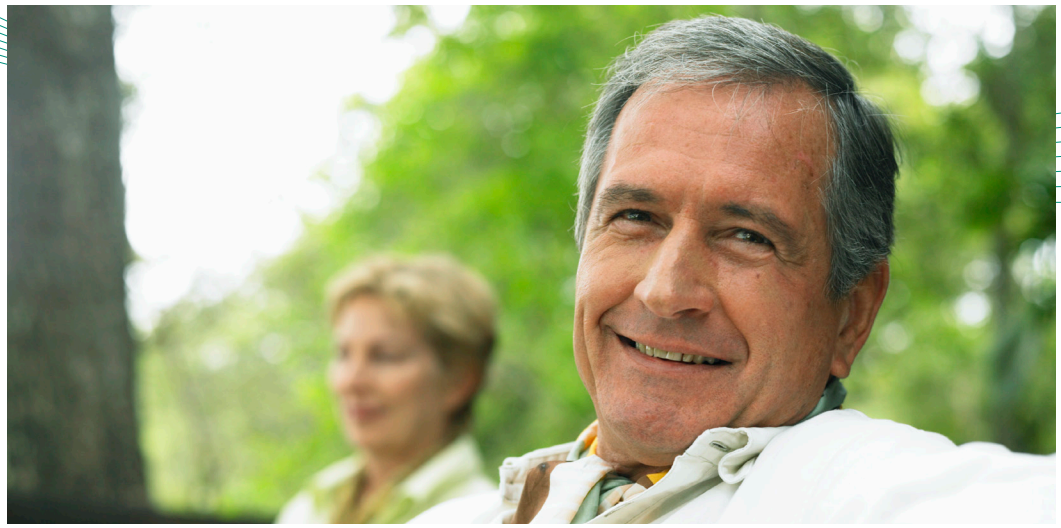

Data Quality Documentation, Home Care Reporting System, 2011–2012

Standards and Data Submission

Canadian Institute for Health Information
Institut canadien d'information sur la santé

Our Vision

Better data. Better decisions.
Healthier Canadians.

Our Mandate

To lead the development and maintenance of comprehensive and integrated health information that enables sound policy and effective health system management that improve health and health care.

Our Values

Respect, Integrity, Collaboration, Excellence, Innovation

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Summary

The Home Care Reporting System (HCRS) is a longitudinal database that captures clinical, demographic and administrative information on clients receiving publicly funded home care services. The Resident Assessment Instrument–Home Care (RAI-HC©), an internationally validated clinical assessment instrument, forms the clinical data standard for HCRS.

At the end of 2011–2012, HCRS contained data from five provinces and territories. Yukon started submitting HCRS data in 2006, British Columbia in 2009. The remaining three provinces submit their home care data without going through the HCRS production system: Manitoba (the Winnipeg Regional Health Authority) submitted once in 2007; Ontario sends data quarterly; and Nova Scotia submitted in 2008 and 2011 (it included a small amount of data for 2010–2011, but most tables in this document refer to 2009–2010 as it is the most recent data year).

The RAI-HC has undergone significant international reliability and validity testing that confirms that the RAI-HC has both high reliability and high validity. Analysis of the HCRS data also shows that it is generally of high quality and exhibits expected patterns of consistency, both within and across assessment records. In addition, the HCRS production system requires that organizations submit data that meets the specifications of the Canadian Institute for Health Information (CIHI); this ensures that each record is complete and contains only valid values.

Users need to be aware of several key issues when using HCRS data:

- While HCRS coverage has expanded since its inception in 2006–2007, and will continue to do so as more jurisdictions implement the RAI-HC assessment and submit data to CIHI, HCRS data may not be representative of Canadian home care services.
- In addition, as participation in HCRS has expanded over time, the population of reference for each year is different. Any changes in trends identified 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 clients being served.
- The structure of HCRS longitudinal data is complex; users should familiarize themselves with each jurisdiction's requirements for assessment frequency when making comparisons across provinces and territories.
- Not all clients have assessment data available; some client groups are not considered long-term home care clients and are therefore not candidates for RAI-HC assessments.
- Winnipeg Regional Health Authority, Nova Scotia and Ontario HCRS data does not go through the production system; therefore, not all HCRS data elements are available to use.

1 Introduction

This report provides data quality and general reference information on data submitted to the Home Care Reporting System (HCRS) to help people understand and use HCRS data. It provides information on the structure of HCRS data, the collection and processing of data, and the strengths and any major limitations of the data. Data limitations are detected and investigated through data processing and through data quality and analytical activities within the Canadian Institute for Health Information (CIHI).

The focus of this report is data submitted to HCRS for 2011–2012 at the time of the annual data release.

CIHI's Data Quality Framework, implemented in 2000–2001 and revised in 2009, provides a common strategy for assessing data quality across CIHI databases and registries. It is built upon five dimensions of quality:

- Accuracy;
- Comparability;
- Timeliness;
- Usability; and
- Relevance.

The strengths and limitations of the HCRS data discussed in this report focus on aspects of accuracy (specifically, coverage, non-response and measurement error) and comparability.

For further information on the CIHI Data Quality Framework, visit CIHI's website (www.cihi.ca).

2 An Overview of the Home Care Reporting System

HCRS was launched by CIHI in 2006–2007 as a pan-Canadian reporting system to support standardized reporting in publicly funded home care programs. HCRS contains longitudinal demographic, clinical, functional and resource utilization information on individuals in Canada receiving home care services in their homes. HCRS has incorporated, with permission from interRAI, data element definitions of certain key demographic and administrative data elements from the Resident Assessment Instrument–Home Care (RAI-HC©) for all home care clients regardless of whether they receive a RAI-HC assessment.

HCRS has the flexibility to capture and report any or all of this data, allowing for a basic level of comparative reporting across RAI and non-RAI jurisdictions.

2.1 The RAI Home Care Assessment System

The RAI-HC forms the clinical data standard for HCRS. It is a validated clinical assessment developed by interRAI, an international research network, and was modified with permission by CIHI for Canadian use.

The RAI-HC is a comprehensive assessment that is used to identify the preferences, needs and strengths of persons receiving long-term home care services; it also provides a snapshot of the services they receive. It includes 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. A full list of data elements collected in the RAI-HC is provided in the appendix. The RAI-HC assessment is completed upon admission to long-term home care and at regular reassessment intervals (usually six months to one year), or when the client experiences a significant change in clinical status.

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

The RAI-HC has been designed to be compatible with the suite of interRAI assessment and problem-identification tools. Such compatibility advances continuity of care through an integrated assessment system across multiple health care settings and promotes a person-centred evaluation rather than fragmented site-specific assessments.

2.2 HCRS Record Types

There are 14 different types of records that can be submitted to HCRS, distinguished by the data element Y2 Record Type, which is submitted on every record.

There are 10 different client record types for the submission of client-specific data. The remaining 4 non-client record types are required for the appropriate processing of client-specific records.

2.2.1 Client Records

Client records are designed to capture comprehensive client-specific information on individuals who have been accepted by source organizations to receive home care services.

HCRS is an event-driven reporting system, meaning that the information submitted in the different records reflects the different events that occur throughout a client's home care service episode.

Record Name		Summary of Data Collected
Admission	AD	Personal identifiers, demographic and administrative information collected through referral, intake and acceptance processes May include data collected from initial RAI-HC assessment or the first service visit
Update Client Profile	UC	A change in client's demographic or administrative information recorded in the Admission record The data element that has changed, the date of change and the new value are collected.
RAI-HC Assessment	RH	Data captured during the RAI-HC Assessment, excluding demographic information already submitted on the admission record and Q5 of Medications section
Medication	MD	Data captured in Q5 of RAI-HC assessment
Service Start	SS	This record captures the start of an individual stream of home care service. Type of service, discipline of service provider and date service started are recorded.
Service Details	SD	The amount and delivery settings of service received during the reporting period
Service End	SE	This record captures information about the end of an individual stream of home care service. Date stream of service finished
ER Visits	ER	This record type is used to record any emergency department visits a home care client may have had during the reporting period.
Organization Client Transfer	OT	This record type is used when source organizations go through restructuring (such as major boundary changes) that result in changes to the organization and client unique identifiers. If an individual continues to receive home care services throughout an organization's restructuring, this record type can be used to link an individual's unique identifiers (and therefore his or her records) before and after the restructuring.
Discharge	DC	This record type is used to capture information when an individual is discharged, marking the end of the client's home care service episode.

2.3 Data Collection

The RAI-HC is implemented in jurisdictions primarily as a comprehensive assessment for front-line clinicians to help plan and monitor client care. The data submitted to HCRS is therefore a by-product of the ongoing processes of care.

The assessment is captured electronically, and the vendor software used by the organization can provide real-time feedback for staff to support care planning.

The *RAI-HC User's Manual* provides data element definitions and data collection standards. The *Home Care Reporting System Data Submission Specifications Manual* provides information on how the data is to be submitted to HCRS and includes data element specifications, valid code values, record layouts, data validation rules and error message descriptions. Both are made available to clients prior to the beginning of each fiscal year. Organizations participating in HCRS can access CIHI's products and services related to data quality and processing, client education and support, data access, national health information standards and selected publications and reports. When clients submit data files to HCRS, submission reports are made available to them immediately after the records are processed. All organizations that submit data to HCRS must use software that meets CIHI's specifications. Organizations use software developed by CIHI-licensed software vendors to collect and submit HCRS information. These vendors incorporate CIHI's submission specifications into their proprietary software systems. Data files are submitted to CIHI electronically through a secure, web-based application.

2.3.1 Completeness of Data Submissions

CIHI checks each record on submission to ensure that the record is complete and the values are valid. **Only records that meet the specified level of completeness, accuracy and consistency will be accepted.** Any records that do not meet these specifications are rejected; data providers are given a report detailing the reasons for the rejection.

Correction and resubmission of records that were previously rejected is the responsibility of the organizations collecting and submitting the data.

2.3.2 Non-Production Data

In addition to organizations that submit data in compliance with CIHI's submission specifications, some jurisdictions have been temporarily allowed to send CIHI data files that would not be accepted through the normal submission channels. This data may then be loaded into CIHI's online eReporting system and its analytical files, which are made available for data requests. Thus, the data from these jurisdictions will be included in the products produced by HCRS even though it isn't in the database (the production system). Data loaded this way is referred to as non-production data. It is expected that all jurisdictions providing non-production data will make the transition to normal data submissions in the future. CIHI works closely with these jurisdictions to facilitate this process. Since non-production data is not subject to the standard edits and validations, not all questions about its quality can be answered. Therefore, some data from these jurisdictions may be excluded in this report. Currently, CIHI has non-production home care data from Ontario, Nova Scotia and the WRHA. For 2011–2012, CIHI received non-production data from Ontario. WRHA submitted in 2012 but not in time for the annual data release or publication of this document.

2.3.3 Data Submission Timeline

Quarterly data submission deadlines are published annually, prior to the beginning of the data submission year. Data providers have 60 days after the end of a quarter to submit their data for that quarter. Sixty days following the end of the quarter, a cut of the submitted data is produced—to which non-production data is added—for the creation of HCRS eReports and analytical data files. While data is accepted into HCRS after the data submission deadline, it is not incorporated into the eReports for that quarter.

2.4 Data Quality Control

CIHI takes measures to ensure quality control during data capture, including the following:

- Encouraging data suppliers to use electronic data capture to complete assessments and requiring them to use licensed vendors who implement edits and audits at data capture, which allow for corrections and verifications to occur at the time of data entry.
- Requiring all vendors to pass CIHI's testing requirements on an annual basis, to ensure compliance with the most recent CIHI specifications.
- Checking each record on submission to ensure completeness and valid values. Any records that don't meet these specifications either are rejected or are accepted with a warning message, and data providers are given a report detailing the reasons for the rejection.
- Responding to coding questions, including consultation and approval by interRAI researchers for relevant questions, to ensure that standard, consistent responses are made available to data providers.

2.4.1 Vendor Support and Software Testing

CIHI maintains data capture quality control measures through the Common Services department of its Central Operations and Services branch. These areas offer vendor support, coordinate the annual release of system specifications to vendors and assist with vendor system testing. For such testing, files are processed in a test environment to ensure that the format and content of the files meet HCRS submission requirements for the fiscal year.

2.4.2 HCRS System Edits and Correction Processes

Data suppliers are encouraged to use electronic tools to complete assessments and to use CIHI-licensed vendors who implement edits and audits at data collection, which allow for corrections and verifications to occur at the time of data entry.

The edits built into the HCRS database are logical and consistent, and they are verified by both the HCRS team and the information technology team prior to implementation. Several consistency edits exist within and between data elements and also between records to ensure the longitudinal integrity of the client'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.

Operational reports are generated in a timely manner (normally within 48 hours) when each submission file is processed in the database. These operational reports provide data suppliers with details regarding the number of records submitted, the number of records rejected and the reasons for each rejected record. Education sessions and direct client support are provided to assist with interpreting submission reports and correcting rejected records.

An email notification confirming receipt and processing of the file is sent to the relevant organizations' database contact (as specified in the Contact Information Records). Both submission and source organizations will be able to view their submission reports online. Where submission files contain data for more than one source organization, individual submission reports will be produced for each source organization: the submission organization will be able to view reports for all data it has submitted; each individual source organization will have access to submission reports for its own organization only.

2.4.3 Education Program

Through a comprehensive program of education, instructional sessions are provided to clients on using the RAI-HC assessment, submitting data, managing submission errors and corrections, and using eReports. These sessions serve as one mechanism to ensure the use of standardized data collection coding practices and adherence to CIHI's data submission and collection requirements.

2.4.4 Client Support

CIHI's HCRS program area provides support for data collectors and submitters. The team answers questions related to the RAI-HC assessment and HCRS products, including eReports; assists in the development and delivery of education programs; provides data submission expertise; and builds relationships with provincial/territorial contacts, health organizations and data users.

2.5 HCRS Outputs

The RAI-HC has embedded decision-support algorithms, which summarize information from the assessment and can be used to support both clinical and organizational decision-making. These include clinical scales, which summarize key clinical domains (such as cognitive performance, physical functioning, depression symptoms and pain), quality indicators, case mix methodology (Resource Utilization Group version III, or RUG-III) and triggers for care planning protocols.

In 2008, CIHI released the *Coding Standards for RAI-HC in Hospital Settings* for completing RAI-HC assessments. The output algorithms have been modified to take into account these coding standards. This includes the addition of algorithms for two flags that are used in the derivation of the individual outputs to identify assessments carried out in hospital settings. Each output has a section that documents whether it can be calculated in hospital settings.

HCRS provides participating organizations with **eReports**, which contain profiles of their populations, services and outcomes, including quality indicators. These reports are used by clinical quality champions, managers and policy-makers for planning, quality improvement and accountability. Standard tables of aggregate data are available to the public through HCRS Quick Stats.

3 Coverage and Response

Coverage and response are aspects of the accuracy dimension of the CIHI Data Quality Framework that relate to whether the appropriate data is available in the database.

Coverage refers to the population for which data should be submitted. Response refers to the data submitted for that population. Within HCRS, coverage is primarily measured at the health region level. The list of health regions that should be submitting is referred to as the frame.

Response is measured at several levels:

- Regions—was data received from all health regions on the frame?
- Record—were all expected records received?
- Item—was all expected data within individual items/data elements on a record received?

3.1 HCRS Population of Interest and Population of Reference

The HCRS **population of interest**—the group of units for which information is wanted—is defined as all people who are receiving publicly funded home care services in Canada. Publicly funded home care programs across Canada deliver a diverse set of services to meet a wide variety of client needs.

The definition of home care used for HCRS encompasses the breadth of services offered by public programs and reflects the variety of settings where these services are delivered. These services may be provided by a number of different agencies or individuals.

Individuals who receive home care have a broad range of needs. Short-term needs typically involve a single service in response to a specific event (for example, nursing care following a stay in an acute care hospital); long-term needs involve support from a variety of health providers to remain living in a community setting.

The ways in which jurisdictions meet these needs differ considerably. The services provided vary with respect to types of services provided; range and type of service providers available; settings where services are provided; organizational size, structure and governance; and eligibility, coverage and co-payment requirements and service maximums.

The service delivery models employed also vary and include services provided by in-house personnel; contracted service providers; and/or self-managed care (where clients receive funding and are responsible for acquiring their services).

The HCRS **population of reference** is defined as all individuals receiving long-term home care through publicly funded home care programs that were expected to submit data to HCRS during the reference period April 1, 2011, to March 31, 2012. The population of reference is explicitly stated in all HCRS releases.

As many jurisdictions are partway through their HCRS implementations, organizations in these jurisdictions are considered to be part of the population of reference once they have completed testing and submitted their first data to CIHI.

In 2011–2012, the population of reference, from a health region (frame unit) perspective, included

- 14 Ontario community care access centres;
- 9 Nova Scotia health regions;
- 1 Yukon organization;
- 1 Manitoba organization; and
- 5 British Columbia regional health authorities.

Continuous efforts are being made to include more organizations and jurisdictions in HCRS; however, no new programs began submitting in 2011–2012.

CIHI is supporting implementation of HCRS in several jurisdictions across Canada:

- Newfoundland and Labrador is implementing the RAI-HC provincially. Data collection began in 2010–2011. Data submission to CIHI is planned for 2014–2015.
- Prince Edward Island is planning to submit administrative and service data to HCRS by 2014–2015.
- Saskatchewan has implemented the RAI-HC in 10 regions and is planning to submit to HCRS in 2013–2014.
- Alberta has implemented the RAI-HC provincially and has built a provincial data repository. Data submissions to CIHI are planned for 2013–2014.

Table 1 summarizes participation in HCRS since 2007–2008. As participation has changed over time, the population of reference for each year is different. Due to this changing coverage and increases in data volumes, any identified changes in trends need to be interpreted carefully, as they may reflect changes in the underlying population rather than actual changes in client characteristics and resource utilization.

Table 1: HCRS Participation (Number of Health Regions Submitting Data), by Province/Territory, 2007–2008 to 2011–2012

Province/Territory	Total Number of Health Regions	Year				
		2007–2008	2008–2009	2009–2010	2010–2011	2011–2012
N.S.*	9	9	9	9	9	0
Ont.	14	14	14	14	14	14
Man.†	11	1	0	0	0	0
B.C.	5	5	5	5	5	5
Y.T.	1	1	1	1	1	1
All	**40**	**30**	**29**	**29**	**29**	**20**

Notes

* CIHI did not receive district health authorities' identifiers.

† Winnipeg Regional Health Authority submitted its own records. Other health regions were not involved.

Source

Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

It should be noted that when organizations begin data submission, they submit some historical data related to fiscal years prior to the year they begin to submit to CIHI. This information includes admission records for clients of the home care program at the time of HCRS/RAI-HC implementation and assessment records completed between the time of implementation and the beginning of successful submissions to CIHI.

As the HCRS frame does not currently contain all health regions in all provinces and territories that make up the HCRS population of interest, caution should be used when interpreting results from HCRS, as the population covered by HCRS may not be representative of all provinces. Reasons for this include the following:

- The admission criteria for home care and the services provided within these provinces or territories vary across the country. Depending on the availability of other services, such as residential care or nursing homes and assisted living/supportive housing, jurisdictions tailor their admission criteria and service provision for home care to the local needs of their populations.
- Within jurisdictions, submission to HCRS can depend on the scope of the RAI-HC's mandate. Some jurisdictions submit data only if clients are mandated to have a RAI-HC (that is, long-term clients), while others submit services data for all clients in the province (which can include clients receiving acute, rehabilitation or palliative services).
- RAI-HC assessments are also completed in hospital settings where some data elements, such as environmental assessment or clients' adherence with medications, are excluded.

3.2 HCRS Regional-Level Non-Response

The HCRS team works with jurisdictions (ministries of health and regional health authorities) to determine whether they will be submitting to HCRS. If a province makes changes to its health regions (which serve as submitting organizations), the frame (the list of submitting organizations) must then be changed accordingly.

HCRS data submissions are monitored routinely, and CIHI staff follows up with data providers, regional health authorities and ministries of health when there are gaps in submissions or if there is a significant change in the total volume of records received.

3.3 Record-Level Coverage and Non-Response

This section describes the volumes and types of records submitted to HCRS and any issues with missing records (record-level non-response).

It should be noted that if episodes are missing entirely from HCRS—that is, an Admission record (AD) for a client has not been submitted—then it is impossible to know that this data is missing because there is no external data source with which to compare HCRS data. However, volumes of AD records are monitored to detect any potential non-response at this level. Monitoring volumes will become a more reliable method once all implementations are complete but will not account for policy changes that could impact overall home care volumes.

3.3.1 Increase in Record Volumes

With new regions submitting to HCRS, the database has experienced growth. Tables 2, 3, 4 and 5 provide summaries of the growth in the number of client episodes (admission and discharge data), RAI-HC assessment records, home care services records and medication records submitted to HCRS since 2007–2008. As noted in Tables 3 and 5, data from Nova Scotia for 2010–2011 was not complete.

Table 2: Numbers of Admission and Discharge Records, by Province/Territory, 2007–2008 to 2011–2012

	Year of Admission									
	2007–2008		2008–2009		2009–2010		2010–2011		2011–2012	
Record Type	**AD**	**DC**	**AD**	**DC**	**AD**	**DC**	**AD**	**DC**	**AD**	**DC**
Province/Territory										
N.S.*										
Ont.†	387,468	342,434	394,189	378,125	364,880	355,479	383,077	386,114	374,084	369,874
Man.*										
B.C.	28,780	1,200	40,504	12,347	34,474	12,891	35,258	17,126	27,138	14,579
Y.T.	315	235	340	307	362	314	527	346	525	520
All	**416,563**	**343,869**	**435,033**	**390,779**	**399,716**	**368,684**	**418,862**	**403,586**	**401,747**	**384,973**

Notes

* Did not submit Admission records to CIHI.

† Based on Episode table, and year of admission is determined by X6 or CC1.

AD: Admission record.

DC: Discharge record.

Source

Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

Table 3: Number of RAI-HC Assessment Records Submitted, by Province/Territory, 2007–2008 to 2011–2012

Province/Territory	Year of Assessment				
	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012
N.S.*	14,875	15,016	16,018	472	
Ont.	221,455	228,985	226,963	234,894	245,192
Man.†	6,764				
B.C.	759	18,663	18,485	21,031	9,705
Y.T.	85	127	185	221	219
All	**243,938**	**262,791**	**261,651**	**256,618**	**255,116**

Notes

* Did not provide the full year of assessment records in 2010–2011.

† Submitted non-production data only once in 2009.

Source

Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

Table 4: Number of Service Records Submitted, British Columbia, 2007–2008 to 2011–2012

Province	Year of Service Start				
	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012
B.C.	38,163	73,361	73,929	73,262	61,956

Note

Dates determined based on Service Start Date X10.

Source

Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

Table 5: Number of Medication Records Submitted, by Province/Territory, 2007–2008 to 2011–2012

Province/Territory	Year of Assessment				
	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012
N.S.*	96,475	95,951	104,379	3,029	
Ont.	1,975,737	2,076,794	2,086,496	2,194,638	2,295,198
Man.					
B.C.	6,644	107,375	106,712	108,794	33,018
Y.T.	647	1,064	1,612	1,861	1,833
All	**2,079,503**	**2,281,184**	**2,299,199**	**2,308,322**	**2,330,049**

Notes

* Did not provide the full year of assessment records in 2010–2011.

Dates determined based on Assessment Reference Date (A1).

Source

Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

3.3.2 Assessed Clients

The HCRS standard expects that a RAI-HC assessment will be carried out on clients assigned to the Long-Term Supportive Care and Maintenance client groups. If a client's goals of care change significantly (for example, if their health status deteriorates significantly), the client may need to be reassigned to a different client group following a reassessment of their needs. This can occur at any time during a client's home care service episode. Tables 6 and 7 give the percentages of assessed clients. Table 6 shows the proportion of all home care clients who were admitted and then assessed in 2011–2012, including those from client groups for whom assessments are not expected. Table 7 gives the proportion of clients who were never assessed after admission, broken down by client group.

Table 6: Proportion of Clients With Assessments Completed in 2011–2012, by Province/Territory

Province/Territory	Number of Clients Admitted in 2011	Number of Clients Assessed in 2011 After Admission	Percentage of Clients Assessed in 2011 After Admission
N.S.			
Ont.	178,486	47,825	26.79%
Man.			
B.C.	23,402	6,243	26.68%
Y.T.	369	122	33.06%
All	**202,257**	**54,190**	**26.79%**

Source
Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

3.3.3 Potential Duplicate Records

There are many edits within HCRS 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 (for example, client identifiers or dates).

The initial record for a client received by HCRS is an Admission record, which contains demographic information and unique identifiers such as Health Card Number, Date of Birth, Sex and Admission Date. Each Admission record is assigned a source organization client identifier by the organization's software. All subsequent records for that client are linked by this client identifier.

If a mistake is made with the unique identifiers, a duplicate record may be submitted for a client. In this situation, it would not be possible to definitively identify the duplicate record as such.

Due to the edit checks on submissions to HCRS, recognizable duplicate assessments or admissions are not accepted by the HCRS production system (two records for the same client on the same day). Therefore, no such duplicate records can occur for British Columbia or Yukon. However, duplicates of this type can occur for jurisdictions not submitting data through the production system. Duplicate assessments occurred for Manitoba, Nova Scotia and Ontario data, with less than 0.25% of assessments occurring on the same day for the same person. For Admission records in 2011–2012, only Ontario had duplicates, with approximately 1.6% of these duplicate admissions occurring for the same person on the same day.

3.3.4 Record-Level Non-Response

HCRS is a longitudinal reporting system, and long-term home care clients in certain client groups are expected to be assessed at least once each year until he or she 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 client. There are three possible reasons why an expected assessment or discharge record is not in the HCRS database: it was never completed; it was completed but not submitted to CIHI; or it was rejected and never resubmitted.

Table 7 presents the proportion of clients who were not assessed after admission. The clients are categorized by client group because only clients in two of the client groups would have been expected to have an assessment completed and submitted: 4—Long-Term Supportive Care Clients and 5—Maintenance Clients. Data users should be aware of limitations in interpreting and applying data findings broadly in cases where assessment data is expected and the rate of record-level non-response is high.

Clients who are not assessed are excluded from certain analyses due to the unavailability of required clinical data elements (some clinical data elements are collected only on the assessment).

Table 7: Proportion of Clients Never Assessed After Admission, by Admission Client Group and Province/Territory, 2007–2008 to 2011–2012

Client Group	Province/ Territory	Year of Assessment														
		2007–2008			2008–2009			2009–2010			2010–2011			2011–2012		
		D	N	%	D	N	%	D	N	%	D	N	%	D	N	%
1—Acute Home Care Client	N.S.															
	Ont.	115,992	92,118	79.42%	103,618	86,962	83.93%	99,828	87,900	88.05%	93,160	84,800	91.03%	89,912	85,157	94.71%
	Man.															
	B.C.	8,190	7,955	97.13%	12,207	11,921	97.66%	8,266	8,011	96.92%	8,766	8,550	97.54%	8,089	8,047	99.48%
	Y.T.	169	135	79.88%	191	147	76.96%	148	127	85.81%	179	161	89.94%	161	152	94.41%
2—End-of-Life Client	N.S.															
	Ont.	7,224	6,102	84.47%	6,101	5,212	85.43%	5,639	4,998	88.63%	5,307	4,727	89.07%	5,005	4,559	91.09%
	Man.															
	B.C.	2,102	2,041	97.10%	2,413	2,311	95.77%	1,994	1,900	95.29%	1,933	1,861	96.28%	1,685	1,663	98.69%
	Y.T.	21	19	90.48%	19	18	94.74%	31	27	87.10%	22	19	86.36%	29	22	75.86%
3—Rehabilitation Client	N.S.															
	Ont.	52,450	33,594	64.05%	46,243	30,943	66.91%	40,291	28,452	70.62%	37,184	28,301	76.11%	36,560	30,636	83.80%
	Man.															
	B.C.	2,125	1,895	89.18%	2,818	2,539	90.10%	2,165	1,889	87.25%	2,404	2,179	90.64%	2,295	2,235	97.39%
	Y.T.	40	32	80.00%	25	21	84.00%	27	27	100.00%	146	133	91.10%	146	146	100.00%
4—Long-Term Supportive Care Client	N.S.															
	Ont.	32,270	7,110	22.03%	24,013	5,284	22.00%	18,796	4,400	23.41%	15,082	3,751	24.87%	13,279	3,878	29.20%
	Man.															
	B.C.[1]	4,334	2,548	58.79%	4,856	1,954	40.24%	4,101	1,471	35.87%	3,724	1,148	30.83%	2,078	1,409	67.81%
	Y.T.	1	0	0.00%	5	0	0.00%	10	1	10.00%	5	0	0.00%	7	3	42.86%
5—Maintenance Client	N.S.															
	Ont.	37,391	11,959	31.98%	34,815	11,583	33.27%	31,488	11,568	36.74%	31,348	12,343	39.37%	31,423	13,997	44.54%
	Man.															
	B.C.	9,802	6,439	65.69%	15,124	9,897	65.44%	13,776	9,103	66.08%	13,399	9,191	68.59%	8,059	6,750	83.76%
	Y.T.	48	13	27.08%	45	10	22.22%	50	3	6.00%	50	6	12.00%	24	5	20.83%

Table 7: Proportion of Clients Never Assessed After Admission, by Admission Client Group and Province/Territory, 2007–2008 to 2011–2012 (cont'd)

Client Group	Province/ Territory	Year of Assessment														
		2007–2008			2008–2009			2009–2010			2010–2011			2011–2012		
		D	N	%	D	N	%	D	N	%	D	N	%	D	N	%
8—Not Applicable	**N.S.**															
	Ont.	1,942	286	14.73%	1,807	309	17.10%	1,797	301	16.75%	1,582	373	23.58%	1,610	386	23.98%
	Man.															
	B.C.															
	Y.T.															
9—Client Group Not Provided	**N.S.**															
	Ont.	9,386	6,737	71.78%	5,452	4,474	82.06%	593	160	26.98%	789	341	43.22%	642	346	53.89%
	Man.															
	B.C.	1,215	1,066	87.74%	588	503	85.54%	495	463	93.54%	252	220	87.30%	1,196	1,191	99.58%
	Y.T.							1	0	0.00%	5	0	0.00%	2	1	50.00%

Notes

D: number of clients admitted in this fiscal year.

N: number of unassessed clients each year.

Client groups 4 and 5 are expected to be assessed.

Source

Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

3.4 Item Non-Response

Item non-response (or partial non-response, as it is sometimes known) occurs when a record is received with some missing or invalid data. The item response rate for HCRS depends largely on whether the data element is mandatory or optional.

The vast majority of data elements in HCRS 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, quality indicators and the RUG case mix methodology) used for analysis. Details of the data elements submitted on each record to HCRS are provided in the appendix.

Some data elements are not applicable in certain situations and can therefore be left blank; these are also excluded from any item non-response rates. Examples include assessment items that are not collected when an assessment is completed while the client is in hospital (for instance, data elements pertaining to environmental assessment of the client's home).

There are other non-mandatory elements. Optional elements are those contained in Section J2 of ICD-10-CA Diagnoses. Medication DIN is also optional, but this data is submitted in a separate record. Health regions that don't collect Section J2 will simply not submit any medication records.

The *Home Care Reporting System Data Submission Specifications Manual* provides details of the specific codes used to identify unknown and not applicable values.

Tables 8 and 9 provide item non-response rates for admission and assessment-level data for elements that can have item non-response. (The rest of the data elements are mandatory and do not have unknown options, and therefore have an item non-response rate of 0%.) Nova Scotia and Manitoba are not present in Table 8, as they did not have data for 2011–2012. Only Ontario is present in Table 9 because the other two jurisdictions with 2011–2012 data, Yukon and British Columbia, submit through the production system and therefore cannot contain item non-response of the type shown in the table.

Table 8: Item Non-Response Rates for Admission Data Elements, by Province/Territory, 2011–2012

		Province/Territory					
		Ont.		B.C.		Y.T.	
Number of Admission Records		370,234		9,722		525	
Data Element	**Submission Status**	N	%	N	%	N	%
BB5a Primary Language	**C**	280,821	75.85%	3,518	36.19%	0	0.00%
AA4 Postal Code of Residence	**M**	1,285	0.35%	0	0.00%	0	0.00%
BB1 Sex	**O**	21	0.01%	12	0.12%	1	0.19%
AA3b P/T Issuing Health Card Number	**M**	0	0.00%	0	0.00%	0	0.00%

Notes
C: mandatory status determined by respective provincial profile.
M: mandatory.
O: optional.
Manitoba did not submit data for 2011–2012.
Nova Scotia's 2011–2012 data was insufficient to produce meaningful results.
Source
Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

Table 9: Item Non-Response Rates for Assessment Data Elements, 2011–2012

		Year of Assessment		
		2011–2012		
Province/Territory	**Data Element**	D	N	%
Ont.	BB3 Aboriginal Identity	245,192	24,989	10.19%
	BB6 Education	245,192	24,989	10.19%
	CC8 Residential History	245,192	159,559	65.08%
	CC2 Reason for Referral	245,192	147,117	60.00%
	CC3a Goals of Care—Skilled Nursing Treatments	245,192	147,118	60.00%
	CC3b Goals of Care—Monitoring	245,192	147,119	60.00%
	CC3c Goals of Care—Rehabilitation	245,192	147,119	60.00%
	CC3d Goals of Care—Client/Family Education	245,192	147,119	60.00%
	CC3e Goals of Care—Family Respite	245,192	147,118	60.00%
	CC3f Goals of Care—Palliative Care	245,192	147,119	60.00%
	CC4 Time Since Last Hospital Stay	245,192	147,117	60.00%
	CC5 Where Lived at Time of Referral	245,192	147,117	60.00%
	CC6 Who Lived With at Time of Referral	245,192	147,117	60.00%

Notes
D: assessments.
N: number with no response on this element.
Ontario submitted administrative data elements (sections AA, BB and CC) on its RAI-HC records, so the non-response rates are shown here instead of in Table 8.
Manitoba did not submit data for 2011–2012.
Nova Scotia's 2011–2012 data was insufficient to produce meaningful results.
B.C.'s and Yukon's data does not contain item non-response for variables of this type because it is submitted through the HCRS production system.
Source
Home Care Reporting System, 2007 to 2011, Canadian Institute for Health Information.

4 Measurement Error, Bias and Consistency

This section describes how well the data is reported to CIHI and how well it reflects the reality it was designed to measure.

Measurement error relates to errors caused when a data element is coded or answered incorrectly. Bias assesses, in a systematic way, the degree to which the difference occurs between the reported values and the values that should have been reported. Consistency assesses the amount of variation that would occur if repeated measurements were done.

4.1 Reliability and Validity of RAI-HC Assessment and Outputs

The RAI-HC has undergone significant reliability and validity testing in several countries[1–4], which confirms that the RAI-HC has both high reliability and high validity.

4.2 Consistency of Demographic Variables

Records within an episode of care are linked by the unique source organization client identifier (X1b), which is assigned with each submitted AD. Because an individual client may have multiple episodes of care from different organizations, other variables need to be used to link records from different episodes. HCRS collects numeric identifiers (HCN, for example) and demographic information (such as Sex and Date of Birth) on the AD to uniquely identify records belonging to the same individual.

HCNs are assigned to individuals by provincial ministries of health and territorial governments, although Nova Scotia and Manitoba encrypt their HCNs before submission to CIHI. CIHI receives a complete HCN on HCRS records and applies a standard algorithm to scramble this number, even if it had already been encrypted by the submitter. Because the numbers are unique only within each province and territory, HCRS captures a variable representing the province or territory that issued the HCN. A small proportion of clients do not have a provincial/territorial HCN submitted to HCRS, either because they do not have one or because it was unavailable at the time of data collection (see Section 3.4: Item Non-Response).

The unique source organization identifier is an administrative number other than the client's HCN. It may be automatically generated by an organization's information technology system, and will identify individual clients even if they do not have a valid HCN. It will therefore facilitate person-based analysis (such as the assessing access rates).

CIHI creates a Client ID, which is a meaningless but unique number that identifies individuals within HCRS while maintaining their anonymity. This variable is based on the combination of the client's birth date, gender, unique source organization identifiers, encrypted HCN and the province/territory responsible for issuing the HCN.

The HCRS analytical data files have a series of data quality flags used to identify records that have issues with the demographic variable. Flags include the following:

- Clients without an HCN;
- Inconsistent Date of Birth across admissions (within a particular health region or across health regions);
- Inconsistent Sex across admissions (within a particular health region or across health regions);
- Age is outside the expected range (younger than 16 or older than 115); and
- Format of the HCN was inconsistent with the specifications of the province/territory issuing the health card.

Less than 0.1% of records from each province triggered these data quality flags.

4.3 Consistency of Clinical Variables

In addition to the evaluation of clinical measurement properties described in Section 4.1, there are checks on the clinical consistency of the data within each assessment record. These checks, referred to as data quality audits, are performed on submitted data to verify unusual combinations of data elements, which are either an error requiring correction or an accurate reflection of the client's clinical status. These potential errors are summarized on the operational reports. Home care organizations then have an opportunity to correct records and resubmit them. Table 10 shows the rates at which the clinical data quality audits were triggered in the assessment data, by year. Nova Scotia, Ontario and Manitoba are shown even though their data was not submitted through these validation checks. Their results had to be separately calculated for this report. It is important to note, therefore, that data providers in these three provinces did not receive operational reports with these potential errors listed and therefore did not have the opportunity to correct the data, if it was erroneous.

Table 10: Trigger Rates for Clinical Data Quality Audits, by Province/Territory and Year of Assessment, 2007–2008 to 2011–2012

		Year of Assessment														
		2007–2008			2008–2009			2009–2010			2010–2011			2011–2012		
Edit Rules	**Province/ Territory**	D	N	%	D	N	%	D	N	%	D	N	%	D	N	%
Rule 0235: IF P1dB (Meals—Hours) = 0 AND P1dC (Meals—Minutes) = 0 THEN P1dA (Meals—Days) Must = 0	**N.S.**	14,875	169	1.14%	15,016	145	0.97%	16,018	211	1.32%	472	5	1.06%			
	Ont.	221,455	252	0.11%	228,985	34	0.01%	226,963	5	0.00%	234,894	2	0.00%	245,192	0	0.00%
	Man.	6,764	194	2.87%												
	B.C.	759	0	0.00%	18,663	0	0.00%	18,485	1	0.01%	21,031	0	0.00%	9,705	0	0.00%
	Y.T.	85	0	0.00%	127	0	0.00%	185	1	0.54%	221	1	0.45%	219	1	0.46%
Rule 0272: IF P1gA >0 THEN P2o Occupational Therapy Must = 1 or 2	**N.S.**	14,875	91	0.61%	15,016	121	0.81%	16,018	156	0.97%	472	3	0.64%			
	Ont.	221,455	14,547	6.57%	228,985	15,678	6.85%	226,963	16,220	7.15%	234,894	18,466	7.15%	245,192	23,048	9.40%
	Man.	6,764	87	1.29%												
	B.C.	759	39	5.14%	18,663	1,368	7.33%	18,485	1,413	7.64%	21,031	1,628	7.74%	9,705	767	7.90%
	Y.T.	85	5	5.88%	127	7	5.51%	185	12	6.49%	221	16	7.24%	219	15	6.85%
Rule 0228: IF P2o Occupational Therapy = 1 or 2 THEN P1gA Must Be >0	**N.S.**	14,875	383	2.57%	15,016	355	2.36%	16,018	435	2.72%	472	6	1.27%			
	Ont.	221,455	12,768	5.77%	228,985	9,061	3.96%	226,963	7,963	3.51%	234,894	7,336	3.12%	245,192	6,725	2.74%
	Man.	6,764	35	0.52%												
	B.C.	759	8	1.05%	18,663	64	0.34%	18,485	55	0.30%	21,031	85	0.40%	9,705	85	0.88%
	Y.T.	85	0	0.00%	127	0	0.00%	185	3	1.62%	221	3	1.36%	219	0	0.00%
Rule 0403: IF (P2q Day Centre = 0 or 3) AND (P2r Day Hospital = 0 or 3) AND X70 Location of Assessment = 1 THEN P1iA Day Care or Day Hospital—Days Must = 0	**N.S.**	14,875	0	0.00%	15,016	0	0.00%	16,018	0	0.00%	472	0	0.00%			
	Ont.	221,455	5,436	2.45%	228,985	5,255	2.29%	226,963	5,251	2.31%	234,894	6,002	2.56%	245,192	6,399	2.61%
	Man.	6,764	0	0.00%												
	B.C.	759	39	5.14%	18,663	993	5.32%	18,485	990	5.36%	21,031	1,134	5.39%	9,705	559	5.76%
	Y.T.	85	0	0.00%	127	0	0.00%	185	3	1.62%	221	3	1.36%	219	5	2.28%
Rule 0226: IF P2p Physical Therapy = 1 or 2 THEN P1fA Must Be >0	**N.S.**	14,875	934	6.28%	15,016	793	5.28%	16,018	863	5.39%	472	32	6.78%			
	Ont.	221,455	18,288	8.26%	228,985	14,248	6.22%	226,963	12,342	5.44%	234,894	11,181	4.76%	245,192	9,884	4.03%
	Man.	6,764	144	2.13%												
	B.C.	759	16	2.11%	18,663	140	0.75%	18,485	106	0.57%	21,031	114	0.54%	9,705	143	1.47%
	Y.T.	85	1	1.18%	127	0	0.00%	185	2	1.08%	221	2	0.90%	219	6	2.74%

Table 10: Trigger Rates for Clinical Data Quality Audits, by Province/Territory and Year of Assessment, 2007–2008 to 2011–2012 (cont'd)

		Year of Assessment														
		2007–2008			2008–2009			2009–2010			2010–2011			2011–2012		
Edit Rules	**Province/ Territory**	D	N	%	D	N	%	D	N	%	D	N	%	D	N	%
Rule 0274: IF P1fA >0 THEN P2p Physical Therapy Must = 1 or 2	**N.S.**	14,875	77	0.52%	15,016	92	0.61%	16,018	102	0.64%	472	4	0.85%			
	Ont.	221,455	2,670	1.21%	228,985	3,097	1.35%	226,963	3,011	1.33%	234,894	3,246	1.38%	245,192	3,866	1.58%
	Man.	6,764	60	0.89%												
	B.C.	759	5	0.66%	18,663	268	1.44%	18,485	212	1.15%	21,031	234	1.11%	9,705	144	1.48%
	Y.T.	85	0	0.00%	127	0	0.00%	185	2	1.08%	221	2	0.90%	219	8	3.65%
Rule 0233: IF P1bB (Visiting Nurses—Hours) = 0 AND P1bC (Visiting Nurses—Minutes) = 0 THEN P1bA (Visiting Nurses—Days) Must = 0	**N.S.**	14,875	1,193	8.02%	15,016	1,222	8.14%	16,018	1,256	7.84%	472	44	9.32%			
	Ont.	221,455	716	0.32%	228,985	46	0.02%	226,963	5	0.00%	234,894	0	0.00%	245,192	0	0.00%
	Man.	6,764	118	1.74%												
	B.C.	759	0	0.00%	18,663	0	0.00%	18,485	0	0.00%	21,031	0	0.00%	9,705	0	0.00%
	Y.T.	85	0	0.00%	127	0	0.00%	185	0	0.00%	221	1	0.00%	219	2	0.91%
Rule 0288: IF H1dA Managing Medications—Self-Performance = 0, 1, 2, or 3 THEN Q1 Number of Medications Must >0	**N.S.**	14,875	394	2.65%	15,016	388	2.58%	16,018	417	2.60%	472	16	3.39%			
	Ont.	221,455	2	0.00%	228,985	0	0.00%	226,963	0	0.00%	234,894	0	0.00%	245,192	0	0.00%
	Man.	6,764	169	2.50%												
	B.C.	759	0	0.00%	18,663	23	0.12%	18,485	19	0.10%	21,031	24	0.11%	9,705	5	0.05%
	Y.T.	85	1	1.18%	127	1	0.79%	185	0	0.00%	221	1	0.45%	219	2	0.91%
Rule 0399: IF G1eA Lives With Client—Primary = 2 THEN O2b Client/Caregiver Feels Client Be Better Off in Another Living Arrangement Must Not = 2 or 3	**N.S.**	14,875	104	0.70%	15,016	123	0.82%	16,018	114	0.71%	472	1	0.21%			
	Ont.	221,455	504	0.23%	228,985	548	0.24%	226,963	604	0.27%	234,894	750	0.32%	245,192	706	0.29%
	Man.	6,764	16	0.24%												
	B.C.	759	0	0.00%	18,663	128	0.69%	18,485	176	0.95%	21,031	147	0.70%	9,705	63	0.65%
	Y.T.	85	0	0.00%	127	1	0.79%	185	2	1.08%	221	5	2.26%	219	8	3.65%

Notes

D: assessments.

N: number of assessments that trigger the edit rule.

Source

Home Care Reporting System, 2007 to 2011, Canadian Institute for Health Information.

4.4 Longitudinal Consistency

As HCRS is longitudinal, certain checks are performed to assess the consistency of the clinical information submitted across multiple assessment records. These checks examine key disease diagnoses that are not expected to change over time. Subsequent assessments are compared; as expected, they show very high consistency across assessments (inconsistency rates of 1% or less).

Table 11: Rates of Longitudinal Inconsistency, by Province/Territory, 2011–2012

	Ont.		B.C.		Y.T.		All	
	N	%	N	%	N	%	N	%
Number of Assessments	**797,110**	**100.00%**	**43,533**	**100.00%**	**628**	**100.00%**	**841,271**	**100.00%**
J1j Hemiplegia/ Hemiparesis	1,160	0.15%	69	0.16%	1	0.16%	**1,230**	**0.15%**
J1k Multiple Sclerosis	596	0.07%	18	0.04%	1	0.16%	**615**	**0.07%**
J1y Diabetes	6,840	0.86%	242	0.56%	5	0.80%	**7,087**	**0.84%**
J1z Emphysema/COPD	5,170	0.65%	164	0.38%	4	0.64%	**5,338**	**0.63%**
J1aa Renal Failure	2,544	0.32%	111	0.25%	2	0.32%	**2,657**	**0.32%**

Notes
Nova Scotia and Manitoba had no assessments in 2011–2012.
For Ontario, B.C. and Yukon, year-over-year assessments were compared for individual clients, using 2010–2011 as the baseline year (for example, a person's 2010–2011 assessment was compared with his or her earlier assessments).
Source
Home Care Reporting System, 2007 to 2012, Canadian Institute for Health Information.

5 Comparability

Comparability refers to the extent to which databases are consistent over time and use standard conventions (such as data elements or reporting periods) that make them similar to other databases.

5.1 Conventions

5.1.1 Health Regions

Data submitted to HCRS is grouped either by jurisdiction (Yukon and Nova Scotia) or by health region (B.C., Manitoba and Ontario). CIHI uses the province's own health region definitions and boundaries. Health region boundaries can change over time if provincial/territorial jurisdictions change the boundaries or the organizational structure of their health regions.

5.1.2 Person

As mentioned in Section 4.2, HCRS collects the data elements HCN, Province/Territory Issuing HCN, Sex and Date of Birth to uniquely identify records belonging to the same person.

The client's HCN and full birthdate are not normally made available to third-party users. Access to these and other restricted data elements requires prior approval by CIHI's Privacy, Confidentiality and Security Committee, in line with CIHI's Privacy Policy.[5] For third-party data releases, CIHI creates a Client ID, which is a meaningless but unique number specific to that release in order to identify individuals within HCRS while maintaining their anonymity. This variable is based on the combination of the encrypted HCN and the province/territory responsible for issuing the HCN, and clients' date of birth. Instead of the full birthdate, the age of the client (in years) at admission, assessment and/or discharge is provided.

The HCRS database also contains data quality flags (listed in Section 4.2) that check the consistency of birthdate and sex in all the admissions for a particular Client ID and also whether it is based on the HCN, so that users can include or exclude these records depending on their needs.

5.1.3 Time

HCRS data is reported by fiscal quarter (April 1 to June 30, July 1 to September 30, October 1 to December 31 and January 1 to March 31) and fiscal year (April 1 to March 31) based on the date on the record. Full admission, assessment and discharge dates are captured, enabling data users to group data within and across fiscal years, depending on the needs of the study.

5.1.4 Geography

Postal Code is a common variable in almost all CIHI databases. HCRS captures the postal code of the client's residence. The six-digit postal codes are mapped to standard geographical classifications and regional health authority boundaries (and are based on data provided in Statistics Canada's Postal Code Conversion File). The forward sortation area—the first three digits of a postal code—is typically the lowest level of aggregation available to external users under CIHI's Privacy Policy.[5] The release of information for small geographical areas may also be restricted to ensure confidentiality. Special requests must be approved by CIHI's Privacy and Legal Services Secretariat. Note that for rural areas that use post office box numbers, postal code data does not necessarily provide an accurate picture of the client's residence; postal codes of this type tend to cover larger geographical areas than urban codes.

6 Conclusion

HCRS is a longitudinal database that captures clinical, demographic and administrative information on clients receiving publicly funded home care services. The RAI-HC, an internationally validated clinical assessment instrument, forms the clinical data standard for HCRS.

While HCRS coverage has expanded since submissions began in 2006, and will continue to do so in the future as more jurisdictions implement the RAI-HC assessment and submit their data to CIHI, HCRS data may not be representative of all home care services in Canada. In addition, as participation in HCRS has expanded over time, the population of reference for each year is different. Any changes in trends identified must be interpreted carefully, as they may reflect changes in the underlying population rather than actual changes in client characteristics and resource utilization.

The RAI-HC has undergone significant international reliability and validity testing that confirms the RAI-HC has both high reliability and high validity. Analysis of HCRS data also shows that the data is generally of high quality and exhibits expected patterns of consistency both within and across assessment records. Some data quality issues have been identified in this report, related to non-response, measurement error and consistency and historical comparability.

The structure of HCRS longitudinal data is complex. Users need to familiarize themselves with data deadlines and the data elements available on different types of records. (For more information, send an email to the Home Care team at homecare@cihi.ca.) The appendix, below, presents a list of data elements (ID and name) and notes their mandatory status, valid values and data type.

Appendix: RAI-HC Assessment Data Elements

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
Y1	Unique Record ID	Always mandatory		alphanumeric
Y2	Record Type	Always mandatory	RH	string
Y3	Submission Type	Always mandatory	N, C, D	alphanumeric
Z1a	Source Organization Identifier	Always mandatory	First character must be 0–9, N, Y, V	alphanumeric
Z1c	Organization Effective Date	Optional	YYYYMMDD, valid date	date
10x	Data Collection Vendor Code	Always mandatory	Assigned by CIHI to each vendor	alphanumeric
Y13	Reporting Period	Mandatory for new or correction records	1–13	numeric
X1a	Unique Provincial Client Identifier	Mandatory status determined by respective provincial profile		alphanumeric
X1b	Unique Source Organization Client Identifier	Mandatory for new or correction records		alphanumeric
AA2	Case Record Number	Mandatory for new or correction records		alphanumeric
BB3	Aboriginal Identity	Mandatory under other conditions	0, 1	numeric
BB5b	Interpreter Needed	Mandatory for new or correction records	0, 1	numeric
BB6	Education	Mandatory under other conditions	1, 2, 3, 4, 5, 6, 7, 8, 9	numeric
BB7a	Legal Guardian/Substitute Decision-Maker	Mandatory for new or correction records	0, 1, 9	numeric
BB7b	Advanced Medical Directives	Mandatory for new or correction records	0, 1, 9	numeric
BB8a	Payment—Provincial/ Territorial Government Plan	Optional	0, 1	numeric
BB8b	Payment—Other Province/Territory	Optional	0, 1	numeric
BB8c	Payment—Federal Government—Veterans Affairs Canada	Optional	0, 1	numeric
BB8d	Payment—Federal Government—First Nations and Inuit Health Branch	Optional	0, 1	numeric
BB8f	Payment—Worker's Compensation Board	Optional	0, 1	numeric
BB8g	Payment—Canadian Resident—Private Insurance	Optional	0, 1	numeric
BB8h	Payment—Canadian Resident—Public Trustee	Optional	0, 1	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
BB8i	Payment—Canadian Resident—Self Pay	Optional	0, 1	numeric
BB8j	Payment—Other Country Resident—Self Pay	Optional	0, 1	numeric
BB8k	Payment—Unknown/ Unavailable	Optional	0, 1	numeric
CC1	Date Case Opened/ Reopened	Mandatory for new or correction records	YYYYMMDD, valid date	date
CC2	Reason for Referral	Mandatory under other conditions	1, 2, 3, 4, 5, 6	numeric
CC3a	Goals—Nursing Treatments	Mandatory under other conditions	0, 1	numeric
CC3b	Goals—Monitoring	Mandatory under other conditions	0, 1	numeric
CC3c	Goals—Rehabilitation	Mandatory under other conditions	0, 1	numeric
CC3d	Goals—Client/Family Education	Mandatory under other conditions	0, 1	numeric
CC3e	Goals—Family Respite	Mandatory under other conditions	0, 1	numeric
CC3f	Goals—Palliative Care	Mandatory under other conditions	0, 1	numeric
CC4	Time Since Last Hospital Stay	Mandatory under other conditions	0, 1, 2, 3, 4, 5	numeric
CC5	Where Lived at Time of Referral	Mandatory under other conditions	1, 2, 3, 4, 5	numeric
CC6	Who Lived With at Time of Referral	Mandatory under other conditions	1, 2, 3, 4, 5, 6	numeric
CC7	Prior Residential Care Facility	Mandatory under other conditions	0, 1	numeric
CC8	Residential History	Mandatory under other conditions	0, 1	numeric
A1	Assessment Reference Date	Mandatory for new or correction records	YYYYMMDD, valid date	date
A2	Reason for Assessment	Mandatory for new or correction records	1, 2, 3, 4, 5, 6, 7, 8	numeric
X70	Location of Assessment	Mandatory for new or correction records	1, 2, 3, 4	numeric
X71	Facility Admission Date	Mandatory under other conditions	YYYYMMDD, valid date	date
B1a	Short-Term Memory	Mandatory for new or correction records	0, 1	numeric
B1b	Procedural Memory	Mandatory for new or correction records	0, 1	numeric
B2a	Cognitive Skills—Decision Making	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
B2b	Cognitive Skills—Worsening Decision Making	Mandatory for new or correction records	0, 1	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
B3a	Delirium 7 Days	Mandatory for new or correction records	0, 1	numeric
B3b	Delirium 90 Days	Mandatory for new or correction records	0, 1	numeric
C1	Hearing	Mandatory for new or correction records	0, 1, 2, 3	numeric
C2	Making Self Understood	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
C3	Ability to Understand Others	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
C4	Communication Decline	Mandatory for new or correction records	0, 1	numeric
D1	Vision	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
D2	Visual Limitations	Mandatory for new or correction records	0, 1	numeric
D3	Visual Decline	Mandatory for new or correction records	0, 1	numeric
E1a	Indicators of Depression—Sad Mood	Mandatory for new or correction records	0, 1, 2	numeric
E1b	Indicators of Depression—Anger	Mandatory for new or correction records	0, 1, 2	numeric
E1c	Indicators of Anxiety—Unrealistic Fears	Mandatory for new or correction records	0, 1, 2	numeric
E1d	Indicators of Anxiety—Repetitive Health Complaints	Mandatory for new or correction records	0, 1, 2	numeric
E1e	Indicators of Anxiety—Repetitive Anxious Complaints	Mandatory for new or correction records	0, 1, 2	numeric
E1f	Indicators of Sad Mood—Sad, Pained Facial Expressions	Mandatory for new or correction records	0, 1, 2	numeric
E1g	Indicators of Sad Mood—Recurrent Crying, Tearfulness	Mandatory for new or correction records	0, 1, 2	numeric
E1h	Withdrawal From Activities of Interest	Mandatory for new or correction records	0, 1, 2	numeric
E1i	Reduced Social Interaction	Mandatory for new or correction records	0, 1, 2	numeric
E2	Mood Decline	Mandatory for new or correction records	0, 1	numeric
E3a	Wandering	Mandatory for new or correction records	0, 1, 2	numeric
E3b	Verbally Abusive	Mandatory for new or correction records	0, 1, 2	numeric
E3c	Physically Abusive	Mandatory for new or correction records	0, 1, 2	numeric
E3d	Socially Inappropriate/ Disruptive	Mandatory for new or correction records	0, 1, 2	numeric
E3e	Resists Care	Mandatory for new or correction records	0, 1, 2	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
E4	Changes in Behaviour Symptoms	Mandatory for new or correction records	0, 1	numeric
F1a	At Ease Interacting With Others	Mandatory for new or correction records	0, 1	numeric
F1b	Openly Expresses Conflict or Anger With Family/Friends	Mandatory for new or correction records	0, 1	numeric
F2	Change in Social Activities	Mandatory under other conditions	0, 1, 2	numeric
F3a	Length of Time Client Is Alone During Day	Mandatory under other conditions	0, 1, 2, 3	numeric
F3b	Client Feels Lonely	Mandatory under other conditions	0, 1	numeric
G1eA	Lives With Client—Primary	Mandatory for new or correction records	0, 1, 2	numeric
G1fA	Relationship to Client—Primary	Mandatory under other conditions	0, 1, 2, 3	numeric
G1gA	Advice or Emotional Support—Primary	Mandatory under other conditions	0, 1	numeric
G1hA	IADL Care—Primary	Mandatory under other conditions	0, 1	numeric
G1iA	ADL Care—Primary	Mandatory under other conditions	0, 1	numeric
G1jA	Increase in Emotional Support—Primary	Mandatory under other conditions	0, 1, 2	numeric
G1kA	Increase in IADL Care—Primary	Mandatory under other conditions	0, 1, 2	numeric
G1lA	Increase in ADL Care—Primary	Mandatory under other conditions	0, 1, 2	numeric
G1eB	Lives With Client—Secondary	Mandatory for new or correction records	0, 1, 2	numeric
G1fB	Relationship to Client—Secondary	Mandatory under other conditions	0, 1, 2, 3	numeric
G1gB	Advice or Emotional Support—Secondary	Mandatory under other conditions	0, 1	numeric
G1hB	IADL Care—Secondary	Mandatory under other conditions	0, 1	numeric
G1iB	ADL Care—Secondary	Mandatory under other conditions	0, 1	numeric
G1jB	Increase in Emotional Support—Secondary	Mandatory under other conditions	0, 1, 2	numeric
G1kB	Increase in IADL Care—Secondary	Mandatory under other conditions	0, 1, 2	numeric
G1lB	Increase in ADL Care—Secondary	Mandatory under other conditions	0, 1, 2	numeric
G2a	Any Caregiver Unable to Continue	Mandatory for new or correction records	0, 1	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
G2b	Primary Caregiver Not Satisfied With Support From Family/Friends	Mandatory under other conditions	0, 1	numeric
G2c	Primary Caregiver Expresses Distress, Anger, Depression	Mandatory under other conditions	0, 1	numeric
G2d	Caregiver Status—None of the Above	Mandatory under other conditions	0, 1	numeric
G3a	Hours of Informal Help—5 Weekdays	Mandatory under other conditions	0 to 999	numeric
G3b	Hours of Informal Help—2 Weekend Days	Mandatory under other conditions	0 to 999	numeric
H1aA	Meal Preparation—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1bA	Ordinary Housework—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1cA	Managing Finances—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1dA	Managing Medications—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1eA	Phone Use—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1fA	Shopping—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1gA	Transportation—Self Performance	Mandatory under other conditions	0, 1, 2, 3, 8	numeric
H1aB	Meal Preparation—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H1bB	Ordinary Housework—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H1cB	Managing Finances—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H1dB	Managing Medications—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H1eB	Phone Use—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H1fB	Shopping—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H1gB	Transportation—Difficulty	Mandatory for new or correction records	0, 1, 2	numeric
H2a	Mobility in Bed	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2b	Transfer	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2c	Locomotion in Home	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2d	Locomotion Outside of Home	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
H2e	Dressing Upper Body	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2f	Dressing Lower Body	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2g	Eating	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2h	Toilet Use	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2i	Personal Hygiene	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H2j	Bathing	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 8	numeric
H3	ADL Decline	Mandatory for new or correction records	0, 1	numeric
H4a	Mode of Locomotion—Indoors	Mandatory for new or correction records	0, 1, 2, 3, 4, 8	numeric
H4b	Mode of Locomotion—Outdoors	Mandatory for new or correction records	0, 1, 2, 3, 4, 8	numeric
H5	Stair Climbing	Mandatory for new or correction records	0, 1, 2	numeric
H6a	Stamina—Days	Mandatory for new or correction records	0, 1, 2, 3	numeric
H6b	Stamina—Hours	Mandatory for new or correction records	0, 1	numeric
H7a	Client Believes She/He Can Increase Function Independence	Mandatory for new or correction records	0, 1	numeric
H7b	Caregivers Believe Client Can Increase Function Independence	Mandatory for new or correction records	0, 1	numeric
H7c	Good Prospects of Recovery	Mandatory for new or correction records	0, 1	numeric
H7d	Functional Potential—None of the Above	Mandatory for new or correction records	0, 1	numeric
I1a	Bladder Continence	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 8	numeric
I1b	Worsening of Incontinence	Mandatory for new or correction records	0, 1	numeric
I2a	Pads or Briefs	Mandatory for new or correction records	0, 1	numeric
I2b	Indwelling Urinary Catheter	Mandatory for new or correction records	0, 1	numeric
I2c	Bladder Devices—None of the Above	Mandatory for new or correction records	0, 1	numeric
I3	Bowel Continence	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 8	numeric
J1a	Cerebrovascular Accident (Stroke)	Mandatory for new or correction records	0, 1, 2	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
J1b	Congestive Heart Failure	Mandatory for new or correction records	0, 1, 2	numeric
J1c	Coronary Heart Disease	Mandatory for new or correction records	0, 1, 2	numeric
J1d	Hypertension	Mandatory for new or correction records	0, 1, 2	numeric
J1e	Irregularly Irregular Pulse	Mandatory for new or correction records	0, 1, 2	numeric
J1f	Peripheral Vascular Disease	Mandatory for new or correction records	0, 1, 2	numeric
J1g	Alzheimer's	Mandatory for new or correction records	0, 1, 2	numeric
J1h	Dementia Other Than Alzheimer's	Mandatory for new or correction records	0, 1, 2	numeric
J1i	Head Trauma	Mandatory for new or correction records	0, 1, 2	numeric
J1j	Hemiplegia/Hemiparesis	Mandatory for new or correction records	0, 1, 2	numeric
J1k	Multiple Sclerosis	Mandatory for new or correction records	0, 1, 2	numeric
J1l	Parkinsonism	Mandatory for new or correction records	0, 1, 2	numeric
J1m	Arthritis	Mandatory for new or correction records	0, 1, 2	numeric
J1n	Hip Fracture	Mandatory for new or correction records	0, 1, 2	numeric
J1o	Other Fractures (Wrist, Vertebral)	Mandatory for new or correction records	0, 1, 2	numeric
J1p	Osteoporosis	Mandatory for new or correction records	0, 1, 2	numeric
J1q	Cataract	Mandatory for new or correction records	0, 1, 2	numeric
J1r	Glaucoma	Mandatory for new or correction records	0, 1, 2	numeric
J1s	Any Psychiatric Diagnosis	Mandatory for new or correction records	0, 1, 2	numeric
J1t	HIV Infection	Mandatory for new or correction records	0, 1, 2	numeric
J1u	Pneumonia	Mandatory for new or correction records	0, 1, 2	numeric
J1v	Tuberculosis	Mandatory for new or correction records	0, 1, 2	numeric
J1w	Urinary Tract Infection	Mandatory for new or correction records	0, 1, 2	numeric
J1x	Cancer, Not Including Skin Cancer	Mandatory for new or correction records	0, 1, 2	numeric
J1y	Diabetes	Mandatory for new or correction records	0, 1, 2	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
J1z	Emphysema/COPD/Asthma	Mandatory for new or correction records	0, 1, 2	numeric
J1aa	Renal Failure	Mandatory for new or correction records	0, 1, 2	numeric
J1ab	Thyroid Disease (Hyper or Hypo)	Mandatory for new or correction records	0, 1, 2	numeric
J1ac	Disease—None of the Above	Mandatory for new or correction records	0, 1	numeric
J2a	Oth A—ICD-10-CA code	Optional	Valid ICD-10-CA code	alphanumeric
J2b	Oth B—ICD-10-CA code	Optional	Valid ICD-10-CA code	alphanumeric
J2c	Oth C—ICD-10-CA code	Optional	Valid ICD-10-CA code	alphanumeric
J2d	Oth D—ICD-10-CA code	Optional	Valid ICD-10-CA code	alphanumeric
K1a	Blood Pressure Measured	Mandatory under other conditions	0, 1	numeric
K1b	Received Influenza Vaccine	Mandatory under other conditions	0, 1	numeric
K1c	Test for Blood in Stool or Screening Endoscopy	Mandatory under other conditions	0, 1	numeric
K1d	If Female: Received Breast Exam or Mammography	Mandatory under other conditions	0, 1	numeric
K1e	Preventive Health—None of the Above	Mandatory under other conditions	0, 1	numeric
K2a	Diarrhea	Mandatory for new or correction records	0, 1	numeric
K2b	Difficulty Urinating or Urinating 3 Times Per Night	Mandatory for new or correction records	0, 1	numeric
K2c	Fever	Mandatory for new or correction records	0, 1	numeric
K2d	Loss of Appetite	Mandatory for new or correction records	0, 1	numeric
K2e	Vomiting	Mandatory for new or correction records	0, 1	numeric
K2f	Problem Conditions 2+ Days—None of the Above	Mandatory for new or correction records	0, 1	numeric
K3a	Chest Pain	Mandatory for new or correction records	0, 1	numeric
K3b	No Bowel Movement in 3 Days	Mandatory for new or correction records	0, 1	numeric
K3c	Dizziness/Lightheadness	Mandatory for new or correction records	0, 1	numeric
K3d	Edema	Mandatory for new or correction records	0, 1	numeric
K3e	Shortness of Breath	Mandatory for new or correction records	0, 1	numeric
K3f	Delusions	Mandatory for new or correction records	0, 1	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
K3g	Hallucinations	Mandatory for new or correction records	0, 1	numeric
K3h	Problem Conditions—None of the Above	Mandatory for new or correction records	0, 1	numeric
K4a	Pain—Frequency	Mandatory for new or correction records	0, 1, 2, 3	numeric
K4b	Pain—Intensity	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
K4c	Pain—Disrupts Usual Activities	Mandatory for new or correction records	0, 1	numeric
K4d	Pain—Character	Mandatory for new or correction records	0, 1, 2	numeric
K4e	Pain—Adequate Medication	Mandatory for new or correction records	0, 1, 2	numeric
K5	Falls Frequency	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	numeric
K6a	Unsteady Gait	Mandatory for new or correction records	0, 1	numeric
K6b	Client Limits Going Outdoors Because Afraid of Falling	Mandatory for new or correction records	0, 1	numeric
K7a	Client Felt/Was Advised to Reduce Drinking/Smoking	Mandatory for new or correction records	0, 1	numeric
K7b	Client Had to Have Drink First Thing in A.M., Was in Trouble Due to Drinking	Mandatory for new or correction records	0, 1	numeric
K7c	Smoked or Chewed Tobacco Daily	Mandatory for new or correction records	0, 1	numeric
K8a	Client Feels He/She Has Poor Health	Mandatory for new or correction records	0, 1	numeric
K8b	Unstable Condition, ADL, Mood or Behaviour	Mandatory for new or correction records	0, 1	numeric
K8c	Flare-Up of a Recurrent or Chronic Problem	Mandatory for new or correction records	0, 1	numeric
K8d	Treatment Changed in Last 30 Days	Mandatory for new or correction records	0, 1	numeric
K8e	Prognosis of Less Than 6 Months to Live	Mandatory for new or correction records	0, 1	numeric
K8f	Health Status—None of the Above	Mandatory for new or correction records	0, 1	numeric
K9a	Fearful of Family Member/Caregiver	Mandatory for new or correction records	0, 1	numeric
K9b	Unusually Poor Hygiene	Mandatory for new or correction records	0, 1	numeric
K9c	Unexplained Injuries, Broken Bones, Burns	Mandatory for new or correction records	0, 1	numeric
K9d	Neglected, Abused	Mandatory for new or correction records	0, 1	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
K9e	Physically Restrained	Mandatory for new or correction records	0, 1	numeric
K9f	Other Status—None of the Above	Mandatory for new or correction records	0, 1	numeric
L1a	Weight Loss	Mandatory for new or correction records	0, 1	numeric
L1b	Severe Malnutrition (Cachexia)	Mandatory for new or correction records	0, 1	numeric
L1c	Morbid Obesity	Mandatory for new or correction records	0, 1	numeric
L2a	One or Fewer Meals a Day	Mandatory for new or correction records	0, 1	numeric
L2b	Noticeable Decrease in Amount of Food or Fluids Consumed	Mandatory for new or correction records	0, 1	numeric
L2c	Insufficient Fluid	Mandatory for new or correction records	0, 1	numeric
L2d	Enteral Tube Feeding	Mandatory for new or correction records	0, 1	numeric
L3	Swallowing	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
M1a	Problem Chewing	Mandatory for new or correction records	0, 1	numeric
M1b	Dry Mouth	Mandatory for new or correction records	0, 1	numeric
M1c	Problem Brushing Teeth/ Dentures	Mandatory for new or correction records	0, 1	numeric
M1d	Oral Status—None of the Above	Mandatory for new or correction records	0, 1	numeric
N1	Skin Problems	Mandatory for new or correction records	0, 1	numeric
N2a	Pressure Ulcer	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
N2b	Stasis Ulcer	Mandatory for new or correction records	0, 1, 2, 3, 4	numeric
N3a	Burns	Mandatory for new or correction records	0, 1	numeric
N3b	Open Lesions (Other Than Ulcers)	Mandatory for new or correction records	0, 1	numeric
N3c	Skin Tears/Cuts	Mandatory for new or correction records	0, 1	numeric
N3d	Surgical Wound	Mandatory for new or correction records	0, 1	numeric
N3e	Corns, Calluses, Structural Problems, Infections, Fungi	Mandatory for new or correction records	0, 1	numeric
N3f	Skin Problems—None of the Above	Mandatory for new or correction records	0, 1	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
N4	Prior Pressure Ulcer	Mandatory for new or correction records	0, 1	numeric
N5a	Antibiotics	Mandatory for new or correction records	0, 1	numeric
N5b	Dressings	Mandatory for new or correction records	0, 1	numeric
N5c	Surgical Wound Care	Mandatory for new or correction records	0, 1	numeric
N5d	Other Wound/Ulcer Care	Mandatory for new or correction records	0, 1	numeric
N5e	Wound Care—None of the Above	Mandatory for new or correction records	0, 1	numeric
O1a	Lighting	Mandatory under other conditions	0, 1	numeric
O1b	Floors/Carpets	Mandatory under other conditions	0, 1	numeric
O1c	Bathroom/Toilet	Mandatory under other conditions	0, 1	numeric
O1d	Kitchen	Mandatory under other conditions	0, 1	numeric
O1e	Heating/Cooling	Mandatory under other conditions	0, 1	numeric
O1f	Personal Safety	Mandatory under other conditions	0, 1	numeric
O1g	Access to Home	Mandatory under other conditions	0, 1	numeric
O1h	Access to Rooms in House	Mandatory under other conditions	0, 1	numeric
O1i	Home Environment—None of the Above	Mandatory under other conditions	0, 1	numeric
O2a	Client Lives With Others	Mandatory for new or correction records	0, 1	numeric
O2b	Client or Primary Caregiver Feels Client Be Better Off in Another Living Arrangement	Mandatory for new or correction records	0, 1, 2, 3	numeric
P1aA	Home Health Aides—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1bA	Visiting Nurses—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1cA	Homemaking Services—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1dA	Meals—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1eA	Volunteer Services—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1fA	Physical Therapy—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
P1gA	Occupational Therapy—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1hA	Speech Therapy—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1iA	Day Care or Day Hospital—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1jA	Social Worker in Home—Days	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7	numeric
P1aB	Home Health Aides—Hours	Mandatory under other conditions	0 to 999	numeric
P1bB	Visiting Nurses—Hours	Mandatory under other conditions	0 to 999	numeric
P1cB	Homemaking Services—Hours	Mandatory under other conditions	0 to 999	numeric
P1dB	Meals—Hours	Mandatory under other conditions	0 to 999	numeric
P1eB	Volunteer Services—Hours	Mandatory under other conditions	0 to 999	numeric
P1fB	Physical Therapy—Hours	Mandatory under other conditions	0 to 999	numeric
P1gB	Occupational Therapy—Hours	Mandatory under other conditions	0 to 999	numeric
P1hB	Speech Therapy—Hours	Mandatory under other conditions	0 to 999	numeric
P1iB	Day Care or Day Hospital—Hours	Mandatory under other conditions	0 to 999	numeric
P1jB	Social Worker in Home—Hours	Mandatory under other conditions	0 to 999	numeric
P1aC	Home Health Aides—Mins	Mandatory under other conditions	0 to 99	numeric
P1bC	Visiting Nurses—Mins	Mandatory under other conditions	0 to 99	numeric
P1cC	Homemaking Services—Mins	Mandatory under other conditions	0 to 99	numeric
P1dC	Meals—Mins	Mandatory under other conditions	0 to 99	numeric
P1eC	Volunteer Services—Mins	Mandatory under other conditions	0 to 99	numeric
P1fC	Physical Therapy—Mins	Mandatory under other conditions	0 to 99	numeric
P1gC	Occupational Therapy—Mins	Mandatory under other conditions	0 to 99	numeric
P1hC	Speech Therapy—Mins	Mandatory under other conditions	0 to 99	numeric
P1iC	Day Care or Day Hospital—Mins	Mandatory under other conditions	0 to 99	numeric
P1jC	Social Worker in Home—Mins	Mandatory under other conditions	0 to 99	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
P2a	Oxygen	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2b	Respirator for Assistive Breathing	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2c	All Other Respiratory Treatments	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2d	Alcohol/Drug Treatment Program	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2e	Blood Transfusion(s)	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2f	Chemotherapy	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2g	Dialysis	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2h	IV Infusion—Central	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2i	IV Infusion—Peripheral	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2j	Medication by Injection	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2k	Ostomy Care	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2l	Radiation	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2m	Tracheostomy Care	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2n	Exercise Therapy	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2o	Occupational Therapy	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2p	Physical Therapy	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2q	Day Centre	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2r	Day Hospital	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2s	Hospice Care	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2t	Physician or Clinic Visit	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2u	Respite Care	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2v	Daily Nurse Monitoring	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2w	Nurse Monitoring Less Than Daily	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2x	Medical Alert Bracelet or Electronic Security Alert	Mandatory for new or correction records	0, 1, 2, 3	numeric

Element				
ID	Name	Mandatory Status	Valid Values	Data Type
P2y	Skin Treatment	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2z	Special Diet	Mandatory for new or correction records	0, 1, 2, 3	numeric
P2aa	Special Treatment—None of the Above	Mandatory for new or correction records	0, 1	numeric
P3a	Oxygen	Mandatory under other conditions	0, 1, 2, 3, 4	numeric
P3b	IV	Mandatory under other conditions	0, 1, 2, 3, 4	numeric
P3c	Catheter	Mandatory under other conditions	0, 1, 2, 3, 4	numeric
P3d	Ostomy	Mandatory under other conditions	0, 1, 2, 3, 4	numeric
P4a	Number of Overnight Hospital Admissions	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	numeric
P4b	Number of ER Visits Without an Overnight Stay	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	numeric
P4c	Emergent Care	Mandatory under other conditions	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	numeric
P5	Treatment Goals	Mandatory under other conditions	0, 1	numeric
P6	Overall Change in Care Needs	Mandatory for new or correction records	0, 1, 2	numeric
P7	Trade Offs	Mandatory under other conditions	0, 1	numeric
Q1	Number of Medications	Mandatory for new or correction records	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	numeric
Q2a	Antipsychotic/Neuroleptic	Mandatory for new or correction records	0, 1	numeric
Q2b	Anxiolytic	Mandatory for new or correction records	0, 1	numeric
Q2c	Antidepressant	Mandatory for new or correction records	0, 1	numeric
Q2d	Hypnotics or Analgesics	Mandatory for new or correction records	0, 1	numeric
Q3	Medical Oversight	Mandatory under other conditions	0, 1	numeric
Q4	Compliance/Adherence With Medications	Mandatory under other conditions	0, 1, 2, 3	numeric
R1c	Date Assessment Coordinator Signed as Complete	Mandatory for new or correction records	YYYYMMDD, valid date	date

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Cette publication est aussi disponible en français sous le titre *Qualité des données de 2011-2012 du Système d'information sur les services à domicile*.

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