**Facilitating Visual Efficiency, Successful Employment, and Quality of Life of Working Age Adults with Low Vision**

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**Position**

Working age adults with low vision (including youths in transition from school to work)

are entitled to individualized assessment-based services that can assist them in optimal gainful employment. Services should be provided by specially trained and certified professionals with skills to meet a range of needs including education and job training, employment, vision rehabilitation, independent living, and orientation & mobility.

**Introduction**

There is a substantial, chronically high rate of unemployment among people with blindness or low vision (Moore & Wolffe, 1997). The American Foundation for the Blind (AFB), which continually monitors the rate of employment of people with visual impairments noted that only 30% of working age legally blind adults were employed (AFB, n.d.). These findings are supported in other literature focusing on employment of persons with visual impairment (Dickerson, Smith, & Moore, 1997; Giesen & Ford,

1986; Geisen, Graves, Schmitt, Lamb, Cook, Capps, & Boyet, 1985). Employment for adults with visual impairments is lower than estimates for people with other disabilities and much lower than the employment rate of the general population (Kirchner, Schmeidler, & Todorov, 1999; McNeil, 2001).

There are many factors that can be addressed with regard to the causes of unemployment, including the importance of adequate education and job training and the need for employers to welcome qualified employees who happen to be blind or have low vision. Lee and Ponchillia (in press) indicate that unemployment is high in part because consumers lack knowledge about low vision services, lack access to adequate training in the use of low vision devices for reading, and have inadequate skill in reading with low vision. It is clear to low vision rehabilitation professionals that provision of appropriate equipment and instruction in efficient use of remaining vision, in addition to instruction

in nonoptical, nonvisual techniques is vital for optimal employment, independence, and quality of life of individuals with low vision. Quality of life is generally defined as the individual’s perception of his or her life with regard to level of independence, functional abilities, socialization, physical, psychological and emotional well-being, and his or her goals within the cultural milieu s/he lives within (World Health Organization [WHO],

1997).

Further study of the status of working age adults with regard to employment and quality of life would lead to the implications caused by two important factors (McMahan & Sturz, 2006). First, the largest segment of U.S. population, the “Baby Boomer” generation born after the end of World War II, is aging, with over 20% of the workforce expected to be aged 55 and over by the year 2015, an increase of nearly 50% through

2014 (AARP Public Policy Institute, 2006). Secondly, the individuals in that group must

remain in the work force longer in order to enjoy full retirement benefits due to current Social Security Administration policy with regard to phased retirement. Thus, rather than retiring at age 62-65, many workers who desire full retirement benefits will need to work until they are 70. Age-related visual impairments are more likely to affect work and daily living activities in this growing segment of the population (Quillman & Goodrich, 2004). By 2010, more than 51 percent of the workforce is expected to be 40 or older, which is a

33 percent increase since 1980 (Mosner, Spiezle, & Emerman, 2003). It is clear from these data that more workers with visual impairments are likely to comprise the population of potential workers.

Another important fact is that a large percentage of individuals who are legally blind have a secondary disability which may include other sensory loss or physical limitations (Kirchner, Schmeidler, & Todorov 1999). Considering the pool of aging consumers with low vision and age-related comorbidity, the literature points to the potential for other accommodations indicated besides low vision services (Rogers, Schmitt, & Scholl, 1997).

Quillman and Goodrich (2004) described the necessity for instruction in use of remaining vision and prescribed devices for those who receive low vision services. All too often, practitioners incorrectly assume that individuals with low vision understand how to use their remaining vision efficiently. As a result, many prescribed low vision devices sit unused after being taken home (Quillman & Goodrich, 2004). Literature clearly documents the need for (a) intervention related to optimizing the use of remaining vision, (b) guidelines for environmental modifications to enhance employment and quality of

life, and (c) adequate instruction in the use of low vision devices (Capella-McDonall,

2005; Quillman & Goodrich, 2004; Williams, Pathak-Ray, Austin, Lloyd, Millington, & Bennett, 2007). Studies such as those carried out by researchers at the Vision Impairment Center to Optimize Remaining Sight (VICTORS) support the positive outcome of systematic training in low vision rehabilitation (Stelmack, Stelmack, & Massof, 2002).

**Guidelines for Practice**

*1. Comprehensive low vision services including individualized evaluation must be*

*part of vocational and independent living services.*

*2. Evaluations should include general eye examinations and low vision evaluations by ophthalmologists or optometrists who are certified in low vision, functional vision evaluations, environmental analyses, literacy assessments, and assessments pertaining to quality of life factors related to communications, activities of daily living, and orientation and mobility (Lee & Ponchillia, in press; Lueck, 2004).* Specifically, the following assessments are recommended:

a. Ecological assessment for all reading that a consumer is required to do on the job, including spot reading, lengthy reading tasks, multiple point visual tasks (such as data entry).

b. Assessment of work setting to determine recommended environmental modifications. In all cases, the goal of modification should relate to universal design factors so that others in the work setting may also benefit.

c. Assessment of the consumer’s current ability as it relates to job tasks and the effectiveness of the current low vision prescription.

d. Assessment of the match between the critical reading speed of the consumer and that required for work and independent living. Note that literacy issues may also need to be addressed. Critical reading speed is determined by noting the smallest print that an individual can read at maximum speed (Mansfield, Legge, Luebker, & Cunningham, 1994) using tools such as the MNREAD Acuity Charts. e. Ergonomic assessment of the worksite is necessary since lighting and glare, posture, safety, work space, avoidance of strain are all extremely critical for those with low vision and those with multiple disabilities. Specifically, visual

ergonomic considerations include illumination, glare, and positioning of monitors and other visual displays (Ankrum, 1997).

*3. Low vision services must include instruction in (a) the use of techniques to improve efficient use of visual skills, and also (b) promote the application of visual and non-visual techniques to facilitate access to information in the environment (Corn, DePriest, & Erin; 2000, Goodrich, Mehr, & Darling, (1980; Lueck, 2004).*

• Goodrich and Bailey (2000) and Goodrich and Kirby (2001) echo many others who point out the need for low vision instruction as part of low vision services. Instruction should include information about vision status, description of eye condition, purpose of all devices or modifications recommended operation and maintenance of devices, and information about how to modify the environment for optimal visual functioning.

• Use of remaining vision is paramount for those for whom it is effective.

However, for many, alternate or complimentary techniques (non optical, tactile, kinesthetic, auditory) may enable efficiency and confidence (Lee & Ponchillia, in press). Examples include the use of voice output word processing, tactile markers on equipment controls, or a Braille filing system.

*4. Low vision services must be provided at least annually unless someone’s changing vision or job needs require more frequent evaluations and services.*

The changes caused by such factors as aging, increased sophistication of ability to use vision or low vision devices, job demands, new equipment can all affect optimal visual functioning. Periodic review of the eye, prescribed devices, or need for alternative tools or techniques is recommended.

*5. Self advocacy is likely the greatest tool for safe and effective job performance and quality of life for those who have low vision once they have received appropriate evaluation and services. Therefore, consumers of services should also receive information promoting self advocacy and responsibility for their accommodations. Examples include:*

• instruction in how to modify the work environment

• how to maintain or repair devices or locate replacement parts

• when to request different accommodations from employers, low vision specialists, or vocational rehabilitation counselors.

**Recommended practices**

Working age consumers with low vision must receive periodic, comprehensive low vision services from qualified professionals who understand the continuum of accommodations for people experiencing visual impairment. This team can consist of the consumer with low vision as well as the employer, spouse or other family members along with a range of medical and rehabilitation specialists. Specialists on the team can include a general eye care professional (ophthalmologist or optometrist), an eye care professional who specializes in low vision (ophthalmologist and/or optometrist), certified low vision therapist (CLVT), certified rehabilitation counselor (CRC) or case manager (if indicated), certified vision rehabilitation therapist (CVRT), occupational therapist familiar with low vision (OT), certified orientation & mobility specialist (COMS), teacher of children with visual impairments (TVI) for youth in transition from school to work, and other professionals as indicated. Vocational rehabilitation counselors and employers should consider universal design factors and workplace ergonomics when creating or modifying work environments, since such changes will benefit the greatest number of individuals in the workplace throughout their working years (Langton & Ramseur, 2001).

**Conclusion**

Working age adults and youth in transition who have low vision are a small segment of

the population. However, when one considers that the total economic impact of vision problems in the U.S. is an estimated 51.4 billion dollars, it becomes apparent that the overall impact of this small segment on the nation’s resources is significant (Rein & Frick, 2007). Costs include the direct cost of treatment, loss of personal income, associated costs such as disability benefits, and loss of productivity. Appropriate low vision services combined with adaptive techniques are vital to the success of these individuals for accomplishing work and daily living tasks. The growing number of baby boomers, particularly those who experience age-related vision loss, are also likely to benefit greatly from environmental modifications intended to suit the needs of fellow workers who have low vision. Low vision services that are provided regularly beginning with comprehensive assessments and are carried out in a manner that includes patient instruction and promoting self-advocacy are most likely to ultimately increase work efficiency and the quality of life for those who receive them, and are likely to decrease costs associated with unused devices, unemployment, reduced work efficiency, injuries, or inability to live independently.

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