OFFERING LOW VISION SERVICES IN ANY PRACTICE

-Niedzwiecki

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Low vision services have become an increasingly covered subject in Optometric and vision related literature. More and more, authors are calling for practitioners to offer low vision services to their patients. John W. Potter, O.D., recently appealed to Optometrists, "...to think more of low vision care in your daily practice, then perhaps you will participate more in the cooperative and collaborative practice of low vision, even if you do not provide the care directly yourself.".(1) The need for the service is present now and will expand the surge in population of older people who are visually impaired.(2) Visual impairment and blindness can have many causes. But when nothing can be done medically or surgically, it is important that the patient be made aware of the option of low vision rehabilitation.(3) Though the causes of blindness and visual impairment are varied, experts agree that the numbers are increasing and eye care professionals should be prepared to offer some form of low vision service, be it referral to a low vision practitioner or special agency, simple low vision aids or specialization in low vision rehabilitation.

Although blindness and visual impairment can occur at any age, the frequency of visual impairment increases with age, from 5% of people under the age of 20, to 15% of people 65 and older and even higher for people over 75.(4) In fact, demographic studies show that age is the most common factor in predicting the prevalence of blindness and visual impairment.(5) Figures from the National Society for the Prevention of Blindness(NSPB), 1980, estimated 498,000 legally blind in the U.S., 53% of which are elderly.(6) Also, over half of the new cases of blindness each year are reported in people over 65 years.(6) According to the same study of the NSPB, a majority of people over the age of 75 (10 million) will likely have

some visual impairment which will affect their ability to perform daily living activities.(6) Other studies estimate the number of legally blind from 500,000 to as many as 906,000.(7) The prevalence of eye disease increases from 1% of pre-school children to 85% of older adults.(8) These percentages become even more significant when coupled with the trends in population statistics.

The most notable trend is the aging of America. Studies estimate that in 40 years, nearly one-third of the population will be over the age of 65. In 1984, that same segment represented 11.9% of the population (28 million). This segment is growing at over twice the rate of the population under the age of 65.(9) The National Center for Health Statistics projected, in 1979, 1,760,000 elderly would have severe visual impairment by the year 2000.(10) Recently released data indicates the number of elderly with severe visual impairment has already surpassed projections for the year 2000.(11) At the other end of the age spectrum, increasing numbers of children with vision loss are a result of advanced medical technology and the saving of high risk babies, giving rise to children with retinopathy of prematurity and multiple disabling conditions.(12)

Since, however, the greatest increases in visual impairment are occurring in older populations, anyone specializing in low vision must have a thorough knowledge of the diseases causing these impairments. Four of the leading causes of blindness - diabetic retinopathy, aging cataracts, age-related macular degeneration(ARMD), and glaucoma - are related to aging and account for 98% of vision loss in people over 70.(13) ARMD is the leading cause of new cases of visual impairment in people over 65.(14) Diabetes is the leading cause of blindness in the U.S., and aging cataracts are the third leading cause of blindness in the U.S. Regardless of the causes of

their visual impairment, everyone, child or adult, has needs that must be met. Foremost among them is access to the system which will provide the services to meet their needs.

Optometrists are in an ideal position to get people into the system. Once patients become aware of what is available to them, whether it is optical or support services, they are on their way to having their needs addressed and met if possible. The "ideal" low vision service would encompass the following components: a functional evaluation; assessment of needs in various settings; demonstration of devices; review of medical data; identification of needs; motivation of patient; clinical evaluation of near and distance acuities, visual fields, and binocularity; magnification trials; assessment of illumination; prescription of devices; training using devices; referral(s) to other appropriate services such as counseling and orientation and mobility; and follow-ups.".(15) No one individual or clinic need offer every component of this "ideal" service. Low vision is best suited to a team approach.

The simplest way to become a member of the team is by being aware of who in the community provides low vision service. It is also important to know which government agencies will pay for or help provide services, low vision and others, once a person is declared legally blind. Knowing when to make a proper referral will very often save the patient time and money. And, as always, timely referral in early detection and treatment for eye disorders(16) to an Ophthalmologist for treatment can help patients save or maintain remaining vision. This is especially true in disorders such as glaucoma and diabetes where patients are often asymptomatic. Practitioners need not wait until a patient is legally blind before informing them about low vision services. Leslie Sage Piqueras,

M.Ed., includes an appendix of organizations which provide information and/or support to persons with low vision.(15)(see appendix A) Gregory L. Goodrich, Ph.D., recently published an article surveying journals which publish low vision articles. He lists the 15 most active journals in the low vision field by percentage of low vision publications. These 15 publications account for 75% of all low vision articles. The Journal of Visual Impairment and Blindness heads the list at 27.2%, followed by Journal of Vision Rehabilitation at 9.3% and Optometry and Vision Science at 7.4%.(17)(see Appendix B) Becoming familiar with the various low vision resources can be helpful for a practitioner in beginning to offer basic low vision services.

The American Optometric Association low vision section has a diversified program of professional activities(18) which can assist in getting a low vision practice started. Each new member is provided with INTRODUCTION TO LOW VISION: A RESOURCE GUIDE FOR PRACTITIONERS which includes a list of resources, a bibliography, and a how-to approach for basic low vision care. The Lighthouse in New York can also be a valuable resource when just starting out. It offers service to the visually impaired, training and continuing education to professionals, printed material and information, and marketing and distribution of low vision aids. They also offer a starter kit of devices for practitioners.(3) Some manufacturers of low vision devices will loan starter kits of devices to those doctors unsure of their commitment to providing low vision services. Barbara Anan, O.D., offers a list of manufacturers and other sources which offer optical low vision devices and low vision services and/or information. (see Appendix D) She also provides an assessment system to use when considering the additional cost of offering low vision services.(19)

(see Appendix C) Estimated beginning costs for a basic low vision practice are $3,000, advanced are $10,000-$12,000, and specialized are $20,000 and up.(19) Average costs to equip a basic low vision practice range from $2,000 to $3,000 depending on the source.

If approached correctly, low vision can be profitable as well as generate many non-low vision referrals, especially of family members of low vision patients. Henry Greene, O.D., shortens a low vision office visit by forty-five minutes, simply by talking to the patient ahead of time and telling them to write down things they wish they could do better if not for their vision. He then has the patient prioritize these needs. In this way, he can get right to the specific task with which the patient needs the most help.(3) As practitioners begin offering simple low vision devices to patients, they may evolve to a more advanced practice just by keeping up with their patients' changing visual needs, brought on by progressive disease.

A practitioner specializing in low vision services needs an extensive working knowledge of low vision devices and offer rehabilitation, in the form of training with devices or mobility, to their patients. This need for training calls up a parallel between low vision services and vision therapy services. Potential exists for therapy techniques, such as fixation and tracking with eccentric fixation when reading or fixation and tracking with a distance telescope. Offices specializing in vision therapy often have the necessary staff and facilities to be cost effective in adding low vision training.(20) For those doctors wishing to actively specialize in low vision, the American Academy of Optometry offers a Diplomate in Low Vision, requiring rigorous examination to demonstrate a high level of knowledge and competence in low vision

theory and practice.(18)

Whether practitioners choose to specialize, offer basic services, or just provide patients with referral sources, they are serving a great need. Those who don't, need to "...recognize the fact that eight out of ten visually impaired persons have some residual vision, and a majority of these persons are currently not being served by low vision practitioners or clinics."(18) The Lighthouse National Center for Vision and Aging estimates that in the U.S., there are 200 clinics and 1800 private practitioners offering low vision services. This leaves a lot of room in low vision to "join up" for the other approximately 15,000 practicing Ophthalmologists and 22,000 practicing Optometrists.(3) It is becoming increasingly important that eye care professionals and the medical community get involved in low vision services. Only consider, ten million Americans alone, over the age of 50, have some form of ARMD.(3) These numbers are going to surge with the aging of America's population, and these people will be demanding services from the health care profession and the government. Optometry has a challenge ahead in low vision and it is worthwhile to Optometrists and to their patients to meet the challenge.

REFERENCES

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(3) Capowski, Genevieve; **Low vision: Challenges and Opportunities** ; Optometric Management, 1990,, Oct. p39-48.

(4) Special Committee of Aging. U.S. senate 1978.

(5) Lowman, C., & Kirchner, C.; **elderly blind and visually impaired persons: projected numbers in the year 2000;** J of Vis Imp & Blind; 1979 73 p69-73

(6) National Society for the prevention of Blindness; **vision problems in the U.S.;** New York; National Society for the Prevention of Blindness.

(7) Kahn, H.A., & Morehead, H.S.; **Statistics of blindness in model reporting area 1969-1970** ; DHEW; Publication no. 73-127; Washington D.C.; U.S. Government Printing Office.

(8) American Academy of Ophthalmology; **Eye care for the American people;** San Francisco; 1987.

(9) Development in Aging, 1984; **Report of the U.S. Senate Special Committee on Aging;** 1985.

(10) Kirchner, C.; **Data on blindness and visual impairment in the U.S.: A resource** manual **on characteristics, education, employment and service delivery;** New York American Federation for the Blind; 1985.

(11) Nelson,K.A.; **Visual impairment among elderly Americans: Statistics in transition;** J of Vis Imp & Blind; 1987; 81 p331-334.

(12) Zambone, A.M.; **Serving the young child with visual impairments: An overview of disability impact and intervention needs. In: Infants and young children: A interdisciplinary journal of special care practices;** Maryland; Aspen Publishers; 1989; 81 p331-331.

(13) Kahn, H.A.; **The framingham study I: Outline and major pravalence findings;** American J of Epidemiology; 106 p17-41.

(14) Miller, D.; **Ophthalmology the Essentials** ; New York John Wiley and Sons; 1979.

(15) Piqueras, L.S.; **Every Optometrist's concern - patient's access to low vision services;** J of the AOA; 62(1) p13-17.

(16) Morse, A.R., et al; **Aging and visual impairment** ; 1987; Sept. p308-312.

(17) Goodrich, Gregory, L.; **A survey of journals publishing low vision articles;** J of Vis Rehab 1992; 6(4) p3-5.

(18) Rosenbloom, A.A., M.A., O.D.; **Low vision ahead** ; 1991; J. of the AOA; 62(1) p10-11.

(19) Anan, Barbara, O.D.; **Low vision** ; Optometric Economics; Aug. p30-35.

(20) Jordan, Mary, O.D.; **Specialization in low vision rehabilitation and visual therapy** ; 1991;J. of the AOA; 62(1) p32-36.

Appendix

These organizations provide information and/or support to persons with low vision.

Alliance of Genetics Support Groups
38th & R Streets, NW
Washington, DC 20057
(800) 336-4363
(202) 331-0942

American Association of Diabetes Educators
500 N. Michigan Avenue, Suite 1400
Chicago, IL 60611
(312) 661-1700

American Council of the Blind
1010 Vermont Avenue, NW
Suite 1100
Washington, DC 20005
(202) 393-3666

American Diabetes Association
1660 Duke Street
Alexandria, VA 22314
(800) 232-3472
(703) 549-1500

American Foundation for the Blind
15 West 16th Street
New York, NY 10011
(800) 232-5463 (outside NY)
(212) 620-2147 (in NY)
(212) 620-2063 (National Consultant in Low Vision)

American Foundation for the Blind
Mid-Atlantic Regional Center
1615 M Street, N.W.
Suite 250
Washington, DC 20036
(202) 457-1487

American Foundation for the Blind
Midwest Regional Center
20 N. Wacker Drive
Suite 1938
Chicago, IL 60606
(312) 269-0095

American Foundation for the Blind
Northeast Regional Center
15 West 16th Street
New York, NY 10011
(212) 620-2003

American Foundation for the Blind
Southeast Regional Center
100 Peachtree Street
Suite 1016
Atlanta, GA 30303
(404) 525-2303

Appendix B

Table 1.

Rank and percent frequency of low vision publications for the 15 most active journals in the low vision field.

Rank	Journal	Percent
1	*Journal of Visual Impairment and Blindness*	27.2
2	*Journal of Vision Rehabilitation*	9.3
3	*Optometry and Vision Science*[1]	7.4
4	*Archives of Ophthalmology*	3.2
5	*RE:view*[2]	5.1
6	*British Journal of Visual Impairment*	2.9
7	*Clinical Vision Science*	2.5
8	*Investigative Ophthalmology and Visual Science*	2.4
9	*Current Opinion in Ophthalmology*	2.2
10	*American Journal of Ophthalmology*	1.9
11	*British Journal of Ophthalmology*	1.9
12	*Journal of the American Optometric Association*	1.8
13	*Integracion*[3]	1.6
14	*Ophthalmology*	1.5
15	*Ophthalmic and Physiological Optics*	1.1

[1] Formerly *American Journal of Optometry and Physiological Optics.*

[2] Formerly *Education of the Visually Handicapped.*

[3] Began publishing in 1988.

Normal Expenses:

Misc. (dues, publications, donations, repairs, etc.)	_____
Office space (rent)	_____
Utilities (gas, electricity, etc.)	_____
Taxes (personal property, real estate, inventory)	_____
Staff salaries and benefits	_____
Insurance premiums	_____
Optometric equipment and instruments	_____
Inventory (lenses, frames, contact lenses, and supplies)	_____
Budget for new equipment	_____
Budget for continuing education	_____
Repayment of debts (loans)	_____
Total Expenses	_____

Finances Required:

Days open each year (250 average) _____
Hours open per year _____
Days out of office (lectures, CE, vacation, etc.) _____
Hours doctor provides regular optometric care per year _____
Finances required by doctor for professional service per year _____

Total Finances _____

TOTAL EXPENSES + FINANCES _____

$$\text{Chair cost} = \frac{\text{Total Expenses + Finances}}{\text{Total hours of doctor's services}}$$ _____

$$\text{Cost/hour to keep ofc. open} = \frac{\text{Total Expenses + Finances}}{\text{Hours ofc. open per year}}$$ _____

Low Vision (LV) Expenses:*

Total office expense, 1 year (= Total Expenses)	_____
Special low vision staff	_____
Low vision evaluation equipment	_____
Low vision aids inventory	_____
Budget for new LV equipment and aids	_____
Budget for LV continuing education	_____
Low Vision Total Expenses	_____

Hours spent in LV care per year _____
Remuneration OD needs for additional time and skill for LV care _____

$$\text{Chair cost of LV} = \frac{\text{LV Total Expenses + Doctor's Remuneration}}{\text{Total Hours Spent on LV Care}}$$ _____

*Dr. Cole's estimates for the cost of low vision equipment and other aids:

Beginning: $3,000
Advanced: $10,000 to $12,000
More specialized: $20,000 and up

—Roy G. Cole, O.D.

The following are manufacturers and other sources of optical low vision devices:

Allergan Humphrey (CA) 1-800-227-1508
Bausch & Lomb, Inc. (NY) 1-800-452-6789
Beecher Research (IL) (708) 893-0187
Benson Optical (MN) (612) 933-6616
Bernell Corporation (IN) 1-800-348-2225
Big Eye Lamps, Inc. (NJ) (201) 938-2490
Bossert Specialties, Inc. (AZ) (602) 956-6637
Bushnell Optical Division of Bausch & Lomb, Inc. (CA) (714) 592-8000
Coburn Optical Industries (OK) 1-800-262-8761
Colonial Optical Company, Inc. (CA) (213) 776-0777
Copeland Intra Lenses Services, Inc. (NY) 1-800-223-0498 or (212) 838-3525 in NY
Corning Medical Optics (NY) 1-800-742-5273
Designs for Vision (NY) 1-800-345-4009
Donegan Optical Company, Inc. (KS) (913) 492-2500
Duffens Optical (KS) (913) 234-3481
Edmund Scientific Company (NJ) (609) 573-6250
Edroy Products Company, Inc. (NY) 1-800-233-8803
Edwards Optical Corp. (VA) (804) 481-4380
Eschenbach Optik of America (CT) (203) 438-7471
Franel Optical Supply Co. (FL) 1-800-327-2070 or 1-800-432-3770 in FL
Jack Goodkin & Associates (GA) 1-800-759-6275
Gottlieb Vision Group (GA) 1-800-666-7484
Keeler Instruments, Inc. (PA) 1-800-523-5620
Lighthouse of Houston (TX) (713) 527-9561
Lighthouse Low Vision Products (NY) 1-800-453-4923
LS & S Group Inc. (IL) 1-800-468-4789
Luxo Lamp (NY) (914) 937-4433
Luzerne Optical Laboratories, Ltd. (PA) 1-800-233-9637 or 1-800-432-8096 in PA
Mattingly International (CA) 1-800-826-4200
Maxi-Vision (FL) 1-800-232-6294
McLeod Optical Co. (RI) 1-800-288-5367
Mentor O & O (MA) 1-800-992-7557
Mons International (GA) 1-800-541-7903
M-Tech Optics Corp. (MI) (313) 531-3577
Nikon Inc. (CA) (213) 516-7124
Ocutech (NC) 1-800-326-6460
Optical Designs, Inc. (TX) (713) 497-2988
Rx Lenses/Low Vision Aids (FL) 1-800-336-6622 or 1-800-621-6386 in FL
Science Products (PA) 1-800-888-7400
Selsi Company (NJ) (201) 935-0388
Stocker & Yale, Inc. (MA) (617) 927-3940
Swift Instruments Inc. (MA) (617) 436-2960
Tech-Optics International Corp. (NY) 1-800-678-4277
Tinus Optical Company, Inc. (VA) 1-800-552-1869
Unitron, Inc. (NY) (516) 589-6666
Universal Ophthalmic Instruments (TX) (713) 890-5469
Volk Optical (OH) 1-800-345-8655
Walters, Inc. (CA) (818) 706-2202
Western Optical Co. (WA) (206) 622-7627
Winco Optical Inc. (PA) 1-800-345-1567
Wingate Ophthalmic Co., Inc. (NY) (516) 378-4473
Younger Optics (CA) 1-800-421-2920
Carl Zeiss, Inc. (VA) 1-800-468-3358

Because of space limitations, this list is limited to sources of optical low vision devices. The American Foundation for the Blind (AFB) publishes two useful lists: "Sources of Optical, Non-Optical, and Electronic Devices for People with Low Vision," and "Organizations Providing Information and/or Support to Persons with Low Vision." The first includes sources of large print publications, electronic low vision devices and CCTV, audio materials, lamps, and more. Both lists are updated yearly. For copies of the AFB lists, send a self-addressed stamped envelope to:

Leslye S. Piqueras
c/o American Foundation for the Blind
15 West 16th Street
New York, NY 10011

All data supplied by AOA Low Vision Section, American Foundation for the Blind, Inc., or the manufacturers.

The following are selected organizations offering low vision information and/or support for persons with low vision. A complete list is available from the American Foundation for the Blind. (See Figure 2 for details). Also included are AOA resources.

American Diabetes Association (VA) 1-800-232-3472
American Foundation for the Blind (NY) 1-800-232-5463 or (212) 620-2147
Association for Macular Disease, Inc. (NY) (212) 605-3719
Association of Radio Reading Services (AZ) 1-800-255-2777
Council of Citizens with Low Vision International (IN) 1-800-733-2258
National Association for Parents of the Visually Impaired (WI) 1-800-562-6265
Retinitis Pigmentosa Foundation Fighting Blindness (MD) 1-800-638-2300
RP (Retinitis Pigmentosa) International (CA) 1-800-344-4877

AMERICAN OPTOMETRIC ASSOCIATION (AOA) RESOURCES

AOA's Low Vision Section offers a number of resources to help optometrists adding low vision services to their practice:

The Section provides each new member with *Introduction to Low Vision: A Resource Guide for Practitioners.* This guide includes a list of resources, a bibliography, and a how-to approach to basic low vision care.

To assist with networking, the Section publishes a directory of members. A semiannual newsletter updates members on new products and developments in the field, and the Section sponsors an annual continuing education symposium on low vision at the AOA Congress.

All AOA members are eligible to join the Low Vision Section. To obtain an application, contact the Section office at (314) 991-4100, extension 223. Annual dues are $50.

The International Library, Archives & Museum of Optometry (ILAMO) offers a wide range of low vision materials and information, both for the practitioner and the patient. In addition to numerous clinical and practice management books on low vision, ILAMO also offers videotapes, audio cassettes, and slide sets (with scripts) for low vision presentations.

The AOA Order Department produces patient education pamphlets, videotapes, and news backgrounders on low vision. In addition, the Order Department sells Professional Enhancement Program (PEP) Monographs on adding new services like low vision to your practice or in the community.

ILAMO and the AOA Order Department can be reached at (314) 991-4100.