Trends in Research in Rehabilitation Medicine in the U.S.A.

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Introduction

Four major factors influence the subjects selected for research in rehabilitation medicine in the U.S.A. These are the research interests of (1) research funding sources; (2) organizations needing research knowledge for policy decisions; (3) individual investigators and (4) political advocacy groups.

Research Funding Sources

The following organizations fund research in rehabilitation medicine. Each has specific interests which become factors in the development of research trends.

National Institute on Disability and Rehabilitation Research (NIDRR): This governmental organization operates within a wide mandate that requires it to contribute to the independence of persons of all ages who have disabilities. It seeks improved systems, products and practices in the rehabilitation process. NIDRR's support of medical rehabilitation research and training (R&T) centers has contributed to much of the medical rehabilitation research in the U.S.A. for several decades. A notable success has been its support of spinal cord injury research and model systems development. Recent R & T center support included interventions effective in the rehabilitation of those with strokes, brain injuries and pediatric trauma. NIDRR now stresses outcomes at the disability and handicap levels (human functioning, community integration, employment and empowerment) more than at the pathophysiology and impairment levels. It also continues substantial support to Rehabilitation Engineering Centers seeking solutions to disability-related problems through technology.

Veterans Administration Research and Development Services: This governmental organization exists to improve the quality of life of disabled veterans by making them more functionally independent. Its priorities are research projects on prosthetics, amputations, spinal cord injury and sensory aids with special emphasis on the problems of aging, physical fitness and psychosocial rehabilitation. Special interests include the use of computer-assisted techniques to further refine artificial limbs, development of robots and computer controlled electrical stimulation for application to paralyzed limbs. More recent research identifies effectiveness of community integration programs and services.

National Center for Medical Rehabilitation Research (NCMRR): This recent governmental organization permits rehabilitation medicine research to join its sister medical disciplines in the prestigious National Institutes of Health (NIH). NCMRR's mission is to enhance the quality of life of people with disabilities through support of research on restoration,
replacement, enhancement, or prevention of deterioration of function. Topics of interest for support include prosthetics, skin integrity, overuse injuries, functional assessment, measurement tools, biomaterials, chronic pain, recovery of neurofunction, and progressive neuromuscular disorders. NCMRR is expected to focus more on pathophysiology and impairment than handicap issues.

Centers for Disease Control and Prevention: This respected governmental organization which has been very successful in the control of infectious diseases has assumed responsibility for injury and chronic disease prevention, including secondary prevention of further functional loss. It will add an epidemiological approach to the control of disability. Initial studies have been in the areas of spinal cord and brain injuries.

Policy Funding Sources

Public policy regarding the funding of health care is undergoing significant changes in the U.S.A. Each component, including rehabilitation, must justify its costs through demonstrating significant outcomes. This interest has produced, as a major trend in rehabilitation research, studies directed towards the cost effectiveness of rehabilitation delivery systems. Organizations supporting such research include governmental organizations, provider associations and foundations.

Health Care Financing Administration: This governmental organization has supported major studies on the use of resources by rehabilitation organizations. Earlier studies confirmed that functional loss predicted case needs more than the medical diagnosis. A current study comparing stroke rehabilitation results from different types of facilities is expected to show that more rehabilitation can be done successfully in community settings rather than requiring rehabilitation hospital care.

Agency for Health Care Policy and Research: Sponsored research focused on the effectiveness and efficiency of specific treatments and health care delivery systems are supported by this governmental organization. It has identified a number of rehabilitation topics as important to health care in general, including skin pressure ulcers, neurogenic bladder and post acute care of individuals with stroke. A report on stroke clinical guidelines emphasizing the need for more research on treatment outcomes is expected soon.

Provider Organizations

The National Association of Rehabilitation Facilities (NARF) in order to encourage research on rehabilitation payment systems has sponsored important research. NARF initiated a study exploring ways to classify rehabilitation patients so that their use of resources could be predicted. This led to the development of Functional Related Groups (FRG's) which use age, FIM Impairment, and FIM scores as the basis of classification.

Individual Investigator Interest

The interests and energies of individual investigators result in the presentation and publication of hundreds of papers annually. Many of these studies require few resources other than investigator time. A review of articles published in the Archives of PM & R over the last year reveals almost 30% deal with measurement of outcomes after rehabilitation and the assessment of measurement tools. Another 30% report on the results of specific interventions. Approximately 28% described the role of injury and illness on producing impairment and functional loss. Recent presentations at the Academy of PM & R included an even higher percentage of papers related to measurement (38%).
Political Advocacy Groups

These organizations have lobbied successfully for specific research interests including spinal cord and brain injury.

Conclusions

Major research trends in rehabilitation medicine in the U.S.A. include strong interest in global treatment outcomes, measurement tools, treatment efficacy, cost effectiveness and prevention of primary and secondary disability.