POLICY STATEMENT:

I. Based upon our criteria and the lack of peer-reviewed literature, computer aided acoustic heart sound recording has not demonstrated a benefit to patient outcomes and is considered investigational.

II. Based upon our criteria and the lack of peer-reviewed literature, correlated audioelectric cardiography has not demonstrated a benefit to patient outcomes and is considered investigational.

DESCRIPTION:

Acoustic heart sound recording, or acoustic cardiography, describes the process of computer-aided electronic auscultation that acquires, records, and analyzes the acoustic signals of the heart. Cardioscan (Zargis Medical Corp) received FDA approval in June 2004. This device is intended for use in acquiring, analyzing and reporting heart sound data and also provides interpretation of the data to assist the physician in evaluating S1 and S2 heart sounds and identifying murmurs.

Correlated audioelectric cardiography devices also record and display EKG tracings as well as acoustic heart sounds. The Audicor System (Inovise Medical, Inc) was approved by the FDA in November 2003. This system, when used in the V3 and V4 positions on the chest wall, is designed to acquire both heart sounds and simultaneous ECG electrical signals and uses multiple algorithms to identify and report critical diagnostic markers, including third and fourth heart sounds.

RATIONALE:

There is inadequate evidence of the validity of computer-aided electronic auscultatory devices, or their impact on clinical outcomes in peer-reviewed published medical literature. Computer-aided electronic auscultation of heart sounds is proposed as an improved method for the primary care provider to differentiate between innocent and pathological heart murmurs and to detect and track changes over time.

A 2013 guideline from the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines addressing management of heart failure states “Other options for diagnostic evaluation of patients with suspected acutely decompensated HF (heart failure), such as acoustic cardiography, bioimpedance vector monitoring, or noninvasive cardiac output monitoring are not yet validated.” (Yancy, et al, 2013).

No prospective studies were found regarding the diagnostic performance of correlated audioelectric cardiography and its impact on patient management in clinical situations. Neither the American College of Cardiology/American Heart
Association (ACC/AHA) Guidelines for the Management of Patients with ST-Elevation Myocardial Infarction nor the ACC/AHA Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult make any mention of correlated audioelectric cardiography or acoustic heart sound recording as a diagnostic tool.

Please see YourCare PA list for related codes.

REFERENCES:


Becker C. Still hard to beat. Doctors don't have the heart--or a clinical reason--to part with their old-fashioned stethoscopes. Mod Health 2003;33(19):30, 32.


Tavel ME, Katz H. Usefulness of a new sound spectral averaging technique to distinguish an innocent systolic murmur from that of aortic stenosis. Am J Cardiol 2005 Apr 1;95(7):902-4.


KEY WORDS:

Auscultation, Acoustic cardiography, Acoustic heart sound recording, Audicor system, Cardioscan, Correlated acoustic cardiogram, Electronic phonocardiography