

Local Coverage Determination (LCD) for Cardiac Catheterization (L29090)

Contractor Information

Contractor Name

First Coast Service Options, Inc.

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Contractor Number

09102

Contractor Type

MAC - Part B

LCD Information

Document Information

LCD ID Number

L29090

Primary Geographic Jurisdiction

Florida

LCD Title

Cardiac Catheterization

Oversight Region

Region IV

Contractor's Determination Number

93451

Original Determination Effective Date

For services performed on or after 02/02/2009

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Original Determination Ending Date**Revision Effective Date**

For services performed on or after 01/01/2011

Revision Ending Date**CMS National Coverage Policy**

Coverage Issues Manual, Section 35-45

Medicare Carriers Manual, Section 4630

Indications and Limitations of Coverage and/or Medical Necessity

Cardiac catheterization is a technique in which a flexible catheter is passed along veins or arteries into the heart and associated vessels for the measurement of physiological data and imaging of the heart and great vessels. This technique is utilized when there is a need to confirm the presence of a clinically suspected condition, define its anatomical and physiological severity, and determine the presence of associated conditions. This need most commonly arises when clinical assessment suggests that the patient may benefit from an interventional procedure (e.g., coronary angioplasty, balloon valvuloplasty or heart surgery).

Left Heart Catheterization (93452, 93458, 93459):

A left heart catheterization (typically includes coronary angiography and left ventricular angiography) will be considered medically necessary for asymptomatic patients with any of the following situations/conditions:

There is evidence of high risk on non-invasive testing.

- Exercise ECG (electrocardiogram) testing documents an abnormal ST segment depression (magnitude equal to or greater than 1.0mm depression, persistent post-exercise changes (5 minutes), depression in multiple leads).

OR

- Ischemia at low threshold on stress-testing suggests adverse prognosis and should be included along with the other indicators.

an abnormal systolic blood pressure response during progressive exercise, with sustained decrease of greater than 10mmHg or flat blood pressure (less than or equal to 130mmHg); associated with ECG evidence of ischemia.

OR

other potentially important determinant such as exercise induced ST segment elevation in leads other than aVR or exercise induced ventricular tachycardia.

- Myocardial perfusion scintigraphy documents any demonstrable perfusion defect, or an abnormal blood flow distribution in the anterior wall or more than one vascular region at rest or with exercise, or an abnormal distribution (ischemia) associated with increased lung uptake produced by exercise in the absence of severely depressed left ventricular function at rest.

- Radionuclide ventriculography documents a fall in ventricular ejection fraction of greater than or equal to 10% during exercise, or left ventricular ejection fraction of less than 50% at exercise or rest when suspected to be due to coronary artery disease.

After successful resuscitation from cardiac arrest that occurred without obvious precipitating cause, when a reasonable suspicion of coronary artery disease exists.

The presence of one or more major risk factors (e.g., diabetes mellitus, hypertension, smoking, hyperlipidemia, family history) and a positive exercise test in patients without known coronary heart disease.

The presence of prior myocardial infarction with normal left ventricular function at rest, and evidence of ischemia by non-invasive testing.

After coronary bypass surgery or percutaneous transluminal angioplasty when there is evidence of ischemia by non-invasive testing.

Before high risk noncardiac surgery in patients who have evidence of ischemia by non-invasive testing.

Periodic evaluation of patients after cardiac transplantation.

A left heart catheterization (typically includes coronary angiography and left ventricular angiography) will be considered medically necessary for symptomatic patients with any of the following situations/conditions:

Angina pectoris that has proven inadequately responsive to medical treatment, percutaneous transluminal angioplasty, thrombolytic therapy or coronary bypass surgery. "Inadequately responsive" is taken to mean that patient and physician agree that angina significantly interferes with a patient's occupation or ability to perform his or her usual activities.

Unstable angina pectoris defined as:

- Increased severity and frequency of chronic angina pectoris within the past two months, despite medical management, including onset of angina at rest.

- New onset (within two months) of angina pectoris which is severe or increases despite medical treatment.

- Acute coronary insufficiency, with pain at rest usually of greater than or equal to 15 minutes duration, associated with ST-T wave changes, within the preceding two weeks.

Prinzmetal's or variant angina pectoris (pain experienced at rest).

Any angina pectoris in association with any of the following:

- Evidence of high risk as manifested by exercise ECG testing in addition to failure to complete Stage II of Bruce protocol or equivalent workload (less than or equal to 6.5 METS with other protocols) due to ischemic cardiac symptoms.

OR

Exercise heart rate at onset of limiting ischemia symptoms of less than 120/minute (without beta blockers).

OR

Evidence of high risk/perfusion defect as manifested by radionuclide exercise pharmacologic testing (myocardial perfusion scintigraphy, radionuclide ventriculography, or focal metabolic abnormality or mismatch).

- The coexistence of a history of myocardial infarction, a history of hypertension and ST segment depression on the baseline ECG.

- Intolerance to medical therapy because of uncontrollable side effects.

- Episodic pulmonary edema or symptoms of ventricular failure without obvious cause.

Any angina pectoris associated with a series of progressively more abnormal exercise ECG or other non-invasive stress test.

Any angina pectoris in a patient that cannot be risk stratified by other means as a result of an inability to exercise because of an amputation, arthritis, limb deformity, or severe peripheral vascular disease.

A left heart catheterization (typically includes coronary angiography and left ventricular angiography) will be considered medically necessary for atypical chest pain* of uncertain etiology with any of the following situations/conditions:

* (For the purpose of this policy, atypical chest pain is defined as single or recurrent episodes of chest pain suggestive, but not typical, of the pain of myocardial ischemia. This discomfort may have some features of ischemic pain together with features of noncardiac pain. Chest pain that has no features of cardiac pain, as well as typical chest pain of myocardial ischemia or angina as determined by a careful medical history, is excluded from definition.)

Atypical chest pain when ECG or radionuclide stress test indicates that coronary disease may be present.

When the presence of atypical chest pain due to coronary artery spasm is suspected.

When there are associated symptoms or signs of abnormal left ventricular function or failure.

Atypical chest pain when non-invasive studies are questionable or cannot be adequately performed.

When non-invasive tests are negative but symptoms are severe and management requires that significant coronary artery disease be excluded.

A left heart catheterization (typically includes coronary angiography and left ventricular angiography) will be considered medically necessary after a myocardial infarction with any of the following situations/conditions:

Angina pectoris occurring at rest or with minimal activity.

In selected patients, heart failure during the evolving phase, or left ventricular ejection fraction 45%, primarily when associated with some manifestation of recurrent myocardial ischemia or with significant ventricular arrhythmias.

Evidence of myocardial ischemia on laboratory testing: exercise induced ischemia (with or without exercise induced angina pectoris), manifested by greater than or equal to 1 mm of ischemic ST segment depression or exercise induced reversible radionuclide perfusion defect or defects, or exercise induced reduction in the ejection fraction or wall motion abnormalities on radionuclide ventriculographic studies.

Non-Q-wave myocardial infarction.

Mild angina pectoris.

A past history of documented myocardial infarction or unstable angina pectoris, or both present greater than six months before the current infarction.

Thrombolytic therapy during the evolving phase, particularly with evidence of reperfusion.

A left heart catheterization (typically includes coronary angiography and left ventricular angiography) will be considered medically necessary for valvular heart disease with any of the following situations/conditions:

When valve surgery is being considered suggesting coronary artery disease.

When valve surgery is being considered in female patients who are postmenopausal.

When aortic or mitral valve surgery is being considered.

When one or more major risk factors for coronary artery disease are present: heavy smoking history, diabetes mellitus, hypertension, hyperlipidemia, strong family history of premature coronary artery disease.

When reoperation for aortic or mitral valve disease is being considered in patients who have not had coronary angiography for one year or more.

In the presence of infective endocarditis when there is evidence for coronary embolism.

A left heart catheterization (typically includes coronary angiography and left ventricular angiography) will be considered medically necessary for any of the following conditions:

In disease affecting the aorta when knowledge of the presence or extent of coronary artery involvement is necessary for management (for example, the presence of aortic aneurysm or ascending aortic dissection), arteritis coronary (various forms) or homozygous type II hypercholesterolemia in which coronary artery involvement is suspected.

The presence of left ventricular failure without obvious cause and adequate left ventricular systolic function.

When patients with hypertrophic cardiomyopathy have angina pectoris uncontrolled by medical therapy, or are to undergo surgery or alcohol ablation treatment for outflow obstruction.

The presence of cardiomyopathy, restrictive cardiomyopathy, pericarditis.

Recent blunt trauma to the chest and evidence of acute ischemia/contusion myocardial infarction in patients who have no evidence of preexisting coronary artery disease.

When patients are to undergo other cardiac surgical procedures, such as pericardiectomy or removal of chronic pulmonary emboli.

Right Heart Catheterization (93451, 93456, 93457):

Right heart catheterization is not routinely part of coronary angiography, but is an associated procedure in a significant number of patients. This procedure should be performed under the following circumstances:

Patients with known history of congestive heart failure; peripheral edema; ascites

Patients with cardiomyopathy documented by non-invasive workup.

Patients with known or suspected valvular heart disease.

Patients with known or suspected intracardiac shunt (e.g., atrial-septal defect [ASD], ventricular-septal defect [VSD]).

Patients with previous myocardial infarction.

Patients with unexplained symptoms (e.g., shortness of breath), suspected to have cardiac origin.

Patients in whom pulmonary artery disease is known or suspected (e.g., pulmonary hypertension, status post pulmonary emboli).

Evaluate status of cardiac transplant patients.

Combined Heart Catheterization (93453, 93460, 93461):

In conjunction with left heart catheterization, right heart catheterization can be useful in providing cardiac output and hemodynamics that may be important therapeutic directives.

Extra Cardiac Angiography performed with Cardiac Catheterization (75724, 36245)

75724 Angiography, renal, bilateral, selective (including flush aortogram), radiological supervision and interpretation

36245 Selective catheter placement, arterial system; each first order abdominal, pelvic, or lower extremity artery branch, within a vascular family

Extra Cardiac Angiography is sometimes reported with cardiac catheterization. These services include interrogation of the abdominal plus iliofemoral artery, abdominal aorta, carotid and renal arteries.

However, such services are generally not indicated. Medical necessity must be documented in the medical record.

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Coding Information

Bill Type Codes:

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service. Absence of a Bill Type does not guarantee that the policy does not apply to that Bill Type. Complete absence of all Bill Types indicates that coverage is not influenced by Bill Type and the policy should be assumed to apply equally to all claims.

Revenue Codes:

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report this service. In most instances Revenue Codes are purely advisory; unless specified in the policy services reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all Revenue Codes indicates that coverage is not influenced by Revenue Code and the policy should be assumed to apply equally to all Revenue Codes.

99999	Not Applicable
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93451	RIGHT HEART CATHETERIZATION INCLUDING MEASUREMENT(S) OF OXYGEN SATURATION AND CARDIAC OUTPUT, WHEN PERFORMED
93452	LEFT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION, WHEN PERFORMED
93453	COMBINED RIGHT AND LEFT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION, WHEN PERFORMED
93456	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING INTRAPROCEDURAL INJECTION(S) FOR CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION; WITH RIGHT HEART CATHETERIZATION
93457	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING INTRAPROCEDURAL INJECTION(S) FOR CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION; WITH CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL, VENOUS GRAFTS) INCLUDING INTRAPROCEDURAL INJECTION(S) FOR BYPASS GRAFT ANGIOGRAPHY AND RIGHT HEART CATHETERIZATION
93458	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING INTRAPROCEDURAL INJECTION(S) FOR CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION; WITH LEFT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, WHEN PERFORMED
93459	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING INTRAPROCEDURAL INJECTION(S) FOR CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION; WITH LEFT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, WHEN PERFORMED, CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL, VENOUS GRAFTS) WITH BYPASS GRAFT ANGIOGRAPHY
93460	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING INTRAPROCEDURAL INJECTION(S) FOR CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION; WITH RIGHT AND LEFT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, WHEN PERFORMED
93461	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING INTRAPROCEDURAL INJECTION(S) FOR CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION; WITH RIGHT AND LEFT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, WHEN PERFORMED, CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL, VENOUS GRAFTS) WITH BYPASS GRAFT ANGIOGRAPHY

ICD-9 Codes that Support Medical Necessity

XX000	Not Applicable
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Diagnoses that Support Medical Necessity

N/A

ICD-9 Codes that DO NOT Support Medical Necessity

N/A

XX000	Not Applicable
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ICD-9 Codes that DO NOT Support Medical Necessity Asterisk Explanation

Diagnoses that DO NOT Support Medical Necessity

N/A

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General Information

Documentations Requirements

Medical record documentation maintained by the ordering/referring physician must clearly indicate the medical necessity of cardiac catheterization covered by the Medicare Program. Also, the hard copy test results and interpretation of the catheterization must be included in the patient's medical record.

If the provider of the cardiac catheterization is other than the ordering/referring physician, the provider of the service must maintain hard copy documentation of test results and interpretation, along with copies of the documentation to support medical necessity for the cardiac catheterization and extra cardiac angiography.

Appendices

Utilization Guidelines It is expected that these services would be performed as indicated by current medical literature and/or standards of practice. When services are performed in excess of established parameters, they may be subject to review for medical necessity.

Sources of Information and Basis for Decision

Scanlon, P.J., and et al. (1999). ACC/AHA Guidelines for Coronary Angiography. Executive summary and recommendations. Circulation 2345-2357.

Advisory Committee Meeting Notes

Start Date of Comment Period

End Date of Comment Period

Start Date of Notice Period 01/01/2011

Revision History Number 1

Revision History Explanation Revision Number:1

Start Date of Comment Period:N/A

Start Date of Notice Period:01/01/2011

Revision Effective Date 01/01/2011

LCR B2011-017

December 2010 Update

Explanation of Revision: Annual 2011 HCPCS Update. Deleted CPT codes 93501, 93510, 93511, 93514, 93524, 93526, 93527, 93528, and 93529 and replaced with CPT codes 93451, 93452, 93453, 93456, 93457, 93458, 93459, 93460 and 93461. Changed the "Contractor Determination Number" to 93451. The effective date of this revision is based on date of service.

Revision Number:Original

Start Date of Comment Period:N/A

Start Date of Notice Period:12/04/2008

Revised Effective Date:02/02/2009

This LCD consolidates and replaces all previous policies and publications on this subject by the carrier predecessors of First Coast Service Options, Inc. (Triple S and FCSO).

For Florida (00590) this LCD (L29090) replaces LCD L5977 as the policy in notice. This document (L29090) is effective on 02/02/2009.

11/21/2010 - The following CPT/HCPCS codes were deleted:

93501 was deleted from Group 1
93510 was deleted from Group 1
93511 was deleted from Group 1
93514 was deleted from Group 1
93524 was deleted from Group 1
93526 was deleted from Group 1
93527 was deleted from Group 1
93528 was deleted from Group 1
93529 was deleted from Group 1

Reason for Change

Related Documents

This LCD has no Related Documents.

LCD Attachments

There are no attachments for this LCD.

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All Versions

Updated on 12/16/2010 with effective dates 01/01/2011 - N/A

[Updated on 11/30/2008 with effective dates 02/02/2009 - N/A](#)

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