

Patient Safety Indicator 12 (PSI 12) Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate

July 2021

Hospital-Level Indicator

Type of Score: Rate

Prepared by:

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services

www.qualityindicators.ahrq.gov

DESCRIPTION

Perioperative pulmonary embolism or proximal deep vein thrombosis (secondary diagnosis) per 1,000 surgical discharges for patients ages 18 years and older. Excludes discharges with a principal diagnosis of pulmonary embolism or proximal deep vein thrombosis; with a secondary diagnosis of pulmonary embolism or proximal deep vein thrombosis present on admission; in which interruption of the vena cava or a pulmonary arterial thrombectomy occurs before or on the same day as the first operating room procedure; with extracorporeal membrane oxygenation; with acute brain or spinal injury present on admission; and obstetric cases.

[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the software by 1,000 to report events per 1,000 hospital discharges.]

NUMERATOR

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-10-CM diagnosis code for proximal deep vein thrombosis (**DEEPVIB***) or a secondary ICD-10-CM diagnosis code for pulmonary embolism (**PULMOID***).

DENOMINATOR

Surgical discharges, (**Appendix E: SURGI2R**) for patients ages 18 years and older, with any listed ICD-10-PCS procedure code for an operating room procedure (**Appendix A: ORPROC**). Surgical discharges are defined by specific MS-DRG codes.

[Appendix A - Operating Room Procedure Codes](#)

[Appendix E - Surgical Discharge MS-DRGs](#)

DENOMINATOR EXCLUSIONS

Exclude cases:

- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for proximal deep vein thrombosis (**DEEPVIB***)
- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for pulmonary embolism (**PULMOID***)
- where a procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure (**VENACIP***)
- where a procedure for pulmonary arterial thrombectomy occurs before or on the same day as the first operating room procedure (**THROMP***)
- where the only operating room procedure(s) is/are for interruption of vena cava (**VENACIP***) and/or pulmonary arterial thrombectomy (**THROMP***)
- with any listed ICD-10-CM diagnosis code present on admission for acute brain or spinal injury (**NEURTRAD***)
- with any listed ICD-10-PCS procedure code for extracorporeal membrane oxygenation (ECMO) (**ECMOP***)
- MDC 14 (pregnancy, childbirth, and puerperium)
- MDC 15 (newborns and other neonates with conditions originating in perinatal period)
- with an ungroupable DRG (DRG=999)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)

* See below for code list

Proximal deep vein thrombosis diagnosis codes: (DEEPVIB)

I8010	Phlebitis and thrombophlebitis of Unspecified femoral vein	I82401	Acute embolism and thrombosis of Unspecified deep veins of right lower extremity
I8011	Phlebitis and thrombophlebitis of right femoral vein	I82402	Acute embolism and thrombosis of Unspecified deep veins of left lower extremity
I8012	Phlebitis and thrombophlebitis of left femoral vein	I82403	Acute embolism and thrombosis of Unspecified deep veins of lower extremity, bilateral
I8013	Phlebitis and thrombophlebitis of femoral vein, bilateral	I82409	Acute embolism and thrombosis of Unspecified deep veins of Unspecified lower extremity
I80201	Phlebitis and thrombophlebitis of Unspecified deep vessels of right lower extremity	I82411	Acute embolism and thrombosis of right femoral vein
I80202	Phlebitis and thrombophlebitis of Unspecified deep vessels of left lower extremity	I82412	Acute embolism and thrombosis of left femoral vein
I80203	Phlebitis and thrombophlebitis of Unspecified deep vessels of lower extremities, bilateral	I82413	Acute embolism and thrombosis of femoral vein, bilateral
I80209	Phlebitis and thrombophlebitis of Unspecified deep vessels of Unspecified lower extremity	I82419	Acute embolism and thrombosis of Unspecified femoral vein
I80211	Phlebitis and thrombophlebitis of right iliac vein	I82421	Acute embolism and thrombosis of right iliac vein
I80212	Phlebitis and thrombophlebitis of left iliac vein	I82422	Acute embolism and thrombosis of left iliac vein
I80213	Phlebitis and thrombophlebitis of iliac vein, bilateral	I82423	Acute embolism and thrombosis of iliac vein, bilateral
I80219	Phlebitis and thrombophlebitis of Unspecified iliac vein	I82429	Acute embolism and thrombosis of Unspecified iliac vein
I80221	Phlebitis and thrombophlebitis of right popliteal vein	I82431	Acute embolism and thrombosis of right popliteal vein
I80222	Phlebitis and thrombophlebitis of left popliteal vein	I82432	Acute embolism and thrombosis of left popliteal vein
I80223	Phlebitis and thrombophlebitis of popliteal vein, bilateral	I82433	Acute embolism and thrombosis of popliteal vein, bilateral
I80229	Phlebitis and thrombophlebitis of Unspecified popliteal vein	I82439	Acute embolism and thrombosis of Unspecified popliteal vein
I80291	Phlebitis and thrombophlebitis of Other deep vessels of right lower extremity	I824Y1	Acute embolism and thrombosis of Unspecified deep veins of right proximal lower extremity
I80292	Phlebitis and thrombophlebitis of Other deep vessels of left lower extremity	I824Y2	Acute embolism and thrombosis of Unspecified deep veins of left proximal lower extremity

I80293	Phlebitis and thrombophlebitis of Other deep vessels of lower extremity, bilateral	I824Y3	Acute embolism and thrombosis of Unspecified deep veins of proximal lower extremity, bilateral
I80299	Phlebitis and thrombophlebitis of Other deep vessels of Unspecified lower extremity	I824Y9	Acute embolism and thrombosis of Unspecified deep veins of Unspecified proximal lower extremity

Pulmonary embolism diagnosis codes: (PULMOID)

I2602	Saddle embolus of pulmonary artery with acute cor pulmonale	I2694	Multiple subsegmental pulmonary emboli without acute cor pulmonale
I2609	Other pulmonary embolism with acute cor pulmonale	I2699	Other pulmonary embolism without acute cor pulmonale
I2692	Saddle embolus of pulmonary artery without acute cor pulmonale		

Interruption of vena cava procedure codes: (VENACIP)

06H00DZ	Insertion of intraluminal device into inferior vena cava, open approach	06L04ZZ	Occlusion of inferior vena cava, percutaneous endoscopic approach
06H03DZ	Insertion of intraluminal device into inferior vena cava, percutaneous approach	06V00CZ	Restriction of inferior vena cava with extraluminal device, open approach
06H04DZ	Insertion of intraluminal device into inferior vena cava, percutaneous endoscopic approach	06V00DZ	Restriction of inferior vena cava with intraluminal device, open approach
06L00CZ	Occlusion of inferior vena cava with extraluminal device, open approach	06V00ZZ	Restriction of inferior vena cava, open approach
06L00DZ	Occlusion of inferior vena cava with intraluminal device, open approach	06V03CZ	Restriction of inferior vena cava with extraluminal device, percutaneous approach
06L00ZZ	Occlusion of inferior vena cava, open approach	06V03DZ	Restriction of inferior vena cava with intraluminal device, percutaneous approach
06L03CZ	Occlusion of inferior vena cava with extraluminal device, percutaneous approach	06V03ZZ	Restriction of inferior vena cava, percutaneous approach
06L03DZ	Occlusion of inferior vena cava with intraluminal device, percutaneous approach	06V04CZ	Restriction of inferior vena cava with extraluminal device, percutaneous endoscopic approach
06L03ZZ	Occlusion of inferior vena cava, percutaneous approach	06V04DZ	Restriction of inferior vena cava with intraluminal device, percutaneous endoscopic approach
06L04CZ	Occlusion of inferior vena cava with extraluminal device, percutaneous endoscopic approach	06V04ZZ	Restriction of inferior vena cava, percutaneous endoscopic approach
06L04DZ	Occlusion of inferior vena cava with intraluminal device, percutaneous endoscopic approach		

Pulmonary arterial thrombectomy procedure codes: (THROMP)

02CP0ZZ	Extirpation of matter from pulmonary trunk, open approach	02CQ4ZZ	Extirpation of matter from right pulmonary artery, percutaneous endoscopic approach
02CP3ZZ	Extirpation of matter from pulmonary trunk, percutaneous approach	02CR0ZZ	Extirpation of matter from left pulmonary artery, open approach
02CP4ZZ	Extirpation of matter from pulmonary trunk, percutaneous endoscopic approach	02CR3ZZ	Extirpation of matter from left pulmonary artery, percutaneous approach
02CQ0ZZ	Extirpation of matter from right pulmonary artery, open approach	02CR4ZZ	Extirpation of matter from left pulmonary artery, percutaneous endoscopic approach
02CQ3ZZ	Extirpation of matter from right pulmonary artery, percutaneous approach		

Acute brain or spinal injury diagnosis codes: (NEURTRAD)

G9731	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating a nervous system procedure	S064X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to Other causes prior to regaining consciousness, initial encounter
G9732	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating Other procedure	S064X9A	Epidural hemorrhage with loss of consciousness of Unspecified duration, initial encounter
I6000	Nontraumatic subarachnoid hemorrhage from Unspecified carotid siphon and bifurcation	S065X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter
I6001	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	S065X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter
I6002	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	S065X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter
I6010	Nontraumatic subarachnoid hemorrhage from Unspecified middle cerebral artery	S065X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
I6011	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	S065X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter
I6012	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	S065X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
I602	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	S065X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
I6020	Nontraumatic subarachnoid hemorrhage from Unspecified anterior communicating artery	S065X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter
I6021	Nontraumatic subarachnoid hemorrhage from right anterior communicating artery	S065X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to Other cause before regaining consciousness, initial encounter
I6022	Nontraumatic subarachnoid hemorrhage from left anterior communicating artery	S065X9A	Traumatic subdural hemorrhage with loss of consciousness of Unspecified duration, initial encounter

I6030	Nontraumatic subarachnoid hemorrhage from Unspecified posterior communicating artery	S066X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter
I6031	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	S066X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter
I6032	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	S066X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter
I604	Nontraumatic subarachnoid hemorrhage from basilar artery	S066X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter
I6050	Nontraumatic subarachnoid hemorrhage from Unspecified vertebral artery	S066X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter
I6051	Nontraumatic subarachnoid hemorrhage from right vertebral artery	S066X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter
I6052	Nontraumatic subarachnoid hemorrhage from left vertebral artery	S066X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter
I606	Nontraumatic subarachnoid hemorrhage from Other intracranial arteries	S066X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter
I607	Nontraumatic subarachnoid hemorrhage from Unspecified intracranial artery	S066X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter
I608	Other nontraumatic subarachnoid hemorrhage	S066X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of Unspecified duration, initial encounter
I609	Nontraumatic subarachnoid hemorrhage, Unspecified	S140XXA	Concussion and edema of cervical spinal cord, initial encounter
I610	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	S14101A	Unspecified injury at C1 level of cervical spinal cord, initial encounter
I611	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	S14102A	Unspecified injury at C2 level of cervical spinal cord, initial encounter

I612	Nontraumatic intracerebral hemorrhage in hemisphere, Unspecified	S14103A	Unspecified injury at c3 level of cervical spinal cord, initial encounter
I613	Nontraumatic intracerebral hemorrhage in brain stem	S14104A	Unspecified injury at c4 level of cervical spinal cord, initial encounter
I614	Nontraumatic intracerebral hemorrhage in cerebellum	S14105A	Unspecified injury at c5 level of cervical spinal cord, initial encounter
I615	Nontraumatic intracerebral hemorrhage, intraventricular	S14106A	Unspecified injury at c6 level of cervical spinal cord, initial encounter
I616	Nontraumatic intracerebral hemorrhage, multiple localized	S14107A	Unspecified injury at c7 level of cervical spinal cord, initial encounter
I618	Other nontraumatic intracerebral hemorrhage	S14108A	Unspecified injury at c8 level of cervical spinal cord, initial encounter
I619	Nontraumatic intracerebral hemorrhage, Unspecified	S14109A	Unspecified injury at Unspecified level of cervical spinal cord, initial encounter
I6200	Nontraumatic subdural hemorrhage, Unspecified	S14111A	Complete lesion at C1 level of cervical spinal cord, initial encounter
I6201	Nontraumatic acute subdural hemorrhage	S14112A	Complete lesion at C2 level of cervical spinal cord, initial encounter
I6202	Nontraumatic subacute subdural hemorrhage	S14113A	Complete lesion at c3 level of cervical spinal cord, initial encounter
I6203	Nontraumatic chronic subdural hemorrhage	S14114A	Complete lesion at c4 level of cervical spinal cord, initial encounter
I621	Nontraumatic extradural hemorrhage	S14115A	Complete lesion at c5 level of cervical spinal cord, initial encounter
I629	Nontraumatic intracranial hemorrhage, Unspecified	S14116A	Complete lesion at c6 level of cervical spinal cord, initial encounter
S06310A	Contusion and laceration of right cerebrum without loss of consciousness, initial encounter	S14117A	Complete lesion at c7 level of cervical spinal cord, initial encounter
S06311A	Contusion and laceration of right cerebrum with loss of consciousness of 30 minutes or less, initial encounter	S14118A	Complete lesion at c8 level of cervical spinal cord, initial encounter
S06312A	Contusion and laceration of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S14119A	Complete lesion at Unspecified level of cervical spinal cord, initial encounter
S06313A	Contusion and laceration of right cerebrum with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	S14121A	Central cord syndrome at C1 level of cervical spinal cord, initial encounter
S06314A	Contusion and laceration of right cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	S14122A	Central cord syndrome at C2 level of cervical spinal cord, initial encounter

S06315A	Contusion and laceration of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S14123A	Central cord syndrome at c3 level of cervical spinal cord, initial encounter
S06316A	Contusion and laceration of right cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S14124A	Central cord syndrome at c4 level of cervical spinal cord, initial encounter
S06317A	Contusion and laceration of right cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S14125A	Central cord syndrome at c5 level of cervical spinal cord, initial encounter
S06318A	Contusion and laceration of right cerebrum with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S14126A	Central cord syndrome at c6 level of cervical spinal cord, initial encounter
S06319A	Contusion and laceration of right cerebrum with loss of consciousness of Unspecified duration, initial encounter	S14127A	Central cord syndrome at c7 level of cervical spinal cord, initial encounter
S06320A	Contusion and laceration of left cerebrum without loss of consciousness, initial encounter	S14128A	Central cord syndrome at c8 level of cervical spinal cord, initial encounter
S06321A	Contusion and laceration of left cerebrum with loss of consciousness of 30 minutes or less, initial encounter	S14129A	Central cord syndrome at Unspecified level of cervical spinal cord, initial encounter
S06322A	Contusion and laceration of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S14131A	Anterior cord syndrome at C1 level of cervical spinal cord, initial encounter
S06323A	Contusion and laceration of left cerebrum with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	S14132A	Anterior cord syndrome at C2 level of cervical spinal cord, initial encounter
S06324A	Contusion and laceration of left cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	S14133A	Anterior cord syndrome at c3 level of cervical spinal cord, initial encounter
S06325A	Contusion and laceration of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S14134A	Anterior cord syndrome at c4 level of cervical spinal cord, initial encounter

S06326A	Contusion and laceration of left cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S14135A	Anterior cord syndrome at c5 level of cervical spinal cord, initial encounter
S06327A	Contusion and laceration of left cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S14136A	Anterior cord syndrome at c6 level of cervical spinal cord, initial encounter
S06328A	Contusion and laceration of left cerebrum with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S14137A	Anterior cord syndrome at c7 level of cervical spinal cord, initial encounter
S06329A	Contusion and laceration of left cerebrum with loss of consciousness of Unspecified duration, initial encounter	S14138A	Anterior cord syndrome at c8 level of cervical spinal cord, initial encounter
S06330A	Contusion and laceration of cerebrum, unspecified, without loss of consciousness, initial encounter	S14139A	Anterior cord syndrome at Unspecified level of cervical spinal cord, initial encounter
S06331A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter	S14141A	Brown-Sequard syndrome at C1 level of cervical spinal cord, initial encounter
S06332A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S14142A	Brown-Sequard syndrome at C2 level of cervical spinal cord, initial encounter
S06333A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	S14143A	Brown-Sequard syndrome at c3 level of cervical spinal cord, initial encounter
S06334A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter	S14144A	Brown-Sequard syndrome at c4 level of cervical spinal cord, initial encounter
S06335A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S14145A	Brown-Sequard syndrome at c5 level of cervical spinal cord, initial encounter

S06336A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S14146A	Brown-Sequard syndrome at c6 level of cervical spinal cord, initial encounter
S06337A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S14147A	Brown-Sequard syndrome at c7 level of cervical spinal cord, initial encounter
S06338A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S14148A	Brown-Sequard syndrome at c8 level of cervical spinal cord, initial encounter
S06339A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of Unspecified duration, initial encounter	S14149A	Brown-Sequard syndrome at Unspecified level of cervical spinal cord, initial encounter
S06340A	Traumatic hemorrhage of right cerebrum without loss of consciousness, initial encounter	S14151A	Other incomplete lesion at C1 level of cervical spinal cord, initial encounter
S06341A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 30 minutes or less, initial encounter	S14152A	Other incomplete lesion at C2 level of cervical spinal cord, initial encounter
S06342A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S14153A	Other incomplete lesion at c3 level of cervical spinal cord, initial encounter
S06343A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	S14154A	Other incomplete lesion at c4 level of cervical spinal cord, initial encounter
S06344A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	S14155A	Other incomplete lesion at c5 level of cervical spinal cord, initial encounter
S06345A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S14156A	Other incomplete lesion at c6 level of cervical spinal cord, initial encounter

S06346A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S14157A	Other incomplete lesion at c7 level of cervical spinal cord, initial encounter
S06347A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S14158A	Other incomplete lesion at c8 level of cervical spinal cord, initial encounter
S06348A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S14159A	Other incomplete lesion at Unspecified level of cervical spinal cord, initial encounter
S06349A	Traumatic hemorrhage of right cerebrum with loss of consciousness of Unspecified duration, initial encounter	S240XXA	Concussion and edema of thoracic spinal cord, initial encounter
S06350A	Traumatic hemorrhage of left cerebrum without loss of consciousness, initial encounter	S24101A	Unspecified injury at T1 level of thoracic spinal cord, initial encounter
S06351A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 30 minutes or less, initial encounter	S24102A	Unspecified injury at T2-T6 level of thoracic spinal cord, initial encounter
S06352A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S24103A	Unspecified injury at T7-T10 level of thoracic spinal cord, initial encounter
S06353A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	S24104A	Unspecified injury at T11-T12 level of thoracic spinal cord, initial encounter
S06354A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	S24111A	Complete lesion at T1 level of thoracic spinal cord, initial encounter
S06355A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S24112A	Complete lesion at T2-T6 level of thoracic spinal cord, initial encounter
S06356A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S24113A	Complete lesion at T7-T10 level of thoracic spinal cord, initial encounter

S06357A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S24114A	Complete lesion at T11-T12 level of thoracic spinal cord, initial encounter
S06358A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S24119A	Complete lesion at Unspecified level of thoracic spinal cord, initial encounter
S06359A	Traumatic hemorrhage of left cerebrum with loss of consciousness of Unspecified duration, initial encounter	S24131A	Anterior cord syndrome at T1 level of thoracic spinal cord, initial encounter
S06360A	Traumatic hemorrhage of cerebrum, unspecified, without loss of consciousness, initial encounter	S24132A	Anterior cord syndrome at T2-T6 level of thoracic spinal cord, initial encounter
S06361A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter	S24133A	Anterior cord syndrome at T7-T10 level of thoracic spinal cord, initial encounter
S06362A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S24134A	Anterior cord syndrome at T11-T12 level of thoracic spinal cord, initial encounter
S06363A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	S24139A	Anterior cord syndrome at Unspecified level of thoracic spinal cord, initial encounter
S06364A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter	S24141A	Brown-Sequard syndrome at T1 level of thoracic spinal cord, initial encounter
S06365A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S24142A	Brown-Sequard syndrome at T2-T6 level of thoracic spinal cord, initial encounter
S06366A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S24143A	Brown-Sequard syndrome at T7-T10 level of thoracic spinal cord, initial encounter

S06367A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S24144A	Brown-Sequard syndrome at T11-T12 level of thoracic spinal cord, initial encounter
S06368A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S24149A	Brown-Sequard syndrome at Unspecified level of thoracic spinal cord, initial encounter
S06369A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of Unspecified duration, initial encounter	S24151A	Other incomplete lesion at T1 level of thoracic spinal cord, initial encounter
S06370A	Contusion, laceration, and hemorrhage of cerebellum without loss of consciousness, initial encounter	S24152A	Other incomplete lesion at T2-T6 level of thoracic spinal cord, initial encounter
S06371A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 30 minutes or less, initial encounter	S24153A	Other incomplete lesion at T7-T10 level of thoracic spinal cord, initial encounter
S06372A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S24154A	Other incomplete lesion at T11-T12 level of thoracic spinal cord, initial encounter
S06373A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	S24159A	Other incomplete lesion at Unspecified level of thoracic spinal cord, initial encounter
S06374A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of 6 hours to 24 hours, initial encounter	S3401XA	Concussion and edema of lumbar spinal cord, initial encounter
S06375A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S3402XA	Concussion and edema of sacral spinal cord, initial encounter
S06376A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S34101A	Unspecified injury to L1 level of lumbar spinal cord, initial encounter

S06377A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S34102A	Unspecified injury to L2 level of lumbar spinal cord, initial encounter
S06378A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S34103A	Unspecified injury to L3 level of lumbar spinal cord, initial encounter
S06379A	Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness of Unspecified duration, initial encounter	S34104A	Unspecified injury to L4 level of lumbar spinal cord, initial encounter
S06380A	Contusion, laceration, and hemorrhage of brainstem without loss of consciousness, initial encounter	S34105A	Unspecified injury to L5 level of lumbar spinal cord, initial encounter
S06381A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 30 minutes or less, initial encounter	S34109A	Unspecified injury to Unspecified level of lumbar spinal cord, initial encounter
S06382A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S34111A	Complete lesion of L1 level of lumbar spinal cord, initial encounter
S06383A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	S34112A	Complete lesion of L2 level of lumbar spinal cord, initial encounter
S06384A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of 6 hours to 24 hours, initial encounter	S34113A	Complete lesion of L3 level of lumbar spinal cord, initial encounter
S06385A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S34114A	Complete lesion of L4 level of lumbar spinal cord, initial encounter
S06386A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S34115A	Complete lesion of L5 level of lumbar spinal cord, initial encounter

S06387A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S34119A	Complete lesion of Unspecified level of lumbar spinal cord, initial encounter
S06388A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of any duration with death due to Other cause prior to regaining consciousness, initial encounter	S34121A	Incomplete lesion of L1 level of lumbar spinal cord, initial encounter
S06389A	Contusion, laceration, and hemorrhage of brainstem with loss of consciousness of Unspecified duration, initial encounter	S34122A	Incomplete lesion of L2 level of lumbar spinal cord, initial encounter
S064X0A	Epidural hemorrhage without loss of consciousness, initial encounter	S34123A	Incomplete lesion of L3 level of lumbar spinal cord, initial encounter
S064X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	S34124A	Incomplete lesion of L4 level of lumbar spinal cord, initial encounter
S064X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	S34125A	Incomplete lesion of L5 level of lumbar spinal cord, initial encounter
S064X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	S34129A	Incomplete lesion of Unspecified level of lumbar spinal cord, initial encounter
S064X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	S34131A	Complete lesion of sacral spinal cord, initial encounter
S064X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	S34132A	Incomplete lesion of sacral spinal cord, initial encounter
S064X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	S34139A	Unspecified injury to sacral spinal cord, initial encounter
S064X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	S343XXA	Injury of cauda equina, initial encounter

Extracorporeal membrane oxygenation (ECMO) procedure codes: (ECMOP)

5A15223	Extracorporeal membrane oxygenation, continuous	5A15A2F	Extracorporeal oxygenation, membrane, central, intraoperative
5A1522F	Extracorporeal oxygenation, membrane, central	5A15A2G	Extracorporeal oxygenation, membrane, peripheral veno-arterial, intraoperative
5A1522G	Extracorporeal oxygenation, membrane, peripheral veno-arterial	5A15A2H	Extracorporeal oxygenation, membrane, peripheral veno-venous, intraoperative
5A1522H	Extracorporeal oxygenation, membrane, peripheral veno-venous		