# Billing and Coding Guidelines for Non- Invasive Peripheral Arterial Vascular Studies

# LCD Database ID Number L35761

# **Medicare manual excerpts:**

# **Ultrasound Diagnostic Procedures**

CMS Pub100-03 *Medicare National Coverage Determinations Manual*, Chapter 1- Coverage Determinations, Part 4 Section 220.5- Ultrasound Diagnostic Procedures (Rev. 76, 09-28-07).

Ultrasound diagnostic procedures are listed below and are divided into two categories. Medicare coverage is extended to the procedures listed in Category I. Periodic claims review by the A/Medicare Administrative Contractor's (A/MAC) medical consultants should be conducted to ensure that the techniques are medically appropriate and the general indications specified in these categories are met. Techniques in Category II are considered experimental and should not be covered at this time.

#### B. Nationally Covered Indications

Category I - (Clinically effective, usually part of initial patient evaluation, may be an adjunct to radiologic and nuclear medicine diagnostic technique). Partial list is included see IOM for total list:

- Arterial Flow Study, Peripheral (Doppler)
- Arterial Aneurysm, Peripheral (B-Scan)

### C. Nationally Non-Covered Indications

Category II - (Clinical reliability and efficacy not proven)

• *B-Scan for atherosclerotic narrowing of peripheral arteries.* 

#### **Plethysmography**

CMS Pub. 100-03 *Medicare National Coverage Determinations Manual*, Chapter 1- Coverage Determinations, Part 1 Section 20.14 -Plethysmography, (Rev. 1, 10-03-03).

Plethysmography involves the measurement and recording (by one of several methods) of changes in the size of a body part as modified by the circulation of blood in that part. Plethysmography is of value as a noninvasive technique for diagnostic, preoperative and postoperative evaluation of peripheral artery disease in the internal medicine or vascular surgery practice. It is also a useful tool for the preoperative podiatric evaluation of the diabetic patient or one who has intermittent claudication or other signs or symptoms indicative of peripheral vascular disease which have a bearing on the patient's candidacy for foot surgery.

The oldest form of plethysmography is the venous occlusive pneumoplethysmography. This method is cumbersome, time consuming, and requires considerable training to give useful, reproducible results. Nonetheless, in the setting of the hospital vascular laboratory, this technique is considered a reasonable and necessary procedure for the diagnostic evaluation of suspected peripheral arterial disease. It is unsuitable for routine use in the physician's office.

Recently, however, a number of other plethysmographic methods have been developed which make use of phenomena such as changes in electric impedance or changes in segmental blood pressure at constant volume to assess regional perfusion. Several of these methods have reached a level of development which makes them clinically valuable.

Medicare coverage is extended to those procedures listed in Category I below when used for the accepted medical indications mentioned above. The procedures in Category II are still considered experimental and are not covered at this time. Denial of claims because a noncovered procedure was used or because there was no medical indication for plethysmographic evaluation of any type should be based on §1862(a) (1) of the Act.

#### Category I – Covered

Segmental Plethysmography - Included under this procedure are services performed with a regional plethysmograph, differential plethysmograph, recording oscillometer, and a pulse volume recorder.

*Electrical Impedance Plethysmography* - This method senses changes in a minute electric current sent through a portion of the body by means of separate electrodes proximal and distal to the sensing electrodes. Changes in electrical impedance of a limb are a reflection of the change in blood content and limb volume.

Ultrasonic Measurement of Blood Flow (Doppler) - While not strictly a plethysmographic method, this is also a useful tool in the evaluation of suspected peripheral vascular disease or preoperative screening of podiatric patients with suspected peripheral vascular compromise. CMS Pub 100-03 Medicare National Coverage Determinations Manual, Chapter 1- Coverage Determinations, Part 4 Section 220.5- Ultrasound Diagnostic Procedures (Rev. 76, 09-28-07).

Strain Gauge Plethysmography - This test is based on recording the non-pulsatile aspects of inflowing blood at various points on an extremity by a mercury-in-silastic strain gauge sensor. The instrument consists of a chart recorder, automatic cuff inflation and deflation system, and a recording manometer.

#### Category II - Experimental

The following methods have not yet reached a level of development such as to allow their routine use in the evaluation of suspected peripheral vascular disease and are not covered since they are considered experimental.

Inductance Plethysmography - This method is considered experimental and does not provide reproducible results.

Capacitance Plethysmography - This method is considered experimental and does not provide reproducible results.

Mechanical Oscillometry - This is a non-standardized method which offers poor sensitivity and is not considered superior to the simple measurement of peripheral blood pressure.

Photoelectric Plethysmography - This method is considered useful only in determining whether or not a pulse is present and does not provide reproducible measurements of blood flow.

Differential plethysmography, on the other hand, is a system which uses an impedance technique to compare pulse pressures at various points along a limb, with a reference pressure at the midbrachial or wrist level. It is not clear whether this technique, as usually performed in the physician's office, meets the definition of plethysmography because quantitative measurements of blood flow are usually not made. It has been concluded, in any event, that the differential

plethysmography system is a blood pulse recorder of undetermined value which has the potential for significant overutilization. Therefore, reimbursement for studies done by techniques other than venous occlusive pneumoplethysmography should be denied, at least until additional data on these devices, including controlled clinical studies, become available.

The following studies are not covered:

• Periorbital photoplethysmography

# **Thermography**

CMS Pub.100-03 *Medicare National Coverage Determinations Manual*, Chapter 1- Coverage Determinations, Part 4 Section 220.11- Thermography, (Rev. 1, 10-03-03).

Thermography is the measurement of self-emanating infrared radiation that reveals temperature variations at the surface of the body. The thermographic device senses body temperature and demonstrates areas of differing heat emission by producing brightly colored patterns. Each color represents a specific temperature level. Interpretation of these color patterns according to designated anatomic distribution is thought to aid in diagnosing a vast array of diseases.

Thermography for any indication (including breast lesions which were excluded from Medicare coverage on July 20, 1984) is excluded from Medicare coverage because the available evidence does not support this test as a useful aid in the diagnosis or treatment of illness or injury. Therefore, it is not considered effective. This exclusion was published as a CMS Final Notice in the "Federal Register" on November 20, 1992.

## **Coding Guidelines**

- 1. Use the appropriate procedure code and modifiers.
- 2. Indicate the diagnoses for which the testing is being performed.
- 3. Documentation is not required on initial claims submission unless requested.
- 4. If studies are performed on the upper and lower extremities on the same day, the services should be submitted on separate detail lines. When claims are submitted electronically, it should be indicated in Item19 of field N-4 (old format) or in record HAO-05 of the National Standard format, that upper AND lower studies were performed. If paper claims are still being submitted, this information must appear on the CMS-1500 claim form.
  - Upper and lower extremity physiologic studies (93923)
  - o Lower extremity studies (93925 and 93926)
  - O Upper extremity duplex studies (93930 and 93931)

The submitted medical record should support the use of the selected diagnostic codes and the CPT/HCPCS codes should accurately describe the studies performed. If modifiers are reported, the documentation must support the use of these modifiers. Note: A payable diagnosis alone does not support medical necessity of ANY service.

The HCPCS/CPT code(s) may be subject to Correct Coding Initiative (CCI) edits. This policy does not take precedence over CCI edits. Please refer to the CCI for correct coding guidelines and specific applicable code combinations prior to billing Medicare.

# **Revision history**