



National Ambulatory Care Reporting System
Open-Year Data Quality Test Specifications,
2015–2016



Our vision

Better data. Better decisions.
Healthier Canadians.

Our mandate

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

Our values

Respect, Integrity, Collaboration,
Excellence, Innovation

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Introduction

As part of the Canadian Institute for Health Information's (CIHI's) commitment to quality data, the National Ambulatory Care Reporting System (NACRS) 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 Open-Year Data Quality (OYDQ) reports that will be sent at a later date to facilities to communicate suspect data quality issues for investigation and/or correction as applicable; and
- Help NACRS clients create their own data quality audits to identify abstracts with suspected data quality issues.

This document lists the OYDQ tests performed on the NACRS, along with their rule, patient care type, submission level, selection criteria, and the data elements used in the analysis. Each test is indexed by a reference number and this number is used for all communication with clients.

For certain OYDQ 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, using the selection criteria found within this OYDQ document, it is highly recommended they resolve the issues and submit corrections to CIHI.

Updates

The NACRS Open-Year Data Quality Test Specifications document is updated every fiscal year with new or deleted OYDQ tests. An OYDQ test may be deleted if new edits are created or if the data quality issue is no longer relevant. An OYDQ test may also be modified to reflect enhancements to the *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (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*.

The results for the tests showing very low volumes of data quality issues are not included in the OYDQ reports.

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

Open-Year Data Quality Tests: Summary and Rationale

The following table provides a brief summary of the NACRS OYDQ tests for 2015-2016. In the rationale column, the table also highlights a number of key impacts of correcting these DQ issues.

OYDQ Test Number	OYDQ Test Title	Short Description	Rationale
N0045-52	Post-Procedure Disorder Code (see Appendix A) Recorded Without an External Cause Code	All post-procedural disorder codes require an external cause code (Y60–Y84 or V01–X59).	Results not included in OYDQ reports due to low volumes Originally included since post-procedural codes are used in reports which are provided to external clients.
N0047-83	Status Attribute Not Equal to DX (Diagnostic) With Coronary Angiogram	The Intervention code 3.IP.10.VX <i>Xray, heart with coronary arteries of left heart structures using percutaneous transluminal arterial (retrograde) approach</i> should have a status attribute of DX (Diagnostic) when the only intervention episode is coronary angiogram 3.IP.10.VX and there is only one intervention episode.	Results not included in OYDQ reports due to low volumes It is important to distinguish diagnostic coronary angiogram from other coronary angiograms.
N0039-105	Institution To Assigned With Visit Disposition In 12 (Intra-facility transfer to day surgery), 13 (Intra-facility transfer to the emergency department) or 14 (Intra-facility transfer to clinic)	Institution To must be blank when Visit Disposition indicates intra facility transfer.	Results not included in OYDQ reports due to low volumes An Intra-facility transfer to day surgery, emergency department or clinic applies to transfers within the reporting facility. The information is important for patient flow within the system and across sectors.
N9340-99	Stroke Diagnosis Code Without Project 340 Field Recorded	When a stroke Diagnosis Code is recorded, the Project Number 340 should also be recorded.	Stroke is a high priority health initiative.
N9340-103 MODIFIED	Not Applicable or Unknown Value for Field 157 (<i>Prescription for Antithrombotic Medication at Discharge</i>) When Project 340 Recorded for ischaemic stroke	When Project 340 is recorded, it is mandatory to complete the field <i>Prescription for antithrombotic medication at discharge</i> whether patients with a diagnosis of ischaemic stroke received a prescription for antithrombotic medication from the ED.	Stroke is a high priority health initiative.
N9340-123 NEW	Missing, Invalid or Unknown Value for Fields 158 to 169 (<i>Stroke Symptom Onset Date and Time</i>) When Project 340 Recorded	When Project 340 is recorded, it is mandatory to complete Fields 158 to 169 (<i>Stroke Symptom Onset Date and Time</i>). This field captures the date and time that the patient first started to experience stroke symptoms, regardless of the location of the patient at the time of symptom onset.	Stroke is a high priority health initiative

OYDQ Test Number	OYDQ Test Title	Short Description	Rationale
N9340-124 NEW	Stroke Symptom Onset Date and Time after Arrival Date and Time When Project 340 Recorded	When Project 340 is recorded, it is mandatory to complete Fields 158 to 169 (Stroke Symptom Onset Date and Time). This field captures the date and time that the patient first started to experience stroke symptoms, regardless of the location of the patient at the time of symptom onset. The Stroke Symptom Onset Date and Time must be a date/time earlier than the emergency department arrival date	Stroke is a high priority health initiative
N9340-125 NEW	High Level of N (No) for Field 147 (<i>Referral to Stroke Prevention Services at ED Discharge</i>) When Project 340 Recorded	When Project 340 is recorded, it is mandatory to complete Field 147 (<i>Referral to Stroke Prevention Services at ED Discharge</i>). This field captures whether patients with a diagnosis of stroke or transient ischemic attack receive a referral for stroke prevention follow-up at discharge.	Stroke is a high priority health initiative

Open-Year Data Quality Tests

1. Post-Procedure Disorder Code Recorded Without an External Cause Code (N0045-52)

Rule

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

Patient Care Type	All
Submission Level	Level 3
Selection Criteria	Abstracts with a post-procedural disorder diagnosis code (see Appendix A) AND without an external cause code (Y60–Y84 or V01–X59).
Data Elements	Main Problem; Other Problem(s)

2. Status Attribute Not Equal to DX (*Diagnostic*) With Coronary Angiogram (N0047-83)

Rule

The code 3.IP.10.VX *Xray, heart with coronary arteries of left heart structures using percutaneous transluminal arterial (retrograde) approach* must have a status attribute of DX (Diagnostic) when the only intervention performed during ambulatory care visit is coronary angiogram 3.IP.10.VX and there is only one intervention code.

Patient Care Type	All
Submission Level	Level 3
Selection Criteria	Abstracts where only Main Intervention is recorded in the abstract, the intervention code is 3.IP.10.VX and Main Intervention Status Attribute is not equal to DX.
Data Elements	Main Intervention; Other Intervention(s); Main Intervention Attributes Status

3. Institution To Assigned With Visit Disposition In 12 (*Intra-facility transfer to day surgery*), 13 (*Intra-facility transfer to the emergency department*) or 14 (*Intra-facility transfer to clinic*) (N0039-105)

Rule

Institution To must be blank when Visit Disposition indicates intra facility transfer.

Patient Care Type	All
Submission Level	Level 3
Selection Criteria	Visit Disposition in (12, 13 or 14) and Institution To is not blank.
Data Elements	Visit Disposition; Institution To

4. Stroke Diagnosis Code Without Project 340 Field Recorded (N9340-99)

Rule

Project 340 is mandatory in select jurisdictions. This test will only be completed for those jurisdictions where Project 340 is mandatory.

Project 340 should be completed for all new ischemic and haemorrhagic stroke and transient ischemic attack cases in NACRS Level 3 Emergency Department, where the stroke is recorded as the Main Problem (data element 44):

- I60.- *Subarachnoid haemorrhage (excluding I60.8- Other subarachnoid haemorrhage);*
- I61.- *Intracerebral haemorrhage;*
- I63.- *Cerebral infarction (excluding I63.6 Cerebral infarction due to cerebral venous thrombosis, nonpyogenic);*
- I64 *Stroke, not specified as haemorrhage or infarction;*
- I67.6 *Nonpyogenic thrombosis of intracranial venous system;*
- H34.0 *Transient retinal artery occlusion;*
- H34.1 *Central retinal artery occlusion;*
- G45.- *Transient cerebral ischaemic attacks and related syndromes; (excluding G45.4 Transient global amnesia).*

Includes cases where the stroke is secondary to a complication of pregnancy (O99.4, O88.-).

Please note that, it is not possible to identify “NEW” stroke cases among the data already submitted with the selection criteria of Project Number 340. Therefore, there may be cases flagged with this test that do not require correction.

Notes: There may be cases flagged with this test that do not require completion of project 340. Refer to the NACRS manual for complete data collection instructions.

Patient Care Type	ED
Submission Level	Level 3
Selection Criteria	<p>Inclusions:</p> <p>Facility Province: ON</p> <p>AND</p> <p>Diagnosis Code of Stroke or TIA: I60.- (excluding I60.8), I61.-, I63.- (excluding I63.6), I64, I67.6, H34.0, H34.1, G45.- (excluding G45.4) recorded as Main Problem (data element 44).</p> <p>Exclusions:</p> <ol style="list-style-type: none"> 1. Cases where the stroke is a complication of poisoning with Diagnosis of T36.0 to T50.9. 2. Cases where the stroke (hemorrhage) is due to a brain neoplasm (C71.-, C79.3, D33.0 - D33.2, D43.0 - D43.2). 3. Cases that are transferred to inpatient within the same reporting facility (Visit Disposition = 06, 07)
Data Elements	Main Problem; Other Problem(s); Project Number
References	NACRS Abstracting Manual: NACRS Special Projects—Project 340.

5. Not Applicable or Unknown Value for Field 157 (Prescription for Antithrombotic Medication at Discharge) When Project 340 Recorded for ischaemic stroke (N9340-103)

Rule

When Project 340 is recorded, it is mandatory to complete Field 157 (*Prescription for Antithrombotic Medication at Discharge*). This field captures whether patients with a diagnosis of ischaemic stroke (I63.– (excluding I63.6), I64, I67.6, H34.0, H34.1, G45.– (excluding G45.4)) receive a prescription for antithrombotic medication at discharge from ED.

This test will be completed for all abstracts where Project 340 has been completed, regardless of whether it is mandatory in a particular jurisdiction. A high percent of abstracts with not applicable (8) or unknown (9) value for Field 157 may indicate a need to investigate practices around the capturing of prescription for antithrombotic medication at discharge.

Please note that this test will only be included in the summary reports and only the results for facilities with greater than 0% of abstracts with missing, invalid or unknown value for Field 157 when Project 340 recorded will be reported. Abstract identification information will not be provided for this test.

Patient Care Type	ED
Submission Level	Level 3
Selection Criteria	Project Number 340 where ischaemic stroke diagnosis cases (I63.– (excluding I63.6), I64, I67.6, H34.0, H34.1, G45.– (excluding G45.4)) are recorded and Field 157 is not applicable (8) or unknown (9) Exclusions: Records where the stroke diagnosis is I60.- or I61.- Records where visit disposition='10' or '11' (Death after or on arrival) and Field 157 = '8'
Data Elements	Project Number, Field 157
References	NACRS Abstracting Manual: NACRS Special Projects—Project 340.

6. Missing, Invalid or Unknown Value for Fields 158 to 169 (*Stroke Symptom Onset Date and Time*) When Project 340 Recorded (N9340-123)

Rule

When Project 340 is recorded, it is mandatory to complete Fields 158 to 169 (*Stroke Symptom Onset Date and Time*). This field captures the date and time that the patient first started to experience stroke symptoms, regardless of the location of the patient at the time of symptom onset.

This test will be completed for all abstracts where Project 340 has been completed, regardless of whether it is mandatory in a particular jurisdiction. A high percent of abstracts with missing, invalid or unknown date and time for Fields 158 to 169 may indicate a need to investigate practices around the capturing of stroke symptom onset date and time.

Please note that this test will only be included in the summary reports and only the results for facilities with greater than 0% of abstracts with missing, invalid or unknown date and time for Fields 158 to 169 when Project 340 recorded will be reported. Abstract identification information will not be provided for this test.

Patient Care Type	ED
Submission Level	Level 3
Selection Criteria	Project Number 340 for stroke diagnosis cases is recorded and Fields 158 to 169 are missing, invalid or unknown date and/or time, as follows: Fields 158-161 (Year): is blank or has unknown value (9999) or is not valid four character code of 2015 or 2016 Fields 162-163 (Month): is blank or has unknown value (99) or is not valid two character code of 01-12 Fields 164-165 (Day): is blank or has an unknown value (99) or is not a valid two character code of 01-31 Fields 166-167 (Hour): is blank or has an unknown value (99) or is not a valid two digit character of 00-23 Fields 168-169: Minutes: is blank or has an unknown value of (99) or is not a valid two digit character of 00-59
Data Elements	Project Number, Fields 158 to 169
References	NACRS Abstracting Manual: NACRS Special Projects—Project 340.

7. Stroke Symptom Onset Date and Time after Arrival Date and Time When Project 340 Recorded (N9340-124)

Rule

When Project 340 is recorded, it is mandatory to complete Fields 158 to 169 (*Stroke Symptom Onset Date and Time*). This field captures the date and time that the patient first started to experience stroke symptoms, regardless of the location of the patient at the time of symptom onset. The Stroke Symptom Onset Date and Time must be a date/time earlier than the emergency department arrival date.

This test will be completed for all abstracts where Project 340 has been completed, regardless of whether it is mandatory in a particular jurisdiction.

Patient Care Type	ED
Submission Level	Level 3
Selection Criteria	<p>Arrival Date, Date of Registration or Triage Date is a valid date and Project Number 340 for stroke diagnosis cases is recorded and Fields 158 to 165 (Stroke Symptom Onset Date) is a valid date:</p> <ul style="list-style-type: none"> • Fields 158-161 (Year): is a valid four character code of any year • Fields 162-163 (Month): is a valid two character code of 01-12 • Fields 164-165 (Day): is a valid two character code of 01-31 <p>And One of the following conditions is met:</p> <ul style="list-style-type: none"> • If Arrival Time and Fields 166-169 (Stroke Symptom Onset Time) are a valid four digit character of 0000-2359, values recorded in Fields 158 to 169 are after the Arrival Date and Time • If Arrival Time or Fields 166-169 (Stroke Symptom Onset Time) is not a valid four digit character of 0000-2359, values recorded in Fields 158 to 169 are after the Arrival Date <p>Note: If Arrival Date/Time is not a valid date, the earlier of the Triage Date/Time and Date of Registration/Registration Time is used to compare with Stroke Symptom Onset Date/Time</p>
Data Elements	Arrival Date, Arrival Time, Date of Registration, Time of Registration, Triage Date, Triage Time, Project Number, Fields 158 to 169
References	NACRS Abstracting Manual: NACRS Special Projects—Project 340.

8. High Level of N (No) for Field 147 (*Referral to Stroke Prevention Services at ED Discharge*) When Project 340 Recorded (N9340-125)

Rule

When Project 340 is recorded, it is mandatory to complete Field 147 (*Referral to Stroke Prevention Services at ED Discharge*). This field captures whether patients with a diagnosis of stroke or transient ischemic attack receive a referral for stroke prevention follow-up at discharge.

This test will be completed for all abstracts where Project 340 has been completed, regardless of whether it is mandatory in a particular jurisdiction. A percentage higher than 50% of abstracts with value N (No) for Field 147 may indicate a need to investigate practices around the capturing of referral to stroke prevention services at ED discharge.

Please note that this test will only be included in the summary reports and only the results for facilities with greater than 50% of abstracts with N for Field 147 when Project 340 recorded will be reported. Abstract identification information will not be provided for this test.

Patient Care Type	ED
Submission Level	Level 3
Selection Criteria	Project Number 340 for stroke diagnosis cases is recorded and at least 50% of these records have the Field 147 recorded as N, at one facility.
Data Elements	Project Number, Field 147
References	NACRS Abstracting Manual: NACRS Special Projects—Project 340.

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
- M96.60 Fracture of bone following insertion of joint prosthesis
- M96.68 Fracture of bone following insertion of other and unspecified orthopaedic implant
- 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

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