Stroke Version 2.0 NINDS CDE Project

Name of Stroke v2.0 Subgroup: Imaging
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Please answer the following questions below.

1. **Approach for selection of elements** (*How did you go about drafting the recommendations and/or reviewing the current tools/instruments, and did you have any criteria for selection and classification?)*
   Revision of prior documents, review of interval scientific literature relating to use of specific metrics or elements, broad inclusion of data elements, panel discussions on each topic, hierarchical use or prioritization of data elements, final review of all stroke imaging CDE.

2. **Differential application to types of Stroke** *(Do the instruments/elements you recommended differ between the types of Stroke?)*
   Yes, specific applications and uses in distinct subtypes have been noted.

3. **Differential application to adult and pediatric and other subpopulations within Stroke patients** *(Do the instruments/elements you recommended differ between target populations within Stroke?)*
   No

4. **Summary of recommendations**

Instrument / Scale / CRF Name	Domain	Subdomain	Classification
Aneurysm Location and Dimensions CRF	Assessments and Examinations	Imaging Diagnostics	**Exploratory:** Digital Subtraction Angiography (DSA) site of access anatomic site; Intracranial stenosis present indicator; Contralateral stenocclusive vessel disease indicator; Aneurysm followup shape type **Supplemental:** All other CDEs
Cardiac Magnetic Resonance Imaging CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental:** All CDEs
Echocardiogram CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental:** All CDEs
Echocardiogram II CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental:** All CDEs
Imaging Acquisition CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental:** All CDEs

Instrument / Scale / CRF Name	Domain	Subdomain	Classification
Parenchymal Imaging CRF	Assessments and Examinations	Imaging Diagnostics	**Exploratory:** Imaging one third middle cerebral artery territory involved indicator **Supplemental:** All other CDEs
Perfusion and Penumbral Imaging CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental-Highly Recommended:** Imaging study ID number; Imaging study date and time **Supplemental:** All other CDEs
Vessel Carotid Ultrasound CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental-Highly Recommended:** Imaging study ID number; Imaging study date and time; Imaging B-mode finding result; Imaging echo pattern result; Imaging plaque surface type; Imaging plaque severity grade; Imaging color flow angle measurement; Imaging peak velocity measurement; Imaging end diastolic velocity measurement; Imaging signal indicator; Imaging percent stenosis criterion type; Imaging stenosis percentage value **Supplemental:** All other CDEs

Instrument / Scale / CRF Name	Domain	Subdomain	Classification
Vessel Imaging Angiography CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental-Highly Recommended:** Imaging study ID number; Imaging study date and time; Imaging modality vessel imaging angiography type **Exploratory:** Qureshi angiographic occlusions scale score; Imaging aneurysm 3D reconstruct indicator; Wall opposition stent flow diverter quality grade; Imaging aneurysm occlusion percent value; Imaging aneurysm kinetic energy mean measurement; Imaging mean blood velocity measurement; Imaging aneurysm shear rate mean measurement; Imaging aneurysm vorticity mean measurement; Imaging aneurysm viscous dissipation measurement; Imaging aneurysm vortex coreline length measurement; Imaging aneurysm wall shear stress mean measurement; Imaging aneurysm wall shear stress maximum measurement; Imaging aneurysm wall shear stress minimum measurement; Imaging aneurysm shear concentration index value; Imaging aneurysm low wall shear stress percent value; Imaging aneurysm oscullatory shear stress mean value; Imaging aneurysm inflow mean rate; Imaging aneurysm inflow concentration index value **Supplemental:** All other CDEs
Vessel Imaging Transcranial CRF	Assessments and Examinations	Imaging Diagnostics	**Supplemental:** All CDEs

5. **Comparison to other Stroke standards** *(Are there any notable similarities/differences in the CDE recommendations as compared with other standards?)*
   Similar to prior process of original CDE development.

6. **Issues unique to Stroke** *(Were there any issues encountered when developing the CDE standards which are unique to Stroke or which highlight a unique concern about Stroke data collection?)*
   Yes, episodic use or acute nature of data element availability.

7. **Unmet needs; unanswered questions** *(What unmet need / unanswered questions were identified via the CDE process in Stroke? What areas are in need of further research and development?)* **Codification and practical simplification of CDE to enhance future use.**