

Data Dictionary

ICD-9-CM Principal Diagnosis Code

Element definition from Specifications Manual for National Hospital Inpatient Quality Measures

The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.

Any valid ICD-9-CM diagnosis code

Notes for Abstraction:

The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."

Suggested Data Sources:

- Discharge summary
- Face sheet
- UB-04, Field Location: 67

Guidelines for Abstraction: Refer to ICD-9-CM & ICD-10 Code Tables

Diagnosis for ischemic stroke ICD-9: 433.01, 433.10, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00, 434.01, 434.11, 434.91, 436

Diagnosis for ischemic stroke ICD-10: I6322, I6529, I63139, I63239, I63019, I63119, I63219, I6359, I6359, I6320, I6609, I6619, I6629, I6330, I6340, I6350, I678.

Patient location when stroke symptoms discovered (Where was the patient when stroke was detected or when symptoms were discovered?)

Indicate the type of facility or setting from which the patient came from when stroke like symptoms were discovered.

- Not in a healthcare setting
- Another acute care facility
- Chronic healthcare facility
- Outpatient healthcare setting
- Stroke occurred while patient was an inpatient in your hospital (*Inpatient Stroke*)
- ND or Cannot be determined

Notes for Abstraction

- If the patient was a resident of a nursing home, but was out with family for the day and suffered a stroke and the family/EMS brought the patient to your hospital, choose "Not in a healthcare setting".
- If the patient was at home, at work, or even a visitor in your hospital and had stroke symptoms, then choose "Not in a healthcare setting".
- If the patient was transferred to your hospital from another hospital's ED or inpatient unit but was outside of a healthcare facility when the stroke occurred, choose "Not in a healthcare setting".

Data Dictionary

- If the patient was a resident of a nursing home and the stroke occurred at the NH, choose "Chronic healthcare facility".
- A chronic care facility would include nursing home, long-term care facility, inpatient rehab facility, and assisted-living facility.
- If the patient is at a clinic or physician office visit, or at your hospital but receiving outpatient procedure or service that did not require the patient to be admitted as an inpatient, select "Outpatient healthcare setting".
- If the patient was an inpatient in your hospital choose "Stroke occurred while patient was an inpatient in your hospital". If the patient was already within your ED or hospital and experienced new onset of stroke symptoms, then this is considered an inpatient stroke or TIA. Only those hospitals that are interested in collecting information regarding inpatient stroke care should enter these patients. Patients who have transient symptoms that are present on arrival to the ED but resolve, and then later return during the hospitalization and meet criteria for ischemic stroke should all be entered as inpatient strokes.
- The answer to this question is independent of the answer for Point of Origin for Admission or Visit. That question asks where the patient was located prior to arriving at your hospital, not where the patient was when they first developed stroke symptoms.

Pre-hospital Data, Admission Data

Age

This is the age on the day of admission, calculated from date of birth in medical record. Because this data element is critical in determining the population for all measures, the abstractor should NOT assume the UB-92/UB-04 claim information for the birth date is correct. If the abstractor determines through medical record review that the UB-92/UB-04 day is incorrect, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct birth date through medical record review, she/he should default to the UB-92/UB-04 date of birth.

Admission Data, UB-92/UB-04, Field Location: 14.

Was this patient admitted for the sole purpose of performance of elective carotid intervention?

Element definition from Specifications Manual for National Hospital Inpatient Quality Measures

Documentation demonstrates that the current admission is solely for the performance of an elective carotid intervention (e.g., elective carotid endarterectomy, angioplasty, carotid stenting).

- Yes (There is documentation that this admission was solely for the performance of elective carotid intervention.)
- No (There is no documentation that this admission was solely for the performance of elective carotid intervention, OR unable to determine from medical record documentation.)

Notes for Abstraction

- Patients admitted for an acute stroke are not considered to have been admitted solely for the purpose of the performance of elective carotid intervention.
 - If the patient was admitted for an acute stroke, even if a carotid intervention was performed after admission, select "No".
 - When documentation of the procedure is not linked with "elective", select "No".
 - When the patient is directly admitted to the hospital post-procedure following an elective carotid intervention performed as an outpatient, select "Yes".
- Example:

Data Dictionary

Patient scheduled for elective carotid endarterectomy right side on 05/17/20xx at 08:30. Patient checks into outpatient surgery at 06:13 and proceeds to the O.R., then to PACU. Patient status is changed to inpatient at 11:35 on 05/17/20xx. Patient discharged home on 05/18/20xx.

EXCEPTION:

Patients with documentation of an elective carotid intervention performed and discharged from the outpatient setting prior to hospital admission for stroke.

Example:

Pt scheduled for outpatient placement of an elective right carotid stent on 05/17/20xx. Patient discharged home on 05/17/20xx following the procedure. Patient arrives in the ED two days later with complaints of syncope and left-sided numbness, and is admitted to the hospital on 05/19/20xx.

- When documentation clearly indicates that the carotid intervention is elective, (e.g., admitting orders to obtain informed consent for a carotid procedure; pre-operative testing completed prior to admission; surgical orders for carotid endarterectomy dated prior to arrival; physician office visit documentation prior to arrival stating, "CEA with Dr. X planned in the near future"), select "Yes".

Suggested Data Sources: PHYSICIAN/APN/PA DOCUMENTATION ONLY

- History and physical
- OR report
- Physician orders
- Progress notes

Guidelines for Abstraction:

Inclusion

Patients with the following ICD-9-CM procedure codes, if medical record documentation states that the patient was admitted for the elective performance of this procedure:

- 00.61 Percutaneous angioplasty or arthrectomy of carotid
- 00.63 Percutaneous insertion of carotid artery stents
- 38.02 Carotid embolectomy/ thrombectomy
- 38.12 Carotid endarterectomy
- 38.22 Percutaneous angiосopy
- 38.3 Resection of carotid with anastomosis
- 38.42 Resection of carotid aneurysm
- 88.41 Arteriography

Elective
o Anticipated
o Asymptomatic

Exclusion

Patients with the following ICD-9-CM procedure codes, if medical record documentation indicates that the patient is also being treated for an acute stroke during this hospitalization:

- 00.61 Percutaneous angioplasty or arthrectomy of carotid
- 00.63 Percutaneous insertion of carotid artery stents
- 38.02 Carotid embolectomy/ thrombectomy
- 38.12 Carotid endarterectomy
- 38.22 Percutaneous angiосopy
- 38.3 Resection of carotid with anastomosis
- 38.42 Resection of carotid aneurysm
- 88.41 Arteriography

Data Dictionary

- o Evaluation
- o Non-emergent
- o Planned
- o Pre-admission
- o Pre-arranged
- o Pre-planned
- o Pre-scheduled
- o Previously arranged
- o Prophylactic
- o Scheduled
- o Work-up

Admission Data

Had stroke symptoms resolved at time of presentation?

Indicate if symptoms already resolved upon hospital arrival.

- Yes
- No
- ND

Initial NIH Stroke scale (Was NIH Stroke scale performed as part of initial evaluation)?

Initial NIH Stroke scale

Was NIH Stroke scale performed as part of initial evaluation?

- Yes: An NIH stroke scale was performed as part of the initial evaluation or neurology consultation.
- No/ND: An NIH stroke scale was not performed or was performed but the total score is not available.

Notes for Abstraction:

- You should be looking for the first NIHSS performed and documented in the first admission note or in the first neurology consultation note, whichever comes first, or in a separate earlier note. Patients with acute ischemic stroke treated with intravenous tPA or with an acute endovascular procedure should be included as a "Yes" response only if the NIHSS is performed before the start of these treatments. If the first NIH Stroke Scale score was performed only after the first admitting note and after the first neurology consult note, or after treatment with intravenous tPA or acute endovascular procedure, or not performed at all then select "No/ND".
- If comprehensive neurological findings are outlined in the first admission note or in the first neurology consultation note that enables you to abstract the complete NIHSS, answer "Yes" to this data element and enter the findings into the sub questions under the "Total Score".
- If another stroke scale was performed instead, including the Modified NIH Stroke Scale, answer "No/ND".
- It is highly recommended that the NIHSS should be performed by a certified examiner.

Admission Data

Total Score

Data Dictionary

If Initial NIH stroke scale was performed, what is the first NIH Stroke Scale total score recorded by hospital personnel. Click on (Show/Hide) to display the sub-questions from the NIH Stroke Scale. The total will be computed automatically from these sub-questions. Completing the NIHSS sub-questions is optional.

Notes for Abstraction:

- Enter the total score of the first NIHSS performed and documented in the first admission note or in the first neurology consultation note, whichever comes first, or in a separate earlier note. First NIHSS can be recorded by either the MD or a member of the "stroke team" (including a PA, NP or RN).

Admission Data

Importance: 1b.4 Summary of Data on Disparities by Population Group" originally published in "Risk score for in-hospital ischemic stroke mortality derived and validated within the Get With The Guidelines-Stroke program" as Table 3

Table 1 of 2

Characteristics of Ischemic Stroke Patients With or Without NIHSS Score Recorded

Characteristic	NIHSS Score Recorded (n=109 187)	NIHSS Score Not Recorded (n=165 801)	P
Age, y	73 (61–82)	75 (62–83)	<0.001
Male gender	48.19	45.43	<0.001
Race			
White	74.72	73.64	<0.001
Black	14.14	15.76	
Asian	2.59	2.07	
American Indian	0.15	0.15	
Hawaiian/Pacific Islander	0.31	0.25	
Other or unable to determine	3.78	4.07	
Hispanic	4.31	4.06	
Mode of arrival			<0.001
EMS from scene	57.68	50.64	
Private transport/walk-in	37.91	42.85	
Did not present via ED	4.41	6.50	
History of:			
Atrial fibrillation	18.58	17.87	<0.001
Prosthetic heart valve	1.52	1.44	0.09
Previous stroke or	29.72	31.46	<0.001

Importance: 1b.4 Summary of Data on Disparities by Population Group" originally published in "Risk score for in-hospital ischemic stroke mortality derived and validated within the Get With The Guidelines-Stroke program" as Table 3

Characteristic	NIHSS Score Recorded (n=109 187)	NIHSS Score Not Recorded (n=165 801)	P
TIA			
Coronary artery disease	27.47	27.57	0.54
History of carotid stenosis (>50%)	4.66	4.79	0.12
Diabetes mellitus	28.51	30.86	<0.001
Peripheral vascular disease	4.88	5.45	<0.001
Hypertension	74.01	73.98	0.87
Dyslipidemia	36.85	34.11	<0.001
Atrial fibrillation in hospital	17.31	14.97	<0.001
Smoker, current/within past year	18.26	16.35	<0.001
Arrived during daytime regular hours*	47.83	46.18	<0.001
Hospital characteristics			
No. of beds	380 (267–564)	365 (256–507)	<0.001
Academic teaching hospital	60.60	60.61	0.02
Died in the hospital	5.19	5.72	<0.001

EMS indicates emergency medical services; ED, emergency department; and TIA, transient ischemic attack.

Age, NIHSS score, and No. of beds are reported as median (interquartile range); all other values are percentages. Significance testing by Kruskal–Wallis test (for continuous variables) or χ^2 test (for categorical variables).

* Daytime regular hours were defined as 7 AM to 5 PM Monday to Friday; all other times (including all day Saturday and Sunday) were considered off-hours.

Importance: 1b.4 Summary of Data on Disparities by Population Group" originally published in "*Risk score for in-hospital ischemic stroke mortality derived and validated within the Get With The Guidelines-Stroke program*" as Table 3

Citation: Smith EE, Shobha N, Dai D, Olson DM, Reeves MJ, Saver JL, Hernandez AF, Peterson ED, Fonarow GC, Schwamm LH(2010) Risk score for in-hospital ischemic stroke mortality derived and validated within the Get With The Guidelines-Stroke Program. *Circulation* 122:1496–1504. Available at: <http://circ.ahajournals.org/content/122/15/1496.full>

Importance: 1b.4 Summary of Data on Disparities by Population Group" originally published in *Relationship of National Institute of Health Stroke Scale to 30-Day Mortality in Medicare Beneficiaries with Acute Ischemic Stroke* as Table 4

Table 2 of 2

NIHSS Discrimination of 30-Day Mortality Risk in Clinically Relevant Subgroups

Patient Subgroups	Chi-Square for 30-Day Mortality	c-Statistic (95% Confidence Intervals)
Age <80 y (N=17020)	2539.4	0.82 (0.81–0.83)
Age ≥ 80 y (N=16080)	3558.7	0.81 (0.80–0.82)
Men (N=14417)	2588.1	0.81 (0.79–0.82)
Women (N=18683)	3913.6	0.83 (0.82–0.83)
Prior stroke/TIA (N=9886)	1820.2	0.81 (0.79–0.82)
No prior stroke/TIA (N=23047)	4720.0	0.82 (0.82–0.83)

NIHSS indicates National Institutes of Health Stroke Scale; TIA, transient ischemic attack.

NIHSS analyzed as a continuous variable.

Citation: Fonarow G, Saver J, Smith EE, Broderick J, Kleindorfer D, Sacco R, Pan W, Olson D, Hernandez A, Peterson E, Schwamm L. Relationship of National Institute of Health Stroke Scale to 30-Day Mortality in Medicare Beneficiaries with Acute Ischemic Stroke. *J Am Heart Assoc* 2012, 1:42-50. Available at: <http://jaha.ahajournals.org/content/1/1/42.full>

NIHSS Measure Missing Data

Variable	Level	Eligible Patient Population <i>including</i> Incomplete Records (1,776,460)*		Eligible Patient Population <i>excluding</i> Incomplete Records (1,613,736)*		Created Date 01APR2003-30SEP2011 (N=1766144)†		Created Date 01OCT2011-31DEC2011 (N=99139)†		Created Date 01JAN2012-31MAR2012 (N=105298)†	
NIH Stroke Scale performed?	Missing					132493	7.50	2462	2.48	2919	2.77
	Yes					798897	45.23	63368	63.92	67995	64.57
	No/ND					834754	47.26	33309	33.60	34384	32.65
If NIHSS = Yes how Initial NIHSS was estimated	Missing	377304	21.24	343748	21.30	1341674	75.97	43598	43.98	47427	45.04
	Actual					404276	22.89	53291	53.75	55562	52.77
	Available	421387	23.72	390846	24.22						
	Estimated from record					18356	1.04	2155	2.17	2215	2.10
	ND	1841	0.10	741	0.05	1838	0.10	95	0.10	94	0.09
If NIHSS performed, what is the first NIH Stroke Scale total score recorded	Not Applicable	975928	54.94	878401	54.43						
	Missing	5992	0.34	1258	0.08	973221	55.10	36915	37.24	38762	36.81
	Available	794540	44.73	734077	45.49	792923	44.90	62224	62.76	66536	63.19
NIHSS score obtained from transferring facility	Not Applicable	975928	54.94	878401	54.43						
	Missing					1766093	100.00	98083	98.93	104082	98.85
	Available					51	0.00	1056	1.07	1216	1.15

Stroke Audit Results (n=438)

variable_name	not_in_source	incorrect	% not_in_source	% Incorrect
nihssperformed	50	25	11.4%	6.4%
ivtpadatetime	8	11	1.8%	2.6%
ivtpa	40	8	9.1%	2.0%
ivtpaoutside	33	2	7.5%	0.5%

These are the audit data results for initial NIHSS performed, IV tPA given, IV tPA time, and whether IV tPA was given at an outside hospital. Most IV tPA time were off by >10 minutes, which was likely due to transcription error at the site.

* Sourced from the October 11, 2011 Stroke National DQR

† Sourced from the April 12, 2012 Harvest