



Care1st Health Plan Arizona, Inc.

Easy Choice Health Plan

Harmony Health Plan of Illinois

Missouri Care

'Ohana Health Plan, a plan offered by WellCare Health Insurance of Arizona

OneCare (Care1st Health Plan Arizona, Inc.)

Staywell of Florida

WellCare (Arkansas, Connecticut, Florida, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Nebraska, New Jersey, New York, South Carolina, Tennessee, Texas)

WellCare Prescription Insurance

Computed Tomography Perfusion Imaging (E/I)

Policy Number: HS-161

Original Effective Date: 3/18/2010

**Revised Date(s): 3/18/2011; 3/1/2012;
3/7/2013; 3/6/2014; 3/5/2015; 3/3/2016;
3/2/2017; 2/1/2018**

APPLICATION STATEMENT

The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any.

DISCLAIMER

The Clinical Coverage Guideline (CCG) is intended to supplement certain standard WellCare benefit plans and aid in administering benefits. Federal and state law, contract language, etc. take precedence over the CCG (e.g., Centers for Medicare and Medicaid Services [CMS] National Coverage Determinations [NCDs], Local Coverage Determinations [LCDs] or other published documents). The terms of a member's particular Benefit Plan, Evidence of Coverage, Certificate of Coverage, etc., may differ significantly from this Coverage Position. For example, a member's benefit plan may contain specific exclusions related to the topic addressed in this CCG. Additionally, CCGs relate exclusively to the administration of health benefit plans and are NOT recommendations for treatment, nor should they be used as treatment guidelines. Providers are responsible for the treatment and recommendations provided to the member. The application of the CCG is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any. All links are current at time of approval by the Medical Policy Committee (MPC) and are subject to change prior to the annual review date. Lines of business (LOB) are subject to change without notice; current LOBs can be found at www.wellcare.com. All guidelines can be found at this site as well but selecting the Provider tab, then "Tools" and "Clinical Guidelines".

BACKGROUND

Computed tomography (CT) perfusion imaging provides a quantitative measurement of regional cerebral blood flow. A perfusion CT study involves sequential acquisition of CT sections during intravenous administration of an iodinated contrast agent. Analysis of the results allows the physician to calculate the regional cerebral blood volume, the blood mean transit time through the cerebral capillaries, and the regional cerebral blood flow. CT perfusion imaging has been proposed to be used primarily as a method of evaluating patients suspected of having an acute stroke whenever thrombolysis is considered. CT perfusion imaging may provide information about the presence and site of vascular occlusion, the presence and extent of ischemia, and about tissue viability. This

information may help the clinician determine whether thrombolysis is appropriate. Perfusion computed tomography imaging tracks transient attenuation changes in the blood vessels and brain parenchyma during the first pass passage of an intravenously injected contrast medium. Maps of cerebral blood volume, mean transit time, and cerebral blood flow can be obtained from a pixel-by-pixel analysis of the density changes over time. Generated maps depend on the commercial software and algorithms used in the processing of the data. Currently, three perfusion CT approaches use different data acquisition and analysis methods:

- *Whole Brain CT Perfused Blood Volume.* Assessed by acquiring a helical scan through the whole brain with and without contrast.
- *First Pass Perfusion CT.* A first pass or bolus tracking CT perfusion study is performed by acquiring repeated images at the same location (a cine scan) through a volume of interest during bolus injection and passage of contrast through the region of interest.
- *Dynamic Perfusion CT.* Acquiring a temporal set of images through an extended volume of interest during a bolus injection of contrast constitutes a dynamic perfusion CT study. In this context, the extended volume of interest refers to imaging of tissue beyond the absolute width of the detector array.

POSITION STATEMENT

Applicable To:

- Medicaid – Hawaii
- Medicare – Easy Choice Health Plan, Hawaii

NOTE: For other markets, please refer to the designated vendor for requests.

Computed tomography (CT) perfusion imaging **is considered experimental and investigational** for assessing members suspected of having an acute stroke or in triaging members with stroke for thrombolytic therapy. CT perfusion imaging **is considered experimental/investigational** for evaluating members with the following:

- Chronic cerebral ischemia; **OR**,
- Cerebral vasospasm; **OR**,
- Head trauma; **OR**,
- Cerebral gliomas; **OR**,
- Herpes simplex virus encephalitis; **OR**,
- Use in balloon occlusion tests; **OR**,
- Any and all other possible indications.

CODING

Non Covered CPT® Category III Codes

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 *Sunset January 2014*

Non-Covered ICD-10-CM Diagnosis Codes *List may not be all inclusive.*

B00.4 Herpesviral encephalitis; Herpesviral meningoencephalitis
C71.0 - C71.9 Malignant neoplasm of brain
G45.9 Transient cerebral ischemic attack, unspecified
I63.00-I63.039 Cerebral infarction due to thrombosis of unspecified precerebral artery
I63.6 Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
I63.10 Cerebral infarction due to embolism of unspecified precerebral artery
I63.19 Cerebral infarction due to embolism of other precerebral artery
I63.20 Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
I63.29 Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
I63.30 Cerebral infarction due to thrombosis of unspecified cerebral artery
I63.39 Cerebral infarction due to thrombosis of other cerebral artery

- I63.40** Cerebral infarction due to embolism of unspecified cerebral artery
- I63.49** Cerebral infarction due to embolism of other cerebral artery
- I63.50** Cerebral infarction due to unspecified occlusion or stenosis of cerebral arteries
- I63.59** Cerebral artery occlusion, unspecified, with cerebral infarction
- I63.311- I63.349** Cerebral thrombosis, with cerebral infarction
- I63.411- I63.449** Cerebral embolism, with cerebral infarction
- I63.511 -I63.549** Cerebral artery occlusion, unspecified, with cerebral infarction
- I65.01 - I65.9** Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction
- I66.01-I66.3, I66.8, I66.9** Cerebral embolism, (cerebral infarction
- I67.2** Cerebral atherosclerosis
- I67.841** Reversible cerebrovascular vasoconstriction syndrome
- I67.848** Other Cerebral vasospasm and vasoconstriction
- S06.0X0A-S06.2X0A** Other specified intracranial injury without loss of consciousness, initial encounter
- S06.9x0A-S06.9X9A**
- S06.810A-S06.899A**

*Current Procedural Terminology (CPT) 2016 American Medical Association: Chicago, IL.®©

REFERENCES

1. Adams HP, del Zoppo G, Alberts MJ, et al. Guidelines for the early management of adults with ischemic stroke: a guideline from the American Heart Association / American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups. 2007. *Stroke*; 38:1655-1711.
2. Parsons MW. Perfusion CT: is it clinically useful? 2008. *International Journal of Stroke*;3(1):41-50.
3. Sajjad Z. Perfusion imaging in icshaemic stroke. 2008. *Journal Pakistan Medical Association*;58(7):391-394.
4. American College of Radiology (ACR), American Society of Neuroradiology (ASNR) and the Society for Pediatric Radiology (SPR) practice guideline for the performance of CT perfusion in neuroradiologic imaging. American College of Radiology, & American Society of Neuroradiology Web site. <https://www.acr.org/~media/D541B09581DB46A0A89AC6543646B156.pdf>. Published October 2007 [amended 2017]. Accessed January 22, 2018.
5. Health care guideline: diagnosis and initial treatment of ischemic stroke. Institute for Clinical Systems Improvement Web site. https://www.icsi.org/_asset/xql3xv/Stroke-Interactive0712.pdf. Published July 2012 (updated 2016). Accessed January 22, 2018.

MEDICAL POLICY COMMITTEE HISTORY AND REVISIONS

Date	Action
2/1/2018, 3/2/2017, 3/3/2016, 3/5/2015, 3/6/2014, 3/7/2013, 3/1/2012 12/1/2011 3/18/2011	<ul style="list-style-type: none"> • Approved by MPC. No changes. • New template design approved by MPC. • Approved by MPC.