Title:	**Visual electrodiagnosis April 2001**
Agency:	Medical Services Advisory Committee (MSAC) Commonwealth Department of Health and Ageing GPO Box 9848 Canberra ACT 2601 Australia **http//:www.msac.gov.au**
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Aim

To assess the safety and effectiveness of several visual electrodiagnostic tests for the diagnosis of retinal disease, optic nerve damage and visual field defects and under what circumstances public funding should be supported for these tests.

Conclusions and results

Safety	No significant consumer risks were identified.
Effectiveness	There was no rigorous evidence to support diagnostic effectiveness for the following five tests considered in detail: focal electroretinography (ERG), multifocal ERG, visual evoked potentials (VEP), scotopic threshold response (STR) and intensity response function (IRF). Studies were generally of a poor quality, did not identify diagnostic characteristics and offered little discussion of patient management outcomes. All of the studies considered were ranked only as level IV evidence. In the case of focal ERG, some studies did provide diagnostic characteristics but were flawed due to selection of patients who were already diagnosed with the disease or by failing to provide a reference test. This would have tended to overestimate the accuracy of focal ERG as a diagnostic test. Electroretinography, pattern electroretinography, dark adaptometry, electrooculography and visual evoked responses are recognised tests by the International Society of Clinical Electrophysiology of Vision.
Cost-effectiveness	This could not be evaluated due to insufficient evidence regarding accuracy of the tests and usefulness of patient outcomes.

Recommendations

1. Public funding should be supported for electroretinography, pattern electroretinography, dark adaptometry, electrooculography and visual evoked responses; but
2. not be supported for focal or multifocal ERG, VEP, STR or IRF.

Method

MSAC conducted a systematic review of the biomedical literature from 1966 to October 2000 by accessing biomedical databases, the Internet and international health technology websites to identify the accuracy and precision of the tests and their usefulness in terms of patient outcomes.

Prepared by the Centre for Clinical Effectiveness, Australia