Medical Coverage Policy

Non-invasive Measurement of Left Ventricular End Diastolic Pressure (LVEDP) in the Outpatient Setting

☐ Device/Equipment  ☐ Drug  ☐ Medical  ☐ Surgery  ☒ Test  ☐ Other


Prospective review is recommended/required. Please check the member agreement for preauthorization guidelines.

Prospective review is not required.

Description:

Left ventricular end diastolic pressure (LVEDP), the pressure at the end of the filling phase of the heart, is elevated in congestive heart failure. Its measurement may be useful in the management of patients with congestive heart failure. Non-invasive measurements of LVEDP have been developed based on the observation that the arterial pressure during the strain phase of the Valsalva maneuver may directly reflect the LVEDP. For example, arterial pressure response during the Valsalva maneuver generally shows 4 distinct phases, which can be recorded and analyzed. The VeriCor device (CVP Diagnostics, Boston, MA) is an example of a device for the non-invasive measurement of LVEDP that has received U.S. Food and Drug Administration (FDA) clearance through the 510(k) process.

The VeriCor device consists of a digital expiratory manometer coupled with a continuous arterial pressure monitor and a medical grade computer. A tonometric sensor is attached to the patient’s wrist with a blood pressure cuff attached to the arm. After an 8-minute tonometric calibration period is completed, the VeriCor system is ready for use. For the test, the patient is prompted to perform a Valsalva maneuver by blowing into the mouthpiece of the digital monometer to produce an expiratory pressure of 20 to 30 mmHg for a minimum of 8 seconds. The digital signals are collected and stored on a medical grade computer. The arterial pressure signals are then analyzed according to algorithms that were developed to most accurately predict pulmonary capillary wedge pressure.

Medical Criteria:
Not applicable.

Policy:
Non-invasive measurement of left ventricular end diastolic pressure (LVEDP) in the outpatient setting is considered not medically necessary because there is insufficient evidence in the published medical literature to demonstrate its efficacy.
Coverage:
Benefits may vary between groups and contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement contract for the applicable Services Not Medically Necessary benefits/coverage.

Coding:
Providers should file left ventricular filling pressure indirect measurement by computerized calibration of the arterial waveform response to Valsalva maneuver using the following unlisted code: 93799

Also known as:
Congestive Heart Failure
Left Ventricular End Diastolic Pressure
Non-invasive Measurement
LVEDP
Non-invasive Measurement
VeriCor

Publications:
Provider Update, May 2009
Provider Update, Jun 2010
Provider Update, May 2011

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