

The View from the Crossroads of Public Health and Vision (Re)habilitation

John E. Crews, Corinne Kirchner, and Donald J. Lollar

This special issue of the *Journal of Visual Impairment & Blindness* is a first attempt to bridge the fields of vision rehabilitation and public health. As such, it has a dual audience and a dual purpose: 1) to persuade members of the vision rehabilitation field that collaborating with the public health community will help to meet the needs of people with visual impairments, and 2) to convince those in public health that their mission to serve the public will be more fully realized if they include people with disabilities within their conception of health and ensure accessibility throughout their programs and services. As obvious as this type of mutual benefit may sound to some, it has been questioned, and certainly has not yet had a chance to develop in practice.

A number of seemingly unrelated phenomena point to the need for cross-, if not multidisciplinary, collaboration. Anyone who has studied vision rehabilitation or special education, written a grant application, or attended in-service training in the vision field has encountered the challenge of describing the number, employment status, education level, and needs of

the population experiencing vision loss. Furthermore, rehabilitation therapists, vocational counselors, orientation and mobility instructors, and teachers—the core of the vision rehabilitation field—are focused on such aspects of health and well-being as trip hazards and falls; barriers to physical exercise; meal preparation and stovetop safety, and healthy work environments. Many suggest strategies for making medicines more readily identifiable—everything from using rubber bands to large-print labels—while advocating for containers that offer accessible information. A recent, admittedly non-representative, survey of travelers who are blind noted that 8% of respondents had been hit by automobiles and almost a third had had their white canes run over (Carroll & Bentzen, 2000).

Studies of the health of adults with visual impairments show that they are more likely to have problems with heart disease, hypertension, and depression (see the Crews article in this issue). Visually impaired children, too, are likely to have other impairments. Some professionals in vision rehabilitation pay particular attention to the special needs of people experiencing both vision and hearing loss, and to developing approaches to dealing with dual sensory impairments. This array of health-related concerns—issues that shape the lives of people who experience vision

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loss—is a central part of the focus of rehabilitation professionals and advocates in the blindness and visual impairment field.

The short-range outcomes of vision rehabilitation are generally measured in terms of skills acquired or technology used to perform valued tasks, such as classroom learning, meal preparation, budgeting and accounting, or getting from place to place. These interventions, in turn, allow people to attend school, maintain a household, go to work, and participate in a rich mix of civic, family, and recreational roles. Skills and technologies are the means to achieve the more meaningful long-term outcome of full social participation.

The hallmark of rehabilitation as it has evolved in the United States is to honor the experience of disability by addressing each individual as having unique strengths and needs. Therefore, in vocational rehabilitation and special education, the rehabilitation plan is “individualized”: designed with, and specifically for, that person. Gains are measured at the individual level, although they might then be grouped with outcomes of other participants to show a program’s effectiveness.

The history and tradition of the individualized approach is so ingrained in rehabilitation activities that it represents the normative model of the disciplines involved, and personnel preparation programs assert the individualistic point of view defined by this culture. However, our thesis here, supported by the articles that follow, is that another point of view effectively complements (re)habilitation (a term that, in our use, is meant to convey *habilitation* as well as *rehabilitation*). That approach is represented by public health.

The intersection of public health and rehabilitation

We acknowledge at the outset that the good fit of public health and rehabilitation is not always recognized. Indeed, public health has often had an uneasy relationship with rehabilitation, stemming from the heavy emphasis in public health on “primary prevention,” which is comprised of activities aimed at preventing disease, injury, or *disability*. The focus on primary prevention in public health appears at first blush to shunt aside people with disabilities—people who had conditions that, by definition, were not “prevented.” But does this mean that the goals of health promotion don’t apply to disabled individuals? We join many others in arguing that public health provides not only a complementary but an overlapping point of view to habilitation and rehabilitation—like the circles in a Venn diagram. Together, those overlapping sectors create new opportunities to improve the lives of people with vision loss.

For example, the rehabilitation field’s concerns, as noted earlier, regarding the need to describe the population, prevent falls, enable people with low vision to identify medicines, avoid pedestrian injuries, and eliminate differences in health status, all represent concerns within public health. But although the concepts overlap, the terms used in the public health field may not be entirely familiar to rehabilitation providers: consider “epidemiology,” “medical error,” “surveillance” (as applied to health status), “comorbid conditions” (as distinct from “secondary conditions”), and “health disparities” for the issues just mentioned.

Although the pathways differ, the desired endpoint of the routes taken by public health and rehabilitation is the same—full social participation by people with disabilities. Among the concerns of mutual interest for vision rehabilitation and public health are people's access to health care and information, involvement in exercise and conditioning, and the management of secondary conditions (such as skin health for people who have diabetes).

Clearly, then, the public health approach is not just about preventing disability. Still, in today's society, many people with disabilities bristle at language that even indirectly suggests that they should be "prevented." The disability rights movement, along with the achievement by many individuals of appropriate education and rehabilitation, has gone a long way toward showing that limitations associated with vision loss or other disabilities are not inherent to the condition. Now, it is time to move beyond the conception that the public health point of view is at odds with the interests and self-definition of people with disabilities. As the articles in this issue demonstrate, the essential aims and functions of public health are highly relevant to the well-being of those with disabilities. That message needs to get across to the vision rehabilitation community.

Defining the public health focus

Unlike rehabilitation (or, for that matter, conventional medical care) public health focuses on defined populations—rather than focusing on individual cases. The aim is for broadly shared patterns of cause and effect related to health status. Since the aim of public health research is

to understand and then address problems at the population level, it employs instruments such as the Behavioral Risk Factor Surveillance Survey (BRFSS), which samples more than 200,000 individuals annually. The survey, initiated in 1984 by the Centers for Disease Control and Prevention (CDC), is meant to be representative of the entire residential population with telephones of the United States. It is operated by the health departments of all 50 states and generates information on health-related behavior, medical and preventive practices, and access to and use of health care.

Public health policy makers and planners look to findings from the BRFSS and other surveys to detect disparities in health status or related behavior among subgroups: between varied ethnic groups, for example, or between people with and without disabilities. These findings inform the development of interventions to promote health and healthy behavior, and thus to reduce the disparities. The interventions are generally not the one-on-one approaches used by a doctor in treating a patient or by a rehabilitation teacher with a client. Rather, public health interventions target community-wide centers of information or other activity (schools or blindness agencies, for example), aiming to influence individuals through environmental or other indirect and efficient means. Decisions regarding health and related behavior may be made one person at a time, but the approach to effecting those decisions through better information is most efficient at a group or community level (see the Di Stefano article in this issue). For example, campaigns to promote more physical exercise or to reduce smoking focus on broader communities.

One campaign might be designed to discourage young people from taking up smoking, while another aims to encourage adults to quit. Outcomes are generally measured at the population level, through surveillance surveys. The success of national campaigns to reduce smoking may be tracked through the BRFSS. Less fully developed programs might measure outcomes at local levels rather than nationally, as interventions target specific communities or subgroups of interest.

These differing points of view—community or group on the one hand, individual level on the other—are not mutually exclusive. One informs the other, and each has the potential to keep the other honest and relevant. And, we would argue, each has the capacity to reinvigorate and perhaps reinvent the other. Questions relevant to the public health of people with vision impairment are informed by individual experiences or the aggregate of individual experiences. It may not be possible to understand fully the role of the built environment in terms of travel on foot without understanding the experience of vision impairment for an individual. For example, lack of sidewalks, broken sidewalks, poor lighting or glare, and busy intersections are environmental barriers that discourage people who have vision impairments from walking around in the community, and thus discourage exercise.

Similarly, the discipline of orientation and mobility, because it addresses the pragmatics of getting around *safely* in the community, may not fully attend to the health benefits derived from getting around for routine daily activities, which can serve as a form of physical exercise. Safety issues associated with traveling and

vision loss are largely regarded as a problem “owned” by the person with vision impairment and, perhaps, the orientation and mobility instructor. They are not perceived as a problem owned by the community at large. However, if 8% of all children going off to school were involved in auto pedestrian accidents, like those pedestrians reported by the American Council of the Blind (Carroll and Bentzen, 2000), we would assert that we have a major public health problem. Here, we are talking about a smaller population, but the problem is proportionately serious.

Progress in public health

There is some encouraging evidence that public health is building bridges to disability. For example, the BRFSS did not contain questions to identify people with disabilities until 1998. In 2001, two disability questions were tested in the core of the BRFSS and then adopted for the permanent core in 2003. While these questions are not sufficiently detailed to identify people with vision impairments, their inclusion indicates a shift toward engaging with disability issues. Moreover, CDC has developed a vision module for the BRFSS that does address both visual function and eye disease condition. That module is added at the discretion of the state. These data provide state-level information on vision loss that is likely to be of great utility to planners, policy makers, and advocates.

Further evidence that public health is reaching out to the disability community can be found in Healthy People 2010 (HP2010), the current iteration of the nation’s strategic public health planning document. It contains for the first time a chapter on disability, which includes

13 objectives to enhance health, quality of life, and participation of people with disabilities, and a chapter on vision and hearing that, among its specific goals addressing prevention of several eye diseases, includes one that addresses low vision and access to rehabilitation (see Kirchner's article in this issue).

The addition of these survey questions to the BRFSS and the objectives added to HP2010 are strong indicators that the public health field is beginning to recognize the importance to its core mission of issues faced by people with disabilities, in particular the potential to engage health concerns among people with disabilities. These recent extensions of data collection and public health objectives can serve as a foundation upon which to build innovative collaborations.

Toward a national discussion

The time is right for a national discussion on the ways in which the rehabilitation and public health approaches complement each other, and on their combined potential to improve the lives of people who experience vision loss. There are any number of questions and topics that could constitute a robust agenda for such a discussion, including:

- How might health promotion be integrated into traditional rehabilitation programs? Would it be possible to enhance rehabilitation services by building upon orientation and mobility skills to promote exercise and conditioning as a part of the rehabilitation intervention? Many rehabilitation teachers address nutrition and weight management as a part of their instruction, but how could these interventions become more centrally a part that discipline? Outcomes of these enhanced interventions would be measured not only in terms of the skills transferred, but also in terms of overall improved health.
- How can health data be disseminated through the blindness system and public health channels so that information is more accessible to people with vision loss? For example, can those who are diabetic get information about diet that is both reliable and accessible? Can there be a national commitment to providing all health promotion materials in a form that is more accessible to people with visual impairments, so that addressing accessibility becomes routine?
- How might the built environment (for example, sidewalks, street crossings, and medicine labels) be modified to be friendly to people with vision impairments?
- Advocates, policy makers, and planners do want to know something about the number and characteristics of people who experience vision impairment, but how can this be accomplished? The National Vision Program at CDC has developed a vision module for the BRFSS that provides information about conditions and visual function, which is implemented at the discretion of the state. By implementing this module more widely at the state level, we could estimate the population of adults with vision loss in each state and study variations from state to state. These data could be applied usefully in planning and advocating for the needs of people with vision loss.
- Is there a distinct knowledge base that needs to be developed to deal with the

public health needs of people with vision impairments? If we genuinely want to promote exercise, conditioning, and better nutrition, are there strategies that should be implemented, tested, and refined to meet the specific needs of people who are visually impaired? And if specific interventions can be developed, how might they be disseminated in a way that is fully accessible to people with vision loss—not as an afterthought but as a central mission?

This set of articles represents a reaching out—an attempt to create an intellectual foundation for debate in both the blindness and the public health fields on the merits of finding a common agenda to better serve people who experience vision loss. The loss of vision, as well as disability in general, is a profound human experience that must be respected. It is a personal experience, played out by the individual and affecting in varying degrees the family and others who care about that person. Vision rehabilitation and special education are at their best in responding on that personal level, making the human connections and offering the one-on-one attention that go a long way toward explaining why so many of us in the field choose to do the day-to-day work of rehabilitation.

But vision loss operates on another level as well, played out within communities and across the nation. Local, state, and federal policy decisions are often made on the assumption that the “problems” associated with vision loss reside in the individual and not the community; they are often made in the absence of the essential, first-hand knowledge that the vision rehabilitation field can contribute;

and they too often result in flawed policy. However, such poorly informed decision-making is not inevitable. Public health policies developed in conjunction with rehabilitation expertise have remarkable potential to improve health and the quality of lives. Medicine bottle labels and medical guidelines issued in large print would benefit many people, not just those who are visually impaired. Ample sidewalks, maintained in good condition, would be a boon to many people, disabled or not. Safer street crossings would make everyone safer. The vision rehabilitation field needs to be in a position to affect decisions in areas such as these.

Given what we know about disparities in health between people with and without vision loss, we believe that an opportunity exists to explore and perhaps exploit this intersection of the individual and collective approaches, to think more creatively about health promotion and improved quality of life. We are excited about this emerging connection and want the reader to be a fellow traveler in this new direction. The editors invite you to comment on the scope and depth of the articles provided, highlighting both the issues that resonate with you and those that do not. Identify gaps that may emerge as you read the articles. Help us build these bridges. We look forward to hearing from you.

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John E. Crews, DPA, lead scientist, Disability and Health Program, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, 1600 Clifton Road NE, Mail Stop E88, Atlanta, GA 30333; e-mail: jcrews@cdc.gov. **Corinne Kirchner, Ph.D.**, senior research scientist, Policy Research Department, American Foundation for the Blind, 11 Penn Plaza, Suite 300, New York, NY 10001; e-mail: [corinne@afb.net](mailto:<corinne@afb.net>). **Donald J. Lollar, Ed.D.**, acting director, Office of Extramural Research, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention; e-mail: dlollar@cdc.gov.

Guest Editor's Page

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conditions, health as a self-assessed experience, and functional abilities among elderly persons who are visually impaired that are to be addressed by the rehabilitation and accessible communities. We expect to see much more empirical research—both quantitative and qualitative research—that will include measures of environmental access that affect health and social participation.

Janiszewski's article illustrates and promotes effective public education about vision loss. It shows that public awareness is a vital component of improving eye health for preventable conditions and of general health for persons who are visually impaired through vision rehabilitation. Notably, it emphasizes the importance of the ongoing evaluation of program outcomes.

Finally, a Roundup of short pieces should tantalize the reader who is enthused about the possibilities that public health offers to serve people with visual impairments more holistically. Because of space constraints, we cover only a sample of relevant programs, and only highlights of each. Rimmer discusses opportunities for physical activity; Sapolin addresses emergency preparedness; Ponchilla reports

on diabetes management; Horowitz and Reinhardt shift to the systems level, focusing on the mental health system; Orr, Rogers, and Scott turn our attention to the aging network; and Topor puts the spotlight on the Indian health system.

In closing, I have a sense of satisfaction, having worked for months with so many dedicated authors and with staff members of AFB Press and the Office of Disability and Health of the Centers for Disease Control and Prevention to arrive at this diversified supplement to *JVIB*. But the notion of a mixed picture pops up again. I am only too aware of how much we had to leave out. Now it is your turn to read, discuss, explore, and start writing to carry the thread forward in future regular issues of *JVIB*.

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CORINNE KIRCHNER, PH.D.
GUEST EDITOR