A Coders Perspective

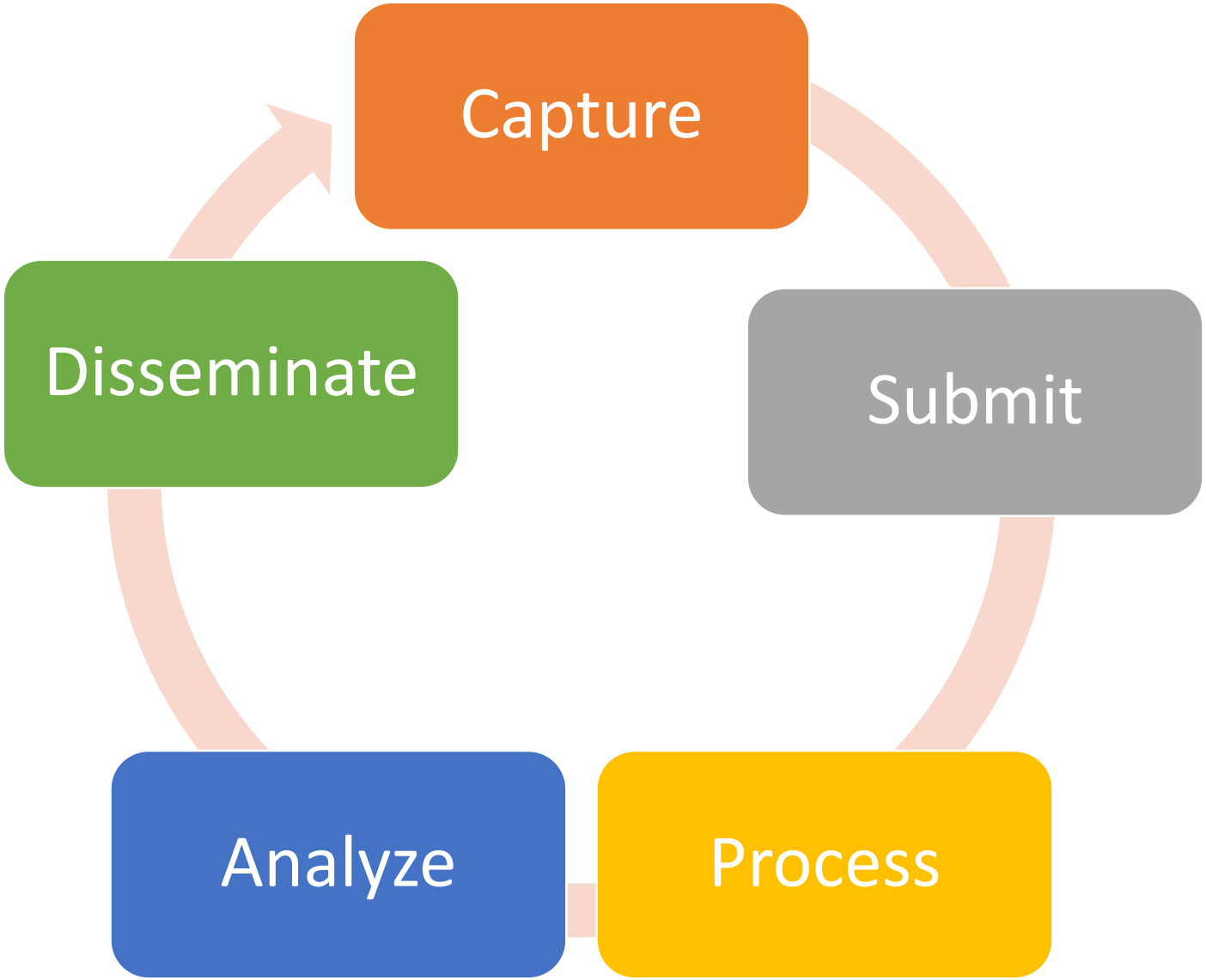
How do Coders affect Data Quality.

The Coding Standards and Abstracting Manuals form the basis of a Coder's foundation for Quality Information. As Professionals we are responsible for upholding The Coding Standards and Abstracting Manuals, applying them consistently in each interaction we have with the Health Information we come in contact with. This is one way we affect Data Quality.

The use of common definitions and processes facilitates comparability, consistency and efficiency. CIHI works with Stakeholders on Health Information Standards and supports their adoption. Using common definitions is imperative when we have to interpret Clinical Documentation; definitions for the different types of strokes can be found on the HSF website www.heartandstroke.ca the Standard definition for Stroke Units at www.corhealthontario.ca

Within our CIHI Stroke Projects you have hyperlinks to Stakeholder's websites the information is at our fingertips challenge yourself by searching these websites for much needed FAQ's. These are the tools as Coders we can use to find Standardized definitions for Stroke instead of relying on Google. Being on the same page is part of the Job.

CIHI's Information Quality Framework



Stakeholders & Clinicians interpret the information. And sometimes require HIM's to help decipher the information.

HIM's responsibilities
We capture it
submit it
process it
analyze it.

DATA QUALITY ISSUES IDENTIFIED

As the Lead Coder at the General I was asked to look at the Data that Rhonda's team had compiled. Concerns over SSO times and ALPHA FIM scores were raised.

What can a Coder add?

We know the Coding Standards that drives our code selection.

We know the specification of the data sets and what is a valid data entry.

We know what the challenges are when searching the Clinical Documentation.

We are a Wealth of Knowledge!

Review Elements Collected in CIHI Special Project 340

1. CT Scan / MRI within 24 hours
2. Admission to a Stroke Unit/ Referral to an SPC (ED cases)
3. Administration of Acute tPA
4. Date and Time of Acute tPA administration
5. Antithrombotic Medications prescribed at Discharge
6. Date and Time of Stroke Onset

Project 340

SSO times being recorded as 9999.

Possible Explanations

- The data has both NACRS and DAD information together
- One would expect NACRS to have a higher case count of SSO time 9999
- Coders not referring to the CIHI estimated time table found within stroke project 340
- Chart missing at time of coding
- Clinicians not documenting SSO onset time or ambulance record missing at time of coding
- Stroke symptoms being misdiagnosed on arrival and final is a query diagnosis

Review Elements Collected in CIHI Special Project 640

1. Dysphagia Screening
2. Telestroke Consultation
3. Date of admission to Stroke Unit
4. Date of discharge from Stroke Unit
5. *Emergency Room Triage Date and time*

Review Elements Collected in CIHI Special Project 740

Field 01

Documentation of Alpha FIM Scores

- Y- Yes there is documentation
- N- No documentation

Fields 02-09

Alpha FIM completion date

Year, month day,
YYMMDDHHMM
99999999 if blank

Fields 10-11

13 Raw Motor Rating

2 Characters
13-91 (Score range)
99 if blank

Fields 10-11

5 Raw Motor Rating

2 Characters
5-35 (Score range)
99 if blank

Project 740

Project 740 not appearing on Abstract

- Not answering N to the project instead complete omission
- Not validating ALPHA FIM project because no-one qualified to fill out the Scores
- Patients do not stay long enough before being transferred out
- Not knowing where to find scores in chart
- Not having enough qualified stroke cases to make it mandatory
- 2 strokes a mth >24 a year makes this project mandatory.
- Incomplete scores… use 9999 if the date is documented

Polling Question

At your site how often are your Stroke codes due to a Neoplasm

A) 80%
B) >50%
C) <50%
D) Hardly ever

Answer from Poll

Polling Question

On Repatriation for discharge planning from HHS General(EVT) Site what is your Main Diagnosis

A) Convalescence

B) ALC

C) Stroke

Answer from Poll

Polling Question

With the EVT population when transferring from your ER dept. what INST # are you transferring to when you send Patients to the General?

A) NACRS #4231

B) INPT #1982

Answer from Poll

Questions Regarding the Stroke Special Projects

CHART REVIEW

A coders challenge

CHART #1
ER ADMIT TIME 15:12pm 21/11/….

What is the Stroke Symptom Onset?

This would be considered last seen normal for this chart.

9:15am for both NACRS and DAD found in the Ambulance Record and ER Triage

What is the Stroke code?

NACRS I63.9 stroke CT done hemorrhage ruled out.

DAD I63.9 due to Unconfirmed Diagnosis Standard eQuery sent “Pontine Infarct”

Stroke diagnosis following the documentation within the chart.

IMPRESSION AND PLAN:
In summary, is a -year-old man with vascular risk factors who presents with a fluctuating episode of left-sided weakness and dysarthria, whichimproved on arrival to the Emergency Department. CT angiogram showed severe burden of intra- and extracranial atherosclerotic disease, in particular the right supraclinoid ICA and the left vertebral and proximal basilar artery. These changes are likely on the basis of
significant atherosclerotic disease related to his underlying vascular risk factors.

I discussed with that we should admit him briefly in the hospital for monitoring given he had multiple events and the severe atherosclerotic disease which may put him at risk of recurrent events in the next short time. He did describe he had a a past allergy to ASPIRIN breaking out in hives. Therefore, he was loaded with Plavix 300 mg and will continue on Plavix 75 mg daily. We will obtain an echocardiogram and Holter to assess for alternate etiology of stroke, but if no cardiac abnormalities are found then likely his event is on the basis of intracranial atherosclerotic disease either in the posterior circulation or the right supraclinoid artery. As such, he will remainon Plavix indefinitely. For now, we will allow for permissive hypertension and hold his felodipine. He should have a brief assessment by Allied Health to make sure he is safe for discharge once his investigations are complete, with ongoing risk factor modification as an outpatient. He was advised regarding smoking cessation and should receive continued counselling. It was a pleasure to be involved in this patient's care.

Terminology mentioned in chart

- Small vessel disease (I63.5)
- Intracranial Atherosclerotic Disease (I63.2 & I63.5)
- Artery to Artery Disease(thrown clot)
- Plaque rupture(thrombus dislodged)

DATE OF DICTATION: 25/11/21
ADMISSION DATE: 21/11/21
DISCHARGE DATE: 25/11/21
VISIT DATE: 21/11/21 ACCOUNT:

DISCHARGE SUMMARY

DIAGNOSIS:
Right pontine infarct, likely secondary to plaque rupture.

PAST MEDICAL HISTORY:
1. Hypertension.
2. Dyslipidemia.
3. Type 2 diabetes.
4. Irritable bowel syndrome.
5. Prostate hypertrophy.

DISCHARGE MEDICATIONS:
1. Clopidogrel 75 mg p.o. once daily.
2. Tamsulosin 0.4 mg p.o. b.i.d.
3. Rosuvastatin 40 mg p.o. daily.
4. Canagliflozin 300 mg p.o. daily.
5. Latanoprost eye drops applied daily to affected eye.
6. Dutasteride 0.5 mg p.o. daily.
7. Linagliptin 5 mg p.o. daily.
8. Perindopril 4 mg p.o. daily.

COURSE IN HOSPITAL:
The patient was initially admitted to Hospital on November 21, 2021 after noting a sudden onset dizziness while driving. The patient also noted onset of left leg weakness and dysarthria. He was subsequently brought to the Hospital where he was found to have a new right pontine infarct. The patient was subsequently admitted to the Stroke ward at Hospital for further workup and investigations. The patient did very well on the ward was discharged home with an NIH of 0 after being cleared by physiotherapy and occupational therapy.

INVESTIGATIONS IN HOSPITAL:
1. HbA1c 6.7.
2. CT head completed November 21, 2021 showed a chronic left PCA territory infarct with moderate burden of intra and extraaxial atherosclerotic disease. There is severe stenosis of the right supraclinoid ICA immediately proximal and distal to a 3.6 mm intradural supraclinoid ICA aneurysm, likely atherosclerotic in etiology. Mild irregularity of the right M1 and proximal M2 segments as well as the right A1 were also noted likely to be secondary to atherosclerotic disease. Non-opacification of the distal V2 and proximal V4 seconds were also noted, likely secondary to chronic occlusion. The distal V4 segment and proximal to mid basilar artery were also noted to be severely stenotic and the irregular, likely in keeping with atherosclerotic disease.
3. MRI brain completed November 22, 2021 showed signs of chronic microangiopathic changes in the brain as well as a small area of restricted diffusion in the pons suggestive of recent ischemic event.
Echocardiogram completed November 25, 2021 revealed an ejection fraction of 73% with no cardioembolic source of embolism identified and no hemodynamically significant valve disease seen.
4. The patient's Holter report was pending at the time of discharge.

ASSESSMENT AND PLAN:
presented to Hospital with left sided weakness and dysarthria secondary to right pontine infarct. He did very well and his NIH at the time of discharge as 0. The likely etiology of the patient's infarct was secondary to plaque rupture/embolic artery-to-artery. He was discharged home in stable condition onPlavix, rosuvastatin as well as Perindopril 4 mg for blood pressure control. He will follow up on the telephone with the stroke nurse practitioner in 2 weeks' time and will follow up with in the SPC in 3 months' time.

Thank you for involving us in the care of this patient.

As per Stroke Job Aide. Pontine(Region or Artery)? Infarction, pontine arteries feed the Pons/Pontine area I63.9. Perhaps not every stroke has an identifiable occlusion in the cerebral and or precerebral vasculature. The “likely” identifies the mechanism all we know for sure is Pontine Infarction.

Polling Question

Do your Clinicians use probable/likely etc. to describe the Final Stroke Diagnosis?

A)80% of the time

B)>50%

C)<50%

D)Hardly ever

Answer from Poll

Our message to Stroke Teams

Please inform Clinicians who are responsible for documentation when they use terms like “probable, likely, presumed” they are denoting uncertainty. Coding Standards for Unconfirmed Diagnosis is applied.

Chart #1
Pontine Infarct=I63.9
Pontine Infarct likely secondary to plaque rupture=I63.9

Infarct
-cerebral(I63.9)
- -due to Stenosis/Occlusion NEC
- - - cerebral arteries I63.5
- - - precerebral arteries I63.2

If the clinicians know it is embolic but uncertain of the origin of the clot/thrombus please use ESUS(Embolic Stroke of Undetermined Source). And remove the term likely!

Infarct
-cerebral
- -due to embolism
- - -cerebral arteries I63.4
- - -precerebral arteries I63.1

CHART #2
ER ADMIT 13:46 21/11/…..

What was the Stroke Symptom Onset?

NACRS 22:00 20/11/….

DAD 22:00 20/11/….

This would be considered a wake up stroke …using eQuery #49068

What is the Stroke Code?

NACRS I63.9 dx is CVA but we had a CT done r/o hemorrhage

DAD I63.9 mention only the region of the brain

When 930am changed to 915am SSO than changed again to become a wake-up stroke.

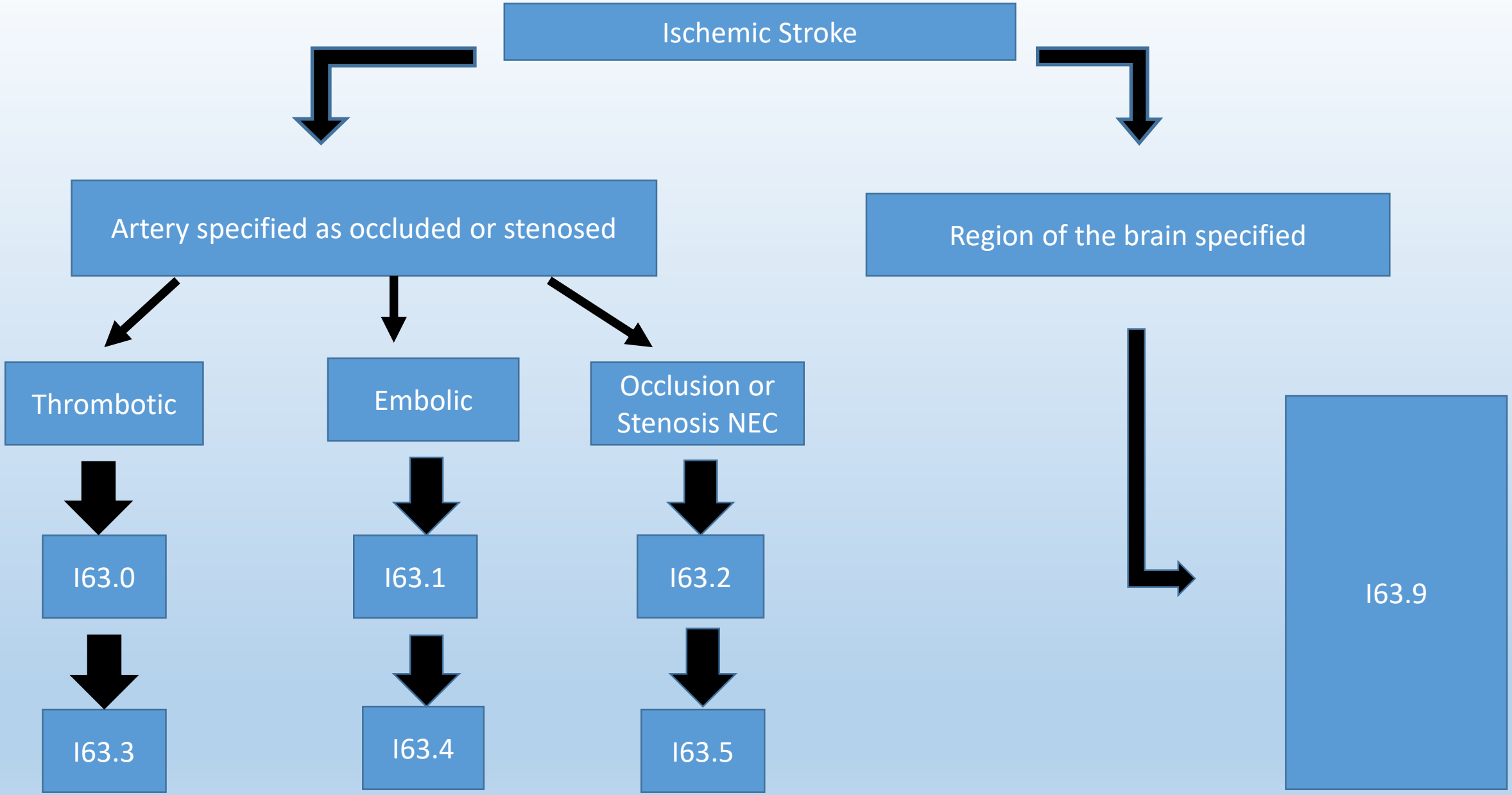
HISTORY OF PRESENTING ILLNESS:
A .-year-old gentleman, right-handed, brought by EMS to our hospital as a case of acute stroke, the history was taken initially from EMS, as the patient was found by his wife with the right side weakness and slurred speech with facial droop with difficulty to following command, brought to the Emergency Department at Hospital at 11:05 a.m. within the IV tPA window. Upon arrival, his temperature was 36.5, pulse 87, blood pressure 162/48, respiratory rate 16, oxygen saturation 96. His NIHSS score was 8 point. He had an urgent CT scan which did not show any acute ischemic stroke orbleed and CTA did not show any large vessel occlusion. We tried to contact his wife to clarify the last seen well; however, she was not answering the phone, so we depend on EMS hand over, the patient was candidate for IV thrombolysis and he enrolled in the ACT study and received tenecteplase. Later on, his wife came to the Emergency Department and we took from her detailed history, and according to her, on November 20, 2021 at noontime, he noticed new wobbling; however, at that time, there is no slurred speech or word finding difficulty, however, today at 9:15, when he woke up in the morning, she noticed new slurred speech with word finding difficulty and some right arm weakness, and because of that, she contacted EMS. It is possible the speech worsened between 9:15 and 9:30, but it was unclear.

Chart documentation stating pt awoke with slurred speech.

- When the time the patient went to bed is unknown use 22:00pm eQuery 49068
- Pg. 12/23 hand written note has an addendum
- they are watching for hemorrhagic transformation due to TPA given possibly outside of safe window.

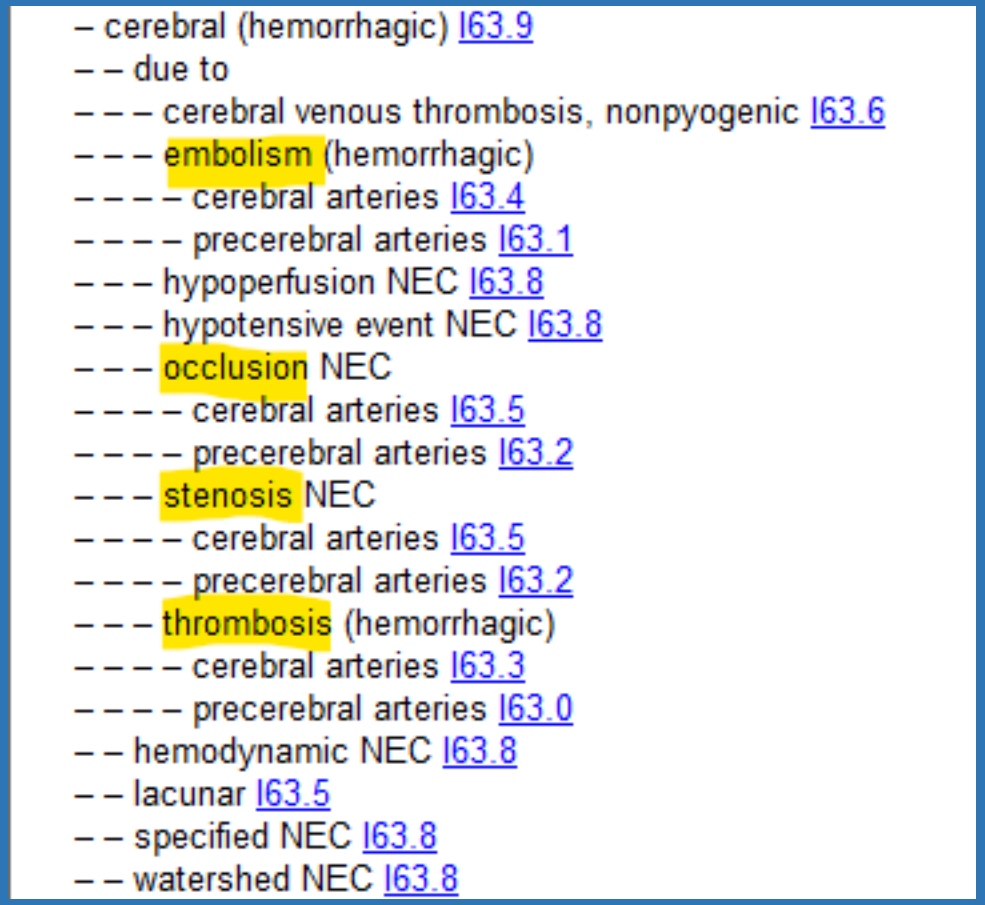
DISCHARGE DIAGNOSIS:
Left thalamic and posterior limb of capsule ischemic stroke secondary to cardioembolic cause.

Terminology used in Chart	
• Brainstem stroke vs seizure	I63.9
• L medial medullary syndrome	I63.9 +G46.4
• Etiology likely A fib	I63.9 without documentation of which artery occluded
• ?L posterior limb IC stroke vs med medullary	I63.9 unconfirmed specificity at the block level
• Stroke cardioembolic 2nd A fib	I63.9 no artery site where the infarction occurred
• L internal capsule lacunar infarct (2nd to Afib vs Atheroma)	I63.5 lacunar codes to specific code
• Left thalamic & posterior limb of IC specified 2nd to cardioembolic(known Afib) vs ICAD(known ICA stenosis)	I63.9 listing only region of brain infarcted no specific artery


Ischemic Stroke
Artery specified as occluded or stenosed
Region of the brain specified
Thrombotic
Embolic
Occlusion or Stenosis NEC
I63.0
I63.1
I63.2
I63.3
I63.4
I63.5
I63.9

Direction for our Stroke Teams

If you don't tell us what artery is blocked we cannot code with any specificity when the etiology is Thrombotic, Embolic or Occlusion/ Stenosis NEC. You can see below we need to know the specific artery that is causing the occlusion before we can assign embolic or thrombotic Stroke Codes.



– cerebral (hemorrhagic) I63.9
– – due to
– – – cerebral venous thrombosis, nonpyogenic I63.6
– – – embolism (hemorrhagic)
– – – – cerebral arteries I63.4
– – – – precerebral arteries I63.1
– – – hypoperfusion NEC I63.8
– – – hypotensive event NEC I63.8
– – – occlusion NEC
– – – – cerebral arteries I63.5
– – – – precerebral arteries I63.2
– – – stenosis NEC
– – – – cerebral arteries I63.5
– – – – precerebral arteries I63.2
– – – thrombosis (hemorrhagic)
– – – – cerebral arteries I63.3
– – – – precerebral arteries I63.0
– – hemodynamic NEC I63.8
– – lacunar I63.5
– – specified NEC I63.8
– – watershed NEC I63.8

ICD-10- CA 2018 International Statistical Classification of Diseases, CIHI

CHART #3

What is the final Code for the Stroke?

Answer I63.5 they told us what artery was occluded but etiology of occlusion was questioned “likely”.

Chart documentation found within chart

INVESTIGATIONS:
CT/CTA demonstrated ASPECTS score 7-8 (early changes in right caudate/lentiform). The right M1 had a partially occlusive thrombus, and there was an occlusion in the right M2. There was also delayed washout (hangup) on the first post-head. Carotids had no significant stenosis bilaterally.

WBC 7.0, hemoglobin 120, PLT 387. INR 1.1. Na 143, K 4.0, CL 107, CO2 29, urea 4.2, creatinine 76, glucose random 5.5.

ECG demonstrates query borderline first degree heart block (210 milliseconds, PR interval per computer automatic calculation).

ASSESSMENT AND PLAN:

with a history of hypertension and ex-smoker and obesity. The patient had an initial NIHSS of +1 left face, but this worsened in the Emergency Department to NIHSS 7-8 (+2 left face, +3 left arm, +1-2 left leg, +1 dysarthria). As such, the patient was given TPA (The patient has no contraindications). Given these deficits, the patient was also decided to go for EVT. While the patient was in the angio suite to NIHSS 0, this was quickly followed within 2-3 minutes by a worsening again to NIHSS 5-6 with left arm weakness and the patient stating they were having numbness in the left arm, as well as left leg weakness. As such, the patient went for EVT due to these fluctuating deficits. On the first run of imaging, it demonstrated that the patient was recanalized. This was without thrombectomy. TICI 3. On reassessment after this EVT scan, the patient was found to have NIHSS 1 for left nasolabial fold mild flattening.

3. Etiology workup, for cardioembolic source the patient will have a Holter monitor 24 hours, as well as echocardiogram. Given the patient's young age (48-year-old), for possible paradoxical emboli the patient will have echocardiogram with bubble study. As well, during the patient's stay in hospital, APLA and other prothrombotic workup can be considered if the patient's history is consistent with these. The patient will also have HbA1c and lipids sent as part of routine stroke workup and lipid assessment study is sent as part of routine stroke workup.

CONCLUSIONS
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1. There were no TEE related complications.
2. Overall left ventricular systolic function is normal with an EF between 55 - 60 %. No regional wall motion abnormalities were noted.
3. The right ventricle is grossly normal in size and function.
4. There is no evidence of LA or LA appendage thrombus.
5. Patent foramen ovale present. There is a small amount of right to left shunting at rest and moderate right to left shunting post Valsalva.
6. The visualized ascending aorta is mildy dilated at 40 mm.
7. No significant valve disease seen.

DISCHARGE SUMMARY

IDENTIFICATION:
A -old female with right MCA stroke.

transformation. Investigations for the etiology of the stroke revealed a PFO with right-to-left flow, small in size on TEE which was able to better characterize it. We are thinking this is the likely etiology of her presentation. As such, we have referred her to for consideration of closure of her PFO.

In addition to this, the echocardiogram also revealed an area of apical dyskinesia with negative troponins in hospital. However, given the patient had COVID in August, we were

The documentation in this chart pointed us towards a paradoxical thrombus that traveled from the right to the left side of the heart via a PFO. The thrombus travelled to the brain and occluded the M1 and M2 of the MCA branches. The thrombus is now a thromboembolism/embolus.

Polling Question

Does documentation of Thrombus in ischemic infarctions always mean the etiology is thrombotic?

A)Yes
B)No

Answer from Poll

A Coder's Challenge -is to read all diagnoses within the context of each chart. CIHI's Job Aides, eQueries, on-top of the Standards try to cover as many scenario's as possible but we know the language used within charts does not always fit into the boxes. We have codes but cannot use them if we are not talking the same language as Clinicians.