



Policy Number: MP.107.MPC

Last Review Date: 07/08/2025

Effective Date: 07/15/2025

MP.107.MPC Enhanced External Counterpulsation Therapy

Maryland Physicians Care considers an initial treatment course of 35 one-hour sessions per benefit period given five days per week of **Enhanced External Counterpulsation Therapy (EECP)** medically necessary for the following indications:

- Patients with chronic coronary disease, refractory angina pectoris, or with *Class III or IV* angina symptoms per New York Heart Association (NYHA) or Canadian Cardiovascular Society (CCS) and on maximally tolerated guideline-directed medical therapy (GDMT) ^(6, 7)
- Patients who are not amenable for revascularization either Percutaneous Coronary Intervention (PCI) or surgically coronary artery bypass graft (CABG) due to ⁽⁷⁾:
 - Inoperative condition or high risk of operative complications or post-op failure;
 - Recurrent angina pectoris despite multiple revascularization procedures;
 - Unsuitable coronary anatomy; OR
 - Additional co-morbid states which could create excessive risk.

Repeat courses of EECP will be considered on a case-by-case basis for patients with refractory angina pectoris if all of the following criteria are met ⁽⁷⁾:

- Patient meets medical necessity criteria for EECP; AND
- Prior EECP has resulted in a sustained improvement in symptoms, with a significant (greater than 25%) reduction in frequency of angina symptoms with:
 - Improvement by one or more angina classes (NYHA or CCS); AND
 - Three or more months has elapsed from the prior EECP treatment.

To review a request for medical necessity, the following items must be submitted for review:

- Progress note that prompted request (including list of current medications)
- Records from last EECP treatment (if applicable)
- Most recent Echocardiogram, Stress test
- Most recent cardiac catheterization report

Limitations

- This policy only addresses EECP performed in the outpatient setting
- All other cardiac conditions not otherwise specified as nationally covered for the use of EECP remain nationally non-covered



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- It is an expectation that all patients receive care/service from a licensed clinician
- FDA approved EECP devices intended for the treatment of cardiac conditions
- Non-coverage of hydraulic versions of these types of devices remain in force
- EECP is not intended as a first-line therapy for angina
- Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations, and CMS policies when applicable.

Contraindications of Enhanced External Counterpulsation ^(6, 7)

- Decompensated heart failure
- Severe Aortic Regurgitation
- Severe Peripheral Artery Disease
- Recent myocardial infarction within the last 3 months
- Recent surgical intervention within the last 6 weeks
- Recent cardiac catheterization (1-2 weeks) or arterial femoral puncture
- Unstable angina pectoris
- Severe hypertension > 180/110 mm Hg
- Heart rate of <35 or >125 beats per minute
- Arrhythmias that interfere with EECP triggering
- Severe venous disease (thrombophlebitis, deep vein thrombosis, or pulmonary embolism)
- Severe lower extremity vaso-occlusive disease
- Presence of a documented aortic aneurysm requiring surgical repair
- Pregnancy

Background

Enhanced External Counterpulsation (EECP) as a nonsurgical outpatient treatment of angina pectoris and coronary artery disease (CAD) refractory to medical and/or surgical therapy. This therapy increases blood flow to the heart by compressing blood vessels in the lower extremities. The patient is placed on a treatment table where their lower trunk and lower extremities are wrapped in a series of three compressive air cuffs which inflate and deflate in synchronization with the patient's cardiac cycle.

Although EECP devices are cleared by the Food and Drug Administration (FDA) for use in treating a variety of cardiac conditions, including stable or unstable angina pectoris, acute myocardial infarction and cardiogenic shock, the use of this device to treat cardiac

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conditions other than stable angina pectoris is not covered, since only that use has developed sufficient evidence to demonstrate its medical effectiveness.

New York Heart Association Grading Scale for Heart Failure ⁽⁸⁾:

- Class I: No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).
- Class II: Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea or chest pain.
- Class III: Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, dyspnea or chest pain.
- Class IV: Symptoms of heart failure at rest. Any physical activity causes further discomfort.

Canadian Cardiovascular Society Grading Scale for Angina ⁽⁹⁾:

- Class I: Ordinary physical activity does not cause angina, such as walking or climbing stairs. Angina occurs with strenuous, rapid or prolonged exertion.
- Class II: Slight limitation of ordinary activity. Angina occurs only during vigorous physical activity, such as walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals in cold, wind, or under emotional stress, or only during the few hours after awakening. Walking more than two blocks on the level and climbing more than one flight of ordinary stairs at a normal pace and in normal conditions
- Class III: Marked limitation of ordinary physical activity. It is induced by walking one or two-level blocks and climbing one flight of stairs in normal conditions and at a normal pace
- Class IV: Inability to carry on any physical activity without discomfort. Anginal syndrome may be present at rest.

All criteria are substantiated by the latest evidence-based medical literature. To enhance transparency and reference, Appropriate Use (AUC) scores, when available, are diligently listed alongside the criteria.

This policy first defaults to AUC scores established by published, evidence-based guidance endorsed by professional medical organizations. In the absence of those scores, we adhere to a standardized practice of assigning an AUC score of 6. This score is determined by considering variables that ensure the delivery of patient centered care in line with current guidelines, with a focus on achieving benefits that outweigh associated risks. This approach aims to maintain a robust foundation for decision-making and underscores our commitment to upholding the highest standards of care. ^(1, 2, 3, 4, 5)

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AUC Score

An appropriate diagnostic or therapeutic procedure is one in which the expected clinical benefit exceeds the risks or negative consequences of the procedure by a sufficiently wide margin such that the procedure is generally considered acceptable or reasonable care. The ultimate objective of AUC is to improve patient care and health outcomes in a cost-effective manner but is not intended to ignore ambiguity and nuance intrinsic to clinical decision making.

- Appropriate Care - Median Score 7-9
- May be Appropriate Care - Median Score 4-6
- Rarely Appropriate Care - Median Score 1-3

Acronyms/Abbreviations

- AUC Appropriate use criteria
- CABG Coronary Artery Bypass Graft
- CAD Coronary Artery Disease
- CCS Canadian Cardiovascular Society
- EECPC Enhanced External Counterpulsation
- FDA Food and Drug Administration
- GDMT Guideline-Directed Medical Therapy
- NYHA New York Heart Association
- PCI Percutaneous Coronary Intervention

Codes

| CPT Codes / HCPCS Codes / ICD-10 Codes | |
|--|---|
| Code | Description |
| HCPCS codes covered if selection criteria are met (If Appropriate): | |
| G0166 | External Counterpulsation, per treatment session |
| ICD-10 codes covered if selection criteria are met: | |
| I20.0 | Unstable angina |
| I20.1 | Angina pectoris with documented spasm |
| I20.2 | Refractory angina pectoris |
| I20.8 | Other forms of angina pectoris |
| I20.81 | Angina pectoris with coronary microvascular dysfunction |
| I20.89 | Other forms of angina pectoris |
| I20.9 | Angina pectoris, unspecified |

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| I25.10 | Atherosclerotic heart disease of native coronary artery without angina pectoris |
| I25.110 | Atherosclerotic heart disease of native coronary artery with unstable angina pectoris |
| I25.111 | Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm |
| I25.112 | Atherosclerotic heart disease of native coronary artery with refractory angina pectoris |
| 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 |
| I25.6 | Silent myocardial ischemia |
| I25.700 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris |
| I25.701 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm |
| I25.702 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with refractory angina pectoris |
| 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 |
| I25.710 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris |
| I25.711 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm |
| I25.712 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with refractory angina pectoris |
| 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 |
| I25.720 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris |

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| I25.721 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm |
| I25.722 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with refractory angina pectoris |
| 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 |
| I25.730 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris |
| I25.731 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm |
| I25.732 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with refractory angina pectoris |
| 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 |
| I25.750 | Atherosclerosis of native coronary artery of transplanted heart with unstable angina |
| I25.751 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm |
| I25.752 | Atherosclerosis of native coronary artery of transplanted heart with refractory angina pectoris |
| 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 |
| I25.760 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina |
| I25.761 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm |
| I25.762 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with refractory angina pectoris |

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| 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 |
| I25.790 | Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris |
| I25.791 | Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm |
| I25.792 | Atherosclerosis of other coronary artery bypass graft(s) with refractory angina pectoris |
| 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 |
| I25.810 | Atherosclerosis of coronary artery bypass graft(s) without angina pectoris |
| I25.811 | Atherosclerosis of native coronary artery of transplanted heart without angina pectoris |
| I25.812 | Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris |
| I25.82 | Chronic total occlusion of coronary artery |
| I25.85 | Chronic coronary microvascular dysfunction |
| I25.89 | Other forms of chronic ischemic heart disease |
| I25.9 | Chronic ischemic heart disease, unspecified |

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