



NACRS Open-Year Data Quality
Technical Specifications, 2012–2013

Standards and Data Submission



Canadian Institute
for Health Information

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Better data. Better decisions.
Healthier Canadians.

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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

Table of Contents

- Table of Contents 1
- Introduction 1
- Purpose 1
- Updates 1
- Data Quality Tests 3
 - 1 High Proportion of Records With Triage Date/Time Equal to Registration Date/Time (DQT01) 3
 - 2 High Proportion of Records With Registration Date/Time Equal to Physician Initial Assessment (PIA) Date/Time (DQT02)..... 3
 - 3 High Proportion of Records With Registration Date/Time Equal to Main Intervention Date/Time (DQT03)..... 4
 - 4 High Proportion of Records With Registration Date/Time Equal to Disposition Date/Time (DQT04) 4
 - 5 High Proportion of Records With Unknown Disposition Time (DQT05)..... 4
 - 6 High Proportion of Records With Unknown Triage Time (DQT06) 5
 - 7 Institution To Coded With Visit Disposition In (12, 13, 14) (DQT07)..... 5
 - 8 High Proportion of Records With Unknown Physician Initial Assessment Time (DQT08)..... 5
 - 9 High Proportion of Records With Unknown Patient Left ED Time (DQT09) 6
 - 10 Time Waiting for Physician Initial Assessment (TPIA) Greater Than 24 Hours (DQT10)..... 6
 - 11 Main Intervention Coded When Patient Left Without Being Seen (DQT11) 7
 - 12 Main Intervention Coded When DOA (DQT12)..... 7
 - 13 Length of Stay (LOS_HOURS) Greater Than 72 Hours (3 Days) (DQT13)..... 7
 - 14 Intervention Duration Greater Than 1,440 Minutes (1 Day) (DQT14)..... 8
 - 15 Duplicates (DQT15) 8
 - 16 Death Recorded Multiple Times (DQT16)..... 8
 - 17 High Proportion of Records With Unknown Triage Level (DQT17)..... 9
 - 18 Date/Time Patient Left ED (PLED) Is the Same as Disposition Date/Time (DQT23)..... 9
 - 19 Myocardial Infarction (I21-, I22-, or I24.0), Without R94.30 (STEMI), R94.31 (NSTEMI), or R94.38 (Unspecified) (DQT26) 10
- Appendix: Indicators Formula Specifications..... 11

Introduction

CIHI is committed to collecting and disseminating high quality data. In support of this commitment, the National Ambulatory Care Reporting System (NACRS) applies the CIHI Data Quality Framework to its procedures and data holdings annually. This Data Quality Framework is available on the CIHI website (www.cihi.ca) for those interested. One ongoing key activity within NACRS is the data quality analysis performed during the submission year and after year end. Suspect findings that are found during the open-year analyses are communicated back to the submitting facility for further investigation.

Purpose

The purpose of this document is to help clients submitting to NACRS identify abstracts that have suspected data quality issues. Clients should refer to this document every time they have been contacted by a CIHI client service representative (CSR) regarding a specific data quality test.

This document lists the data quality tests performed in NACRS. Each test is indexed by a reference number that is communicated to clients. It is recommended that clients apply the inclusion and exclusion criteria when they use the specified formula.

For certain data quality tests that include day surgery and other types of ambulatory care, please refer to the National MIS Standards Functional Centre Accounts to Ambulatory Care Group Mapping Table. It is located in Appendix D of the *NACRS Manual* and will provide a list of valid MIS functional centres for a variety of ambulatory visit types.

Once clients have identified abstracts with suspected data quality issues, it is highly recommended they resolve the issues and submit corrections to CIHI.

Updates

The following changes were made to the 2012-2013 NACRS Technical Specifications:

Retired data quality tests:

- Unusual Proportion of Records With Unknown Ambulance Arrival Time (DQT18);
- Unusual Proportion of Records With Unknown Ambulance Transfer of Care Time (DQT19);
- Unusual Proportion of Records With Unknown Clinical Decision Unit Time In (DQT20);
- Unusual Proportion of Records With Unknown Clinical Decision Unit Time Out (DQT21);

- Unusual Proportion of Records With Unknown Access to Primary Health Care Code (DQT22);
- Unusual proportion of Records with Unknown Consult Arrival Time (DQT24);
- High Volume of Records With Status After Triage Coded as 1 (default value suspected) (DQT25).

Newly added data quality test:

- Myocardial Infarction (I21-, I22-, or I24.0), Without R94.30 (STEMI), R94.31 (NSTEMI), or R94.38 (Unspecified) (DQT26)

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

Data Quality Tests

1 High Proportion of Records With Triage Date/Time Equal to Registration Date/Time (DQT01)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1
Exclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition = 02
Formula	Triage Date and Time = Registration Date and Time
Data Elements	Visit MIS Functional Centre Account Code; Triage Date; Triage Time; Date of Registration/Visit; Registration/Visit Time; Visit Disposition; ED Visit Indicator

2 High Proportion of Records With Registration Date/Time Equal to Physician Initial Assessment (PIA) Date/Time (DQT02)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • Provider Type = M • Service Provider in (00000 to 00122) • ED Visit Indicator = 1
Exclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition in (02, 03) • Triage Level = 1
Formula	Registration Date and Time = PIA Date and Time
Data Elements	Visit MIS Functional Centre Account Code; Triage Level; Date of Registration/Visit; Registration/Visit Time; Date of Physician Initial Assessment; Time of Physician Initial Assessment; Visit Disposition; Provider Type; Provider Service; ED Visit Indicator

3 High Proportion of Records With Registration Date/Time Equal to Main Intervention Date/Time (DQT03)

Patient Care Type	Day Surgery
Submission Level	Level 3
Inclusion Criteria	All
Exclusion Criteria	N/A
Formula	Registration Date and Time = Main Intervention Date and Time
Data Elements	Visit MIS Functional Centre Account Code; Date of Registration/Visit; Registration/Visit Time; Main Intervention Start Date; Main Intervention Start Time

4 High Proportion of Records With Registration Date/Time Equal to Disposition Date/Time (DQT04)

Patient Care Type	<ul style="list-style-type: none"> • ED Visits • Day Surgery
Submission Level	Levels 1 to 3
Inclusion Criteria	All
Exclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition in (02, 03)
Formula	Registration Date and Time = Disposition Date and Time
Data Elements	Visit MIS Functional Centre Account Code; Date of Registration/Visit; Registration/Visit Time; Visit Disposition; Disposition Date; Disposition Time;

5 High Proportion of Records With Unknown Disposition Time (DQT05)

Patient Care Type	<ul style="list-style-type: none"> • ED Visits • Day Surgery
Submission Level	Levels 1 to 3
Inclusion Criteria	All
Exclusion Criteria	N/A
Formula	Disposition Time = 9999
Data Elements	Visit MIS Functional Centre Account Code; Triage Level; Disposition Time; ED Visit Indicator

6 High Proportion of Records With Unknown Triage Time (DQT06)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1
Exclusion Criteria	<ul style="list-style-type: none"> • Triage Level = Blank
Formula	Triage Time = 9999
Data Elements	Visit MIS Functional Centre Account Code; Triage Time; Triage Level; ED Visit Indicator

7 Institution To Coded With Visit Disposition In (12, 13, 14) (DQT07)

Patient Care Type	All
Submission Level	Level 3
Inclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition = (12, 13, 14)
Exclusion Criteria	<ul style="list-style-type: none"> • Institution To = Blank
Formula	Visit Disposition in (12, 13, 14) and Institution To is not blank
Data Elements	Visit Disposition; Institution To

8 High Proportion of Records With Unknown Physician Initial Assessment Time (DQT08)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1 • Provider Type = M • Provider Service in (00000 to 00122)
Exclusion Criteria	<ul style="list-style-type: none"> • Triage Level = Blank
Formula	Time of Physician Initial Assessment = 9999
Data Elements	Visit MIS Functional Centre Account Code; Time of Physician Initial Assessment; Provider Type; Provider Service; ED Visit Indicator

9 High Proportion of Records With Unknown Patient Left ED Time (DQT09)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1 • Visit Disposition in (06, 07, 08, 09, 12, 14)
Exclusion Criteria	<ul style="list-style-type: none"> • Triage Level = Blank
Formula	Patient Left ED Time = 9999
Data Elements	Visit MIS Functional Centre Account Code; Visit Disposition; Time Patient Left Emergency Department; ED Visit Indicator

10 Time Waiting for Physician Initial Assessment (TPIA) Greater Than 24 Hours (DQT10)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1 • Provider Type = M • Provider Service in (00000 to 00122)
Exclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition in (02, 03) • Triage Level = Blank
Formula	TPIA* >24 Hours
Data Elements	Visit MIS Functional Centre Account Code; Triage Date; Triage Time; Date of Registration/Visit; Registration/Visit Time; Date of Physician Initial Assessment; Time of Physician Initial Assessment; Visit Disposition; Provider Type; Provider Service; ED Visit Indicator

Note

* Please see appendix for TPIA calculation.

11 Main Intervention Coded When Patient Left Without Being Seen (DQT11)

Patient Care Type	All
Submission Level	Level 3
Inclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition = 02
Exclusion Criteria	<ul style="list-style-type: none"> • Main Intervention = Blank
Formula	Visit Disposition = 02 and Main Intervention is not blank
Data Elements	Visit Disposition; Main Intervention

12 Main Intervention Coded When DOA (DQT12)

Patient Care Type	All
Submission Level	Level 3
Inclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition = 11
Exclusion Criteria	<ul style="list-style-type: none"> • Main Intervention = Blank
Formula	Main Intervention* is not blank when Visit Disposition = 11
Data Elements	Visit Disposition; Main Intervention

Note

* DOA patients can have interventions related to harvesting organs and confirming death.

13 Length of Stay (LOS_HOURS) Greater Than 72 Hours (3 Days) (DQT13)

Patient Care Type	All
Submission Level	Levels 1 to 3
Inclusion Criteria	All
Exclusion Criteria	N/A
Formula	LOS_HOURS* >72 Hours (3 Days)
Data Elements	Triage Date; Triage Time; Date of Registration/Visit; Registration/Visit Time; Visit Disposition; Disposition Date; Disposition Time; Date Patient Left Emergency Department; Time Patient Left Emergency Department

Note

* Please see appendix for LOS calculation.

14 Intervention Duration Greater Than 1,440 Minutes (1 Day) (DQT14)

Patient Care Type	All
Submission Level	Level 3
Inclusion Criteria	<ul style="list-style-type: none"> • Intervention Duration is coded
Exclusion Criteria	N/A
Formula	Intervention Duration >1,440 Minutes (1 Day) and Intervention Duration ≠ 9999
Data Elements	Duration of Ambulatory Care Intervention for Main and Other Interventions

15 Duplicates (DQT15)

Patient Care Type	All
Submission Level	Levels 1 to 3
Inclusion Criteria	All
Exclusion Criteria	N/A
Formula	Match all records on all data elements except for Abstract ID Number
Data Elements	All data elements

16 Death Recorded Multiple Times (DQT16)

Patient Care Type	All
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • Visit Disposition in (10, 11)
Exclusion Criteria	<ul style="list-style-type: none"> • Health Care Number coded as 0 or 1
Formula	Match all records with Visit Disposition in (10, 11) on Health Care Number and Province/Territory Issuing Health Care Number
Data Elements	Health Care Number; Province/Territory Issuing Health Care Number; Visit Disposition

17 High Proportion of Records With Unknown Triage Level (DQT17)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1
Exclusion Criteria	<ul style="list-style-type: none"> • Triage Level = Blank
Formula	Triage Level = 9
Data Elements	Visit MIS Functional Centre Account Code; Triage Level; ED Visit Indicator

18 Date/Time Patient Left ED (PLED) Is the Same as Disposition Date/Time (DQT23)

Patient Care Type	ED Visits
Submission Level	Levels 1 to 3
Inclusion Criteria	<ul style="list-style-type: none"> • ED Visit Indicator = 1 • Visit Disposition in (06, 07, 08, 09)
Exclusion Criteria	<ul style="list-style-type: none"> • Triage Level = Blank • Time_PLED = 9999 and Disposition Time = 9999
Formula	Date_PLED = Disposition Date and Time_PLED = Disposition Time
Data Elements	Visit MIS Functional Centre Account Code; Triage Level; Visit Disposition; Disposition Date; Disposition Time; Date Patient Left Emergency Department; Time Patient Left Emergency Department; ED Visit Indicator

19 Myocardial Infarction (I21-, I22-, or I24.0), Without R94.30 (STEMI), R94.31 (NSTEMI), or R94.38 (Unspecified) (DQT26)

Patient Care Type	All
Submission Level	Level 3
Inclusion Criteria	<ul style="list-style-type: none"> Records where I21.-, or I22.-, or I24.0 is assigned as Main or Other Problem
Exclusion Criteria	N/A
Formula	Main or Other Problem = I21.-, or I22.-, or I24.0 without R94.30, or R94.31, or R94.38
Data Elements	Main Problem; Other Problem(s)

Appendix: Indicators Formula Specifications

Time Waiting for Physician Initial Assessment (TPIA, calculated in hours)

Description:	<p>To be calculated for records with the following: MIS Functional Centre in the 7*310 series, where * = 1, 2 or 3; and ED Visit Indicator equals 1; and Triage Level = {1, 2, 3, 4, 5 or 9}; and Visit Disposition = 01, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14 or 15</p> <p>Formula: WAIT_TIME_TO_PIA_HOURS = (Date/Time PIA) - (Registration Date/Time) or (Triage Date/Time)</p> <p>Special Instructions: Use (Registration Date/Time) when a) (Triage Date/Time) is later than (Registration Date/Time); or b) (Triage Date/Time) does not contain a valid time/date value.</p> <p>Use (Triage Date/Time) when a) (Registration Date/Time) is later than or equal to (Triage Date/Time); or b) (Registration Date/Time) does not contain a valid time/date value.</p> <p>If Date/Time of Physician Initial Assessment is blank or Time of Physician Initial Assessment = 9999, then WAIT_TIME_TO_PIA_HOURS = blank.</p> <p>If both Triage Date/Time AND Registration Date/Time are blank or 9999, then WAIT_TIME_TO_PIA_HOURS = blank.</p> <p>When the calculated result of WAIT_TIME_TO_PIA_HOURS is NEGATIVE, assign zero to it.</p>
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Length of Stay (LOS_HOURS, calculated in hours)

Description:	<p>Formula: LOS_HOURS = (Date/Time Patient Left ED) OR (Disposition Date/Time) - (Registration Date/Time) OR (Triage Date/Time)</p> <p>Special Instructions:</p> <p>Use (Date/Time Patient Left ED) when</p> <ul style="list-style-type: none"> a) Visit Disposition = 06, 07, 08, 09, 12, 13 or 14; or b) Visit Disposition = 01, 02, 03, 04, 05, 10, 11 or 15 and (Disposition Date/Time) does not contain a valid time/date value. <p>Use (Disposition Date/Time) when</p> <ul style="list-style-type: none"> a) Visit Disposition = 01, 02, 03, 04, 05, 10, 11 or 15; or b) Visit Disposition = 06, 07, 08, 09, 12, 13 or 14 and (Date/Time Patient Left ED) does not contain a valid time/date value. <p>Use (Registration Date/Time) when</p> <ul style="list-style-type: none"> a) (Triage Date/Time) is later than (Registration Date/Time); or b) (Triage Date/Time) does not contain a valid time/date value. <p>Use (Triage Date/Time) when</p> <ul style="list-style-type: none"> a) (Registration Date/Time) is later than or equal to (Triage Date/Time); or b) (Registration Date/Time) does not contain a valid time/date value. <p>If both (Date/Time Patient Left ED) and (Disposition Date/Time) do not contain valid values, then LOS_HOURS = null.</p> <p>If both (Triage Date/Time) and (Registration Date/Time) do not contain valid values, then LOS_HOURS = null.</p>
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