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Original Effective Date: 11/15/00

Reviewed: 04/25/24

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## Subject: Signal Averaged Electrocardiography (SAECG)

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### DESCRIPTION:

Signal-averaged electrocardiography (SAECG) is a technique involving computerized analysis of small segments of a standard EKG to detect ventricular late potentials. Late potentials are signals that can be seen only at a very low voltage and are usually masked by noise from electrical equipment.

SAECG has been proposed as a test to predict which patients are at higher risk of experiencing an arrhythmic event (either a sustained arrhythmia or sudden cardiac death). Since sudden cardiac death, whether from arrhythmias or pump failure, is one of the most common causes of death after a previous MI, there is much interest in risk stratification to determine target therapy.

**Summary and Analysis of Evidence:** An UpToDate review on “Incidence of and risk stratification for sudden cardiac death after myocardial infarction” (Podrid, 2022) states, “...the predictive value of SAECG alone is low, and in practice this test is now rarely used for risk stratification.” The review goes on to state, “A number of additional risk factors are associated with the risk of SCD after an acute MI, including microvolt T wave alternans, signal-averaged ECG, and heart rate variability. However, because the results of these studies do not usually affect management decisions, we do not recommend their routine use.” Sugawara and associates (2023) concluded that “Although its evidence has not been well established, our case may indicate that the SA-ECG could be a potentially useful tool to evaluate the effectiveness of a therapy after ventricle arrhythmia ablation in patients harboring LPs and confined abnormal myocardium. In order to establish more solid evidence, a larger population and unified validation are necessary.” Signal-averaged ECG has been studied as a diagnostic test for several cardiac related disorders but the evidence is insufficient to demonstrate clinical utility and to determine the effects of the technology on health outcomes.

## POSITION STATEMENT:

Signal-averaged electrocardiography (SAECG) is considered **experimental or investigational** for all indications. The evidence is insufficient to determine the effects of the technology on health outcomes.

## BILLING/CODING INFORMATION:

### CPT Coding:

93278	Signal-averaged electrocardiography (SAECG), with or without ECG ( <b>Investigational</b> )
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## REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

## PROGRAM EXCEPTIONS:

**Federal Employee Program (FEP):** Follow FEP guidelines.

**State Account Organization (SAO):** Follow SAO guidelines.

**Medicare Advantage products:** No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

## DEFINITIONS:

None applicable

## RELATED GUIDELINES:

None applicable

## OTHER:

None applicable.

## REFERENCES:

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### COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 04/25/24.

### GUIDELINE UPDATE INFORMATION:

11/15/00	Medical Coverage Guideline Developed.
02/15/02	Medical Coverage Guideline Reformatted.
03/15/03	Reviewed; no changes.
09/15/06	Scheduled review and revision of guideline consisting of updated references and addition of rationale for investigational statement.
07/15/07	Annual review, investigational status maintained, reformatted guideline, references updated.
09/15/08	Scheduled review; no change in position statement; references updated.
06/15/09	Annual review: position statement maintained; references updated.
05/11/14	Revision: Program Exceptions section updated.
07/15/17	Revision; investigational status maintained, description, position statement, and references updated.
05/15/19	Review; Position statement maintained; description section and references updated.
05/15/21	Review; Position statement maintained; references updated.
06/15/23	Review: Position statement maintained and references updated.
05/15/24	Review: Position statement maintained; description and references updated.