

Medicare Reimbursement for CT Perfusion in the Diagnosis of Acute Stroke¹

This advisory discusses Medicare coding, coverage and payment for the diagnostic application of computed tomography (CT) perfusion imaging in the assessment of acute stroke when performed in the hospital inpatient and outpatient settings.^{2,3} While it focuses on Medicare program policies, these policies also may be applicable to selected private payers throughout the country.

Coding

Medicare's reimbursement system relies mostly on Current Procedural Terminology (CPT) codes to consistently identify diagnostic imaging procedures provided to Medicare patients.⁴ The CPT coding system was developed and is maintained by the American Medical Association (AMA) and the codes are updated annually. The majority of CPT codes belong to CPT Category I. Designated with a five-digit code, these procedures/services satisfy prerequisites which include the following:

- The procedure is performed in multiple locations by many practitioners
- The clinical efficacy of the procedure/service is established and documented in published literature and
- The Food and Drug Administration (FDA) has cleared one or more products for specific use in the procedure/service⁵



CPT Category III Codes

In order to track utilization of emerging technology such as certain CT perfusion imaging, separate CPT codes were developed by the AMA. Designated as CPT Category III, these codes have four digits followed by an alphabetic character. According to the AMA, **if a Category III code is available, this code must be reported instead of a Category I unlisted or other Category I code.** Generally, a Category III code will be archived after five years if a Category I code is not assigned. When reporting a service that is new and denoted using a CPT Category III code, payers may require a special report to accompany the medical claim in order to determine whether the service is medically appropriate for the patient. The following is information that should be included:⁶

- Description of the nature, extent, and need for the procedure
- Time, effort, and equipment needed to provide the procedure

Other information may be required, including the following:

- Complexity of symptoms
- Final diagnosis
- Pertinent physical findings
- Diagnostic and therapeutic procedures
- Concurrent problems
- Follow-up care

For more information on Category III codes and their use, refer to the coding guidelines that accompany the relevant section of the CPT[®] 2009. The guidelines are also posted on the AMA website at <http://www.ama-assn.org/ama/pub/category/3885.html> - Introduction.

Coding for CT Perfusion Studies

Effective January 1, 2003, the AMA implemented CPT Category III code 0042T, Cerebral perfusion analysis using computed tomography with contrast administration, including post processing of parametric maps with determination of cerebral blood flow, cerebral blood volume, and mean transit time, to report CT perfusion procedures.

The AMA and the American Heart Association (AHA) have published information regarding various scenarios or medical practices involving the assessment of acute stroke. According to these sources, alternative or additional procedures may be performed for the assessment of acute stroke. These include CT imaging of the head or brain, as well as CT angiography of the head. Applicable CPT codes for these procedures are listed in Table 1.⁷

Per the ACR and AMA, the 2D and 3D rendering images resulting from some CT studies are contemplated in the CT codes; therefore, a separate 3D rendering code (ie, CPT codes 76376 or 76377) should not be reported with certain CT codes. Specifically, in CPT[®] 2009, immediately under the listings of the 3D rendering codes, the AMA provides a list of codes that should not be reported in conjunction with these 3D codes. CPT code 70496 is included in this list; however, CPT codes 0042T and 70450 are not.⁸

When submitting claims to Medicare, procedural CPT codes are reported with diagnosis codes describing the patient's documented medical conditions. These diagnoses are reported using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

CPT Category III Codes

In order to track utilization of emerging technologies such as CT colonography, separate CPT codes were developed by the AMA. Designated as CPT Category III codes, these codes have four digits followed by an alphabetic character. According to the AMA, **if a Category III code is available, this code must be reported instead of a Category I unlisted code or other Category I code.** Generally, a Category III code will be archived after five years if a Category I code is not assigned.

When reporting a service that is new and denoted using a CPT Category III code, payers may require a special report to accompany the medical claim in order to determine whether the service is medically appropriate for the patient. The following is information that should be included:⁶

- Description of the nature, extent and need for the procedure
- Time, effort and equipment needed to provide the procedure

Other information may be required, including the following:

- Complexity of symptoms
- Final diagnosis
- Pertinent physical findings
- Diagnostic and therapeutic procedures
- Concurrent problems
- Follow-up care

For more information on Category III codes and their use, refer to the coding guidelines that accompany the relevant section of *CPT*[®] 2009. The guidelines are also posted on the AMA website at:

<http://www.ama-assn.org/ama/pub/category/3885.html> - Introduction.

Coding for CTC Studies

The AMA announced that effective July 1, 2004 CPT 0067T, *Computed tomographic (CT) colonography (ie, virtual colonoscopy); diagnostic*, should be used when CT colonography is performed for the diagnostic evaluation of the colon to detect colonic polyps and colon cancer.⁷

Immediately under the listing of this code in *CPT*[®] 2009, the AMA has provided an instruction that CPT codes for CT of the abdomen or pelvis (i.e., 72192-72194, 74150-74170) should not be reported in conjunction with CPT 0067T.⁸

In addition, per the American College of Radiology (ACR) and the AMA, the diagnostic CT colonography code contemplates 3D reconstruction of the colon including the endoluminal fly-through and the 360° dissection view;⁹ therefore, a separate 3D rendering code (i.e., CPT codes 76376 or 76377) should *not* be reported with the diagnostic CT colonography code.¹⁰ Specifically, in *CPT*[®] 2009, immediately under the listings of the 3D rendering codes, the AMA provides a list of codes that should not be reported in conjunction with these codes, and 0067T is included in this list.

When submitting claims to Medicare, procedural CPT codes are reported with diagnosis codes describing the patient's documented medical conditions. These diagnoses are reported using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

Reimbursement

Medicare reimbursement for diagnostic imaging procedures is comprised of a **professional component**, the amount paid for the physician’s interpretation and report, and a **technical component**, the amount paid for all other services (including staffing and equipment costs). When combined and paid to the physician, this amount is often referred to as the **total** or **global reimbursement**.

Currently, Medicare reimburses diagnostic imaging procedures differently depending on the site of care. In a **hospital inpatient** site of care, the technical (facility) payment is subsumed within the payment to the hospital that is determined based on the Medicare Severity Diagnosis Related Group (MS-DRG) to which the patient is assigned. In a **hospital outpatient department**, the technical component of a procedure is reimbursed under an Ambulatory Payment Classification (APC) under Medicare’s hospital outpatient prospective payment system (HOPPS). In some cases, a procedure is not reimbursed separately, but rather is “packaged” or included in the APC payment to the hospital. The professional component is reimbursed under the Medicare physician fee schedule regardless of the setting.

Table 1 provides information concerning Medicare’s national payment rates for CT procedures for assessment of acute stroke. Since national payment rates in the Medicare physician fee schedule are not assigned to CPT Category III codes, CPT 0042T is carrier-priced under certain circumstances as listed in this table. Carrier-priced means the local Medicare contractors will establish, for their region, payment amounts for this service. For more information about local Medicare reimbursement rates for computed tomography procedures for the assessment of acute stroke go to the GE Computed Tomography Medicare Reimbursement Calculator at: <http://www.gehealthcare.com/usen/community/reimbursement/>. To confirm reimbursement rates, consult your local Medicare contractor.

Table 1: 2009 Medicare Reimbursement for CT Perfusion for Acute Stroke

(Reflects National Rates, Unadjusted for Locality)

CPT Code	Reimbursement Component	Hospital Inpatient Department ⁹	Hospital Outpatient Department ^{10,11}
CPT 0042T Cerebral perfusion analysis using computed tomography with contrast administration, including postprocessing of parametric maps with determination of cerebral blood flow, cerebral blood volume, and mean transit time	Technical *	MS-DRG	Packaged in APC
	Professional **	Carrier-priced	Carrier-priced
	Total	MS-DRG + Carrier-priced	APC + Carrier-priced
CPT 70450 Computed tomography, head or brain; without contrast material	Technical	MS-DRG	\$194.39
	Professional	\$43.64	\$43.64
	Total	MS-DRG + \$43.64	\$238.03
CPT 70496 Computed tomographic angiography, head, with contrast material(s), including noncontrast images, if performed, and image post-processing	Technical	MS-DRG	\$351.86
	Professional	\$89.81	\$89.81
	Total	MS-DRG + \$89.81	\$441.67

* Technical is the facility payment

**Professional is the physician payment

Coverage

Medicare's National Coverage Determination (NCD) for computed tomography (CT) does not specifically address coverage of diagnostic CT colonography. The NCD states that CT scans may be covered as diagnostic services if reasonable and necessary, and if performed on an FDA-approved model of CT equipment. The national coverage determination is described in the Internet Manual for Medicare National Coverage Determinations at: http://www.cms.hhs.gov/manuals/downloads/ncd103c1_Part4.pdf (scroll to Section 220.1).

According to the NCD, local Medicare contractors have discretion to determine the specific circumstances under which CT perfusion imaging is covered. Some local Medicare contractors have developed Local Coverage Determinations (LCDs) for CT imaging of the brain, which generally indicate coverage for acute stroke assessment; however, the LCDs do not specifically address CT perfusion. In such cases, Centers for Medicare and Medicaid Services (CMS) states in its reimbursement policy for Category III codes that individual contractors will generally determine coverage and payment for these procedures on a case-by-case basis.¹²

You will need to confirm coverage for CT perfusion by consulting your local Medicare contractors for specific information on coverage. A directory of local Medicare contractors is available at: http://www.cms.hhs.gov/ContractingGeneralInformation/Downloads/02_ICdirectory.pdf. To access specific LCDs, refer to: <http://www.cms.hhs.gov/mcd/search.asp> or the individual contractor's website.

With respect to private payers, some may rely on Medicare reimbursement policies, while others consider alternative information. Therefore, it is important to consult with individual private payers regarding coverage for CT perfusion as well.

¹ Information presented in this document is current as of January 1, 2009. Any subsequent changes which may occur in coding, coverage and payment are not reflected herein.

² The Food and Drug Administration (FDA) approved labeling for a particular item of GEHC equipment may not specifically cover all of the procedures discussed in this customer advisory. Some payers may in some instances treat a procedure which is not specifically covered by the equipment's FDA-approved labeling as a non-covered service.

³ The federal statute known as the Stark Law (42 U.S.C. §1395nn) imposes certain requirements which must be met in order for physicians to bill Medicare patients for in-office radiology services. In some states, similar laws cover billing for all patients. In addition, licensure, certificate of need, and other restrictions may be applicable.

⁴ CPT codes and descriptions only are copyright © 2008 American Medical Association. All rights reserved. No fee schedules are included in CPT. The American Medical Association assumes no liability for data contained or not contained herein.

⁵ American Medical Association. CPT Process- How a Code Becomes a Code. Link: <http://www.ama-assn.org/ama/pub/category/3882.html>.

⁶ American Medical Association. CPT® 2009 Professional Edition.

⁷ Clinical scenarios are described in the AMA's CPT Changes 2003, and in the AHA Scientific Statement: Guidelines and Recommendations for Perfusion Imaging in Cerebral Ischemia. Stroke: 2003; Vol. 34.

⁸ American College of Radiology. Clinical Examples in Radiology. Winter 2006; Vol. 2, Issue 1. American Medical Association. CPT® 2008 Professional Edition.

⁹ Third party reimbursement amounts and coverage policies for specific procedures will vary by payer and by locality. The technical component is paid pursuant to the hospital inpatient prospective payment system. The professional component for imaging procedures performed in the hospital inpatient setting is generally paid under the Medicare physician fee schedule (MPFS); however, for Category III CPT codes, local Medicare contractors determine the payment rate. The MPFS payment is based on relative value units published in Federal Register, Vol. 73, No. 224, November 19, 2008. Amounts do not necessarily reflect any subsequent changes in payment since publication. To confirm reimbursement rates for specific codes, consult with your local Medicare contractor.

¹⁰ Third party reimbursement amounts and coverage policies for specific procedures will vary by payer and by locality. The technical component is a payment amount assigned to an Ambulatory Payment Classification unless the procedure is packaged under another procedure under the hospital outpatient prospective payment system, as published in Federal Register, Vol. 73, No. 223, November 18, 2008. The professional component is generally paid under the Medicare physician fee schedule; however, for Category III CPT codes, local Medicare contractors determine the payment rate. The MPFS payment is based on relative value units published in Federal Register, Vol. 73, No. 224, November 19, 2008. Amounts do not necessarily reflect any subsequent changes in payment since publication. To confirm reimbursement rates for specific codes, consult with your local Medicare contractor.

¹¹ The Centers for Medicare & Medicaid Services (CMS) has established five imaging composite APCs (APCs 8004, 8005, 8006, 8007, and 8008) based on the families of codes used for the multiple imaging procedure payment reduction policy under the Medicare Physician Fee Schedule (MPFS). The composite APCs provide a single APC payment when two or more imaging procedures using the same imaging modality were provided in a single session. The single payment will cover those imaging services that qualify for composite APC payment, as well as the packaged services furnished on the same date of service. If a with and without are reported together, they are paid at the higher with contrast payment category. If they are reported alone on a claim, they are paid separately as a stand alone study. The new imaging composite APCs include:

- Ultrasound (APC 8004)
- Computed tomography (CT) and computed tomographic angiography (CTA) without contrast (APC 8005)
- CT and CTA with contrast (APC 8006) • Magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA) without contrast (APC 8007), and
- MRI and MRA with contrast (APC 8008)

The composite APCs will be marked with the conditional packaging indicator of "Q". However CMS has expanded the definitions of "Q" at levels of "Q1", "Q2", and "Q3". The new status indicators are defined as: "Q1" is assigned to all "STVX-packaged codes;" status indicator "Q2" is assigned to all "T-packaged codes;" and status indicator "Q3" is assigned to all codes that are paid through a composite APC based on composite-specific criteria or separately through single code APCs when the criteria are not met. Note: If a hospital performs a procedure without contrast during the same session as at least one other procedure with contrast using the same imaging modality, payment is made for the "with contrast" composite APC.

¹² Federal Register, Vol. 68, No. 216, November 7, 2003.

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