

3D™  
Revascularization  
Device

RED® 68

RED 62

RED 72 with  
SENDit®  
Technology

RED 43

MIDWAY™ 62

Penumbra ENGINE®

# Physician Coding and Payment

## Intracranial Mechanical Thrombectomy Coding Tips

Per 2026 AMA CPT coding guidelines, CPT codes 61645, 61650, and 61651 include selective catheterization, diagnostic angiography, and all subsequent angiography including: associated radiological supervision and interpretation within the treated vascular territory, fluoroscopic guidance, neurologic and hemodynamic monitoring of the patient, and closure of the arteriotomy by manual pressure, an arterial closure device, or suture.

For the purposes of reporting services described by 61645, 61650, and 61651, the intracranial arteries are divided into three vascular territories:

- Right carotid circulation
- Left carotid circulation
- Vertebro-basilar circulation

CPT code 61645 may be reported once for each intracranial vascular territory treated and can be used to report any method of mechanical thrombectomy, such as aspiration with the Penumbra System®.

CPT code 61650 is reported once for the first intracranial vascular territory treated with intra-arterial prolonged administration of pharmacologic agent(s). If additional intracranial vascular territory(ies) is also treated with intra-arterial prolonged administration of pharmacologic agent(s) during the same session, the treatment of each additional vascular territory(ies) is reported using 61651 (may be reported maximally two times per day, maximum).

Do not report CPT codes 61645, 61650, or 61651 in conjunction with CPT codes 36221, 36226, 36228, 37184, or 37186 for the same treated vascular territory. Do not report CPT code 61645 in conjunction with CPT codes 61650 or 61651 for the same vascular distribution.

The procedure codes listed below are examples of appropriate codes to use when reporting the different elements of aspiration thrombectomy procedures for outpatient or physician services. This is not a complete or exhaustive list; there may be additional codes that could be used. AMA coding instructions state that providers should select the code that most accurately describes the procedure or service performed and should avoid using an approximate code if a more specific one exists.<sup>1</sup>

It is the responsibility of the provider to determine the appropriate coding when billing a claim.

## Physician Payment

- Based on RBRVS relative weights per CPT code × 2026 Qualifying APM conversion factor of \$33.57
- Payments vary based on geographic location
- These codes are not eligible for payment in outpatient/ASC setting of care

CPT Code	Description	2026 National Medicare Payment <sup>a</sup>	Work RVU <sup>a</sup>
61645	Percutaneous arterial transluminal mechanical thrombectomy and/or infusion for thrombolysis, intracranial, any method, including diagnostic angiography, fluoroscopic guidance, catheter placement, and intraprocedural pharmacological thrombolytic injection(s)	\$756.00	14.63
61650	Endovascular intracranial prolonged administration of pharmacologic agent(s) other than thrombolysis, arterial, including catheter placement, diagnostic angiography, and imaging guidance; initial vascular territory	\$524.00	9.75
61651	Endovascular intracranial prolonged administration of pharmacologic agent(s) other than thrombolysis, arterial, including catheter placement, diagnostic angiography, and imaging guidance; each additional vascular territory (Add-on code: list separately in addition to code for primary procedure)	\$224.00	4.14

1. CPT® Editorial Panel, Current Procedure Terminology 2026 Professional Edition codebook 4th edition, American Medical Association, Chicago, IL, 2025

a. The 2026 physician payment rates are reflective of the Calendar Year 2026 Medicare Physician Fee Schedule (MPFS) Final Rule, which was published in Federal Register, Vol. 90 No. 212, Wednesday, November 5, 2025. Payments listed are national unadjusted fee schedule rates and are subject to change due to CMS' quarterly fee schedule updates and correction notices. Actual payments to physicians may also vary based on locality.

This list may not be comprehensive or complete. These procedures may be subject to the CMS multiple procedure reduction rule. When applicable, a payment reduction of 50% is applied to all payment amounts except the procedure with the greatest RVUs, which is paid at 100% unless exempt by CPT instructions or payer policy.

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Reimbursement Inquiries: reimbursement@penumbrainc.com

The reimbursement information is provided for illustrative purposes only and does not constitute reimbursement or legal advice. Providers are responsible for consulting payers and reimbursement specialists regarding coding, coverage and reimbursement and for submitting appropriate coding and information for services provided.

# Physician Coding and Payment

## Modifier 59 - Distinct Procedural Service

- Modifier 59 is used to identify procedures/services, other than Evaluation and Management (E/M) services, not normally reported together, but are appropriate under the specific circumstances. These circumstances may include:
  - different session or patient encounter (including different patient encounters on the same day)
  - different procedure or surgery distinct from primary procedure being reported
  - different anatomic sites (such as different vascular territories)
  - separate incision/excision, separate lesion, or separate injury (or area of injury in extensive injuries) not ordinarily encountered or performed on the same day by the same physician
  - timed services (e.g., codes for which unit of service is a measure of time, such as per hour) provided during the same encounter only when they are performed sequentially
- Modifier 59 should only be used if no other modifier more appropriately describes the relationship of the two procedure codes. For example, if procedures are performed on different sides of the body, modifiers RT or LT are more appropriate than modifier 59.

### Examples of appropriate uses of modifier 59 and National Correct Coding Initiative (NCCI) guidelines:

Example	NCCI Guidelines
Failed percutaneous vascular procedure followed by an open procedure by the same physician at the same patient encounter	Only the HCPCS/CPT code for the completed procedure may be reported
Percutaneous procedure performed on one lesion with a similar open procedure performed on a separate lesion	The HCPCS/CPT code for the percutaneous procedure may be reported with modifier 59 only if the lesions are in distinct and separate anatomically defined vessels
Similar open and percutaneous procedures are performed on different lesions in the same anatomically defined vessel	Only the open procedure may be reported
A diagnostic procedure is performed preceding a therapeutic procedure and the diagnostic procedure is the basis for performing the therapeutic procedure	Modifier 59 may be reported with a procedure code for diagnostic angiography that has not been previously performed, and is not considered an integral component of the primary procedure or service
A diagnostic procedure is performed subsequent to a completed therapeutic procedure	Modifier 59 may be reported for a diagnostic procedure only when the diagnostic procedure is not a common, expected, or necessary follow-up to the therapeutic procedure

## References & Sources

- CPT Editorial Panel, Current Procedure Terminology 2026 Professional Edition codebook 4th edition, American Medical Association, Chicago, IL, 2025
- Centers for Medicare and Medicaid Services, Calendar Year 2026 Medicare Physician Fee Schedule (MPFS) Final Rule, CMS-1832-F, Federal Register, Vol. 90 No. 212, Wednesday November 5, 2025
- Modifier 59, MLN1783722 Fact Sheet March 2022 Proper Use of Modifiers 59 & –X{EPSU}. <https://www.cms.gov/files/document/mln1783722-proper-use-modifiers-59-xepsu.pdf>

**Mechanical/Aspiration Thrombectomy ICD-10-PCS Procedure Codes<sup>1</sup> (Inpatient Setting)**

The procedure codes listed below are examples of appropriate codes to use when reporting the different elements of aspiration thrombectomy procedures in an inpatient setting. This is not a complete or exhaustive list; there may be additional codes that could be used. AMA coding instructions state that providers should select the code that most accurately describes the procedure or service performed and should avoid using an approximate code if a more specific one exists.<sup>2</sup> It is the responsibility of the provider to determine the appropriate coding when billing a claim.

**Thrombectomy**

03CG3ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Approach
03CH3ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Approach
03CJ3ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Approach
03CK3ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Approach
03CL3ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Approach
03CM3ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Approach
03CN3ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Approach
03CP3ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Approach
03CQ3ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Approach

**Thrombolytics**

3E03317	Introduction of Other Thrombolytic into Peripheral Vein, Percutaneous Approach
3E04317	Introduction of Other Thrombolytic into Central Vein, Percutaneous Approach
3E05317	Introduction of Other Thrombolytic into Peripheral Artery, Percutaneous Approach
3E06317	Introduction of Other Thrombolytic into Central Artery, Percutaneous Approach
3E08317	Introduction of Other Thrombolytic into Heart, Percutaneous Approach

**Imaging**

B30R0ZZ	Plain Radiography of Intracranial Arteries using High Osmolar Contrast
B30R1ZZ	Plain Radiography of Intracranial Arteries using Low Osmolar Contrast
B30RYZZ	Plain Radiography of Intracranial Arteries using Other Contrast
B30RZZZ	Plain Radiography of Intracranial Arteries
B31R0ZZ	Fluoroscopy of Intracranial Arteries using High Osmolar Contrast
B31R1ZZ	Fluoroscopy of Intracranial Arteries using Low Osmolar Contrast
B31RYZZ	Fluoroscopy of Intracranial Arteries using Other Contrast
B31RZZZ	Fluoroscopy of Intracranial Arteries

**Catheterization**

03HY3ZZ	Insertion of Infusion Device into Upper Artery, Percutaneous Approach
04HY3ZZ	Insertion of Infusion Device into Lower Artery, Percutaneous Approach

1. Centers for Medicare and Medicaid Services, ICD-10 Procedure Coding System (ICD-10-PCS) 2026 Tables and Index, <https://www.cms.gov/medicare/coding-billing/icd-10-codes> <https://www.cms.gov/medicare/coding-billing/icd-10-code>

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# Inpatient Facility Coding and Payment

## Relevant Medicare Severity Diagnosis Related Groups

MS-DRG	Description	2026 National Medicare DRG Payment*
23	Craniotomy with Major Device Implant or Acute CNS PDX with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator	\$41,698
24	Craniotomy with Major Device Implant or Acute Complex CNS PDX	\$28,466
25	Craniotomy and Endovascular Intracranial Procedures with MCC	\$33,085
26	Craniotomy and Endovascular Intracranial Procedures with CC	\$22,625
27	Craniotomy and Endovascular Intracranial Procedures w/o MCC	\$18,359

2026 Inpatient rates in effect from October 1, 2025 – September 30, 2026

(M)CC = (major) complications and/or comorbidities. Complete list available at:

<https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/fy-2026-jpps-final-rule-home-page#DataFiles>

\* Rates reflect FY 2026 National Medicare payment rates for hospitals submitting quality data and meaningful EHR users. Hospitals that do not submit quality data or are not meaningful EHR users may see decreased payment rates.

## Charges for Penumbra System may be assigned to the following revenue codes:

- **0270** Medical/surgical supply
- **0272** Sterile supply
- **0279** Other supplies/devices

## Relevant HCPCS Level II Codes

Product	Suggested HCPCS
Penumbra Reperfusion Catheters (includes all Penumbra System neuro catheters) <sup>a</sup>	<b>C1887</b> - Catheter, guiding (may include infusion/perfusion capability)
Penumbra Separators	NONE
3D Revascularization Device™	<b>C1887</b> - Catheter, guiding (may include infusion/perfusion capability)
Sterile Aspiration Tubing	NONE
Non-Sterile System Supplies	NONE
Delivery Catheters	<b>C1887</b> - Catheter, guiding (may include infusion/perfusion capability)

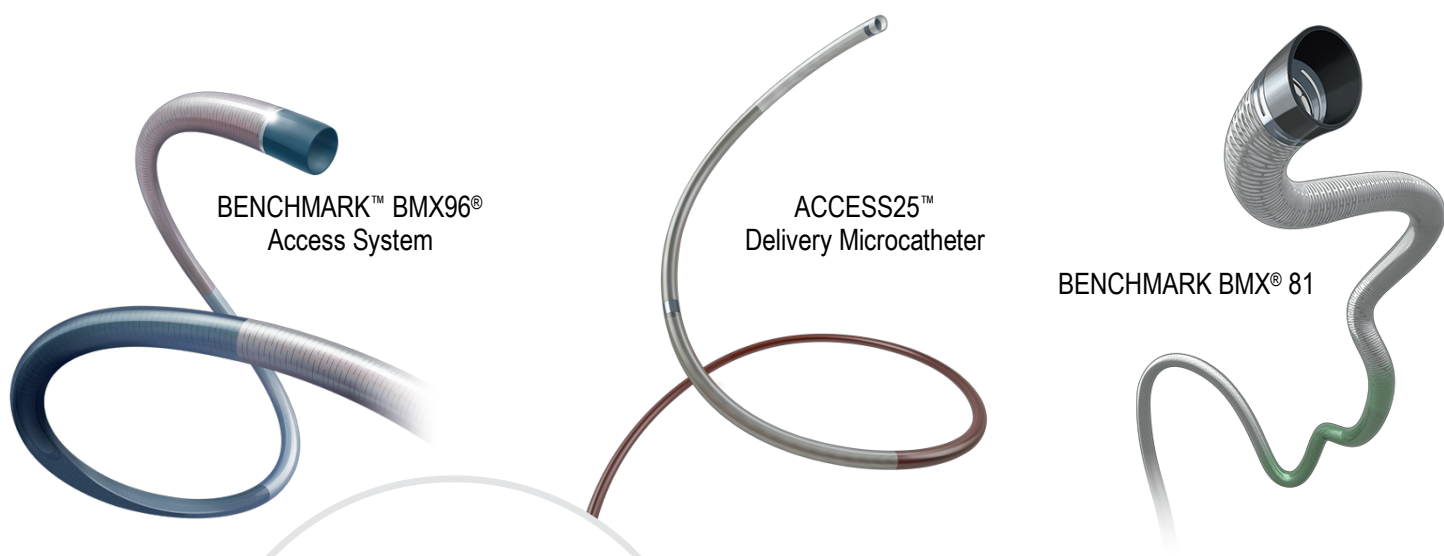
a. Not for use for infusion/perfusion—Only for use for aspiration

HCPCS Codes are not separately reimbursed for hospital inpatient procedures. However, they may be used for reporting and other administrative processes.

## References & Sources

- Centers for Medicare and Medicaid Services, Fiscal Year 2026, Hospital Inpatient Prospective Payment System (IPPS) Final Rule, CMS-1833-F, Federal Register/ Vol. 90, No. 147/ Monday, August 4, 2025
- Centers for Medicare and Medicaid Services, ICD-10 Procedure Coding System (ICD-10-PCS) 2026 Tables and Index, <https://www.cms.gov/medicare/coding-billing/icd-10-codes> <https://www.cms.gov/medicare/coding-billing/icd-10-codes>
- Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System (HCPCS) Quarterly Update, effective January 2026, <https://www.cms.gov/medicare/coding-billing/healthcare-common-procedure-system/quarterly-update>

# Neurovascular Coil Embolization



BENCHMARK™ BMX96®  
Access System

ACCESS25™  
Delivery Microcatheter

BENCHMARK BMX® 81



SMART COIL®



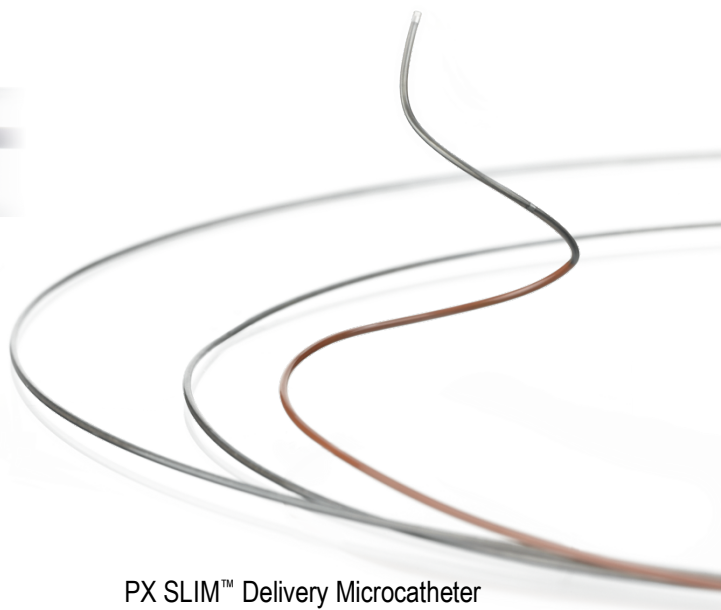
SMART COIL  
Detachment Handle



Swift™ Coil



Penumbra Coil 400™



PX SLIM™ Delivery Microcatheter

Reimbursement Inquiries: [reimbursement@penumbrainc.com](mailto:reimbursement@penumbrainc.com)

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# Outpatient Facility Coding and Payment

## Neurovascular Coil Embolization CPT Codes (Outpatient Setting)

Effective January 1, 2026, CMS is removing CPT code 61624 from the “inpatient only” list of procedures and has added it to the Calendar Year 2026 Outpatient Prospective Payment System and related fee schedules. This action is the first part of a 3-year transition process which will conclude by January 1, 2029, resulting in the elimination of the list of services and procedures designated as requiring inpatient care.

This does not imply that these procedures are no longer eligible for inpatient status. For Medicare, an inpatient admission is generally appropriate when the patient is expected to need 2 or more midnights of medically necessary hospital care.

In addition, neurovascular embolization CPT codes 61624 and 61626 will be inclusive of radiological supervision and interpretation codes; 75894 and 75898 will no longer be separately billable. Because these services are reported together more than 75% of the time, the codes were flagged as potentially misvalued under the CMS Misvalued Codes Initiative. Diagnostic angiography and selective catheter placement may be separately reported however, and should be reported with the appropriate modifiers to distinguish the services from the primary procedure (as described in the example given on page 5 of this document).

CPT® Code	Description	APC	Hospital Outpatient Department (HOPD) Facility Payment	Ambulatory Surgical Center (ASC) Facility Payment
61624	Transcatheter permanent occlusion or embolization (e.g., for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; central nervous system (intracranial, spinal cord)	5194	\$18,729.00	\$12,762.00
61626	Transcatheter permanent occlusion or embolization (e.g., for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; non-central nervous system, head or neck (extracranial, brachiocephalic branch)	5193	\$11,794.00	\$6,866.00

**Neurovascular Coil Embolization CPT Codes and Reimbursement for Physicians**

- Based on RBRVS relative weights per CPT code × 2026 Qualifying APM conversion factor of \$33.57
- Payments vary based on geographic location.

Beginning January 1, 2026, neurovascular embolization CPT codes 61624 and 61626 will be inclusive of radiological supervision and interpretation codes; 75894 and 75898 will no longer be separately billable. Because these services are reported together more than 75% of the time, the codes were flagged as potentially misvalued under the CMS Misvalued Codes Initiative. Diagnostic angiography and selective catheter placement may be separately reported however, and should be reported with the appropriate modifiers to distinguish the services from the primary procedure (as described in the example given on page 5 of this document).

CPT® Code	Description	2026 National Medicare Payment	Work RVU
61624	Transcatheter permanent occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), including all radiological supervision and interpretation, intraprocedural road-mapping, and imaging guidance necessary to complete the intervention, percutaneous, any method; central nervous system (intracranial, spinal cord)	\$1,045.00	19.50
61626	Transcatheter permanent occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), including all radiological supervision and interpretation, intraprocedural road-mapping, and imaging guidance necessary to complete the intervention, percutaneous, any method; non-central nervous system, head or neck (extracranial, brachiocephalic branch)	\$755.00	14.93

\* The 2026 physician payment rates and RVUs are reflective of the Calendar Year 2026 Medicare Physician Fee Schedule (MPFS) Final Rule, which was published in the Federal Register, Vol. 90 No. 212, Wednesday November 5, 2025. Payments listed are national unadjusted fee schedule rates and are subject to change due to CMS' quarterly fee schedule updates and correction notices. Actual payments to physicians may also vary based on locality and setting of care.

Physician fees for your local area can be found at the following CMS link: <https://www.cms.gov/apps/physician-fee-schedule/overview.aspx>

This list may not be comprehensive or complete. These procedures may be subject to the CMS multiple procedure reduction rule. When applicable, a payment reduction of 50% is applied to all payment amounts except the procedure with the greatest RVUs, which is paid at 100% unless exempt by CPT instructions or payer policy.

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**References & Sources**

- Centers for Medicare and Medicaid Services, Calendar Year 2026 Medicare Physician Fee Schedule (MPFS) Final Rule CMS-1832-F, Federal Register, Vol. 90 No. 212, Wednesday November 5, 2025
- CPT Editorial Panel, Current Procedure Terminology 2026 Professional Edition codebook 4th edition, American Medical Association, Chicago, IL, 2025

**Neurovascular Coil Embolization ICD-10-PCS Procedure Codes<sup>2</sup> (Inpatient Setting)**

The procedure codes listed below are examples of appropriate codes to use when reporting the different elements of neurovascular coil embolization procedures in an inpatient setting. This is not a complete or exhaustive list; there may be additional codes that could be used. AMA coding instructions state that providers should select the code that most accurately describes the procedure or service performed and should avoid using an approximate code if a more specific one exists.<sup>1</sup> It is the responsibility of the provider to determine the appropriate coding when billing a claim.

**Embolization**

03LG3DZ	Occlusion of Intracranial Artery with Intraluminal Device, Percutaneous Approach
03LH3DZ	Occlusion of Right Common Carotid Artery with Intraluminal Device, Percutaneous
03LJ3DZ	Occlusion of Left Common Carotid Artery with Intraluminal Device, Percutaneous
03LK3DZ	Occlusion of Right Internal Carotid Artery with Intraluminal Device, Percutaneous
03LL3DZ	Occlusion of Left Internal Carotid Artery with Intraluminal Device, Percutaneous
03LM3DZ	Occlusion of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
03LN3DZ	Occlusion of Left External Carotid Artery with Intraluminal Device, Percutaneous
03LP3DZ	Occlusion of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LQ3DZ	Occlusion of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LR3DZ	Occlusion of Face Artery with Intraluminal Device, Percutaneous Approach
03LS3DZ	Occlusion of Right Temporal Artery with Intraluminal Device, Percutaneous
03LT3DZ	Occlusion of Left Temporal Artery with Intraluminal Device, Percutaneous

**Catheterization**

03HY33Z	Insertion of Infusion Device into Upper Artery, Percutaneous Approach
04HY33Z	Insertion of Infusion Device into Lower Artery, Percutaneous Approach

**Imaging**

B30R0ZZ	Plain Radiography of Intracranial Arteries using High Osmolar Contrast
B30R1ZZ	Plain Radiography of Intracranial Arteries using Low Osmolar Contrast
B30RYZZ	Plain Radiography of Intracranial Arteries using Other Contrast
B30RZZZ	Plain Radiography of Intracranial Arteries
B31R0ZZ	Fluoroscopy of Intracranial Arteries using High Osmolar Contrast
B31R1ZZ	Fluoroscopy of Intracranial Arteries using Low Osmolar Contrast
B31RYZZ	Fluoroscopy of Intracranial Arteries using Other Contrast
B31RZZZ	Fluoroscopy of Intracranial Arteries

1. CPT® Editorial Panel, Current Procedure Terminology 2026 Professional Edition codebook 4th edition, American Medical Association, Chicago, IL, 2025

2. Centers for Medicare and Medicaid Services, ICD-10 Procedure Coding System (ICD-10-PCS) 2026 Tables and Index, <https://www.cms.gov/medicare/coding-billing/icd-10-codes>

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# Inpatient Facility Coding and Payment

## Relevant Medicare Severity Diagnosis Related Groups

MS-DRG	Description	2026 National Medicare DRG Payment*
20	Intracranial Vascular Procedures w/ PDX Hemorrhage w/ MCC	\$57,259
21	Intracranial Vascular Procedures w/ PDX Hemorrhage w/ CC	\$38,522
22	Intracranial Vascular Procedures w/ PDX Hemorrhage w/o MCC or CC	\$23,121
25	Craniotomy and Endovascular Intracranial Procedures w/ MCC	\$33,085
26	Craniotomy and Endovascular Intracranial Procedures w/ CC	\$22,625
27	Craniotomy and Endovascular Intracranial Procedures w/o MCC or CC	\$18,359

2026 Inpatient rates in effect from October 1, 2025 – September 30, 2026

(M)CC = (major) complications and/or comorbidities. Complete list available at:

<https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/fy-2026-ippss-final-rule-home-page#DataFiles>

\*Rates reflect FY 2026 National Medicare payment rates for hospitals submitting quality data and meaningful EHR users. Hospitals that do not submit quality data or are not meaningful EHR users may see decreased payment rate.

## Costs for Penumbra coils can be categorized into the following revenue codes:

- **0270** Medical/surgical supply
- **0272** Sterile supply
- **0278** Other implants
- **0279** Other supplies/devices

## Relevant HCPCS Level II Codes

Product	Suggested HCPCS
Coils	C1889 - Implantable/insertable device, not otherwise classified
Detachment Handle	NONE

HCPCS Codes are not separately reimbursed for hospital outpatient procedures. However, they may be used for reporting and other administrative processes.

## References & Sources

- Centers for Medicare and Medicaid Services, Fiscal Year 2026, Hospital Inpatient Prospective Payment System (IPPS) Final Rule, CMS-1833-F, Federal Register/ Vol. 90, No. 147/ Monday, August 4, 2025
- Centers for Medicare and Medicaid Services, ICD-10 Procedure Coding System (ICD-10-PCS) 2026 Tables and Index, <https://www.cms.gov/medicare/coding-billing/icd-10-codes>
- Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System (HCPCS) Quarterly Update, effective January 2026



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