Rehabilitation of Persons with Injuries
— Contributors—

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Rehabilitation of Persons with Injuries
Executive Summary

Improvements in emergency medical systems, trauma centers, injury prevention, and medical and surgical management have resulted in increased survival rates for people with serious injuries. Mere survival, however, is not enough; children and adults with injuries need rehabilitation and educational services to help them regain biologic, psychologic, and social functions. These services must be comprehensive, longitudinal, and coordinated. Rehabilitation must be seen as part of a continuum of care provided to people with injuries by an interdisciplinary team and by the injured person's family from the early acute stage to the end of the person's life, if necessary.

In terms of human suffering and costs, injuries exact a huge toll, especially injuries in the following six major categories for which a person requires intensive rehabilitation services.

Spinal Cord Injury. Estimates of people with spinal cord injury (SCI) in the United States range from 177,000 to 200,000, and 10,000 to 20,000 more people receive an SCI each year. Most people with SCIs are permanently impaired, and most have major disabilities. In the United States, the cost of SCI is estimated at $6.2 billion annually.

Traumatic Brain Injury. No surveillance data with exact numbers of traumatic brain injuries exist. An estimated 70,000 people annually incur moderate-to-severe head injuries and require long-term rehabilitation services to help cope with cognitive, behavioral, and emotional deficits. Children and young adults are disproportionately affected by traumatic brain injuries and often require lifelong rehabilitation services.

Burns. About half of all people who receive burn injuries require medical care. Each year, between 70,000 and 100,000 hospital admissions are for burns; about a third of these admissions are to facilities with specialized burn units. Data are limited on long-term sequelae to burn injuries, rehabilitation outcomes, and the costs of rehabilitation care for burns.

Limb Injuries. About half of all hospital trauma admissions are due to injuries to the upper and lower limbs, resulting in a total of $5.4 billion in hospital charges.

Back Injuries. Of the estimated 5.2 million Americans with low back pain, about half are chronically disabled. Low back pain is the most common cause of work disability in adults younger than 45 years of age. The cost of compensable low back pain has been estimated at $11 billion.

Polytrauma and Other Injuries. Polytrauma (injuries to more than one body system) occurs frequently. For example, about half of all people injured in motor vehicle crashes have multiple injuries, including head, spinal, facial, or extremity injuries. Each year, an estimated 2.4 million Americans suffer from an eye injury, and nearly 1 million Americans now have permanent visual loss as a result of ocular trauma.

Rehabilitation can improve functional outcomes by maintaining function of body systems and reducing residual disabilities. Unfortunately, rehabilitation services are not available to all who need them. The capacity of the health care system to provide rehabilitative services is not uniform throughout the country; services are sometimes fragmented and poorly distributed. Moreover, the cost of rehabilitation is a barrier for people who lack medical insurance or third-party payers for medical expenses.

Although great progress has been made in the development and delivery of rehabilitation services, many improvements are still needed. Two recent developments are encouraging. First, the passage of the Americans with Disabilities Act reflects a recognition of the rights of persons with disabilities to have access to employment and to an independent, noninstitutional lifestyle. This legislation will have a major impact on our Nation when it becomes law in 1992. Similarly, the recently published Institute of Medicine study, *Disability in America*, will have an impact on policymakers and researchers by providing them with a framework for prevention strategies (1).

This position paper has been developed to serve as a national agenda for rehabilitation services, research, and policy for this decade while supporting the Year 2000 Objectives in *Healthy People 2000* (2). Vital to this agenda is the belief that all injured children and adults and their families should receive the benefits of rehabilitation that are currently available and that research, both basic and applied, should receive adequate funding. **Our goal is to establish, by the year 2000, a cost-effective system of rehabilitative care that will permit an injured person to achieve optimal health, personal autonomy, and an independent, noninstitutional lifestyle. A cost-effective system of rehabilitative care will help achieve an important objective of *Healthy People 2000*, namely the reduction of secondary disabilities as a result of head and spinal cord injuries.**

We acknowledge that this is an ambitious goal and that it requires substantial financial commitment, new systems of health care delivery, and new research and evaluation. The achievement of this goal depends on cooperation and collaboration among researchers, clinicians, consumers, families, communities, and public and private agencies. We believe that obtaining the finances and the cooperation needed to attain this goal is possible.

Six major areas need special attention.

Basic Science Research

The National Institutes of Health (NIH) convened a group of experts in rehabilitation medicine, behavioral and social sciences, allied health, nursing, and related fields to help determine what research is needed to build a strong foundation for rehabilitation services. This task force recommended a solid program of basic science research and outcome research. In addition, NIH recently established the National Center for Medical Rehabilitation Research to address the need for basic rehabilitation research. **We strongly endorse the recommendations of the NIH task force report and the establishment of the National Center for Medical Rehabilitation Research. We recommend establishing a cohesive program of research that would include projects ranging from basic science to ways injured persons can function in the community.**

Injury and Rehabilitation Surveillance

The field of rehabilitation is hampered by lack of data on etiology, risk factors, treatment, and outcomes related to rehabilitating persons with injuries. Evaluating preventive strategies and clinical care approaches is important; however, without objective measurement tools, measuring evaluation outcomes is difficult. **We recommend developing a clinical care data base that would include epidemiologic information on etiology, risk factors, treatment, outcome, and cost on all persons with injuries.**

Information Dissemination and Technology Transfer

Information from researchers must reach clinical and public health programs and the general public, and information about gaps in care, the relative effectiveness of various clinical care strategies, and emerging problems must reach researchers. **We recommend that high priority be given to funding proposals for information dissemination and technology transfer among researchers, clinicians, all health-care providers, injured persons and their families, and community members.**

Increased Capacity for Delivering Rehabilitation Services

Comprehensive rehabilitation services are not uniformly available throughout the country. Successful clinical service systems, such as the Model Spinal Cord Injury Care Systems, provide integrated care by using existing clinical and prevention knowledge. Such innovative systems, however, are not available in all regions of the country, and not everyone who needs such services can afford them. **We propose that systems of care be developed for all people with injuries that produce significant limitations in function and that the effectiveness of these systems be evaluated.**

Research on Clinical and Health Services

Many types of interventions and other factors influence the medical outcomes and quality of life of a person with disabilities. **Health systems research, incorporating a variety of innovative and traditional approaches, is needed to address issues such as access to and payment for services, cost-benefit analysis of rehabilitation services, reemployment training and back-to-work incentives, and combinations of traditional and nontraditional rehabilitation services and therapeutic methods.**

Training

The field of rehabilitation faces shortages of trained medical, allied health, and nonmedical care givers. Various professional and nonprofessional groups need many levels of training. Formal methods must be developed to train, support, and certify personal care attendants who are critically important in helping people with disabling injuries achieve independence. **We strongly believe that more trained personnel are needed in all areas of rehabilitation, including research, clinical care, and personnel services, to ensure the development of model systems of rehabilitative care.**

References

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