



MASSACHUSETTS

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## Medical Policy

# Enhanced External Counterpulsation - EECP - for Chronic Stable Angina or Congestive Heart Failure

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## Policy Number: 649

BCBSA Reference Number: 2.02.06

NCD/LCD: National Coverage Determination (NCD) for External Counterpulsation (ECP) Therapy for Severe Angina (20.20)

## Related Policies

- Treatment of Damaged Myocardium, [#424](#)

## Policy

### Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Enhanced external counterpulsation is **INVESTIGATIONAL** for all indications, including but not limited to, treatment of chronic stable angina pectoris, congestive heart failure, erectile dysfunction, or ischemic stroke.

### Medicare HMO Blue<sup>SM</sup> and Medicare PPO Blue<sup>SM</sup> Members

BCBSMA covers the use of ECP for patients who have been diagnosed with disabling angina (Class III or Class IV, Canadian Cardiovascular Society Classification or equivalent classification) who, in the opinion of a cardiologist or cardiothoracic surgeon, are not readily amenable to surgical intervention, such as PTCA or cardiac bypass, under the following conditions for Medicare HMO Blue and Medicare PPO Blue members in accordance with CMS NCD:

- Their condition is inoperable, or at high risk of operative complications or post-operative failure;
- Their coronary anatomy is not readily amenable to such procedures; or
- They have co-morbid states which create excessive risk.

BCBSMA does not cover all other cardiac conditions not otherwise specified as nationally covered for Medicare HMO Blue and Medicare PPO Blue members in accordance with CMS NCD:

### National Coverage Determination (NCD) for External Counterpulsation (ECP) Therapy for Severe Angina (20.20)

<http://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=97&ncdver=2&bc=AgAAQAAAAAAAA&>

### Prior Authorization Information

Pre-service approval is required for all inpatient services for all products.

See below for situations where prior authorization may be required or may not be required for outpatient services.

Yes indicates that prior authorization is required.

No indicates that prior authorization is not required.

N/A indicates that this service is primarily performed in an inpatient setting.

#### Outpatient

<b>Commercial Managed Care (HMO and POS)</b>	This is not a covered service.
<b>Commercial PPO and Indemnity</b>	This is not a covered service.
<b>Medicare HMO Blue<sup>SM</sup></b>	No
<b>Medicare PPO Blue<sup>SM</sup></b>	No

### CPT Codes / HCPCS Codes / ICD Codes

*Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.*

*Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.*

#### CPT Codes

There is no specific CPT code for this service.

#### HCPCS Codes

HCPCS codes:	Code Description
G0166	External counterpulsation, per treatment session

#### ICD-10-CM Diagnosis Coding

ICD-10-CM diagnosis codes:	Code Description
I20.8	Other forms of angina pectoris
I20.1	Angina pectoris with documented spasm
I20.9	Angina pectoris, unspecified
I25.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm
I25.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris
I25.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris
I25.701	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm
I25.708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris
I25.709	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris
I25.711	Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm

I25.718	Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris
I25.719	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris
I25.721	Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm
I25.728	Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris
I25.729	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris
I25.731	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm
I25.738	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris
I25.739	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris
I25.751	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm
I25.758	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris
I25.759	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris
I25.761	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm
I25.768	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris
I25.769	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris
I25.791	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm
I25.798	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris
I25.799	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris

## Description

Enhanced external counterpulsation (ECCP) has been studied primarily in patients with refractory angina and congestive heart failure. It uses timed, sequential inflation of pressure cuffs on the calves, thighs, and buttocks to augment diastolic pressure, decrease left ventricular afterload, and increase venous return. Augmenting diastolic pressure displaces a volume of blood backward into the coronary arteries during diastole when the heart is in a state of relaxation and the resistance in the coronary arteries is at a minimum. The resulting increase in coronary artery perfusion pressure may enhance coronary collateral development or increase flow through existing collaterals. In addition, when the left ventricle contracts, it faces a reduced aortic pressure to work against, since the counterpulsation has somewhat emptied the aorta.

Intra-aortic balloon counterpulsation is a more familiar, invasive form of counterpulsation that is used as a method of temporary circulatory assistance for the ischemic heart, often after an acute myocardial infarction. In contrast, ECCP is thought to provide a permanent effect on the heart by enhancing the development of coronary collateral development. The multiple components of the procedure include the use of the device itself, finger plethysmography to follow the blood flow, continuous electrocardiograms (EKGs) to trigger inflation and deflation, and optional use of pulse oximetry to measure oxygen saturation before and after treatment.

Examples of external counterpulsation devices for use in the treatment of patients with congestive heart failure, stable or unstable angina pectoris, acute myocardial infarction, or cardiogenic shock include The

EECP Therapy System Model TS3 with Pulse Oximetry from Vasomedical, Inc., and the CardiAssist Counterpulsation System and CardiAssist ECP System from Cardiomedics, Inc. All external counterpulsation devices for all indications, including but not limited to, treatment of chronic stable angina pectoris, congestive heart failure, erectile dysfunction, or ischemic stroke are considered investigational regardless of the commercial name, the manufacturer or FDA approval status.

## Summary

The single randomized controlled trial (RCT) evaluating the efficacy of enhanced external counterpulsation (EECP) in the treatment of stable angina is insufficient to draw conclusions about net health outcome in these patients. Additional RCTs address intermediate measures in stable angina and do not address longer-term, patient-oriented aspects of quality of life, mortality, or morbidity. The modest benefit seen in the single RCT directed toward EECP in heart failure has not been supported by other evidence of sufficient quality to recommend its use. Additional research into the use of EECP for other ischemic conditions such as stroke, central retinal artery occlusion, and erectile dysfunction are inadequate to draw conclusions about impact on net health outcome. Thus, this technology is considered investigational.

## Policy History

Date	Action
10/2016	New references added from BCBSA National medical policy.
7/2014	Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.
4/2014	New references added from BCBSA National medical policy.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
4/2011	Reviewed - Medical Policy Group - Cardiology and Pulmonology. No changes to policy statements.
4/2010	Reviewed - Medical Policy Group - Cardiology and Pulmonology. No changes to policy statements.
4/2010	BCBSA National medical policy review. No changes to policy statements.
4/2009	Reviewed - Medical Policy Group - Cardiology and Pulmonology. No changes to policy statements.
1/2009	BCBSA National medical policy review. No changes to policy statements.
8/2008	BCBSA National medical policy review. No changes to policy statements.
4/2008	Reviewed - Medical Policy Group - Cardiology and Pulmonology. No changes to policy statements.
4/2007	Reviewed - Medical Policy Group - Cardiology and Pulmonology. No changes to policy statements.

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

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