reports are shared with deputy ministers of health and key jurisdictional representatives across the country.

# Introduction to continuing care

## Overview of continuing care

Continuing care includes long-term care (e.g., nursing or personal care homes) and hospital-based continuing care for people who require on-site delivery of supervised care, with nursing care provided 24 hours a day, 7 days a week.

### Long-term care

Long-term care is governed by provincial and territorial legislation. The admission criteria for long-term care and the services provided vary across the country. Jurisdictions tailor their admission criteria and service provision for long-term care toward the local needs of their populations based on a number of factors, including the availability of other services, such as home care and assisted-living settings to keep people living in the community. For some

jurisdictions, where home care and other community support services are available, many people who would have otherwise been admitted to a long-term care home are now served at home or in other settings.

There is also variation in how long-term care homes are governed and who owns them. Of the total 2,076 Canadian long-term care homes, 54% are privately owned and 46% are publicly owned.<sup>1</sup>

Long-term care homes can submit data to CCRS or IRRS-LTCF if they provide 24-hour nursing care and have implemented the RAI-MDS 2.0 (CCRS) or interRAI LTCF (IRRS) clinical standard.

## **Hospital-based continuing care**

Hospital-based continuing care serves individuals who may not be ready for discharge from hospital but who no longer need acute care services. Also known as extended care, chronic care or complex continuing care, it provides ongoing professional services to a diverse population with complex health needs.

Hospital-based continuing care facilities/units submit to CCRS only if they have implemented the CCRS clinical standard (RAI-MDS 2.0). This currently includes Ontario complex continuing care facilities and 2 Winnipeg Regional Health Authority hospitals. Other continuing care hospitals and units submit data to CIHI's Discharge Abstract Database. Hospital-based continuing care data is not submitted to IRRS-LTCF.

# Introduction to CCRS and IRRS-LTCF

## Overview

CCRS was launched in 2003–2004. Using the RAI-MDS 2.0 assessment instrument, the database captures longitudinal demographic, clinical and functional information on residents who receive continuing care services in hospital-based facilities and long-term care homes in Canada that are publicly funded and have 24-hour nursing available. Participating organizations also provide administrative information collected when the resident enters and leaves the hospital/long-term care home, plus information on hospital/long-term care home characteristics to support comparative reporting.

IRRS-LTCF was launched in 2019–2020. It captures similar information as CCRS but uses an updated clinical assessment instrument (interRAI LTCF). Several jurisdictions across Canada are in the process of transitioning from CCRS to IRRS.

## Clinical standards

CCRS receives data collected with the RAI-MDS 2.0 assessment. IRRS-LTCF receives data collected with the interRAI LTCF assessment, which is an updated, streamlined version of the RAI-MDS 2.0. Both are validated clinical assessments developed by interRAI, a collaborative network of researchers in more than 30 countries committed to improving care for persons who have disabilities or are medically complex. Both have been modified for use in Canada by CIHI, with permission from interRAI.

The RAI-MDS 2.0 and interRAI LTCF are both comprehensive assessments used to identify the preferences, needs and strengths of residents of long-term care homes (and, in the case of the RAI-MDS 2.0, patients in continuing care hospitals) and provide a snapshot of the services received. They include measures of cognition, communication, vision, mood and behaviour, psychosocial well-being, physical functioning, continence, disease diagnoses, nutritional status, skin condition, medications, and special treatments and procedures.

The information, which is gathered electronically at the point of care, provides real-time decision support for front-line care planning and monitoring. The data from individual residents can be aggregated and used by clinical quality champions, managers and policy-makers for planning, quality improvement and accountability.

Data collected using the 2 clinical standards may not be directly comparable. Recommendations on how to map and compare data collected via the RAI-MDS 2.0 and interRAI LTCF are available in the *Long-Term Care Assessment Mapping: RAI-MDS 2.0 and interRAI LTCF Comparison Document*, part of the IRRS reference materials that can be found in CIHI's [eStore](#). This resource may be useful to data users looking to trend or compare data collected in both CCRS and IRRS.

## Outputs

The RAI-MDS 2.0 and interRAI LTCF have embedded decision-support algorithms. These algorithms summarize information from the assessment and can be used to support both clinical and organizational decision-making. The algorithms include outcome scales, Clinical Assessment Protocols (CAPs), quality indicators and case-mix systems.

Outcome scales combine assessment items from the RAI-MDS 2.0 or interRAI LTCF to summarize a specific clinical domain for a person, such as cognitive performance, physical functioning, depression symptoms and pain.

Person-level CAPs provide evidence-informed guidance for further assessment and intervention in areas where there is risk of decline or potential to improve (e.g., activities of daily living).

Quality indicators are organizational summary measures that reflect quality of care across key domains, including safety, health status, and appropriateness and effectiveness.



Case-mix systems sort residents into similar clinical groups that reflect the relative costs of services and supports they are likely to use. This information becomes available to clinicians, managers and policy-makers and can be used at the point of care, at the organization level or at the system level to plan and monitor care, understand populations, improve quality and allocate resources.

CIHI has conducted preliminary analyses to determine the comparability of the RAI-MDS 2.0 and the interRAI LTCF outcome scales and quality indicators. Based on these preliminary analyses, CIHI recommends that stakeholders can trend the majority of the outcome scale and quality indicator data over time as they transition from the RAI-MDS 2.0 to the interRAI LTCF, as well as compare among organizations or jurisdictions using either instrument. As CIHI receives more interRAI LTCF data, analyses and recommendations will be reassessed and adjusted as needed.

Further details are in the *CCRS RAI-MDS 2.0 Output Specifications Manual*, *IRRS Long-Term Care Facilities Output Specifications*, *RAI-MDS 2.0 Outcome Scales Reference Guide* and *interRAI LTCF Outcome Scales Reference Guide*, available in CIHI's [eStore](#).

Information comparing the data elements used in the output algorithms in CCRS and IRRS-LTCF is available in the *Long-Term Care Assessment Mapping: RAI-MDS 2.0 and interRAI LTCF Comparison Document*, available as part of the IRRS reference materials in CIHI's [eStore](#).

## Record types

### CCRS

There are 9 different types of records that can be submitted to CCRS: 7 for the submission of resident-specific information<sup>iii</sup> and 2 non-resident record types required for the appropriate processing of resident-specific records.<sup>iv</sup> The data elements collected vary by assessment type; the assessment types are described in more detail in the next section. Resident-specific records can be submitted to CCRS as new, correction or deletion records.

Further details are in the *CCRS Data Submission User Manual*, available in CIHI's [eStore](#).

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iii. The 7 record types for the submission of resident-specific data are Admission/Re-entry (AD), Update (UP), RAI-MDS 2.0 Full Assessment (FA), RAI-MDS 2.0 Quarterly Assessment (QA), Medication (MD), Discharge (DC) and Special Project (SP).  
iv. The 2 non-resident record types required for the appropriate processing of resident-specific records are Control Record (CR) and Contact Information (CI).

## IRRS-LTCF

IRRS separates assessment data into 3 distinct components called Resources, which can be submitted either together or separately to IRRS upon completion in real time:

- Patient Resource
  - Demographic and identifying information about the resident that is unlikely to change over time (e.g., Case Record Number, Health Care Identification Number, Birthdate, Sex, Language)
- Encounter Resource
  - Administrative information about the resident’s care encounter (e.g., Admission Date, Discharge Date, Current Payment Sources, Program Types)
- Assessment Resource
  - Clinical information that is specific to a point-in-time assessment (e.g., Treatments, Diagnoses, Cognition, Physical Function)

Like CCRS, the data elements required for each data submission vary slightly by assessment type, which is based on the reason for assessment — for example, the Intake History section is completed only on a first assessment. There are 6 assessment types<sup>v</sup> that can be submitted to IRRS-LTCF; all collect resident-specific information.

Further details are in the *IRRS Mandatory Matrix* and *Integrated interRAI Reporting System (IRRS) Reference Manual*, available in CIHI’s [eStore](#).

## Encounter/episode of care

An encounter or episode of care is the period of time between an individual’s admission to and discharge from a continuing care facility (hospital-based facility or long-term care home).

## CCRS

An Admission/Re-entry (AD) record that contains key demographic and administrative information is collected for all residents on admission. For new admissions, the AD record opens the resident episode and establishes the Unique Registration Identifier (URI) number associated with all assessments in that episode of care.

The CCRS standard expects that a full RAI-MDS 2.0 assessment (record type FA) will be carried out on residents in continuing care within 14 days of admission and will be repeated annually within the same episode of care. A full assessment should also be completed when a resident experiences a significant change in clinical status. For lengths of stay less than 14 days, completing an assessment is voluntary.

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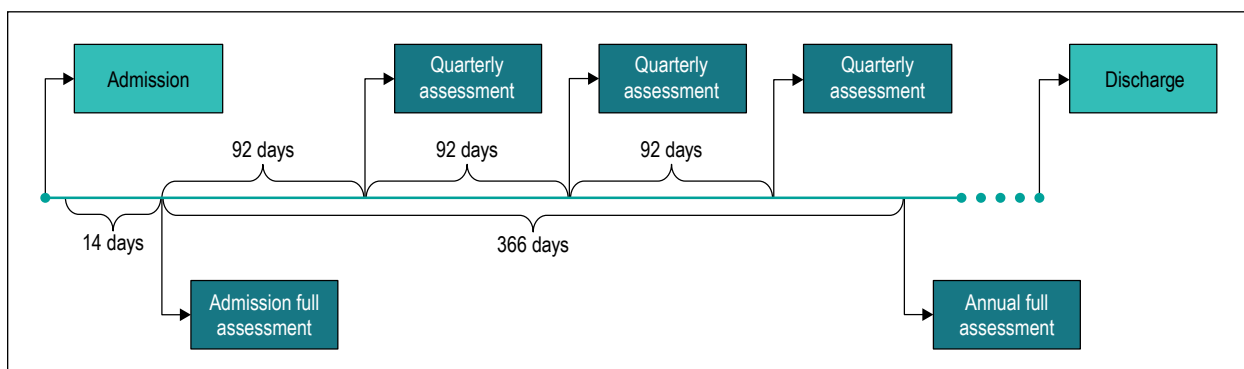
v. The 6 assessment types submitted to IRRS-LTCF are first assessment, routine reassessment, return assessment, significant change in status reassessment, discharge assessment — regular and discharge tracking only — regular.

A shorter quarterly RAI-MDS 2.0 assessment (record type QA) should be completed every quarter (at 3, 6 and 9 months) between full assessments. When using RAI-MDS 2.0 assessment data, users should be aware that not all data elements will be available for the quarterly assessments.

A discharge record is completed whenever a resident is discharged from a continuing care facility (including death). A discharge record may also be completed when the discharge is temporary (i.e., when the resident’s return is anticipated).

If a resident is discharged but returns to the same continuing care facility before the next scheduled assessment, the previous assessment cycle can continue under the same URI. If the resident misses their scheduled assessment while out of the continuing care facility, a new episode of care must be started under a new URI.

**Figure 1** Typical CCRS episode



## IRRS-LTCF

In IRRS-LTCF, the administrative information that creates and ends an episode of care (e.g., Date Case Opened, Last Day of Stay) is submitted as part of the Encounter Resource. Each Encounter Resource may have multiple Assessment Resources (i.e., first assessment, routine reassessments) associated with it.

A first assessment is recommended by day 4 of the person’s stay. Jurisdictions may wish to set their own parameters for completion, but the time to complete the assessment should not exceed 7 days from the time of entry into the long-term care home.

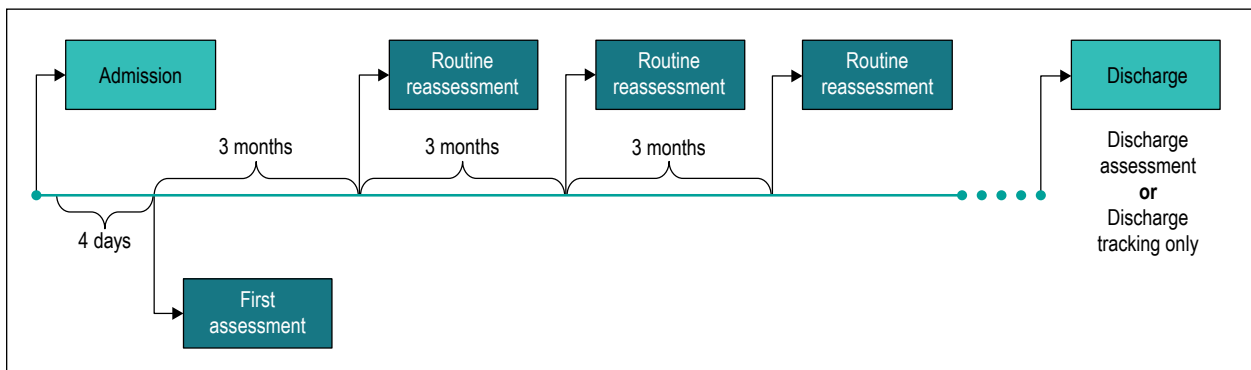
It is recommended that routine reassessments then be completed every 3 months. In addition, a significant change in status reassessment should be completed whenever a significant change in clinical status occurs to the person.

In IRRS-LTCF, all assessments except one are considered full assessments because they contain essentially the same items, aside from the following variations:

- The Intake History section is completed only on a first assessment; and
- The Discharge section is completed only on a discharge assessment.

The exception is a discharge tracking only assessment. This includes a minimal amount of administrative data that facilities may use to close an open encounter instead of a full discharge assessment.

**Figure 2** Typical IRRS-LTCF episode



## Organization definitions

### Organization and population scope

CCRS and IRRS-LTCF are designed to capture information on all residents of all publicly funded or subsidized continuing care facilities in Canada that have 24-hour nursing available. Data is received predominantly from long-term care homes, though CCRS also captures some hospital-based continuing care data. Some publicly funded long-term care homes have residents whose cost of stay is covered solely by private means; these long-term care homes may choose to submit data for these residents to CCRS/IRRS-LTCF. A private pay resident flag is collected to differentiate these residents from those whose services are covered in whole or in part by public funds.

### Source organizations

Source organizations (i.e., long-term care homes, hospital-based continuing care facilities) are the agencies actually delivering services and those responsible for collecting information on the residents they serve.

## Submission organizations

Submission organizations submit data to CIHI. In some jurisdictions, source organizations will submit their own data to CIHI and therefore will act as both source and submission organizations. In other jurisdictions, source organizations will send their data to another organization (e.g., their provincial ministry of health), which will then submit the data to CIHI.

## Overview of CIHI data tables

CCRS data is grouped into 4 key data tables: Organization, Episode, Assessment and Medication. IRRS-LTCF data is grouped into 5 key data tables: Organization, Encounter, Assessment, Medication and Disease Diagnoses. For both databases, additional tables contain information on resource utilization and quality indicators.

### Organization table (CCRS/IRRS-LTCF)

Organization data includes general information about facilities/hospitals delivering continuing care services, including the type of organization and basic name and address elements. Data is submitted at the facility/hospital level and can be rolled up to health region/zone, province/territory and national levels.

### Episode (CCRS)/Encounter (IRRS-LTCF) table

Episode/encounter data includes identifiers, demographic information and administrative data such as referral and discharge information. This data can be collected on all continuing care residents regardless of whether they receive an assessment.

### Assessment table (CCRS/IRRS-LTCF)

Assessment data is captured during the resident's stay, typically at admission and on a quarterly basis thereafter until discharge. It includes information about a resident's functioning, needs, strengths and preferences.

### Medication table (CCRS/IRRS-LTCF)

Medication records contain specific information about each prescription drug, including the dose and frequency of administration. Medication records are linked to a specific assessment and are optional to submit.

### Disease Diagnoses table (IRRS-LTCF)

Disease diagnosis data includes information on ICD-10-CA codes that reflect resident characteristics. In CCRS, this data is stored in the Assessment table.

## Coverage and participation

Data coverage speaks to the extent to which each jurisdiction participates in, and is therefore reflected in, the database. Some jurisdictions will participate fully, some partially and some not at all.

The CCRS/IRRS-LTCF population of interest, the group of units for which information is wanted, is defined as all residents of all publicly funded continuing care facilities (primarily long-term care homes, but also hospital-based facilities for CCRS) in Canada that have 24-hour nursing available.

The CCRS/IRRS-LTCF population of reference, the group of units for which information should be available, is defined as all publicly funded continuing care facilities in Canada with 24-hour nursing from which data submissions to CCRS or IRRS-LTCF can be expected.

The population of reference has changed over time, and participation varies by jurisdiction and year. Furthermore, as IRRS-LTCF was developed to eventually replace CCRS, several jurisdictions across Canada are in the process of transitioning from CCRS to IRRS-LTCF. Therefore, any time series changes must be interpreted carefully, as they may reflect changes in the underlying population rather than actual changes in the characteristics and resource utilization of the residents being served.

As the CCRS/IRRS-LTCF population of reference does not currently contain all provinces and territories (or all providers within submitting provinces and territories) that make up the population of interest, caution should be used when interpreting results, as the data may not be representative of all continuing care facilities in Canada.

For further information on participation by province/territory and the number of long-term care homes and continuing care hospitals submitting data to CCRS/IRRS-LTCF by province/territory and year, see tables 3, 4 and 5 in the section [CCRS/IRRS-LTCF data](#).

# Quality measures for CCRS/IRRS-LTCF throughout the information life cycle

This section provides information on the processes and standards CIHI uses to support data quality and information quality throughout the CCRS/IRRS-LTCF information life cycle: capture, submit, process, analyze and disseminate.

## Capture

### Data capture

The process begins with data (assessment, demographic and administrative) collected electronically by front-line clinicians and stored in a vendor software system. The RAI-MDS 2.0 or interRAI LTCF is implemented in jurisdictions primarily as a comprehensive assessment for front-line clinicians to help plan and monitor resident care. The data submitted to CCRS or IRRS-LTCF is, therefore, a by-product of the ongoing processes of care.

The CCRS and IRRS-LTCF data sets consist of both clinical assessment data elements and those required by CIHI for administrative purposes; this amounts to more than 400 items for the RAI-MDS 2.0 and more than 300 for the interRAI LTCF. In both cases, the vast majority of data elements are mandatory to submit, including all the elements that are used to derive the key outputs (outcome scales, CAPs, quality indicators and the case-mix systems).

In long-term care, most assessments are completed by nurses; sometimes they are completed by occupational therapists, physiotherapists and/or social workers. Some organizations have super users whose sole responsibility is to conduct interRAI assessments, while other sites have an interdisciplinary team that completes assessments.

## Quality measures

CIHI takes measures to ensure quality control during the data capture phase of the CCRS and IRRS-LTCF information life cycle. These are intended to ensure standardized data collection and to prevent data quality issues. They include

- Providing data element definitions and data collection standards such as user manuals and job aids;
- Encouraging data suppliers to use electronic data capture to complete assessments and requiring them to use licensed vendors, preferably those that implement edits and audits at data capture that allow corrections and verifications to occur at the time of data entry;
- Providing education courses that address coding of RAI-MDS 2.0/interRAI LTCF assessment data; and
- Responding to coding questions, including consultation with and approval by interRAI researchers for relevant questions, to ensure that standard, consistent responses are made available to data providers.

## Resources for assessors

Resources and job aids are available on CIHI's website to support assessors who use the RAI-MDS 2.0 and interRAI LTCF. They are organized into 3 categories:

- [User manuals and forms](#)
- [Resources](#)
- [Education](#)

## Submit

### CCRS/IRRS-LTCF data submission

Various vendor software systems are used to capture data at long-term care facilities. This data may then be securely submitted to CIHI in real time (for IRRS-LTCF) or compiled into submission files that are submitted later (for CCRS). In most cases, this data comes to CIHI directly from the facility; in some cases, however, facilities send the data to their regional health authority or ministry, which compiles it and sends it to CIHI on their behalf.

Once the data has been submitted, CIHI processes the data and sends back acceptance and/or error messages, either directly to the facility's software in real time (for IRRS-LTCF) or via submission reports (for CCRS). Corrected data should be resubmitted to CIHI. Records that have been accepted by the final submission deadline each quarter are included in analytical reports that can support clinical and quality management decisions.



## Quality measures

CIHI takes measures to ensure quality control during the CCRS/IRRS-LTCF data submission phase of the information life cycle. These are aimed at preventing, monitoring and controlling data quality issues and include

- Producing user manuals and specifications documents that provide information on how the data is to be submitted to CIHI, including data element specifications, valid code values, record layouts, data validation rules and error message descriptions. Documentation is reviewed annually, and changes are made available to clients prior to the beginning of each fiscal year;
- Requiring data providers to use licensed software vendors that incorporate CIHI's submission specifications into their proprietary software systems;
- Requiring all software vendors to pass CIHI's testing requirements to ensure compliance with the most recent CIHI specifications;
- Checking each data element upon submission to ensure completeness and valid values. Data not meeting these specifications is either rejected (hard edit) or accepted with a warning message (soft edit), and data providers are given information about the reasons for the rejection. Correcting and resubmitting rejected records is the responsibility of the organizations collecting and submitting the data;
- Producing quarterly data quality audit reports that identify potentially missing records and illogical or suspicious values in successfully submitted data; and
- Providing direct client support by email ([specializedcare@cihi.ca](mailto:specializedcare@cihi.ca)) to assist with submitting data, interpreting submission reports and correcting rejected records.

## Resources for data submitters

CIHI has developed the following manuals to support data submission. They are available by logging in to CIHI's website and visiting [eStore](#).

### CCRS

- *Continuing Care Reporting System (CCRS) Data Submission User Manual*

### IRRS-LTCF

- *Integrated interRAI Reporting System (IRRS) Reference Manual*
- *IRRS Mandatory Element Matrix*

In addition to the manuals above, CIHI's Education Program includes a suite of courses relating to long-term care, including data submission. The course catalogue and the courses are available by logging in to [CIHI's Learning Centre](#).

## System edits

The edits built into the CCRS/IRRS databases are logical and consistent, and they are verified by CIHI's continuing care and information technology teams prior to implementation. Several consistency edits exist within and between data elements and between records to ensure the longitudinal integrity of the resident's information. For example, the Discharge Date submitted on the discharge record must be on or after the Admission Date submitted on the admission record.

## Duplicate records

There are many edits in CCRS and IRRS to prevent the submission of duplicate records. However, duplicates may still occur if the source organizations change some of the information that is used to determine the uniqueness of the records (e.g., resident identifiers, dates). Such duplicates are not identified during quality checks, but the impact is assumed to be minimal.

## Submission reports and system-to-system messaging

CCRS submission reports are generated when each CCRS submission file is processed at CIHI, normally within 48 hours of receipt of the data. These reports, housed within CIHI's secure Operational Reports environment, provide data suppliers with details regarding the number of records submitted, the number of records rejected and the reasons for each rejected record. Reports for both submission and source organizations are available online by logging in to [CIHI's Client Services](#).

IRRS was designed to communicate messages about accepted and rejected data directly with submitters' vendor software to enable data submitters to correct their data in near real time, if desired. As a result, the submission reports that are present in CCRS and similar databases are not created for IRRS submissions.

## Data quality audit reports

CCRS data quality audit reports are produced 45 days after the end of a quarter. They identify potentially missing records and illogical or suspicious values in successfully submitted data. Data submitters then have an additional 15 days to submit corrections and/or missing data.

In IRRS, the goal is for software vendor solutions to provide similar functionality as assessments are being completed in near real time.

## Frequency of submission

Data submission to CCRS/IRRS-LTCF is quarterly, but organizations can submit data any number of times within each quarter. Quarterly data submission deadlines are published annually, prior to the beginning of the data submission year.

To have data included in the comparative reports that CIHI updates each quarter, CCRS data providers have up to 45 days after the end of the quarter to submit their data, and an additional 15 days to submit corrections and/or missing data.

As IRRS is designed to be a timelier reporting system, submitters have 1 month following the end of each quarter to submit data, including corrections, and have it included in that set of quarterly reports.

For either database, late data can be submitted at any time but might not be included in the respective quarterly or annual reporting.

## Process

### Processing CCRS/IRRS-LTCF data

CCRS and IRRS-LTCF data goes through robust, automated data quality processing in CIHI's IT environment. To prepare the data for analytical use, various data operations are performed, such as encrypting health care numbers, deriving additional data elements and flagging data quality issues. This processed data is then used for analytical, reporting and dissemination purposes.

### De-identification

CIHI receives a complete health care number (HCN) on almost all CCRS/IRRS-LTCF records and applies a standard algorithm to encrypt this number, even if it has already been encrypted by the submitter. This standard encryption methodology is applied to all CIHI data holdings. As a result, CCRS/IRRS-LTCF data can be linked with other CIHI data (e.g., home care clinical assessments, hospital admissions).

### Data cuts

60 days following the end of a quarter, a cut of the transformed CCRS data is produced to create analytical data files and outputs; for IRRS-LTCF, a data cut is generated 1 month following the end of each quarter. While data continues to be accepted into CCRS and IRRS-LTCF after the data submission deadline, it is not incorporated into that quarter's reporting. Late submissions are included in subsequent updates.

A publicly available Quick Stats report is produced using Quarter 4 (Q4) data each year; as such, submissions occurring after the Q4 submission deadline are not included in that year's report. Data submitted after the Q4 submission deadline may still appear in public Your Health System (YHS) reports, if submitted before the next fiscal year's Q1 submission deadline.

## Data quality flags

The CCRS and IRRS-LTCF analytical data files have a series of data quality flags used to identify records that have issues with given demographic variables, such as if a resident's age is outside the expected range (younger than 16 or older than 115).

# Analyze

## Resources for analysts

CIHI has developed a number of manuals and job aids that can help users analyze and interpret CCRS/IRRS-LTCF outputs. These are available from CIHI's [eStore](#), as well as in the eReporting application (available to authorized users by [logging in to CIHI's website](#)) under Supporting Links.

CIHI's Education Program includes a suite of courses relating to long-term care. The course catalogue and a learning pathway are available by logging in to [CIHI's Learning Centre](#).

## Analytical outputs

CCRS/IRRS-LTCF analytical outputs are summarized in the [Disseminate](#) section of this guide. Key outputs include Quick Stats, eReports and YHS: In Brief and In Depth.

## Geographic level

CCRS/IRRS-LTCF data for all submitting provinces and territories can be analyzed at the organization, region (or zone) and province/territory levels.

When analyzing trends at the organization level, users should be aware that organizational changes (such as closures, mergers or splits) can affect the longitudinal integrity of resident and organization information.

Depending on the vendor systems available to clients, 1 of 2 things can happen following an organizational change:

- Organizations discharge all their active residents from the old organization number and admit them under the new organization number. This breaks the longitudinal record of the active residents (as they all begin new episodes of care) and also affects admission and discharge volumes and length-of-stay calculations.
- Organizations transfer all their active residents to the new organization number, maintaining the longitudinal integrity of individual resident records. However, all historical records for residents are transferred to the new organization number, which affects the analysis of historical data under the previous organization number.

For further information, email [specializedcare@cihi.ca](mailto:specializedcare@cihi.ca).

## Item non-response

When analyzing CCRS/IRRS-LTCF data, users should be aware of item non-response (or partial non-response). Item non-response occurs when a record is received with some missing or invalid data. The item non-response rate for CCRS and IRRS-LTCF depends largely on whether the data element is mandatory or optional.

The vast majority of data elements in both databases are mandatory and therefore require a valid response for the system to accept the record; this includes all the elements that are used to derive the key outputs (outcome scales, CAPs, quality indicators and the case-mix systems) used for analysis. Some data elements are not applicable in certain situations and can therefore be left blank.

The HCN is used to determine unique residents and to link records in CCRS/IRRS-LTCF or with other databases for longitudinal analysis. In recent years, more than 98% of CCRS/IRRS-LTCF records from each province and territory have contained an HCN each year.

Item non-response rates for other data items are available on request.

## Counting residents

Data users should be aware of the different ways of counting CCRS/IRRS-LTCF residents. Key variations are detailed in the table below.

**Table 1** CCRS/IRRS-LTCF counting variations

Counting variables	Variations	Comments
<b>Identifier type</b>	<b>CCRS</b> <ul style="list-style-type: none"> <li>• Unique Registration Identifier (URI)</li> <li>• Encrypted HCN</li> <li>• Resident ID</li> </ul>	Note that each ID will produce a different result when counting unique clients due to different relationships between the variables within jurisdictions.
	<b>IRRS-LTCF</b> <ul style="list-style-type: none"> <li>• Client ID</li> <li>• Encrypted HCN</li> </ul>	
<b>Resident type</b>	Total residents	The count of residents may be event based; if a resident had an admission, assessment or discharge in a given time period, they are counted.  Alternatively, resident count can refer to all active residents in a given time period, regardless of what year they were admitted to continuing care and whether they had an event in that period. If a resident has not been discharged, they are considered active.
	Assessed residents	Residents assessed with the RAI-MDS 2.0 or interRAI LTCF assessment instrument in a given time period.
	Admitted residents	Residents admitted to a continuing care facility with 24-hour nursing (may be a hospital-based facility or long-term care home) in a given time period.
	Discharged residents	Residents discharged from a continuing care facility with 24-hour nursing (may be a hospital-based facility or long-term care home) in a given time period.
<b>Event type</b>	All events (assessment, admission, discharge) Latest event in given time period	The number of events included for analysis can differ depending on the time period and type of analysis. For example, counts may be based on all events in a given time period. If a resident has multiple events, they will be counted more than once.  Alternatively, only 1 event in a time period or episode of care may be counted. In this approach, if a resident has more than one event (e.g., assessment) within a time period/episode of care, only the latest event is counted.
<b>Setting type (CCRS only)</b>	Hospital Long-term care home	Hospital-based continuing care includes hospitals with extended, chronic or complex care beds. At this time, only Ontario and Manitoba have facilities of this designation type that are required to submit data to CCRS.  Long-term care includes nursing, personal care and long-term care homes that have 24-hour nursing available.

# Disseminate

## Dissemination of CCRS/IRRS-LTCF data

The table below summarizes the ways CIHI disseminates CCRS/IRRS-LTCF data.

**Table 2** CCRS/IRRS-LTCF reporting outputs

Name	Description	Access	Frequency
<b>Quick Stats</b>	Standard tables of aggregate data at the province/territory level for a given year, therefore reflecting only 1 point in time. Contain administrative, clinical, resource utilization and quality indicator information. Include data for only the jurisdictions that submitted data for the given fiscal year. As of the publication of <i>Profile of Residents in Residential and Hospital-Based Continuing Care, 2021–2022</i> , tables include both CCRS and IRRS-LTCF data.	<a href="#">Available publicly</a>	Annually
<b>eReports</b>	Secure, web-based access to comparable RAI-MDS 2.0/interRAI LTCF and related data in a user-friendly, interactive environment. Functionality includes <ul style="list-style-type: none"> <li>• Comparative reporting (compare across organizations, regions, provinces/territories or the entire database);</li> <li>• Trending over time (4 years or 8 quarters);</li> <li>• Customizable reports that can be saved; and</li> <li>• Graphs and tables that can be downloaded in Excel or as a PDF.</li> </ul>	Authorized users only. Available to users that meet specific criteria, such as organizations that submit data to CCRS/IRRS-LTCF, as well as their health authorities and ministries of health. Accessed via CIHI's Client Services application.	Quarterly
<b>Your Health System (YHS): In Brief and In Depth</b>	Interactive public reporting tool that includes 9 Long-Term Care quality indicators and 7 contextual measures. Includes functionality that allows comparisons between organizations, regions and provinces/territories. YHS: In Depth includes a matrix that provides a snapshot of how indicators are performing compared with the average and across time. Features exportable graphs and data. Designed to present comparative indicator results that may facilitate sharing of best practices and help generate new ideas for improvement strategies.	Available publicly: <a href="#">In Brief</a> <a href="#">In Depth</a>	Annually

Name	Description	Access	Frequency
<b>Data requests</b>	Researchers, decision-makers and health managers can request specific CCRS and/or IRRS-LTCF data from CIHI at an aggregate or record level to suit their information needs. Data will be released in accordance with CIHI's Privacy Policy.	Via <a href="#">Data Inquiry Form</a>	On request
<b>Special topic</b>	Tailored analytical outputs that use data from across CIHI's data holdings to focus on a particular health area. Some examples include <i>Seniors in Transition: Exploring Pathways Across the Care Continuum</i> (2017) and <i>Dementia in Canada</i> (2018).	<a href="#">CIHI's website</a>	Varies

Before any analytical outputs are released by CIHI, they undergo internal verification and approval processes. These include both checking the accuracy of the outputs and verifying adherence to [CIHI's Privacy Policy](#).

## CCRS/IRRS-LTCF data

The following section presents data relating to CCRS and IRRS-LTCF participation, resident counts and data quality indicators. Results are based on the Q4 data cut of the respective fiscal years, usually extracted at the beginning of May for IRRS-LTCF and June for CCRS.

### Participation

#### Current and historic coverage

The following table shows the number of long-term care homes and continuing care hospitals with available data in CCRS/IRRS-LTCF by province/territory and year, over the total number of homes suitable for participation.

The numerators in Table 3 represent the number of long-term care homes and continuing care hospitals that submitted data in that year, as opposed to the number for which CCRS data is currently available. Table 4, on the other hand, shows the years for which a substantive amount of data is available in CCRS and IRRS-LTCF, by province; this can include data that was submitted retroactively.

The denominators in Table 3 represent the number of long-term care homes and continuing care hospitals that were considered suitable for participation in CCRS or IRRS-LTCF in the fiscal year at that time.



**Table 3** Number of long-term care homes and continuing care hospitals submitting data to CCRS and IRRS-LTCF over number of long-term care homes suitable for participation,\* by province/territory and year

Province/ territory	Database	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Facility-based long-term care							
N.L.	CCRS	36/36	35/35	35/36	35/36	36/38	36/38
P.E.I.	—	—	—	—	—	0/19	0/19
N.S.	CCRS	3/93	2/93	0/93	1/93	1/84	1/84
N.B.	CCRS	1/67	0/68	0/68	0/69	0/70	0/71
	IRRS-LTCF	0/67	1/68	1/68	52/69	70/70	69/71
Que.	—	—	—	—	—	—	—
Ont.	CCRS	625/625	625/625	626/626	623/624	620/627	622/629
Man. <sup>†</sup>	CCRS	39/125	39/125	39/125	39/125	38/125	38/124
Sask.	CCRS	155/156	152/156	140/156	137/156 <sup>‡</sup>	1/161	0/161
	IRRS-LTCF	0/156	0/156	0/156	0/156	156/161	156/161
Alta.	CCRS	174/174	175/175	177/177	180/180	181/186	179/179 <sup>§</sup>
B.C.	CCRS	301/307	300/307	297/309	299/313	299/299	300/309
Y.T.	CCRS	5/5	5/5	5/5	5/5	4/4	4/4
N.W.T.	—	—	—	—	—	0/9	0/9
Nun.	—	—	—	—	—	0/3	0/3
Hospital-based continuing care							
Ont. <sup>**</sup>	CCRS	108/108	109/115	103/115	100/116	100/116	99/117
Man. <sup>†</sup>	CCRS	2/2	2/2	2/2	2/2	2/2	2/2

#### Notes

\* *Number suitable for participation* is the total number of long-term care homes/hospitals that were suitable for participation in CCRS or IRRS-LTCF in each fiscal year. It is sourced through direct contact with the individual ministries of health and/or information provided on their websites. For CCRS, if information that comes directly from the ministry is unavailable, then the number of facilities that have past submissions but have not indicated that submissions are to cease is used.

† Manitoba data is currently submitted from participating facilities in the Winnipeg Regional Health Authority only.

‡ Saskatchewan began implementing the interRAI LTCF in 2019–2020 using a staggered approach. As such, most Saskatchewan facilities do not have full coverage for the RAI-MDS 2.0 for that fiscal year, and many submitted both CCRS and IRRS-LTCF data.

§ 179 facilities submitted RAI-MDS 2.0 data for 2021–2022. By year end, 11 facilities had transitioned to the interRAI LTCF instrument but had not yet begun submitting to IRRS-LTCF.

\*\* Small Ontario complex continuing care (CCC) facilities sometimes do not submit to CCRS in a given year, as they do not have any residents in their designated CCC beds.

— No facilities from this jurisdiction reported to CCRS or IRRS-LTCF for the specified time period, and the number of facilities suitable for participation was not available or could not be determined with reasonable certainty for the purposes of this report.

#### Sources

Continuing Care Reporting System, June 2022, and Integrated interRAI Reporting System, May 2022, Canadian Institute for Health Information.

**Table 4** Historic CCRS and IRRS-LTCF coverage and data availability,\*  
by province/territory

Province/ territory	CCRS	IRRS-LTCF	Comments
Facility-based long-term care			
<b>N.L.</b>	2008–2009 to current	—	—
<b>P.E.I.</b>	—	—	No commitment to participate.
<b>N.S.</b>	2004–2005 to current	—	Nova Scotia has partial commitment to collect and submit data to CCRS, with 1 facility submitting as of 2021–2022. The province is currently in the process of transitioning to IRRS-LTCF, with data submission expected to begin in 2022–2023.
<b>N.B.</b>	2013–2014 to 2016–2017	2017–2018 to current	New Brunswick implemented the interRAI LTCF between 2016 and 2017 and started submitting data to IRRS-LTCF in 2019.  Previously, New Brunswick had only partial commitment to collect and submit data, with 1 facility submitting data to CCRS.
<b>Que.</b>	—	—	No commitment to participate.
<b>Ont.</b>	2005–2006 to current	—	—
<b>Man.</b>	2007–2008 to current	—	Manitoba has partial commitment to participate, with full participation from Winnipeg Regional Health Authority (WRHA) only.
<b>Sask.</b>	2013–2014 to 2020–2021	2019–2020 to current	Saskatchewan began implementing the interRAI LTCF in July 2019 using a staggered approach, with submission to IRRS-LTCF beginning in April 2021. As such, most Saskatchewan facilities do not have full coverage for the RAI-MDS 2.0 for 2019–2020 or 2020–2021.
<b>Alta.</b>	2009–2010 to current	—	Alberta began transitioning to IRRS-LTCF in 2021–2022; the transition is ongoing. Currently, only data from the RAI-MDS 2.0 (CCRS) is submitted to CIHI and included in reporting.
<b>B.C.</b>	2003–2004 to current	—	—
<b>Y.T.</b>	2008–2009 to current	—	—
<b>N.W.T.</b>	—	—	No commitment to participate.
<b>Nun.</b>	—	—	No commitment to participate.

Province/ territory	CCRS	IRRS-LTCF	Comments
Hospital-based continuing care			
<b>Ont.</b>	1996–1997 to current	—	Ontario complex continuing care (CCC) facilities began completing RAI-MDS 2.0 assessments in 1996–1997 and began submitting to CCRS when it was created in 2003–2004.  Small Ontario CCC facilities sometimes do not submit to CCRS in a given year, as they do not have any residents in their designated CCC beds.
<b>Man.</b>	2008–2009 to current	—	Manitoba has partial commitment to participate, with full participation from WRHA only.

#### Notes

\* Years of data coverage are based on the years for which a substantive number of assessment records (50 or more) are available, based on the Assessment Reference Date of the record. It does not necessarily reflect full coverage in a province or territory.

— Not applicable.

#### Sources

Continuing Care Reporting System, June 2022, and Integrated interRAI Reporting System, May 2022, Canadian Institute for Health Information.

## Resident counts

### Residents by year

The table below presents the number of residents reflected in CCRS/IRRS-LTCF data, by province/territory and year. The values represent the number of residents based on the data submitted in that year, as opposed to data that is currently available. The latter can include data submitted retroactively. For information on assessed, admitted and discharged resident counts, see Quick Stats or eReports.

**Table 5** CCRS/IRRS-LTCF residents, by province/territory and year

Province/ territory	Database	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Facility-based care							
<b>N.L.</b>	CCRS	3,546	3,818	3,733	3,773	3,786	3,769
<b>N.S.</b>	CCRS	114	176	—	114	111	69
<b>N.B.</b>	CCRS	293	—	—	—	—	—
	IRRS-LTCF	—	293	300	3,509	6,335	6,264
<b>Ont.</b>	CCRS	114,206	114,326	110,161	109,410	91,265	92,427
<b>Man.</b>	CCRS	7,798	7,805	7,632	7,854	7,233	7,199

Province/ territory	Database	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Facility-based care (continued)							
Sask.	CCRS	12,315	12,221	11,069	8,457*	—	—
	IRRS-LTCF	—	—	—	—	11,546	11,750
Alta.	CCRS	21,879	21,825	22,095	22,799	20,857	21,299
B.C.	CCRS	37,256	36,802	36,829	36,950	35,757	36,664
Y.T.	CCRS	345	388	316	419	386	433
Hospital-based care							
Ont.	CCRS	27,416	27,689	26,523	26,760	25,134	28,920
Man.	CCRS	261	246	231	214	206	204

#### Notes

\* Saskatchewan began implementing the interRAI LTCF in 2019–2020 using a staggered approach. As such, most Saskatchewan facilities do not have full coverage for the RAI-MDS 2.0 for that fiscal year. Saskatchewan's data in 2019–2020 reflects 70% of the residents reported on for a typical fiscal year.

— Data not available.

In 2017–2018, New Brunswick implemented the interRAI LTCF.

CCRS *residents* is the number of Unique Registration Identifiers (URIs) for residents who were admitted, assessed or discharged through 2017–2018. Beginning in 2018–2019, CCRS *residents* uses Resident ID.

#### Sources

Continuing Care Reporting System, June 2022, and Integrated interRAI Reporting System, May 2022, Canadian Institute for Health Information.

## Data quality indicators

This section of the guide presents results for 3 data quality indicators. The results are based on the data submitted in the respective fiscal year, as opposed to data that is currently available. The latter can include data submitted retroactively. For further information relating to the indicator methodology, please see the [Provincial/Territorial Data Quality Report: Indicators and Contextual Measures — Reference Guide](#).

### Missing Longitudinal Records

The Missing Longitudinal Records indicator measures the percentage of CCRS/IRRS-LTCF residents who had activity (an AD record or an assessment record) in Q1, 2 or 3 of the reporting fiscal year, for whom data (an assessment or discharge) was expected by CIHI but had not been submitted for at least one fiscal quarter as of the end of Q4 of the reporting fiscal year.

This indicator provides a measure of records that are potentially missing from CCRS/IRRS-LTCF. Organizations are expected to submit an assessment in each quarter the resident is in the long-term care home/hospital until the resident is discharged. If the submission of assessments stops without the submission of a discharge record, this indicates there is at least one expected record missing for that resident (e.g., discharge record, assessment).

The optimal value is 0%. It is assumed for the purposes of this indicator that the expected assessment or discharge records are not in the database for 1 of 3 reasons: they were never completed, they were completed but not submitted to CIHI or they were rejected and never resubmitted.

This indicator relates to the capture and submit stages of the data life cycle and the quality dimension accuracy and reliability.

**Table 6** CCRS residents with missing longitudinal records, by province/territory and year (%)

Province/ territory	Database	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Facility-based care							
<b>N.L.</b>	CCRS	0.1	0.2	1.0	1.6	1.6	0.9
<b>N.S.</b>	CCRS	3.5	28.0	—	71.1	13.5	82.6
<b>N.B.</b>	CCRS	0.0	—	—	—	—	—
	IRRS-LTCF	—	*	*	*	6.0	8.8
<b>Ont.</b>	CCRS	0.1	0.1	0.6	2.9	1.3	1.2
<b>Man.</b>	CCRS	0.5	0.5	4.2	2.6	3.4	6.3
<b>Sask.</b>	CCRS	1.0	0.6	2.8	†	—	—
	IRRS-LTCF	—	—	—	†	1.6	3.1
<b>Alta.</b>	CCRS	0.0	0.0	0.6	0.7	1.2	1.2
<b>B.C.</b>	CCRS	2.6	2.2	7.2	11.3	10.0	9.9
<b>Y.T.</b>	CCRS	2.3	1.0	2.2	1.7	1.8	17.1
Hospital-based care							
<b>Ont.</b>	CCRS	0.1	0.1	0.4	0.5	0.7	0.9
<b>Man.</b>	CCRS	0.0	0.0	3.0	0.9	2.4	2.9

**Notes**

\* In 2017–2018, New Brunswick implemented the interRAI LTCF.

† Saskatchewan began implementing the interRAI LTCF in 2019–2020 using a staggered approach. As such, most Saskatchewan facilities do not have full coverage for the RAI-MDS 2.0 for that fiscal year. This indicator has not been calculated during implementation of the interRAI LTCF.

— Data not available.

**Sources**

Continuing Care Reporting System, June 2022, and Integrated interRAI Reporting System, May 2022, Canadian Institute for Health Information.

## Residents Without a Full Assessment

The Residents Without a Full Assessment indicator measures the percentage of residents (based on URI) who had data submitted in the reporting fiscal year who were expected to have at least one full assessment submitted but for whom no full assessments were received. Residents who were discharged before the organization started submitting to CCRS, were discharged within 14 days of being admitted or were admitted within 14 days of March 31 of the reporting year are excluded from this indicator, as they were not expected to be assessed.

The optimal value is 0%. It is assumed for the purposes of this indicator that the expected full assessment records are not in the database for 1 of 3 reasons: they were never completed, they were completed but not submitted to CIHI or they were rejected and never resubmitted.

This indicator relates to the capture and submit stages of the data life cycle and the quality dimension accuracy and reliability.

This indicator is relevant only for clients receiving RAI-MDS 2.0 assessments that are submitted to CCRS — residents are assessed quarterly with a reduced number of items but are also expected to receive a full assessment each year. Assessments that use the interRAI LTCF instrument and are submitted to IRRS all contain the same items (i.e., all are full assessments except the discharge tracking assessments).

**Table 7** CCRS residents without a full assessment, by province/territory and year (%)

Province/ territory	Database	2019–2020	2020–2021	2021–2022
Facility-based care				
<b>N.L.</b>	CCRS	0.8	0.8	0.9
<b>N.S.</b>	CCRS	17.1	13.6	10.1
<b>N.B.</b>	CCRS	—	—	—
	IRRS-LTCF	*	*	*
<b>Ont.</b>	CCRS	0.1	0.0	0.1
<b>Man.</b>	CCRS	1.5	1.2	1.2
<b>Sask.</b>	CCRS	2.5 <sup>†</sup>	6.0	—
	IRRS-LTCF	*	*	*
<b>Alta.</b>	CCRS	0.6	0.3	0.4
<b>B.C.</b>	CCRS	1.9	1.7	2.1
<b>Y.T.</b>	CCRS	20.5	22.6	32.3

Province/ territory	Database	2019–2020	2020–2021	2021–2022
Hospital-based care				
<b>Ont.</b>	CCRS	0.2	0.4	0.4
<b>Man.</b>	CCRS	0.5	1.5	2.1

**Notes**

\* This indicator is relevant only for clients receiving RAI-MDS 2.0 assessments that are submitted to CCRS — residents are assessed quarterly with a reduced number of items and are expected to receive a full assessment each year. Assessments that use the interRAI LTCF instrument and are submitted to IRRS all contain the same items — all are full assessments — except the discharge tracking assessments.

† Saskatchewan began implementing the interRAI LTCF in 2019–2020 using a staggered approach. As such, most Saskatchewan facilities do not have full coverage for the RAI-MDS 2.0 for that fiscal year.

— Data not available.

Due to a methodological change, numbers reported here might not align with those in previous versions of this report, and historical results from before 2019–2020 cannot be reproduced.

**Sources**

Continuing Care Reporting System, June 2022, and Integrated interRAI Reporting System, May 2022, Canadian Institute for Health Information.

## Late Submissions: Record Level

The Late Submissions: Record Level indicator is a measure of the timeliness of the province's/territory's data submission to CCRS/IRRS-LTCF. It calculates the percentage of records for a given year that are submitted after the quarterly submission deadline but before the Q1 deadline of the next fiscal year.<sup>vi</sup> The optimal value is 0%.

This indicator relates to the capture and submit stages of the data life cycle and the quality dimension timeliness and punctuality.

vi. Note that the methodology for this indicator differs from that used in the *Provincial/Territorial Data Quality Report: Indicators and Contextual Measures — Reference Guide* in that it calculates late submissions for the fiscal year rather than by quarter.

**Table 8** CCRS record-level late submissions, by province/territory and year (%)

Province/ territory	Database	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Facility-based care							
<b>N.L.</b>	CCRS	2.9	0.1	1.1	0.3	0.8	1
<b>N.S.</b>	CCRS	16.3	1.9	1.0	4.1	22.6	—
<b>N.B.</b>	CCRS	0.0	*	n/a	n/a	n/a	n/a
	IRRS-LTCF	n/a	—	—	—	‡	1.3
<b>Ont.</b>	CCRS	0.3	0.5	0.4	1.7	1.7	1.4
<b>Man.</b>	CCRS	1.5	1.3	1.1	1.7	1.3	2.3
<b>Sask.</b>	CCRS	2.3	30.2	4.8	0.5 <sup>†</sup>	1.6	n/a
	IRRS-LTCF	n/a	n/a	n/a	n/a	‡	‡
<b>Alta.</b>	CCRS	0.3	7.3	0.6	0.9	26.2	1.5
<b>B.C.</b>	CCRS	1.1	3.1	1.5	6.3	6.1	4.8
<b>Y.T.</b>	CCRS	0.2	0.6	0.1	1.5	5.4	8.4
Hospital-based care							
<b>Ont.</b>	CCRS	0.5	0.5	0.6	2.2	2.9	2.7
<b>Man.</b>	CCRS	0.2	0.6	1.5	5.0	2.2	3.8

**Notes**

\* In 2017–2018, New Brunswick implemented the interRAI LTCF.

† Saskatchewan began implementing the interRAI LTCF in 2019–2020 using a staggered approach. As such, most Saskatchewan facilities do not have full coverage for the RAI-MDS 2.0 for that fiscal year.

‡ Late assessments of IRRS-LTCF data cannot be calculated for 2020–2021 for New Brunswick and Saskatchewan, and for 2021–2022 for Saskatchewan.

— Data not available.

n/a: Not applicable.

**Sources**

Continuing Care Reporting System, June 2022, and Integrated interRAI Reporting System, May 2022, Canadian Institute for Health Information.



# Reference

1. Canadian Institute for Health Information. [Long-term care homes in Canada: How many and who owns them?](#). Accessed July 26, 2023.



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