



ENTRY LEVEL COMPETENCIES IN VISUAL IMPAIRMENT AND LOW VISION REHABILITATION

INTRODUCTION:

Traditionally optometric education has taught low vision rehabilitation as a specialty. There has not been any visible encouragement to teach or practice low vision rehabilitation at various levels. A natural division with very grey borders has developed however, where a portion of private practitioners may offer some low level of care based on meeting the needs of their current patients but not necessarily fully developed, marketed or even fully knowledgeable in how to offer more comprehensive care. The more advanced clinics tend to be staffed by more experienced and “expert” optometrists, e.g., American Academy of Optometry Diplomates in Low Vision. These clinics however are few and far between and do not meet the geographic need for low vision patients all over the U.S.

The formal optometric curriculum in the schools and colleges do provide education that in principle should equip the graduating OD to provide an entry level of low vision rehabilitation. If we as educators can explore the feasibility of teaching an entry level low vision rehabilitation for all graduating optometrists (i.e. level one primary low vision care) and promote a more comprehensive level be explored within residency programs, many of the unmet needs of service provision could be met. However, primary low vision care must include the knowledge of comprehensive rehabilitation, including several key concepts for the appropriate education and referral of patients for comprehensive care.

Over twenty five years ago, there was a recommended plan for an educational program from the ASCO that included a comprehensive curriculum plan for low vision rehabilitation.¹ This model although very thorough and extremely ambitious was not readily adopted in all the colleges. The comprehensive nature of the curriculum recommendation in 1982 may have led to its lack of adoption. With a two level model of low vision rehabilitation, we propose an educational model that repackages the current curriculum and when possible introduces basic low vision concepts earlier in the four year program to educate students early in their education that low vision rehabilitation is part of the primary care practice. This model could be integrated easily with the existing practice management and primary care tracts within the schools. We propose that there should be two levels of competency, or tiers of optometric practice, in low vision rehabilitation. The first tier, entry level competency, would be primary low vision care that embraces a certain level of low vision rehabilitation in the usual primary care optometric practice. Functional visual goals might include improving reading ability for small print and reducing glare.

In a small pilot study of the potential of low vision clinical trial sites carried out by Kammer and Jones six optometric low vision clinics recorded patient characteristics over a 30 day period. It was found that approximately 78% of all patients (n=163) that were considered “low vision” by the doctors met the ICD9 classification for moderate visual impairment or better based on visual acuity of better than 20/200 and more specifically, 36% had acuity better than 20/70.² If this statistic is accurate, then a significant number of patients seen in optometric clinics may in fact need only primary low vision care and this need could be met by training the masses of optometrists to address a large segment of the visually impaired population. Clearly defined referral criteria and education of comprehensive low vision rehabilitation services is critical for appropriate care to be provided when activities of daily living are affected.

More than a third (36.2 percent) of the optometrists responding to the 2006 AOA Scope of Practice Survey said they provided some level of low vision services. More than four out of five (84.6 percent) refer low vision patients elsewhere for services, while 25.4 percent also accepted low vision referrals from other practitioners. Nine out of ten (89.9 percent) ODs managed or co-managed patients with macular degeneration.³ We believe the low number of optometrists practicing entry level low vision care (as we define it) is due to the perception that low vision rehabilitation is not a primary care or entry level skill for optometrists but that it is for specialists with extensive training.

The concept of levels of low vision rehabilitation has already been introduced in general ophthalmology in the United States through the efforts of the Vision Rehabilitation Committee of the American Academy of Ophthalmology whose SmartSight vision rehabilitation initiative to incorporate vision rehabilitation into the continuum of ophthalmic care included three levels.⁴ The International Council of Ophthalmology also supports three levels of training (competencies) or curriculum for low vision rehabilitation including basic, standard and advanced level goals. The first two levels include a more comprehensive low vision evaluation, treatment and management including the introduction of various low vision devices for field enhancement, central vision loss, and they also include driving assessments. The third level reserves prescribing of the most complex of optical devices, rehabilitative therapies and field enhancement.⁵

PROCESS OF DEVELOPMENT OF ENTRY LEVEL LOW VISION COMPETENCIES:

Consensus methods and specifically the Delphi method are designed to gain opinions from members of a group and work toward a consensus without the influence or time delay of extended discussions and personality interplay.^{6, 7, 8} It usually starts with presentation of background information on the topic in question and a period of idea generation and then the ideas are organized by the investigators and formatted into a rating-scale questionnaire. In the next round, the panelists are asked to rate each idea anonymously and the investigators summarize the results of the ratings and inform each panelist. A convenient way to carry out this process is with an online web site. The ASCO LV SIG successfully utilized a modified Delphi method through the use of email, conference calls and a specific open source Delphi method web site (<http://armstrong.wharton.upenn.edu/delphi2/>). The Kiely, Chakman, Horton articles regarding competency based assessment for the profession of optometry and optometric therapeutic competency standards 2000 were valuable in the development of the questionnaires utilized in the Delphi method process.^{9, 10}

The low vision special interest group (SIG) was formed in 2006 and consists of representatives from every school and college of optometry in the US, Canada and Puerto Rico. During the short meetings at the AAO, a common theme surfaced again and again. Our group was missing a document containing entry level competencies. Such a document could serve as a foundation for the instructors creating or maintaining the low vision rehabilitation educational curriculum in the schools and colleges of optometry. The SIG reached consensus on 20 competencies in a very productive and unified meeting in Florida in July 2008. A modified consensus method was used to initiate the process several months prior to the in-person meeting, utilizing conference calls, email and a survey style web site to gather ideas and initiate a tentative list of competencies among the steering the LV SIG committee. The draft of competencies was subsequently sent to as many SIG members as possible to rate, prioritize and add comments to the drafted items. 18 SIG members responded to the on-line surveys and those results were organized and distributed to the attendees of the in-person meeting in July 2008. The in-person meeting carried out 2 additional rounds of the Delphi process using the online resource and in-person discussion of the prior anonymous group comments. By the end of the second day, the items were significantly revised and new items were added. The attendees reached consensus on the twenty items and following the meeting, the competencies were sent to the AOA and a few other low vision groups following the meeting. Minor comments and suggestions were gathered and integrated into the final document and sent out to the entire ASCO SIG members by email for final comments and approval. The final competencies document gained approval from the majority of the representatives of the schools and colleges of optometry. No disapproving feedback has been received. The Delphi process enabled the group to generate outcome goals (see below). These new objectives expand upon our established work to date and help us accomplish our overriding goal of improving the state of low vision rehabilitation education in all schools and colleges of optometry.

¹ A plan for an educational program in rehabilitative optometry. Conducted by the Association of Schools and Colleges of Optometry 1980.

² Kammer R, Jones L. Study of Low Vision Recruitment Potential. *Optom Vis Sci.* 2006; 83 (suppl).

³ AOA scope of practice survey, 2006.

⁴ American Academy of Ophthalmology. Vision Rehabilitation for Adults Preferred Practice Pattern. San Francisco CA: American Academy of Ophthalmology; 2006.

⁵ International Task Force on Resident and Specialist Education in Ophthalmology on behalf of the International Council of Ophthalmology (ICO). . Principles and Guidelines of a Curriculum for Education of the Ophthalmic Specialist. Chapter 15. Low Vision Rehabilitation. *Klinische Monatsblätter für Augenheilkunde.* 2006.223:S1-S48.

⁶ Jones J, Hunter D. Qualitative research: Consensus methods for medical and health services research. *Br Med J* 1995; 311:376-380.

⁷ Pill J. The Delphi method: substance, context, a critique and an annotated bibliography. *Socio-Econ Plan Sci* 1971; 5:57-71.

⁸ Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. *J Adv Nurs* 2000; 32:1008-1015.

⁹ Kiely P, Chakman J, Horton P. The development of competency-based assessment for the profession of optometry. *Clin Exp Optom* 1995; 78: 206-218.

¹⁰ Kiely P, Chakman J, Horton P. Optometric therapeutic competency standards 2000. *Clin Exp Optom* 2000; 83: 300-314.

PARTICIPANTS:

List of those that submitted responses for pre-Delphi method ratings of competencies

*Attended July 2 day meeting

**Attended part by phone

		COLLEGE
Christi	Clossen	Pacific University College of Optometry
*Kia	Eldred	University of Houston College of Optometry
*Roanne	Flom	Ohio State University College of Optometry
*Richard	Jamara	New England College of Optometry
*Rebecca	Kammer	Southern California College of Optometry
*Elli	Kollbaum	Indiana University School of Optometry
*Dave	Lewerenz	Northeastern State University
Christy	Sell	SUNY State College of Optometry
**William	O'Connell	SUNY State College of Optometry
*Pamela	Oliver	Nova Southeastern University
*Nicole	Patterson	Nova Southeastern University
Jennifer	Bulmann	Southern College of Optometry
*Cynthia	Heard	Southern College of Optometry / The Eye Center
Marsha	Snow	UAB School of Optometry
*Ana	Perez	University of Houston College of Optometry
*Tracey	Matchinski	Illinois College of Optometry
*Sarah	Appel	PCO/Salus
*Robert	Greer	UC Berkeley
*Katie	Boland	St. Louis
*Joan	Stelmack	Hines VA, Residency Director
Susan	Leat	University of Waterloo, CA

Entry Level Competencies in Visual Impairment and Low Vision Rehabilitation

1. Be able to apply epidemiologic aspects of visual impairment, appropriate terminology and classifications of visual impairment in order to communicate with patients, the public and other health care providers.
2. In addition to performing a standard case history, be able to ask basic questions about symptoms, functional difficulties, and rehabilitation goals to anticipate the level of care that patients with visual impairment may require.
3. Be able to recognize functional implications, hereditary factors and prognoses of common causes of visual impairment and explain them in language understandable to patients, families and other care providers.
4. Be able to recognize psychological factors (e.g. depression, grief, motivation) that may affect adjustment to vision loss and the potential for rehabilitation.
5. Be able to recognize pertinent social factors (e.g. social support system, education level, vocation, physical environment) and how they may influence the rehabilitation plan and process.
6. Be able to recognize significant physical and neurological co-morbidities (e.g. Parkinson disease, stroke, dementia) that influence low vision rehabilitation and modify evaluation strategies and rehabilitation.
7. Be able to perform visual acuity testing at both distance and near on patients with visual impairment using appropriate charts with proper documentation (e.g. working distance, eccentric viewing, illumination).
8. Be able to perform trial lens refraction and modify refractive techniques for the patient with visual impairment (e.g. bracketing, hand held Jackson cross cylinder).
9. Be able to recognize common symptoms of contrast sensitivity loss, screen for loss, recommend basic modifications (e.g. filter, lens, lighting and environmental options) and refer for comprehensive low vision rehabilitation when indicated.

10. Be able to detect scotomas of the central visual field, understand their impact on visual acuity and visual function, and educate patients about their implications for activities of daily living.
11. Understand basic optical principles of low vision rehabilitation devices and be able to predict magnification levels needed to achieve patient goals.
12. Be able to prescribe basic optical and non-optical low vision rehabilitation devices, provide training in their use, and refer for comprehensive low vision rehabilitation when indicated.
13. Be able to recognize availability of and indications for use of adaptive technology (e.g. video magnification, software) and refer for comprehensive low vision rehabilitation when indicated.
14. Be cognizant of rehabilitation strategies for visual field deficits (e.g. sighted guide technique, orientation and mobility, visual field enhancement devices and equipment, scanning training) and refer for comprehensive low vision rehabilitation when indicated.
15. Develop an understanding of the special considerations for examining children, the elderly, and the multiply handicapped and educate about referral options and potential for rehabilitation.
16. Understand relevant vision standards for driving, provide necessary assessment and documentation, and refer for comprehensive low vision rehabilitation, driver evaluation/training, and medical evaluation when indicated.
17. Be aware of the criteria for legal blindness determination and be able to educate patients on the basic social and legal ramifications of legal blindness certification.
18. Understand that the needs of patients with visual impairment may require professional collaboration and be able to coordinate care with available rehabilitative, educational and social service resources.
19. Identify governmental, private and consumer organizations that offer support and information to individuals with visual impairment (e.g. NEI, Veterans Administration, state rehabilitation agencies, foundations for the blind, consumer advocacy groups and support groups).
20. Be familiar with third party reimbursement for low vision rehabilitation services and materials.