

Neurointerventional Coding: Cerebrovascular and Spine Intervention Made Easy

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Diseases Treated

★ Brain, Head and Neck

- Cerebral Aneurysms (ruptured and unruptured)
- AVM/AVF
- Hypervascular Tumors (intracranial and H&N)
- Thrombo-embolic Stroke
- Cerebrovascular and Carotid Atherosclerotic Disease
- Epistaxis
- Cancer (IA chemo Rx)
- Epilepsy

Diseases Treated

★ Spine

- Osteoporotic compression fractures
- Tumors
- Vascular malformations/fistulae
- Spine Pain Management

E&M Codes

★ Outpatient Evaluations

- Consults: New/Established
 - 99241-99245
- Established Patient (follow-up)
 - 99211-99215
 - NO GLOBAL PERIOD
 - Perc. Nucleoplasty = 90 days
 - Vertebroplasty/Kyphoplasty = 10 days
- New Patient (i.e. self-referral)
 - 99201-99205

E&M Codes

★Inpatient Evaluations

- Consultations
 - Initial new or established patient
 - 99251-99255
 - Follow-up
 - 99261-99263
- Subsequent Hospital Care
 - NO GLOBAL PERIOD
 - 99231-99233

Obama Care?

- ★No differentiation between consultation and evaluation
- ★Increased reimbursement for E&M
 - Budget Neutrality = Decrease reimbursement for procedural and S&I codes

Procedures with Imaging Guidance

★2009

- Procedure codes
- S&I codes
 - Often for imaging guidance in absence of diagnostic imaging study
 - Does “require” saving image(s)

★2010 on....

- Bundling of imaging guidance into procedural code
- Will not see equal reimbursement of two parts

Medicare Reimbursement

★Medicare National Physician Fee Schedule

- Pays physicians
- In-Facility
 - Hospital, ASC or IDTF (independent diagnostic testing facility)
 - -26 modifier indicating PC only
- Non-Facility
 - Office
- Different rates for PC and TC (as well as global rate for office services)
- Greater bundling of services started 1/1/08

Medicare Reimbursement

★Hospital Payment Systems (TC)

- IPPS
 - Inpatient prospective payment system
 - Diagnosis Related Group payment (DRG)
- HOPPS
 - Hospital outpatient prospective payment system
 - Uses Ambulatory Payment Classification (APC)
 - Each APC = clinically similar services
 - May have more than one APC per encounter

Medicare Reimbursement

★Hospitals should report all applicable codes (even for bundled services) under HOPPS

- CMS 2008 HOPPS rule:
 - “if packaged services and their charges are not reported, the payment for the services into which their cost is packaged may be understated. Therefore, it is important that hospitals report all services furnished and associated charges.”
 - www.cms.hhs.gov/quarterlyproviderupdates/downloads/cms1392fc.pdf

Procedures with Imaging Guidance

- ★Intervention often combined with diagnostic assessment
 - i.e. SAH/aneurysm
- ★Trend moving to cross sectional evaluation
 - CTA for SAH

Cerebrovascular and Spinal Vascular Intervention

Angiography CPT codes

- ★36215 – 1st Order
- ★36216 – 2nd Order
- ★36217 – 3rd Order
- ★36218 – Additional 2nd or 3rd Order
- ★Less frequent
 - 36200 – Aorta (femoral or axillary approach)
 - 36245 – “Other family below diaphragm”
 - Spinal angio (above diaphragm = 36215)

Angiography CPT codes

- ★ 75671 – Bilateral Cerebral (Carotid)
- ★ 75665 – Unilateral Cerebral (Carotid)
- ★ 75680 – Bilateral Cervical Carotid
- ★ 75676 – Unilateral Cervical Carotid
- ★ 75685 – Vertebral, intracranial &/or cervical (x2 if bilateral cervical)

Spinal Angiography CPT codes

- ★ Vertebral, Thyrocervical, Costocervical, Intercostal arteries (Above Diaphragm)
 - 36215-36218
 - Use 75685 x2 for vertebrals and 75774 (each additional vessel after basic for thyrocervical and costocervical trunks)
- ★ Lumbar, Middle Sacral, Internal Iliac arteries (Below Diaphragm)
 - 36245
- ★ 75705 = “angiography, spinal, selective” for each intercostal, lumbar, middle sacral and internal iliacs

Neurointerventional Procedures

- ★ Embolization
 - Aneurysm (GDC)
 - AVM/AVF (glue, coils, particles)
 - Tumors
 - Epistaxis
 - Bleeding (i.e. H&N Cancer)

Cerebral Aneurysm Embolization

AVM/AVF Embolization

Embolization CPT Codes

★61624 = “Transcatheter permanent occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; central nervous system (intracranial, spinal cord)”

- Listed under “Endovascular Therapy” section
- 75894 (S&I)

(May charge >1 if would require separate surgical approach)

Embolization CPT Codes

★61710

- Listed under “Surgery for Aneurysm, AVM or Vascular Disease” section
- “by intra-arterial embolization, injection procedure, or balloon catheter”

★“INCLUDES CRANIOTOMY WHEN APPROPRIATE FOR PROCEDURE”

Embolization CPT Codes

★75898 = Angiography through existing catheter for follow-up study for transcatheter therapy, embolization or infusion

- Multiple charges (# follow-up)
- Documentation in report

★75774 = Angiography, selective, each additional vessel studied after basic examination

Dural Sinus Catheterization

36012-All dural sinuses

Dural Sinus Venography

- ★ 75860
 - Venous sinus (eg, petrosal and inferior sagittal) or jugular, catheter, S&I
- ★ 75870
 - Superior sagittal sinus
- ★ 75880
 - Orbital
- ★ 75893
 - Venous sampling through catheter

Head & Neck Embolization

Embolization CPT Codes

- ★ 61626 = Same as 61624 but for non-central nervous system, head or neck (extracranial, brachiocephalic branch)
 - 75894 (S&I)
- ★ 37204 = “Non-central nervous system, Non-head and neck”
 - 75894 (S&I)
 - Example: vertebral body lesion

Balloon Test Occlusion

- ★ 61623
 - Endovascular temporary balloon occlusion, head or neck (Extra OR Intracranial), including selective catheterization..., positioning and inflation of balloon, concomitant neuro monitoring and S&I of all angiography including post occlusion.
 - May charge appropriate S&I (only) if complete diagnostic angiography of artery to be occluded is performed immediately prior to TBO

Stroke Thrombolysis

- ★ 37201 = “Transcatheter therapy, infusion for thrombolysis other than coronary”
 - 75896
 - 37209 = “Exchange of a previously placed arterial catheter during thrombolytic therapy”
 - Eg. Lower Extremity

Stroke: Mechanical Thrombectomy

★ 37184

- Primary percutaneous transluminal mechanical thrombectomy, noncoronary, arterial, including fluoroscopic guidance and **intraprocedural thrombolytic injections**; initial vessel

★ 37185

- Second and all subsequent vessel(s) within same vascular family

★ 37186

- **Secondary** percutaneous transluminal thrombectomy, noncoronary, arterial, including fluoroscopic guidance and intraprocedural thrombolytic injections, provided in conjunction with another percutaneous intervention other than primary mechanical thrombectomy

Stroke: Mechanical Thrombectomy

★ 37186 = “Rescue” Thrombectomy

★ Based on intention of treatment.

- Depends on focus of treatment and not sequence of when procedure performed
 - Embolus from stenting procedure
 - Small thrombus in lesion removed before planned angioplasty can be performed

★ 37184

- Thrombectomy only procedure performed
- Thrombectomy reveals underlying stenosis which is then treated with angioplasty or stent
- Thrombectomy is performed after prolonged course of thrombolytic infusion therapy

★ Record documentation is key

Stroke: Mechanical Thrombectomy

★ Does not include selective catheterization codes or S&I codes

★ No global period (0 days)

Balloons and Stents

Cervical Carotid Atherosclerotic Disease

★ 37215 = “Transcatheter placement of intravascular stent(s), cervical carotid artery, percutaneous, with distal protection”

★ 37216 = “Transcatheter placement of intravascular stent(s), cervical carotid artery, percutaneous, without distal protection”

★ INTERNAL CAROTID ARTERY STENTING

★ No S&I code or selective catheterization code

★ Includes ALL ipsilateral cervical and cerebral carotid angiography

Cervical Carotid Atherosclerotic Disease

★ CMS Limitations

- Approved trial
- Limited indications for non-trial patients
 - CMS Certification of Hospital

Proximal Carotid Atherosclerotic Disease

★ Category III Codes

- 0075T: “Transcatheter placement of extracranial **vertebral** or **intrathoracic (ie. proximal common) carotid artery** stent(s), including radiologic S&I, percutaneous; initial vessel
- 0076T: Each additional vessel
- CMS specific rules: clarify local medical review policy (LMRP), National Coverage Decisions (NCDs) and other non-CMS payer policy before submitting

Subclavian/Innominate Atherosclerotic Disease

★ 35475/75962: “Transluminal balloon angioplasty, percutaneous; **brachiocephalic trunk or branches**, each vessel”

★ 37205/75960: Intravascular stent placement (except coronary, carotid and vertebral vessel)

★ 37206/75960: Stent placement each additional vessel

Cerebral/Carotid Atherosclerotic Disease

Cerebral Atherosclerotic Disease

★ 61630

- Balloon angioplasty, intracranial (eg, atherosclerotic stenosis), percutaneous

★ 61635

- Transcatheter placement of intravascular stent(s), intracranial (eg, atherosclerotic stenosis), including balloon angioplasty, if performed

★ Include all selective catheterization and angiography (S&I) of target vascular family

★ Most carriers will **NOT** pay for intracranial stenting or angioplasty

Stent Assisted Cerebral Aneurysm Embolization

- ★ What to do when staged stent followed by later date embolization
 - **61630 1st step (not paid), 61624 for embolization at later date**
 - *61624 with -58 modifier indicating planned or anticipated (staged) procedure by the same physician during the postoperative period*

Vasospasm

- ★ 61640
 - Balloon dilatation of intracranial vasospasm, percutaneous; initial vessel
- ★ 61641
 - Each additional vessel in **same** vascular family
- ★ 61642
 - Each additional vessel in **different** vascular family
 - Includes all selective catheterization, contrast injection, vessel measurement, road mapping, post angiography and fluoro for balloon inflation

Epilepsy: Wada Test

- ★ 37202 = Transcatheter therapy, infusion other than for thrombolysis, any type (eg. spasmolytic, vasoconstrictive)
 - 75896
 - CMS = 30 minutes or greater
 - Need -52 modifier for reduced services
 - Also used for vasospasm infusion
 - In addition to 35475 if angioplasty also performed
 - Also used for IA Chemotherapy

Spine Intervention

Embolization

★ Embolization

- **61624** = “transcatheter permanent occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; central nervous system (intracranial, **spinal cord**)
- **37204** = “transcatheter occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; non-central nervous system, **non-head and neck**
 - Vertebral body, paraspinal
- **62294** = “injection procedure, arterial, for occlusion of AV malformation, spinal”
 - Listed under spinal injection, drainage and aspiration

Vertebroplasty

- 22520 = Thoracic, each level
- 22521 = Lumbar, each level
- 22522 = Each additional thoracic or lumbar
 - T12 + L1 = 22520 + 22521
- 76012 = Fluoroscopic guidance, each level
- 76013 = CT guidance, each level

Kyphoplasty

★ 22523

- Percutaneous vertebral augmentation, including cavity creation (fracture reduction and **bone biopsy included** when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation; **Thoracic**

★ 22524

- **Lumbar**

★ 22525

- Each additional **thoracic** or **lumbar** vertebral body

★ S&I codes: 72291 (fluoro) and 72292 (CT)

NCCI Edits

- ★ Note that biopsy performed at time of Vertebroplasty or Kyphoplasty is bundled into the primary procedure code and should not be billed separately

- ★ Also note 10 day global period

Vx/Kx Controversies?

- ★ What constitutes cavity formation
 - “Percutaneous vertebral augmentation, **including cavity creation** (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation
- ★ Physicians/Coders walking the tightrope

Sacroplasty

- ★ No code currently available
 - Not appropriate to use vertebroplasty or kyphoplasty codes for sacrum
 - 2009 = Unlisted spine procedure code
- ★ Category III codes in 2010
 - 0200T – *Percutaneous sacral augmentation (sacroplasty), **unilateral** injection(s), including the use of a balloon or mechanical device (if utilized), one or more needles*
 - 0201T – *Percutaneous sacral augmentation (sacroplasty), **bilateral** injections, including the use of a balloon or mechanical device (if utilized), two or more needles*
 - (For radiological supervision and interpretation, see 72291, 72292) (If bone biopsy is performed, see 20220, 20225).
- ★ Future Reimbursement?

Discography

- ★ Procedural Codes
 - 62290
 - Injection procedure for discography, each level, lumbar
 - 62291
 - Cervical or thoracic

Discography

- ★ S&I Codes
 - 72295
 - Discography, lumbar
 - 72285
 - Discography, cervical or thoracic
- ★ Per region codes
 - Most spine related percutaneous procedures
 - Current code changes that bundle imaging guidance into procedure
 - Facet joint injections 2010
 - Transforaminal epidurals 2011?

Percutaneous Diskectomy

- 62287 = “aspiration or decompression procedure, percutaneous, of nucleus pulposus of intervertebral disk, any method, single or multiple levels, lumbar (eg, manual or automated percutaneous diskectomy, percutaneous laser diskectomy)”
 - 76003 Fluoroscopic guidance
 - Includes all devices
 - **90 day global period**

IDET

- ★ IDET trade name for S&N Device
- ★ IntraDiscal Electrothermal Annuloplasty
 - 22526
 - Percutaneous IDET annuloplasty, unilateral or bilateral including fluoroscopic guidance, single level
 - 22527
 - One or more additional levels
 - Do not report separate S&I code
 - Techniques other than electrothermal use 0062T, 0063T
 - CMS National Coverage Decision

Percutaneous Disk Aspiration

- ★ New in 2009
- ★ Typically diagnosis of infection
- ★ RVU equivalent to single level discogram
- ★ 62267
 - Percutaneous aspiration within nucleus pulposus, intervertebral disc, or paravertebral tissue for diagnostic purposes

Moderate (Conscious) Sedation

- ★ “Drug induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.”
- ★ Does NOT include minimal sedation (anxiolysis), deep sedation or monitored anesthesia care.
- ★ Note: NOT DEPENDENT on drug administered

Moderate (Conscious) Sedation

★ The following services are included and NOT reported separately:

- Assessment of patient (not included in intra-service time)
- IV access and fluids for patency
- Administration of agent(s)
- Maintenance of sedation
- Monitoring of O2 saturation, heart rate and blood pressure; and
- Recovery (not included in intra-service time)

Moderate (Conscious) Sedation

★ “Intra-service time **starts** with the administration of the sedation agent(s), **requires** continuous face-to-face attendance, and **ends** at the conclusion of personal contact by the physician providing the sedation.”

Moderate (Conscious) Sedation

★ Moderate sedation services provided by the same physician performing the diagnostic or therapeutic service that the sedation supports, **requiring** the presence of an independent trained observer to assist in monitoring of the patient’s level of consciousness and physiological status

- 99143: < 5 years age, first 30 minutes intra-service time
- **99144**: 5 years or older, first 30 minutes intra-service time
- **99145**: Each additional 15 minutes intra-service time
 - 99148-99150 used for other physician not performing procedure

Documentation!!!!!!!

★ Procedure Note

- Itemized List of Procedures based on Codes
 - Vessels Selectively Catheterized
 - Vessels Injected and Saved (S&I)
 - Individual Interventions
 - Levels and Sides
- Sedation
 - Time of service
- Equipment Used
- Fluoroscopy Time
- Technique
 - OP NOTE
- Findings
 - Image Interpretation