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

At the heart of data
Table of Contents

Introduction ................................................................................................................................. 1
Purpose ...................................................................................................................................... 1
Updates ...................................................................................................................................... 1
Data Quality Tests ...................................................................................................................... 4
  1. Potential Extra Abstracts (D0103-18) ............................................................................... 4
  2. Mismatch Between Weight (0002-0999 g) and Low Birth Weight Diagnosis Code (D1002-20) ...................................................................................................................... 4
  3. Mismatch Between Weight (1000-2499 g) and Low Birth Weight Diagnosis Code (D1002-21) ...................................................................................................................... 4
  4. Incomplete Linkage of Mothers and Babies by Maternal/Newborn Chart Number (D0112-23) ...................................................................................................................... 5
  5. Z51.5 Palliative Care Assigned Diagnosis Type 2 or 3 (D1002-27) .................................. 6
  6. Incorrect Status Attribute Assigned for Hip Replacement Interventions (D1103-29) ...... 6
  7. Incorrect Status Attribute Assigned for Knee Replacement Interventions (D1103-30) ...... 7
  8. Multiple Live-Born Births Coded as Live-Born Singleton (D1002-32) ............................... 7
  9. Death Discharge Disposition and Death Visit Disposition Assigned to the Same Patient in DAD and NACRS (D0505-34) ...................................................................................... 8
  10. Three or More OOH Intervention Episodes in One Day (D1113-35) ................................ 8
  11. Diagnosis Code O75.701 with 5.MD.60.^^ Caesarean Section Delivery (D1102-44) ....... 9
  12. Unknown Weight 0001 Recorded for Newborns and Neonates Less Than 29 Days (D0703-50) ...................................................................................................................... 9
  13. Post-Procedural Disorder Codes Recorded Without an External Cause Code (D1002-52) ...................................................................................................................... 10
  14. Missing ECT Intervention Code (D1102-53) .................................................................. 10
  15. Main Patient Service/Transfer Service 64 (Psychiatry) or 65 (Paediatric Psychiatry) Without Mental Health Indicator (D1502-54) ...................................................................................... 11
  16. Maternal Death Cases With Discharge Disposition Alive (D1002-57) ............................ 11
  17. Surgical Repair, Postpartum of Current Obstetric Laceration-Diagnosis and Intervention Code Mismatch (D1002-58) ...................................................................................... 12
  19. Missing R94.30 (STEMI) Diagnosis Code When Status Attribute N or D Is Assigned With 1.IJ.50.^^ (PCI) (D1002-60) ........................................................................................... 13
  20. Newborn Abstract Missing P07.2 Extreme Immaturity or P07.3 Other Preterm Infants (D1002-61) ...................................................................................................................... 13
  21. Diagnosis Type 0 With Diagnosis Code P07.2/P07.3 and Entry Code N (D1004-62)..... 14
  22. Unknown Admission Time (D0402-64)........................................................................... 14
  23. Unknown Discharge Time (D0502-65)........................................................................... 14
Appendix A—Post-Procedural Disorder Codes ........................................................................ 15
Introduction

As part of the Canadian Institute for Health Information’s (CIHI’s) commitment to quality data, the Discharge Abstract Database (DAD) is routinely analyzed for data quality issues during the submission year and after database closure. Suspect findings are communicated back to the submitting facilities for investigation and correction while the database is still open for submission.

Purpose

This document was created to

- Accompany the files that will be sent at a later date which communicate suspect findings to facilities for investigation and/or correction as applicable; and
- Help DAD clients create their own data quality audits to identify records with suspected data quality issues.

This document lists the data quality tests performed on the DAD, along with their selection criteria, the data elements used in the analysis, one correct example to demonstrate a correct case and the references. It is important to note that the correct example does not cover all possible correct examples as applicable to the selection criteria.

CIHI client service representatives or ministry of health representatives will send facilities the data quality files containing the abstracts submitted to the DAD that have met the selection criteria specified in one or more data quality tests. Facilities are asked to review the charts of the abstracts with errors and to resubmit the correct abstracts, where applicable. Each data quality file sent to facilities will reference the data quality test number and description along with the abstract identification data elements, such as Chart Number, Fiscal Year, Fiscal Period, Batch Number, Abstract Number and Discharge Date. The abstract identification information will help facilities link the incorrect abstracts to the matching abstracts in their systems.

Note: The same abstract may be identified as having more than one data quality issue. For example, an abstract may be identified in the data quality test Incorrect Status Attribute Assigned for Knee Replacement Interventions (D1103-30) and again in data quality test Potential Extra Abstracts (D0103-18).

Updates

The DAD Open-Year Technical Specifications document is updated every fiscal year and new data quality tests identified in the DAD are added to the document. A data quality test may also be modified to reflect enhancements to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, the Canadian version of the International Statistical Classification of Diseases and Related Health Problems (ICD-10-CA), the Canadian
Classification of Health Interventions (CCI) and/or to align with the most recent version of the Canadian Coding Standards for ICD-10-CA and CCI. Data quality tests may be deleted if new edits are created or if the data quality test is no longer relevant.

Starting with 2012–2013, each data quality test is identified by a unique code assigned to only that data quality test. The unique code is assigned based on the most relevant group and field analyzed and a sequential number to identify the data quality test. The sequential number is a number used within CIHI for the purpose of test tracking. For example, the unique code D1102-53 has been assigned to the data quality test ‘Missing ECT Intervention Code’ because this data quality test refers to Group=11 (Interventions), Field 02 (Intervention Code) and it has the sequential number=53. This unique code will not be assigned to any other data quality test.

The following changes were made to the DAD Open-Year Technical Specifications 2012–2013:

**Retired data quality tests:**

- Diagnosis Cluster Issues for Post-Intervention Conditions - External Cause Codes Y60–Y84 Recorded Without a Diagnosis Cluster;
- Diagnosis Cluster Issues for Post-Intervention Conditions - Post-Procedural Disorder Codes Recorded Without a Diagnosis Cluster;
- Drug-Resistant Microorganism Codes U82–U84 Recorded Without a Diagnosis Cluster;
- Diagnosis Prefix 8 Recorded With a Code Other Than Z51.5 Palliative Care;
- Missing Diagnosis Prefix 5 or 6 With a Post-Admit Comorbidity and a Qualifying Intervention;
- Diagnosis Prefix 5 or 6 Incorrectly Assigned Without an Intervention or Without a Qualifying Intervention;
- Diagnosis Prefix 5 or 6 Assigned With Diagnosis Types Other Than Diagnosis Type 2;
- Incorrect Assignment of Intervention Pre-Admit Flag;
- Diagnosis Cluster Alpha Character Recorded Only Once;
- Diagnosis Prefix 5 or 6 Incorrectly Assigned on a Day Surgery Record;
- Diagnosis Prefix 5 or 6 Incorrectly Assigned With Obstetric Code;
- Intervention Codes 1.IJ.50.^^ Dilation, Coronary Arteries With Coronary Angiogram.

**New data quality tests:**

- Potential Extra Abstracts (D0103-18);
- Mismatch Between Weight (0002-0999 g) and Low Birth Weight Diagnosis Code (D1002-20);
- Mismatch Between Weight (1000-2499 g) and Low Birth Weight Diagnosis Code (D1002-21);
- Unknown Weight 0001 Recorded for Newborns and Neonates Less than 29 Days (D0703-50);
- Missing ECT Intervention Code With Mental Health Indicators (D1102-53);
- Main Patient Service/Transfer Service 64 (Psychiatry) or 65 (Paediatric Psychiatry) Without Mental Health Indicator (D1502-54);
• Maternal Death Cases With Discharge Disposition Alive (D1002-57);
• Missing R94.30 (STEMI) When Status Attribute N or D is Assigned With 1.IJ.50.^^ (PCI) (D1002-60);
• Newborn Abstract Missing P07.2 Extreme Immaturity or P07.3 Other Preterm Infants (D1002-61);
• Diagnosis Type 0 With Diagnosis Code P07.2/P07.3 and Entry Code N (D1004-62);
• Unknown Admission Time (9999) (D0402-64);
• Unknown Discharge Time (9999) (D0402-65).

For more information, please contact CIHI at cad@cihi.ca.
Data Quality Tests

1. Potential Extra Abstracts (D0103-18)

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records where the below group of data elements are the same.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Element</td>
<td>Province/Territory, Institution Number, Health Care Number, Birth Date, Gender, Postal Code, Admission Date, Admission Time, Discharge Date, Discharge Time, Diagnosis Code, Intervention Code, Weight</td>
</tr>
</tbody>
</table>

2. Mismatch Between Weight (0002-0999 g) and Low Birth Weight Diagnosis Code (D1002-20)

**Rule/Rationale**
When a newborn abstract has the weight recorded between 0002 and 0999 grams, the corresponding low birth weight Diagnosis Code must match. Low birth weight recorded between 0002-0999 grams is classified to P07.0 Extremely low birth weight.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records where Entry Code = N and Weight = 0002-0999 grams and the Diagnosis Code P07.1 (Other low birth weight) is recorded.</th>
</tr>
</thead>
</table>
| Data Element       | Entry Code, Weight, Diagnosis Code | Correct Case Example | Entry Code = N  
Weight = 755 grams  
P07.0 Extremely low birth weight |
| Reference          | Canadian Coding Standards: Low Birth Weight and/or Preterm Infant; Version 2012 of ICD-10-CA. |

3. Mismatch Between Weight (1000-2499 g) and Low Birth Weight Diagnosis Code (D1002-21)

**Rule/Rationale**
When a newborn abstract has the weight recorded between 1000 and 2499 grams, the corresponding low birth weight Diagnosis Code must match. Low birth weight recorded between 1000 and 2499 grams is classified to P07.1 Other low birth weight.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records where Entry Code = N and Weight = 1000 - 2499 grams and the Diagnosis Code P07.0 (Extremely low birth weight) is recorded.</th>
</tr>
</thead>
</table>
| Data Element       | Entry Code, Weight, Diagnosis Code | Correct Case Example | Entry Code = N  
Weight = 2300 grams  
P07.1 Other low birth weight |
| Reference          | Canadian Coding Standards: Low Birth Weight and/or Preterm Infant; Version 2012 of ICD-10-CA. |
4. Incomplete Linkage of Mothers and Babies by Maternal/Newborn Chart Number (D0112-23)

Rule/Rationale
The Maternal/Newborn Chart Number on the mother’s record must be the same as the Chart Number recorded on her newborn’s record. The Maternal/Newborn Chart Number on the newborn’s record must be the same as the Chart Number recorded on his or her mother’s record.

The Maternal/Newborn Chart Number is the only data element used by CIHI to link mothers and their babies. The Maternal/Newborn Chart Number linkage is one of the provincial/territorial data quality indicators that ensure accurate information.

| Selection Criteria | Mother’s record contains Z37.0–, Z37.2–, Z37.3–, Z37.5–, Z37.6– or Z37.9– and Most Responsible Diagnosis Code is not O04– *Medical abortion* and One of the intervention codes is 5.MD.50.^ to 5.MD.60.^ &
| | Hospital-born newborn’s record contains Z38.0–, Z38.3– or Z38.6– and Most Responsible Diagnosis Code is not P96.4 *Termination of pregnancy, affecting fetus and newborn.*
| | Mothers’ records where the Maternal/Newborn Chart Number is not the same as the Chart Number in the newborns’ records.
| | Newborns’ records where the Maternal/Newborn Chart Number is not the same as the Chart Number in the mother’s records.

| Data Elements | Maternal/Newborn Chart Number, Chart Number

<table>
<thead>
<tr>
<th>Correct Case Example</th>
<th>Chart Number</th>
<th>Maternal/Newborn Chart Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>M00001</td>
<td>N00001</td>
</tr>
<tr>
<td>Newborn</td>
<td>N00001</td>
<td>M00001</td>
</tr>
</tbody>
</table>

The Maternal/Newborn Chart Number on the mother’s record is correctly recorded with newborn’s Chart Number, and the Maternal/Newborn Chart Number on the newborn’s record is correctly recorded with mother’s Chart Number.

Reference
DAD Abstracting Manual: Group 01—Submission Control Data Elements, Field 12—Maternal/Newborn Chart Number.
5. **Z51.5 Palliative Care Assigned Diagnosis Type 2 or 3 (D1002-27)**

**Rule/Rationale**
Z51.5 Palliative care is not assigned a Diagnosis Type 2 or 3. The diagnosis typing definitions do not fit nicely with Z51.5; therefore, specific direction is provided in the Palliative Care coding standard. Palliative care is not a condition per se, but rather a service provided to a specific patient population. Depending on the circumstances of the case, Z51.5 may be assigned Diagnosis Type M, 1, W, X or Y. For those facilities that do not capture service transfers (W, X and Y), the equivalent of a service transfer Diagnosis Type is Diagnosis Type 1.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records where Z51.5 is assigned Diagnosis Type 2 or 3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Elements</td>
<td>Diagnosis Code, Diagnosis Type</td>
</tr>
<tr>
<td>Correct Case Example</td>
<td>Z51.5 (M) Palliative care C18.9 (3) Malignant neoplasm colon, unspecified</td>
</tr>
<tr>
<td>Reference</td>
<td>Canadian Coding Standards: Palliative Care.</td>
</tr>
</tbody>
</table>

6. **Incorrect Status Attribute Assigned for Hip Replacement Interventions (D1103-29)**

**Rule/Rationale**
When one of the following codes, representing a mechanical complication or infection and inflammatory reaction due to an existing prosthesis, is assigned as Diagnosis Type M or 1

- T84.03 Mechanical complication of hip prosthesis
- T84.53 Infection and inflammatory reaction due to hip prosthesis

and the intervention recorded is

- 1.SQ.53.LA-PN Implantation of internal device, pelvis, prosthetic device, dual component [e.g. cup with protrusio ring or additional screw, plate fixation], uncemented [Status Attribute R]

the mandatory Status Attribute must be “R” (revision). The combination of Diagnosis and Intervention Codes describes a re-do of an intervention performed previously due to an unexpected problem, meeting the definition of a revised intervention.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records with Diagnosis Code T84.03 or T84.53 as Diagnosis Type M or 1 and Intervention code 1.SQ.53.LA or 1.VA.53.LA without Status Attribute “R” (revision).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Elements</td>
<td>Diagnosis Code, Diagnosis Type, Intervention Code, Intervention Status Attribute</td>
</tr>
<tr>
<td>Correct Case Examples</td>
<td>T84.53 (M) Infection and inflammatory reaction due to hip prosthesis [Diagnosis Cluster A] Y83.1 (9) Surgical operation with implant of artificial internal device as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure [Diagnosis Cluster A] 1.SQ.53.LA-PN Implantation of internal device, pelvis, prosthetic device, dual component [e.g. cup with protrusio ring or additional screw, plate fixation], uncemented [Status Attribute R]</td>
</tr>
<tr>
<td>Reference</td>
<td>Canadian Coding Standards: Revised Interventions.</td>
</tr>
</tbody>
</table>
7. Incorrect Status Attribute Assigned for Knee Replacement Interventions (D1103-30)

Rule/Rationale
When one of the following codes, representing a mechanical complication or infection and inflammatory reaction due to an existing prosthesis, is assigned as Diagnosis Type M or 1:
- T84.04 Mechanical complication of knee prosthesis
- T84.54 Infection and inflammatory reaction due to knee prosthesis
and the intervention recorded is
- 1.VG.53.^^ Implantation of internal device, knee joint
the mandatory Status Attribute must be “R” (revision). The combination of Diagnosis and Intervention Codes describes a re-do of an intervention performed previously due to an unexpected problem, meeting the definition of a revised intervention.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records with Diagnosis Code T84.04 or T84.54 as Diagnosis Type M or 1 and Intervention Code 1.VG.53.^^ without Status Attribute “R” (revision).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Elements</td>
<td>Diagnosis Code, Diagnosis Type, Intervention Code, Intervention Status Attribute</td>
</tr>
<tr>
<td>Correct Case Examples</td>
<td>T84.54 (M) Infection and inflammatory reaction due to knee prosthesis [Diagnosis Cluster A]</td>
</tr>
<tr>
<td></td>
<td>Y83.1 (9) Surgical operation with implant of artificial internal device as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure [Diagnosis Cluster A]</td>
</tr>
<tr>
<td></td>
<td>1.VG.53.LA-PM-N Implantation of internal device, knee joint, single component prosthetic device, with synthetic material (e.g. bone paste, cement, Dynagraft, Osteoset) [Status Attribute R]</td>
</tr>
</tbody>
</table>

Reference
Canadian Coding Standards: Revised Interventions.

8. Multiple Live-Born Births Coded as Live-Born Singleton (D1002-32)

Rule/Rationale
According to the Canadian Coding Standards, every newborn record must include a code from Z38.– Liveborn infants according to place of birth to indicate the plurality of birth. A live-born singleton is assigned a code from Z38.0– to Z38.2–. Live-born twins, triplets or other multiple births are assigned a code from Z38.3– to Z38.8–. A multiple birth newborn record must not have a code from Z38.0– to Z38.2– (singleton) recorded.
Most multiple births are delivered on the same date. However, some multiple births can occur on different dates. The codes Z38.3– to Z38.8– describe the plurality of the pregnancy and apply even when the births occur on different days or at different locations and/or when one or more of the babies are stillborn.
This analysis focuses on multiple births delivered on the same date. Clients may also perform analyses on different delivery dates, different delivery locations and where one or more newborns are stillborn.
9. **Death Discharge Disposition and Death Visit Disposition Assigned to the Same Patient in DAD and NACRS (D0505-34)**

*Rule/Rationale*

The DAD Discharge Disposition code 07—*Died* and NACRS Visit Disposition code 10—*Death after Arrival* or code 11—*Death on Arrival* can only be assigned once to the same patient.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records with Discharge Disposition code 07—died in DAD and Visit Disposition codes 10 or 11—death in NACRS and the same Health Care Number and Province/Territory Issuing Health Card Number in DAD and NACRS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Elements</td>
<td>Discharge Disposition (DAD), Visit Disposition (NACRS), Health Care Number</td>
</tr>
<tr>
<td>Correct Case Example</td>
<td>The same Health Care Number does not appear on more than one record with Discharge Disposition 07 in DAD or Visit Disposition 10 or 11 in NACRS.</td>
</tr>
</tbody>
</table>

10. **Three or More OOH Intervention Episodes in One Day (D1113-35)**

*Rule/Rationale*

According to the guideline provided in the *DAD Abstracting Manual*, an intervention episode represents a patient's visit to a physical location where one or more interventions may take place. When more than one CCI code is required to capture the interventions performed in a single intervention episode, the Intervention Episode Start Date will be recorded once on the first line of the abstract. Repeating the Intervention Episode Start Date for multiple interventions in the same episode may result in erroneously increasing the intervention count (used in Resource Intensity Weight assignment).

The Out-of-Hospital (OOH) Indicator field indicates that an intervention episode was performed in the ambulatory care area of another facility during the current inpatient stay in the reporting facility.

The purpose of this test is to identify records with potential errors of over-recording Intervention Episode Start Date for multiple OOH interventions in a single episode.
11. Diagnosis Code O75.701 with 5.MD.60.^^ Caesarean Section Delivery (D1102-44)

Rule/Rationale
For a single delivery case, O75.701 Vaginal delivery following previous caesarean section delivered with or without mention of antepartum condition must not be recorded with a code from 5.MD.60.^^ Caesarean section delivery because the combination of codes is contradictory. That is, O75.701 represents a vaginal delivery following a previous Caesarean section, so the expected intervention is a code from 5.MD.50.^^ to 5.MD.56.^^ (vaginal delivery) UNLESS the error is with incorrect selection of the Diagnosis Code.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records where O75.701 and Z37.0– or Z37.1– (Single live birth or Stillbirth delivery) are recorded with a code from 5.MD.60.^^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Elements</td>
<td>Diagnosis Code, Intervention Code</td>
</tr>
<tr>
<td>Correct Case Example</td>
<td>O75.701 (M) Other complications of labour and delivery, not elsewhere classified, vaginal delivery following previous caesarean section, delivered, with or without mention of antepartum condition</td>
</tr>
<tr>
<td></td>
<td>Z37.000 (3) Single live birth, pregnancy resulting from both spontaneous ovulation and conception</td>
</tr>
<tr>
<td></td>
<td>5.MD.50.AA Manually assisted vaginal delivery (vertex) without episiotomy</td>
</tr>
<tr>
<td>Reference</td>
<td>Canadian Coding Standards: Delivery With History of Previous Caesarean Section.</td>
</tr>
</tbody>
</table>

12. Unknown Weight 0001 Recorded for Newborns and Neonates Less Than 29 Days (D0703-50)

Rule/Rationale
Weight is required for Case Mix Group assignment. A high percentage of records with 0001 (unknown) weight may indicate facility documentation issues.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>The records where Entry Code is not equal S (Stillbirth) and Age Code = D or B and Age Unit = 0-29 and Weight = 0001.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Element</td>
<td>Weight, Entry Code, Age Code, Age Unit</td>
</tr>
</tbody>
</table>
13. Post-Procedural Disorder Codes Recorded Without an External Cause Code (D1002-52)

*Rule/Rationale*
All post-procedural disorder codes (see Appendix A) require an external cause code (Y60–Y84 or V01–X59).

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Diagnosis Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Records with a post-procedural disorder code (see Appendix A) AND without an external cause code (Y60–Y84 or V01–X59).</td>
<td></td>
</tr>
</tbody>
</table>

**Correct Case Examples**

<table>
<thead>
<tr>
<th>Example 1:</th>
<th>[Diagnosis Cluster A]</th>
</tr>
</thead>
<tbody>
<tr>
<td>K91.42 (M) Malfunction of colostomy stoma, not elsewhere classified</td>
<td>Y83.3  (9) Surgical operation with formation of external stoma as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 2:</th>
<th>[Diagnosis Cluster A]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M96.6 (M) Fracture of bone following insertion of orthopaedic implant, joint prosthesis, or bone plate</td>
<td>W10 (9) Fall on and from stairs and steps</td>
</tr>
<tr>
<td>U98.0 (9) Place of occurrence, home</td>
<td></td>
</tr>
</tbody>
</table>

**References**

14. Missing ECT Intervention Code (D1102-53)

*Rule/Rationale*
The ECT Intervention Code (1.AN.09.JA-DV *Stimulation, brain using external stimulation (for shock or convulsion]*) is mandatory to be recorded for certain CMG assignments (see the ECT CMG list below). For those facilities in Manitoba, Newfoundland and Labrador, New Brunswick and Ontario where the “Psychiatric Flag” is set on the Institution File, the ECT is mandatory to be recorded in Group 15 (Mental Health Indicators field 09 and 10). Recording ECT intervention only in Group 15 and not in the Intervention Code field would result in these cases not grouping properly and falling into the CMGs without ECT.

**Examples:**
Without ECT CMGs:

- CMG 677 Schizophrenia without ECT
- CMG 691 Bipolar Disorder, Severe Depression without ECT
- CMG 680 Schizoaffective Disorder without ECT
- CMG 689 Bipolar Disorder without ECT
- CMG 693 Depressive Episode without ECT
With ECT CMGs:
- CMG 676 Schizophrenia with ECT
- CMG 690 Bipolar Disorder, Severe Depression with ECT
- CMG 679 Schizoaffective Disorder with ECT
- CMG 688 Bipolar Disorder with ECT
- CMG 692 Depressive Episode with ECT

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Acute records where MH ECT Treatment = 2 (Yes) and ECT Intervention Code 1.AN.09.JA-DV is missing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Element</td>
<td>Intervention Code, ECT Treatment</td>
</tr>
</tbody>
</table>

**15. Main Patient Service/Transfer Service 64 (Psychiatry) or 65 (Paediatric Psychiatry) Without Mental Health Indicator (D1502-54)**

*Rule/Rationale*
This test is specific to Ontario facilities.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Ontario records where the Mental Health Edit Indicator = 1 and MPS or Transfer Service in 64 or 65 and there is no Mental Health Indicator recorded in Group 15.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Element</td>
<td>Institution Number, Main Patient Service, Service Transfer Service, Mental Health Edit Indicator = 1</td>
</tr>
</tbody>
</table>

**16. Maternal Death Cases With Discharge Disposition Alive (D1002-57)**

*Rule/Rationale*
When a diagnosis code of
- O95.– Obstetric death of unspecified cause, or
- O96.– Death from any obstetric cause occurring more than 42 days but less than one year after delivery, or
- O97.– Death from sequelae of obstetric causes
is assigned, the discharge disposition must be “07” Died.

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Records where Diagnosis Code O95.–, or, O96.–, or O97.– is assigned and Discharge Disposition is not equal to 07.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Element</td>
<td>Discharge Disposition, Diagnosis Code</td>
</tr>
<tr>
<td>Correct Case Example</td>
<td>Discharge disposition = 07 Died O95.001 Obstetric death of unspecified cause, delivered, with or without mention of antepartum condition</td>
</tr>
</tbody>
</table>
17. Surgical Repair, Postpartum of Current Obstetric Laceration-Diagnosis and Intervention Code Mismatch (D1002-58)

Rule/Rationale
When 5.PC.80.JP (repair of 1st or 2nd degree tear) or 5.PC.80.JQ (repair of 3rd or 4th degree tear) is assigned, the corresponding diagnosis code should match in terms of the degree of tear, one of O70.001 or O70.004 (1st degree tear), O70.101 or O70.104 (2nd degree tear), O70.201 or O70.204 (3rd degree tear) or O70.301 or O70.304 (4th degree tear). Additionally, when an obstetrical laceration is repaired, it is mandatory to assign the applicable diagnosis code (for the degree of laceration) as a significant diagnosis type and the intervention code for the repair.

Selection Criteria
Records where 5.PC.80.JP (1st or 2nd degree repair) is recorded with O70.201 or O70.204 (3rd degree perineal laceration), or O70.301 or O70.304 (4th degree perineal laceration) or 5.PC.80.JQ (3rd or 4th degree repair) is recorded with O70.001 or O70.004 (1st degree perineal laceration), or O70.101 or O70.104 (2nd degree perineal laceration).

Data Elements
Diagnosis Code, Intervention Code

Correct Case Example
O70.101 (M) Second degree perineal laceration during delivery, delivered, with or without mention of antepartum condition
Z37.000 (3) Single live birth, pregnancy resulting from both spontaneous ovulation and conception
5.PC.80.JP Surgical repair, postpartum of current obstetric laceration of pelvic floor, perineum, lower vagina or vulva (Includes: Repair of 1st or 2nd degree tear, minor periurethral tears)

Reference
Version 2012 of ICD-10-CA and CCI.


Rule/Rationale
When a percutaneous coronary intervention is performed—one of codes
- 1.IJ.50.^^ Dilation, coronary arteries; or
- 1.IJ.57-GQ-FV Extraction, coronary arteries, percutaneous transluminal approach using atherectomy device (e.g. transluminal extractor catheter, rotoablator, laser); or
- 1.IJ.57.GQ-GX Extraction, coronary arteries, percutaneous transluminal approach using device NEC [e.g. Thrombectomy device]

it is mandatory to also assign 3.IP.10.VX Xray, heart with coronary arteries of left heart structures using percutaneous transluminal arterial (retrograde) approach.3.
Selection Criteria | Records where 1.IJ.50.^^ or I.IJ.57-GQ-FV or 1.IJ.57.GQ-GX is assigned without 3.IP.10.VX (coronary angiography) for the same intervention episode.
---|---
Data Element | Intervention Code
Correct Case Example | 1.IJ.50.GQ-NR Dilation, coronary arteries, using endovascular stent only, percutaneous transluminal approach [e.g. with angioplasty alone]
References | Canadian Coding Standards: Selection of Interventions to Code for Ambulatory Care, Selection of Interventions to Code for Acute Inpatient Care; Self Learning Product: Moving Forward Using Version 2012 of ICD-10-CA and CCI. Lesson 3.3 Coronary Angiography.

19. Missing R94.30 (STEMI) Diagnosis Code When Status Attribute N or D Is Assigned With 1.IJ.50.^^ (PCI) (D1002-60)

Rule/Rationale
When the status attribute N Primary PCI for STEMI (ST segment elevation myocardial infarction) or D Other PCI for STEMI is assigned with a code from 1.IJ.50.^^, there must be a corresponding diagnosis for STEMI (i.e., R94.30 Electrocardiogram suggestive of ST segment elevation myocardial infarction [STEMI]). The status attribute N or D are reserved for cases in which a percutaneous coronary intervention is performed for a diagnosis of STEMI.

Selection Criteria | Records where Intervention Code 1.IJ.50.^^ and Status Attribute = N or D without Diagnosis Code R94.30.
---|---
Data Element | Diagnosis Code, Status Attribute, Intervention Code
Correct Case Example | 1.IJ.50.GQ-NR Dilation, coronary arteries, percutaneous transluminal approach [e.g. with angioplasty alone], using (endovascular) stent only
Status = N or D
I21.0 (M) Acute transmural myocardial infarction of anterior wall
R94.30 (3) Electrocardiogram suggestive of ST segment elevation myocardial infarction [STEMI]
Reference | Moving Forward Using Version 2012 of ICD-10-CA and CCI; Canadian Coding Standards: Selection of Status Attribute for Percutaneous Coronary Intervention (PCI).

20. Newborn Abstract Missing P07.2 Extreme Immaturity or P07.3 Other Preterm Infants (D1002-61)

Rule/Rationale
When gestational age of the newborn is less than 37 completed weeks, it is mandatory to assign, as a significant diagnosis type, either:
• P07.2 Extreme Immaturity;
• P07.3 Other Preterm infants.
## Selection Criteria
Records where:
- Entry Code is newborn (N) and the Gestational Age is recorded as 01 to 27 weeks, **without** a diagnosis code of P07.2 as diagnosis type M, 1,W, X or Y or
- Entry Code is newborn (N) and the Gestational Age is recorded as 28 to 36 weeks, **without** a diagnosis code of P07.3 as diagnosis type M,1,W,X or Y.

## Data Element
Entry Code, Gestational Age, Diagnosis Code

## Correct Case Example
- Entry Code = N (newborn)
- Gestational Age = 36 weeks
- P07.3 (M) Other preterm infants
- Z38.010 (0) Singleton, delivered by caesarean, product of both spontaneous (NOS) ovulation and conception

## References
Canadian Coding Standards: Low Birth Weight and/or Preterm Infant; Diagnosis Typing Definitions for DAD—Diagnosis Type (0)—Newborn.

### 21. Diagnosis Type 0 With Diagnosis Code P07.2/P07.3 and Entry Code N (D1004-62)

**Rule/Rationale**
When Gestational Age of the newborn is less than 37 completed weeks, it is mandatory to assign, as a **significant diagnosis type**, either:
- P07.2 *Extreme Immaturity*; or
- P07.3 *Other Preterm infants*.

## Selection Criteria
Records where Entry Code = N and Gestational Age is recorded as less than 37 weeks and Diagnosis Code P07.2 or P07.3 is assigned Diagnosis Type (0).

## Data Element
Diagnosis Code, Diagnosis Type, Entry code, Gestational Age

## Correct Case Example
- Entry Code = N (newborn)
- Gestational Age = 36 weeks
- P07.3 (M) Other preterm infants
- Z38.010 (0) Singleton, delivered by caesarean, product of both spontaneous (NOS) ovulation and conception

### 22. Unknown Admission Time (D0402-64)

**Selection Criteria**
Abstracts where Admission Time = 9999.

**Data Element**
Admission Time

### 23. Unknown Discharge Time (D0502-65)

**Selection Criteria**
Abstracts where Discharge Time = 9999.

**Data Element**
Discharge Time
Appendix A—Post-Procedural Disorder Codes

This list identifies all post-procedural disorder codes. When a code from this list is assigned, it always requires an external cause code. When the applicable external cause is from Y60–Y84, a Diagnosis Cluster must be applied.

E89.0 Postprocedural hypothyroidism
E89.1 Postprocedural hypoinsulinaemia
E89.2 Postprocedural hypoparathyroidism
E89.3 Postprocedural hypopituitarism
E89.4 Postprocedural ovarian failure
E89.5 Postprocedural testicular hypofunction
E89.6 Postprocedural adrenocortical (-medullary) hypofunction
E89.8 Other postprocedural endocrine and metabolic disorders
E89.9 Postprocedural endocrine and metabolic disorder, unspecified
G97.0 Cerebrospinal fluid leak from spinal puncture
G97.1 Other reactions to spinal and lumbar puncture
G97.2 Intracranial hypotension following ventricular shunting
G97.8 Other postprocedural disorders of nervous system
G97.9 Postprocedural disorder of nervous system, unspecified
H59.0 Keratopathy (bullous aphakic) following cataract surgery
H59.80 Cataract (lens) fragments in eye following cataract surgery
H59.81 Cystoid macular oedema following cataract surgery
H59.88 Other postprocedural disorders of eye and adnexa
H59.9 Postprocedural disorder of eye and adnexa, unspecified
H95.0 Recurrent cholesteatoma of postmastoidectomy cavity
H95.1 Other disorders following mastoidectomy
H95.8 Other postprocedural disorders of ear and mastoid process
H95.9 Postprocedural disorder of ear and mastoid process, unspecified
I97.0 Postcardiotomy syndrome
I97.1 Other functional disturbances following cardiac surgery
I97.2 Postmastectomy lymphoedema syndrome
I97.8 Other postprocedural disorders of circulatory system, not elsewhere classified
I97.9 Postprocedural disorder of circulatory system, unspecified
J95.00 Haemorrhage from tracheostomy stoma
J95.01 Infection of tracheostomy stoma
J95.02 Malfunction of tracheostomy stoma
J95.03 Tracheo-esophageal fistula following tracheostomy
J95.08 Other tracheostomy complication
J95.1 Acute pulmonary insufficiency following thoracic surgery
J95.2 Acute pulmonary insufficiency following nonthoracic surgery
J95.3 Chronic pulmonary insufficiency following surgery
J95.4 Mendelson's syndrome
J95.5 Postprocedural subglottic stenosis
J95.80 Postprocedural pneumothorax
J95.81 Transfusion related acute lung injury (TRALI)
J95.88 Other postprocedural respiratory disorders
J95.9 Postprocedural respiratory disorder, unspecified
K91.0 Vomiting following gastrointestinal surgery
K91.1 Postgastric surgery syndromes
K91.2 Postsurgical malabsorption, not elsewhere classified
K91.3 Postoperative intestinal obstruction
K91.40 Haemorrhage from colostomy stoma
K91.41 Infection of colostomy stoma
K91.42 Malfunction of colostomy stoma, not elsewhere classified
K91.43 Haemorrhage from enterostomy stoma
K91.44 Infection of enterostomy stoma
K91.45 Enterostomy malfunction, not elsewhere classified
K91.5 Postcholecystectomy syndrome
K91.60 Haemorrhage from gastrostomy stoma
K91.61 Infection of gastrostomy stoma
K91.62 Gastrostomy malfunction, not elsewhere classified
K91.8 Other postprocedural disorders of digestive system, not elsewhere classified
K91.9 Postprocedural disorder of digestive system, unspecified
M96.0 Pseudarthrosis after fusion or arthrodesis
M96.1 Postlaminectomy syndrome, not elsewhere classified
M96.2 Postradiation kyphosis
M96.3 Postlaminectomy kyphosis
M96.4 Postsurgical lordosis
M96.5 Postradiation scoliosis
M96.6 Fracture of bone following insertion of orthopaedic implant, joint prosthesis, or bone plate
M96.8 Other postprocedural musculoskeletal disorders
M96.9 Postprocedural musculoskeletal disorder, unspecified
N99.0 Postprocedural renal failure
N99.1 Postprocedural urethral stricture
N99.2  Postoperative adhesions of vagina
N99.3  Prolapse of vaginal vault after hysterectomy
N99.4  Postprocedural pelvic peritoneal adhesions
N99.50 Haemorrhage from external stoma of urinary tract
N99.51 Infection of external stoma of urinary tract
N99.52 Other malfunction of external stoma of urinary tract, NEC
N99.8  Other postprocedural disorders of genitourinary system
N99.9  Postprocedural disorder of genitourinary system, unspecified
Talk to Us

CIHI Ottawa
495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6
Phone: 613-241-7860

CIHI Toronto
4110 Yonge Street, Suite 300
Toronto, Ontario M2P 2B7
Phone: 416-481-2002

CIHI Victoria
880 Douglas Street, Suite 600
Victoria, British Columbia V8W 2B7
Phone: 250-220-4100

CIHI Montréal
1010 Sherbrooke Street West, Suite 300
Montréal, Quebec H3A 2R7
Phone: 514-842-2226

CIHI St. John’s
140 Water Street, Suite 701
St. John’s, Newfoundland and Labrador A1C 6H6
Phone: 709-576-7006

www.cihi.ca
At the heart of data