MEDICAL POLICY

SUBJECT: TILT TABLE TESTING

POLICY NUMBER: 2.01.01
CATEGORY: Technology Assessment

EFFECTIVE DATE: 09/21/00
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- If the member’s subscriber contract excludes coverage for a specific service it is not covered under that contract. In such cases, medical policy criteria are not applied.
- Medical policies apply to commercial and Medicaid products only when a contract benefit for the specific service exists.
- Medical policies only apply to Medicare products when a contract benefit exists and where there are no National or Local Medicare coverage decisions for the specific service.

POLICY STATEMENT:

I. Based upon our criteria and review of the peer-reviewed literature, tilt table testing (TTT) has been medically proven effective and therefore medically appropriate for the following indications:
   A. Patients who have evidence for recurrent unexplained syncope with a negative noninvasive syncopal workup without identifiable structural heart disease; or
   B. Patients with recurrent syncope or a single syncopal event who work in a high-risk setting (e.g., commercial vehicle driver, pilot) with or without evidence of structural heart disease;

II. Based upon our criteria and review of the peer-reviewed literature, tilt table testing has not been medically proven effective and is considered investigational for all other indications.

POLICY GUIDELINES:

The Federal Employee Health Benefit Program (FEHBP/FEP) requires that procedures, devices or laboratory tests approved by the U.S. Food and Drug Administration (FDA) may not be considered investigational and thus these procedures, devices or laboratory tests may be assessed only on the basis of their medical necessity.

DESCRIPTION:

The tilt table test can be used to diagnose neurocardiogenic syncope. Neurocardiogenic, or neurally mediated, syncope is caused by a sudden, temporary failure of the autonomic nervous system to maintain blood pressure and heart rate.

The device required for a tilt-table test is a motorized table designed specifically for use in a cardiac catheterization/electrophysiology laboratory. This table differs from tilt tables used in radiology and physical therapy departments. The tilt table for syncope testing must change the patient’s position from 0–60° in less than 10 seconds, must be able to restore the patient equally quickly to a supine position, and must have proper restraints. The patient is held at a 60° angle for an extended period of time, during which heart rate and blood pressure are monitored and syncope observed, should it occur. Syncope is defined as a sudden, transient loss of consciousness, accompanied by loss of postural tone.

The tilt-table test has also been used to classify a patient’s syncope into different categories, which may aid in determining whether a patient is a candidate for insertion of a pacemaker to treat syncope. Based on the heart rate and blood pressure changes observed during the tilt, syncope can be classified as type 1 mixed, type 2A cardioinhibitory, type 2B cardioinhibitory, or type 3 pure vasodepressor.

RATIONALE:

The 1997 TEC Assessment concluded that for the diagnosis of syncope, the evaluation of tilt-table testing is limited due to the lack of standardized protocols for the test, poor sensitivity for the diagnosis of neurocardiogenic syncope, and lack of evidence that tilt-table testing improves health outcomes or reduces utilization of other medical resources needed to diagnose or manage syncope. Although tilt-table testing allows confirmation of a diagnosis of neurocardiogenic syncope in many cases, it may not be specific enough to rule out life-threatening cardiac causes of syncope, and not sensitive enough to detect most cases of neurocardiogenic syncope.

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The American College of Cardiology published a consensus statement on tilt-table testing that concluded that such testing had a valuable role in the clinical evaluation of patients with syncope of uncertain origin. In addition, the European Society of Cardiology Task Force on Syncope guidelines (updated 2009) state that tilt-table testing is indicated for diagnostic purposes with certain specific indications. A guideline on the diagnosis of syncope of the American College of Physicians’ Clinical Efficacy Assessment Project also recommends tilt-table testing.

An American Heart Association (AHA)/American College of Cardiology Foundation (ACCF) Scientific Statement on the Evaluation of Syncope (Strickberger, et al., 2006) states that tilt table testing is used as an aid in establishing the diagnosis of neurocardiogenic syncope, but serious questions about the sensitivity, specificity, diagnostic yield and day-to-day reproducibility of the test exist. The reported sensitivity and specificity of tilt table testing depend on the technique used. The sensitivity ranges from 26% to 80%, and the specificity is approximately 90%. In patients with a negative evaluation (i.e., no evidence of ischemia or cardiac structural abnormalities), the pretest probability that the diagnosis is neurocardiogenic syncope is high. Tilt table testing therefore contributes little to establishing the diagnosis. In a patient with a normal evaluation and a negative tilt table test, neurocardiogenic syncope remains the most likely diagnosis. The scientific statement also states that it may be more important to rule out other causes of syncope than it is to perform a tilt table test, since the risk of recurrent syncope in a patient with a normal cardiac evaluation and syncope is similar regardless of whether the tilt table test is positive or negative.

Two randomized clinical trials evaluating dual-chamber pacemakers as a treatment for neurocardiogenic syncope in patients with refractory syncope have been published. The entry criteria for these clinical trials required that the patient have a cardioinhibitory or bradycardiac response as assessed by tilt-table testing. This criterion exists because the scientific rationale for this treatment is that the pacemaker corrects the slow heart rhythm that is presumably the cause of the syncope in this subset of patients. Evidence is lacking as to whether cardiac pacing is effective among patients with other types of tilt-table test responses or among patients with negative tilt-table tests. Thus, it is unknown whether the tilt-table test is actually a necessary component of the selection criteria for a pacemaker. However, given the invasiveness and complexity of pacemaker treatment for syncope, incorporating tilt-table testing to evaluate cardioinhibitory response for patients whose frequency, severity, and refractoriness to treatment merit consideration for pacemaker therapy, is considered appropriate by some.

**CODES:**

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<tr>
<th>Number</th>
<th>Description</th>
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<td>93660</td>
<td>Evaluation of cardiovascular function with tilt table evaluation, with continuous ECG monitoring and intermittent blood pressure monitoring, with or without pharmacological intervention</td>
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**REFERENCES:**


Deharo JC, et al. An implantable loop recorder study of highly symptomatic vasovagal patients: the heart rhythm observed during a spontaneous syncope is identical to the recurrent syncope but not correlated with the head-up tilt test or adenosine triphosphate test. J Am Coll Cardiol. 2006 Feb 7;47(3):587-93.


Strickberger SA, et al. AHA/ACCF scientific statement on the evaluation of syncope: from the American Heart Association Councils on Clinical Cardiology, Cardiovascular Nursing, Cardiovascular Disease in the Young, and Stroke, and the Quality of Care and Outcomes Research Interdisciplinary Working Group; and the American College of Cardiology Foundation In Collaboration With the Heart Rhythm Society. J Am Coll Cardiol 2006 Jan 17;47(2):473-84.


**KEY WORDS:**

Dizziness, Syncope, Syncopeal event.

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**CMSCOVERAGEFORMEDICAREPRODUCTMEMBERS**

There is currently no National Coverage Determination (NCD) or Local Coverage Determination (LCD) for Tilt Table Testing.