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Evidence Report/Technology Assessment
Number 100

Criteria to Determine Disability Related to Multiple Sclerosis

Prepared for:
Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
540 Gaither Road
Rockville, MD 20850
www.ahrq.gov

Contract No. 290-02-0025

Prepared by:
Duke Evidence-based Practice Center, Durham, North Carolina

Investigators
Douglas C. McCrory, MD, MHS
Lisa A. Pompeii, PhD, COHN-S
Mark B. Skeen, MD
Sam D. Moon, MD, MPH
Rebecca N. Gray, DPhil
Jane T. Kolimaga, MA
David B. Matchar, MD

AHRQ Publication No. 04-E019-2
May 2004

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Suggested Citation:
McCrory DC, Pompeii LA, Skeen MB, Moon SD, Gray RN, Kolimaga JT, Matchar DB. Criteria to Determine Disability Related to Multiple Sclerosis. Evidence Report/Technology Assessment No. 100. (Prepared by the Duke Evidence-based Practice Center, Durham, NC, under Contract No. 290-02-0025.) AHRQ Publication No. 04-E019-2. Rockville, MD: Agency for Healthcare Research and Quality. May 2004.

Preface

The Agency for Healthcare Research and Quality (AHRQ), through its Evidence-Based Practice Centers (EPCs), sponsors the development of evidence reports and technology assessments to assist public- and private-sector organizations in their efforts to improve the quality of health care in the United States. This report on *Criteria to Determine Disability Related to Multiple Sclerosis* was requested and funded by the Social Security Administration. The reports and assessments provide organizations with comprehensive, science-based information on common, costly medical conditions and new health care technologies. The EPCs systematically review the relevant scientific literature on topics assigned to them by AHRQ and conduct additional analyses when appropriate prior to developing their reports and assessments.

To bring the broadest range of experts into the development of evidence reports and health technology assessments, AHRQ encourages the EPCs to form partnerships and enter into collaborations with other medical and research organizations. The EPCs work with these partner organizations to ensure that the evidence reports and technology assessments they produce will become building blocks for health care quality improvement projects throughout the Nation. The reports undergo peer review prior to their release.

AHRQ expects that the EPC evidence reports and technology assessments will inform individual health plans, providers, and purchasers as well as the health care system as a whole by providing important information to help improve health care quality.

We welcome written comments on this evidence report. They may be sent to: Director, Center for Outcomes and Evidence, Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, MD 20850.

Carolyn M. Clancy, M.D.
Director
Agency for Healthcare Research and Quality

Jean Slutsky, P.A., M.S.P.H.
Acting Director, Center for Outcomes and Evidence
Agency for Healthcare Research and Quality

Jo Anne B. Barnhart
Commissioner
Social Security Administration

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Structured Abstract

Context: The Social Security Administration (SSA) processes more than 3.5 million claims for disability benefits each year. Multiple sclerosis (MS) is the third most common neurological diagnosis cited as the cause for disability. SSA requested evidence on whether current medical knowledge supports its MS disability policies.

Objectives: Our first major objective was to identify, review, and evaluate the medical literature on five major topics: reliability of MS diagnostic criteria; predictors of physical and mental impairments; effect of treatment and symptom management therapies; association of clinical findings with work ability; and impact of environmental factors on work capacity. Our second objective was to describe information needed to address any data insufficiencies, if any, in these five areas.

Data Sources: Nearly 1500 English-language articles were identified, principally from searches of MEDLINE®, CINAHL®, and Web of Science. The term *multiple sclerosis* was merged with concepts specific to the topic areas.

Study Selection: Nearly 50 percent, or 739 articles, initially met the selection criteria; of these, 168 (23 percent) passed three levels of screening (titles and abstracts; full-text articles; data abstraction). Inclusion requirements included a population with MS, relevance to specific question(s) based on appropriate thresholds, and satisfactory level of evidence.

Data Extraction: Descriptive data were partially abstracted into standardized evidence tables by a non-clinician abstractor and then completed by two clinicians (primary abstractor and over-reader). Methodological quality of each article was assessed for internal and external validity and reported in the evidence tables.

Data Synthesis: In two recent high-quality studies, the McDonald criteria identified a high proportion of patients presenting with clinically isolated syndrome who will go on to develop clinically definite MS over 1-4 years of follow up, with a specificity of 83 to 87 percent. We found few prospective studies describing prediction of changes in physical and mental impairments over a 9- to 24-month time frame. In clinical trials, few patients improved with disease-modifying treatments and then only in the range of 1.0 point on the Extended Disability Status Scale (EDSS); rehabilitation and symptomatic treatment of spasticity, fatigue, depression, voiding dysfunction, and cognitive impairments resulted in symptom and functional status improvement. Work ability has been little studied, and few data link it to symptoms or objective physical and cognitive measures. We found no studies linking thermal sensitivity and work ability.

Conclusions: McDonald criteria appear to have substantial evidence for validity and inter-rater reliability in diagnosing MS; clinical data are poor at predicting 1-year clinical outcomes. Treatments do not result in improvements in impairments, but symptomatic treatments can result in improvements in functional status. Further research is required to understand the associations between clinical data and work status or work ability.

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Appendixes and Evidence Tables are provided electronically at http://www.ahrq.gov/clinic/epcindex.htm