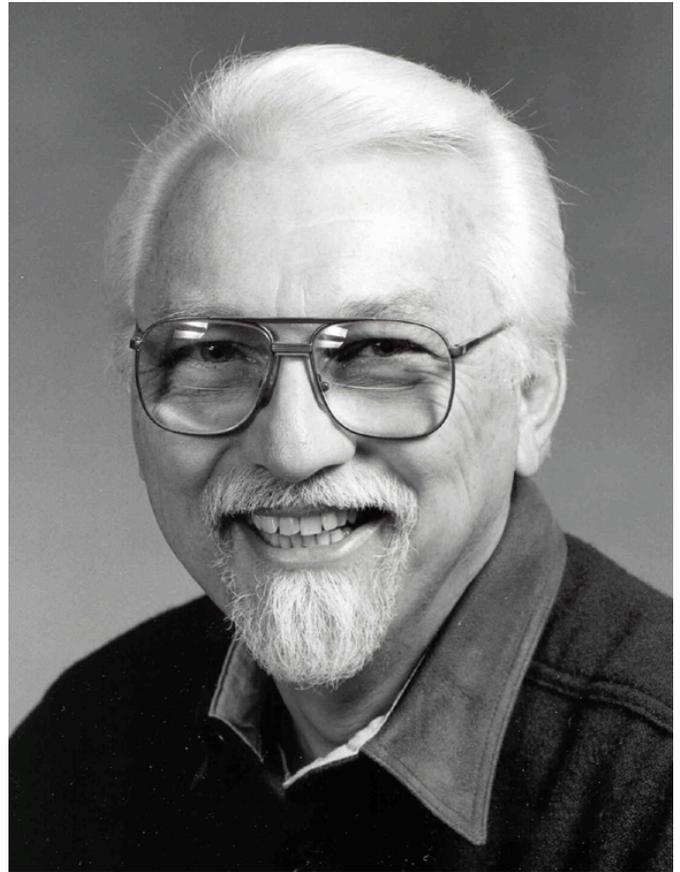


EDITORIAL

Low Vision and Blindness

A single-topic issue of the *Journal of Rehabilitation Research and Development* provides a unique opportunity to present new information and to interest new research professionals in meeting the challenges faced by persons with a visual disability. That a single-topic issue of a VA journal is devoted to the area of low vision and blindness is appropriate. The Department of Veterans Affairs (VA) has had a long and distinguished history of leadership and research innovation in developing clinical programs and supporting new technology and research for veterans with a visual disability.



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By highlighting VA's past contributions in the history of services in visual impairment, we hope to create a sense of pride and accomplishment in the efforts of the Department to put veterans first. In addition, we want to provide the foundation for considerations of future research with the editorial and articles in this special issue.

Prior to the early part of the twentieth century in the United States, blind persons were employed primarily in sheltered workshops. Vocational rehabilitation, or putting persons who were visually impaired in competitive employment, was first viewed as a critical need in this country for veterans when they returned from World War I. The War Risk Insurance Act of 1914 was a landmark piece of legislation that authorized vocational rehabilitation services for all veterans disabled during the war; competitive employment was the goal of vocational rehabilitation training (1). This Act was superseded in 1918 by the Smith-Hughes Vocational Education Act. It created a Federal Board for Vocational Education to administer vocational rehabilitation programs for both veterans and civilians.

In 1943, Public Law 78-16 was passed authorizing the VA to provide vocational rehabilitation for disabled veterans returning from World War II, increasing disability compensation rates, and providing other benefits that would assist war-disabled servicemen to make a new start. The Barden-LaFollette Act for rehabilitation of disabled civilians was enacted, following the VA model.

Public Law 78-309 was passed to provide dog guides for veterans with a visual disability. However, in 1944, one million dollars was proposed, even though it was 50 times as much money as dog guides would require. The scope of the law was expanded to include funding for electronic and mechanical equipment.

Beginning in 1943, the early military program efforts for rehabilitation of veterans who were visually disabled involved temporary rehabilitation training centers at two Army hospitals, Valley Forge General Hospital in Phoenixville, Pennsylvania and Letterman General Hospital in San Francisco (later Dibble General Hospital in Menlo Park, California). Old Farms Convalescent Hospital in Avon, Connecticut was established for the Army and Navy in 1944. The purpose of these hospitals was to transfer the care of the military personnel to the VA for continuation of rehabilitation for specific vocational training and placement services. Based on experiences of the previous military hospitals, Hines VA Blind Rehabilitation Center was opened in 1948. Within a year, Hines was a model of progressive rehabilitation for persons with visual disability.

One of the major contributions, beginning at Valley Forge and continued at Hines, that interested people around the world was the development of independent mobility training and the use of the "long cane." Koestler maintained that,

Few periods in history were as fertile as the fifties in providing blind people with opportunities and incentives for economic and social progress. The decade was dotted with landmarks of liberation: expanded educational, vocational and cultural programs, a greater choice and availability of jobs, improved financial security, new resources for personal adjustment and growth through rehabilitation centers. To take advantage of these widened horizons, however, blind people had to forgo the comfort of sheltered lives and move out into the bustling traffic of their sighted peers. That it could be done, to a degree theretofore considered unattainable, had been demonstrated by the example of the World War II veterans and the cane travel techniques that had freed so many of them from immobility (1, p. 315-6).

VA has been instrumental not only in funding innovative clinical training for blinded veterans, but also in the development and evaluation of new technology. Since approximately 1950, VA has funded major efforts to construct guidance devices or electronic mobility aids, such as the Laser Cane.

Follow-up studies have provided useful data for program evaluation as well. The first VA follow-up study of WW II veterans who were visually impaired was done in 1952-3. The study was based on

structured interviews with 2,000 service-connected veterans with a visual impairment from the WWII and Korean conflicts. Findings from this study amply supported the conclusion that rehabilitation training had "paid dividends, both psychologically and economically" (2). Ten years later, a second follow-up study was done (AFB).

In 1954, the VA sponsored a technical conference on reading machines for individuals with a visual disability. Based on this conference, the VA sponsored experiments at Haskins Laboratories to generate spoken speech from printed text. Many of the VA personnel worked in collaboration with Massachusetts Institute of Technology's Sensory Aids Evaluation and Development Center on technology development and evaluation.

In 1967, two additional regional Blind Rehabilitation Centers (BRCs) opened, which served as field testing sites for electronic reading and mobility devices developed under sponsorship of the VA's Prosthetics and Sensory Aids Research and Development Division in the 1970s. Researchers were deployed in each of the BRCs to conduct centrally coordinated studies on emerging technology for persons with visual disabilities. This strategy led to significant progress in the development and use of electronic travel aids (Laser Cane, Binaural Sensory Aid, Pathsounder), communication technology (Stereotoner, Optacon, text-to-speech synthesis, speech compression), and low vision devices (optical devices and closed circuit television systems). Many of the companies developing these "orphan" technologies were small, consisting in some cases of just a single engineer. Depending on the evaluation results, the device could be recommended as prosthetics for veterans with visual disabilities. This infusion of money and clinical expertise often provided the lifeline for struggling companies. Because of the VA's support and clinical evaluations, many of these devices are now as common as telephones and toasters in the homes of individuals with a visual disability.

Understandably, the military rehabilitation programs were watched internationally with close attention by the agencies concerned with the welfare of all people with visual disabilities. Even though the blinded veteran population constituted a relatively small number, education and rehabilitation professionals found that the techniques that assisted veterans with success might well be adapted for the civilian population including individuals with congenital visual impairment.

Because of the Barden-Lafollett Act, the federal government was prepared from 1943 to become a partner to individual state governments in vocational training and placement of adults with visual disabilities. However, rehabilitation programs for civilians have never compared with those developed for veterans at Valley Forge, Old Farms, Dibble, Hines, and the subsequent Blind Rehabilitation Centers.

The emphasis of early vision rehabilitation and research in the VA for veterans was on vocational employment, but today the emphasis is focused on the needs and problems of older veterans with visual disabilities, reflecting the changing demographics.

Currently, two out of three Americans will develop a disability as they age, but they do not have to be totally disabled as a result of an impairment if the necessary supports and services are available (3). The

primary conditions that disable America's population of older persons are arthritis, hypertension, hearing impairment, heart disease, visual impairment, and stroke (4). While the prevalence of individuals with a visual impairment is small when compared to heart disease and arthritis, for example, it is considered a severe disability for the older person. The incidence of visual impairment is high among the over-55 population because of four leading eye conditions associated with aging: age-related macular degeneration, cataracts, glaucoma, and diabetic retinopathy.

The most striking observation about vision impairment is the strong correlation to age. Of the estimated 4,292,360 noninstitutionalized, severely visually disabled persons in the United States in 1990, 82 percent were 55 years of age or older. The prevalence rates of blindness and visual impairment dramatically increases from 28.4 per 1000 in the age group 55-64 to 210.6 per thousand or 1 in 4, in the age group 85 and over (5). The average age of the veteran currently being served by the VA Blind Rehabilitation services is 67 and only 11 percent are totally blind or have light perception only (6). Therefore, the population of individuals with a visual disability are partially sighted, and 68 percent are over the age of 65. It is apparent that older persons with low vision constitute the largest segment of individuals with a severe visual impairment. According to projections by the American Foundation for the Blind, the number of persons aged 65 or older with severe functional limitations in vision will increase by 284 percent from the year 2000 to 2050.

The Department of Veterans Affairs has been a rehabilitation leader in this country, and the VA model, in general, for rehabilitation of individuals with a visual disability, has been copied by state programs. The population of veterans with a visual disability has changed from young, service-connected blinded returning soldiers, to older persons with age-related low vision. Seventy percent of the visually impaired people in this country are beyond retirement age, and well over 90 percent of newly visually impaired persons fall into this age category.

Professionals and consumers continue to regard the VA as the leader and primary innovator in programs and technology development for individuals with a visual disability. Due to the current pressure to do more with less, the contributions and future efforts of the VA in general, and the Rehabilitation and Research and Development Service more specifically, have assumed even greater importance for individuals with a visual disability.

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REFERENCES

1. Koestler FA. The unseen minority. New York: The David McKay Co., Inc.; 1976.
2. Bledsoe CW. War-blinded veterans in a post-war setting. Washington, DC: The Veterans Administration; 1958.
3. Williams TF. The aging process: biological and psychological considerations, In: Brodey S, Ruff G, editors. Aging and rehabilitation. New York: Springer; 1986.
4. Blake R. What disables American elderly? *Generations* 1984;7(4):6-9.

5. Nelson KA, Dimitrova G. Statistical Brief# 36: severe visual impairment in the United States and in each state, 1990. J Vis Impairm Blindn 1993;86(3):80-5.
6. De l'Aune W, Blasch B, Williams MD. Mobility training outcomes. Proceedings of the 9th International Mobility Conference. Atlanta, GA: Department of Veterans Affairs Rehabilitation R&D Center; 1998. p. 33-7.

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