

Emergency Department Stroke Registry Indicator Specifications
2020 (07/01/2019 to 06/30/2020 Discharge Dates)
August 2019

Summary of Changes	Two ischemic stroke ICD-10-CM diagnosis codes added to improve case identification: <ul style="list-style-type: none"> • I63.81 Other cerebral infarction due to occlusion or stenosis of a small artery • I63.89 Other cerebral infarction
Measure	Door-to-Imaging Initiated Time
Description	Indicator used to assess the percentage of adult stroke patients for which diagnostic imaging was initiated in 25 minutes or less following their arrival to the hospital or emergency department (ED).
Methodology	Population identification is accomplished either prospectively via concurrent case identification through daily review of emergency department logs or via a query of the hospital discharge information to find cases for inclusion. Data elements are either extracted from an EMR system or abstracted through medical record review.
Rationale	Rapid diagnosis of stroke subtype and possible contraindications to thrombolytic therapy needs to occur rapidly for administration of IV alteplase in the appropriate time window. Tracking when imaging was initiated may lead to streamlining of key care processes that might otherwise delay the initiation of thrombolytic therapy. Imaging should be initiated within 25 minutes of arrival.
Measurement Period	Data will be submitted on a quarterly basis on the following schedule for the 12-month measurement period: <p>Discharge Dates</p> <ul style="list-style-type: none"> • Third Quarter, 2019: July 1 – September 30 <ul style="list-style-type: none"> ○ Data Submission Deadline for Third Quarter, 2019, is 02/15/2020 • Fourth Quarter, 2019: October 1 – December 31 <ul style="list-style-type: none"> ○ Data Submission Deadline for Fourth Quarter, 2019, is 05/15/2020 • First Quarter, 2020: January 1 – March 31 <ul style="list-style-type: none"> ○ Data Submission Deadline for First Quarter, 2020, is 08/15/2020 • Second Quarter, 2020: April 1 – June 30 <ul style="list-style-type: none"> ○ Data Submission Deadline for Second Quarter, 2020, is 11/15/2020

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Denominator	Patients with documented final clinical diagnosis of ischemic stroke, transient ischemic attack, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified, or whose ED visit was assigned a principal ICD-10-CM diagnosis code listed in Table 1 for ischemic stroke, Table 2 for transient ischemic attack, or Table 3 for hemorrhagic stroke.
Exclusions	<ul style="list-style-type: none"> • Patients <18 years of age on date of arrival to hospital. • Patients admitted solely for elective carotid endarterectomy or any revascularization. • Patients enrolled in a clinical trial related directly to stroke care. • Patients who started experiencing stroke symptoms after hospital arrival (in ED/Observation/Inpatient). • Patients who were determined to receive comfort measures only while still in the emergency department. • Patients who expire while in the emergency department • Patients whose date or time of arrival are missing or not documented. • Patients whose last known well time is missing. • Patients whose date or time of imaging are missing or not documented. • Patients transferred into your facility from another facility through the emergency department or as a direct admit. • Patients whose last known well time is greater than 3.5 hours from hospital arrival time. • Patients whose symptoms have resolved, which may be determined using any of the following criteria: <ul style="list-style-type: none"> ○ documentation in the physician notes to the effect of “symptoms have resolved prior to arrival” or “patient has returned to baseline”; or ○ the choice “yes” is selected for the data element “had stroke symptoms resolved at time of presentation.”

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Numerator	All ischemic stroke, transient ischemic attack, subarachnoid hemorrhage, intracerebral hemorrhage and stroke not otherwise specified patients whose diagnostic imaging was initiated at the reporting hospital within 25 minutes or less from time of arrival.
Suggested Data Sources	ED records, intake/face sheet/hospital admissions records, progress notes, acute physician notes, diagnostic reports, radiology notes.

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Table 1: Ischemic Stroke ICD-10-CM Diagnosis Codes

ICD-10	Description
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery
I63.011	Cerebral infarction due to thrombosis of right vertebral artery
I63.012	Cerebral infarction due to thrombosis of left vertebral artery
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery
I63.02	Cerebral infarction due to thrombosis of basilar artery
I63.031	Cerebral infarction due to thrombosis of right carotid artery
I63.032	Cerebral infarction due to thrombosis of left carotid artery
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery
I63.09	Cerebral infarction due to thrombosis of other precerebral artery
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery
I63.111	Cerebral infarction due to embolism of right vertebral artery
I63.112	Cerebral infarction due to embolism of left vertebral artery
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries

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I63.119	Cerebral infarction due to embolism of unspecified vertebral artery
I63.12	Cerebral infarction due to embolism of basilar artery
I63.131	Cerebral infarction due to embolism of right carotid artery
I63.132	Cerebral infarction due to embolism of left carotid artery
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries
I63.139	Cerebral infarction due to embolism of unspecified carotid artery
I63.19	Cerebral infarction due to embolism of other precerebral artery
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries

I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries

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163.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries
163.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries
163.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
163.30	Cerebral infarction due to thrombosis of unspecified cerebral artery
163.311	Cerebral infarction due to thrombosis of right middle cerebral artery
163.312	Cerebral infarction due to thrombosis of left middle cerebral artery
163.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries
163.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery
163.321	Cerebral infarction due to thrombosis of right anterior cerebral artery
163.322	Cerebral infarction due to thrombosis of left anterior cerebral artery
163.323	Cerebral infarction due to thrombosis of bilateral anterior arteries
163.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
163.331	Cerebral infarction due to thrombosis of right posterior cerebral artery
163.332	Cerebral infarction due to thrombosis of left posterior cerebral artery
163.333	Cerebral infarction to thrombosis of bilateral posterior arteries
163.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
163.341	Cerebral infarction due to thrombosis of right cerebellar artery

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163.342	Cerebral infarction due to thrombosis of left cerebellar artery
163.343	Cerebral infarction to thrombosis of bilateral cerebellar arteries
163.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery
163.39	Cerebral infarction due to thrombosis of other cerebral artery
163.40	Cerebral infarction due to embolism of unspecified cerebral artery
163.411	Cerebral infarction due to embolism of right middle cerebral artery
163.412	Cerebral infarction due to embolism of left middle cerebral artery

163.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries
163.419	Cerebral infarction due to embolism of unspecified middle cerebral artery
163.421	Cerebral infarction due to embolism of right anterior cerebral artery
163.422	Cerebral infarction due to embolism of left anterior cerebral artery
163.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries
163.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery
163.431	Cerebral infarction due to embolism of right posterior cerebral artery
163.432	Cerebral infarction due to embolism of left posterior cerebral artery
163.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries

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163.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery
163.441	Cerebral infarction due to embolism of right cerebellar artery
163.442	Cerebral infarction due to embolism of left cerebellar artery
163.443	Cerebral infarction due to embolism of bilateral cerebellar arteries
163.449	Cerebral infarction due to embolism of unspecified cerebellar artery
163.49	Cerebral infarction due to embolism of other cerebral artery
163.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery
163.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
163.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery
163.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries
163.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery
163.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery
163.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery
163.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries
163.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery

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163.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery
163.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery
163.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries
163.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery
163.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery
163.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery
163.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries
163.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery
163.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery
163.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
163.8	Other cerebral infarction
163.81	Other cerebral infarction due to occlusion or stenosis of a small artery
163.89	Other cerebral infarction
163.9	Cerebral infarction, unspecified

Table 2: Transient Ischemic Attack ICD-10-CM Diagnosis Codes

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ICD-10	Description
G45.0	Vertebro-basilar artery syndrome
G45.1	Carotid artery syndrome (hemispheric)
G45.2	Multiple and bilateral precerebral artery syndromes
G45.8	Other transient cerebral ischemic attacks and related syndromes
G45.9	Transient cerebral ischemic attack, unspecified
G46.0	Middle cerebral artery syndrome
G46.1	Anterior cerebral artery syndrome
G46.2	Posterior cerebral artery syndrome

Table 3: Hemorrhagic Stroke ICD-10-CM Diagnosis Codes

ICD-10	Description
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery

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I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I60.8	Other nontraumatic subarachnoid hemorrhage
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I61.3	Nontraumatic intracerebral hemorrhage in brain stem
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized
I61.8	Other nontraumatic intracerebral hemorrhage
I61.9	Nontraumatic intracerebral hemorrhage, unspecified
I62.9	Nontraumatic intracranial hemorrhage, unspecified