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January 2024 Revisions

- The Hospital Course and Acute Therapies Subgroup Summary was updated.
 - The subgroup expanded the Neurobehavioral Symptom Inventory recommendation to all types of stroke.

August 2022 Revisions

- The CDE C00311 Birth weight report value was removed from the Pregnancy and Perinatal
 History CRF and replaced with CDE C59019 Birth weight measurement. CDE C59019 classified as
 Supplemental Highly Recommended.
- The CDE C00311 Birth weight report value was removed from the Stroke Types and Subtypes CRF and replaced with CDE C59019 Birth weight measurement. CDE C59019 classified as Supplemental.
- Start-up Resource Listing was updated to reflect v2.0 recommendations and updates to the Pregnancy and Perinatal History CRF CDEs.

March 2022 Revisions

- Modified Rankin Scale (mRS) NOC was updated.
- Zarit Burden Interview (ZBI) NOC added as Exploratory under the new Caregiver Burden
 Outcomes Subdomain/ Outcomes and End Points Domain. Highlight Summary document was
 updated to reflect the addition of this NOC.

November 2021 Revisions

- Western Aphasia Battery NOC was updated to reflect that the full version is recommended, not the bedside version.
- Highlight Summary document was updated to reflect v2.0 recommendations.

September 2021 Revisions

 C59009 Pregnancy current status and C59010 Postpartum period current status were added to the Medical History CRF as Supplemental.

June 2021 Revisions

• Stroke Presentation and Vital Signs Subgroup Summary was posted.

- Assessment of Transient Neurologic Deficits Resolved Prior to Presentation CRF F1160 updates for v2.0 were added. Title was changed from Stroke Symptoms/ Comorbid Events.
 - CDEs Added
 - C22780 Date time clock type
 - C59006 Date time unknown status
 - CDEs Removed
 - C14180 Stroke symptom/comorbid event resolve presentation indicator
 - C14184 Stroke symptom/comorbid event seizure type
 - C14536 Seizure diagnosis method type
 - C14544 Pregnant or in postpartum period indicator
 - C14545 Pregnant or in postpartum period status
 - Classification Changes
 - None
 - Permissible Value Modifications
 - C14178 Stroke symptom type
 - Added: Sudden weakness of the face, arm or leg
 - Removed: Headache; Seizure or convulsion; Vomiting
 - Revised: Numbness or weakness of the face, arm or leg to Sudden sensory symptoms of the face, arm or leg; Added Sudden to Confusion; Trouble seeing in one or both eyes; Trouble walking, dizziness, loss of balance or coordination
 - C14179 Stroke symptom experienced indicator
 - Removed: Don't know
 - C14183 Stroke symptom timing in relation to stroke onset category
 - Added: Preceded stroke onset by > 7 days
 - Removed: Onset coincident with stroke onset; Followed stroke onset by
 6 hrs
 - Revised: Preceded stroke onset by >= 24 hrs to Preceded stroke onset by >= 24 hrs to 7 days
 - C14187 Stroke symptom pediatric-specific type
 - Revised: Combined Neonatal clinical seizure and Neonatal subclinical seizure into Neonatal seizure (clinical or subclinical)

October 2020 Revisions

- Classifications for three CDEs on the Pre-Hospital/Emergency Medical Service (EMS) Course CRF were corrected from Supplemental to Supplemental Highly Recommended:
 - C01000 Glasgow Coma Scale (GCS) Eye response scale
 - o C01001 Glasgow Coma Scale (GCS) Motor response scale
 - C01002 Glasgow Coma Scale (GCS) Verbal response scale

June – September 2020 Revisions

Overview

The Stroke Version 2.0 CDE Working Group comprehensively reviewed and updated the Stroke Version 1.0 CDEs. The Stroke CDEs were harmonized with the Unruptured Cerebral Aneurysms and Subarachnoid Hemorrhage (SAH) CDEs. There have been significant changes to the content of the Stroke CDE materials in Version 2.0 compared to Version 1.0.

Subgroup Summaries were posted for Stroke Version 2.0 CDE Subgroups.

Within the Outcomes and End Points Domain, the Emotional and Cognitive Status Subdomain was divided into separate Emotional Status and Cognitive Status Subdomains.

The following case report forms (CRFs) were updated, removed or newly added to the Stroke Version 2.0 recommendations. The corresponding data dictionaries (i.e., CDE Detailed Reports) have been modified in accordance with the form changes. Notably, there were two CDEs added to the list of Core CDEs for all stroke studies: C01521 Heart rate and C04807 Vital status.

Updated CRFs (29)

- 1. Demographics F1150
 - a. CDEs Added
 - i. C00031 Race expanded category
 - ii. C52535 Ethnicity pertinent intracranial aneurysm type
 - iii. C58676 Birth sex assigned type
 - iv. C58677 Gender identity type
 - v. C58780 Birth sex assigned type other text
 - vi. C58781 Gender identity type other text
 - vii. C58782 Race expanded maternal category
 - viii. C58783 Race expanded paternal category
 - b. CDEs Removed
 - i. C00035 Gender type
 - c. Classification Changes
 - i. C14123 Country of residence name: Supplemental (v1.0) to Exploratory (v2.0)
 - d. Permissible Value Modifications
 - i. C10676 Country of residence code
 - 1. Added: CN; DE; FI; FR; IN; JP; Other Asian; Other European; RU
- 2. Social Status F1151
 - a. CDEs Added
 - i. C19258 Occupation primary status
 - ii. C19259 Occupation primary other status text
 - iii. C19260 Occupation secondary status
 - iv. C19262 Occupation secondary other status text
 - v. C19482 Paid work hour week count
 - vi. C52560 Occupation paid type
 - b. CDEs Removed
 - i. C00015 Education year count
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C00204 Employment current status:

- 1. Revised: Keeping House to Homemaker
- 3. Behavioral History F1154
 - a. CDEs Added
 - i. C06108 Tobacco smoke pack-year value
 - ii. C55953 Tobacco use stopped age not applicable status
 - iii. C55966 Alcohol use stopped age not applicable status
 - iv. C58936 Drug or substance current illicit or recreational use indicator
 - v. C58937 Drug or substance illicit or recreational use category
 - vi. C58938 Drug or substance illicit or recreational use other text
 - vii. C58939 Tobacco cigarette use started age value
 - viii. C58940 Tobacco cigarette use stopped age value
 - ix. C58941 Tobacco cigarette use stopped age not applicable status
 - x. C58942 E-cigarette electronic vapor product use ever indicator
 - xi. C58943 E-cigarette electronic vapor product use status
 - xii. C58944 Alcohol 30 day use indicator
 - xiii. C58945 Regular moderate intense aerobic exercise physical activity indicator
 - xiv. C58946 Regular moderate intense aerobic exercise physical activity days week number
 - b. CDEs Removed
 - i. C00712 Subscribed drug or substance illicitly used category
 - ii. C00713 Drug or substance current illicit use indicator
 - iii. C18670 Subscribed drug or substance illicitly used other text
 - c. Classification Changes
 - i. C00705 Alcohol current use indicator: Supplemental (v1.0) to S-HR (v2.0)
 - ii. C00706 Alcohol prior use indicator: Supplemental (v1.0) to S-HR (v2.0)
 - d. Permissible Value Modifications
 - i. C00719 Tobacco product used type
 - 1. Added: e-cigarette or vaping products
- 4. Family History F1153
 - a. CDEs Added
 - i. C52569 Brain aneurysm family member relationship text
 - ii. C52570 Subarachnoid hemorrhage family member relationship text
 - iii. C58947 Family history stroke youngest age unknown status
 - iv. C58948 Family history coronary artery disease (CAD) youngest age unknown status
 - b. CDEs Removed
 - i. None
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C00720 Family history medical condition type:
 - Added: Abdominal aortic aneurysm; Arterial dissection; Ehlers-Danlos Syndrome Type IV; Marfan Syndrome; Mitochondrial disorders; Multiple endocrine neoplasia type I; Neurofibromatosis type 1 (NF1); Polycystic kidney disease; Subarachnoid hemorrhage (SAH)
- 5. History Data Source and Reliability F1156
 - a. CDEs Added
 - i. None
 - b. CDEs Removed
 - i. None

- c. Classification Changes
 - i. None
- d. Permissible Value Modifications
 - i. C08147 Data source
 - 1. Removed: Family, specify relation
- 6. Medical History F1152
 - a. CDEs Added
 - i. C06246 Medical history condition type
 - ii. C10539 Diabetes first diagnosis age value
 - iii. C10541 Diabetes treatment type
 - iv. C10543 Cancer head or neck radiation treatment indicator
 - v. C15624 Pregnancy indicator
 - vi. C15629 Postpartum indicator
 - vii. C15630 Postpartum day week value
 - viii. C16012 Medical history condition diagnosis indicator
 - ix. C16174 Menopause indicator
 - x. C17473 Cardiovascular history cardiac surgery date
 - xi. C17475 Cardiovascular history cardiac surgery type
 - xii. C17480 Diabetes mellitus complications type
 - xiii. C17488 Psychiatric history psychotic diagnosis type
 - xiv. C18793 Medical history condition other text
 - xv. C19057 Diabetes mellitus complications other text
 - xvi. C19058 Psychiatric history psychotic diagnosis other text
 - xvii. C19078 Cardiovascular history cardiac surgery other text
 - xviii. C19174 Other cardiac disorder type
 - xix. C22679 Medical history first depressive episode diagnosis age value
 - xx. C52597 Medical history ischemic stroke range
 - xxi. C52598 Medical history ischemic stroke recency rate
 - xxii. C52599 Medical history hemorrhagic stroke type
 - xxiii. C52600 Medical history transient ischemic attack range
 - xxiv. C52601 Medical history transient ischemic attack recency rate
 - xxv. C52602 Medical history migraine aura indicator
 - xxvi. C52603 Medical history migraine active last year indicator
 - xxvii. C52604 Medical history carotid endarterectomy anatomic site
 - xxviii. C52605 Medical history carotid artery stenting anatomic site
 - xxix. C52617 Head trauma result type
 - xxx. C52618 Medical history neck trauma recency rate
 - xxxi. C52619 Medical history atrial fibrillation other cause indicator
 - xxxii. C52620 Medical history atrial fibrillation other cause text
 - xxxiii. C52621 Medical history artificial valve type
 - xxxiv. C52622 Medical history cardiac catheterization recency rate
 - xxxv. C52623 Aortic thoracic aneurysm specify text
 - xxxvi. C52624 Hypertension first diagnosed age value
 - xxxvii. C52693 High cholesterol treatment type
 - xxxviii. C52695 Cancer diagnosis type
 - xxxix. C52696 Infection within two weeks type
 - xl. C52697 Infection within two weeks other text
 - xli. C52699 Sickle cell anemia blood transfusion treatment indicator

- xlii. C52700 Hypercoagulable disorder type text
- xliii. C52701 Bleeding disorder type text
- xliv. C52702 Connective tissue disease other type text
- xlv. C52703 Sleep apnea type text
- xlvi. C52706 Mitochondrial encephalomyopathy lactic acidosis stroke like episodes indicator
- xlvii. C52709 Menopause begin age value
- xlviii. C58354 Other cancer type text
- xlix. C58926 Medical history hemorrhagic stroke range
 - I. C58927 Medical history hemorrhagic stroke recency rate
 - li. C58928 Medical history carotid endarterectomy recent date
 - lii. C58929 Medical history carotid artery stenting recent date
- liii. C58930 Hypertension treatment type
- liv. C58931 Menopause treatment type
- lv. C58932 Menopause treatment type other text
- lvi. C58933 Acquired heart disease indicator
- lvii. C58934 Chickenpox past twelve month indicator
- lviii. C58935 Facial segmental hemangioma PHACE syndrome indicator
- b. CDEs Removed
 - i. None
- c. Classification Changes
 - i. C00315 Medical history global assessment indicator: Supplemental (v1.0) to S-HR (v2.0)
- d. Permissible Value Modifications
 - i. None
- 7. Pregnancy and Perinatal History F1155
 - a. CDEs Added
 - i. C00007 Birth date
 - ii. C12604 APGAR one minute score
 - iii. C16055 Full term delivery child indicator
 - iv. C58820 Pregnancy or delivery risk factor status
 - v. C58821 Pregnancy or delivery risk factor illness other text
 - vi. C58823 Pregnancy or delivery risk factor fetal abnormal recognize in utero text
 - vii. C58824 Pregnancy or delivery risk factor maternal infection text
 - viii. C58825 Intracranial aneurysm rupture delivery status
 - b. CDEs Removed
 - i. None
 - c. Classification Changes
 - i. C00001 Gestational age value: Supplemental (v1.0) to S-HR (v2.0)
 - ii. C00311 Birth weight value: Supplemental (v1.0) to S-HR (v2.0)
 - iii. C00723 APGAR ten minute score: Supplemental (v1.0) to S-HR (v2.0)
 - iv. C00724 APGAR five minute score: Supplemental (v1.0) to S-HR (v2.0)
 - v. C06005 Data collected date and time: Supplemental (v1.0) to S-HR (v2.0)
 - vi. C10556 Pregnant ever indicator: Supplemental (v1.0) to S-HR (v2.0)
 - vii. C10558 Delivery or pregnancy termination last date and time: Supplemental (v1.0) to S-HR (v2.0)
 - viii. C10559 Spontaneous miscarriage count: Supplemental (v1.0) to S-HR (v2.0)
 - ix. C11062 Maternal delivery age value: Supplemental (v1.0) to S-HR (v2.0)
 - x. C11063 Parity maternal value: Supplemental (v1.0) to S-HR (v2.0)
 - xi. C11065 Gravida maternal value: Supplemental (v1.0) to S-HR (v2.0)

- xii. C11066 Pregnancy or delivery risk factor type: Supplemental (v1.0) to S-HR (v2.0)
- xiii. C11067 Pregnancy or delivery risk factor indicator: Supplemental (v1.0) to S-HR (v2.0)
- xiv. C11078 Delivery mode type: Supplemental (v1.0) to S-HR (v2.0)
- xv. C11079 Neonate delivery route type: Supplemental (v1.0) to S-HR (v2.0)
- xvi. C11080 Delivery modality type: Supplemental (v1.0) to S-HR (v2.0)
- xvii. C11081 Delivery caesarean timing status: Supplemental (v1.0) to S-HR (v2.0)
- xviii. C11083 Delivery extraction type: Supplemental (v1.0) to S-HR (v2.0)
- xix. C14151 Pregnancy medical terminations count: Supplemental (v1.0) to S-HR (v2.0)
- xx. C18819 Pregnancy or delivery risk factor other text: Supplemental (v1.0) to S-HR (v2.0)
- xxi. C18829 Delivery mode induced other text: Supplemental (v1.0) to S-HR (v2.0)
- d. Permissible Value Modifications
 - i. C11066 Pregnancy or delivery risk factor type
 - 1. Added: Fetal abnormalities recognized in utero; Maternal infection; Lack of prenatal care; Maternal drug abuse
 - ii. C11078 Delivery mode type
 - 1. Removed: Induced
 - iii. C11080 Delivery modality type: Added Other
- 8. Prior Functional Status F1157
 - a. CDEs Added
 - i. None
 - b. CDEs Removed
 - i. None
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C11084 Developmental and academic history type
 - Revised Delayed acquisition of language/cognitive milestones, diagnosed by a
 pediatrician or neurologist to Delayed acquisition of language milestones, diagnosed
 by a health care provider or educator; Delayed acquisition of cognitive milestones,
 diagnosed by a health care provider or educator
- 9. Hospital Arrival/Admission F1159
 - a. CDEs Added
 - i. None
 - b. CDEs Removed
 - i. C14193 Hospital observation stay no admission indicator
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C14190 Stroke symptoms discover location type
 - 1. Added: examples of locations Not in a healthcare setting (e.g., at place of residence and not in a hospital or clinic); Another acute care facility (e.g., outside hospital); Chronic healthcare facility (e.g., skilled nursing facility); Outpatient healthcare setting (e.g., clinic)
 - ii. C05418 Hospital transport type
 - 1. Added: Mobile stroke unit; EMS from home/scene; Unknown
 - 2. Removed: Ground ambulance with physician; Ground ambulance no physician; By foot; Helicopter
 - iii. C14195 Hospital point of origin for admission or visit type

- 1. Added: Not in a healthcare facility; Another acute care facility; Chronic healthcare facility; Outpatient healthcare facility; Stroke occurred after hospital arrival (in ED/observation unit/inpatient)
- 2. Removed: Non-Health Care Facility Point of Origin; Clinic; Transfer From a Hospital (Different Facility); Transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF); Transfer from another Health Care Facility; Emergency Room; Court/Law Enforcement; Transfer from One Distinct Unit of the Hospital to another Distinct Unit of the Same Hospital Resulting in a Separate Claim to the Payer; Transfer from Ambulatory Surgery Center; Transfer from Hospice and is Under a Hospice Plan of Care or Enrolled in a Hospice Program
- iv. C14197 Hospital care upon admission type
 - 1. Removed: Other Service Admission; Revised Neuro Admit to Neurology Admission
- v. C14198 Hospital presumptive admission diagnosis type
 - 1. Added: Ischemic Venous Stroke; Intracranial Hemorrhage
 - 2. Removed: Stroke not otherwise specified
 - 3. Revised: Ischemic Stroke to Ischemic Arterial Stroke; No stroke related diagnosis to Not stroke related diagnosis
- vi. C14199 Stroke complication of medical/ surgical procedure or therapy likelihood type
 - 1. Added: Not applicable
- 10. Pre-Hospital/Emergency Medical Service (EMS) Course F1158
 - a. CDEs Added
 - i. C04814 Residence type
 - ii. C05418 Hospital transport type
 - iii. C08147 Data source
 - iv. C18667 Data source other text
 - v. C18747 Residence other text
 - vi. C58279 Residence current occupy duration text
 - vii. C58804 Emergency Medical Services (EMS) service personnel highest level type
 - viii. C58805 Pre-hospital stroke screen tool type
 - ix. C58806 Pre-hospital stroke screen tool other text
 - x. C58807 Pre-hospital stroke screen tool outcome status
 - xi. C58808 Pre-hospital severity scale type
 - xii. C58809 Pre-hospital severity scale type other text
 - xiii. C58810 Pre-hospital large vessel occlusion indicator
 - xiv. C58811 Pre-hospital severity scale total score
 - xv. C58812 Pre-hospital severity scale not documented status
 - b. CDEs Removed
 - i. C14204 Emergency Medical Services (EMS) vehicle type
 - ii. C14212 Los Angeles Motor Scale (LAMS) total score
 - iii. C14223 Emergency Medical Services (EMS) service highest level type
 - c. Classification Changes
 - i. C01000 Glasgow Coma Scale (GCS) Eye response scale: Supplemental (v1.0) to S-HR (v2.0)
 - ii. C01001 Glasgow Coma Scale (GCS) Motor response scale: Supplemental (v1.0) to S-HR (v2.0)
 - iii. C01002 Glasgow Coma Scale (GCS) Verbal response scale: Supplemental (v1.0) to S-HR (v2.0)
 - d. Permissible Value Modifications

- i. C14202 Emergency Medical Services (EMS) dispatch priority type
 - 1. Added: Not documented
 - 2. Removed: Unknown
- ii. C14622 Los Angeles Motor Scale (LAMS) facial smile or grimace abnormal type
 - 1. Revised: Right; Left to Droop on right side of face; Droop on left side of face
- iii. C14623 Los Angeles Motor Scale (LAMS) grip abnormal type
 - 1. Revised: Right Weak Grip to Weak Grip with right hand; Right No Grip to No Grip with right hand; Left Weak Grip to Weak Grip with left hand; Left No Grip to No Grip with left hand
- iv. C14624 Los Angeles Motor Scale (LAMS) arm strength abnormal type
 - 1. Revised: Right Drift Down to Right arm drifts down but does not fall immediately; Right Falls Rapidly to Right arm falls rapidly; Left Drifts Down to Left arm drifts down but does not fall immediately; Left Falls Rapidly to Left arm falls rapidly

11. Stroke Types and Subtypes F1162

- a. CDEs Added
 - i. C58676 Birth sex assigned type
 - ii. C58780 Birth sex assigned type other text
 - iii. C58893 Clinical stroke time based ischemic stroke laterality type
 - iv. C58894 Clinical stroke time based Intracerebral hemorrhage laterality type
 - v. C58895 Clinical stroke tissue based ischemic stroke laterality type
 - vi. C58896 Clinical stroke tissue based Intracerebral hemorrhage laterality type
 - vii. C58898 Causative Classification System (CCS) large artery atherosclerosis phenotype status
 - viii. C58899 Causative Classification System (CCS) cardiac embolism phenotype status
 - ix. C58901 Causative Classification System (CCS) small artery occlusion phenotype status
 - x. C58902 Causative Classification System (CCS) other uncommon cause phenotype status
 - xi. C58904 Atherosclerosis small-vessel disease cardiac pathology other cause dissection (ASCOD) system atherothrombosis grade
 - xii. C58907 Atherosclerosis small-vessel disease cardiac pathology other cause dissection (ASCOD) system small vessel grade
 - xiii. C58908 Atherosclerosis small-vessel disease cardiac pathology other cause dissection (ASCOD) system cardioembolic grade
 - xiv. C58909 Atherosclerosis small-vessel disease cardiac pathology other cause dissection (ASCOD) system other grade
 - xv. C58910 Atherosclerosis small-vessel disease cardiac pathology other cause dissection (ASCOD) system dissection grade
 - xvi. C58911 Atherosclerosis small vessel disease cardiac pathology other cause dissection (ASCOD) system sub type
 - xvii. C58912 Embolic stroke of undetermined source (ESUS) criteria category
 - xviii. C58913 Perinatal arterial ischemic stroke type
 - xix. C58914 Vascular effects of Infection in Pediatric Stroke (VIPS) arteriopathy primary diagnosis subtype classification status
 - xx. C58915 Vascular effects of Infection in Pediatric Stroke (VIPS) arteriopathy secondary diagnosis subtype classification status
 - xxi. C58916 Vascular effects of Infection in Pediatric Stroke (VIPS) focal cerebral arteriopathy type
 - xxii. C58917 Focal Cerebral Arteriopathy Severity Score (FCASS) supraclinoid internal carotid artery score scale

- xxiii. C58918 Focal Cerebral Arteriopathy Severity Score (FCASS) middle cerebral artery 1 segment score scale
- xxiv. C58919 Focal Cerebral Arteriopathy Severity Score (FCASS) anterior cerebral artery 1 segment score scale
- xxv. C58920 Focal Cerebral Arteriopathy Severity Score (FCASS) middle cerebral artery 2 segment score scale
- xxvi. C58921 Focal Cerebral Arteriopathy Severity Score (FCASS) anterior cerebral artery 2 segment score scale
- xxvii. C58922 Focal Cerebral Arteriopathy Severity Score (FCASS) baseline score
- xxviii. C58923 Focal Cerebral Arteriopathy Severity Score (FCASS) delta point score code
- xxix. C58924 Focal Cerebral Arteriopathy Severity Score (FCASS) follow up sum score
- xxx. C58925 Sophia chance findings during routine imaging other text
- b. CDEs Removed
 - i. C00035 Gender type
 - ii. C14264 Childhood AIS standardized classification and diagnostic evaluation (CASCADE) secondary sub type
 - iii. C19075 Childhood AIS standardized classification and diagnostic evaluation (CASCADE) secondary sub other text
- c. Classification Changes
 - i. C14257 Childhood stroke type: Supplemental (v1.0) to S-HR (v2.0)
 - ii. C14258 Perinatal stroke type: Supplemental (v1.0) to S-HR (v2.0)
- d. Permissible Value Modifications
 - i. C14225 Trial of ORG 10172 in Acute Stroke Treatment (TOAST) ischemic stroke sub type
 - 1. Added: Small artery occlusion
 - 2. Removed: Small vessel occlusion
 - ii. C14236 Oxfordshire Community Stroke Project (OCSP) subtype category
 - 1. Removed: Cerebral infarction
 - iii. C14237 Intracerebral hemorrhage presumed cause type
 - 1. Removed: Aneurysm
 - iv. C14244 Subarachnoid hemorrhage etiology type
 - 1. Added: Fusiform aneurysm; Presumed amyloid angiopathy
 - v. C14257 Childhood stroke type
 - 1. Added: Childhood cerebral venous thrombosis
 - 2. Removed: Childhood cerebral sinovenous ischemic stroke
 - vi. C14258 Perinatal stroke type
 - 1. Added: Perinatal arterial ischemic stroke (PAIS); Perinatal cerebral venous thrombosis (CVT); Periventricular venous infarction (PVI)
 - Removed: Ischemic perinatal stroke (IPS); Neonatal acute arterial ischemic stroke (AIS); Neonatal cerebral sinovenous ischemic stroke; Presumed pre- or perinatal stroke
 - vii. C14261 Childhood AIS standardized classification and diagnostic evaluation (CASCADE) standard primary acute sub type
 - 1. Added Undetermined etiology
- 12. Hospital Discharge F1163
 - a. CDEs Added
 - i. C58829 Diagnosis principal discharge stroke TIA related ICD-10-CM code status
 - ii. C58831 Stroke initial residence or discharge destination other text
 - b. CDEs Removed

- i. C14217 Stroke service accredited discharge destination type
- c. Classification Changes
 - i. None
- d. Permissible Value Modifications
 - i. C14627 Stroke initial residence or discharge destination type
 - Added: Home with no in-home services; Home with home care services; Another family member's/ friend's home; Intensive Inpatient rehabilitation facility (IRF) including distinct rehabilitation units of a hospital: three hours or greater of therapy per day; Skilled nursing facility (SNF)/ subacute rehab: less than two hours a day of therapy; Medicare certified long-term care hospital (LTCH); Hospice- home or medical facility providing hospice level of care; Other not defined above:; Expired
 - 2. Removed: Discharged to home or self care (routine discharge); Discharged/ transferred to a short term/ general hospital for inpatient care; Discharged/ transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of skilled care = patient received therapy less than 3 hours/day; Discharged/ transferred to a Designated Cancer Center or Children's Hospital; Discharged/ transferred to home under care of organized home health service organization; Expired; Discharged/ transferred to court/ law enforcement; Discharged/ transferred to a federal health care facility; Hospice-home; Hospice-medical facility (certified) providing hospice level of care; Discharged/transferred to hospital-based Medicare approved swing bed; Discharged/ transferred to an inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital; Discharged/ transferred to a nursing facility certified under Medicaid but not certified under Medicare; Discharged/ transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital; Discharged/transferred to a Medicare certified long term care hospital (LTCH); Discharged/transferred to a Critical Access Hospital (CAH); Discharged/ transferred to another type of health care institution not defined elsewhere in this code list
- 13. Physical/Neurological Exam F1164
 - a. CDEs Added
 - i. C02411 Laterality type
 - ii. C21720 Vertigo assessment indicator
 - iii. C58816 Frontal lobe function status
 - iv. C58817 Parietal lobe function status
 - v. C58818 Dysphagia status
 - vi. C58819 Dizziness indicator
 - b. CDEs Removed
 - i. C13520 Dysphagia indicator
 - ii. C13523 Dizziness or vertigo indicator
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. None
- 14. Vital Signs F1165
 - a. CDEs Added
 - i. C01500 Airway treatment type
 - ii. C01551 Respiration type
 - iii. C01557 Respiratory support type

- b. CDEs Removed
 - i. None
- c. Classification Changes
 - i. None
- d. Permissible Value Modifications
 - i. C01553 Blood pressure measurement position type
 - 1. Removed: Unknown
 - ii. C01550 Temperature measurement anatomic site
 - 1. Removed: Forehead Cutaneous Infrared; Unknown
- 15. Biospecimen Collection and Processing F1169
 - a. CDEs Added
 - i. C01705 Lab test name
 - ii. C01712 Lab specimen type
 - iii. C14517 Device manufacturer name
 - iv. C18731 Lab test other text
 - v. C54743 Specimen biologic source type
 - vi. C54746 Specimen not collected reason
 - vii. C54748 Specimen baseline collection indicator
 - viii. C54749 Cerebrospinal fluid collection method type
 - ix. C54750 Cerebrospinal fluid collection method other text
 - x. C54751 Cerebrospinal fluid collection anatomic site
 - xi. C54752 Cerebrospinal fluid collection anatomic site other text
 - xii. C54753 Specimen collection tube type
 - xiii. C54754 Specimen collection tube other text
 - xiv. C55003 Specimen centrifugation revolutions per minute value
 - xv. C55004 Specimen centrifugation temperature value
 - xvi. C55005 Specimen centrifugation duration
 - xvii. C55009 Specimen storage temperature value
 - xviii. C55323 Specimen normal control collected indicator
 - xix. C55325 Specimen convalescent collected indicator
 - xx. C55327 Specimen serial collected indicator
 - xxi. C55329 Specimen storage barcode system used indicator
 - xxii. C55338 Specimen freeze thaw cycle prior biomarker assay number
 - xxiii. C55340 Specimen selective inhibitor used indicator
 - xxiv. C55341 Specimen selective inhibitor used type
 - xxv. C55343 Specimen hazardous triple packaged ship indicator
 - xxvi. C55344 Microdialysis cerebral probe location anatomic site
 - xxvii. C55345 Microdialysis cerebral probe number
 - xxviii. C55346 Microdialysis cerebral probe molecular weight limit value
 - xxix. C55347 Microdialysis cerebral probe membrane length measurement
 - xxx. C55348 Device model number
 - xxxi. C55349 Microdialysis cerebral Ictus monitoring interval
 - xxxii. C55352 Microdialysate source type
 - xxxiii. C55353 Microdialysate composition type text
 - xxxiv. C55357 Microdialysis cerebral analyte glucose measurement
 - xxxv. C55358 Microdialysis cerebral analyte pyruvate measurement
 - xxxvi. C55359 Microdialysis cerebral analyte lactate measurement
 - xxxvii. C55360 Microdialysis cerebral analyte lactate pyruvate ratio value

- xxxviii. C55361 Microdialysis cerebral novel target analyte indicator
- xxxix. C55362 Multiplex platform normalization technique text
 - xl. C55363 Multiplex platform batch effect indicator
 - xli. C55746 Specimen surround dry ice shipment indicator
 - xlii. C55747 Specimen insulate shipment box indicator
 - xliii. C56123 Specimen centrifugation performed indicator
 - xliv. C57923 Blood collection tube additive type
 - xlv. C58407 Blood collection tube volume value
 - xlvi. C58426 Biomarker specimen collected aliquot number
- xlvii. C58427 Biomarker specimen collected aliquot volume value
- xlviii. C58717 Alcoholic drink not applicable last year indicator
- xlix. C58718 Tobacco last consumed date and time
 - I. C58719 Tobacco not applicable last year indicator
 - li. C58720 Collection time mortality status indicator
- lii. C58721 Lab specimen type other text
- liii. C58722 Specimen collection position type
- liv. C58723 Blood collection method type other text
- lv. C58724 Specimen hemolyzed indicator
- lvi. C58735 Needle gauge size type
- lvii. C58736 Needle gauge size type other text
- lviii. C58737 Blood collection tube number
- lix. C58738 CSF/serum simultaneous collection indicator
- lx. C58739 CSF/plasma simultaneous collection indicator
- lxi. C58740 Specimen collection grossly bloody indicator
- lxii. C58741 Specimen shipped indicator
- lxiii. C58742 Shipping conditions type
- lxiv. C58743 Shipping conditions type other text
- lxv. C58744Specimen ambient light protection indicator
- lxvi. C58745 Specimen cooler than room temperature indicator
- Ixvii. C58746 Specimen centrifugation date and time
- Ixviii. C58747 Specimen freezing date and time
- lxix. C58748 Freezing method type
- lxx. C58749 Freezing method type other text
- lxxi. C58750 Blood collection tube additive type other text
- Ixxii. C58751 Specimen expiration date
- Ixxiii. C58752 Specimen expiration not applicable indicator
- lxxiv. C58753 Specimen analysis date and time
- lxxv. C58754 Multiplex platform statistical methodology type
- lxxvi. C58873 Blood collection method category
- b. CDEs Removed
 - i. C12207 Gastrointestinal therapy take nutrition supplement indicator
 - ii. C12208 Gastrointestinal therapy nutrition supplement type
 - iii. C14543 Genetic disorder type
 - iv. C14544 Pregnant or in postpartum period indicator
 - v. C14545 Pregnant or in postpartum period status
 - vi. C18827 Gastrointestinal therapy nutrition supplement other text
 - vii. C18961 Genetic disorder other text
- c. Classification Changes

- i. C01701 Lab specimen collection date and time: Supplemental (v1.0) to S-HR (v2.0)
- d. Permissible Value Modifications
 - i. None
- 16. Laboratory Tests F1167
 - a. CDEs Added
 - i. C01714 Pregnancy test not applicable reason
 - ii. C58755 Toxicology screen other text
 - iii. C58756 Lab test result standard unit of measure
 - iv. C58757 Lab test unit type
 - b. CDEs Removed
 - i. C01707 Lab test abnormality significance type
 - ii. C01708 Lab test performed indicator
 - iii. C01711 Lab test result unit of measure
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C01705 Lab test name
 - 1. Added: Acidity/pH; Activated Partial Thromboplastin Time (aPTT); Activated protein C resistance (APCR); Albumin; Ammonia (NH3); Analgesics; Anticardiolipin antibody IgG (ACA IgG); Anticardiolipin antibody IgM (ACA Igm); Anticonvulsants; Antinuclear antibodies (ANA); Antithrombin activity (AT-III); Barbiturates; Beta 2- glycoprotein Antibody IgG; Beta 2- glycoprotein Antibody IgM; Classical AntiNeutrophil Cytoplasmic Antibodies (C-ANCA); Confirmatory testing for lupus anticoagulant; Creatinine Clearance; CSF glucose; CSF protein; CSF red blood cell count; CSF white blood cell count; D-dimer; Dilute russell viper venom time (DRVVT); Direct bilirubin; Electrophoresis; Erythrocyte sedimentation rate (ESR); Factor V Leiden mutation (FVL); Fibrinogen; Folate; Glomerular Filtration Rate (GFR); Glycosylated Hemoglobin (HgBA1C); High Sensitivity C Reactive Protein (hsCRP); HIV antibodies; Homocysteine; Immunoglobulin G (IgG); Oligoclonal Bands; Partial pressure of carbon dioxide (PaCO2); Partial Pressure of Oxygen (PaO2); Plasmin; Protein C activity; Protein S activity; Protein S Antigen, Free; Prothrombin gene mutation (Factor II/ G20210A); Protoplasmic-staining AntiNeutrophil Cytoplasmic Antibodies (P-ANCA); Psychotropics; Rapid plasma reagin (RPR); Rheumatoid factor; Sedatives; Stimulants; Stool guaiac; Sympathomimetics; Thrombin time; Total protein; Varicella-Zoster Virus (VZV) Antibodies; Varicella-Zoster Virus (VZV) PCR; Venereal Disease Research Laboratory (VDRL) Slide Test
 - Removed 8-isoprostanes; 8-OH-2-deoxyguanosine; Atrial natriuretic peptide (ANP); B-type natriuretic peptide (BNP); C-Reactive Protein; Fasting Glucose; Frataxin Level; GAA repeat-expansion mutation; Glycosylated Hemoglobin; Lactate; Oral glucose tolerance; Plasma malondialdehyde; Serum N-terminal atrial natriuretic peptide (ANP-N); Urea; Urine 8-OH-2-deoxyguanosine/creatinine ratio; Urine Creatinine; Urine Nitrite; Urine pH; Urine White Blood Cells (WBC); Vitamin E
 - ii. C10896 Pregnancy test performed indicator
 - 1. Removed: Unknown
- 17. Parenchymal Imaging F1171
 - a. CDEs Added
 - i. C02426 Epidural hematoma findings type
 - ii. C02429 Epidural hematoma volume measurement

- iii. C02455 Midline shift supratentorial indicator
- iv. C02474 Subdural hematoma acute volume measurement
- v. C08245 Imaging slice count
- vi. C13245 National Institutes of Health Stroke Scale (NIHSS) Severity total score
- vii. C58822 Imaging acute infarcts count category
- viii. C58826 Hyperdense artery specify text
- ix. C58827 Hyperdense venous sinus or cortical vein specify text
- x. C58828 Imaging acute ischemic lesion volume sequence type
- xi. C58830 Imaging acute ischemic lesion volume sequence specify text
- xii. C58832 Imaging chronic infarct count category
- xiii. C58833 Leukoaraiosis sequence type
- xiv. C58834 Leukoaraiosis sequence specify text
- xv. C58835 Perihematomal edema MRI sequence type
- xvi. C58836 Perihematomal edema MRI sequence other text
- xvii. C58837 Epidural hematoma thickness measurement
- xviii. C58838 Epidural hematoma location anatomic site
- xix. C58839 Subdural hematoma thickness measurement
- xx. C58840 Subdural hematoma location anatomic site
- xxi. C58841 Herniation present indicator
- xxii. C58842Herniation location type
- xxiii. C58843 Findings other present indicator
- xxiv. C58844 Other findings text
- b. CDEs Removed
 - i. C08254 Imaging visual analysis location performed type
 - ii. C08255 Imaging visual analysis blinded indicator
 - iii. C10931 Imaging quality of images technically satisfactory indicator
 - iv. C13752 Imaging computed tomography angiography (CTA) source used indicator
 - v. C13754 Imaging CT settings window value
 - vi. C13755 Imaging CT settings level value
 - vii. C13757 Imaging acute infarct level of confidence status
 - viii. C13758 Imaging diagnosis stroke transient ischemic attack indicator
 - ix. C13759 Imaging diagnosis stroke transient ischemic attack symptoms resolve indicator
 - x. C13760 Imaging diagnosis stroke transient ischemic attack symptoms resolve less 24 hours indicator
 - xi. C13761 Imaging acute infarcts count
 - xii. C13787 Imaging chronic infarct count
 - xiii. C13818 Hematoma deep region epicenter anatomic site
 - xiv. C13844 Hemorrhagic transformation symptomatic type
 - xv. C13845 Imaging shift present indicator
 - xvi. C13846 Imaging shift type
 - xvii. C13856 Malformation other present indicator
 - xviii. C18620 Hyperdense vessel specify text
 - xix. C18720 Imaging visual analysis location performed other text
- c. Classification Changes
 - i. C13774 Imaging one third middle cerebral artery territory involved indicator: Supplemental (v1.0) to Exploratory (v2.0)
- d. Permissible Value Modifications
 - i. C13751 Imaging acquisition reason

- 1. Added: Follow-up
- ii. C02437 Imaging modality type
 - 1. Added: CT
- iii. C02495 Imaging scanner strength value
 - 1. Added: 1.5T; 3.0T; 4.0T; 7.0T; Other, specify
- iv. C02499 Imaging pulse sequence type
 - 1. Added: T1-weighted; T2-weighted; Other, specify
- v. C02411 Laterality type
 - 1. Added: Right; Left; Bilateral; NA Not present
- vi. C13767 Imaging vascular Territory location of acute infarct name
 - 1. Added: Lenticulostriates; Borderzone
 - 2. Removed: Watershed
- vii. C13768 Imaging additional vascular result
 - 1. Added: Hyperdense venous sinus or cortical vein, specify
 - 2. Removed: Mass Effect; Loss of grey white differentiation
 - 3. Revised: Edema to Malignant edema; Hyperdense vessel, specify to Hyperdense artery, specify
- viii. C13817 Hematoma deep region anatomic site
 - 1. Removed: Subcortical white matter
- ix. C13838 Hijdra scale anatomic site
 - 1. Removed: Third Ventricle
- x. C13841 Subdural hematoma type
 - 1. Removed: Lengthy; Prolonged
- xi. C13842 Hemorrhagic transformation present indicator
 - 1. Added: Unsure
 - 2. Removed: Unknown
- xii. C13762 Imaging infarcts one vascular territory indicator
 - 1. Removed: Unknown
- xiii. C13774 Imaging one third middle cerebral artery territory involved indicator
 - 1. Removed: Unknown
- xiv. C13786 Imaging chronic infarct present indicator
 - 1. Removed: Unknown
- xv. C13821 Spot sign positive indicator
 - 1. Removed: Unknown
- xvi. C13826 Hematoma chronic indicator
 - 1. Removed: Unknown
- xvii. C13828 Microbleed present indicator
 - 1. Removed: Unknown
- xviii. C13840 Subdural hematoma present indicator
 - 1. Removed: Unknown
- xix. C13848 Hydrocephalus present indicator
 - 1. Removed: Unknown
- xx. C13850 Arteriovenous present malformation indicator
 - 1. Removed: Unknown
- xxi. C13852 Tumor present indicator
 - 1. Removed: Unknown
- xxii. C13854 Abscess present indicator
 - 1. Removed: Unknown

- 18. Perfusion and Penumbral Imaging F1172
 - a. CDEs Added
 - i. C58814 Imaging magnetic resonance based identification penumbra method other text
 - ii. C58815 Imaging perfusion computed tomography based identification penumbra method other text
 - b. CDEs Removed
 - i. C02437 Imaging modality type
 - ii. C02495 Imaging scanner strength value
 - iii. C08244 Imaging slice thickness value
 - iv. C08254 Imaging visual analysis location performed type
 - v. C08255 Imaging visual analysis blinded indicator
 - vi. C10931 Imaging quality of images technically satisfactory indicator
 - vii. C18701 Imaging modality other text
 - viii. C18718 Imaging scanner strength other text
 - ix. C18720 Imaging visual analysis location performed other text
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C13857 Imaging magnetic resonance based identification core volume type
 - 1. Removed: Cerebral blood volume (CBV) defect volume
 - ii. C13862 Imaging magnetic resonance based identification perfusion defect volume type
 - 1. Added: (CBV) to Cerebral blood flow defect volume
 - iii. C13866 Imaging magnetic resonance based identification penumbra method type
 - 1. Added: Other, specify
 - iv. C13873 Imaging perfusion computed tomography based identification perfusion defect volume type
 - 1. Added: Regional cerebral blood flow (rCBF): Removed Cerebral blood volume(CBV) defect volume
 - v. C13877 Imaging perfusion computed tomography based identification penumbra method type
 - 1. Added: Other, specify
- 19. Vessel Carotid Ultrasound F1173
 - a. CDEs Added
 - i. C13245 National Institutes of Health Stroke Scale (NIHSS) Severity total score
 - ii. C58867 Imaging chronic stroke type
 - iii. C58868 Imaging transient ischemic attack type
 - iv. C58869 Imaging contrast agent name
 - v. C58870 Imaging plaque thickness unit of measure
 - vi. C58871 Imaging signal indicator
 - vii. C58872 Intima media thickness (IMT) edge detection algorithm type
 - b. CDEs Removed
 - i. C08254 Imaging visual analysis location performed type
 - ii. C08255 Imaging visual analysis blinded indicator
 - iii. C10931 Imaging quality of images technically satisfactory indicator
 - iv. C13751 Imaging acquisition reason
 - v. C13918 Imaging no signal indicator
 - vi. C13937 Imaging mean lumen diameter measurement
 - vii. C13938 Imaging minimum lumen diameter measurement

- viii. C13939 Imaging mean interadventitial diameter measurement
- ix. C13940 Imaging minimum interadventitial diameter measurement
- x. C18720 Imaging visual analysis location performed other text
- xi. C18888 Imaging acquisition reason other text
- c. Classification Changes
 - i. C02494 Imaging study date and time: Supplemental (v1.0) to S-HR (v2.0)
 - ii. C13750 Imaging study ID number: Supplemental (v1.0) to S-HR (v2.0)
 - iii. C13907 Imaging B-mode finding result: Supplemental (v1.0) to S-HR (v2.0)
 - iv. C13908 Imaging echo pattern result: Supplemental (v1.0) to S-HR (v2.0)
 - v. C13909 Imaging plaque surface type: Supplemental (v1.0) to S-HR (v2.0)
 - vi. C13910 Imaging plaque severity grade: Supplemental (v1.0) to S-HR (v2.0)
 - vii. C13916 Imaging color flow angle measurement: Supplemental (v1.0) to S-HR (v2.0)
 - viii. C13917 Imaging end diastolic velocity measurement: Supplemental (v1.0) to S-HR (v2.0)
 - ix. C13919 Imaging percent stenosis criterion type: Supplemental (v1.0) to S-HR (v2.0)
 - x. C13947 Imaging peak velocity measurement: Supplemental (v1.0) to S-HR (v2.0)
 - xi. C14006 Imaging stenosis percentage value: Supplemental (v1.0) to S-HR (v2.0)
- d. Permissible Value Modifications
 - i. C13901 Imaging patient type
 - 1. Added: Chronic TIA
 - 2. Removed: Brain Edema; Vasospasm
 - ii. C10570 Imaging contrast agent used indicator
 - 1. Removed: Unknown; Not applicable
 - iii. C13924 Imaging vertebral origin result
 - 1. Added: Reverse flow
 - iv. C13925 Imaging vertebral interosseous result
 - 1. Added: Occluded; Reverse flow
 - 2. Removed: Occlusion
 - v. C13922 Imaging common carotid artery (CCA) externalization indicator
 - 1. Removed: Unknown
 - vi. C13926 Intima media thickness (IMT) B mode indicator
 - 1. Removed: Unknown
 - vii. C13927 Intima media thickness (IMT) B Mode guided M mode indicator
 - 1. Removed: Unknown
 - viii. C13928 Intima media thickness (IMT) electronic caliper indicator
 - 1. Removed: Unknown
 - ix. C13929 Intima media thickness (IMT) edge detection algorithm indicator
 - 1. Removed: Unknown
- 20. Vessel Imaging Angiography F1174
 - a. CDEs Added
 - i. C02483 Traumatic aneurysm findings type
 - ii. C02484 Traumatic aneurysm status
 - iii. C02485 Traumatic aneurysm anatomic site
 - iv. C02486 Traumatic aneurysm volume measurement
 - v. C02487 Vascular dissection findings type
 - vi. C02488 Vascular dissection extent type
 - vii. C02491 Venous sinus injury status
 - viii. C02492 Venous sinus injury anatomic site
 - ix. C02493 Venous sinus injury morphology type

- x. C13948 Imaging mean blood velocity measurement
- xi. C54675 Imaging aneurysm anatomic site
- xii. C54728 Aneurysm neck maximum measurement
- xiii. C54729 Aneurysm aspect ratio value
- xiv. C54738 Aneurysm thrombus indicator
- xv. C54739 Aneurysm shape pathology type
- xvi. C54757 Imaging aneurysm dome size value
- xvii. C54758 Imaging aneurysm irregular indicator
- xviii. C54760 Imaging aneurysm 3D reconstruct indicator
- xix. C54761 Wall opposition stent flow diverter quality grade
- xx. C54762 Imaging aneurysm occlusion percent value
- xxi. C54763 Imaging aneurysm Raymond Roy Occlusion Classification category
- xxii. C54764 Imaging aneurysm parent branch vessel occlusion indicator
- xxiii. C54765 Imaging aneurysm kinetic energy mean measurement
- xxiv. C54766 Imaging aneurysm shear rate mean measurement
- xxv. C54767 Imaging aneurysm vorticity mean measurement
- xxvi. C54768 Imaging aneurysm viscous dissipation measurement
- xxvii. C54769 Imaging aneurysm vortex coreline length measurement
- xxviii. C54770 Imaging aneurysm wall shear stress mean measurement
- xxix. C54771 Imaging aneurysm wall shear stress maximum measurement
- xxx. C54772 Imaging aneurysm wall shear stress minimum measurement
- xxxi. C54773 Imaging aneurysm shear concentration index value
- xxxii. C54774 Imaging aneurysm low wall shear stress percent value
- xxxiii. C54775 Imaging aneurysm oscillatory shear stress mean value
- xxxiv. C54776 Imaging aneurysm inflow mean rate
- xxxv. C54777 Imaging aneurysm inflow concentration index value
- xxxvi. C58881 Expanded Thrombolysis in Cerebral Infarction (eTICI) perfusion scale grade
- xxxvii. C58889 Imaging vessel angiography Tan collateral score
- xxxviii. C58890 Imaging aneurysm kinetic energy mean unit of measure
- xxxix. C58891 Imaging aneurysm shear rate mean unit of measure
 - xl. C58892 Imaging aneurysm vorticity mean unit of measure
 - xli. C58897 Imaging aneurysm viscous dissipation unit of measure
 - xlii. C58900 Imaging aneurysm oscillatory shear stress mean value unit of measure
 - xliii. C58903 Traumatic aneurysm anatomic site other text

b. CDEs Removed

- i. C08254 Imaging visual analysis location performed type
- ii. C08255 Imaging visual analysis blinded indicator
- iii. C10931 Imaging quality of images technically satisfactory indicator
- iv. C13886 Imaging vessel angiography cause type
- v. C13887 Imaging vessel angiography symptomology type
- vi. C13888 Thrombolysis In Myocardial Infarction (TIMI) scale individual vessel score
- vii. C13889 Thrombolysis In Myocardial Infarction (TIMI) scale global score
- viii. C13891 Thrombolysis in Cerebral Infarction (TICI) perfusion scale grade
- ix. C13895 Imaging vessel angiography presumed pathogenesis type
- x. C13896 Imaging vessel angiography level of confidence status
- xi. C18720 Imaging visual analysis location performed other text
- c. Classification Changes
 - i. C02494 Imaging study date and time: Supplemental (v1.0) to S-HR (v2.0)

- ii. C13750 Imaging study ID number: Supplemental (v1.0) to S-HR (v2.0)
- iii. C13879 Imaging modality vessel imaging angiography type: Supplemental (v1.0) to S-HR (v2.0)
- d. Permissible Value Modifications
 - i. C13751 Imaging acquisition reason
 - 1. Added: Treatment
 - ii. C13879 Imaging modality vessel imaging angiography type
 - 1. Added: Cone Beam Computed Tomography (CBCT)
 - 2. Revised: MRA to MRA/MRV; CTA to CTA/CTV
 - iii. C02411 Laterality type
 - 1. Added: Right; Left; Bilateral; N/A Not present
 - iv. C13882 Magnetic resonance angiography type
 - 1. Removed: Computer Tomography Venography (CTV)
 - v. C13884 Imaging vessel angiography arterial anatomic site
 - 1. Revised: Basilar-distal to AICA to Basilar-distal; Basilar-proximal to AICA to Basilar-proximal
 - vi. C13885 Imaging vessel angiography arterial result
 - 1. Added: Other
 - vii. C13894 Imaging vessel angiography overall assessment type
 - 1. Added: Stenosis; Occlusion; Other
 - 2. Removed: Impaired flow
 - 3. Revised: Small Caliber to Small Caliber/Congenital Hypoplasia
- 21. Electrocardiogram (ECG) F1177
 - a. CDEs Added
 - i. None
 - b. CDEs Removed
 - i. None
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C04504 ECG heart rhythm result type:
 - 1. Removed: Atrial arrhythmia; Premature atrial contractions; Atrial fibrillation; Atrial flutter; Atrial other; Ventricular arrhythmia; Premature ventricular contractions; Ventricular fibrillation; Ventricular tachycardia; Ventricular other; Ventricular arrhythmia morphology-Uniform; Paced rhythm, specify type; Paced rhythm type-Atrial; Paced rhythm type-ventricular
- 22. Antithrombotics and Risk Factor Controlling Medications F1178
 - a. CDEs Added
 - i. C58845 Discharge origin location type
 - ii. C58846 Discharge origin location other text
 - iii. C58949 Medication stroke discharge prescribe category
 - iv. C58950 Anticoagulant agent stroke discharge prescribe type
 - v. C58951 Anticoagulant agent stroke discharge prescribe other text
 - vi. C58952 Antiplatelet agent stroke discharge prescribe type
 - vii. C58953 Antiplatelet agent stroke discharge prescribe other text
 - viii. C58954 Antihypertensive agent stroke discharge prescribe type
 - ix. C58955 Antihypertensive agent stroke discharge prescribe other text
 - x. C58956 Anti diabetic agent stroke discharge prescribe type

- xi. C58957 Anti diabetic agent stroke discharge prescribe other text
- xii. C58958 Lipid lower agent stroke discharge prescribe type
- xiii. C58959 Lipid lower agent stroke discharge prescribe other text
- xiv. C58960 Antithrombotic therapy not prescribed serious side effect text
- b. CDEs Removed
 - i. C14636 Heparin venous thromboembolism (VTE) prophylaxis dose
 - ii. C14637 Stroke discharge medication category
- c. Classification Changes
 - i. None
- d. Permissible Value Modifications
 - i. C14630 Anticoagulant agent in hospital type
 - 1. Added: Direct thrombin inhibitor (Lepirudin, Desirudin, Bivalirudin, Argatroban, Dabigatran); Factor Xa inhibitor (Apixaban, Betrixaban, Edoxaban, Rivaroxaban, Fondaparinux)
 - 2. Removed: Fondaparinux (Arixtra)
 - ii. C14632 Antiplatelet agent in hospital type
 - 1. Added: Cilostazol
 - 2. Removed: Ticlopidine (Ticlid)
 - iii. C14635 Extracranial venous thromboembolism prophylaxis type
 - 1. Added: Direct thrombin inhibitor (Lepirudin, Desirudin, Bivalirudin, Argatroban, Dabigatran)
 - 2. Added examples: Factor Xa inhibitor (Apixaban, Betrixaban, Edoxaban, Rivaroxaban, Fondaparinux)
 - 3. Removed: Warfarin; Venous foot pumps (VFP); Oral Factor Xa inhibitor
 - iv. C14638 Antithrombotic therapy not prescribed reason
 - Revised: Allergy to or complication related to aspirin, ticlopidine, clopidogrel, dipyridamole, warfarin, or heparins (history or current) to Allergy to aspirin, clopidogrel, dipyridamole, cilostazol, warfarin, direct thrombin inhibitor, factor Xa inhibitor or heparin (history or current); Risk for bleeding or discontinued due to bleeding to Risk for bleeding; Discontinued due to bleeding; Serious side effect to medication to Serious side effect to medication, specify
- 23. Prior and Concomitant Medications F1206
 - a. CDEs Added
 - i. C12207 Gastrointestinal therapy take nutrition supplement indicator
 - ii. C12208 Gastrointestinal therapy nutrition supplement type
 - iii. C18827 Gastrointestinal therapy nutrition supplement other text
 - iv. C54985 Stimulant current former use type
 - v. C54986 Stimulant current former use other text
 - vi. C54987 Stimulant current former use duration
 - vii. C54988 Stimulant current former use age start value
 - viii. C54989 Stimulant former use age end value
 - ix. C54990 Cocaine expose year prior unruptured intracranial aneurysm presentation indicator
 - x. C54991 Cocaine use duration
 - xi. C54992 Cocaine exposure age start value
 - xii. C54993 Cocaine exposure age end value
 - xiii. C54994 Potency enhancing drug current former use type
 - xiv. C54995 Potency enhancing drug current former use duration

- xv. C54996 Potency enhancing drug current former use age start value
- xvi. C54997 Potency enhancing drug former use age end value
- xvii. C54998 Medication immunosuppressant current former type
- xviii. C54999 Medication immunosuppressant current former take other text
- xix. C58961 Medication antiplatelet current former take indicator
- xx. C58962 Medication antiplatelet past week type
- xxi. C58963 Medication antiplatelet past week other text
- xxii. C58964 Medication anticoagulant current former take indicator
- xxiii. C58965 Medication anticoagulant past week type
- xxiv. C58966 Medication anticoagulant past week other text
- xxv. C58967 Medication cholesterol reduce control current former take indicator
- xxvi. C58968 Medication cholesterol reduce control past week type
- xxvii. C58969 Medication cholesterol reduce control past week other text
- xxviii. C58970 PCSK9 inhibitor past three month indicator
- xxix. C58971 Medication diabetic current former take indicator
- xxx. C58972 Medication diabetic past week type
- xxxi. C58973 Medication diabetic past week other text
- xxxii. C58974 Medication antihypertensive current former take indicator
- xxxiii. C58975 Medication antihypertensive past week type
- xxxiv. C58976 Medication diuretic past week type
- xxxv. C58977 Medication diuretic past week other text
- xxxvi. C58978 Medication beta-blocker past week type
- xxxvii. C58979 Medication beta-blocker past week other text
- xxxviii. C58980 Medication angiotensin receptor blocker past week type
- xxxix. C58981 Medication angiotensin receptor blocker past week other text
 - xl. C58982 Medication calcium-channel blocker past week type
 - xli. C58983 Medication calcium-channel blocker past week other text
 - xlii. C58984 Medication ACE inhibitor past week type
 - xliii. C58985 Medication ACE inhibitor past week other text
 - xliv. C58986 Medication other antihypertensive past week type
 - xlv. C58987 Medication other antihypertensive past week text
- xlvi. C58988 Medication hormone replacement current former take indicator
- xlvii. C58989 Medication hormone replacement past week type
- xlviii. C58990 Medication hormone replacement past week other text
- xlix. C58991 Medication hormone replacement therapy route type
 - I. C58992 Medication hormone replacement therapy route other text
 - li. C58993 Medication oral contraceptive current former take indicator
- lii. C58994 Medication implant estrogen contraceptive current former take indicator
- liii. C58995 Medication other current former take indicator
- liv. C58996 Medication other past week type
- lv. C58997 Medication other past week other text
- lvi. C58998 Medication ADHD ADD current former take indicator
- lvii. C58999 Medication cold preparation current former take indicator
- lviii. C59000 Medication L-asparaginase current former take indicator
- b. CDEs Removed
 - i. None
- c. Classification Changes
 - i. None

- d. Permissible Value Modifications
 - i. C02011 Medication prior or concomitant dose frequency
 - 1. Revised: AD to alt. d.
- 24. Thrombolytic/Reperfusion Therapies F1179
 - a. CDEs Added
 - i. C58852 IV tPA not started MRI selection treatment beyond 4.5 hour reason
 - ii. C58857 Angiographic image last date and time
 - b. CDEs Removed
 - i. None
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C14396 IV tPA initiated status
 - 1. Added: Yes- beyond 4.5 hour using imaging selection
 - ii. C14399 IV tPA not started reason
 - 1. Added: Stroke severity nondisabling; MRI not feasible; CTP not feasible
 - 2. Removed: Stroke severity too mild
- 25. Stroke Surgical and Procedural Interventions F1180
 - a. CDEs Added
 - i. C58784 Stroke surgical therapeutic procedure type
 - ii. C58785 Stroke neurosurgical procedure non vascular other text
 - iii. C58786 Stroke surgical therapeutic procedure other text
 - iv. C58787 Thrombectomy artery anatomic site
 - v. C58788 Thrombectomy middle cerebral artery segment anatomic site
 - vi. C58789 Intracranial revascularization procedure type
 - vii. C58790 Intracranial revascularization procedure other text
 - viii. C58791 Bypass revascularization surgery type
 - ix. C58792 Carotid revascularization procedure type
 - x. C58793 Carotid revascularization procedure other text
 - xi. C58794 Vertebral artery revascularization procedure type
 - xii. C58795 Vertebral artery revascularization procedure other text
 - xiii. C58796 Ventricular drain place type
 - xiv. C58797 Ventricular drain place other text
 - xv. C58798 Increase intracranial pressure medical therapy type
 - xvi. C58799 Osmotic therapy type
 - xvii. C58800 Stroke surgical operative preventive treatment indicator
 - xviii. C58801 Stroke surgical operative preventive treatment type
 - xix. C58802 Stroke surgical operative preventive cardiac treatment text
 - xx. C58803 Stroke surgical operative preventive neurosurgical treatment other text
 - b. CDEs Removed
 - i. C05108 Surgical or therapeutic procedure type
 - ii. C18765 Surgical or therapeutic procedure other text
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C05104 Inpatient outpatient status
 - 1. Removed: Home health
- 26. Lifestyle Modification Therapies F1181

- a. CDEs Added
 - i. C58845 Discharge origin location type
 - ii. C58846 Discharge origin location other text
 - iii. C58847 Weight loss counsel indicator
 - iv. C58848 Weight loss intervention type
 - v. C58849 Physical activity increase recommendation indicator
 - vi. C58850 Physical activity increase intervention type
 - vii. C58851 Physical activity increase intervention other text
 - viii. C58853 Dietary intervention type
 - ix. C58854 High sodium intake avoid counsel indicator
 - x. C58855 High sodium intake avoid intervention type
 - xi. C58856 High alcohol consumption avoid counsel indicator
 - xii. C58858 High alcohol consumption avoid intervention type
 - xiii. C58859 Recreational prescription drug abuse discontinue counsel indicator
 - xiv. C58860 Recreational prescription drug abuse discontinue intervention type
 - xv. C58861 Recreational prescription drug abuse discontinue intervention other text
 - xvi. C58862 Contraceptive hormone replacement treatment counsel indicator
 - xvii. C58863 Contraceptive hormone replacement treatment intervention type
 - xviii. C58864 Mental resilience stress management tool adopt counsel indicator
 - xix. C58865 Mental resilience stress management tool adopt intervention type
 - xx. C58866 Mental resilience stress management tool adopt intervention other text
- b. CDEs Removed
 - i. C14276 Weight loss or activity recommendation indicator
 - ii. C14278 Formal dietary counseling indicator
- c. Classification Changes
 - i. None
- d. Permissible Value Modifications
 - i. C14275 Smoking cessation treatment type
 - 1. Added: Education provided to patients and caregivers about second hand smoke exposure
 - 2. Revised: Direct discussion with patient or caregiver about stopping smoking (e.g., advised patient to stop smoking) to Direct discussion with the patient or caregiver about stopping smoking; Institution of a structured nicotine withdrawal protocol/program during acute hospitalization; Prescription of Wellbutrin/bupropion or alternative FDA-approved smoking cessation medication if prescribed as smoking cessation to Prescription of Wellbutrin (bupropion), Chantix (varenicline), or alternative FDA-approved smoking cessation medication if prescribed for smoking cessation
- 27. Palliative/Comfort Care and End of Life Issues F2834
 - a. CDEs Added
 - i. None
 - b. CDEs Removed
 - i. None
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C14280 Comfort care earliest documentation timepoint type
 - 1. Removed: Timing unclear

- ii. C14283 Do not resuscitate or intubate (DNR or DNI) earliest documentation timepoint type
 - 1. Removed: Timing unclear
- 28. Rehabilitation Therapies F1182
 - a. CDEs Added
 - i. C05134 Therapy rehabilitation start date time
 - ii. C22608 Total rehabilitation session count
 - iii. C58874 Location post-acute stroke discharge other text
 - iv. C58875 Therapy or rehabilitation received status other text
 - v. C58876 Therapy or rehabilitation session week frequency
 - vi. C58877 Inpatient therapy or rehabilitation location type
 - vii. C58878 Therapy or rehabilitation duration
 - viii. C58879 Assistive device use indicator
 - ix. C58880 Assistive device type
 - x. C58882 Assistive device other text
 - xi. C58883 Adjunctive treatment drool surgical procedure injection specify text
 - xii. C58884 Supportive medical equipment indicator
 - xiii. C58885 Supportive medical equipment type
 - xiv. C58886 Supportive medical equipment other text
 - xv. C58887 Follow-up care specialist type
 - xvi. C58888 Follow-up care specialist other text
 - b. CDEs Removed
 - i. C05132 Therapy or rehabilitation frequency
 - ii. C05133 Therapy or rehabilitation session duration
 - iii. C12679 Mobility device use indicator
 - iv. C12682 Orthosis use indicator
 - v. C12683 Mobility device type
 - vi. C12943 Orthosis type
 - vii. C14292 Durable medical equipment indicator
 - viii. C14293 Durable medical equipment type
 - ix. C14294 Follow-up care stroke specialist indicator
 - x. C14295 Follow-up care primary care provider indicator
 - xi. C14296 Follow-up care rehabilitation doctor indicator
 - xii. C18870 Mobility device other text
 - xiii. C18883 Orthosis other text
 - xiv. C18914 Durable medical equipment other text
 - c. Classification Changes
 - i. None
 - d. Permissible Value Modifications
 - i. C14290 Location post-acute stroke discharge type
 - Added: Home with no in-home services; Home with home care services; Another family member's/ friend's home; Intensive Inpatient rehabilitation facility (IRF) including distinct rehabilitation units of a hospital: three hours or greater of therapy per day; Skilled nursing facility (SNF)/ subacute rehab: less than two hours a day of therapy; Medicare certified long-term care hospital (LTCH); Hospice- home or medical facility providing hospice level of care; Other not defined above:; Expired
 - 2. Removed Own home with self care; Another family member's/ friend's home; Short term/ general hospital for inpatient care; Skilled nursing facility (SNF) with Medicare

certification in anticipation of skilled care; Designated Cancer Center or Children's Hospital; Home under care of organized home health service organization; Expired; Court/ law enforcement facility; Federal health care facility; Hospice- home; Hospice-medical facility (certified) providing hospice level of care; Hospital-based Medicare approved swing bed; Inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital; Medicare certified long-term care hospital (LTCH); Nursing facility certified under Medicaid but not certified under Medicare; Psychiatric hospital or psychiatric distinct part unit of a hospital; Critical Access Hospital (CAH); Another type of health care institution not defined above

- ii. C14286 Therapy or rehabilitation received status
 - 1. Removed: Transferred to rehabilitation facility; Referred to rehabilitation services following discharge; Ineligible to receive rehabilitation services because of insurance issues
 - Revised: Received rehabilitation services during hospitalization to Received rehabilitation therapy during hospitalization; Ineligible to receive rehabilitation services because symptoms resolved to Did not receive rehabilitation therapy because symptoms resolved; Ineligible to receive rehabilitation services due to impairment to Ineligible to receive rehabilitation therapy due to impairment severity or medical issues
- iii. C05130 Therapy or rehabilitation type
 - 1. Added: Speech/Language; Psychological/Cognitive
 - 2. Removed: Speech therapy; Psychological
- iv. C05104 Inpatient or outpatient status
 - 1. Removed: Home health
- v. C14289 Adjunctive treatment type
 - 1. Added Potential function enhancing drugs (SSRIs, stimulants, antidepressants)
 - 2. Revised: Surgical procedure for drooling, specify to Surgical procedure or injection for drooling, specify; Feeding tube placement to Feeding/gastrostomy tube placement

CRFs Removed (2)

- 1. Vessel Imaging Transcranial Color-Coded Real-time Sonography (TCCS)
- 2. Vessel Imaging Transcranial Doppler (TCD)

These CRFs were merged to form the Vessel Imaging Transcranial CRF.

New CRFs (11)

CRF	V2.0 Classification	Added from SAH?*
Aneurysm Location and Dimensions	Supplemental; Exploratory	No
Cardiac Magnetic Resonance Imaging (MRI)	Supplemental	Yes
Death	Core; Supplemental; Exploratory	Yes
Echocardiogram	Supplemental	Yes
Echocardiogram II	Supplemental	Yes
Home Time	Exploratory	Yes
Imaging Acquisition	Supplemental	No

CRF	V2.0 Classification	Added from SAH?*
Return to Work	Exploratory	Yes
SAH Surgical/Procedural Interventions	Supplemental – Highly Recommended; Supplemental; Exploratory	Yes
UIA Management	Supplemental; Exploratory	Yes
Vessel Imaging Transcranial	Supplemental	No

^{*}Classification may be different than for SAH.

The following instruments were reclassified, removed, or newly added. Information in the instrument summaries was also updated as necessary.

Updated Instrument Classifications (11)

Instrument	V1.0 Classification	V2.0 Classification
Barthel Index	Core	Supplemental
Boston Naming Test (BNT) - 30-item	Supplemental	Supplemental – Highly
version		Recommended
Center for Epidemiologic Studies-	Supplemental – Highly	Supplemental
Depression Scale (CES-D)	Recommended	
King's Outcome Scale for Childhood Head	Supplemental	Exploratory
Injury (KOSCHI)		
National Institutes of Health (NIH)	Exploratory	Supplemental
Toolbox		
Neuropsychiatric Inventory	Supplemental	Exploratory
Questionnaire (NPI-Q)		
	Supplemental – Highly	Added as Core for Ischemic
NIH Stroke Scale (NIHSS)	Recommended	Stroke only;
Will Stroke Scale (Willss)		Supplemental – Highly
		Recommended
Patient-Reported Outcomes	Supplemental	Supplemental – Highly
Measurement Information System		Recommended
(PROMIS)		
Patient-Reported Outcomes	Exploratory	Supplemental
Measurement Information System		
(PROMIS)-Physical Function Assessments		
Quality of Life in Neurological Disorders	Exploratory	Supplemental – Highly
(Neuro-QOL)		Recommended
Questionnaire for Verifying Stroke-Free	Supplemental	Supplemental – Highly
Status (QVSFS)		Recommended

Instruments Removed (2)

- 1. Atherosclerosis Risk in Communities Study (ARIC) TIA/Stroke Form
- 2. Post Acute Care Admission Continuity Assessment Record and Evaluation (PAC Admission CARE) Tool Section VI: Functional Status

New Instrument Recommendations (31)

Instrument	Instrument Subdomain V2.0 Classifi		Added from SAH?
6-Minute Walk Test	Performance Measures	Supplemental	No
Action Research Arm Test	Performance Measures	Supplemental	Yes
Animal Naming	Performance Measures	Supplemental	No
Assessment of Motor and Process Skills (AMPS)	Activities of Daily Living/Performance	Supplemental	No
Beck Anxiety Inventory (BAI)	Emotional Status	Supplemental	Yes
Beck Depression Inventory II (BDI-II)	Emotional Status	Supplemental	Yes
Berg Balance Scale (BBS)	Performance Measures	Supplemental	Yes
Brief Visuospatial Motor Test - Revised (BVMT-R)	Performance Measures	Supplemental	No
Color-Word Interference Test Delis- Kaplan Executive Function System (D-KEFS)	Cognitive Status	Supplemental	Yes
Controlled Oral Word Association Test (COWAT)	Performance Measures	Supplemental	No
Fugl-Meyer Assessment	Performance Measures	Supplemental – Highly Recommended	Yes
Generalized Anxiety Disorder (GAD-7)	Emotional Status	Exploratory	Yes
Grooved Pegboard Test	Performance Measures	Supplemental	Yes
Motor Evaluation Scale for Upper Extremity in Stroke Patients (MESUPES)	Performance Measures	Supplemental	No
Neurobehavioral Symptom Inventory	Physical/Neurological Examination	Supplemental	Yes
Patient Health Questionnaire - 9 (PHQ-9) Depression Scale	Emotional Status	Supplemental – Highly Recommended	Yes
Pediatric Modified Rankin Scale (mRS)	Pediatric	Exploratory	No
Pediatric Quality of Life Inventory (PedsQL 4.0)	Pediatric	Supplemental	No
Pediatric Stroke Recurrence and Recovery Questionnaire (RRQ)	Pediatric	Supplemental	No
PROMIS-10/PROMIS v1.2 – Global Health	Quality of Life/Patient Reported Outcomes	Supplemental – Highly Recommended	No

Instrument	Subdomain	V2.0 Classification	Added from SAH?
PROMIS-29	Quality of Life/Patient Reported Outcomes	Supplemental – Highly Recommended	No
PTSD Checklist - Civilian (PCL-C)	Emotional Status	Exploratory	Yes
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)	Cognitive Status	Supplemental	No
Rey Auditory Verbal Learning Test [RAVLT]	Cognitive Status	Supplemental	Yes
Similarities Subtest of the Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV)	Cognitive Status	Exploratory	Yes
Six-Item Screener (SIS)	Cognitive Status	Supplemental	No
Stroke and Aphasia Quality of Life-39 (SAQOL-39)	Quality of Life/Patient Reported Outcomes	Supplemental – Highly Recommended	No
Token Test	Performance Measures	Supplemental	Yes
Trail Making Test (TMT), Delis- Kaplan Executive Function System (D-KEFS)		Supplemental	Yes
Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-P)	Quality of Life/Patient Reported Outcomes	Exploratory	Yes
Western Aphasia Battery-Revised (WAB-R)	Cognitive Status	Supplemental – Highly Recommended	No

January 2020 Revisions

- General Core CRF updated to replace 'Gender' question with 'Sex assigned at birth' and 'Gender identity'.
- Two new CDEs added to CRF: C58676 (Birth sex assigned type) and C58677 (Gender identity type). C00035 has been removed
- Start-Up document updated to reflect these changes.

December 2018 Revisions

- F1161 Glasgow Coma Scale:
 - Scoring information section text was corrected to state that lower, not higher, scores indicate patients in comatose.

August 2018 Revisions

- F1151 Social Status:
 - Classification revised to Supplemental Highly Recommended for:
 - C00015 Education year count
 - CRF revised
- F1171 Perfusion and Penumbral Imaging:
 - o Classification revised to Supplemental Highly Recommended for:
 - C13750 Imaging study ID number
 - C02494 Imaging study date and time
 - C13245 National Institutes of Health Stroke Scale (NIHSS) Severity total score added to form
- F1176 Vessel Imaging Transcranial Doppler (TCD):
 - o Classification revised to Supplemental- Highly Recommended for:
 - C13750 Imaging study ID number
 - C02494 Imaging study date and time
 - C13942 Imaging vessel category
 - C02411 Laterality type
 - C14056 Imaging depth measurement
 - C13947 Imaging peak velocity measurement
 - C13948 Imaging mean blood velocity measurement
 - C14007 Imaging Transcranial Doppler (TCD) findings result type
 - C13949 Imaging flow/probe direction type
 - CRF revised

July 2018 Revisions

• F1154 Behavioral History CRF was revised. Question 7 text was corrected to query six or more drinks instead of five or more drinks.

April 2017 Revisions

• The Unruptured Cerebral Aneurysms and Subarachnoid Hemorrhage (SAH) CDEs were posted to the NINDS website under their own <u>landing page</u>:

https://www.commondataelements.ninds.nih.gov/SAH.aspx#tab=Data Standards.

October 2016 Revisions

- CRFs updated:
 - Pregnancy and Perinatal History: formatting updates
 - Hospital Discharge: formatting; ICD-9 codes updated to ICD-10
 - Surgical and Procedural Interventions: formatting; ICD-9 codes updated to ICD-10; ISO
 8601 link added

February 2016 Revisions

 Revised Start-Up Resources to reflect C00015 Education year count CDE is now Supplemental – Highly Recommended

May 2015 Revisions

• Revised Start-Up Resources based on revised Core classification.

April 2015 Revisions

No changes.

March 2015 Revisions

No changes.

February 2015 Revisions

No changes.

January 2015 Revisions

- Posting of revised 508 compliant Start-Up and Highlight Summaries.
- The CDEs in use page was updated with new studies in Stroke.

November 2014 Revisions

No changes.

September 2014 Revisions

No changes.

August 2014 Revisions

No changes.

July 2014 Revisions

Upload of various CRFs and NOCs Stroke with editorial corrections.

June 2014 Revisions

No changes.

May 2014 Revisions

No changes.

April 2014 Revisions

No changes.

March 2014 Revisions

No changes.

February 2014 Revisions

No changes.

January 2014 Revisions

No changes.

December 2013 Revisions

Updated highlight summaries and start-up resource documents for Stroke

November 2013 Revisions

No changes.

August 2013 Revisions

Overview

There have been Minor changes to the content and structure of the Stroke CDE materials in Version 2.0 compared to Version 1.3, including the following:

Form Status Changes

New Forms:

None

Updated Forms:

- Summary of NINDS Recommended Measures for Neurological Impairment
- Summary of NINDS Recommended Measures for Activities of Daily Living
- Summary of NINDS Recommended Measures for Emotional and Cognitive Status
- Summary of NINDS Recommended Measures for Participation/Quality of Life
- Summary of NINDS Recommended Measures for Performance
- Summary of NINDS Recommended Measures for Pediatrics
- Summary of NINDS Recommended Measures for Clinical Event End Points

Removed Forms:

None

Detailed Form Revisions:

Additional specific changes to the CRF modules are detailed in the table included on the subsequent page.

1 Stroke Revision History Document Table

CRF Module/	Current	Previous	Change	Change Type	Description of
Guideline	Version	Version	Classification		Change
Summary of NINDS	2.0	1.3	Major	Notice of	All Redundant
Recommended				Copyright	Information
					was removed
Measures for					and the title
Neurological					was changed
Impairment					for easier
					understanding
					of the
	2.0	4.2			document
Summary of NINDS	2.0	1.3	Major	Notice of	All Redundant
Recommended				Copyright	Information
Measures for					was removed and the title
Activities of Daily					was changed
Living					for easier
Living					understanding
					of the
					document
	2.0	1.3	Major	Notice of	All Redundant
Summary of NINDS			.,.	Copyright	Information
Recommended				COPYTIGHT	was removed
Measures for					and the title
Emotional and					was changed
Cognitive Status					for easier
					understanding
					of the
					document
Summary of NINDS	2.0	1.3	Major	Notice of	All Redundant
Recommended				Copyright	Information
Measures for					was removed
					and the title
Participation/Quality					was changed
of Life					for easier
					understanding
					of the
					document

CRF Module/	Current	Previous	Change	Change Type	Description of
Guideline	Version	Version	Classification		Change
Summary of NINDS	2.0	1.3	Major	Notice of	All Redundant
Recommended				Copyright	Information
Measures for					was removed
					and the title
Performance					was changed
					for easier
					understanding
					of the
					document
Summary of NINDS	2.0	1.3	Major	Notice of	All Redundant
Recommended				Copyright	Information
Measures for					was removed
Pediatrics					and the title
rediatries					was changed for easier
					understanding
					of the
					document
	2.0	1.3	Major	Notice of	All Redundant
Summary of NINDS				Copyright	Information
Recommended				COPYLIGHT	was removed
Measures for					and the title
Clinical Event End					was changed
Points					for easier
					understanding
					of the
					document

May 2013 Revisions

Overview

There have been Major changes to the content and structure of the Stroke CDE materials in Version 1.2 compared to Version 1.1, including the following:

Form Status Changes

New Forms:

- Barthel Index
- The National Institute of Health Toolbox (NIH Toolbox)
- Patient-Reported Outcomes Measurement Information System (PROMIS)
- Post-Acute Continuity Assessment Record and Evaluation (PAC Admission CARE)

- Quality of Life in Neurological Disorders (Neuro-Qol)
- Boston Naming Test (BNT)
- Delis Kaplan Executive Functioning System- Trail Making Test Parts A&B subtest (DKEFS)
- Hopkins Verbal Learning Test Revised (HVLT-R)
- Montreal Cognitive Assessment (MOCA)
- Neuropsychiatric Inventory Questionnaire (NPI)
- Rey Osterrieth Complex Figure and Delay
- Stroop Test
- Telephone Interview for Cognitive Status (TICS)
- Wechsler Adult Intelligence Scale III-Digit Symbol and Symbol Search Subtests
- Woodcock-Johnson III Test of Cognitive Abilities
- Canadian Occupation Performance Measure (COPM)
- EuroQol 5-Dimension Questionnaire (EQ-5D)
- Stroke Impact Scale (SIS)
- Bayley Scales of Infant Development (Bayley III, BSID)
- Perceived Efficacy and Goal Setting System (PEGS)

Updated Forms:

Notice of Copyright Created (NOC) (Will replace previously existing forms)

- The National Institute of Health Stroke Scale (NIHSS)
- Glasgow Outcome Scale (GOS) and Glasgow Outcome Scale-Extended (GOSE)
- Modified Rankin Scale (mRs)
- Center for Epidemiologic Studies Depression Scale (CES-D)
- Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)
- 36-Item Short Form Survey (SF-36)
- Stroke Specific Quality of Life (SS-QOL)
- Walking Speed (Subtest of NIH Toolbox)
- Kings Outcome Scale for Childhood Head Injury (KOSCHI)

- Pediatric Stroke Outcome Measure Short Neuro Exam (PSOM-SNE) Child Version
- Pediatric Stroke Outcome Measure Short Neuro Exam (PSOM-SNE) Infant Version
- Atherosclerosis Risk in Communities Study (ARIC) TIA/Stroke Form
- Questionnaire for Verifying Stroke-Free Status (QVSFS)
- Stroke Adjudication Worksheet

Removed Forms:

None

Detailed Form Revisions:

Additional specific changes to the CRF modules are detailed in the table included on the subsequent page.

2 Stroke Revision History Document Table

CRF Module/	Current	Previous	Change	Change Type	Description of
Guideline	Version	Version	Classification		Change
Barthel Index	1.2	1.1	Major	Notice of	A Notice of
				Copyright	Copyright was
					created for
					this form and
					will replace
					the existing
					form
The National	1.2	1.1	Major	Notice of	A Notice of
Institute of				Copyright	Copyright was
Health Toolbox					created for
(NIH Toolbox)					this form and
					will replace
					the existing
					form
Patient-	1.2	1.1	Major	Notice of	A Notice of
Reported	1.2		11.0,01	Copyright	Copyright was
Outcomes				Copyrigit	created for
Measurement					this form and
Information					will replace
System					the existing
(PROMIS)					form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Post-Acute Continuity Assessment Record and Evaluation (PAC Admission CARE)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Quality of Life in Neurological Disorders (Neuro-Qol)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Boston Naming Test (BNT)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Delis Kaplan Executive Functioning System- Trail Making Test Parts A&B subtest (DKEFS)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Hopkins Verbal Learning Test Revised (HVLT- R)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Montreal Cognitive Assessment (MOCA)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Neuropsychiatric Inventory Questionnaire (NPI)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Rey Osterrieth Complex Figure and Delay	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Stroop Test	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Telephone Interview for Cognitive Status (TICS)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Wechsler Adult Intelligence Scale III-Digit Symbol and Symbol Search Subtests	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Woodcock- Johnson III Test of Cognitive Abilities	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Canadian Occupation Performance Measure (COPM)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
EuroQol 5- Dimension Questionnaire (EQ-5D)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Stroke Impact Scale (SIS)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Bayley Scales of Infant	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was
Development (Bayley III, BSID)					created for
(Bayley III, BSID)					this form and will replace
					the existing
					form
Perceived	1.2	1.1	Major	Notice of	A Notice of
Efficacy and Goal Setting				Copyright	Copyright was created for
System (PEGS)					this form and
					will replace
					the existing form
The National	1.2	1.1	Major	Notice of	A Notice of
Institute of	1.2	1.1	iviajoi	Copyright	Copyright was
Health Stroke Scale (NIHSS)					created for
Source (Times)					this form and will replace
					the existing
					form
Glasgow Outcome Scale	1.2	1.1	Major	Notice of	A Notice of
(GOS) and				Copyright	Copyright was created for
Glasgow Outcome Scale-					this form and
Extended (GOSE)					will replace
					the existing form
Modified Rankin	1.2	1.1	Major	Notice of	A Notice of
Scale (mRs)			,,,,	Copyright	Copyright was
					created for
					this form and will replace
					the existing
					form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Center for Epidemiologic Studies Depression Scale (CES-D)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
36-Item Short Form Survey (SF- 36)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Stroke Specific Quality of Life (SS-QOL)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Walking Speed (Subtest of NIH Toolbox)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Kings Outcome Scale for Childhood Head Injury (KOSCHI)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Pediatric Stroke Outcome Measure Short Neuro Exam (PSOM-SNE) Child Version	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Pediatric Stroke Outcome Measure Short Neuro Exam (PSOM-SNE) Infant Version	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Atherosclerosis Risk in Communities Study (ARIC) TIA/Stroke Form	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form
Questionnaire for Verifying Stroke-Free Status (QVSFS)	1.2	1.1	Major	Notice of Copyright	A Notice of Copyright was created for this form and will replace the existing form

CRF Module/	Current	Previous	Change	Change Type	Description of
Guideline	Version	Version	Classification		Change
Stroke	1.2	1.1	Major	Notice of	A Notice of
Adjudication				Copyright	Copyright was
Worksheet					created for
					this form and
					will replace
					the existing
					form

October 2012 Revisions

Overview

There have been changes to the content and structure of the Stroke CDE materials in Version 1.1 compared to Version 1.0, including the following:

- Every attempt was made to remove duplication and redundancy in the Stroke CDEs;
- The Stroke CDEs were harmonized with other large national and international standardization initiatives and efforts [e.g., International Conference on Harmonization (ICH), Logical Observation Identifiers Names and Codes (LOINC), International Classification of Diseases (ICD), Unified Code for Units of Measure (UCUM)]
- The majority of element names and definitions were improved.
- The permissible values and references of some elements were revised; and
- The version numbers of all forms (excluding standardized scales/instruments) were updated.
- Several guideline documents were reorganized and consolidated to make it easier to understand which standardized instruments/scales are recommended, though the recommendations themselves remained unchanged.
- Some of the forms and guideline documents were re-categorized under a different domain or subdomain to be consistent with other NINDS CDEs.
- The corresponding data dictionaries (i.e., CDE Detailed Report) have been modified in accordance with the form changes.

Form Status Changes

New Forms:

History Data Source and Reliability (items/questions originally on the Medical History form)

Updated Forms:

Antithrombotics and Risk Factor Controlling Medications

- Behavioral History
- Biospecimen Collection and Processing
- Demographics
- Electrocardiogram
- Family History
- Hospital Arrival/Admission
- Hospital Discharge
- Lifestyle Modification Therapies
- Medical History
- Palliative, Comfort Care, and End of Life Issues
- Physical/Neurological Examination
- Pregnancy and Perinatal History
- Pre-Hospital/Emergency Medical Services (EMS) Course
- Prior and Concomitant Medications
- Prior Functional Status
- Rehabilitation Therapies
- Social Status
- Stroke Symptoms, Comorbid Events
- Surgical and Procedural Interventions
- Thrombolytic/Reperfusion Therapies
- Vital Signs

Removed Forms:

None

Detailed Form Revisions:

Additional specific changes to the CRF modules are detailed in the table included on the subsequent page.

3 Stroke Revision History Document Table

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
All	1.1	1.0	Minor	Modified CDEs	Nearly all CDE names and definitions were updated to achieve greater consistency across all NINDS CDEs and for clarity
Various	1.1	1.0	Minor	Deleted CDEs	The following types of CDEs were deleted: CDEs redundant with other CDEs; CDEs specifying unit; and CDEs specifying an "other, specify" response
Various	1.1	1.0	Minor	Modified CDEs	For a number of CDEs, "Unknown" was added to the permissible value set and in some cases "Unknown" replaced "Unknown/Don't Know"
Various	1.1	1.0	Minor	Modified Forms	Instructions were updated to include additional details.
Various	1.1	1.0	Minor	Modified Forms	Reworded footnote identifying certain CDEs as Core.
Antithrombotics and Risk Factor Controlling Medications	1.1	1.0	Minor	Modified Forms	Added note referring to General Prior and Concomitant Medications form.
Behavioral History	1.1	1.0	Minor	Added CDEs	Added Tobacco product used type and Tobacco cigarettes smoked daily average number
Behavioral History	1.1	1.0	Minor	Deleted CDEs	Deleted CDEs for Current Average Packs Smoked per day and Use of Cigars, Pipe, or Chewing Tobacco
Behavioral History	1.1	1.0	Minor	Modified CDEs	Modified Drug or substance illicitly used category permissible values
Behavioral History	1.1	1.0	Minor	Modified Forms	Reworded several questions to be consistent with other disease areas and modified skip logic.

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Biospecimen Collection and Processing	1.1	1.0	Minor	Modified Forms	Removed footnote identifying certain CDEs as Core.
Biospecimen Collection and Processing	1.1	1.0	Minor	Modified Forms	Modified location of Lab specimen collection date and time on form.
Biospecimen Collection and Processing	1.1	1.0	Minor	Modified Forms	Changed a number of questions that were CDEs previously to specifications to be documented
Demographics	1.1	1.0	Minor	Modified Forms	Relabeled Sex to Gender on form and reworded footnote.
Demographics	1.1	1.0	Minor	Modified Forms	Removed Hand Preference Type from form and moved to Physical Exam form.
Demographics	1.1	1.0	Minor	New CDEs	Added Language spoken fluently text, Language spoken fluently ISO 639-2 code, Country of residence name, and Country of residence ISO 3166-1 alpha-2 code
Electrocardiogram	1.1	1.0	Minor	Added CDEs	Added ECG heart rate and ECG global result
Electrocardiogram	1.1	1.0	Minor	Deleted CDEs	Removed Atrial arrhythmia and Ventricular arrhythmia from form.
Electrocardiogram	1.1	1.0	Minor	Modified CDEs	Modified ECG heart rhythm result permissible values
Electrocardiogram	1.1	1.0	Minor	Modified Forms	Reworded footnote and units for ECG PR interval, ECG QRS duration, ECG QT interval, and ECG QTc interval
Family History	1.1	1.0	Minor	Modified CDEs	Modified Family history medical condition type permissible values
History Data Source and Reliability	1.1	1.0	Minor	New form	New form created using CDEs previously on Medical History form.

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Hospital Arrival/Admission	1.1	1.0	Minor	Modified CDEs	Modified Hospital transport type and Hospital location patient first received care type permissible values
Hospital Discharge	1.1	1.0	Minor	Modified CDEs	Revised Diagnosis new indicator and Stroke initial residence or discharge destination type permissible values
Lifestyle Modification Therapies	1.1	1.0	Minor	Modified CDEs	Changed permissible value for "No/ND" to "No" for several CDEs
Medical History	1.1	1.0	Minor	Added CDEs	Added table to capture medical history items according to body system to ensure consistency with General CDEs.
Medical History	1.1	1.0	Minor	Added CDEs	Added Medical history taken date and time and Medical history global assessment indicator
Medical History	1.1	1.0	Minor	Modified Forms	Removed footnote identifying certain CDEs as Core.
Medical History	1.1	1.0	Minor	Modified Forms	Added additional instructions to form, including notes about the problem/condition that is the study focus and specific medical history queries.
Medical History	1.1	1.0	Minor	Modified Forms	Moved Data Source and Reliability CDEs to separate form.
Palliative, Comfort Care, and End of Life Issues	1.1	1.0	Minor	Modified CDEs	Modified Comfort care indicator permissible values
Physical/Neurological Examination	1.1	1.0	Minor	Added CDEs	Added Hand Preference Type (item originally on Demographics form)
Physical/Neurological Examination	1.1	1.0	Minor	Modified Forms	Removed NIH Stroke Scale, Heart Rate Abnormality Indicator, and Heart Rate Abnormality Type from form.

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Pregnancy and Perinatal History	1.1	1.0	Minor	Added CDEs	Added Gravida maternal value, Delivery mode type, Delivery route type, and Delivery modality type
Pregnancy and Perinatal History	1.1	1.0	Minor	Deleted CDEs	Removed Second stage of labor longer, Mother's mode of delivery, Instruments used indicator, required resuscitation indicator, history of umbilical cord abnormalities, other pregnancy/delivery risk factors
Pregnancy and Perinatal History	1.1	1.0	Minor	Modified Forms	Reworded a number of CDEs on form.
Pregnancy and Perinatal History	1.1	1.0	Minor	Modified Forms	Changed ordering of several CDEs on form.
Pre- Hospital/Emergency Medical Services (EMS) Course	1.1	1.0	Minor	Modified Forms	Made minor edits to formatting of questions on form.
Prior and Concomitant Medications	1.1	1.0	Minor	Deleted CDEs	Removed Date Medication History taken.
Prior and Concomitant Medications	1.1	1.0	Minor	Modified Forms	Modified Prior and Concomitant Medications form to be consistent with General CDEs.
Prior and Concomitant Medications	1.1	1.0	Minor	Modified Forms	Modified form name - previously called Medication History
Prior and Concomitant Medications	1.1	1.0	Minor	Modified Forms	Removed footnote identifying certain CDEs as Core.
Prior Functional Status	1.1	1.0	Minor	Modified Forms	Split CDE querying for presence of ADD/ADHD into separate CDEs for ADD and ADHD.
Prior Functional Status	1.1	1.0	Minor	Modified Forms	Reworded School placement type

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Prior Functional Status	1.1	1.0	Minor	Modified Forms	Removed Grade level CDE from form as redundant with data captured on the Social Status form.
Rehabilitation Therapies	1.1	1.0	Minor	Modified CDEs	Revised Therapy or rehabilitation assessment made indicator, Mobility device use indicator, Mobility device type, Adjunctive treatment indicator, Orthoses or positioning devices indicator, Durable medical equipment indicator, Follow up care from stroke specialist indicator, Follow up care from PCP indicator, and Follow up care from rehab doctor indicator permissible values
Social Status	1.1	1.0	Minor	Modified CDEs	Modified Living with persons relationship type and Family income range permissible values
Social Status	1.1	1.0	Minor	Modified Forms	Removed footnote identifying certain CDEs as Core.
Social Status	1.1	1.0	Minor	New CDEs	Added Education years number
Stroke Symptoms, Comorbid Events	1.1	1.0	Minor	Modified CDEs	Edited Stroke symptom/ comorbid event seizure type permissible values
Surgical and Procedural Interventions	1.1	1.0	Minor	Added CDEs	Added Surgical or Therapeutic Procedure CDEs to be consistent with General CDEs.
Surgical and Procedural Interventions	1.1	1.0	Minor	Modified Forms	Removed footnote identifying certain CDEs as Core; added note that detailed questions can be used as interview questions rather than CDEs; and edited wording of questions on form

CRF Module/ Guideline	Current Version	Previous Version	Change Classification	Change Type	Description of Change
Vital Signs	1.1	1.0	Minor	Added CDEs	Added Blood pressure measurement position type, Waist-hip ratio value, and Body mass index value
Vital Signs	1.1	1.0	Minor	Modified CDEs	Modified Temperature measurement anatomic site permissible values
Vital Signs	1.1	1.0	Minor	Modified Forms	Reworded a number of CDEs on form.