I. Policy: Microvolt T-wave Alternans

II. Purpose/Objective:
To provide a policy of coverage regarding Microvolt T-wave Alternans

III. Responsibility:
A. Medical Directors
B. Medical Management

IV. Required Definitions
1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions
Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

a. appropriate for the symptoms and diagnosis or treatment of the Member's condition, illness, disease or injury;
b. provided for the diagnosis, and the direct care and treatment of the Member's condition, illness disease or injury;
c. in accordance with current standards of good medical treatment practiced by the general medical community.
d. not primarily for the convenience of the Member, or the Member's Health Care Provider; and
e. the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member's condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment
Medical Necessity shall mean a service or benefit that is compensable under the Medical Assistance Program and if it meets any one of the following standards:

(i) The service or benefit will, or is reasonably expected to, prevent the onset of an illness, condition or disability.
(ii) The service or benefit will, or is reasonably expected to, reduce or ameliorate the physical, mental or development effects of an illness, condition, injury or disability.
(iii) The service or benefit will assist the Member to achieve or maintain maximum functional
capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for members of the same age.

**DESCRIPTION:**
Microvolt T-wave Alternans involve the detection of every-other-beat alternations in T-wave morphology. These alternations are thought to represent abnormalities in intracellular calcium handling that may predispose patients to sudden cardiac death due to ventricular arrhythmias.

**INDICATIONS:** Microvolt T-wave Alternans diagnostic testing, using the spectral analysis method, may be considered medically necessary for the evaluation of patients at risk for sudden cardiac death and who meet the criteria for cardioverter-defibrillator implantation.

**EXCLUSIONS:** The Plan does **NOT** provide coverage for Microvolt T-wave Alternans if the measurement is not performed using the spectral analysis method because it is considered experimental, investigational or unproven. There is insufficient evidence in the peer-reviewed published medical literature to establish the effectiveness of this treatment on health outcomes when compared to established treatments or technologies.

The Plan does **NOT** provide coverage for Microvolt T-wave Alternans for the diagnosis and assessment of acute coronary syndrome, evaluation of ischemic cardiomyopathy or managing anti-arrhythmic therapy because it is considered experimental, investigational or unproven. There is insufficient evidence in the peer-reviewed published medical literature to establish the effectiveness of this treatment on health outcomes when compared to established treatments or technologies.

**Note:** A complete description of the process by which a given technology or service is evaluated and determined to be experimental, investigational or unproven is outlined in MP 15 - Experimental Investigational or Unproven Services or Treatment.

**CODING ASSOCIATED WITH:** Microvolt T-wave Alternans

The following codes are included below for informational purposes and may not be all inclusive. Inclusion of a procedure or device code(s) does not constitute or imply coverage nor does it imply or guarantee provider reimbursement. Coverage is determined by the member specific benefit plan document and any applicable laws regarding coverage of specific services. Please note that per Medicare coverage rules, only specific CPT/HCPCS Codes may be covered for the Medicare Business Segment. Please consult the CMS website at [www.cms.gov](http://www.cms.gov) or the local Medicare Administrative Carrier (MAC) for more information on Medicare coverage and coding requirements.

93025 Microvolt T-wave Alternans for assessment of ventricular arrhythmias

**Medicare Approved ICD-10 Codes**

I24.8 , I47.0 , I47.2 , I49.01 , I49.02 , R55 , Z98.89


**LINE OF BUSINESS:**

Eligibility and contract specific benefits, limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy. For Medicare, applicable LCD’s and NCD’s will supersede this policy. For PA Medicaid Business segment, this policy applies as written.

**REFERENCES:**


Blue Cross Blue Shield Technology Evaluation Center (TEC). Microvolt T-wave alternans testing to risk stratify patients being considered for ICD therapy for primary prevention of sudden death. TEC Assessment Program. Chicago, IL: October 2005;20(9).

Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD) for MICROVOLT T-WAVE ALTERNANS (MTWA) (20.30)


Centers for Medicare & Medicaid Services (CMS). NCD 20.30 Microvolt T-Wave Alternans (MTWA)


Guy Amit, MD, MPH David S. Rosenbaum, MD, FHRS, Dennis M. Super, MD, MPH Otto Costantini, MD. Microvolt T-wave alternans and electrophysiologic testing predict distinct arrhythmia substrates: Implications for identifying patients at risk for sudden cardiac death. Heart Rhythm 2010 7(6) 763-768

Euler V. Garcia1, II; Carlos Alberto Pastore1; Nelson Samesima1; Horácio G. Pereira Filho1. T-wave alternans: clinical performance, limitations and analysis methodologies. Arq. Bras. Cardiol. 2011; 96(3)


This policy will be revised as necessary and reviewed no less than annually.

Devised: 10/2006

Revised: 5/10 (ref); 5/15 (exclusions)

Reviewed: 04/08, 4/09, 5/11, 5/12, 5/13, 5/14, 5/16, 4/17, 4/18