

Modern Low Vision Rehabilitation service

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Low vision rehabilitation is a new emerging subspecialty drawing from the traditional fields of ophthalmology, optometry, occupational therapy, and sociology, with an ever-increasing impact on our customary concepts of research, education, and services for the visually impaired patient. A multidisciplinary approach and coordinated effort are necessary to take advantage of new scientific advances and achieve optimal results for the patient. Accordingly, the intent of this paper is to outline the principles and details of a modern low vision rehabilitation service.

All rehabilitation attempts must start with a firsthand interview (the intake) for assessing functionality and priority tasks for rehabilitation, as well as assessing the patient's all-important cognitive skills. The assessment of residual visual functions follows the intake and offers a unique opportunity to measure, evaluate, and document accurately the extent of functional loss sustained by the patient from disease. An accurate assessment of residual visual functions includes assessment of visual acuity, contrast sensitivity, binocularity, refractive errors, perimetry, oculomotor functions, cortical visual integration, and light characteristics affecting visual functions. Functional vision assessment in low vision rehabilitation measures how well one uses residual visual functions to perform routine tasks, using different items under various conditions, throughout the day.

Of the many functional vision skills known, reading skills is an obligatory item for all low vision rehabilitation assessments.

Results of assessment guide rehabilitation professionals in developing rehabilitation plans for the individual and recommending appropriate low vision devices. The outcome from assessing residual visual functions is detection of visual functions that can be improved with the use of optical devices. Methods for prescribing devices such as image relocation with prisms to a preferred retinal locus, field displacement to primary gaze position, field expansion, and manipulation of light are practiced today in addition to, or instead of, magnification. Correction of refractive errors, occlusion therapy, enhancement of oculomotor skills, and field restitution are additional methods now available for prescribing devices leading to rehabilitation of visual functions. The outcome from assessing residual functional vision is detection of functional vision that can be improved with the use of vision therapy training. After restoration of optimal residual visual functions is achieved with optical devices, one can follow with training programs for restoration of lost vision-related skills.

If an optical dispensary is available where prescribing of low vision devices routinely takes place, this will help ensure familiarity and specialization of the dispensary and staff with low vision devices and their special dispensing requirements. The dispensing of low vision devices is an opportunity to introduce the device to the patient, train the patient in the correct use of the device for the task selected, and create a direct and continuous connection with the patient until the next encounter. Following assessment, prescribing, and dispensing of devices, a low vision practitioner, ophthalmologist or optometrist, is responsible for recommending and prescribing vision therapy training to improve residual functional vision.

Low vision should not be confused with blindness. People with low vision have some useful vision which can often be improved with low vision devices. Visual impairment may be mild or severe. Low vision usually results in reduced central or reading vision, but may also result from decreased side (peripheral) vision, a loss of color vision, or an inability to properly adjust to light, contrast or glare.

An attempt to present a template for a comprehensive modern low vision rehabilitation practice is made here by summarizing scientific developments in the field and stressing the multidisciplinary involvement required for this kind of practice. It is hoped that this paper and other initiatives from colleagues, the public, and government will promote and raise awareness of modern low vision rehabilitation for the benefit of all.

Low Vision is a condition in which vision cannot be corrected by conventional glasses, contacts, surgery or medicine. People who have vision loss are said to be visually impaired or to have Low Vision and their vision loss is usually caused by an underlying eye disease such as:

- Age-related Macular Degeneration (AMD)
- Diabetic Retinopathy
- Glaucoma
- Cataracts
- Other eye diseases and conditions:- There are a number of other eye diseases and conditions that can cause vision loss. Eye diseases such as Stargardt's, Retinopathy of Prematurity and conditions such as Albinism can all cause vision problems. Other conditions such as strokes and traumatic brain injuries (TBIs) can also cause vision impairments.

Those with Low Vision typically have difficulty reading, writing, watching television, recognizing people's faces or engaging in other daily living tasks. Fortunately, the visually impaired can be helped with a service called Low Vision Rehabilitation Care.

Low Vision affects many Activities of Daily Living (ADLs), and many people are restricted due to the acuity levels with which they must live. Difficulty with reading, writing, watching TV, spotting objects from a distance, and enjoying hobbies is the result. However, with the correct optical device and training, many Low Vision patients can once again perform routine daily activities and regain much of their lost independence.

Low vision devices

Low vision devices on a broad classification



comprises of:

1. Optical aids
2. Non optical aids

Optical aids/devices consists of

1. Telescopes
2. Aspheric lenticular spectacle lenses.
3. Hand magnifier
4. Stand magnifier
5. Fresnel prism
6. Prismospheres
7. Paper weight magnifier
8. Bar magnifier
9. Pocket magnifier
10. Electronic aids as Closed Circuit Television System

Non optical devices Includes seven categories of devices as mentioned below.

1. Large print books
2. Reading stand that supports posture and comfort.
3. Illumination devices such as fluorescent lamps and glare control devices such as photochromatic glasses.
4. Writing devices as typoscopes
5. Medical management devices as insulin syringes with bold letters
6. Mobility canes
7. Sensory substitution devices such as talking books.

Low Vision Rehabilitation service has to be individualized according to the patients needs and has to be tailor-made depending on various factors such as age, profession, and patient's needs. Though the management of some diseases is specific, more importance is given to the patients requirement; only what is most appropriate in treating low vision in a given environmental condition.

