

Clinical Database Management System (CDMS)  
Data Users Guide v.1.0  
March 2014

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# Clinical Database Management System

## Data Users Guide 2014

### Document Control Record

<b>Version</b>	<b>Author</b>	<b>Date</b>	<b>Change(s) Made</b>
v.1.0	Cindy Smith	March 2013	Annual Review and Updates Updates: Other changes are minor e.g. grammar, reference to fiscal year 2011-12 added. Added: Five new additions to Appendix 3 Known CDMS Facts Deletion: No sections or significant text were deleted.
v.1.0	Rosalie Haire	March 2014	Annual updates, Additions: Waterford Hospital Chronic Care Coding and Abstracting Intensive Care Unit Descriptions 1995-200. Appendix 8, DAD fields not imported to CDMS Appendix 9, Facilities with Associated Health Care Boards and Health and Community Service Boards

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# 1. Introduction

## 1.1 Overview

This document has been prepared to inform users of the Clinical Database Management System (CDMS) about the data, the system, and known data quality issues which may impact the use or interpretation of the data.

This document is reviewed annually and revised as needed to ensure it remains current and useful. Feedback from readers is welcomed. Suggestions for future updates can be sent to:

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## 1.2 Purpose of Database

This database is used primarily for research and health system planning and management; related to in-patient and surgical day care (SDC) services provided by acute care facilities in Newfoundland and Labrador (NL).

CDMS information is used to:

- produce provincial, regional or facility specific reports on a regular or ad hoc basis for government, clinicians, the health system or the general public;
- support policy development and evaluation by government related to the delivery of health care in the Province;
- support health and health system research;
- validate or dispute information released by other agencies.

## 1.3 Population Reference Coverage

The CDMS contains records related to in-patient and SDC services provided to residents and non residents by acute care facilities in Newfoundland and Labrador. Appendix 1 contains a list of submitting facilities and their applicable years of data submission.

## 1.4 Reporting Period

The reporting period for CDMS is based upon the fiscal year, April 1 to March 31.

## 1.5 Years Available

CDMS contains complete data for fiscal years 1995-96 to 2012-13.

## 1.6 Management Responsibility

The Manager Clinical Standards and Information is responsible for managing CDMS, ensuring the system is of the highest quality attainable and available to stakeholders for use.

The CDMS Advisory Committee is comprised of internal and external stakeholders. This committee's mandate is to act in an advisory capacity to the Manager Clinical Standards and Information regarding the management and use of data contained within the Clinical Database Management System.

## **2. CDMS Description**

### **2.1 Description of Database**

CDMS was developed as a provincial repository containing administrative, demographic and clinical data related to patients receiving in-patient and SDC services from acute care facilities in Newfoundland and Labrador.

All health care facilities in the province that provide acute and/or surgical day care services report to Canadian Institute for Health Information (CIHI) via Discharge Abstract Database (DAD). CIHI provides the Centre with a copy of the data submitted by all health care facilities in Newfoundland and Labrador.

CIHI provides added values such as Resource Intensity Weights (RIWs), Expected Length of Stay, and case mix assignments based on the appropriate grouping methodology (Case Mix Group Plus (CMG+) for acute care and Day Procedure Groups (DPGs) for surgical day care cases).

Effective Fiscal 2011-2012, the Comprehensive Ambulatory Classifications System (CACS) grouping methodology was redeveloped and is used to group DAD day surgery data. The new CACS grouping methodology will use the investigative technology (diagnostic imaging) interventions found on the day surgery abstract to adjust the RIW

CDMS was originally developed in 1992-93 to import the DAD file received from CIHI. Full year data is not available for 1992-93 and 1993-94. Full year data is available for fiscal years 1994-95 to 2012-13. The data quality of 1994-1995 data is not considered fit for use, we do not recommend using the clinical data associated with this year.

For select years, a small number of facilities submitted chronic care and medical day care data to the DAD, which was included in CDMS.

The CDMS is physically located at the Office of the Chief Information Officer (OCIO) with technical support provided by that organization. The Newfoundland and Labrador Centre for Health Information assumed responsibility for the data management of CDMS when it was formed in 1997. Prior to that date, the Department of Health and Community Services held this responsibility.

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All health care facilities in the province that provide acute and/or surgical day care services report to Canadian Institute for Health Information (CIHI) via

Discharge Abstract Database (DAD). CIHI provides the Centre with a copy of the data submitted by all health care facilities in Newfoundland and Labrador.

## **2.2 Data Elements**

The data contained within the CDMS is essentially a 'copy' of the data submitted to the CIHI Discharge Abstract Database, therefore the data elements are intricately tied to the data standards of the DAD. Data elements in the DAD have frequently undergone revisions and enhancements over the years. These changes are often mirrored in the provincial CDMS.

The DAD abstract contains many data elements, some of which are mandatory for all data submissions, while others are mandatory in specific provinces. The abstract also contains optional data elements which can be collected to meet local needs.

A complete list of mandatory data elements from 2001-02 to 2012-13 for Newfoundland and Labrador can be found in Appendix 2.

## **2.3 Patient Identification**

The Patient ID field in CDMS uniquely identifies each patient. Each record is assessed for Health Care Number (HCN), Date of Birth (DOB), gender and province issuing HCN. If all four data elements match they are considered unique and a Patient ID is assigned. All four must match for each episode of care to be linked to an individual. An episode of care is defined as an encounter with a health service organization for services such as an inpatient admission, or surgical day care visit, etc. If one or more of these four fields are changed, the patient will be assigned a different unique Patient ID.

## **2.4 Reference Materials**

- DAD Abstracting Manual 2001-02 to 2012-13: outlines the data elements, expected values and applicable CIHI edits.
- Canadian Coding Standards 2001-02 to 2012-13: provides guidelines for coding specific to health conditions.
- Edit Specifications 2001-02 to 2012-13: contains a list of provincial edits performed on CDMS data.
- Provincial Mandates: provincial coding and abstracting standards. These are posted on the Centre's website: [http://www.nlchi.nl.ca/data\\_csi\\_provmand\\_dad.php](http://www.nlchi.nl.ca/data_csi_provmand_dad.php)
- CDMS to DAD Data Mapping Excel File for FY 2011 is available on the Centre's website.

## **3. Data Source(s)**

### **3.1 Origin of Data**

Data originates at the participating health care facilities.

### **3.2 Data Flow**



All reporting facilities complete an abstract for each discharge and submit these through the DAD submission process to CIHI. This process will accept or reject abstracts. If the abstract is rejected, a report is sent back to the facility for deletion, correction and resubmission. When the abstract is accepted, an edit process is performed and abstracts with errors are sent back to the originating facility for correction and resubmission.

CIHI sends a monthly cumulative file and a year-end file to the Centre. The year-end file is uploaded to the CLINVIEW database and subsequently to the CLINSAMP database where provincial edits are performed and corrections made. Once the edit/correction process is completed the data is merged into the CLIN10 (production system) database.

CIHI supplies the data file to NLCHI in August of each year after which the data edit and correction process is initiated. The target date for completion of that process is December of the same year.

### **3.3 Data Collection and Processing Time Lines**

**Daily:** Facilities are required to complete abstracts on each discharge within 90 days from the last day of the month of discharge. For example, if a patient is discharged during the month of March, the facility is expected to have the data submitted by the last working day in June.

**Monthly:** Facilities submit completed abstracts to CIHI.

**Annually:** The deadline for abstract submissions is the last weekday in June.

The deadline for abstract resubmissions is the last week day in July.

Note: If a facility fails to meet the submission deadline, it is permissible to submit before the July deadline however; if the late submission contains errors there is no opportunity to submit corrections.

## **4. Data Quality Processes**

### **4.1 Edit /Correction Process**

Data contained in CDMS is edited at several points along the data management pathway:

- Regional health authorities/facilities have edits built into their local abstracting systems to check data during the abstracting/coding process and prior to submission to CIHI.
- CIHI has a rigorous edit process and returns abstracts with errors to the originating facility for correction.
- NLCHI conducts another edit process before data is merged into CDMS. Identified errors are returned to the facility for correction or verification. NLCHI edits are run until all possible corrections are completed.

NLCHI edits are reviewed annually and revised if necessary. In previous years many of CIHI's edits were incorporated into the NLCHI edits. This ensures the quality of data submissions from facilities that missed the CIHI year-end submission deadline but were accepted into CDMS are of equal quality. In 2001

three facilities did not meet the year-end deadline. In 2008 DQS staff completed an extensive edit review of both CIHI and NLCHI fatal and warning edits for 2010 -11 data. As a result of this review and after consultation with R & E staff the number of edits ran was significantly decreased from 482 edits to 74 edits. A copy of active edits is available from Clinical Standards and Information, located on K drive. For 2012-13 there were 79 active edits ran in CDMS and after the final edit run there were 0 errors left in CDMS for 2012-13.

Where feasible edits unique to CDMS are incorporated into the CIHI edits however, this is a 12-18 month process. NLCHI edits that cannot be incorporated into CIHI's edits remain in the NLCHI edits.

CIHI develops and distributes administrative reports outlining progress on data submitted to the DAD. One such report is the Management Report which lists each facility's progress in data submission to CIHI. This report was previously sent to the Centre by regular mail. Effective 2010-11, the HIM Consultant downloads the CIHI E-Management reports from CIHI's website each month and saves them to K drive in excel format. (K:\DQS\818 CIHI National Databases\01 DAD Discharge Abstract Database\09 e Management Reports).

### NLCHI Edit/Correction Cycle

Agency Responsible	Task	Timeline
NLCHI	Review DAD: master file layout edit specifications	March to May
OCIO and NLCHI	Meet to review DAD changes required for upcoming file year	May to June
NLCHI	Provide OCIO with copy of year-end file	August (1 <sup>st</sup> week)
OCIO	Write edits and complete file layout	September (1 <sup>st</sup> week)
NLCHI	Run 1 <sup>st</sup> edit (internal edits)	September (2 <sup>nd</sup> week)
NLCHI	Perform corrections	October (2 <sup>nd</sup> week)
OCIO	Update file	October (3 <sup>rd</sup> week)
NLCHI	Run 2 <sup>nd</sup> edit (RHA edits)	October (4 <sup>th</sup> week)
NLCHI	Perform corrections	November (2 <sup>nd</sup> week)
OCIO	Update file	November (3 <sup>rd</sup> week)
NLCHI	Run 3 <sup>rd</sup> edit (RHA edits, if necessary)	November (3 <sup>rd</sup> week)
NLCHI	Perform corrections	December (1 <sup>st</sup> week)
OCIO	Update file	December (1 <sup>st</sup> week)
OCIO	Move file to production	December (2 <sup>nd</sup> week)

#### 4.2 Maintenance Procedures

The CDMS Advisory Committee members are responsible for bringing forward issues or concerns from their respective organizations, providing key expertise, seeking input and circulating decisions made by the committee.

This is a dynamic dataset, therefore, users should be aware of past data element changes and that changes are likely to occur in the future. Due to these ongoing changes, data elements have been added, revised or classified as inactive over time. Data elements that are deemed inactive are no longer entered into the dataset. However, for historical purposes, these data elements and their values remain in the dataset (for the applicable years). Please refer to the DAD publications for detailed list of data elements and acceptable values.

Rarely will CDMS data be revised. However; if it is revised the database is assigned a new version number and date to ensure accurate identification of the most recent dataset. Details of the revision will also be documented on the record control sheet.

End users of CDMS data may identify data quality issues. When an issue is reported to DQS staff, corrective and/or preventative action is taken.

Every two years DQS staff is scheduled to perform reabstracting studies on data submitted to CDMS. This process compares the data submitted to the DAD with information on the actual medical chart of the patient.

Occasionally adjustments are required to align the data. For example, an element value may change, such as the acronym for Newfoundland and Labrador changed several times over the past years. A complete list of changes is documented in Appendix 3, Known CDMS Facts.

## 5. Uses of Data

The data contained within CDMS is used primarily for clinical research as well as analysis and evaluation of in-patient and SDC health services provided within the province. The Research and Evaluation Department at the Centre provides clinical aggregate statistical information and reports to government agencies, health care managers, clinicians, and other stakeholders to assist in planning, evaluation and evidence-based decision making. Stakeholders include the following organizations and agencies:

- Department of Health and Community Services
- Newfoundland and Labrador Statistics Agency-Community Accounts
- Regional Health Authorities
- Researchers
- Vital Statistics

Data may be disclosed to researchers in accordance with the Centre's privacy and confidentiality policies upon request and approval by the Secondary Users Committee.

The Centre also uses this data to cross reference with other datasets for quality assurance and verification purposes.

## 6. Significant Data Quality History

### 6.1 Methodological Changes

The International Classification of Diseases Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, (ICD-9) and the Canadian Classification of Diagnostic, Therapeutic, and Surgical Procedures (CCP), were the classification systems used to code data within the discharge abstract for fiscal years 1994 to 2001.

The International Statistical Classification of Diseases and Related Health Problems 10<sup>th</sup> Revision Canadian Edition (ICD-10-CA) and Canadian Classification of Health Interventions (CCI) is the classification system used to code data for fiscal year 2001-02 onward.

CIHI governs ICD-10-CA and CCI and in the last twelve years it has released five versions: 2001, 2003, 2006, 2009 and 2012. This is the coding and abstracting tool used by Health Information Management professionals to identify health conditions and interventions. Although not fundamentally different, there are changes that may impact research results, For example, diabetes mellitus codes have changed significantly over the years. It is important when using CDMS data to be aware of the applicable version(s) which apply to the data in use.

## 6.2 Revision History

From 1994 to 2000 there is minimal documentation available to identify revision history.

In April 2001, a redevelopment of the DAD was introduced along with the new classification system, ICD-10-CA/CCI.

A grouping methodology is applied to all data in CDMS from April 1, 1994 to March 31, 2001. When the new classification system was implemented on April 1, 2001 inpatient data was initially grouped using the Case Mix Group Plx methodology however this was later updated to a methodology more compatible with the ICD-10/CCI classification system, Case Mix Group plus (CMG+). Data files that were coded in ICD-10/CCI and initially grouped by CMG plx are historically regrouped by CIHI using CMG+.

Surgical Day Care abstracts are grouped according to the Day Procedure Group methodology up to 2010-11, as of April 1, 2011 CACS.

**Note: Users should exercise caution when comparing case mix assignments of data that was grouped using different grouping methodologies. Depending on the grouping methodology used, the same abstract could be grouped to a different CMG. CIHI provides the province with historically regrouped data for a five year period which supports comparability over that five year period.**

In 2003 the acronym for Newfoundland and Labrador was changed from NF to NL. This impacted the methodology used to uniquely identify patients. The CDMS methodology was updated and past values were revised to ensure the integrity of unique patient identification.

Beginning April 1, 2000 the General Hospital, Health Sciences Centre (001), St. Clare's Mercy Hospital (003), Grace General Hospital (002) and Waterford Hospital (061) consolidated facility numbers and began submitting to CIHI under facility 001.

Prior to 1997 all acute care facilities were governed by individual hospital boards. In 1997, 14 health care boards were created and acute care facilities were amalgamated and governed by associated boards. In 2005, the 14 boards were consolidated into four regional health authorities and facilities were realigned under them. Appendix 1 contains a list of facilities and associated board from 1997 to present.

## 7. Data Quality Limitations

### 7.1 Incomplete submissions

CIHI generally will not accept submissions past the year-end deadline. In exceptional cases CIHI will consider but not necessarily accept submissions beyond the deadline. In order to ensure CDMS contains a full provincial dataset, CDMS can accept late submissions. However, this practice can result in a significant

discrepancy between CDMS and the Newfoundland and Labrador file within the DAD, depending on the volume of records involved.

## **7.2 Major Limitations**

For the fiscal year 2001-02 the former Peninsulas Health Care Corporation (Burin Peninsula Health Care Centre, Bonavista Health Care Centre and Dr. G.B. Cross Memorial Hospital) and Baie Verte Peninsula Health Care Centre, did not meet CIHI's year-end deadline. This data was accepted into CDMS. It is important to note that when comparing CDMS to the DAD file for this period and these facilities, discrepancies will occur. Therefore the CIHI added values such as RIWs, and CMG+ etc. are not available for these records.

Caution should be exercised when using chronic care and medical day care information. Chronic care data was not reported by all facilities in any given year.

The Janeway began reporting newborns under facility number 001 as of April 1, 2005.

As of 2008-09, no facilities reported medical day care data and only the Waterford Hospital continued to report chronic care data.

CIHI generally will not accept submissions past the year-end deadline. In exceptional cases CIHI will consider but not necessarily accept submissions beyond the deadline. In order to ensure CDMS contains a full provincial dataset, CDMS can accept late submissions. However this practice can result in a significant discrepancy between CDMS and the NL file within the DAD, depending on the volume of records involved.

There is a list of known CDMS facts related to clinical and non clinical data that may or may not be a limitation to research. This list can be found in Appendix 3.

## **7.3 Data Quality Initiatives**

It may become apparent that an element's specific values are not as expected. Targeted review and evaluation of these elements is carried out to ensure data quality.

As part of data quality evaluation HIM professionals extract elements and analyze for completeness and accuracy.

# **8. ACCESS**

## **8.1 Privacy and Confidentiality Responsibilities**

The Centre has a Secondary Users Committee that reviews applications for data extracts or access for research and data quality purposes. Approval is granted in accordance with applicable legislative authority and organizational policy.

External users will be required to use the Centre's secure Managed File Transfer system (MFT) in order to receive private and confidential information. To gain access to MFT, the user must complete a MFT application form, provide by the Information Protection Team. Access will be granted upon approval of the application.

## **8.2 De-identification Process**

The CDMS data is de-identified post editing process before it is made available to researchers. Access to identifiable information is only provided when absolutely necessary.

The de-identification process is a joint effort by R&E, DQS, Operations and Information Protection. DQS receives identifiable data and process as outlined in this document. Once the data is ready for use, the Operations Department accepts the data and performs the de-identification process. Each record with a valid MCP number will have a unique de-identification identifier (DID) assigned and the file will be stripped of identifiable data, such as name and MCP number. In case re-identification of a record is required, the Operations database analyst will be responsible to re-identify records (only possible to provide MCP number). DQS will be responsible to attempt re-identification: in some cases records may not be re-identifiable e.g. the original data did not have a valid MCP number so they are assigned a generic DID.

## **9. Comparability**

ICD-9/CCP and ICD-10/CCI files have a very different coding structure and it is not recommended that they be compared. It is best to review both as independent coding systems.

CDMS can be used to cross reference for verification and data quality validation with other database/sets using the MCP number, For example, the number of live births per facility matched with number of live births per facility in NLCHI Live Birth System.

## Appendix 1 Facility/Board Listing

Facility	Facility ID Number	Year(s) of Data CDMS	Associated Regional Health Authority as of 2005	Associated Board/Corporation 1994-05 to 2005	Comments
General Hospital, Health Sciences Centre	001	1994/05 to present	Eastern Health Authority	Health Care Corporation of St. John's.	
Salvation Army Grace General Hospital	002	1994/05 to 1999-00	N/A	N/A	Facility closed in 2000.
St. Clare's Mercy Hospital	003	1994/05 to 1999-00	Eastern Health Authority	Health Care Corporation of St. John's.	As of April 1, 2000 this facility began submitting data under the General Hospital, Health Sciences Centre
Western Memorial Regional Hospital	004	1994/05 to present	Western Health Authority	Western Health Care Corporation	
Notre Dame Bay Memorial Hospital	005	1994/05 to present	Central Health Authority	Central East Health Care Institutions Board	
Bonavista Peninsula Health Centre	007	1994/05 to present	Eastern Health Authority	Peninsulas Health Care Corporation	
Bonne Bay Health Centre	008	1994/05 to present	Western Health Authority	Western Health Care Corporation	
Brookfield/Bonnews Health Centre	009	1994/05 to present	Central Health Authority	Central East Health Care Institutions Board	
Calder Health Care Centre	010	1994/05 to present	Western Health Authority	Western Health Care Corporation	
Dr. Charles L. LeGrow Health Centre	012	1994/05 to present	Western Health Authority	Western Health Care Corporation	
Fogo Island Health Centre	014	1994/05 to present	Central Health Authority	Central East Health Care Institutions Board	
Connaigre Peninsula Health Centre	016	1994/05 to present	Central Health Authority	Central West Health Corporation	
Dr. A.A. Wilkinson Memorial Health Centre	018	1994/05 to present	Eastern Health Authority	Avalon Health Care Institutions Board	
Placentia Health Centre	019	1994/05 to present	Eastern Health Authority	Avalon Health Care Institutions Board	
Green Bay Community Health Centre	020	1994/05 to present	Central Health Authority	Central West Health Corporation	
Sir Thomas Roddick	021	1994/05	Western Health	Western Health Care	



Facility	Facility ID Number	Year(s) of Data CDMS	Associated Regional Health Authority as of 2005	Associated Board/Corporation 1994-05 to 2005	Comments
Hospital		to present	Authority	Corporation	
Rufus Guinchard Health Care Centre	025	1994/05 to present	Western Health Authority	Western Health Care Corporation	
Charles S. Curtis Memorial Hospital	026	1994/05 to present	Labrador-Grenfell Health Authority	Grenfell Regional Health Services Board	
Cartwright Community Clinic	027	1994/05 to present	Labrador-Grenfell Health Authority	Health Labrador Corporation	
White Bay Central Health Centre	030	1994/05 to present	Labrador-Grenfell Health Authority	Grenfell Regional Health Services Board	
Strait of Belle Isle Health Centre	031	1994/05 to present	Labrador-Grenfell Health Authority	Grenfell Regional Health Services Board	
Labrador South Health Centre	032	1994/05 to present	Labrador-Grenfell Health Authority	Grenfell Regional Health Services Board	
Nain Community Clinic	035	1994/05 to present	Labrador-Grenfell Health Authority	Health Labrador Corporation	
Central Newfoundland Regional Health Centre	038	1994/05 to present	Central Health Authority	Central West Health Corporation	
A.M. Guy Memorial Health Centre	039	1994/05 to present	Central Health Authority	Central West Health Corporation	
Hopedale Community Clinic	045	1994/05 to present	Labrador-Grenfell Health Authority	Health Labrador Corporation	
Makkovik Community Clinic	047	1994/05 to present	Labrador-Grenfell Health Authority	Health Labrador Corporation	
James Paton Memorial Hospital	049	1994/05 to present	Central Health Authority	Central East Health Care Institutions Board	
Baie Verte Peninsula Health Centre	050	1994/05 to present	Central Health Authority	Central West Health Corporation	
Dr. Walter Templeman Community Health Centre	053	1994/05 to present	Eastern Health Authority	Health Care Corporation of St. John's.	
Captain William Jackman Memorial Hospital	055	1994/05 to present	Labrador-Grenfell Health Authority	Health Labrador Corporation	
Janeway Child Health Centre	056	1994/05 to present	Eastern Health Authority	Health Care Corporation of St. John's.	As of April 1, 2006, this facility began submitting data under the General

Facility	Facility ID Number	Year(s) of Data CDMS	Associated Regional Health Authority as of 2005	Associated Board/Corporation 1994-05 to 2005	Comments
					Hospital, Health Sciences Centre
Labrador Health Centre	059	1994/05 to present	Labrador-Grenfell Health Authority	Health Labrador Corporation	
Carbonear General Hospital	060	1994/05 to present	Eastern Health Authority	Avalon Health Care Institutions Board	
Waterford Hospital	061	1994/95 to present	Eastern Health Authority	Health Care Corporation of St. John's.	As of April 1, 2000 this facility began submitting data under the General Hospital, Health Sciences Centre
Dr. G.B. Cross Memorial Hospital	064	1994/05 to present	Eastern Health Authority	Peninsulas Health Care Corporation	
Burin Peninsula Health Care Centre	065	1994/05 to present	Eastern Health Authority	Peninsulas Health Care Corporation	
Dr. L.A. Miller Centre	069	1994/95 to 2005/06	Eastern Health Authority	Health Care Corporation of St. John's.	, for details on level of care and services submitted by LA Miller Centre

## Appendix 2

### Mandatory DAD Elements 2001-2011

Mandatory DAD Elements for Newfoundland and Labrador	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	Comments
Institution Number	*	*	*	*	*	*	*	*	*	*	*	*	
Batch Year	*	*	*	*	*	*	*	*	*	*	*	*	
Batch Period	*	*	*	*	*	*	*	*	*	*	*	*	
Batch Number	*	*	*	*	*	*	*	*	*	*	*	*	
Abstract Number	*	*	*	*	*	*	*	*	*	*	*	*	
Coder Number	*	*	*	*	*	*	*	*	*	*	*	*	
Chart Number	*	*	*	*	*	*	*	*	*	*	*	*	
Register Number	*	*	*	*	*	*	*	*	*	*	*	*	
Maternal/Newborn Chart Number/Register Number	*	*	*	*	*	*	*	*	*	*	*	*	2008/09 now called Maternal/Newborn Chart Number
Health Care Number	*	*	*	*	*	*	*	*	*	*	*	*	
Postal Code	*	*	*	*	*	*	*	*	*	*	*	*	
Residence Code	*	*	*	*	*	*	*	*	*	*	*	*	
Gender	*	*	*	*	*	*	*	*	*	*	*	*	
Province/Territory Issuing Health Care Number	*	*	*	*	*	*	*	*	*	*	*	*	
Responsibility for Payment (RFP)	*	*	*	*	*	*	*	*	*	*	*	*	
Birthdate	*	*	*	*	*	*	*	*	*	*	*	*	
Birthdate is Estimated	*	*	*	*	*	*	*	*	*	*	*	*	If applicable
Provincial Ancillary Data			*	*									
Admit Date	*	*	*	*	*	*	*	*	*	*	*	*	
Admit Time	*	*	*	*	*	*	*	*	*	*	*	*	
Institution From	*	*	*	*	*	*	*	*	*	*	*	*	
Admit Category	*	*	*	*	*	*	*	*	*	*	*	*	
Entry Code	*	*	*	*	*	*	*	*	*	*	*	*	
Admit Via Ambulance	*	*	*	*	*	*	*	*	*	*	*	*	
Readmit Code	*	*	*	*	*	*	*	*	*	*	*	*	2008/09 Readmission
ER-Decision to Admit Date	*	*	*	*	*	*							
ER- Decision to Admit Time	*	*	*	*	*	*							

Mandatory DAD Elements for Newfoundland and Labrador	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	Comments
Date Patient Left ER	*	*	*	*	*	*	*	*	*	*	*	*	2009/10 ED
Time Patient Left ER	*	*	*	*	*	*	*	*	*	*	*	*	2009/10 ED
Discharge Date	*	*	*	*	*	*	*	*	*	*	*	*	
Discharge Time	*	*	*	*	*	*	*	*	*	*	*	*	
Institution To	*	*	*	*	*	*	*	*	*	*	*	*	
Discharge Disposition	*	*	*	*	*	*	*	*	*	*	*	*	
Patient Service	*	*	*	*	*	*	*	*	*	*	*	*	2008/09 Main Patient Service
Weight	*	*	*	*	*	*	*	*	*	*	*	*	2003/04 Stillbirths & newborns/neonates <29 days of age at admission
Transfer Service									*	*	*	*	2009/10 Mandatory for ALC 2011/12 field called Service Transfer
Provider Type Provider Number Provider Service	*	*	*	*	*	*	*	*	*	*	*	*	
Diagnosis Prefix									*	*	*	*	2009/10 Prefix 5 & 6 mandatory for Type 2 diagnoses when Intervention Location is Main OR (01) or Cardiac Cath Room (08)  Prefix 8 – See 2009 Canadian Coding Standards for Palliative care
Diagnosis Code(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Diagnosis Cluster									*	*	*	*	2009/10 for drug resistant organisms and post-intervention conditions
Diagnosis Type(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Intervention	*	*	*	*	*	*	*	*	*	*	*	*	2009/10

<b>Mandatory DAD Elements for Newfoundland and Labrador</b>	<b>01/02</b>	<b>02/03</b>	<b>03/04</b>	<b>04/05</b>	<b>05/06</b>	<b>06/07</b>	<b>07/08</b>	<b>08/09</b>	<b>09/10</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>Comments</b>
Date(s)													Intervention Episode Start Date(s) (Mandatory for all intervention episodes)
Intervention Code(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Attributes: Status Location Extent	*	*	*	*	*	*	*	*	*	*	*	*	For specific CCI codes
Intervention Provider Number(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Intervention Provider Service(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Intervention Location Code	*	*	*	*	*	*	*	*	*	*	*	*	
Anaesthetist(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Anaesthetic Technique(s)	*	*	*	*	*	*	*	*	*	*	*	*	
Out-of-Hospital Indicator	*	*	*	*	*	*	*	*	*	*	*	*	2011/12 called Out of Hospital Intervention Indicator
Out-of-Hospital Institution Number	*	*	*	*	*	*	*	*	*	*	*	*	
Unplanned Return to OR	*	*	*	*	*	*	*	*	*	*	*	*	2008/09 called Unplanned Return to Intervention Location
Died in OR	*	*	*	*	*	*	*	*	*	*	*	*	
Intervention Episode Start Time									*	*	*	*	2009/10 Mandatory for Main OR and Cardiac Cath
Intervention Episode End Date									*	*	*	*	2009/10 Mandatory for Main OR and Cardiac Cath
Intervention Episode End Time									*	*	*	*	2009/10 Mandatory for Main OR and Cardiac Cath
Intervention Pre-Admit Flag									*	*	*	*	
Death in the Special Care	*	*	*	*	*	*	*	*	*	*	*	*	2008/09 SCU Death Indicator

<b>Mandatory DAD Elements for Newfoundland and Labrador</b>	<b>01/02</b>	<b>02/03</b>	<b>03/04</b>	<b>04/05</b>	<b>05/06</b>	<b>06/07</b>	<b>07/08</b>	<b>08/09</b>	<b>09/10</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>Comments</b>
Unit (SCU)													
SCU Unit Number	*	*	*	*	*	*	*	*	*	*	*	*	
SCU Admit Date	*	*	*	*	*	*	*	*	*	*	*	*	
SCU Admit Time	*	*	*	*	*	*	*	*	*	*	*	*	
SCU Discharge Date	*	*	*	*	*	*	*	*	*	*	*	*	
SCU Discharge Time	*	*	*	*	*	*	*	*	*	*	*	*	
Glasgow Coma Scale	*	*	*	*	*	*	*	*	*	*	*	*	Required for head injuries if >3 years
Basic Options			*	*	*	*	*	*	*	*	*	*	See Provincial DAD for data collection for specific years
Mental Health Indicators	*	*	*	*	*	*	*	*	*	*	*	*	Psych Flag
Projects	*	*	*		*	*	*	*	*				Project 350 & 497
Blood Transfusion Indicator			*	*	*	*	*	*	*	*	*	*	
Reproductive Care-TA <b>Fields 01 - 04</b>	*	*											
Reproductive Care-TA <b>Fields 01 – 08</b>			*	*	*	*	*						
Reproductive Care-TA <b>Fields 01 – 04, 06 &amp; 08</b>								*	*	*	*	*	
Reproductive Care Gestational age Obstetrics Delivered and Undelivered	*	*	*	*	*	*	*	*	*	*	*	*	2006/07 Obs Delivered & Undelivered 2009/10 GA (at time of admission) for obstetrics delivered & undelivered cases
Gestational age for Newborns/ Neonates	*	*	*	*	*	*	*	*	*	*	*	*	2006/07 Newborns & Neonates 2009/10 GA (at time of delivery) for NB and Neonates

<b>Mandatory DAD Elements for Newfoundland and Labrador</b>	<b>01/02</b>	<b>02/03</b>	<b>03/04</b>	<b>04/05</b>	<b>05/06</b>	<b>06/07</b>	<b>07/08</b>	<b>08/09</b>	<b>09/10</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>Comments</b>
Delivery time for obstetrics delivered cases	*	*	*	*	*	*	*	*	*	*	*	*	
Breast Feeding on Discharge	*	*	*	*	*	*	*	*	*	*	*	*	
Abstracting Vendor ID	*	*						*	*	*	*	*	

Notes:

- An \* Indicates Mandatory DAD Element for NL
- Provincial Section of DAD for each fiscal year was used as resource material
- List created 2012 06 01

### Appendix 3 Known CDMS Facts

This information is listed in sections: first applicable to all facilities/regions followed by facility/region specific. Both sections identify change/impact in alphabetic order. **This appendix contains information that may impact research outcome; it is recommended that this section be thoroughly reviewed.**

Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
<b>All Sites/Region Impacted By Change</b>			
Acronym for Newfoundland and Labrador	All	All	Over time the acronym for Newfoundland and Labrador changed in the DAD; this impacted the methodology of uniquely identifying patients. The CDMS files were updated when the last change occurred to uniquely identify Newfoundland and Labrador; Acronyms used were NFLD, 01, NF and NL. NL was the most recent change and all CDMS files now identify our province as NL.
Age Calculation	All	All	At CIHI the age is calculated based upon admission date not discharge date. The age in CDMS is the age upon admission. CDMS process age check upon import.
Blood Products	All	All	Blood information identifies the blood components that patient received via intravenous (infusion) during the current acute care admission. Data collection commenced in August 1995 for in-patient abstract submissions. Reference the Transfusion Limiting and Definition Clarifications in the DAD Manual for details of changes over time.
CMG and DPG Regrouped Data 2001-02	All	2001-02	All 2001-02 data was regrouped by CIHI as requested by the Department of Health and Community Service (required for a review of Western & Grenfell data). There are 3400 files that are NOT included in this CMG+ regrouped data. The following facilities have files omitted from 2001-02 data; Dr. .B. Cross Memorial Hospital, Burin Peninsula Health Care Center, Bonavista Health Centre and Baie Verte Peninsula Health Centre These four facilities failed to meet the year-end deadline for 2001-02.
Linkage of mom & Baby	All	All	<p>From 1994-95 to 2000-01 linkage was by chart number.</p> <p>From 2001-02 to 2005-06 linkage was by register (admit) number.</p> <p>From 2001 to 2006 there appears to be inconsistencies in the linkage of moms and babes. Therefore caution should be used when linking moms and babes in CDMS from 2001-2006.</p> <p>From 2006-07 to present linkage is by chart number.</p> <p>From April 1, 2001 to March 31, 2005 all infants born at Womens' Health Centre were admitted to Janeway thus breaking the link between mother (admitted to HSC) and baby (admitted to Janeway). The Janeway began reporting newborns under facility number to HSC (001) as of April 1, 2005.</p>
LOS	All	All	In 1999 the senior systems analyst wrote a program to calculate



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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
			this prior to being imported. Discharge date minus the admit date and rounded to two decimal points. Prior to 1999 the LOS for Main patient services is not imported.
Marital Status	All	All	Marital status was collected from 1995 to 2001. Common law status was an option included in marital status from 1999-01.
Mental Health Including Psych Flag	All	1998-1999	Effective April 1, 1998, it was mandatory for hospitals with a psychiatric service (psych flag turned on in CIHI Institutional File) and patients who have a main patient service or service transfer of psychiatry to complete the Mental Health abstract. It is optional for other hospitals to complete the mental health abstract. <ul style="list-style-type: none"> <li>• This replaced Project 499</li> <li>• Data is NOT generated by diagnosis</li> <li>•</li> </ul> Currently the following Newfoundland and Labrador facilities have a mental health flag with CIHI: <ul style="list-style-type: none"> <li>• Waterford Hospital</li> <li>• Health Sciences Centre</li> <li>• Dr. G.B. Cross Memorial Hospital</li> <li>• Burin Peninsula Health Care Centre</li> <li>• Central Newfoundland Memorial Health Care Centre</li> <li>• Western Memorial Regional Hospital</li> <li>• Sir Thomas Roddick Memorial Hospital</li> </ul>
Intensive Care Units	All	1995-2001	Definitions for the SCU numbers for Fiscal 1995/96 to 2000/2001. <ol style="list-style-type: none"> <li>1 Intensive Care Unit</li> <li>2 Neonatal Intensive Care Unit</li> <li>3 Coronary Care Unit</li> <li>4 Step Down Unit</li> <li>5 Constant Care/Special Care Unit</li> <li>6 Burn Unit</li> <li>7 Isolation</li> <li>8 Undefined From OOP Record</li> <li>9 'Other' (no official definition listed in code table)</li> </ol>
MRDx Sequencing Number in CDMS	All	All	CIHI error 10 04 05 MRDx code is not incorporated in NLCHI edits, because when a change is made to MRDx (which is #1 in CDMS) the next sequential number is used. For example, if there are 4 diagnoses and the MRDx is changed then the changed MRDx will be assigned number 5.
Project 340	All	2012	In 2009, the Canadian Stroke Network, in conjunction with the Canadian Institute for Health Information (CIHI), created an opportunity for all Canadian acute care facilities to collect vital stroke information that is not captured routinely in any other databases. Western Memorial Hospital began collection of Project 34 Stroke as of April 1, 2009. Effective April 1, 2012 it became mandatory

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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
			for NL to collect Project 340.
Project 350	All	2001-2008	Project 350 Allied Health, collection of allied health services, data was discontinued on September 18, 2008. The overall data in this field was not consistently coded and the information is not considered reliable. It is not advised to use this data.
Project 497 (See also note under Other about Diabetes)	All	1999-2000	<p>Project 497 Chronic Conditions, was introduced in 1999. It required NL facilities to collect data in a Special Project field within the discharge abstract to indicate the presence of documented chronic conditions in the health record of individuals discharged from hospital.</p> <ul style="list-style-type: none"> <li>• Effective April 1, 1999</li> <li>• Capturing of chronic conditions: <ul style="list-style-type: none"> <li>○ 1999-2001 ICD-9 codes for <ul style="list-style-type: none"> <li>▪ Diabetes</li> <li>▪ Hypertensive Disease</li> <li>▪ Ischemic Heart Disease</li> <li>▪ PVD</li> <li>▪ Chronic Renal Failure</li> <li>▪ Schizophrenia</li> <li>▪ Rheumatoid Arthritis</li> </ul> </li> <li>2001 onward used ICD-10 codes for <ul style="list-style-type: none"> <li>▪ COPD</li> <li>▪ Irritable Bowel Syndrome (Crohn's Ileitis &amp; Colitis)</li> <li>▪ Arthritis (all types)</li> <li>▪ Hypertensive Disease</li> <li>▪ Ischemic Heart Disease</li> <li>▪ PVD</li> <li>▪ Chronic Renal Failure</li> <li>▪ Schizophrenia</li> </ul> </li> </ul> </li> </ul> <p><b>NOTE:</b> Diabetes was inadvertently left off the 2001 list however beginning January 1, 2003 hospitals were mandated to code all diabetes regardless of the diagnosis typing. Diabetes was listed in Project 497 again in 2003.</p>
Diabetes  ICD-10-CA coding Impact  Project 497 Impact	All	2001-02 to 2008-09	<p>In 2001 &amp; 2003 ICD-10 CA diabetes codes were in a table format and there was a 6th digit (0-4 &amp; 9) to indicate the level of control.</p> <p>0 = Adequately controlled with diet or oral agents  1 = Adequately controlled with insulin  2 = Inadequately controlled with diet or oral agents (and insulin not used to stabilize)  3 = Inadequately controlled with diet or oral agents but adequately controlled with insulin  4 = Inadequately controlled with insulin  9 = Level of control unspecified</p>

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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
			<p>In 2006(07) diabetic codes were not in a table format and no longer have a sixth digit identifying the level of control. There were also a number of additional codes added to the classification for specificity in 2006(07) as well as the 2009 classification.</p> <p>As of April 1, 1999 Newfoundland and Labrador initiated Project 497 as a method to identify several chronic diseases for acute care patients. Diabetes mellitus was included in this project. Therefore diabetes mellitus classified as a Diagnosis Type 3 was captured in Project 497.            Note: Chronic Conditions that are not considered a co-morbidity are assigned a Diagnosis Type 3.</p> <p>In December 2002 it was identified that as of April 1, 2001, diabetes mellitus was inadvertently omitted from Project 497. Several facilities recognized the omission and began coding diabetes mellitus as a diagnosis type 3 on the DAD abstract using ICD-10-CA classification. In December 2002, the Centre mandated that all acute care patients who had a diagnosis of diabetes mellitus as a diagnosis type 3 be included on the DAD abstract until it was reinstated as a chronic condition in Project 497.</p> <p>As of April 1, 2003 diabetes mellitus was reinstated in Project 497 and was not required to be coded on the DAD abstract as a diagnosis type 3. (see mandate binder, memo dated, April 8, 2003.)</p> <p>As of April 1, 2006, CIHI mandated that all acute and surgical day care patients who had a diagnosis of diabetes mellitus regardless of the diagnosis typing be captured on the DAD abstract. All facilities in the province of Newfoundland and Labrador adhere to this national mandate. Many facilities continued to capture diabetes mellitus in Project 497 and as a Diagnosis Type 3 on the DAD in 2003, <b>caution should be taken not to double count Diabetes cases.</b></p>
Project 497	All	2010-11	Effective April 1, 2010 Project 497- Chronic Conditions is no longer mandatory. It is a Regional/Facility decision to collect this data. See page 12.16-1 as per 2010-11 in the Provincial Section of DAD.
Therapeutic Abortion	All	2001-02	<ul style="list-style-type: none"> <li>• Project 307</li> <li>• Effective April 1, 1998</li> </ul> <p>Any hospital that used the diagnostic code of 635 (ICD-9), Therapeutic Abortion information was abstracted.</p> <p>Since 2001 therapeutic abortion data has been submitted on the</p>

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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
			reproduction section of the DAD.
Time Patient Left ER	All		Time Patient Left ER in 2005-06 "9999" is equal to unknown. Upon import this will be put in as 9999 however CDMS has two fields Admit_ER_Datetime and Exit_ER_Datetime which calculated the time in ER. When 9999 is entered on the abstract it is converted to 0000 to indicate unknown.
ER Data	All	2001-02	Please use caution when using ER data for earlier years of ICD-10 data. It has been identified that this data is not reliable.
Residence Codes Community Table	All	2009-2010	October 27, 2008 Since 2002 Natuashish (when it became a community) has used Davis Inlet residence code. This was done based upon the understanding that all residents of Davis Inlet had moved to Natuashish. After reviewing the Municipal Affairs lists to update the 2008 community table in CDMS it was recognized that Davis Inlet is still inhabited. Therefore a residence code was assigned to both communities. <ul style="list-style-type: none"> <li>• 1345 is Davis Inlet residence code</li> <li>• 6035 is Natuashish residence code</li> </ul> Effective April 1, 2009.
Rhogam & WinRho	All	All	As of April 1, 2001 Rhogam and WinRho injections were coded as interventions and NOT included in the Blood Product project. Prior to 2001 this was coded as "other" in the blood product project.
Gestational Age 99 – Not Available	All	2010-2011	The 2010 DAD (page 6.18, Group 18 Field 06) indicates the valid value of Gestational Age 99 (not available). The value 99 should not be included in any calculations. Users are to interpret the value "Y" in CDMS (GEST_WK_DLV_OTH_I) as Gestational Age not available.
<b>Specific Site/Region Impacted By Change</b>			
Basic Option 17  Also known as Discharge Site for Eastern Health (City Hospitals)	Eastern and Western	2005-06	In 2005 the former HCSSJ (Waterford, St. Clare's, LA Miller, Dr. Walter Templeman and Health Sciences Centre (HSC)) began using Basic Option 17, to flag the discharge site. Discharge site was identified by alpha characters. (information recorded for 2005/06 is inconsistent). On October 01, 2006 the site identification was changed from alpha to numeric characters. Only facilities reporting under 001 completed Basic Option 17. (Exception, Dr. Walter Templeton Hospital continues to report discharge site in Basic Option 17 using facility number (053). <b>Janeway also completed discharge site although they continued to report under 056 until March 31, 2006.</b> Western Memorial Regional Hospital also used Basic Option 17 for internal purposes. This was transmitted to CIHI therefore causing a conflict in data values in the Basic Option 17 field. Western Memorial Regional Hospital stopped reporting Basic

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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments																					
			<p>Option 17 to CIHI as of April 1, 2006.</p> <p>The table below identifies the applicable values in CDMS for facility 001, Basic Option 17.</p> <table border="1" data-bbox="781 569 1555 940"> <thead> <tr> <th data-bbox="781 569 1130 690">SITE</th> <th data-bbox="1130 569 1313 690">ALPHA SITE CODE (2005-06)</th> <th data-bbox="1313 569 1555 690">NUMERIC SITE CODE (October 01, 2006-present)</th> </tr> </thead> <tbody> <tr> <td data-bbox="781 690 1130 722">Health Sciences Centre</td> <td data-bbox="1130 690 1313 722">HS</td> <td data-bbox="1313 690 1555 722">01</td> </tr> <tr> <td data-bbox="781 722 1130 753">St. Clare's Mercy Hospital</td> <td data-bbox="1130 722 1313 753">SC</td> <td data-bbox="1313 722 1555 753">02</td> </tr> <tr> <td data-bbox="781 753 1130 785">Waterford Hospital</td> <td data-bbox="1130 753 1313 785">WH</td> <td data-bbox="1313 753 1555 785">03</td> </tr> <tr> <td data-bbox="781 785 1130 848">Janeway Child Health Centre</td> <td data-bbox="1130 785 1313 848">JC</td> <td data-bbox="1313 785 1555 848">04</td> </tr> <tr> <td data-bbox="781 848 1130 879">L.A. Miller Centre</td> <td data-bbox="1130 848 1313 879">MC</td> <td data-bbox="1313 848 1555 879">05</td> </tr> <tr> <td data-bbox="781 879 1130 940">Dr. Walter Templemen Hospital (reports under 053)</td> <td data-bbox="1130 879 1313 940">WT</td> <td data-bbox="1313 879 1555 940">06</td> </tr> </tbody> </table>	SITE	ALPHA SITE CODE (2005-06)	NUMERIC SITE CODE (October 01, 2006-present)	Health Sciences Centre	HS	01	St. Clare's Mercy Hospital	SC	02	Waterford Hospital	WH	03	Janeway Child Health Centre	JC	04	L.A. Miller Centre	MC	05	Dr. Walter Templemen Hospital (reports under 053)	WT	06
SITE	ALPHA SITE CODE (2005-06)	NUMERIC SITE CODE (October 01, 2006-present)																						
Health Sciences Centre	HS	01																						
St. Clare's Mercy Hospital	SC	02																						
Waterford Hospital	WH	03																						
Janeway Child Health Centre	JC	04																						
L.A. Miller Centre	MC	05																						
Dr. Walter Templemen Hospital (reports under 053)	WT	06																						
Chronic Care And Mental Health Chronic Care	Waterford, LeGrow and Sunshine Manor	2005-2006	<p>As of April 1, 2005 only Waterford patients, Dr. Charles LeGrow and Sunshine Manor continued to report chronic care (level of care 3, aka long-term care). All other facilities that previously reported chronic care discontinued reporting as of April 1, 2005.</p> <p>Sunshine Manor and Dr. Charles LeGrow discontinued reporting chronic care as of April 1, 2006.</p> <p>As of April 1, 2006 only the Waterford Hospital report chronic care (level 3). Including the following:            North 3A Residential Patients            North 2A Residential and transitional patients            North 2B Developmentally delayed (severe) patients            West 2A Psychiatric Rehabilitation Patients</p> <p>As of April 2011 all chronic care discharges at the Waterford the only chronic care discharges coded and abstracted and sent to CIHI is:            West 2A Psychiatric Rehabilitation Patients            This decision was made by Jim Brown (Director), Patsy Pike (Manager), Michelle Reid (Health Record Analyst, and Isobel Keefe (Assistant Director of Mental Health and Addictions Program). Due to the collection of data on chronic patients at the Waterford not being utilized in many years. Isobel Keefe requested that West 2A patients be coded/abstracted due to the ongoing changes within the Mental Health Program.</p> <p><b>NOTE:</b> A CDMS review showed from 1994 to 1997 there are no episode types 3s from Waterford in CDMS. Waterford was reporting under 061 during this period.</p>																					

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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
			In 2006 it was discovered that all chronic mental health cases from the Waterford, coded to facility 001 were changed to indicate that the reporting facility was 069 (L.A. Miller Centre) This was during a period when a high number of acute care beds were being used for chronic care. There is no documentation to state why all chronic care from facility 001 was changed to facility 069. This resulted in mental health chronic care patients being categorized with acute care patients receiving chronic care. To investigate and determine a course of action to correct these issues the Senior Systems Consultant-Healthcare at OCIO along with NLCHI staff will review the data both pre and post CDMS import. This document will be updated when the investigation is completed. As of 2005/06 Waterford chronic care is identified. Facilities that submitted mental health indicators to CIHI are identified by having the psych flag turned on at CIHI. The data submitted from these facilities undergo additional data quality testing to include mental health fields. It is an individual facility decision to submit mental health data to CIHI. There are no predetermining factors required to submit this data.
	PHCC	2001-02	January 28,2005 The former PHCC did not meet the CIHI submission deadline for 2001/02. The late submission of this data was imported into CDMS. (approximately 3,400 records) It was discovered that some of the 3,400 were duplicates entries because PHCC sent the same records to CIHI and to NLCHI. There were approximately 1,600 duplicates identified and removed from CDMS. Because these records were not easily identified there is a possibility that some abstracts are duplicates and might remain in CDMS.
ICD-9 CM	WMRH & Grace General Hospital		Western Memorial used ICD-9-CM up to 1998-99. Grace General Hospital used ICD9-CM from 1980's to March 31, 1999 and began using ICD-9 as of April 1, 1999. CIHI converted the ICD9-CM codes to ICD-9. Although ICD-9CM codes were used by NL facilities there are no ICD-9CM codes in CDMS.
Newborns	Grace General	2000-01	Prior to April 1, 2000 newborns were reported by 002(Grace General Hospital) and 003 (St. Clare's Mercy Hospital). Last day for deliveries at St. Clare's was April 06, 1992 all deliveries transferred to the Grace on April 7, 1992. Last day for deliveries at the Grace was July 06, 2000, all deliveries transferred to Womens' Health Centre July 07, 2000. Newborns at Womens' Health were submitted under the Janeway number of 056. This created a linkage issue, mom's abstract was submitted using facility number 001 and baby's abstract was submitted using 056, it was impossible to create a linkage between mother and baby. To correct this issue, as of April 1, 2006 the Womens' Health Centre began reporting newborns under facility number 001.

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Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
Newborns 1 day stay	HCCSJ	2003-04	For newborns who have 1 day LOS and use both patient services 54 (newborn) and 97 (neonatology). The standards state that only one patient service can be used for 1 day stay. It was agreed in consultation with CIHI that patient service 97 would be used in this situation. The rationale being that this service uses more expensive resources than normal newborn.
OOH Interventions HCCSJ	HCCSJ	2001-02	Out of Hospital interventions (OOH) for HCCSJ are not recorded for facilities using 001 (e.g. patient from St. Clare's went to the HSC for intervention and returned to St. Clare's, same day) this intervention is captured as an inpatient intervention on the discharge abstract.
Operative Flag	All	2009-2011	The operative flag is incorrect for 2009-10 and 2010-11.
Medical Day Care	PHCC	1995-96 to 2006-07	From 1995-96 to 2006-07, the former PHCC captured medical day care (type 4). No other facility collected medical day care.
Patient Service	Grenfell	2004-05	February 4, 2005 Grenfell stopped using the generic patient service code of 98 as of April 1, 2004. On April 1, 2004 they began using specific patient service codes. Grenfell used patient service 98 from April 1, 2001 to March 31, 2004.
Site Specific Reporting Changes	Grace General Hospital		The Grace General Hospital closed in July 2000, in preparation for this; all adult discharges as of April 1, 2000 were submitted under facility number 001. All newborns discharged as of April 1, 2000 were submitted under Janeway, facility number 056.
Site Specific Reporting Changes	HCCSJ	2000-2001	Waterford (061), HSC (001), St. Clare's (003) and Grace (002) site specific numbers were merged and began reporting as one entity using 001 as of April 1, 2000. April 1, 2000, Health Sciences Centre (001), St. Clare's Mercy Hospital (003), Grace General Hospital (002) and Waterford Hospital (061) consolidated facility numbers and began submitting to CIHI under facility 0001, 1001 or 3001, depending upon the level of care.
Site Specific Reporting Changes	Janeway		The Janeway discontinued the use of 0056 and 1056 on April 1, 2006 and began submitting under facility number 0001 and 1001. The Janeway began reporting newborns under facility number to 001 as of April 1, 2005.
Site Specific Reporting Changes	Janeway		April 1, 2006, Janeway Child Health Centre discontinued using facility number 056 and began submitting to CIHI using facility number 001
Site Specific Reporting Changes	Miller Centre	2000-01	April 1, 2000, L.A. Miller Centre Rehabilitation submitted Physical and Medical Rehabilitation (patient service 70) and Geriatrics (patient service 72) services were under facility number 0069. DVA (patient service 72) abstracts were submitted under facility number 3069.

This information is listed in sections: first applicable to all facilities/regions followed by facility/region specific. Both sections identify change/impact in alphabetic order. **This appendix contains information that may impact research outcome; it is recommended that this section be thoroughly reviewed.**

Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
			Prior to April 1, 2000 all discharges from L.A. Miller Center were reported under facility number 3001.
Site Specific Reporting Changes	Miller Centre	2004-2005	March 31, 2005 all DVA (Department of Veterans Affairs) (L.A. Miller Centre), chronic care coding, was discontinued, no longer submitted to CIHI.
Site Specific Reporting Changes	Miller Centre		For facility 069 (LA Miller Center) in 2005-06 CIHI did not permit the Miller Center to submit using level of care 3 (chronic care/long term) therefore all submissions have the level of care 0 (acute care). This is only for this fiscal year. Therefore the readmission code for these is blank, this was necessary to prevent fatal errors from CIHI.
Site Specific Reporting Changes	Miller Centre		March 31, 2006 L.A. Miller Center discontinued using 0069 for Rehab submission. Rehab abstracting began submitting under National Rehabilitation System (NRS).
Site Specific Reporting Changes	Miller Centre		There were lengthy discussions within Eastern Health with the Medical Program about Palliative Care Unit and how the beds are used and the treatment given. The consensus was that the Palliative Care Unit as it stands now is not an acute care unit but rather a hospice. There is no active treatment given, it is strictly comfort care and pain management.  Effective April 1, 2008 the Palliative Care Unit and Comfort Care Units at the Miller Centre were no longer considered part of the acute care facility. Patients transferred to these units are discharged from the acute care sites and readmitted to palliative care/comfort care. The palliative care/comfort care admissions are no longer submitted to CIHI.
Site Specific Reporting Changes	St. Clare's & Miller Centre		September 2002, palliative care moved from St. Clare's, which was submitting under facility number 001, to L.A. Miller Center and started submitting to CIHI under facility number 069.  April 1, 2005 the submitting number for comfort care (patient service 58) at L.A. Miller Centre was changed to 001 from 069.
Surgical Day Care	Western & Central		Western Health started coding scopes (gastroscopy and sigmoid/colonoscopy) on October 1, 2002  Central Newfoundland Regional Hospital started coding scopes (gastroscopy and sigmoid/colonoscopy) in 2002.  James Paton started coding scopes (gastroscopy and sigmoid/colonoscopy) in November 2005.
Facility Name Change	Paddon Home	2011-12	Paddon Home has kept the same number but we are showing it as Long Term Care Happy Valley-Goose Bay in the 2011-2012 Provincial DAD.



This information is listed in sections: first applicable to all facilities/regions followed by facility/region specific. Both sections identify change/impact in alphabetic order. **This appendix contains information that may impact research outcome; it is recommended that this section be thoroughly reviewed.**

Change/Impact	Region/Facility Impacted	Fiscal Year	Comments
Missing Newborn Abstracts	Labrador		Through the editing process of linkage of mom & baby there have been a minimum number of newborns identified that did not have an abstract submitted to CIHI. After consultation with the facility a paper abstract was submitted to the Centre and entered manually into the database.
Facility Closure	Western	2010	In July 2010 Dr. J.I. O'Connell, Inst. #107 and Inter-faith Home for Senior Citizens, Inst. # 106 closed. A new facility, Corner Brook Long Term Care Facility, Inst. # 206 was opened. This is reflected in the Provincial DAD 2011-12.
Surgical Day Care	Eastern	2011-12	Effective Fiscal 2011-2012, the Comprehensive Ambulatory Classifications System (CACS) grouping methodology was redeveloped and is used to group DAD day surgery data. The new CACS grouping methodology will use the investigative technology (diagnostic imaging) interventions found on the day surgery abstract to adjust the RIW. Therefore, it is mandatory to code any diagnostic imaging intervention (CT, MRI, nuclear medicine, X-ray, ultrasound, etcetera) performed on a day surgery case.  For Fiscal 2011-2012, Eastern Health Region was not compliant with the DAD standard.
Basic Options – Smoking Project	Labrador/Grenfell	2011-12	Labrador/Grenfell facilities will no longer collect data for the Smoking Project as of 2011-12 abstracts. To avoid triggering errors HIMs will complete Basic Option 1 with the valid value of U for unknown. This practice will remain in place until 2013/14 when CIH will remove the edits.
Provider Number	Central	2011-12	During the 2011-12 CDMS editing process it was identified that in Central's 3M system the number for Dr. Nazir Fayeze Barakji was 4790 however the <b>correct number in the provider database is 4837</b> . The number 4790 belongs to Dr. Teri Lynn Stuckless. Central Health Authority confirmed that they have now corrected the number for Dr. Barakji.
New Facility Name	Western	2011-12	Dr. J.I. O'Connell Centre and Interfaith Home for Senior Citizens have closed and that the new facility is named Corner Brook Long Term Care and the Centre has assigned it Institution #206 and this is reflected in the Provincial DAD for 2011-2012

**Appendix 4**  
**DAD Data Elements NOT Imported Into CDMS**

DAD Data Elements NOT Imported Into CDMS			
DAD_FIELD_NBR	FIELD_DESC	START_POSITION	WIDTH
15	Provincial ancillary data	72	17
40	Blood transfusion not received indicator	176	1
68	Age group	212	2
69	Coding classification indicator	214	1
71	Analytical institution type	216	1
73	1st special care unit number	218	2
74	Last activity date	220	8
209	Intervention 1 out of hospital indicator	601	1
230	Intervention 2 out of hospital indicator	696	1
251	Intervention 3 out of hospital indicator	791	1
272	Intervention 4 out of hospital indicator	886	1
293	Intervention 5 out of hospital indicator	981	1
314	Intervention 6 out of hospital indicator	1076	1
335	Intervention 7 out of hospital indicator	1171	1
356	Intervention 8 out of hospital indicator	1266	1
377	Intervention 9 out of hospital indicator	1361	1
398	Intervention 10 out of hospital indicator	1456	1
419	Intervention 11 out of hospital indicator	1551	1
440	Intervention 12 out of hospital indicator	1646	1
461	Intervention 13 out of hospital	1741	1

<b>DAD Data Elements NOT Imported Into CDMS</b>			
<b>DAD_FIELD_NBR</b>	<b>FIELD_DESC</b>	<b>START_POSITION</b>	<b>WIDTH</b>
	indicator		
482	Intervention 14 out of hospital indicator	1836	1
503	Intervention 15 out of hospital indicator	1931	1
524	Intervention 16 out of hospital indicator	2026	1
545	Intervention 17 out of hospital indicator	2121	1
566	Intervention 18 out of hospital indicator	2216	1
587	Intervention 19 out of hospital indicator	2311	1
608	Intervention 20 out of hospital indicator	2406	1
730	Total special care hours	2600	4
767	Vendor id for abstracting	2784	5
768	Vendor id for grouping	2789	5
769	Total length of stay	2794	5
857	Filler	3133	1
858	Flagged intervention #18	3134	1
859	Flagged intervention #19	3135	1
860	Flagged intervention #20	3136	1
861	CACS Methodology year	3137	4
862	CACS Methodology version	3141	11
902	HIG CODE	3245	4
903	HIG Atypical Code	3249	2
904	HIG Weight	3251	9
905	HIG ELOS DAYS	3260	5
906	HIG Age Category	3265	1
907	HIG FI TOTAL CNT	3266	2
908	HIG OOH FLAG	3268	1
909	HIG SCU FLAG	3269	1
910	HIG HOMECARE FLAG	3270	1
911	HIG LS TRIM DAYS	3271	5

DAD Data Elements NOT Imported Into CDMS			
DAD_FIELD_NBR	FIELD_DESC	START_POSITION	WIDTH
912	HIG SS TRIM DAYS	3276	2
913	HIG MATERNAL AGE FLAG	3278	1
914	HIG RETURN CODE	3279	2
915	HIG ELOS WEIGHT RETURN CODE	3281	2
916	PROV_REGION_CODE	3283	4
917	PROV_REGION_DESC	3287	100

**NOTE:** The following DAD elements from the above table are not imported **since these items are considered redundant information:**

DAD Data Elements NOT Imported Into CDMS [REDUNDANT]			
DAD_FIELD_NBR	FIELD_DESC	START_POSITION	WIDTH
40	Blood transfusion not received indicator	176	1
73	1st special care unit number	218	2
209	Intervention 1 out of hospital indicator	601	1
230	Intervention 2 out of hospital indicator	696	1
251	Intervention 3 out of hospital indicator	791	1
272	Intervention 4 out of hospital indicator	886	1
293	Intervention 5 out of hospital indicator	981	1
314	Intervention 6 out of hospital indicator	1076	1
335	Intervention 7 out of hospital indicator	1171	1
356	Intervention 8 out of hospital indicator	1266	1
377	Intervention 9 out of hospital indicator	1361	1
398	Intervention 10 out of hospital indicator	1456	1

<b>DAD Data Elements NOT Imported Into CDMS [REDUNDANT]</b>			
<b>DAD_FIELD_NBR</b>	<b>FIELD_DESC</b>	<b>START_POSITION</b>	<b>WIDTH</b>
419	Intervention 11 out of hospital indicator	1551	1
440	Intervention 12 out of hospital indicator	1646	1
461	Intervention 13 out of hospital indicator	1741	1
482	Intervention 14 out of hospital indicator	1836	1
503	Intervention 15 out of hospital indicator	1931	1
524	Intervention 16 out of hospital indicator	2026	1
545	Intervention 17 out of hospital indicator	2121	1
566	Intervention 18 out of hospital indicator	2216	1
587	Intervention 19 out of hospital indicator	2311	1
608	Intervention 20 out of hospital indicator	2406	1
730	Total special care hours	2600	4
769	Total length of stay	2794	5

## Appendix 5

### Facilities, Boards and Community Health Regions

Health Care Facilities with Associated Health Boards and Health and Community Services Boards

Retrieved from CDMS

<u>Facility ID</u>	<u>Health Care Board</u>	<u>Health and Community Service</u>
001	01	01
002	01	01
003	01	01
004	06	04
005	04	03
007	03	02
008	06	04
009	04	03
010	06	04
012	06	04
014	04	03
015	03	02
016	05	03
018	02	02
019	02	02
020	05	03
021	06	04
022	03	02
023	05	03
025	06	04
026	07	05
027	08	06
028	08	06
030	07	05
031	07	05
032	07	05
033	07	05
035	08	06
036	01	01
037	01	01
038	05	03
039	05	03
045	08	06
047	08	06
049	04	03
050	05	03
053	01	01
054	01	01
055	08	06
056	01	01

057	08	06
059	08	06
060	02	02
061	01	01
064	03	02
065	03	02
066	08	06
067	07	05
069	01	01

<b>Health and Community Services Boards and Associated Codes</b>	
Retrieved from CDMS	
<b><u>BOARD_NAME</u></b>	<b><u>BOARD_CODE</u></b>
St. John's	01
Eastern	02
Central	03
Western	04
Grenfell	05
Labrador	06
Out of Province	99
Unknown	00

<b>Health Care Boards and Associated Codes</b>		
Retrieved from CDMS		
	<b><u>BOARD_CODE</u></b>	<b><u>DESCRIP</u></b>
	02	Avalon Region
	05	Central West Region
	08	Labrador Region
	01	St. John's Region
	04	Central East Region
	07	Grenfell Region
	03	Eastern Region
	06	Western Region
	09	Out of Province

## Appendix 6 Glossary

### **Alternative Level of Care (ALC)**

When a patient is occupying a bed in a facility and does not require the intensity of resources provided in that care setting (Acute/Complex Continuing Care [Chronic], Mental Health or Rehabilitation), the patient must be designated Alternate Level of Care (ALC) at that time by a physician or his/her delegate. The authorized designate may be a long term care assessor, patient care manager, discharge planner or care team member. (The decision to assign ALC status is not a Health Information Management responsibility).

Note: Prior to Fiscal 2010-2011, the definition of ALC in the DAD applied to acute care only, to facilitate acute expected length of stay calculations.

### **Canadian Classification of Health Interventions (CCI)**

This is a national standard for classifying health care procedures. CCI is the companion classification system to ICD-10-CA.

### **Canadian Classification of Diagnostic, Therapeutic, and Surgical Procedures (CCP)**

This is the national standard for classifying health care procedures used in CDMS up to April 1, 2001.

### **Case Mix Groups Plus CMG+**

The Case Mix Groups+ (CMG+) methodology is designed to aggregate acute care inpatients with similar clinical and resource-utilization characteristics. The CMG+ methodology was introduced in 2007. CMG+ was designed to take advantage of the increased clinical specificity of ICD-10-CA and CCI. This methodology, developed using multiple years of acute care inpatient activity and cost records, introduces and enhances several grouping factors to improve the ability to clinically group inpatients and to define length of stay and resource use indicators.

ICD-10-CA diagnosis codes are used to broadly categorize patients into major clinical categories (MCC). These broad categories are based generally on the most responsible diagnosis code (MRDx). The MCC is divided into two partitions: intervention and diagnosis. If a case is assigned to the diagnosis partition of an MCC, a list of diagnosis codes is used to assign the CMG cell. If a case is assigned to the intervention partition of an MCC, a hierarchical list of intervention codes is used to assign the CMG cell.

The CMG+ methodology further refines CMG with components known as factors to reflect additional conditions that influence a patient's overall medical condition and resource consumption. These factors, known as the Five Factor Methodology, applied across most CMG include:

- Age Group
- Comorbidity Level
- Flagged Interventions
- Intervention Events
- Out-of-Hospital Intervention



Together, these factors are applied to the acute care inpatient cases to improve estimates of resource indicators (RIW and ELOS).

### **Case Mix Groups Plex (CMG/Pix)**

Case Mix Groups (CMGs) were introduced in 1973, forming the patient classification system for bed utilization. They group similar patients together from a clinical as well as a resource use perspective. Historically, CMGs split on age and/or complications or comorbidity. The patient's MRDx is used to assign the case to one of the 24 Major Clinical Categories (MCC). Within each MCC, based on the presence or absence of an operative procedure, the case is directed towards a surgical or medical hierarchy flowchart.

In 1997, CIHI introduced a complexity overlay called "Pix" to its inpatient case-mix methodology. The complexity overlay identifies diagnoses, over and above the MRDx used for CMG assignment, for which prolonged length of stay and more costly treatment might reasonably be expected. Complexity is applied to hospital inpatient cases with one or more chronic disease conditions outside of the primary focus of the acute care episode, cases with multi-organ failure, and cases with iatrogenic or other complications. Complexity is not applied where it does not demonstrate improved homogeneity in LOS or total resource use. Complexity is specific to the medical or surgical MCC partitions.

### **CIHI**

The Canadian Institute for Health Information (CIHI) is an independent, not-for-profit organization that provides essential data and analysis on Canada's health system and the health of Canadians.

### **DAD Abstracting Manual**

The Discharge Abstract Database (DAD) contains data on hospital discharges across Canada. The DAD manual provides specifications and edits related to each element on the abstract.

### **Day Procedure Groups (DPG)**

Day Procedure Groups is a national classification system for ambulatory hospital patients that focus on the area of day surgery. Patients are assigned to categories according to the principal or most resource-intensive intervention recorded on the patient abstract.

Patients assigned to the same DPG group represent a homogeneous cluster with similar clinical episodes and requiring similar resources. The DPG grouping methodology continues to be based on the CCI and is the result of an extensive review and revision process using Canadian case-cost data. Each DPG group is assigned a DPG RIW value, which is used to standardize the expression of hospital day surgery volumes, recognizing that not all day surgery patients require the same health care resources. The volume of day surgery cases is then expressed as total day surgery weighted cases and these weighted cases can be directly compared to the inpatient weighted cases and CACS weighted cases.

## Diagnosis Typing

Diagnosis Typing applies to all data submitted to the Discharge Abstract Database (DAD).

The assignment of a diagnosis type to a condition is meant to signify the impact that the condition had on the patient's care as evidenced in the physician documentation. The following list the various diagnosis types:

- **Most responsible diagnosis (Type M)**

Diagnosis type (M) is the one diagnosis or condition that can be described as being most responsible for the patient's stay in hospital. If there is more than one such condition, the one held most responsible for the greatest portion of the length of stay or greatest use of resources (i.e. operating room time, investigative technology, etc.) is selected

- **Comorbidity diagnoses (Types 1 and 2)**

A diagnosis type (1) is a condition that existed prior to admission, has been assigned an ICD-10-CA code, and satisfies the requirements for determining comorbidity.

A diagnosis type (2) is a condition that arises post-admission, has been assigned an ICD-10-CA code and satisfies the requirements for determining comorbidity. If a post-admit comorbidity qualifies as the MRDx, it must be recorded as both the MRDx and as a diagnosis type (2).

- **Secondary diagnoses (Type 3)**

A diagnosis type (3) is a secondary diagnosis or condition for which a patient may or may not have received treatment, has been assigned an ICD-10-CA code and does not satisfy the requirements for determining comorbidity. Diagnoses that are **only listed** on the Front Sheet, Discharge Summary, Death Certificate, History and Physical or Pre-operative Anesthetic Consults qualify as a diagnosis type (3)—secondary diagnosis. If there is physician documentation elsewhere in the chart that the condition affected the treatment received or required treatment beyond maintenance of the preexisting condition or increased the length of stay (LOS) by at least 24 hours it then must be determined if it is a diagnosis type (1) or type (2) comorbidity.

- **Proxy most responsible diagnosis (Type 6)**

A diagnosis type (6) is assigned to a designated asterisk code in a dagger/asterisk convention when the condition it represents fulfills the requirements stated in the definition for diagnosis type (M)—most responsible diagnosis (MRDx). In morbidity coding, asterisk codes are manifestations of an underlying condition and according to the World Health Organization (WHO) rules, must be sequenced following the code for the underlying cause. The underlying cause codes are identified with a dagger symbol (†) in the ICD-10-CA classification. Diagnosis type (6) is used on the **second line** of the diagnosis field of the abstract to indicate that the manifestation is the condition most responsible for the patient's stay in hospital. When the underlying condition

meets the criteria for MRDx, or when it would be difficult to delineate whether it is the underlying condition or the manifestation that meets the criteria for MRDx, the asterisk code is assigned diagnosis type (3).

- **Service transfer diagnoses (Types W, X and Y)**  
An ICD-10-CA code associated with the first/second/third service transfer.
- **External cause of injury codes (Type 9)**  
A diagnosis type (9) is an external cause of injury code (Chapter XX—*External causes of morbidity and mortality*), place of occurrence code (U98.—*Place of occurrence*) or activity code (U99.—*Activity*). Chapter XX codes are mandatory for use with codes in the range S00–T98 *Injury, poisoning and certain other consequences of external causes*. Category U98.—*Place of occurrence* is mandatory with codes in the range W00–Y34, with the exception of Y06 and Y07, and Category U99.—*Activity* is optional.
- **Diagnoses restricted to newborn abstracts only (Type 0)**  
Diagnosis Type (0) is restricted to newborn codes only (admit category N).

### **Expected Length of Stay (ELOS)**

Expected length of stay is calculated as average acute days for “typical” acute care inpatients. ELOS will depend on CMG assignment as well as complexity levels, and age, where appropriate. Typical cases exclude deaths, transfers, voluntary sign-outs and cases where the actual length of stay is greater than the “trim point” established by CIHI.

### **International Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA).**

This system consists of codes to classify diseases and health problems.

### **International Classification of Diseases, Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, (ICD-9)**

This is the national coding classification system used in CDMS up to April 1, 2001.

### **Length of Stay (LOS)**

Length of stay, for inpatient abstracts, is the difference, in days, between the Admission Date and Discharge Date. If the difference is 0 (Admission Date equals Discharge Date), the calculated LOS is 1.

Length of stay, for same-day surgery abstracts, is the difference, in hours, between the Admission Time and Discharge Time.

### **Office of the Chief Information Officer (OCIO)**

The OCIO provides Information Technology and Information Management capability aligned to support the business of government and the citizens of Newfoundland and Labrador.

**Reabstracting**

Coding of health records previously coded and submitted to CIHI. The reabstracting is completed by a Health Information Management professional not associated with the originating facility.