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Strategy for developing an evidence-based transdisciplinary vision rehabilitation team approach to treating vision impairment

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Vision rehabilitation;
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Low vision;
Evidence-based outcomes;
Rehabilitation team

Abstract

BACKGROUND: Many individuals with vision impairment experience significant loss of the ability to perform daily living activities, which often results in a further decline and loss of quality of life. Appropriate rehabilitation of the population with vision impairment has the potential to both improve individual abilities for health and personal management as well as maximize utilization of available health care resources.

METHODS: The case for an evidence-based model for the vision rehabilitation health care team as a medical rehabilitation program is presented. The recommended strategy has 3 main components: development of a consensus team clinical practice guideline leading to a future evidence-based team guideline for vision rehabilitation; evaluation and measurement of the knowledge, attitudes, and practices of the involved vision rehabilitation professionals before and after implementation of the new paradigm; and measurement of outcomes that estimate the effects of the proposed paradigm on patient care by measuring both the improvement in visual ability of the patient and the economic impact of the model on optometric practice.

CONCLUSIONS: Development of a state-of-the-art evidence-based transdisciplinary team model guideline will facilitate improvement in the quality of life of individuals with diseases that result in chronic vision impairment.

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An ever-growing proportion of our national health care expenditures is focused on individuals with chronic diseases and disorders.[1] Many individuals experience a significant loss of the ability to perform daily living activities; progressive inability to participate in family, social, and community activities; and a consistent decline in the ability to efficiently and effectively manage health care needs. A major portion of this growing patient population consists of individuals of all ages with vision impairment.[2-4] Appropriate rehabilitation of this population has the potential to both improve individual abilities for health and personal management as well as maximize utilization of available health care resources.

Optometry continues to be in the forefront of the evolving process of treating individuals who have vision impairment from a clinical and health care policy perspective. The American Optometric Association (AOA) Low Vision Section, now called the AOA Low Vision Rehabilitation Section (LVRS), developed the original Clinical Practice Guideline "Care of the Patient with Low Vision" in 1994, which remains as the first of only 2 intraprofessional guidelines related to vision impairment listed in the National Guideline Clearinghouse that meets the criteria of an evidence-based guideline as listed in the 2004 U.S. Department of Health & Human Services Agency for Healthcare Research and Quality (HHS AHRQ) Technology Assessment

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Table 1 Relevant acronyms

AAFP	American Academy of Family Practice
AAOph	American Academy of Ophthalmology
ABS	Activities Breakdown Structure
ACGME	Accreditation Council on Graduate Medical Education
ACVREP	Academy for Certification of Vision Rehabilitation and Education Professionals
AI	Activity Inventory
AMA	American Medical Association
AOA	American Optometric Association
AOA LVRS	AOA Low Vision Rehabilitation Section
AOTA	American Occupational Therapy Association
BRC	Veterans Affairs Blind Rehabilitation Center
CARF	Commission on Accreditation of Rehabilitation Facilities
CLVT	Certified Low Vision Therapist
CMS	Centers for Medicare & Medicaid Services
COMS	Certified Orientation and Mobility Specialist
CVRT	Certified Vision Rehabilitation Teacher
DIF	Differential Item Functioning
FIM	Functional Independence Measure
HCFA	Health Care Financing Administration
HHS	U.S. Department of Health & Human Services
KAP	Knowledge, Attitudes and Practice
NAC	National Accreditation Council for Agencies Serving People with Blindness or Visual Impairment
NEHEP	National Eye Health Education Program
NEI	National Eye Institute
NIH	National Institutes of Health
OT	Occupational Therapy
OTR/L	Occupational Therapist
PM&R	Physical Medicine and Rehabilitation
PT	Physical Therapy
VA LV VFQ	Veterans Affairs Low Vision Visual Function Questionnaire

on V*ision Rehabilitation for Elderly Individuals with Low Vision or Blindness*.[5] The current language of clinical optometric care once referred to as "subnormal vision" became known as "low vision," followed by "low vision rehabilitation," and, most recently, "vision rehabilitation." This mirrors the progression of changes in service delivery and scope of care.[6-8] (The latter 3 terms are still often mixed and/or used interchangeably in a multitude of venues.) The terminology, nomenclature, and/or clinical strategies used in optometry continue to be reflected by other professional and policy circles (*see* Table 1) including the National Eye Institute/National Institutes of Health (NEI/NIH) National Eye Health Education Program (NEHEP) initiative, Centers for Medicare & Medicaid Services (CMS), the American Academy of Ophthalmology (AAOph), the American Occupational Therapy Association (AOTA), the Association for Education and Rehabilitation of the Blind and Visually Impaired (AER), the American Public Health Association (APHA), and the White House Conference on Aging (WHCoA). The AOA, through the LVRS, continues to raise the national interest, promoting the prioritization of vision rehabilitation as a necessary part of the continuum of comprehensive medical eye care.[9] The AOA has adopted and continues to promote state-of-the-art language and definitions related to the process of vision rehabilitation, patient examination and clinical care, public health, third-party funding, and patient advocacy.[6,7] Yet, as would be expected with any dynamic evolutionary process, there is a lack of homogeneity and consensus within the greater realm of vision rehabilitation from both an inter- and intraprofessional perspective. As a result, important questions continue to arise as to who and/or what should be included as the providers, services, settings, patient population, third-party funding, practice guidelines, outcomes, and policy language involving vision rehabilitation. There also is a need to prioritize these and other critical variables to direct further research in the field.

The concept of vision rehabilitation as a medical rehabilitation program is relatively new to eye care. In 1995, Massof presented a systems model that identified a process for treating vision impairment within the existing medical model of care.[10] A key component of Massof's proposed model involved the identification of a rehabilitative process parallel to that of physical medicine and rehabilitation (PM&R). Because rehabilitation inherently involves a multidisciplinary approach to solve complex problems related to addressing the impact of visual impairments on a patient's life, vision rehabilitation must draw on a broad range of clinical, technical, pedagogical, and research expertise. Today's model of vision rehabilitation care must include professionals from different disciplines to more effectively address comorbidities and improve patient outcomes. This approach to a new model translates to changing professional beliefs and practice patterns and changing health care policies. Change is regulated by cost and benefit. To effect and manage change, it is critical to know and understand these 2 economic variables with respect to vision rehabilitation services. By evaluating the costs and benefits of different models of service delivery, and by translating health care policies into these economic variables, vision rehabilitation programs can be optimized by changing professional knowledge, attitudes, and practices and judging the economic outcomes.

The goal of this article is to suggest an evidence-based strategy for optimizing vision rehabilitation. This strategy has 3 main components: (1) development of a clinical practice guideline for the vision rehabilitation team based on an interdisciplinary consensus, which eventually will lead to an evidence-based guideline; (2) measurement of the current knowledge, attitudes, and practices (KAP) of members of the vision rehabilitation team and the effects of programs designed to change KAP; (3) measurement of outcomes in terms of the effects of the proposed practice guideline on patients' functional ability and the economic impact on the optometric practice. The proposed strategy uses current considerations for the advancement of best practices, incorporation of evidence-based clinical strategies, and maximized patient outcomes.