

## Codes for SMART on FHIR Trigger Logic:

### **A. ICD-10-CM Stroke Codes**

#### ***Hemorrhagic and Ischemic Stroke (The Joint Commission)***

The Joint Commission's quality measures documents are available at the following link:

[http://www.jointcommission.org/specifications\\_manual\\_for\\_national\\_hospital\\_inpatient\\_quality\\_measures.aspx](http://www.jointcommission.org/specifications_manual_for_national_hospital_inpatient_quality_measures.aspx)

#### **ICD-10-CM Principal Diagnosis Codes for Hemorrhagic Stroke (The Joint Commission)**

I6000	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I6001	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I6002	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I6010	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I6011	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I6012	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I6020	Nontraumatic subarachnoid hemorrhage from <del>unspecified</del> anterior communicating artery
<del>I6021</del>	<del>Nontraumatic subarachnoid hemorrhage from right anterior communicating artery</del>
<del>I6022</del>	<del>Nontraumatic subarachnoid hemorrhage from left anterior communicating artery</del>
I6030	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I6031	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
I6032	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I604	Nontraumatic subarachnoid hemorrhage from basilar artery
I6050	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
I6051	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I6052	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I606	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
I607	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I608	Other nontraumatic subarachnoid hemorrhage
I609	Nontraumatic subarachnoid hemorrhage, unspecified
I610	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I611	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I612	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I613	Nontraumatic intracerebral hemorrhage in brain stem
I614	Nontraumatic intracerebral hemorrhage in cerebellum
I615	Nontraumatic intracerebral hemorrhage, intraventricular
I616	Nontraumatic intracerebral hemorrhage, multiple localized
I618	Other nontraumatic intracerebral hemorrhage
I619	Nontraumatic intracerebral hemorrhage, unspecified

#### **ICD-10-CM Principal Diagnosis Codes for Ischemic Stroke (The Joint Commission)**

I6300	Cerebral infarction due to thrombosis of unspecified precerebral artery
I63011	Cerebral infarction due to thrombosis of right vertebral artery
I63012	Cerebral infarction due to thrombosis of left vertebral artery
<u>I63013</u>	<u>Cerebral infarction due to thrombosis of bilateral vertebral arteries</u>
I63019	Cerebral infarction due to thrombosis of unspecified vertebral artery
I6302	Cerebral infarction due to thrombosis of basilar artery
I63031	Cerebral infarction due to thrombosis of right carotid artery
I63032	Cerebral infarction due to thrombosis of left carotid artery
<u>I63033</u>	<u>Cerebral infarction due to thrombosis of bilateral carotid arteries</u>
I63039	Cerebral infarction due to thrombosis of unspecified carotid artery
I6309	Cerebral infarction due to thrombosis of other precerebral artery
I6310	Cerebral infarction due to embolism of unspecified precerebral artery
I63111	Cerebral infarction due to embolism of right vertebral artery
I63112	Cerebral infarction due to embolism of left vertebral artery
<u>I63113</u>	<u>Cerebral infarction due to embolism of bilateral vertebral arteries</u>
I63119	Cerebral infarction due to embolism of unspecified vertebral artery
I6312	Cerebral infarction due to embolism of basilar artery
I63131	Cerebral infarction due to embolism of right carotid artery
I63132	Cerebral infarction due to embolism of left carotid artery
<u>I63133</u>	<u>Cerebral infarction due to embolism of bilateral carotid arteries</u>
I63139	Cerebral infarction due to embolism of unspecified carotid artery
I6319	Cerebral infarction due to embolism of other precerebral artery
I6320	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
I63211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries
I63212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries
<u>I63213</u>	<u>Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries</u>
I63219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries
I63231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries
I63232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries
<u>I63233</u>	<u>Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries</u>
I63239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries
I6329	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
I6330	Cerebral infarction due to thrombosis of unspecified cerebral artery
I63311	Cerebral infarction due to thrombosis of right middle cerebral artery
I63312	Cerebral infarction due to thrombosis of left middle cerebral artery
<u>I63313</u>	<u>Cerebral infarction due to thrombosis of bilateral middle cerebral arteries</u>
I63319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery
I63321	Cerebral infarction due to thrombosis of right anterior cerebral artery
I63322	Cerebral infarction due to thrombosis of left anterior cerebral artery
<u>I63323</u>	<u>Cerebral infarction due to thrombosis of bilateral anterior arteries</u>
I63329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
I63331	Cerebral infarction due to thrombosis of right posterior cerebral artery
I63332	Cerebral infarction due to thrombosis of left posterior cerebral artery

<a href="#"><u>I63333</u></a>	<a href="#"><u>Cerebral infarction to thrombosis of bilateral posterior arteries</u></a>
I63339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
I63341	Cerebral infarction due to thrombosis of right cerebellar artery
I63342	Cerebral infarction due to thrombosis of left cerebellar artery
<a href="#"><u>I63343</u></a>	<a href="#"><u>Cerebral infarction to thrombosis of bilateral cerebellar arteries</u></a>
I63349	Cerebral infarction due to thrombosis of unspecified cerebellar artery
I6339	Cerebral infarction due to thrombosis of other cerebral artery
I6340	Cerebral infarction due to embolism of unspecified cerebral artery
I63411	Cerebral infarction due to embolism of right middle cerebral artery
I63412	Cerebral infarction due to embolism of left middle cerebral artery
<a href="#"><u>I63413</u></a>	<a href="#"><u>Cerebral infarction due to embolism of bilateral middle cerebral arteries</u></a>
I63419	Cerebral infarction due to embolism of unspecified middle cerebral artery
I63421	Cerebral infarction due to embolism of right anterior cerebral artery
I63422	Cerebral infarction due to embolism of left anterior cerebral artery
<a href="#"><u>I63423</u></a>	<a href="#"><u>Cerebral infarction due to embolism of bilateral anterior cerebral arteries</u></a>
I63429	Cerebral infarction due to embolism of unspecified anterior cerebral artery
I63431	Cerebral infarction due to embolism of right posterior cerebral artery
I63432	Cerebral infarction due to embolism of left posterior cerebral artery
<a href="#"><u>I63433</u></a>	<a href="#"><u>Cerebral infarction due to embolism of bilateral posterior cerebral arteries</u></a>
I63439	Cerebral infarction due to embolism of unspecified posterior cerebral artery
I63441	Cerebral infarction due to embolism of right cerebellar artery
I63442	Cerebral infarction due to embolism of left cerebellar artery
<a href="#"><u>I63443</u></a>	<a href="#"><u>Cerebral infarction due to embolism of bilateral cerebellar arteries</u></a>
I63449	Cerebral infarction due to embolism of unspecified cerebellar artery
I6350	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery
I63511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
I63512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery
<a href="#"><u>I63513</u></a>	<a href="#"><u>Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries</u></a>
I63519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery
I63521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery
I63522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery
<a href="#"><u>I63523</u></a>	<a href="#"><u>Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries</u></a>
I63529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery
I63531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery
I63532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery
<a href="#"><u>I63533</u></a>	<a href="#"><u>Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries</u></a>
I63539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery
I63541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery
I63542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery
<a href="#"><u>I63543</u></a>	<a href="#"><u>Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries</u></a>
I63549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery
I6359	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery
I636	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic

I638	Other cerebral infarction
I639	Cerebral infarction, unspecified

### ***Transient Ischemic Attack***

ICD-10-CM Principal Diagnosis Codes for TIA (not used by TJC)

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

### ***Pregnancy***

Additional ICD-10-CM Principal Diagnosis Codes (not used by TJC)

O99.411	Diseases of the circulatory system complicating pregnancy- first trimester
O99.412	Diseases of the circulatory system complicating pregnancy- second trimester
O99.413	Diseases of the circulatory system complicating pregnancy- third trimester
O99.419	Diseases of the circulatory system complicating pregnancy- unspecified trimester

### ***National Institutes of Health Stroke Scale (NIHSS) score***

Code R29.7 is listed in section R29 ("Other symptoms and signs involving the nervous and musculoskeletal systems").

### ***Code First***

Code R29.7 ("National Institutes of Health Stroke Scale (NIHSS) score") must be preceded by one or more of the following code(s) that represent the underlying etiology. The type of cerebral infarction (I63-)

### ***Subcategories***

***R29.70: NIHSS score 0-9***

***R29.700: NIHSS score 0***

***R29.701: NIHSS score 1***

***R29.702: NIHSS score 2***

***R29.703: NIHSS score 3***

***R29.704: NIHSS score 4***

***R29.705: NIHSS score 5***

***R29.706: NIHSS score 6***

**R29.707: NIHSS score 7**  
**R29.708: NIHSS score 8**  
**R29.709: NIHSS score 9**  
**R29.71: NIHSS score 10-19**  
**R29.710: NIHSS score 10**  
**R29.711: NIHSS score 11**  
**R29.712: NIHSS score 12**  
**R29.713: NIHSS score 13**  
**R29.714: NIHSS score 14**  
**R29.715: NIHSS score 15**  
**R29.716: NIHSS score 16**  
**R29.717: NIHSS score 17**  
**R29.718: NIHSS score 18**  
**R29.719: NIHSS score 19**  
**R29.72: NIHSS score 20-29**  
**R29.720: NIHSS score 20**  
**R29.721: NIHSS score 21**  
**R29.722: NIHSS score 22**  
**R29.723: NIHSS score 23**  
**R29.724: NIHSS score 24**  
**R29.725: NIHSS score 25**  
**R29.726: NIHSS score 26**  
**R29.727: NIHSS score 27**  
**R29.728: NIHSS score 28**  
**R29.729: NIHSS score 29**  
**R29.73: NIHSS score 30-39**  
**R29.730: NIHSS score 30**  
**R29.731: NIHSS score 31**  
**R29.732: NIHSS score 32**  
**R29.733: NIHSS score 33**  
**R29.734: NIHSS score 34**  
**R29.735: NIHSS score 35**  
**R29.736: NIHSS score 36**  
**R29.737: NIHSS score 37**  
**R29.738: NIHSS score 38**  
**R29.739: NIHSS score 39**  
**R29.74: NIHSS score 40-42**  
**R29.740: NIHSS score 40**  
**R29.741: NIHSS score 41**  
**R29.742: NIHSS score 42**

#### A. LOINC Codes

- a. Stroke related: <https://search.loinc.org/search.zul?query=stroke;>  
<http://www.hipaaspace.com/Medical.Coding.Library/LOINC.Codes/S/Stroke/>
- b. 70182-1: NIH Stroke Scale <http://r.details.loinc.org/LOINC/70182-1.html?sections=Comprehensive>

#### B. SNOMED Codes:

- a. <https://clinicalcodes.rss.mhs.man.ac.uk/medcodes/article/2/codelist/stroke/>

Besides the codes, the app should select patients  $\geq 18$  of age, and whose discharge date is  $\leq$  current date. Based on the difference between current and discharge date, one of the 4 (early check – 5 to 10 days, 30-day, 60-day or 90-day) data collection forms need to be used.