



Effective Health Care

Microvolt T-Wave Alternans (MTWA)

Diagnostic Testing

Nomination Summary Document

Results of Topic Selection Process & Next Steps

- MTWA diagnostic testing is an important topic but it was not feasible to narrow the scope of this anonymous nomination without nominator feedback. No further activity will be undertaken on this topic.

Topic Description

Nominator: Anonymous individual

Nomination Summary: The nominator suggests that the non-invasive MTWA test should be performed for the screening of all implantable cardioverter-defibrillator (ICD) candidates. The nominator questions the efficacy of the ICD. The nominator is interested in knowing more about the risks and harms; however, it is unclear whether the nominator is interested in the risks/harms of MTWA or the ICD.

Key Questions from Nominator: None

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Sudden cardiac death (SCD) is a leading cause of death in the United States. Risk stratification of patients for SCD remains a major challenge in clinical medicine. Although there have been advances made, the majority of patients who die from SCD are among a population not identified by current methods of risk stratification. Microvolt T-Wave Alternans (MTWA) has been proposed as a method to detect abnormalities in ventricular repolarization that may predict the occurrence of ventricular reentrant arrhythmias.
- The Centers for Medicare & Medicaid Services (CMS) has recently made a national coverage determination (NCD) for MTWA testing. The NCD was released on March 21, 2006. A reconsideration of coverage for MTWA testing was released on February 14, 2008. CMS has determined that there is sufficient evidence to conclude that MTWA diagnostic testing is reasonable and necessary for the evaluation of patients at risk of sudden cardiac death only when the spectral analytic method is used.

Given the existing CMS coverage decision, the potential impact of a new report on this topic is unclear. The NCD is available at <http://www.cms.hhs.gov/mcd/viewdecisionmemo.asp?id=213>.