No.	Question from participants in workshops	Comments from working group (Health Information Managers, Neurologists)
	Session #1 (7-Apr-22)	
1	Why are CTs done if the MRI is more sensitive?	Most larger emergency departments in Australia have ready access to a CT whereas MRI is harder to access. MRI also requires a detailed screening questionnaire to ensure there is no metal or other possible contraindication to MRI, this takes time which results in a delay to scanning in the acute stroke setting. CT also takes less time and is very sensitive for bleeding, both very relevant in the hyper-acute setting.
2	How long does the external ventricular drain (EVD) usually stay in for?	This varies from patient to patient and is usually in place for 1-7 days.
3	Is it possible to have Intracranial Haemorrhage, unspecified (between skull and brain tissue) with intraventricular haemorrhage (IVH)?	If there is intraventricular haemorrhage it should really involve the brain as the ventricles do not directly connect to the skull, so it is hard to imagine intraventricular haemorrhage, unspecified.
4	Our clinicians feel that the terminology required to assign the codes is out of touch with current clinical terminology. Is any work being done with IHPA on this?	The group is not aware of IHACPA (previously IHPA) undertaking work to update terminology in the ICD-10-AM classification. Suggestions to improve the terminology in the classification can be made via a public submission to IHACPA via the Australian Classification Exchange (ACE). Details on how to make a public submission and access to ACE are available at: https://ace.ihpa.gov.au/ You can also submit a query to your state coding advisory committee for support in writing a public submission. Public submissions already submitted in ACE are visible to the public at: https://ace.ihpa.gov.au/Ace/UserSubmissionList.aspx?type=IcdSubmission Where possible clinicians should be encouraged to document specificity to enable an appropriate code to be assigned.
5	Will CDI education be rolled out to other hospitals and states?	Yes, the Australia and New Zealand Stroke Coding Working Group is developing a Stroke Clinical Documentation Education Program for clinicians working with stroke patients. We aim to complete the pilot at St Vincent's Hospital Melbourne. Following this, we plan to roll out the program via the Stroke Unit Coordinators in hospitals around Australia and New Zealand.

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6	Could the clinical documentation training also be given to allied health personnel? We do not often see the direct link between e.g. hemiplegia and the referral to the physiotherapist (PT), and the treatment the PT gives.	Clinical Documentation training can be provided to all members of the care team working in Stroke Units/wards, including medical doctors, specialist stroke nurses, and allied health.
7	What about documentation of cardiogenic stroke?	The term cardiogenic stroke does not provide specificity of the type of stroke. Therefore, the group suggests to: • Apply ACS 0010 *Clinical documentation and general abstraction guidelines*/*Test results and medication charts* and check for imaging to add further specificity to the documentation of stroke. • Send a documentation query to the clinician for the type of stroke. Where no further specificity of the type of stroke can be obtained, as a last resort assign the default code I64 *Stroke, not specified* as haemorrhage or infarction at Lead term Stroke.
8	There is no ACS 0605 in Twelfth Edition.	In Australia for Twelfth Edition (effective 1 July 2022) ACS 0605 *Stroke extension* has been end dated and replaced with ICD-10-AM Index Stroke/extension – see stroke, by type. The education slides will be updated accordingly for the introduction of Twelfth Edition. New Zealand continues to use ICD-10-AM/ACS Eleventh Edition and therefore ACS 0605 can continue to be applied.
9	Is haemorrhagic transformation considered a stroke extension or complication of Ischaemic stroke?	Clinical advice indicates that haemorrhagic transformation is a complication of ischaemic stroke. An extension of a stroke means that the area of tissue damage secondary to ischaemia has enlarged. Where both haemorrhagic stroke and ischaemic stroke are documented in the episode, a code for both the haemorrhagic stroke and ischaemic stroke can be assigned. This is an accordance with the Conventions used in the Tabular Diseases, section Multiple condition coding, which says: 'In Australia, multiple condition coding (meaning that multiple conditions may be assigned in an episode of care) is used to provide the necessary specificity to fully describe the episode of care.

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		This does not mean multiple codes are assigned to describe a single condition (unless otherwise instructed)'. The assignment of the Condition Onset Flag will assist in confirming the initial presentation and any resulting complications.
10	Can you please give an example of when a coder would assign the Z86- code for history of stroke?	ACS 0002 *Additional diagnoses/Family and personal history, and certain conditions influencing health status* advises that additional diagnosis codes for a personal history can be assigned when they are documented as being related to a condition being managed or an intervention being performed in the current episode of care. ACS 0604 *Cerebrovascular accident (CVA)/Old CVA*, dot points 2 and 3 under point 2 also provide advice of when Z86.71 can be assigned. Examples of when it is appropriate to assign Z86.71 *Personal history of cerebrovascular disease* are: • Symptoms e.g., hemiparesis being investigated in a patient who has a past history of a stroke, where no new stroke has been identified, and the hemiparesis is *not* a residual deficit of the past stroke. • The past history of stroke impacts the management of a condition being managed in the current episode. • Where the deficit(s) does not meet the criteria for additional diagnoses (see ACS 0002 *Additional diagnoses*) but the history of stroke does meet the criteria in ACS 0002. • Where there is no deficit(s) but history of stroke is relevant to the episode of care.
11	When checking for documentation for stenosis or occlusion on imaging do, we still need the causal link as per ACE advice?	The working group interprets the IHACPA Coding Rule Q3471 *Occlusion or stenosis of (pre)cerebral arteries and cerebral infarction* as requiring a causal link between the stenosis or occlusion and the cerebral infarction. If clinical coders are unsure how to apply advice in published coding rules, the working group encourages clinical coders to submit a coding query to their state coding committee.

12	ACS 0604 says to code any deficits i.e. haemorrhage. Can you please confirm do these deficits need to meet ACS 0002?	The introduction of the Australian Coding Standards, section Basic structure and principles of the ACS under General and speciality standards states: … Note that ACS are not mutually exclusive, and multiple standards may apply to an episode of care. Apply first the general standards for diseases and interventions (such as ACS 0001 *Principal diagnosis*, ACS 0002 *Additional diagnoses*, ACS 0010 *Clinical documentation and general abstraction guidelines*), then apply the guidelines in the specialty standards that may take precedence over the general standards. There may also be a cross reference (i.e. see ACS) within an ACS to indicate that there may be applicable guidelines in another ACS. Therefore, the working group advises to first apply ACS 0001 and ACS 0002 to the coding of stroke deficits.
13	Why can't the coding pathways that were presented be included in ACS 0604. There is room in ACS 0604 for a lot more practical information.	Suggestions to improve the Australian Coding Standards can be made via a public submission to IHACPA via the Australian Classification Exchange (ACE). Details on how to make a public submission and access to ACE are available at: https://ace.ihpa.gov.au/ You can also submit a query to your state coding advisory committee for support in writing a public submission. Public submissions already submitted in ACE are visible to the public at: https://ace.ihpa.gov.au/Ace/UserSubmissionList.aspx?type=IcdSubmission
14	With the example in Scenario 4, we would have to code the occlusion and query the principal diagnosis as a stroke.	The working group acknowledges that further documentation should have been made available in scenario 4 of the slides to enable the assignment of I63.5 *Cerebral infarction due to unspecified occlusion or stenosis of cerebral arteries*. Without documentation that the occlusion resulted in the cerebral infarction, you are correct a documentation query would need to be sent to the clinician to clarify the principal diagnosis.
15	Do you code 'neglect' as neurologic neglect?	Clinical advice indicates that when neglect is documented in a stroke patient it is neurological neglect which is a neurological deficit.

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		Where neglect meets criteria for coding, follow Index entry Neglect/neurological to assign R29.5 *Neurological neglect.*
	Session #2 (28-Apr-22)	
16	Are you able to discuss thrombosis and embolism?	Thrombosis is when a clot develops in the blood vessel itself (for stroke – in blood vessel in the brain or neck). Embolism is when a clot develops elsewhere and travels (typically from the heart or a neck vessel) to a blood vessel in the brain. Both can cause a blockage and can lead to ischaemic stroke. A thromboembolism is where a blood clot formed in a vessel (e.g. carotid) and then that clot broke off and moved (embolised) to a downstream artery causing a blockage.
17	In ACS 0604 are the stroke "deficits" the same as the "certain associated conditions"? (For classification purposes). Thanks for the great presentation!	A deficit is something that you can no longer do because of the stroke e.g. weakness of arm, aphasia, memory loss, vision disturbances, gait abnormalities. Associated conditions can commonly occur alongside stroke e.g., hypertension, pneumonia, UTI, AF. From a clinical coding standard perspective, there seems to be some overlap between deficits and certain associated conditions that indicate severity.
18	Re question 10… ACS 0604. Classification points "Assign a code from categories I60–I64 (cerebrovascular diseases) with codes for any deficit(s) (e.g. hemiplegia) regardless of the period of time elapsed since the CVA occurred, or care type changes that occur, during the initial episode(s) of care." Does not state that Deficits of current stoke need to meet ACS 0002? (v sequelae and associated conditions which do?)	See answer to Question 12
19	Dysphagia is different to the other severity indicators? May be considered a deficit? e.g., like dysphasia?	See answer to Question 17

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	Session #3 (19-May-22)	
20	Sometimes I see "intraparenchymal haemorrhage" - how would this be coded if no further info?	Parenchyma is brain tissue. Intraparenchymal haemorrhage is the same as intracerebral haemorrhage. Use the radiology results (CT) to further specify the location. If no further information, the working group advises to follow ICD-10-AM Index: Haemorrhage/intracerebral/specified NEC I61.8.
21	If there is no documented causal link between infarction and carotid artery stenosis, should I still assign infarction due to stenosis?	See answer to Question 11
22	If tPA is given, can we assume it is stenosis or occlusion, other than unspecified ischaemic stroke?	The working group advises that the condition requiring tPA needs to be documented in the episode of care, a code for a condition cannot be assigned from the intervention alone. If the condition is not documented, a documentation query would need to be sent to the clinician.
23	When coding an ischaemic stroke, any advice on what to do if documentation says, “occlusive thromboembolic stroke of cerebral artery”?	For documentation of ’occlusive thromboembolic stroke of cerebral artery’, the working group advises to follow ICD-10-AM Index: Thromboembolism - see also Embolism Embolism/artery/cerebral (see also Occlusion/artery/cerebral) then Occlusion/artery/cerebral/with infarction (due to)/embolism to assign I63.4 *Cerebral infarction due to embolism of cerebral arteries.*
	Session #4 (16-Jun-22)	
24	Would you support coding haemorrhagic transformation as intracerebral haemorrhage in addition to infarction code?	See answer to Question 9
25	Which takes precedence for coding when “thromboembolism” is documented? The thrombus or the embolic nature of the clot? (Diff ICD 10 codes for thrombus or embolism)	The working group advises that lead term ‘thromboembolism’ has a ‘see also’ note directing to Index term ‘embolism’. Therefore, if the condition that requires clinical coding is not listed under lead term ‘thromboembolism’, see also lead term ‘embolism’.
26	Because the classification reflects carotid artery to precerebral, is it still correct to assign precerebral when the occlusion/thrombosis/embolism is within the internal carotid artery, coding would reflect	The working group advises that as carotid artery including internal carotid artery is classified as a pre-cerebral artery, it is correct to assign a precerebral diagnosis code.

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	due to thrombosis of pre cerebral artery and procedures reflect intracerebral clot retrieval if performed- I've noticed WA have their own advice for these scenarios and base off procedure performed.	The working group cannot comment on state specific advice and suggest that for further clarification on published state or national advice, clinical coders are encouraged to submit a coding query to their state coding committee.
27	Can you tell us about Tandem Pathology/lesions?	A tandem occlusion refers to when the extracranial (neck) segment of the artery (e.g. carotid) is blocked in addition to a more distal branch (e.g. Middle Cerebral Artery). This typically occurs when there has been a thrombotic event blocking the carotid (e.g. ruptured plaque) with part of that clot breaking off and moving to block another artery (e.g. thromboembolism to the MCA).

Please note: these questions and answers aim to enhance understanding of stroke and clinical coding of stroke. They do not replace current national or state-based advice. Answers have been developed by members of the Australia and New Zealand Stroke Coding Working Group including clinical coding experts and neurologists. Please also refer to National Coding Rules (contained in ACE) and state/jurisdictional-based advice relevant to your location.

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