

SMARTSIGHT™
MAKING THE MOST OF REMAINING VISION

Academy Initiative in Vision Rehabilitation
Level 3 Guide for Academic Programs and Large Group Practices

COMPREHENSIVE VISION REHABILITATION:

Low Vision Evaluation and Rehabilitation Training

Comprehensive vision rehabilitation addresses:

- ◆ Reading
 - ◆ Activities of daily living
 - ◆ Safety
 - ◆ Community participation
 - ◆ Physical, psychosocial, and cognitive well-being
- It includes, but is not limited to, optical and nonoptical adaptive devices.

PART 1: LOW VISION EVALUATION

History

- ◆ Medical and ophthalmic history
 - ◆ Functional history
- Identify the patient's needs and goals. Consider functional communication; nutritional issues, including shopping and meal preparation; financial management; medication management; self-care; near tasks; distance tasks; history of falls, accidents, and injuries; mobility; driving and transportation.

Assessment of Physical and Psychosocial Well-Being

Note living situation, responsibilities, and supports. Assess for depression and psychosocial adjustment.

Visual Acuity and Refraction

- ◆ Record distance, near, and continuous reading acuity. To read continuous print without fatigue, one must be able to read two or three lines smaller than the desired text size. Precise individual letter acuity to 20/1600 and reading acuity may be assessed with the charts listed in the Appendix.
- ◆ Retinoscopy may be done in a phorometer or with loose lenses, with Rx confirmed in trial frame. Prescription for new eyeglasses is best delayed until completion of occupational therapy training, when the potential benefit of new eyeglasses can be reassessed, unless the refraction varies substantially from the current, e.g., by over 1.5 diopters.

Contrast Sensitivity

Loss of contrast sensitivity impacts function greatly. There is no current standard of measurement, although the FDA is in the process of developing one. Awareness of contrast sensitivity offers insight into functional problems and potential solutions.

Central Field: Scotoma and Preferred Retinal Locus (PRL)

The size, shape and position of the central scotoma and the position of the PRL relative to the scotoma impact function, choice of device, and patient training. Assessment of the scotoma and PRL is therefore necessary for optimal rehabilitation.

State of the art technology for this assessment includes the following:

- ◆ Scanning Laser Ophthalmoscope (SLO), Fourward Technologies. Most accurate, limited supply until new model available
- ◆ MP-1 Microperimeter, Nidek, Inc.

Less precise methods, also applicable to patient training, are listed in the appendix.

Peripheral Field

Map peripheral field, as indicated, with manual or automated perimetry or confrontation field. Mapping should extend to 140 degrees or more.

Magnification Requirements, Tolerance for Devices, and Application of Devices to Desired Tasks

Power and type of device may vary widely even with identical acuities depending on contrast sensitivity, scotoma/PRL pattern, and the patient's physical attributes and needs. Poor contrast with fair acuity may suggest a brightfield magnifier for desk use, for example, a small PRL surrounded by scotoma may necessitate a screen reader, a tremor or upper limb paresis may preclude the use of a handheld device.

Non-optical Devices

Assess application of the range of non-optical devices.

Counseling and Advice

Counsel and advise the patient and family regarding:

- ◆ The disease process and its functional implications
- ◆ Charles Bonnet Syndrome: Phantom vision associated with visual impairment
- ◆ Minimizing risk: nutritional supplementation, smoking cessation, diet, exposures
- ◆ Fall prevention. Pamphlet available from Center for Disease Control
- ◆ Adjustment to vision loss: Risk of depression with vision loss, association of depression with loss of function, importance of maximizing function.
- ◆ Referral for support group, peer counseling, and/or professional counseling
- ◆ Introduction to local and national resources, for example community transportation and radio reading services, Library of Congress talking books.
- ◆ Introduction of Veterans to VA Vision Rehabilitation Services

Referral to PCP or Psychiatry as indicated.

Order for Rehabilitation Training

The physician's order for Medicare-reimbursed occupational therapy rehabilitation training should include: primary code (impairment), secondary code (disease causing impairment), the patient's need for rehabilitation and potential to benefit, the therapy ordered, frequency and duration of treatment, and safety concerns. The order is good for one month. If therapy extends beyond one month, a new order must be written based on the therapist's monthly progress report, which the physician reviews and signs.

PART 2: REHABILITATION TRAINING

Occupational Therapy Assessment

Rehabilitation begins with the therapist's assessment of the patient's current level of function with respect to desired and necessary tasks, consideration of contributing physical, cognitive, psychosocial and environmental factors, and setting of clear, achievable therapy goals with the patient.

Rehabilitation Training

Rehabilitation training may include any or all of the following:

- ◆ Scotoma awareness and efficient use of the PRL in the presence of a central scotoma. Efficient use of the PRL may decrease magnification requirements.
- ◆ Scotoma awareness in the presence of peripheral field loss
- ◆ Visual motor skills including scanning, tracing, tracking and target localization
- ◆ Visual perceptual skills: visual closure, part-to-whole relationships, visual perspective, for patients with CVA-related visual impairment, for example
- ◆ Reading and writing techniques and training
- ◆ Performance of activities of daily living with or without optical devices
- ◆ Application of optical devices to specific tasks, care of devices
- ◆ Application of non-optical devices to specific tasks
- ◆ Adaptations to the environment to enhance function and safety: lighting, contrast, organization, labeling, glare control, hazard removal, and other safety measures
- ◆ Workplace assessments and adaptations
- ◆ Use of adaptive computers: enlargement, speech output
- ◆ Safe mobility in home and community: use of support canes, glare filters, and monoculars for orientation and spotting. [Long cane training is done by Certified Orientation and Mobility Specialists (COMS)]
- ◆ Recreational and avocational activities assessment and training
- ◆ Application of local and national resources and services
- ◆ Caregiver support and training
- ◆ Driver evaluation and training (not reimbursable)
- ◆ Counseling (reimbursable when performed by social worker or psychologist)
- ◆ Support groups (not reimbursable)
- ◆ Referral to further services as indicated, for example the Veteran's Administration Visual Impairment Services Team (VIST), Orientation and Mobility Training if not included in program, to other rehabilitation services, e.g. for balance or hearing, to physician for referral to psychology or psychiatry, to a support group, or to community service agencies, e.g. Area Agency on Aging

LEVEL 3 APPENDIX

A. Documentation and Coding

(Please see the Academy Coding Manual for Vision Rehabilitation, Suggested Reading #3, for further details)

◆ Low Vision Evaluation

(1) Consultation Codes 97741-44. Visual impairment code is primary, disease code is secondary, as consultation is for the impairment, not the disease. May bill by time if half of time is spent counseling and advising patient. Documentation must include a letter to the referring physician. Some HMOs preclude optometrists from using consultation codes.

(2) Evaluation and Management Codes: 99201-05. Visual impairment code is primary, disease code is secondary. May bill by time if half of time is spent counseling and advising patient.

The correlation between the low vision evaluation and Consultation Codes and Evaluation and Management Codes with respect to complexity, decision-making, and risk is currently being compiled.

◆ **Central and Peripheral Fields**

Visual field codes: 92081-3

SLO: both fundus photo and field codes may be used

◆ **Rehabilitation Training**

This is standard for all medical rehabilitation for any impairment. Occupational therapists are familiar with regulations and process. Treatment Codes listed below must be accompanied by visual impairment code and a disease code. Precise documentation is critical, as set forth in the Academy’s *Coding Manual for Vision Rehabilitation*, Suggested Reading #3.

◆ **Rehabilitation Codes**

Rehabilitation Activity	Codes (in 15-minute “units”)
Scotoma/PRL training	97530 or 97533
Scanning for peripheral loss	97530 or 97533
Activities of daily living: reading, writing, self-care, household tasks	97535
Environmental adaptations: lighting, increasing contrast, labeling, glare control, fall prevention	97535
Community integration: shopping, counting money, participation, community resources, transportation alternatives	97537

◆ **Reimbursement for Rehabilitation Training**

The May, 2002, CMS Program Memorandum for Visual Rehabilitation (PM) precludes regional carriers from automatic denial of reimbursement and if denied the PM is useful on appeal. Practically, the PM has resulted in national coverage by Medicare of rehabilitation training for visual impairments within the medical system. Reimbursement is restricted to occupational therapists or physicians.

A five-year CMS Demonstration Project began in 2006 in six areas of the country to assess the impact of adding three groups of non-medical vision rehabilitation professionals as providers of Medicare-reimbursed vision rehabilitation services: Certified Low Vision Therapists, Certified Vision Rehabilitation Therapists (formerly Rehabilitation Teachers), and Certified Orientation and Mobility Specialists. The CMS Demonstration areas are Kansas, New Hampshire, North Carolina, Washington State, Atlanta, GA, and New York City.

B. Charts and Sources

◆ **Distance Acuity Charts**

Colenbrander Low Vision Chart (1 meter)

EDTRS (letters, E’s, symbols, #s)

Requires illuminated chart box

◆ **Near Acuity Charts**

- Lighthouse Individual Letter Chart
- Lighthouse Continuous Text Charts (adult and child)
- LEA Symbol screener (preverbal)
- Patti Pics

◆ **Contrast Sensitivity Charts**

- Colenbrander Mixed Contrast Reading Card
- Pelli-Robson Chart
- Mars Contrast Sensitivity Test, available from <http://www.marsperceptrix.com>

◆ **Sources**

- <http://www.precision-vision.com>
- <http://www.shoplowvision.com>

C. Other Methods for Central Field Testing/Training

- ◆ Fletcher Central Field Test: laser pointer method, from <http://www.shoplowvision.com>
- ◆ Flashcard method: Patient fixates on examiner's nose, reads single-letter flashcards held at surrounding locations. Suggested Reading #14, Ch. 11
- ◆ Clock or face method: Patient fixates on examiner's nose, or center of clock face, reports blurred and clearest areas
- ◆ Macular Mapping Test: computer method: Software package, Smith-Kettlewell, e-mail: mm@ski.org
- ◆ Fundus Photography method. Suggested Reading #18

D. Tests for Reading, Quality of Life, Depression, Cognition

- ◆ Reading: MNRead, Pepper Test
- ◆ Quality of Life: NEI Visual Function Questionnaire 25 (NEI VFQ-25), Inventory of Visual Impairment (IVI)
- ◆ Depression: Geriatric Depression Scale (GDS), 15 and 30 question forms
- ◆ Cognitive Status: Mini-mental Evaluation (adapted for low vision, with verbal cues)

E. Suggested Reading

1. Brilliant, RL. Essentials of Low Vision Practice. Boston, MA: Butterworth-Heinemann, 1998.
2. Canadian Journal of Ophthalmology Special Issue on Low Vision Rehabilitation, June 2006, Ed: Markowitz, SN. <http://pubs.nrc-cnrc.gc.ca/cjo/cho41-03.html>.
3. Vision Rehabilitation Coding Module, Ophthalmic Coding Series. San Francisco: American Academy of Ophthalmology; 2007.
4. Monograph #12, Low Vision Rehabilitation: Caring for the Whole Person. San Francisco: American Academy of Ophthalmology; 1999.
5. Preferred Practice Pattern: Vision Rehabilitation for Adults. San Francisco: American Academy of Ophthalmology; 2007.
6. Policy Statement: Vision Requirements for Driving. San Francisco: American Academy of Ophthalmology; 2006.
7. Brown GC, Brown MM, Sharma S. Differences between ophthalmologists' and patients' perception of quality of life associated with macular degeneration. *Can J Ophthalmol* 2000;35:127-33.
8. Faye EE, Albert DL, Freed B, et al. The Lighthouse Ophthalmology Resident Training Manual: A New Look at Low Vision Care. New York: Lighthouse International; 2000.
9. Goodrich GL, Jose RT, eds. Low Vision – The Reference: A bibliography of the low vision literature. New York: The Lighthouse, Inc., 1996.

10. Ives RQ, Cumming RG, Mitchell P, et al. Visual impairment and falls in older adults: the Blue Mountains Eye Study. *J Amer Geriatr Soc* 1998;1:58-64.
11. Lee PP, Spritzer K, Hays RD. The impact of blurred vision on functioning and well being. *Ophthalmology* 1997;104:390-6.
12. Markowitz SN, Muller C. Macular perimetry in low vision. *Can J Ophthal* 2004;39:56-60.
13. Massof RW, Lidoff L, eds. *Issues in Low Vision Rehabilitation. Service Delivery, policy and Funding.* New York: AFB Press, 2001.
14. Mogk LG, Mogk M. *Macular Degeneration: The Complete Guide to Saving and Maximizing Your Sight.* New York: Ballantine Books; 2003.
15. Rosenthal BP, Cole RG, London R. *Functional Assessment of Low Vision.* St. Louis, MO: Mosby, 1996.
16. Scott IU, Smiddy WE, Schiffman J, et al. Quality of life of low-vision patients and the impact of low-vision services. *Am J Ophthalmol* 1999;128:54-62.
17. Solomon Y, Solomon JD. *Overcoming Macular Degeneration: A Guide to Seeing Beyond the Clouds.* New York: Avon Books; 2000.
18. Somani S, Markowitz SN. Identification of fixation location in macular degeneration with retinal photography. *Can J Ophthal* 2004;39:517-20.
19. Williams RA, Brody BL, Thomas RG, et al. The psychological impact of macular degeneration. *Arch Ophthalmol* 1998;116:514-20.



SmartSight™ is a program of the
American Academy of Ophthalmology
Copyright © 2007