2008 NIDRR Program Directory

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Introduction

The mission of NIDRR is to generate new knowledge and promote its effective use to improve the abilities of people with disabilities to perform activities of their choice in the community, and also to expand society’s capacity to provide full opportunities and accommodations for its citizens with disabilities. NIDRR conducts comprehensive and coordinated programs of research and related activities to assist in the achievement of the full inclusion, social integration, employment, and independent living of people with disabilities. This edition of the NIDRR Program Directory lists all projects funded by NIDRR during the 2007 fiscal year.

The contextual paradigm of disability and rehabilitation research, originally described in NIDRR’s Long Range Plan, 1999-2003, continues to frame the NIDRR research agenda. This paradigm overcomes the limitations imposed by a medical model of disability. This paradigm of disability maintains that “disability is a product of the interaction between characteristics of the individual (e.g., conditions or impairments, functional status, or personal and social qualities) and the characteristics of the natural, built, cultural, and social environments.” (NIDRR Long-Range Plan 1999-2003.)

NIDRR’s Research Program

Under the Long Range Plan 2005-2009, NIDRR-funded research activities fall within three strategic arenas: Research and Development, Capacity Building, and Knowledge Translation. Most NIDRR grantees are universities or organizations of rehabilitation or related services. NIDRR’s largest funding programs are the Rehabilitation Research and Training Centers (RRTCs), the Model Systems, and Rehabilitation Engineering Research Centers (RERCs). NIDRR also makes awards through other program mechanisms, including ADA Technical Assistance Projects, Advanced Rehabilitation Research Training Projects, Disability and Rehabilitation Research Projects, Mary E. Switzer Research Fellowships, NIDRR Contracts, NIDRR Scholars, and Small Business Innovative Research. Program descriptions are provided below.

ADA Technical Assistance Projects

NIDRR funds a network of Disability and Business Technical Assistance Centers (DBTACs) to provide information, training, and technical assistance related to the American with Disability Act (ADA) to businesses, agencies, and the public. Presently, ten regional DBTACs and one Coordination, Outreach, and Research Center (CORC) are funded under this program.

Advanced Rehabilitation Research Training Projects

The Advanced Rehabilitation Research Training (ARRT) Program provides research training and experience at an advanced level to individuals with doctorates, or similar advanced degrees, who have clinical or other relevant experience. ARRT projects train rehabilitation researchers, including researchers with disabilities, with particular attention to research areas that support the implementation and objectives of the Rehabilitation Act of 1973, as amended (Act), and that improve the effectiveness of services authorized under the Act.
Grants are made to institutions to recruit qualified persons, and to provide a training program that includes didactic and classroom instruction, is multidisciplinary, emphasizes scientific research methodology, and may involve collaboration among institutions.

Disability and Rehabilitation Research Projects

The Disability and Rehabilitation Research Projects (DRRP) program funds projects with special emphasis on research, demonstration, training, dissemination, utilization, and technical assistance. Projects may include combinations of these activities. True to the mission of NIDRR, these projects may develop methods, procedures, and rehabilitation technology to assist in achieving the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities, especially individuals with the most significant disabilities, or to improve the effectiveness of services authorized under the Rehabilitation Act.

Mary E. Switzer Research Fellowships

Research Fellowships, named for the late Mary E. Switzer, give individual researchers the opportunity to develop new ideas and gain research experience. There are two levels of fellowships: Distinguished Fellowships and Merit Fellowships. Distinguished Fellowships go to individuals who have seven or more years of research experience in subject areas, methods, or techniques relevant to rehabilitation research and must have a doctorate, other terminal degree, or comparable academic qualifications. Merit Fellowships are given to individuals who have either advanced professional training or independent study experience in an area that is directly pertinent to disability and rehabilitation but who do not meet the qualifications for Distinguished, usually because they are in earlier stages of their careers. Fellows work for one year on an independent research project of their design.

Model Systems

NIDRR administers programs that have become world-renowned model systems of care for persons with spinal cord injuries, burns, and traumatic brain injuries. The Model Systems establish innovative projects for the delivery, demonstration, and evaluation of comprehensive medical, vocational, and other rehabilitation services. The work of the Model Systems begins at the point of injury and ends with successful re-entry into full community life. These projects collect and contribute data on patient characteristics, diagnoses, causes of injury, interventions, outcomes, and costs to a uniform national database; participate in collaborative research with other Model System centers; and coordinate research efforts with other related grant recipients. In 2006, NIDRR funded a coordinating knowledge translation center for all three Model System types.

NIDRR Scholars

The NIDRR Scholars Program is designed to provide internship opportunities in disability and rehabilitation research for undergraduate students with disabilities. Each year, NIDRR provides funding for this program to projects and centers. The intent of the program is to enable students to gain practical experience in ongoing research, thereby preparing them for careers in disability and rehabilitation research. The duration of the internship is one semester and the students are required to work 20 hours per week.
NIDRR Contracts

Through its contracts, NIDRR seeks improved methods, systems, products, and practices to add to its work. The contracts are for specific activities related to management, research, and information dissemination.

Rehabilitation Engineering Research Centers

Rehabilitation Engineering Research Centers (RERCs) conduct programs of advanced research of an engineering or technical nature designed to apply advanced technology, scientific achievement, and psychological and social knowledge to solve rehabilitation problems and remove environmental barriers. Each center is affiliated with one or more institutions of higher education or nonprofit organizations. The RERCs' work in a rehabilitation setting provides an environment for cooperative research and the transfer of rehabilitation technologies into rehabilitation practice. Involved at both the individual and systems levels, RERCs seek to find and evaluate the newest technologies, products, and methods that ultimately can benefit the independence of persons with disabilities and the universal design of environments for all people of all ages. The centers also exchange technical and engineering information worldwide and improve the distribution of technological devices and equipment to individuals who need them.

Rehabilitation Research and Training Centers

NIDRR’s Rehabilitation Research and Training Centers (RRTCs) conduct coordinated and integrated advanced programs of research targeted toward the production of new knowledge, which may improve rehabilitation methodology and service delivery systems, alleviate or stabilize disabling conditions, or promote maximum social and economic independence for persons with disabilities. Operated in collaboration with institutions of higher education or providers of rehabilitation or other appropriate services, RRTCs serve as centers of national excellence in rehabilitation research. Also, they are national or regional resources for research information for individuals with disabilities and the parents, family members, guardians, advocates, or authorized representatives of the individuals. These centers also conduct related training programs, including graduate, pre-service and in-service training. The centers also disseminate and promote the utilization of research findings.

Small Business Innovation Research

Small Business Innovation Research (SBIR) grants help support the production of new assistive and rehabilitation technology. This two-phase program takes a product from development to market readiness.

NARIC and the NIDRR Program Directory

The Program Directory is compiled by the National Rehabilitation Information Center (NARIC). NARIC functions as a specialized library, providing the public with information on and referral services to help locate disability and rehabilitation research and services. Since 1977, NARIC has been the primary source of rehabilitation and disability information generated by NIDRR funds, with special priority services to NIDRR staff and NIDRR-funded project staff.
NARIC also produces REHABDATA, an index of disability and rehabilitation literature produced by NIDRR grantees as well as commercial publishers. Grantees submit copies of NIDRR-supported research products to NARIC and they are added to the reference collection and REHABDATA database. Information about holdings is available online at http://www.naric.com.

Neither NARIC nor NIDRR assumes liability for the Directory’s contents or the use thereof. NARIC does not evaluate or certify the programs or products of the organizations listed in the Directory.

This Directory is not intended for use as a fiscal document to show how NIDRR funds are allocated; its purpose is to display the range of programs that NIDRR supports. This listing is current as of November 15, 2008. This directory may include projects that have passed the indicated extension date.

NARIC operates under U.S. Department of Education contract ED-08-CO-0095.
NIDRR’s employment research focuses on the lifelong challenges to and opportunities presented by transitions in employment experienced by people with disabilities. Employment research addresses methods to integrate the unique needs of employers and disability populations to improve employment outcomes across the life span. NIDRR’s research agenda in the area of employment is designed to strengthen the scientific basis of disability and rehabilitation-related research and practice by increasing the availability of validated theories, measures and methods to: (1) improve measurement, data sources, and estimates; and (2) enhance identification, evaluation, and prediction of the factors that facilitate successful labor force participation and work-related transitions across the life span. This research agenda is also designed to strengthen the scientific basis of disability-related employment policy, practice, and research by providing valid and reliable information and analyses designed to: (1) improve understanding of employment trends; individual labor force participation; and school-to-work transitions; and (2) enhance knowledge of the broader societal developments that affect employment opportunities and outcomes across the life span.

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Rehabilitation Research and Training Centers (RRTCs)
Massachusetts

Rehabilitation Research and Training Center for Vocational Rehabilitation Research

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Principal Investigator: John Halliday
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Project Number: H133B070001
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 07 $649,999; FY 08 $649,999

Abstract: The RRTC for Vocational Rehabilitation Research provides a comprehensive description of the vocational rehabilitation (VR) program, collects best practices, and addresses the need for information that will assist administrators, researchers, and advocates to make data driven policy and practice decisions. The RRTC (1) conducts an exhaustive, systematic research literature search in Year 1, modeled after the Campbell Collaboration reviews, to provide a comprehensive platform for future research activities of the RRTC and for other researchers and policy-makers; (2) collects descriptive data from a wide range of sources including existing administrative datasets and official documents, and launches the RRTC survey of state agencies for vocational rehabilitation, mental retardation/developmental disability, mental health, and welfare, and community rehabilitation providers in Years 2 and 3 to develop state-by-state profiles of employment services and the context of VR service delivery; (3) interviews VR directors of all 80 VR agencies in Years 2 and 3 to collect descriptive information about key characteristics related to operational and programmatic decisions, policies, and practices; (4) uses the Delphi Method in Years 3 through 5 to identify, evaluate, and describe best practices in the implementation of (a) Order of Selection policies and the prioritization of individuals with the most significant disabilities for VR services, (b) employment services for individuals with developmental disabilities, and (c) employment services for individuals with mental illnesses; (5) institutes a training and technical assistance agenda that uses Communities of Practice mechanisms to create interactive participant-driven opportunities for translation, information sharing, and policy development; and (6) widely disseminates products, curricula, and knowledge throughout the vocational rehabilitation system, employment services system, and to a wide array of disability and advocacy organizations.

The RRTC develops a knowledgebase on VR that informs policy and practice at the federal, state, and local levels, encourages data-based decision-making, results in the development of a research base that future investigators can use for analyzing the consequences and outcomes of variations in State VR agencies’ internal arrangements and operations, documents best practices in detail, identifies their key features, and investigates their transferability into other contexts. The RRTC is a partnership of the Institute for Community Inclusion at the University of Massachusetts Boston, the Center for the Study and Advancement of Disability Policy, and InfoUse, a woman-owned business.
Rehabilitation Research and Training Centers (RRTCs)
Montana

Rehabilitation Research and Training Center on Disability in Rural Communities

University of Montana
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Principal Investigator: Tom Seekins, PhD 406/243-2654
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Project Number: H133B030501
Start Date: December 01, 2002
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 03 $600,000; FY 04 $600,000; FY 05 $600,000; FY 06 $600,000; FY 07 $600,000; FY 08 (No-cost extension through 11/30/2008)

Abstract: The research conducted by this project improves the employment status of people with disabilities in the rural U.S., enhances their ability to live independently, and advances the science of rural disability studies. Four core areas comprise 11 research projects in rural employment and economic development, rural health and disability, rural community transportation and independent living, and policy foundations. Projects include: (1) develop scientific methods to measure how rural environments influence an individual’s community participation; (2) collaborate with very small rural businesses to employ people with disabilities; (3) improve rural transportation options; and (4) create programs to prevent or improve secondary conditions. Other projects explore ways for new partners, including faith-based organizations, to be involved in improving rural services. A training program disseminates research findings, trains students, and sparks the creative engagement of policymakers and social advocates. The innovative STATE (Same-Time Availability to Everyone) policy requires that the project provide standard print publications to the general public only when at least two alternative formats are also available to individuals with disabilities.
Rehabilitation Research and Training Centers (RRTCs)
Montana

Rehabilitation Research and Training Center on Disability in Rural Communities

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Project Number: H133B080023
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 08 $850,000

Abstract: The RTC: Rural at The University of Montana conducts research that advances the science of rural disability and rehabilitation, improves the health of rural Americans with disabilities, and increases their opportunities for employment and community integration. The research program: (1) conducts detailed statistical analyses of state Vocational Rehabilitation (VR) data to identify promising, evidence-based rural service practices; (2) develops and evaluates telecommunications protocol for providing rural VR services; (3) conducts a longitudinal study to determine why rural VR clients might exit services prematurely, and to evaluate retention strategies; (4) evaluates rural health promotion strategies that could lead to improved employment outcomes; (5) conducts a randomized controlled trial to evaluate ways to improve rural consumers’ use of health care services; (6) conducts a randomized controlled trial to evaluate a mental health peer support model for rural individuals with mobility or sensory impairments; and (7) identifies strategies to improve rural transportation. The RRTC’s knowledge translation program disseminates research findings and encourages the use of evidence-based rural practices by policy makers, advocates, service providers, and persons with disabilities. The Center’s web site is a central component of this dissemination program and includes the first rural disability “wiki” to build a rural disability knowledgebase. The Center also conducts three focused training initiatives: (1) promoting economic development in rural southwest Texas; (2) facilitating linkages between Utah Small Business Development Centers and VR services; and (3) implementing the Living Well with a Disability health promotion program in rural South Carolina. Finally, the Center uses web technology to conduct an innovative state-of-the-science conference on rural disability and rehabilitation.
Rehabilitation Research and Training Center on Employment Policy and Individuals with Disabilities

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Project Number: H133B040013
Start Date: December 01, 2004
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 04 $700,000; FY 05 $700,000; FY 06 $700,000; FY 07 $700,000; FY 08 $700,000

Abstract: The ultimate goal of the Employment Policy Rehabilitation Research and Training Center (EP-RRTC) is to increase the employment and economic self-sufficiency of people with disabilities and improve the quality of their lives. EP-RRTC’s immediate purpose is to contribute to the success of the transition from caretaker policies to economic self-sufficiency policies. The immediate target population consists of people who influence disability policy: people with disabilities; federal, state, and local policymakers, administrators, and regulators; advocates; service providers; researchers and policy analysts; the media; employers, unions, insurers; and the general public. The ultimate target population is people with disabilities. Specific goals and objectives are: completion of new research activities that will generate knowledge about the effects of past disability policy and other factors on economic self-sufficiency, the impact of current and future initiatives designed to promote economic self-sufficiency, and/or the likely success of new policy options; completion of 20 publishable papers and companion policy briefs; training of consumers via 12 or more Washington-based Disability Policy Forums; training of 5 graduate students; participation in the 2008 conference of the Interagency Subcommittee on Employment; organization and delivery of disability policy research sessions at the Association of Public Policy Analysis and Management (APPAM) fall meetings, and technical assistance to consumers on policy research and evaluation methods and data. Project activities include writing briefs about the evaluations of promising policy innovations, consulting with a wide array of constituents to obtain feedback about an array of policy options that merit further consideration, and collaborating with SSA staff to develop state-level series on employment outcomes for Social Security Disability Insurance and Supplemental Security Income beneficiaries. Dissemination activities include: organization and participation in five disability policy research sessions at the 2007 fall conference of the APPAM and a reception for disability researchers; presentations in the 2008 Interagency Subcommittee on Employment conference on interagency employment research; an accessible website for the dissemination of our outputs (e.g., policy briefs, reports, and materials); presentations and dissemination of outputs at conferences; and publication of the research papers in peer-reviewed journals.
Rehabilitation Research and Training Centers (RRTCs)
New York

Rehabilitation Research and Training Center on Employment Service Systems

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Research Foundation of CUNY
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Project Number: H133B040014
Start Date: October 01, 2004
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 04 $699,981; FY 05 $699,973; FY 06 $699,990; FY 07 $849,982; FY 08 $699,975

Abstract: This Employment Service Systems Research and Training Center develops, enhances, and utilizes partnerships to improve the quality of employment services, opportunities, and outcomes for people with disabilities. Five research projects have been designed to meet this goal and examine partnerships across public agencies, between not-for-profit and public agencies, and between rehabilitation agencies and businesses. The Consortia for Employment Success (CES) creates and evaluates fully integrated disability service provider networks in three local communities. The CES increases access for people with disabilities to both effective, comprehensive placement services, and a well-managed and centralized employer network that will increase employment and career advancement opportunities for persons with disabilities. The Workplace Socialization Model (WPS) supplements the CES Model by focusing on job enhancement and retention. The WPS aims to extend the job tenure of employees with disabilities and other positive work outcomes including the employee’s job satisfaction, organizational commitment, and level of work culture competency, as well as the employer’s satisfaction with the employee’s job performance. Identification of “Good Practices” within Vocational Rehabilitation (VR) is designed to identify a variety of good practices currently being used in the State-Federal VR system across the US that facilitate consumer access to services and enhance employment outcomes. Designing and Testing Comprehensive Employment Practice and Policy Initiatives within a Vocational Rehabilitation State Agency develops and tests a model that leads to enhanced employment outcomes. The model includes the “human capital” characteristics of persons with disabilities as well as what VR delivery systems add to these human capital factors to improve outcomes. A study of collaboration between Workforce Investment Act (WIA) partners in One-Stops collects data within 16 Iowa regions and correlates different levels of collaboration with customer satisfaction and employment outcomes.
Rehabilitation Research and Training Centers (RRTCs)
Ohio

Rehabilitation Research and Training Center on Substance Abuse,
Disability, and Employment

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Project Number: H133B040012
Start Date: December 01, 2004
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 04 $699,998; FY 05 $699,983; FY 06 $699,981; FY 07 $699,984; FY 08 $699,989

Abstract: This RRTC builds on previous findings to positively impact persons with disabilities who also experience substance use disorders, as well as the service providers upon whom they depend. The highly integrated program of research addresses the following goals and objectives: (1) Promote widespread use of substance use disorder screening among persons with disabilities who utilize disability-related employment services. This is accomplished by developing and validating a new substance abuse screener called the “SASSI-VR”. Following two stages of development and validation, the SASSI-VR is evaluated in three vocational rehabilitation (VR) programs on a statewide basis. (2) Conduct a randomized clinical trial of a model of supported employment, Individualized Placement and Support (IPS), to test its efficacy among persons with traumatic brain injury or other severe disabilities that also have a substance use disorder. The two trial sites are affiliated with rehabilitation programs in the Wright State and Ohio State medical schools. Utilization of the IPS model with the study populations holds tremendous potential for impacting services delivery for consumers who experience very low rates of employment. (3) Research policy and practices relative to their impact on VR services for persons with a disability and coexisting substance abuse. Serving as a critical complement to the first project, the roles of policies, statutes, guidelines, and VR service delivery practices will be investigated within the larger community of public agencies. (4) Investigate factors that specifically contribute to unsuccessful case closure among consumers of VR services. This component studies recent unsuccessful closures and their VR counselors, and the study has particular sensitivity to the role of “hidden” substance abuse among unsuccessful closures.
Rehabilitation Research and Training Centers (RRTCs)
Virginia

Rehabilitation Research and Training Center on Workplace Supports and Job Retention

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Project Number: H133B040011
Start Date: November 01, 2004
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 04 $699,981; FY 05 $699,973; FY 06 $699,990; FY 07 $699,988; FY 08 $699,999

Abstract: The purpose of the RRTC on Workplace Supports and Job Retention is to study those supports which are most effective in the workplace for assisting persons with disabilities to maintain employment and advance their careers. Research includes two long-term prospective randomized experimental control research projects: (1) determining the efficacy of public/private partnerships, and (2) determining the efficacy of business mentoring and career based interventions with college students with disabilities. The RRTC is partnered with Manpower, Inc., several community rehabilitation programs, and the VCU Business Roundtable. Additional projects look at disability management practices, extended employment supports, job discrimination in employment retention, benefits planning and assistance, and workplace supports. These studies are done in conjunction with Equal Employment Opportunity Commission, the Society of Human Resource Professionals, and the U.S. Chamber of Commerce.
Disability and Rehabilitation Research Projects
Arkansas

Improve the Employment Outcomes for the Low Functioning Deaf (LFD) Population

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Principal Investigator: Douglas Watson, PhD
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Project Number: H133A060044
Start Date: January 01, 2007
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $450,000; FY 07 $450,000; FY 08 $450,000

Abstract: This project conducts a program of theory-driven research to improve employment outcomes for the Low Functioning Deaf (LFD) population. The goals of the project are to: (1) develop a national profile of the state of the knowledge for services to persons who are LFD; (2) develop consensus on functional definitions of the target population using a concept mapping approach with knowledgeable providers who serve the population; (3) develop and validate a psychometrically sound tool to assess the functional characteristics of persons identified as LFD and to be used by partner states to develop a descriptive profile of the population; (4) replicate a systems level analysis of service delivery options available to the target population with key state partners; (5) assess barriers exhibited by LFD and pre-employment skills needed to enter the workforce; and (6) focus on best practices in job coaching to enhance workplace integration and job tenure. The success of the research and dissemination efforts is insured by inclusion of five state rehabilitation partners including providers, policy makers, and administrators from vocational rehabilitation, community service agencies, and school and community-based transition programs. The project makes use of long-established networks and collaboration with key federally-funded partners to facilitate dissemination of research-based knowledge to the field, leading to improvements in services for persons who are LFD.
Vocational Rehabilitation: Transition Services that Lead to Competitive Employment Outcomes for Transition-Age Individuals with Blindness or Other Visual Impairments

Mississippi State University
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www.blind.msstate.edu

Principal Investigator: Brenda Cavenaugh 662/325-3728
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Project Number: H133A070001
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 07 $450,000; FY 08 $450,000

Abstract: This project conducts scientifically based research on transition services that lead to competitive employment outcomes for transition-age individuals with blindness or other visual impairments. The project includes four major research projects and a plan of dissemination. Project 1 involves conducting an integrative (systematic) literature review to identify and synthesize research on services leading to successful employment and other postsecondary outcomes for blind youth. The review process is considered empirical research and is approached with the scientific rigor used when conducting primary research. Project 2 includes analysis of five national, cross-sectional, and longitudinal data sources to explore relationships between potential causes or influencing factors and positive transition outcomes of youth who are blind or visually impaired. Specialized approaches used in analysis of the longitudinal data sources allow opportunity for causal inferences. Project 3 uses qualitative and quantitative methods in the collection of data from a variety of sources (focus groups with rehabilitation professionals, teachers, post-secondary support service providers, SSA representatives, and others; interviews with consumers; VR case records). The research identifies factors that impact the employment status of transition-age youth. Project 4 involves using knowledge gained from Projects 1, 2, and 3 to identify and develop, demonstrate, and evaluate the effectiveness of two interventions— one targeting youth who are preparing to transition from high school to employment or college and the other targeting youth who are preparing to transition from college to employment. In implementing the plan of dissemination, a variety of methods help ensure that the quality, clarity, and accessibility of products are appropriate for the target population.
Disability and Rehabilitation Research Projects
New York

I.T. Works

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disability.law.uiowa.edu

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Public Contact: Michael Morris, JD; James Schmeling, JD 315/443-9703 (Blanck); 202/521-2930 (Morris); 319/335-8459 (Schmeling)

Project Number: H133A050031
Start Date: December 31, 2005
Length: 12 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 05 $299,901; FY 06 (No-cost extension through 12/31/2007); FY 07 (No-cost extension through 12/31/2008)

Abstract: The goal of the I.T. Works project is to identify barriers to and facilitators of the hiring, retention, advancement, and wages of individuals with disabilities. Research shows that the percentage of working-age individuals with disabilities in full- or part-time positions is substantially lower than the percentage of working-age people without a disability, and there is a demand for trained IT workers. Increasing the employment of individuals with disabilities in IT-related jobs would increase the employment of individuals with disabilities overall and reduce the shortage for trained IT workers. Research activities for this project include a theoretical model in which predictive measures include environmental factors, organizational factors, attitudinal factors, and individual characteristics. Outcome measures in the model include hiring rate, advancement rate, retention rate, and wages of individuals with disabilities. Training activities allow for the distribution of the research findings to diverse target audiences, including employers, IT trainers and professionals, persons with disabilities in diverse employment settings, other researchers, and relevant policy-makers. Target audiences also include IT employers, IT training certification bodies, human resource managers, community colleges and university continuing education programs, and Centers for Independent Living and other disability-related organizations.
Disability and Rehabilitation Research Projects
New York

Demand-Side Employment Placement Models

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Public Contact: William N. Myhill, MEd, JD 315/443-1367; Fax: 315/443-9725

Project Number: H133A 060033
Start Date: July 01, 2006
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $500,000; FY 07 $500,000; FY 08 $500,000

Abstract: Americans with disabilities have significantly lower levels of employment than their peers without disabilities. Prior study of employment rates among people with disabilities generally has relied on a “supply-side” approach, analyzing how personal characteristics predict employment and earnings. These models have not sufficiently analyzed variables related to employer demand (and the interaction of employer demand/supply and the environment) as predictors of employment outcomes for people with disabilities. Thus, there is a need to systematically understand demand characteristics for qualified workers with disabilities, particularly as work requirements change over time. This project sets out scientifically rigorous and evidence-based methods to develop, identify, and evaluate employment demand-side models. It translates the findings into valid and practical tools for large and small businesses in different market sectors to improve employment outcomes. It evaluates the relative efficacy of these tools alongside supply-side research outcomes. The project is a nationwide collaboration of economists, statisticians, and leading experts in law, public and disability policy, corporate culture, applied life studies, technology, and education, as applied to disability employment policy and law. Project leadership includes disability scholars from universities around the country, with combined decades of research, training, and knowledge dissemination experience. The project builds fresh partnerships among disability policy and law experts, the business community, researchers, and national disability organizations such as the National Organization on Disability and the National Council on Independent Living. The project generates new knowledge to better understand market-driven workforce trends in large and small firms and different market sectors, and to inform employment practices to prepare individuals with disabilities for the present and future workforce. The project has a systematic plan and logic model for knowledge translation and dissemination aimed at providing employers best practice and practical tools to improve employment outcomes of people with disabilities.
SEDL’s Vocational Rehabilitation Service Models for Individuals with Autism Spectrum Disorders

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Project Number: H133A080007
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $350,000

Abstract: For this project, SEDL partners with the Center for Autism and Related Disabilities at the University of Central Florida (UCF CARD) to create a knowledge translation initiative to address the growing need for improvement in vocational rehabilitation (VR) and transition services for persons with autism spectrum disorders (ASDs). SEDL and UCF CARD conduct a multifaceted set of research activities to identify and document VR and transitional behavior management practices that are linked to employment successes for people with ASDs, to identify factors that are strongly predictive of such success, to study the activities and impact of a statewide VR service provider network, and to document examples of success among individuals with ASDs in long-term employment placements. Research activities include conducting two major systematic reviews, implementation of a rigorous process for identifying and validating VR best practices, a study of the university-based statewide network of CARD centers in Florida, and case studies of individuals with ASDs and their families. Additionally, this project develops and disseminates an array of information products to inform both policy and practice, and to support implementation of best practices in VR settings throughout the US with existing national VR, service provider, advocacy, and research networks. This project is guided by a national advisory panel comprised of representatives from NIDRR-funded research initiatives addressing ASDs, VR professionals, ASDs service providers, and people with ASDs and/or their family members. The project outcomes include new knowledge and understanding, and allow for on-the-ground changes within the VR system, increasing employment among persons with ASDs.
Vocational Rehabilitation Service Models for Individuals with Autism Spectrum Disorders (VCU ASD Career Links)

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Principal Investigator: Paul Wehman, PhD
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Project Number: H133A080027
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $350,000

Abstract: VCU ASD Career Links conducts evidence-based research on vocational rehabilitation (VR) service models for individuals with autism spectrum disorders (ASDs). The project is based at Virginia Commonwealth University (VCU) and is a collaborative initiative between VCU and the Virginia Department of Rehabilitative Services (DRS). The scope of research covers four areas: (1) the impact of intensive, community-based work experiences on the employment outcomes of youth with ASDs; (2) the postsecondary school participation and ultimate employment of college students with ASDs; (3) the impact of personal digital assistants (PDAs) on the employment outcomes of individuals with ASDs; and (4) a longitudinal analysis of VR service delivery and employment outcomes among DRS clients with ASDs. While the primary target population is persons with ASDs, there is an emphasis on youth and young adults who are unemployed, under-employed, or under-served in postsecondary education. Additionally, this project targets persons from traditionally under-represented populations with diverse racial and ethnic backgrounds. This project works collaboratively with four local school districts in the Richmond area and the Faison School for Autism to enroll youth with ASDs into the project. The project also works with colleges and universities throughout the Commonwealth of Virginia. Dissemination activities include web casts, fact sheets, evidence-based journal articles, and a toolkit on how to enhance VR employment models for youth with ASDs.
Cognitive Training and Supported Employment in Severe Mental Illness

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Project Number: H133G050230
Start Date: December 01, 2005
Length: 36 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 05 $149,736; FY 06 $149,749; FY 07 $149,106; FY 08 (No-cost extension through 11/30/2009)

Abstract: Impaired cognitive functioning is an important predictor of employment outcomes in persons with severe mental illness (SMI), and a common complaint in consumers participating in vocational rehabilitation, including those in supported employment. This project evaluates a new, pilot tested and standardized intervention, the “Thinking Skills for Work”, a program designed to help people with SMI succeed in supported employment programs, including both getting and keeping jobs. The Thinking Skills for Work program is aimed at improving the cognitive functioning of persons with SMI involved in supported employment, and is based on a heuristic model of the interactions between cognition, symptoms, work performance, and vocational services. According to the model, enhanced cognitive functions improve both work outcomes and the efficiency of vocational services (i.e., fewer support services needed per hour of consumer work). The Thinking Skills for Work program is delivered by a specialist who educates consumers about cognitive functioning and work, involves them in a three-month program of computerized cognitive skills training, and works in collaboration with the consumer and supported employment specialist to identify appropriate jobs, practice newly acquired cognitive skills in work-related settings, and develop compensatory strategies for managing persistent cognitive impairments.
Fifteen-year Course of Competitive Employment for People with Severe Mental Illness

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Project Number: H133G050181
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 05 $149,796; FY 06 $149,832; FY 07 $149,431; FY 08 (No-cost extension through 9/30/2009)

Abstract: Little is known about long-term employment among people with severe and persistent psychiatric illnesses, such as schizophrenia or bipolar disorder, and vocational disabilities. Two small pilot studies suggest that a large proportion of these individuals, when exposed to effective vocational rehabilitation (VR) and supported employment services, do attain long-term jobs that are associated with greater independence, economic self-sufficiency, and recovery, but a prospective, longitudinal study is critically needed to confirm and amplify these findings. To address this issue, this study: (1) examines the longitudinal course of competitive employment (any competitive job) and long-term jobs (competitive employment lasting greater than one year) among people with severe mental illnesses; (2) details the impact of VR services, supported employment, and other services on long-term employment; and (3) examines the correlates of long-term employment, including independence, economic self-sufficiency, quality of life, and other aspects of recovery. The key objectives are to build a timeline of work, earned and other income, benefits, independent living, social functioning, symptom control, and quality of life over 15 years for each individual on the basis of multiple data sources; to link VR and other service records with employment outcomes by statistical means and by self-report; and to link employment outcomes with other manifestations of recovery, again by statistical means and by self-report. The project uses timeline methods, longitudinal data methods, and narrative self-reports to conduct these analyses. The outcomes of the study are to show that individuals with the most severe psychiatric disabilities are able to attain high rates of competitive employment and long-term employment, that VR and other services are critical to successful long-term employment, and that long-term employment is associated with independence, economic improvements, quality of life, and recovery.
Maximizing health and function among people with disabilities is critical to the achievement of NIDRR’s mission and the associated higher-order goals of employment and community participation. Functional ability reflects the complex interaction between individuals and the environments in which they live. Accordingly, NIDRR conceptualizes and examines issues of health and function at the individual and systems levels. Individual level research focuses on the development and testing of new interventions that improve functional and health outcomes for individuals. At the systems level, NIDRR-supported research focuses on the organization, and delivery of health care and medical rehabilitation services.

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Rehabilitation Research and Training Centers (RRTCs)
California

Rehabilitation Research and Training Center in Neuromuscular Diseases (RRTC/NMD)

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Project Number: H133B031118
Start Date: December 01, 2003
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 03 $800,000; FY 04 $800,000; FY 05 $800,000; FY 06 $800,000; FY 07 $800,000; FY 08 (No-cost extension through 11/30/2009)

Abstract: The purpose of the Rehabilitation Research and Training Center in Neuromuscular Diseases (RRTC/NMD) is to enhance the health, function, and quality of lives of persons with neuromuscular diseases (NMD). The goals of this project are to: (1) develop a program for multicenter rehabilitation research in NMD through the Cooperative International Neuromuscular Research Group (CINRG); (2) conduct research that continues to address rehabilitation needs, particularly related to exercise, nutrition, pain, secondary conditions, and the quality of life of individuals with neuromuscular diseases; (3) develop and evaluate new or emerging technologies and interventions that provide the information needed to improve employment, community integration, and quality of life outcomes for this population of individuals with disabilities; (4) develop and evaluate appropriate health promotion and wellness programs that enhance the ability of individuals with neuromuscular disease to be physically active and participate in recreational activities; and (5) conduct a comprehensive program of training, dissemination, utilization, and technical assistance activities that are well-anchored in the research program and address the needs of stakeholders.
Rehabilitation Research and Training Centers (RRTCs)
California

Rehabilitation Research and Training Center on Aging-Related Changes in Impairment for Persons Living with Physical Disabilities

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Project Number: H133B031002
Start Date: August 01, 2003
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 03 $700,000; FY 04 $700,000; FY 05 $700,000; FY 06 $700,000; FY 07 $700,000; FY 08 (No-cost extension through 7/31/2009)

Abstract: This project is a combined effort of Rancho Los Amigos National Rehabilitation Center and the University of California at Irvine, with other collaborators including the Center for Disability in the Health Professions at Western University and two Rehabilitation Engineering Research Centers. This project evolves from the fact that persons who have a disability are now living into middle age and late life in ever-increasing numbers. However, many of these people appear to be experiencing premature age-related changes in health and functioning. The project tests a model for improved understanding of these problems and interventions to help alleviate them. Persons who are experiencing these kinds of problems and their families are included in all center projects. The training, dissemination, and technical assistance activities include clinical training of current and future health providers, current and future researchers, persons with disabilities, their families, and policy makers. Both traditional methods of one-on-one and group training as well as technology-based distance training techniques are used to reach national audiences and under-served populations.
Rehabilitation Research and Training Centers (RRTCs)
District of Columbia

Rehabilitation Research and Training Center on Spinal Cord Injury:
Promoting Health and Preventing Complications through Exercise

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Project Number: H133B031114
Start Date: December 01, 2003
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 03 $800,000; FY 04 $800,000; FY 05 $800,000; FY 06 $800,000; FY 07 $800,000; FY 08 (No-cost extension through 11/30/2009)

Abstract: This project systematically and comprehensively addresses the role and impact of physical activity in the prevention of secondary conditions in people with spinal cord injury (SCI). Initially, the project establishes critical, yet-undefined physiological responses to exercise in SCI and comprehensively examines cardiovascular disease risk in individuals with SCI applying accepted guidelines used in the able-bodied population. The project develops exercise formats specifically designed according to severity of SCI and chronicity of SCI to address the prevention of and knowledge regarding osteoporosis and other secondary conditions. In addition, the project determines whether regular exercise is related to fewer secondary conditions. These research findings feed into four training activities that include a peer mentoring program for newly injured people with SCI, a consumer-driven education curriculum for physical therapy and medical students, a state-of-science and training conference, and the development of a virtual resource network on exercise and prevention. The RRTC is a collaborative effort of clinical and disability researchers, SCI consumer organizations, and independent living advocates. In addition to its offerings on www.sci-health.org, the RRTC maintains a Live Journal site at rrtc-sci.livejournal.com. In addition to other webcast accessible through the Multimedia pages on the sci-health.org website, the entire Fall 2006 State of the Science Conference is available on demand at www.sci-health.org/SOS/SOS.php.
Rehabilitation Research and Training Centers (RRTCs)
Illinois

Rehabilitation Research and Training Center on Technology Promoting Integration for Stroke Survivors: Overcoming Social Barriers

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345 East Superior Street
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Principal Investigator: Elliot J. Roth, M.D. 312/238-4637
Public Contact: Linda Lovell, Project Coordinator 312/238-6197; Fax: 312/238-6998

Project Number: H133B031127
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 03 $800,000; FY 04 $800,000; FY 05 $800,000; FY 06 $800,000; FY 07 $800,000; FY 08 (No-cost extension through 9/30/2009)
Abstract: This project develops and evaluates a sequence of robotic training and assistive devices that are designed with the idea of promoting efficient function in the workplace or at home, and with the further intent that they form a basis for the development of appropriate technologies to allow people with disabilities ready access to existing facilities in the community. At each stage, the project engages engineering students as a means to provide intensive effort for development of novel designs, but also to provide valuable opportunities for training students in the themes related to recovery of function and community integration of people with disabilities. Other projects at this center include: the use of emotionally expressive and narrative writing to facilitate coping and adaptation after stroke; computerized training for conversational scripts that facilitate access to the community and work force; and a consumer-directed, dynamic assessment methodology for evaluating community living and work participation environments and technologies for use by people who have had a stroke. In addition to these projects, the RRTC develops and evaluates a comprehensive plan for training directed to stroke survivors and their families, students, researchers, clinicians, and service providers. These approaches are implemented through a variety of mechanisms, including continuing education courses, web-based presentations, and intensive training in our research facilities.
Rehabilitation Research and Training Center on Enhancing the Functional and Employment Outcomes of Individuals Who Experience a Stroke

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Project Number: H133B080031
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 08 $849,813; FY 09 $849,514

Abstract: As new and better stroke treatments have become available, the number of stroke survivors living in the community has increased. Therefore, not only is there a need for further research on promising new interventions that promote health and function, but also a growing need for interventions that can be delivered in home and community settings. This project studies rehabilitation interventions and assessments focused on improved mobility and secondary conditions that have been designed with the intent of promoting efficient function in the workplace or at home. It also looks at the barriers and facilitators for return-to-work from the perspective of stroke survivors who are seeking employment. The RRTC research projects include: (1) a study of the effectiveness of stretching as hand therapy for sub-acute hemiparesis; (2) development of a low-cost, non-mechanized gait retraining device; (3) testing a self-management approach to community living, participation, and employment; (4) examining the barriers and enablers for return-to-work from the perspective of the of the individual who experienced the stroke; and (5) development of a return-to-work vocational assessment using virtual reality technology. For this project, the Rehabilitation Institute of Chicago has partnered with Northwestern University, the University of Illinois at Chicago, Washington University at St. Louis, Marquette University, and Archeworks, Inc, as well as the National Stroke Association and the National Aphasia Association.
Missouri Arthritis Rehabilitation Research and Training Center
(MARRTC)

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Principal Investigator: Jerry C. Parker, PhD
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Project Number: H133B031120
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 03 $800,000; FY 04 $800,000; FY 05 $800,000; FY 06 $800,000; FY 07 $800,000; FY 08 (No-cost extension through 9/30/2009)

Abstract: The purpose of the Missouri Arthritis Rehabilitation Research and Training Center (MARRTC) is to provide leadership at the national level in support of three key objectives: to reduce pain and disability, to improve physical fitness and quality of life, and to promote independent living and community integration for persons with arthritis of all ages in the United States. State-of-the-science rehabilitation research addresses the needs of persons with arthritis in the following areas: (1) home and community-based self-management programs, (2) benefits of exercise and physical fitness, and (3) technologies available to the broad populations of persons with arthritis in the environments where they live, learn, work, and play. The MARRTC conducts training and capacity-building programs for critical stakeholders within the arthritis disability arena, including consumers, family members, service providers, and policy makers. Additionally, the MARRTC provides technical assistance for persons with arthritis and other stakeholders in order to promote utilization of arthritis-related, disability research. The MARRTC also provides widespread dissemination of informational materials to persons with disabilities, their representatives, service providers, and other target audiences (e.g., editors and reporters).
Rehabilitation Research and Training Centers (RRTCs)
New York

Rehabilitation Research and Training Center on Traumatic Brain Injury Interventions

Mount Sinai School of Medicine
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Project Number: H133B040033
Start Date: October 01, 2004
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 04 $700,000; FY 05 $700,000; FY 06 $700,000; FY 07 $700,000; FY 08 $700,000

Abstract: The research program includes two randomized clinical trials (RCTs) and two projects supportive of better everyday interventions and better research: Research Study 1 (R1) is an RCT of a treatment for depression: cognitive behavioral therapy, adapted to address the unique cognitive and behavioral challenges of people with TBI that often pose barriers to treating depression, a major factor in reducing post-TBI quality of life, is compared to supportive therapy. In R2, a second RCT, a standard day treatment program is compared to a similar program (Executive Plus), augmented with modules to improve executive functioning and attention training. R3, Support for Evidence-Based Practice, evaluates all published research on post-TBI interventions and assessment of outcomes; it serves as a national resource for disseminating the results. It also implements three participatory action research-based analyses of high priority areas, including meta-analyses if appropriate. In addressing improved outcome measurement, R4 focuses on the PART instrument, a measure of participation currently being tested within eight TBI Model Systems. R4 focuses on creating a subjective approach to serve as a complement to the PART’s current focus on objective assessment. A major focus of the RRTC is placed on capacity building of clinical and research professionals to address the need for better day-to-day interventions in the lives of people with TBI. Often their medical needs are misread, their brain injury goes unidentified, and they find services and accommodations inappropriate. Capacity building focuses on students early in their educational career - to help shape career choice and points of view; graduate and post-graduate students; and practicing “gate keepers” in the community, primarily psychologists and physicians.
Rehabilitation Research and Training Center on Health and Wellness in Long Term Disability

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Project Number: H133B040034
Start Date: October 01, 2004
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 04 $700,000; FY 05 $700,000; FY 06 $700,000; FY 07 $700,000; FY 08 $700,000

Abstract: The vision of the RRTC is to contribute to the reduction of health disparities for persons with disabilities through an integrated program of research, training, technical assistance, and dissemination. The Center has three interrelated strands of work to address its three intended outcomes/goals: (1) identify strategies to overcome barriers that impede access to routine healthcare for individuals with disabilities; (2) identify interventions in areas such as exercise, nutrition, pain management, or complementary and alternative therapies that promote health and wellness and minimize the occurrence of secondary conditions for persons with disabilities; and (3) develop improved status measurement tool(s) to assess health and well-being of individuals with disabilities regardless of functional ability. In order to achieve these outcomes, the RRTC conducts a coordinated program of research and training activities using a logic model framework. RRTC projects summarize and validate existing research findings on barriers to health care access as well as rigorously test and compare new strategies to overcoming identified barriers. The RRTC also examines and evaluates the practices of exemplary generic and specialized health promotion programs for people with disabilities in order to create an evidence-based set of evaluation and planning criteria. In addition, the RRTC organizes and uses panels to assess current health status measurement tools and develops or refines measures to more accurately reflect the health and well-being of people living with disabilities. Throughout these activities the RRTC disseminates informational materials and provide technical assistance to individuals with disabilities, their representatives, providers, and other interested parties.
Multiple Sclerosis Rehabilitation Research and Training Center

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Project Number: H133B031129
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 03 $800,000; FY 04 $800,000; FY 05 $800,000; FY 06 $800,000; FY 07 $800,000; FY 08 (No-cost extension through 9/30/2009)

Abstract: This center conducts rehabilitation research that: (1) Develops new interventions and practices in the areas of disease suppression, strength enhancement, preserving employment, depression management, and pain control; (2) collects data from an extensive survey and explores complex interactions among multiple variables, models factors that predict differing levels of participation by people with multiple sclerosis (MS), and proposes points of intervention that modify changes in function; and (3) facilitates enhanced participation through training, technical assistance, and dissemination through professional meetings, publications, and a State-of-the-Science conference. In addition, a web-based knowledgebase provides technical assistance to individuals with MS and healthcare providers with respect to caregiver issues, financial and insurance planning, self-sufficiency and coping, and assistive technology.
Multiple Sclerosis Rehabilitation Research and Training Center

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Project Number: H133B080025
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 08 $850,000

Abstract: This project conducts a comprehensive program of research on issues critical to individuals living with multiple sclerosis (MS) in the areas of outcomes measurement, improved medical and community interventions, and improved employment outcomes. The project includes three coordinated core areas of research designed to enhance function and employment in individuals with MS. Program I: The Outcomes Measurement core includes a longitudinal study of 400 people with MS of secondary conditions such as pain, fatigue, depression, and cognitive impairment and outcomes such as participation including employment. This program uses modern psychometric techniques to evaluate measures of these and other secondary conditions, develop cross-walking tables to allow comparison of scores across measures, and compare levels of pain, fatigue, and depression in MS to norms of the general population and other disability groups. Program II develops improved medical or community rehabilitation interventions by conducting a randomized controlled trial of individualized self-management training delivered by telephone to reduce secondary conditions such as fatigue and pain with a generic psychoeducational intervention for control. This program evaluates the impact on participation, including employment, in addition to evaluating reduction in interference from secondary conditions. Program III improves employment outcomes of persons with MS by examining the national RSA 911 database to identify process and outcome variables associated with successful vocational rehabilitation (VR) closures. Qualitative interviews are conducted with federal state VR counselors to understand their perspectives on VR services and MS. Longitudinal data on employment is analyzed to evaluate changes in employment status over time. Researchers conduct follow-up surveys about impact of accommodation services on employment with 200 recipients of services from MS Employment Assistance Service. The result is best practices and recommendations for improved employment services.
Rehabilitation Research and Training Center on Aging with a Physical Disability: Reducing Secondary Conditions and Enhancing Health and Participation, Including Employment

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Project Number: H133B080024
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Margaret Campbell, PhD
NIDRR Funding: FY 08 $850,000

Abstract: The goal of this center is to foster a better understanding of the challenges faced by those aging with a physical disability. The project focuses on four populations of persons with disabilities: persons with spinal cord injury (SCI), multiple sclerosis (MS), post-polio syndrome (PPS), and muscular dystrophy (MD). The project: (1) enhances understanding of the natural course of aging with these disabilities through a series of longitudinal surveys to examine the effects of aging in the development of secondary conditions; (2) develops and evaluates measures of key outcome domains for use with individuals aging with SCI, MS, PPS, and MD utilizing cross-population and cross-measure analyses to evaluate the psychometric properties of instruments used in disability research, as well as to develop better measures of depression, fatigue, participation, and pain; (3) tests the efficacy of two innovative interventions that enhance the health and participation in these populations, using remote monitoring of activity levels and a pilot intervention featuring remote prompting to enhance self-management of activity patterns; (4) enhances understanding of the experiences of individuals aging with SCI, MS, PPS, and MD in the workplace and with vocational rehabilitation and employment services through secondary data analysis and qualitative interviews; and (5) disseminates the findings from the research projects in an effective and efficient manner to individuals with disabilities, their family members, and their health care providers.
Rehabilitation Engineering Research Centers (RERCs)
California

Rehabilitation Engineering Research Center for Successful Aging with Disability: Optimizing Participation Through Technology (OPTT-RERC)

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Project Number: H133E080024
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Margaret Campbell, PhD
NIDRR Funding: FY 08 $950,000

Abstract: The goal of this project is to enhance the lives of individuals aging with and into disability through: (1) development and delivery of cutting-edge technologies for identification, evaluation, and rehabilitation of motor processes that facilitate or impede functional performance, employment, and community participation for the intended beneficiaries; (2) employment of state of the art data management, dissemination, and performance evaluation techniques to ensure that the knowledge and products emergent from the RERC are accessible for all intended beneficiaries; (3) assembly of a multidisciplinary team of experts in clinical rehabilitation, engineering, and gerontology, along with a select group of technology partners, and disability advocates to ensure that OPTT-RERC’s short- and long-term outcome goals are successfully implemented; and (4) alignment of the clinical and technological strengths of several area programs into an integrated infrastructure to provide training opportunities for future rehabilitation researchers. The Dexterous Manipulation with the Fingertips Project evaluates a clinically useful metric and rehabilitation strategy for dynamic multifinger dexterity (R1) and, in collaboration with the second project area, develops a home-use gaming system to promote retention and improvement of dexterous manipulation via immersion technologies (D1). The Virtual Reality (VR) and Gaming for Home-Based Motor Assessment and Training Project develops low cost, home-based VR toolkits (VRT) for motor assessment and rehabilitation (D2) and investigates the efficacy of the VRT games for use in both the clinic setting and the home for individuals aging with and into disability (R2). The Optimizing Mobility in the Home and Community for Manual Wheelchair Users Project identifies optimal transfer and lifting mechanics to preserve the shoulder complex (R3) and uses VRT games for targeted and progressive shoulder exercise while sitting in a wheelchair (D3). The Neuromuscular Electrical Stimulation (NMES) for Mobility uses implantable wireless micro-stimulators to prevent recurrences of debilitating pressure ulcers in the middle age and older individuals with disability (D4).
University of Alabama at Birmingham (UAB) Traumatic Brain Injury Model System (UAB TBIMS)

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Project Number: H133A070039
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $434,398; FY 08 $434,399

Abstract: This project provides rehabilitation services specifically designed to meet the special needs of individuals with traumatic brain injury (TBI) through a multidisciplinary, comprehensive model system which spans the clinical continuum from emergency services through rehabilitation and community re-entry. The project includes one collaborative research module and one in-house research project, aimed at improving the health and function, as well as the community participation of the individuals with TBI. The collaborative research module involves examination of the risks and consequences of weight gain after TBI, which has never been explored in depth. The in-house research project focuses on an in-home training program to improve visual perceptual speed that could impact return to driving.
Northern California Traumatic Brain Injury Model System of Care

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Project Number: H133A070038
Start Date: October 07, 2007
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 07 $426,720; FY 08 $426,720

Abstract: This project conducts research with a focus on fatigue in individuals with traumatic brain injury (TBI). Current studies have identified a strong association of fatigue with sleep disorders, depression, pain, and cognitive challenges; the prevalence of pituitary dysfunction is high in this group as well but the level of dysfunction is not proportional to levels of fatigue. This site specific research effort is a prospective, randomized, single-blind crossover study that evaluates the impact of a graduated physical activity program on fatigue and related factors of depression, sleep quality/daytime drowsiness, cognitive function, and general health measures.
UCHSC Burn Model System Data Coordination Center (BMS/DCC)

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Project Number: H133A070006
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 07 $300,000; FY 08 $300,000

Abstract: The Burn Model System Data Collection Center (BMS/DCC) provides scientific and technical support to the Burn Model Systems’ mission, which is “to conduct research that contributes to evidence-based rehabilitation and clinical interventions as well as develop practice guidelines that improve the lives of individuals with burn injuries.” The BMS/DCC addresses four important areas in rehabilitation research: project design and management, data management and quality, scientifically appropriate analytical support, and broad dissemination for long-term impact. The data center strives to provide quality support by developing integrated information systems, providing professional consultation, and designing and delivering dedicated training programs. The primary goal is to improve the scientific rigor of clinical and rehabilitation research in the area of burn injury. Areas of specific concern include: collecting multi-site longitudinal outcomes data; coordinating multi-center research data; providing analysis and oversight to achieve scientifically sound multi-center collaborative and site-specific clinical and rehabilitative research; collaborating with other National Data and Statistical Centers to exchange ideas and ensure the most efficient operations; publishing scientifically rigorous articles; and coordinating other effective dissemination strategies. The BMS/DCC consists of two functionally independent but related units, a data administration core and an analytical core. The data administration core continues to support and manage the BMS Level 1 (National) Database while implementing the necessary improvements to ensure quality and scientifically sound data for burn research. In addition, the data administration core implements web-based data collection and research support tools for collaborative modules and, as needed, assists in the conduct of the site-specific research studies. The analytical core provides statistical support (analysis, consultation, study-design, and study implementation) for projects that use either Level 1 data or data generated from collaborative and site-specific research.
Disability and Rehabilitation Research Projects
Colorado

Collaborative Spinal Cord Injury Model Systems Centers Program:
Improving Spinal Cord Injury Rehabilitation Outcomes

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Principal Investigator: Gale G. Whiteneck, PhD
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Project Number: H133A060103
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 06 $2,200,000; FY 07 $900,000; FY 08 $900,000

Abstract: Inpatient rehabilitation for spinal cord injury (SCI), like all of rehabilitation, has been studied largely as an undifferentiated black box. Research has examined the whole “rehabilitation package” but has not addressed which specific therapy interventions, medical procedures, patient education, counseling, or activities are effective when offered in various combinations or sequences, for specific types of patients and impairments. To address this limitation, this project uses Clinical Practice Improvement (CPI) research methodology to isolate specific components of rehabilitation interventions, and to determine how, and to what degree, each component is associated with outcomes. Specific aims are to: (1) identify individual patient characteristics, including demographic data, severity of spinal cord injury, and severity of illness (complications and comorbidities), that explain significant variation in the outcomes of acute rehabilitation for SCI; (2) identify specific medical/nursing procedures and therapy interventions, or combinations of procedures and interventions that are associated with better outcomes, controlling for patient characteristics; and (3) determine whether specific impairment-by-treatment interactions are associated with better outcomes.

This project is a collaborative research partnership with five other prominent SCI rehabilitation facilities: Rehabilitation Institute of Chicago, Shepherd Center, Mt. Sinai Medical Center, National Rehabilitation Hospital, and Carolinas Rehabilitation. Also collaborating is the Institute for Clinical Outcomes Research at International Severity Information Systems in Salt Lake City, Utah, which has extensive experience applying CPI methodology, and MobileDataForce in Boise, Idaho, with expertise in handheld data capture technology.
The National Data and Statistical Center for the Traumatic Brain Injury Model Systems

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Project Number: H133A 060038
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 06 $625,000; FY 07 $625,000; FY 08 $625,000

Abstract: By implementing a comprehensive and innovative program of new data management technologies and operating procedures that emulate the best practices of clinical research organizations and data coordinating centers, the National Data and Statistical Center (NDSC) increases the rigor and efficiency of scientific efforts to longitudinally assess the experience of individuals with traumatic brain injury (TBI) and advances TBI rehabilitation. The TBIMS database and the NDSC introduce the following innovations: a state-of-the-art, web-based data management system; a computer-assisted interview system; a Standard Operating Procedures Manual; training through quarterly web-based conferences, as well as more frequent in-person conferences; comprehensive Data Collector certification; annual data monitoring visits to each center; analysis of ethnic/racial bias in participant recruitment and retention and collaboration with the NIDRR-funded Center for Capacity Building on Minorities with Disabilities Research; providing more comprehensive methodological as well as statistical consultation; continuation of the TBIMS survival study; a system for following participants from defunded centers; and the use of common procedures, technologies, and training among all Model System Data Centers.
The Rocky Mountain Regional Brain Injury System (RMRBIS)

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Project Number: H133A070022
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 07 $426,720; FY 08 $426,720

Abstract: The Rocky Mountain Regional Brain Injury System (RMRBIS) conducts two site specific research projects, participates in three collaborative research modules, contributes to the longitudinal TBI National Database, and maintains a TBI Model System of care and research. Research Project R1: Atomoxetine (Strattera) for the treatment of attention disorders in individuals with TBI determines if the only drug approved for attention deficit hyperactivity disorder improves attention, behavioral functioning, and depression in individuals with TBI, using a randomized double-blind placebo-controlled crossover study design. Research Project R2: A health and wellness intervention for individuals with TBI, evaluates a specific, replicable small-group educational approach to improve health-related self-efficacy, health promoting behaviors, and health-related quality of life in individuals with TBI using a randomized wait list control group study design. If effective, this intervention could improve the health and wellness of the many people with secondary conditions and less than healthy lifestyles after TBI. Collaborative Module 1: Sexuality after TBI examines the frequency, type, and severity of changes in sexual function associated with TBI. Collaborative Module 2: Natural history of headache after TBI investigates incidence, prevalence, and types of headache after TBI. Collaborative Module 3: Enhancing Core dataset to expand research on environmental influences affecting outcomes from TBI evaluates the feasibility, reliability, and utility of recording geographic identifiers for place of residence after TBI.
Health Services Research DRRP on Medical Rehabilitation

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Project Number: H133A 030807
Start Date: July 01, 2003
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 03 $300,000; FY 04 $300,000; FY 05 $300,000; FY 06 $300,000; FY 07 $300,000; FY 08 (No-cost extension through 6/30/2009)

Abstract: This research addresses the need to improve the delivery of health services to persons with disabilities by (1) evaluating the impact of Medicare’s inpatient rehabilitation facilities’ (IRF) prospective payment system (PPS) on access to rehabilitation services in terms of settings, services, and length of stay; and (2) identifying the impact of comorbidities on how patients are classified and reimbursed under the new IRF PPS. Medicare’s new PPS for IRF may limit effective access to care because facilities will take fewer risks with patients deemed to be “high cost outliers,” hire more “therapy extenders” rather than licensed professionals, and discharge patients at a higher rate to nursing facilities rather than to community settings. The four specific aims of the research are to: (1) examine changes in the organization of medical rehabilitation services in response to prospective payment; (2) examine changes in patient access to medical rehabilitation settings and services resulting from organizational responses to the change in reimbursement; (3) examine the impact of PPS-related changes in service delivery on patient outcomes; and (4) identify the impact of comorbidities on classification and reimbursement in medical rehabilitation PPS.
Reducing Obesity and Obesity-Related Secondary Conditions in Adolescents with Disabilities

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Project Number: H133A060066
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Margaret Campbell, PhD
NIDRR Funding: FY 06 $250,000; FY 07 $250,000; FY 08 $250,000

Abstract: This project examines the antecedents and consequences of obesity using the ICF framework that addresses both person and environment contextual factors that relate to obesity in adolescents with disabilities; evaluates the validity and utility of an alternative approach for establishing more accurate cutoff points for overweight and obesity in adolescents with disabilities; develops a pilot intervention using an innovative personalized exercise and nutrition program (PEP-for-Youth) for managing obesity among youth with physical and developmental disabilities; and develops mutually beneficial working partnerships with community-based organizations to promote reduction of obesity in youth with disabilities. The research projects operate in partnership with Shriners Hospitals for Children and five national disability organizations (Easter Seals, United Cerebral Palsy, Spina Bifida Association, the Arc, and Blaze Sports America).
Midwest Regional Traumatic Brain Injury Model System: Innovative Approaches to Improve Cognition, Function, and Community Living

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Project Number: H133A 080045
Start Date: October 01, 2008
Length: 48 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $418,139

Abstract: The Midwest Regional Traumatic Brain Injury Model System (MRTBIMS) accomplishes several important objectives in support of an interdisciplinary, multidimensional center focused on providing and improving care for people with traumatic brain injury (TBI). MRTBIMS establishes a coordinated, multilevel, interdisciplinary system of care for people with TBI, including pre-hospital, emergency, acute, long-term acute, intensive rehabilitation, and community care. This continuum of care is provided at Northwestern Memorial Hospital, RML Specialty Hospital, and the Rehabilitation Institute of Chicago and its System of Care. Data is submitted on at least 100 TBI patients per year to the National TBI Database. Research plans include implementation of two site-specific research projects, which consist of clinical trials on the effectiveness of acupuncture to improve sleep in TBI patients and on the effectiveness of a virtual reality robotics program to improve attention and concentration in TBI patients. The Center is engaged in dissemination of educational and other materials on TBI to a variety of target audiences, including persons with TBI and their families, professionals who care for patients with TBI, and the public—collaborating with the Brain Injury Association of Illinois and other NIDRR-funded centers as appropriate.
Johns Hopkins University Burn Injury Rehabilitation Model System (JHU-BIRMS)

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Project Number: H133A070045
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $362,500; FY 08 $362,500

Abstract: The Johns Hopkins University-Burn Injury Model System (JHU-BIRMS) includes three projects: two site-specific randomized, controlled trials (RCT), and one multi-site collaborative study. The first site-specific project is an RCT to test the efficacy of an innovative “Augmented Exercise Program” in enhancing recovery of strength and endurance in those with generalized deconditioning. Preliminary results demonstrate that this 12-week, 36-session conditioning regimen, relative to baseline and to usual care, significantly improves aerobic conditioning. The second site-specific project is an RCT to test the effectiveness of an intervention entitled “Safety, Meaning, Activation, and Resilience Training” (SMART). SMART is a four-session intervention that aims to reduce acute psychological distress and sleep disturbance and to thereby prevent chronic psychiatric disorders and disability. Pilot data show that SMART effectively reduces post-trauma distress, sleep disturbance, and depression. The third project is a multi-site collaborative module entitled “Long-Term Follow-up of the National Database Sample” that extends follow-up to five years post-burn. The NIDRR funded Burn Model System national database provides an unprecedented opportunity to conduct a prospective, multi-site study to assess the long term needs of burn survivors. The Johns Hopkins Burn Center continues to contribute to the Burn Model System national database, as well.
Michigan Traumatic Brain Injury Model System (SEMTBIS)

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Project Number: H133A080044
Start Date: October 01, 2008
Length: 48 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $438,074

Abstract: SEMTBIS focuses on the following major areas: research, education, clinical and systems analysis studies, collection and dissemination of data, and promotion of professional development for individuals with disabilities as well as their family members or caregivers. Two studies address enhancement of health and function of persons with traumatic brain injury (TBI). Projects evaluate the predictive validity of three newly developed brain magnetic resonance imaging (MRI) techniques with respect to functional independence, level of disability, and neurobehavioral outcomes at one and two years post-injury; and examine the safety and efficacy of an antibiotic medication that is thought to positively influence neuroplasticity in the acute stages of recovery from TBI. SEMTBIS recruits, educates, and promotes professional development of individuals with disabilities as well as their family members or caregivers; with consumer involvement in the advisory board and as project staff. SEMTBIS continues to participate in clinical and systems analysis studies of the TBIMS by collecting and contributing data to a uniform, standardized national database on patient characteristics, diagnoses, causes of injury, interventions, outcomes, and costs. Evaluation of these research projects and the overall operations of the SEMTBIS employs a multifaceted approach of quantifiable and objective procedures.
Health Care Coordination for Individuals with Physical Disabilities: Critical Elements and Consumer Outcomes

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Project Number: H133A080049
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 08 $277,233

Abstract: This project creates new knowledge about health care coordination within Minnesota’s Special Needs Basic Care (SNBC) program. Project activities include establishing and testing an operational definition of health care coordination for adults with physical disabilities and examining the extent to which the various components of health care coordination enhance access to health care, improve health outcomes, and create cost savings. The project uses a Participatory Planning and Decision Making process and key informant interviews to identify, classify, and richly describe care management models used in SNBC as well as the critical components of effective care coordination. Cognitive testing and reliability and validity assessment are used to modify several instruments to measure the elements of managed care and managed care outcomes for persons with physical disabilities. Finally, a combination of survey research (in-person interviews) and analysis of secondary data sets (Centers for Medicaid and Medicare utilization information, and Minnesota Department of Human Services assessment and utilization data) is used to examine managed care outcomes for a total of 350 individuals participating in the SNBC program, taking into account variables such as type and severity of disability (including the presence of dual diagnoses), urban or rural location, age, and other demographic characteristics known or hypothesized to be associated with health care access, outcomes and costs. The impact of care coordination models is tested on several outcomes including health care access (Health Care Quality Scale, annual DHS mandated health care accessibility survey results), outcomes (including but not limited to health care self-direction, stress, disability impact), and costs. Products from this line of research include an operational definition of the elements of care coordination, validated reliable instrumentation to measure elements of care coordination, and academic and research-to-practice publications describing the impact of care coordination on access to health care, health care outcomes, and cost.
Mayo Clinic Traumatic Brain Injury Model System

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Project Number: H133A070013
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 07 $423,590; FY 08 $423,590

Abstract: The purpose of the Mayo Clinic Traumatic Brain Injury Model System (TBIMS) is to provide comprehensive, integrated, team-based rehabilitation care and education to individuals with traumatic brain injury (TBI), their families, and significant others along the continuum of recovery and to fill gaps in research knowledge and service delivery through clinical research that promotes full personal and social participation. The Mayo Clinic TBIMS conducts one site-specific project. This project, an Advocacy Training Clinical Trial (ATCT), targets the gap in knowledge concerning the most efficacious method of teaching effective self and system advocacy skills. The goal of the ATCT is to identify efficacious advocacy training methods using a randomized practical behavioral trial methodology in three Midwest states. Objectives of the ATCT are threefold: (1) develop TBI specific measures of advocacy activity, perceived control, and self efficacy; (2) implement, evaluate, and continuously improve upon the ATCT; and (3) assess the statewide impact of the ATCT on greater communities, public policy, systems change, and in the media. The ATCT is designed to establish a sustainable program of efficacious and effective advocacy training in the trial communities, and provide a model for implementation in other communities.
A Multicenter Prospective Randomized Controlled Trial of the Effectiveness of Amantadine Hydrochloride in Promoting Recovery of Function Following Severe Traumatic Brain Injury

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Project Number: H133A031713
Start Date: January 01, 2004
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 03 $599,862; FY 04 $599,994; FY 05 $599,994; FY 06 $599,994; FY 07 $599,994; FY 08 (No-cost extension through 12/31/2009)

Abstract: In this study, eight facilities (three of which are also Traumatic Brain Injury [TBI] Model Systems), join with a Data Coordinating Center at Columbia University, to conduct a prospective double blind randomized controlled trial of amantadine. More than 180 patients who remain in vegetative state (VS) or minimally conscious state (MCS) 4-16 weeks post-TBI are randomized in a stratified fashion to 4 weeks of amantadine (200-400 mg/day) vs. placebo, followed by a 2-week washout period. The Disability Rating Scale is the primary dependent variable with the Coma Recovery Scale-Revised serving as a supplementary measure. The project also explores whether treatment response differs by time post-injury and by diagnosis (i.e., VS or MCS) at treatment onset, and whether specific outcomes of importance to caregivers are achieved more often in the amantadine group.
JFK-Johnson Rehabilitation Institute TBI Model System

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Project Number: H133A070030
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $419,921; FY 08 $419,921

Abstract: Site-specific research represents a sustained investigation of cerebral activation in patients with disorders of consciousness (DOC): vegetative state (VS) and minimally conscious state (MCS). At present, clinical judgment and experience guide diagnostic, prognostic, and treatment decisions for individuals with DOC. Prior research on fMRI activation patterns suggests that patients in MCS retain the neural circuits for receptive language and visual processing. This project tests a novel fMRI protocol that is designed to reliably detect conscious awareness in patients who may be unable to execute behavioral signs of active cognitive processing, using a hierarchical stimulation paradigm that systematically assesses levels of cognitive processing in the auditory and visual systems. In light of provocative findings suggesting that cognitive processing may be maintained in patients who appear to be unconscious on bedside examination, the investigation is extended to individuals with VS as well as those in MCS. A collaborative module extends prior investigations of the effectiveness of specialized, post-acute brain injury rehabilitation. This project is driven by the question of how to characterize the course of post-acute brain injury rehabilitation, and its impact on the long term outcomes of people with brain injuries. Although there is increasing evidence that postacute brain injury rehabilitation can improve functional outcomes after TBI, population-based outcome studies have generally not considered the influence of different pathways of postacute rehabilitation on outcomes after TBI. A longitudinal, observational study characterizes postacute rehabilitation in the TBI Model System, and examines the pathways of postacute rehabilitation in relation to casemix variables, patterns of service utilization, barriers to service delivery, and participants’ perceived needs and satisfaction with treatment. This collaborative project examines the contribution of postacute rehabilitation to functional and psychosocial outcomes at one and two years after injury using multivariate analyses and causal modeling.
Disability and Rehabilitation Research Projects
New Jersey

Northern New Jersey Traumatic Brain Injury System (NNJ TBIS)

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Project Number: H133A 070037
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $423,590; FY 08 $423,590

Abstract: The Northern New Jersey Traumatic Brain Injury System (NNJ TBIS) conducts both a site-specific research study and a collaborative research module. These projects, both related to ongoing NIH-funded studies, contribute to evidence-based rehabilitation interventions and quality of life measurement to improve the lives of individuals with TBI, as follows: (1) An innovative, double-blind, randomized controlled trial of a cognitive rehabilitation intervention utilizing a proven methodology shown to be effective with the multiple sclerosis population; and (2) a collaborative module that adapts, develops, and validates an innovative quality-of-life outcome measurement system for use in TBI intervention research. Each of these projects has been subjected to initial pilot testing to assure the applicability and feasibility of the methodology. The evaluation of this project is guided by a multifaceted approach, which uses a highly quantifiable, objective means of evaluating progress. This is supplemented by a Community Advisory Board, NNJ TBIS Steering Committee, and an external Scientific Advisory Board, which provides feedback on a quarterly, annual, and bi-annual basis, respectively. In addition, project management staff meets internally on a regular basis to review data management and data quality issues and assure effective communication with Kessler Institute for Rehabilitation (KIR) and staff from the trauma centers. Finally, the NNJ TBIS coordinates with the NIDRR-funded Model Systems Knowledge Translation Center at the University of Washington to provide scientific results and information for dissemination to clinical and consumer audiences. The NNJ TBIS is a cooperative effort of the Kessler Medical Rehabilitation Research and Education Center (KMRREC), KIR, and trauma centers from the University of Medicine and Dentistry of New Jersey - The New Jersey Medical School (UMDNJ-NJMS), Hackensack University Hospital, Morristown Memorial Hospital, and St. Joseph's Hospital.
New York Traumatic Brain Injury Model System (NYTBIMS)

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Project Number: H133A070033
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 07 $419,921; FY 08 $419,920
Abstract: The research program of The New York Traumatic Brain Injury Model System (NYTBIMS) aims to advance the understanding of TBI and develop better methods of treating secondary conditions of TBI, especially fatigue, mood, cognition, and sleep disorders. Research goals of this project are to: (1) demonstrate and evaluate a multidisciplinary system of care for persons with TBI in the New York City metropolitan area, including a number of innovative clinical programs; (2) contribute longitudinal data to the National Database of the TBI Model Systems program; and (3) conduct one module and two local studies to: (a) systematically study sleep architecture, insomnia, and other types of sleep disorders after TBI, to better understand post-TBI fatigue; and (b) evaluate the effectiveness of exercise as a treatment of post-TBI fatigue, mood, and cognition. Dissemination, education, and training activities constitute the third component of the NYTBIMS, including a policy newsletter, expanded web-based information, journal publications, presentations at national and local meetings, a newsletter for consumers, and several formal educational and training programs, including training of physiatric residents as well as interns and postdoctoral researchers in psychology.
Classification and Measurement of Medical Rehabilitation Interventions

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Project Number: H133A080053
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 08 $350,000

Abstract: The development of a Rehabilitation Treatment Taxonomy (RTT) covering all treatments (experience-based, medications, education, assistive devices, etc.) delivered in medical rehabilitation is a multi-year, multidisciplinary process requiring the interweaving of many different conceptual and empirical steps, which needs to be guided by an overall blueprint to direct and link individual efforts. This project develops such a blueprint, and performs research to explore strategies and methods that are needed to create and test the full RTT. Specifically, in phase 1, the project scrutinizes existing treatment literature for theories that underlie treatment; develops a theoretical framework; specifies performance requirements and practical constraints for an RTT; and reviews existing ad-hoc classifications for SCI, TBI, stroke, and joint replacement rehabilitation for practicality. Researchers plan to present the resulting blueprint for feedback at an interdisciplinary conference with representatives of all rehabilitation disciplines, revised as necessary in response to feedback, and, in phase 2, used to develop two partial taxonomies: (a) of interventions to improve ambulation in persons with neurological disorders, and (b) of treatments of executive dysfunction after acquired brain injury. Evaluation of the process of development and operationalization of the taxonomy is used to modify, expand, and enhance the blueprint. A second interdisciplinary conference is used to present the modified blueprint to the rehabilitation field and obtain input on directions the field needs to take to develop the entire RTT.
Carolinas Traumatic Brain Injury Rehabilitation and Research System (CTBIRRS)

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Project Number: H133A070042
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $438,571; FY 08 $438,571

Abstract: The Carolinas Traumatic Brain Injury Rehabilitation and Research System (CTBIRRS) is a comprehensive service delivery and research system serving individuals with traumatic brain injury (TBI). The System begins with prevention and emergency medical services and extends through intensive care, acute care, and comprehensive medical rehabilitation to long-term follow-up, community reintegration, and vocational rehabilitation. The research of this Model System focuses on the challenging problem of post-traumatic irritability and aggression using a comprehensive, rigorous approach to generate and disseminate new knowledge on this high impact, pervasive, and understudied problem. This approach to understanding irritability entails two randomized, controlled studies that build on a solid base of prior research by the investigators in this area: (1) a multi-center module study: “A Multi-Center, Parallel-group, Randomized, Double-Blind, Placebo-Controlled Trial of Amantadine Hydrochloride for the Treatment of Chronic TBI Irritability and Aggression: A Replication Study”; and (2) a local research study: “Carbamazepine for the Treatment of Chronic Post-TBI Irritability and Aggression: A 42-day Single-Site, Forced-Titrati, Parallel-Group, Randomized, Double-Blind, Placebo-Controlled Trial.” The research studies were developed with in-depth input from the TBI community, with a solid plan for continued input along the course of the project through all aspects including research implementation, interpretation of findings, knowledge translation, project planning, and evaluation. The evaluation plan is directly linked to the target impacts, and provides a list of clear criteria to facilitate project administration, judge success, ensure dissemination of findings, and provide iterative feedback. CTBIRRS utilizes innovative means of knowledge translation to target audiences (consumers, providers, researchers, third party payers, policy makers), including a consumer conference, provider skill packs and workshops, fact sheets, tip cards, surveys of current practices, peer-reviewed publications, scholarly presentations, and evidence-based reviews. The project evaluates target familiarity with the subject matter and product usefulness. The CTBIRRS project collaborates with the Model System Knowledge Translation Center to disseminate materials that integrate project findings within the larger body of research on post-TBI behavioral management.
TBI Model System Collaborative Study of Amantadine for Post TBI Irritability and Aggression

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Project Number: H133A080035
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $855,000

Abstract: This study focuses on the challenging problem of irritability (primary aim) and aggression (secondary aim) in post-traumatic brain injury by using a rigorous approach to generate and disseminate new knowledge on this high impact, pervasive, and under-studied problem that affects approximately 29-71 percent of individuals with traumatic brain injury (TBI). Building upon prior research, project goals include: (1) assess the effect of amantadine for 28 days at reducing TBI irritability; (2) assess the effect of amantadine for 28 days at reducing TBI aggression; (3) assess the effect of amantadine for 60 days on TBI irritability and aggression; and (4) assess the effect of amantadine on cognitive function following TBI. Continuous input from the TBI community is incorporated into the development and implementation of the project, and throughout the course of this project in the areas of research implementation, interpretation of findings, knowledge translation, project planning, and evaluation. Additionally, this project is a collaborative research partnership between five other prominent TBI research centers: University of Washington, The Institute for Rehabilitation and Research, The Ohio State University, Kessler Institute for Rehabilitation, and Spaulding Rehabilitation Hospital. The knowledge generated by this project benefits those living with TBI by increasing awareness through targeted products and training with healthcare providers, consumers, researchers, vocational counselors, independent living providers, third party payers, and policy makers.
Ohio Regional TBI Model System

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Project Number: H133A070029
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 07 $434,393; FY 08 $434,354

Abstract: This project includes one local research project and a collaborative research module. The local project is an extension of two previous randomized clinical trials in which a targeted financial incentive was found efficacious for engaging and retaining persons with traumatic brain injury (TBI) in substance abuse treatment. The current study investigates the efficacy of a financial incentive for engendering attendance at work as persons with TBI and substance use disorders initiate employment. The collaborative research module replicates and extends a preliminary study recently completed at OSU. That project used geographic identifiers to compile data about the social and economic characteristics of a person’s neighborhood. Researchers then examined the contribution of these environmental factors to outcomes from TBI. The current module contributes to an evaluation of the utility of adding a geographic identifier, based on a person’s residence at follow-up, to the TBI Model Systems National Dataset. With this identifier, future Model Systems researchers could access an ever-growing array of information about the environment and link it to Model Systems data about an individual’s outcome. Dissemination efforts include “SynapShots”, an educational website produced with the Brain Injury Association of America, and a systematic review of Screening and Brief Interventions for the Model Systems Knowledge Translation Center.
Individualized Planning for the First Year Following Acute Rehabilitation Project

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Project Number: H133A080023
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $854,780

Abstract: This project is a multi-center research partnership among the Ohio Regional TBI Model System, the Institute for Clinical Outcomes Research in Salt Lake City, Utah, and the TBI Model Systems National Data and Statistical Center and the Rocky Mountain Regional Brain Injury System at Craig Hospital in Colorado. This project conducts a Clinical Practice Improvement (CPI) study of individual differences in demographic characteristics, pre-morbid status, injury-related conditions, and medical course that differentially predict the effectiveness of rehabilitation interventions on functional independence, participation, and subjective well-being up to one year following traumatic brain injury (TBI). Incorporating data collected for the NIH-funded CPI study, this project focuses on acute rehabilitation, and on the recovery processes occurring after discharge from rehabilitation. CPI methodology studies naturally occurring differences in treatment practices in order to identify individual differences in treatment effectiveness. It allows a large number of intervention-by-impairment interactions to be examined, while individual patient differences, including severity of TBI and medical complications, are controlled. Data is collected at 11 TBI rehabilitation programs in the United States and Canada: Ohio Regional TBI Model System, Carolinas TBIMS Model System, New York TBIMS at Mt. Sinai, National Rehabilitation Hospital, Shepherd Center, Intermountain Medical Center, Rush University Medical Center, Brooks Rehabilitation Hospital, Loma Linda University Rehabilitation Institute, Montreal Rehabilitation Institute, and the Toronto Rehabilitation Institute. Research subjects are 2,315 consecutive, consenting patients admitted for rehabilitation of a moderate or severe TBI. Interviews occur at three and six months post-discharge and one year post-injury allowing for detailed characterization of change during the first year of recovery.
Disability and Rehabilitation Research Projects
Oregon

Health and Health Care Disparities Among Individuals with Disabilities

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Project Number: H133A 080031
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 08 $450,000

Abstract: The Health Disparities Project generates new knowledge about health access and health outcomes, and translates and disseminates the findings for researchers, policy makers, and others. Assisted by an assembled national expert panel and other key project staff, the project determines working definitions, key questions, and analytic models for the studies. Disability perspectives are integrated throughout the project process from development of the research hypotheses and selection of design to analysis of data. This project has four major components: (1) review and synthesize existing health and health care access among individuals with disabilities and subgroups of individuals with disabilities; (2) use the Medical Expenditure Survey data to perform two series of logistic regression and path analysis modeling studies; the first series of studies determines models of systems level, environmental level, and individual level factors that relate to health care access among persons with a range of disabilities; the second series extends these analyses to determine models of health outcomes for persons with a range of disabilities; (3) utilize research findings in future research, program, and policy development through proactive and passive dissemination methods; and (4) integrate project activities to ensure the field of health disparities research advances beyond documentation to explanation, and opportunity for resolution.
The Moss Traumatic Brain Injury Model System

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Project Number: H133A070040
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $434,399; FY 08 $434,399

Abstract: The Moss TBIMS includes two site-specific research projects embedded within a state-of-the-art traumatic brain injury (TBI) treatment and clinical research facility. Project 1 is a placebo-controlled pilot study of the effects of dextroamphetamine (DEX) on attention, engagement in therapy, cognitive and motor speed, and other outcomes in subacute TBI. This project also examines the possibility that DEX accelerates the pace of functional recovery in the subacute phase. Project 2 is a cross-national collaboration with a specialty TBI service in a Copenhagen hospital, which has many similarities to the Moss TBIMS in terms of patient mix, treatment philosophy, and cultural milieu. The Copenhagen facility provides significantly longer and, in some respects, more intensive inpatient care and rehabilitation compared to Moss (and other US rehabilitation facilities), even for patients with comparable injury severity. This affords a natural experiment in which persons with TBI treated at the two facilities are compared on a range of 6- and 12-month outcomes, including functional status, emotional well-being and quality of life, and caregiver burden. The Moss TBIMS also collaborates in multi-center longitudinal database research and collaborative module projects. In addition, extensive knowledge translation projects provide evidence-based skills and knowledge enhancement for clinicians specializing in TBI care and for consumers via collaboration with the Brain Injury Association of Pennsylvania.
North Texas Burn Rehabilitation Model System (NTBRMS)

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Project Number: H133A070024
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 07 $362,500; FY 08 $362,500

Abstract: The North Texas Burn Rehabilitation Model System (NTBRMS) includes one collaborative research module project entitled “Axillary Burn Scar Contracture Prevention with Immediate Post-Operative Casting and Splinting”, and two site specific research studies entitled “Biomechanical Properties of Burn Scar” and “Efficacy of Social Interaction Skills Training Post Burn Injury.” Collaboration occurs on many levels at the NTBRMS. Clinical collaboration is the hallmark of the burn team, which includes individuals from several institutions who work together seamlessly as well as collaboration with our rural care providers through outreach clinics. Research collaboration occurs locally with the surgeons and academic computing and nationally with the other model systems. The evaluation plan specifically focuses on the overall objectives for demonstration, research, and dissemination with specific quantifiable targets, which are reassessed quarterly. Dissemination of NTBRMS materials occurs at many levels and in a variety of formats: lectures by key personnel, publication in peer reviewed journals, a quarterly newsletter, and an accessible website available in English and Spanish. The NTBRMS collaborates with NIDRR-funded Model Systems Knowledge Translation Center (MSKTC) by participating in its systematic reviews of evidence and facilitating knowledge management by identifying the information needs and barriers among the various stakeholders both at national and local levels.
North Texas Traumatic Brain Injury Model System (NT-TBIMS)

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Project Number: H133A 070027
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 07 $430,350; FY 08 $430,350

Abstract: This project provides comprehensive continuum of care for traumatic brain injury (TBI) from the time of arrival at the emergency department through the intensive care unit, inpatient and outpatient rehabilitation, and long-term follow-up after community integration. The project conducts two local research projects aimed at furthering the goal of developing novel therapies and tailoring these therapies to individual patients: (1) A Phase II randomized, placebo-controlled clinical trial to determine whether therapy with recombinant human growth hormone (rhGH) during the acute rehabilitation period after TBI results in improved functional outcome; and (2) an observational study using magnetic resonance imaging (MRI) during the acute rehabilitation period to validate the use of Diffusion Tensor Imaging (DTI) as a biomarker of diffuse axonal injury. Additionally, the NT-TBIMS works collaboratively with other TBI-M S Health Module members in a modular project to develop a Brain Injury Assessment Scale, which allows reliable and validated assessment of sensorimotor impairments after TBI. The goal is that this scale be as useful in the TBI field as the NIH Stroke Scale has been in clinical trials in stroke. Finally, the NT-TBIMS provides patient and family education, and dissemination of research findings to the professional community by conducting seminars, presenting the results at professional meetings, and publishing in professional and lay journals devoted to TBI.
Pediatric Burn Injury Rehabilitation Model System

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Project Number: H133A070026
Start Date: October 01, 2007
Length: 60 months

NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 07 $362,500; FY 08 $362,500

Abstract: This program conducts independent and multi-center projects focusing on evaluating and improving the rehabilitation provided to children with burn injuries, striving to decrease disability and improve reintegration into society. The model system includes one collaborative project assessing the efficacy of long term use of propranolol in the treatment of burn injury (in adults and children) with endpoints of improved survivability, improved cardiovascular condition, greater energy, improved muscle endurance, improved growth in children, and decreased anxiety. The project also includes a site-specific study to improve rehabilitative outcomes for children with greater than 40 percent total body surface area burned by combining an anabolic agent (oxandrolone, Ketoconazole, or propranolol) with a 3-month intensive outpatient rehabilitation program. The supervised exercise program has shown to be effective in ameliorating effects of the hypermetabolic response. This project assesses the effectiveness of combining the anabolic agents and the exercise program with the expectation that the effects will be additive and will improve linear growth, bone mass, muscle strength, lean body mass, physical function, and general well-being. The last study, also site specific, is a continuation from the previous funding cycle. It focuses on Acute Stress Disorder (ASD) and Post Traumatic Stress Disorder (PTSD), a problem that impairs the well-being of burn patients. The study follows children with ASD to access the relationship of the two disorders and to elucidate a history of the development of PTSD.
The Texas Traumatic Brain Injury Model System of TIRR

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Project Number: H133A070043
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 07 $430,350; FY 08 $430,350; FY 09 $430,350

Abstract: The Texas TBI Model System of TIRR conducts a program of research, dissemination activities, and clinical care designed to address social relationships and to improve outcomes for persons with TBI. Research activities include: (1) contributions to the TBI Model Systems National Database, (2) a collaborative, multi-center, research module project on sexuality after TBI, and (3) a local project on social communication difficulties after TBI. A collaborative project on sexuality determines the frequency, type, and severity of changes in sexual functioning after TBI. As part of this project, researchers conduct the first randomized, clinical trial of an intervention to increase satisfaction with sexual functioning and comfort level in discussing sexual issues for persons with TBI and their partners. A local project on social communication conducts a randomized clinical trial of an intervention to improve social communication skills and social integration for persons with TBI, with the largest sample size of any similar study and one of only two randomized controlled trials conducted in this area for over 20 years.
Medicaid Quality Indicators for Individuals with Disabilities

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Project Number: H133A 040016
Start Date: July 01, 2004
Length: 48 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 04 $299,999; FY 05 $299,999; FY 06 $299,999; FY 07 $299,999; FY 08 (No-cost extension through 06/30/2009)
Other Funding: FY 07 $367,359 (California HealthCare Foundation)

Abstract: This project develops and validates health service quality indicators for people with disabilities. The target population to be served is people with disabilities enrolled in managed Medicaid programs. The goal is to develop and field test quality measures for people with disabilities in managed care organizations. The specific aims are: (1) Case identification: Improve the computer algorithm for Medicaid plans to identify beneficiaries who have disabilities. (2) Plan-reported indicators: Select a subset of existing HEDIS Medicaid measures that are appropriate and statistically meaningful for indicating the quality of care for the people identified in Aim #1. (3) Consumer-reported indicators: Assess the content validity of the Axis-CAHPS survey. (4) Develop comparative reporting tools of the quality of care between and within health plans. This is a combined qualitative and quantitative study with three interrelated segments: (1) Extend previous research on using routine health claims data to identify beneficiaries who are at risk of needing modified help to access their Medicaid benefits and services; (2) review and refine the two most widely used Medicaid quality indicator tools, CAHPS and HEDIS; and extend work on refining the CAHPS instrument for people with physical disabilities; and (3) explore how people with disabilities, payers, and providers can use the indicators to improve practice and report outcomes using comparative reporting tools.
Virginia Commonwealth Traumatic Brain Injury Model System

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Project Number: H133A070036
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 07 $426,720; FY 08 $426,720

Abstract: This project utilizes rigorous scientific methods to examine the benefits of intervention for survivors of traumatic brain injury (TBI) and their families before and after inpatient rehabilitation discharge. Traumatic Brain Injury Model Systems (TBIMS) and other researchers have expended considerable energy delineating outcomes. For example, researchers have thoroughly documented problems after injury, including memory disturbance, impaired self-awareness, executive skills dysfunction, slowness, visual dysfunction, poor motor coordination, and behavioral disorders. Recent studies have identified a high prevalence of depression, with many survivors reporting feelings of hopelessness, diminished self-esteem, and social isolation. Brain injury also affects the family system; family members commonly describe emotional distress, lack of respite, financial stress, and lack of community support. Projects at the Model System focus on both survivors and families. One study is a randomized controlled trial to examine the efficacy of a structured approach to the treatment of acute cognitive and neurobehavioral problems. A second study is a randomized controlled trial to examine the benefits of an intervention program for family crisis and support.
University of Washington Burn Model System

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Project Number: H133A 020103
Start Date: October 01, 2002
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 02 $300,000; FY 03 $300,000; FY 04 $300,000; FY 05 $300,000; FY 06 $300,000; FY 07 (No-cost extension through 9/30/2008); FY 08 (No-cost extension through 12/31/2009)

Abstract: This model system conducts five research projects: (1) A New Approach to the Etiology of Hypertrophic Scarring develops an increased understanding of hypertrophic scarring. (2) Effect of Virtual Reality on Active Range-of-Motion During Physical Therapy uses distraction via immersive virtual reality as an adjunctive non-pharmacologic analgesic. This study tests the hypothesis that virtual reality allows patients to tolerate greater stretching during physical therapy compared to no distraction, and that in spite of achieving greater range-of-motion, patients still experience lower pain levels while in virtual reality. (3) Determination of Reasons for Distress in Burn-Injured Adults identifies reasons behind a burn survivor’s distress at various time-points after hospital discharge. (4) Barriers for Return to Work identifies specific barriers to return to work for burn survivors. (5) Acute Stress Disorder Among Burn Survivors evaluates the effectiveness of cognitive-behavioral therapy, relative to a non-directive, supportive therapy control group, and a national comparison sample in reducing the prevalence of posttraumatic stress disorder diagnosis and symptom severity. Projects 4 and 5 are collaborative. In addition, this project participates in the national database.
The Effect of Scheduled Telephone Intervention on Outcomes After Traumatic Brain Injury (TBI)

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Project Number: H133A040004
Start Date: December 01, 2004
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 04 $600,000; FY 05 $600,000; FY 06 $600,000; FY 07 $600,000; FY 08 $600,000

Abstract: This project evaluates the effect of scheduled telephone intervention (STI) on functional and health outcomes, at weeks 1-2, 4, 8, and 12, and months 5, 7, and 9 on functional level, health and emotional status, community integration, and perceived quality of well-being over 1 year after TBI. This a low-cost, easily-implemented intervention is trialed in three states. Timely intervention to identify problems after TBI, to teach patients and their families coping techniques within their own communities and support their independent decision-making, may effectively decrease the need for expensive and often inaccessible services and may improve the quality of life for survivors of TBI. Researchers are evaluating the effect of additional STI at months 15, 18, and 21 on the same variables and employment at 2 years after TBI. Research examines whether the effects of such intervention are similar in multiple sites over a wide geographic area. It also examines the differential impact of the intervention in demographic subgroups, with particular attention to minority versus non-minority racial and ethnic populations.
Controlled Trial of Venlafaxine XR for Depression After SCI: A Multisite Study

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Project Number: H133A060107
Start Date: January 01, 2007
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 06 $2,198,213; FY 07 $899,981; FY 08 $899,982

Abstract: This project is a multisite, randomized, double-blind, placebo controlled trial of venlafaxine XR (Effexor XR) in 168 adults with spinal cord injury (SCI) and major depressive disorder (MDD) who are 18-65 years old and one or more years post injury. The purpose of the study is to examine the efficacy and tolerability of venlafaxine XR as a treatment for MDD. The primary outcome is the percent of responders (those who report at least a 50% reduction in depression severity from baseline to the end of treatment) in the venlafaxine XR versus placebo control group using intent-to-treat analysis. Secondary outcomes include changes in pain, health related quality of life, and participation. A successful clinical trial could lead to more aggressive identification and treatment of MDD as well as improved health and quality of life in this important population. This is a collaborative project with the Northwest Regional Model Spinal Cord Injury System.
University of Washington Burn Model System

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Project Number: H133A070047
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 07 $362,458; FY 08 $362,459

Abstract: The University of Washington Burn Model System includes one multi-site, collaborative project, and two site-specific projects. Project 1: Psychological and Social Needs of Long Term Survivors of Major Burn Injury is a collaborative study (lead center Baltimore) to identify the needs of persons 5 and 10 years after injury. Project 2 (Site-Specific): Expanded Delivery Model for Burn Rehabilitation incorporates a novel intervention, an “expanded care provider”, who enables clinicians to “reach out” to individuals with burn injury and for them to “reach in” to care providers whenever care is needed, rather than on a rigid schedule to determine if this improves burn rehabilitation outcomes. In a randomized trial, Group 1 receives standard outpatient clinic-based rehabilitation. Group 2 has an additional care provider who uses multiple modalities to manage the multifaceted sequelae of thermal injury. Outcomes are assessed using an individualized Goal Attainment Scale and the validated Burn Specific Health Scale. Project 3 (Site Specific): Identification of the Pathways to Scarring utilizes bioinformatics tools to identify gene expression pathways associated with hypertrophic scarring. In addition, we contribute long-term follow-up data to the national database maintained at the University of Colorado in Denver.
Disability and Rehabilitation Research Projects
Washington

University of Washington Traumatic Brain Injury Model System

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Project Number: H133A070032
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 07 $430,349; FY 08 $430,348

Abstract: University of Washington's Traumatic Brain Injury Model System (UWTBIMS) provides a comprehensive, integrated continuum of medical, surgical and rehabilitation services to persons with acute and chronic TBI. This project conducts two site-specific projects. The first is a randomized controlled intervention study evaluating the effect of a structured, telephone-based mentoring program for caregivers focusing on self-management skills. This study builds upon previous experiences with telephone counseling for both people with traumatic brain injury and multiple sclerosis. This research is particularly important because caregivers are so crucial to the successful rehabilitation and community re-integration of persons with TBI and the literature on successful interventions for this population is so sparse. The use of a telephone-based program allows researchers to reach those (especially in rural regions) who lack ready access to knowledgeable advice, behavior change support, and specialty care sufficient to maintain the health of their significant other and themselves. The second project utilizes a large and rich database to predict a number of important long-term outcomes. The modular project studies the natural history of headache under conditions of usual care during the first year after TBI. This project characterizes the course and nature of headache, a common but poorly studied consequence of TBI. It examines the impact of headache on outcome and its potential modifiers, describes patient treatment preferences, and lays the foundation for a multi-site clinical trial.
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Project Number: H133N060021
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 06 $474,471; FY 07 $474,471; FY 08 $474,471

Abstract: The University of Alabama at Birmingham provides rehabilitation services specifically designed to meet the special needs of individuals with spinal cord injury (SCI) through its multidisciplinary, comprehensive Spinal Cord Injury Care System (UAB-SCICS). The UAB-SCICS spans the clinical continuum from emergency services through rehabilitation and community re-entry. The System’s research includes one collaborative research module and two in-house research projects, all of which ultimately aim at improving the health and function of its constituents. The collaborative research module involves the validation of an outcome measure for functional recovery. One in-house research project involves the assessment of the predictive value of key parts of the neurological exam for return of bladder function; the second is an investigation of the effect of nicotine on different types of SCI pain. The project continues to benefit from the active involvement of persons with SCI in the design and execution of the proposed activities. Project results are disseminated via a variety of accessible formats and venues for both professionals and persons with SCI and their families. A detailed plan of operation ensures timely completion of project goals and tasks. Finally, an evaluation plan has been designed to assess the quality and timeliness of project outcomes and dissemination, as well as short and long term impacts of project activities. Activities of the UAB-SCICS reflect an active partnership both within the components of UAB’s health system and between UAB, the Lakeshore Foundation, and the Birmingham VA Medical Center. The project continues as a participant in data collection activities for the National Spinal Cord Injury Statistical Center.
Model Spinal Cord Injury Systems
Colorado

The Rocky Mountain Regional Spinal Injury System

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Abstract:
The Rocky Mountain Regional Spinal Injury System (RMRSIS) goals are to: (1) implement a program of research focusing on the immediate and long-term health, function, and community integration and participation of people with SCI; (2) improve its existing lifetime system of care for people with SCI; and (3) continue exemplary participation in the National SCI Database. A site-specific study determines if high vs. low tidal volumes are more effective in achieving ventilator weaning for individuals with high level tetraplegia, using a randomized clinical trial design. A collaborative research module study involves the development of a reliable, valid measurement tool to assess community participation. RMRSIS includes two Level I trauma centers with specialized acute neurotrauma care facilities (St. Anthony Hospital and Swedish Medical Center) and the rehabilitation and lifetime follow-up services of Craig Hospital.
National Capital Spinal Cord Injury Model System

National Rehabilitation Hospital
MedStar Research Institute
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Project Number: H133N060028
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 06 $449,417; FY 07 $449,417; FY 08 $449,417

Abstract: The National Capital Spinal Cord Injury Model System (NCSCIMS) serves Washington, DC and the nation. By focusing on the frequent and costly complication of pressure ulcers (PU), the NCSCIMS leverages two unique strengths: an existing Rehabilitation Research and Training Center on SCI that focuses on reduction of secondary conditions, and the population of Washington, DC, which is predominantly composed of underserved individuals. The Center includes two site-specific and one modular project and describes a system of care that meets SCIMS priorities: Site Specific Project 1 is a Practice-Based Evidence (PBE) project specifically focused on PU prevention for all individuals with SCI and/or disease (SCI/D) during the acute and rehabilitative phases of care (to evolve to the community in later phases). The PBE approach allows a detailed examination of the effects of methods, modalities, and therapies utilized in rehabilitation to prevent PUs, which are often based on evidence-based medicine, but in reality may not be extrapolated to the broader population with SCI/D. In this project, researchers aim to utilize a PBE approach to augment evidence-based practice while addressing a critical secondary complication for individuals with SCI. Site Specific Project 2 is an SCI Navigator pilot project that combines elements of Peer Mentoring and Patient Navigation to decrease the occurrence of PUs once the individual has returned to the community. In this project, an SCI Navigator assists people with newly-acquired SCI in the transition from inpatient rehabilitation to the community, within the framework of an, at times, dysfunctional healthcare system. The NCSCIMS works with the Model System at the University of Pittsburg to explore Assistive Technology for Mobility (ATM). In this project, researchers investigate the degree to which inadequate wheelchair technology is the factor preventing people with SCI from doing more, work to understand the impact of changes in wheelchair reimbursement, and fully explore the issue of disparity in ATM prescription.
Model Spinal Cord Injury Systems
Georgia

Georgia Regional Spinal Cord Injury Care System

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Project Number: H133N060009
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $474,417; FY 07 $474,417; FY 08 $474,417

Abstract: The Georgia Regional Spinal Cord Injury Care System admits approximately 200 individuals annually with acute onset paralysis secondary to spinal cord injury, and collects post-discharge data on 600 individuals each year. Its patient population comes primarily from Georgia, the rest of the Southeast, and the Eastern Seaboard. The continuum of care begins at injury and continues through transport, assessment, acute care, rehabilitation, emotional adjustment, community reintegration, and lifetime follow-up. The project continues a long record of comprehensive and timely collection of data on subjects who meet the inclusion criteria in three categories: inpatient hospitalization; longitudinal collection at 1, 5, 10, 15, 20, and 25 years post-injury; and registry. In addition to continued model system research, the project conducts two site specific research projects: (1) Psychological Status During Inpatient Rehabilitation and One Year After Onset: Stress, Coping, and Expectation Hope for Recovery; (2) Development and Validation of a Clinical Measure of Wheelchair Seat Cushion Degradation. The project also manages a collaborative data collection research module entitled Impact of SCI on Labor Market Participation.
Model Spinal Cord Injury Systems
Illinois

Midwest Regional Spinal Cord Injury Care System (MRSCIS)

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Project Number: H133N060014
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 06 $484,000; FY 07 $484,000; FY 08 $484,000

Abstract: The Spinal Cord Injury Rehabilitation Program at the Rehabilitation Institute of Chicago and the Acute Spinal Cord Injury Program at Northwestern Memorial Hospital demonstrate the ongoing, comprehensive, multidisciplinary services that are provided to individuals with spinal cord injury (SCI) which allow them to optimize their rehabilitation outcomes and enhance their ability to return to productive, independent living in the community. In order to contribute to the improvement of outcomes for persons with SCI, the System conducts two site-specific research projects: (1) Development of Low-Cost Devices to Increase Delivery of Intensive Treadmill Training, and (2) Disparities in Access to and Outcomes of Rehabilitation Care for Medicare and Medicaid Beneficiaries with Spinal Cord Injury. In addition, the project includes collaboration on one research project, Assistive Technology for Mobility (ATM) Module. MRSCICS has the capacity to enroll 140 individuals from culturally diverse backgrounds with new spinal cord injuries annually into the Spinal Cord Injury Model Systems database, and collect follow-up data on individuals enrolled between 1973 and 2000.
Model Spinal Cord Injury Systems
Massachusetts

The New England Regional Spinal Cord Injury Center

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Project Number: H133N060024
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 06 $464,417; FY 07 $464,417; FY 08 $464,417

Abstract: The New England Regional Spinal Cord Injury Center (NERSCIC), based at Boston Medical Center (BMC), uses a network of rehabilitation hospitals, partners, and affiliates to develop a regional capacity to disseminate materials in such a way that they will be utilized both by consumers with SCI and their families, and health care professionals, with particular attention to minorities and underserved groups. NERSCIC’s site-specific research project involves designing an improved outcome instrument in SCI research. This project applies contemporary measurement methods (CATS) to initiate a major transformation in the outcome assessment technology used to assess activity limitation frequently monitored in SCI research. Once the SCI-CAT has been developed using data collected front major field study, a demonstration of the SCI-CAT evaluates its respondent burden, acceptability to patients and clinicians, as well as its breadth, precision, sensitivity to change, and validity with inpatients and outpatients with SCI who are receiving care from NERSCIC. Comparisons are made between the FIM and SCI-CAT over a 6-month follow-up period. Additionally, this site-specific project will be integrated with the NeuroQoL collaborative module, in order to expand and improve both projects and to avoid developing competing computer adaptive testing instruments. This project is now referred to as the QOL/SCI-CAT Combined Project. Lastly, NERSCIC is a participating site in the SCI Collaborative Participation Module, led by Gale Whiteneck at Craig Hospital, to address the importance of participation given the current absence of a standard acceptable measure of participation. This collaborative SCI module identifies the best existing measure of participation or combines the best items from existing measures of participation to form a new and improved tool with better psychometric properties validated in the SCI Model Systems to ensure broad acceptability in future SCI outcomes research, and to allow for meaningful testing of clinical interventions.
University of Michigan Model Spinal Cord Injury Care System

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Project Number: H133N060032
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 06 $457,417; FY 07 $457,417; FY 08 $457,417

Abstract: The overall purpose of this project is to provide comprehensive rehabilitation and community participation services and to generate new knowledge through research, development, and demonstration designed to improve outcomes for persons with spinal cord injury (SCI). A site-specific research study is conducted in partnership with faculty from the University of Michigan Depression Center, Department of Psychiatry, and the Molecular and Behavioral Neurosciences Institute. This study is a randomized clinical trial study designed to evaluate the efficacy of a pharmacological agent, Venlafaxine HCl also known as Effexor XR, as a preventive agent for reducing depression among persons with SCI. This clinical trial addresses a major need in the field as there are no randomized clinical trials currently available on the effectiveness of antidepressants in persons with SCI. In this study, the drug’s effects on pain are also assessed. An outcome of this study is the formulation of recommendations for antidepressant medication use in SCI and implications for clinical practice guidelines. The project continues to operate an efficient data collection system, facilitating research and contributions to the National SCI Database.
Northern New Jersey Spinal Cord Injury System

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Project Number: H133N060022
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $457,417; FY 07 $457,417; FY 08 $457,417

Abstract: The Northern New Jersey Spinal Cord Injury System (NNJSCIS) provides a comprehensive continuum of state-of-the-art care for persons with spinal cord injury (SCI) and their significant others from time of injury through long-term follow-up in the community and conducts spinal cord research, including clinical research and the analysis of standardized data. NNJSCIS conducts both a site-specific research study and a collaborative module. These studies contribute to evidence-based rehabilitation interventions and clinical and practice guidelines that improve the lives of individuals with SCI and consist of the following: An innovative rehabilitation intervention utilizing technology to prevent respiratory disease in persons with SCI, now the leading cause of death and the third leading cause of hospitalizations in this population; a collaborative module that adapts, develops, and validates an innovative and promising outcome system for use in SCI intervention research; and the NNJSCIS coordinates with the NIDRR-funded Model Systems Knowledge Translation Center to provide scientific results and information for dissemination to clinical and consumer audiences. This project is a cooperative effort of the Kessler Medical Rehabilitation Research and Education Corporation (KMRREC), the Kessler Institute for Rehabilitation (KIR), the University of Medicine and Dentistry of New Jersey - The New Jersey Medical School (UMDNJ-NJMS), and UMDNJ-University Hospital.
Model Spinal Cord Injury Systems
New York

Mount Sinai Spinal Cord Injury Model System

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Project Number: H133N060027
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $452,541; FY 07 $452,541; FY 08 $452,541

Abstract: The purpose of the Mount Sinai Spinal Cord Injury Model System (MS-SCI-M) is to (1) demonstrate and evaluate a multidisciplinary system of rehabilitation care for persons with spinal cord injury (SCI) in the New York City metropolitan area, including innovative programs for community integration; (2) contribute longitudinal data to the SCI National Database; (3) create and evaluate SCI quality of life assessment and participation assessment measures, and collect information on the labor force and economic impacts of SCI; and (4) evaluate the treatment of neuropathic pain using modified-release morphine. There are three major components of the MS-SCI-M: (1) comprehensive clinical care, (2) research (site-specific, module projects and contributions to the national database); and (3) dissemination, education, and training. The comprehensive clinical program consists of the following components: (1) The NYC Emergency Medical Service (NYC-EMS), which ensures the early and safe extrication of individuals with SCI from the site of injury; (2) acute medical/surgical care at Elmhurst Hospital Center or at Mount Sinai Hospital (MSH), both of which provide state-of-the-art emergency and medical/surgical services; and (3) comprehensive inpatient medical rehabilitation services on the 25-bed, CARF-accredited SCI inpatient rehabilitation unit of MSH. The program stresses interdisciplinary care, and employs a primary team model to enhance coordination among caregivers. The research program of MS-SCI-M is designed to advance the understanding of SCI and its consequences, and to develop better methods of treatment of secondary conditions of SCI, especially pain. The site-specific project studies modified-release formulation of morphine sulfate for neuropathic pain after SCI through a randomized, double-blind crossover trial of modified-release morphine and placebo for patients with uncontrolled neuropathic pain of three types. In addition, three module projects are executed in collaboration with SCI model systems elsewhere. Dissemination, education, and training for individuals with SCI, their families, students, and health professionals, constitute the third component of the MS-SCI-M, and include publications in scientific journals, presentations at national and local meetings, publication of a newsletter for consumers, expanded web-based information, a variety of educational and training programs, including an SCI medicine fellowship, and training of physical medicine and rehabilitation residents from various residency programs.
Model Spinal Cord Injury Systems
Ohio

Northeast Ohio Regional Spinal Cord Injury System

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Project Number: H133N060017
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $449,417; FY 07 $449,417; FY 08 $449,417

Abstract: The Northeast Ohio Regional Spinal Cord Injury System (NORSCIS) at MetroHealth Rehabilitation Institute of Ohio in collaboration with Case Western Reserve University and the Cleveland FES Center conducts research to further develop the effectiveness of an innovative Model Spinal Cord Injury Care System and to demonstrate how the application of advanced assistive technology can benefit persons with disabilities. Efficiency and effectiveness of care (and research potential) are enhanced as all components of the continuum of care (from trauma/emergency care to acute medical/surgical treatment, inpatient and outpatient rehabilitation, and community support services) are all available on the NORSCIS campus. A site-specific project studies advances in functional electrical stimulation (FES) technology to document improvements in function, health, and wellness. An innovative focus on trunk muscle stimulation targets specific clinical problems, including seated stability and mobility, reachable workspace, and pulmonary function. A collaborative research project with UPMC SCI, is directed at testing and collecting the data needed to understand the impact of coverage changes and to fully explore the issue of disparity in assistive technology for mobility prescription. A collaborative project with Craig Hospital involves the development of a reliable, valid measurement tool to assess community participation. The goal of these hypothesis-driven research and demonstration projects is to develop and measure the effectiveness of new intervention strategies at both the individual patient level and overall systems of care for persons with spinal cord injury.
Regional Spinal Cord Injury Center of the Delaware Valley

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Project Number: H133N060011
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 06 $464,417; FY 07 $464,417; FY 08 $464,417

Abstract: The Regional Spinal Cord Injury Center of the Delaware Valley (RSCICDV) provides and evaluates a comprehensive program of coordinated patient care, education, and research activities for individuals who have sustained a traumatic spinal cord injury (SCI). Clinical activities are directed at promoting evidence-based practice to improve outcomes and reduce medical complications in persons with SCI. Research activities are designed to develop and validate upper and lower extremity outcome measures for use in clinical trials. Specifically, RSCICDV: (1) contributes to the National Database by enrolling an estimated 50 new subjects per year into the database and by collecting follow-up data on previously enrolled subjects; (2) conducts an on-site research project whose focus is to develop and validate the Capabilities of Arm and Hand in Tetraplegia (CAHT), an objective test of arm and hand functional capabilities needed to conduct clinical trials for neurological recovery in SCI; (3) participates in a collaborative module on evaluating an automated phone follow-up system for people with SCI; (4) participates in a collaborative module on validation of an outcome measure for motor recovery in incomplete SCI; and (5) develops educational resources for patients, healthcare providers, and researchers.
University of Pittsburgh Model Center on Spinal Cord Injury

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Project Number: H133N060019
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 06 $449,417; FY 07 $449,417; FY 08 $449,417

Abstract: The UPMC C-SCI continues its research focus on assistive technology (AT) for mobility. Pilot data collected during the previous funding cycle highlighted disparity in wheelchair prescription. Individuals from minority groups and people with low socioeconomic status received less and lower quality equipment. So that interventions can be developed, the project continues and expands this research to delve into the reasons for disparity. In addition, it investigates the impact of recent Centers for Medicare and Medicaid Services (CMS) changes for AT reimbursement. These changes will likely have a critical impact on the AT provided to individuals with spinal cord injury (SCI). Finally, the project develops a tool to determine how far, how fast, and when people travel in their wheelchairs. This data is related to the type of wheelchairs used, to the number of wheelchair failures, and to measures of participation. From these findings, researchers determine how the wheelchair prescribed impacts participation, and if greater use leads to greater failures. This data can be used to push for improvements in manufacturing and changes in coverage. UPMC C-SCI also conducts a randomized, controlled trial to determine if following the Consortium of Spinal Cord Injury Medicine Guidelines on Upper Limb Preservation leads to decreased pain. These guidelines are applied to acutely injured patients who are followed for the first six months after injury. Validation of the guidelines’ effectiveness helps assure that they become the standard of care across the country. SCI care at the University of Pittsburgh is provided in a multidisciplinary manner with a high level of communication among the constituent services. The project has fully implemented a system of continuity of treatment that begins with the emergency response at the scene of injury and continues with comprehensive treatment and rehabilitation from medical/surgical to acute stage rehabilitation through utilization of assistive technology services and vocational rehabilitation. UPMC C-SCI continues to enroll and collect long-term follow-up data on SCI subjects for the National Spinal Cord Injury Statistical Center.
Texas Model Spinal Cord Injury System

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Project Number: H133N060003
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 06 $464,417; FY 07 $464,417; FY 08 $464,417

Abstract: The Texas Model Spinal Cord Injury System (TM SCIS) provides services along the entire continuum of care from emergency medical service to long-term follow-up and management of secondary conditions. The TM SCIS includes a site-specific research project that is designed to provide high level evidence of the efficacy of a novel treatment to prevent bladder complications. The project is a randomized, double-blind, placebo controlled, parallel groups investigation of the effects of Botulinum toxin A treatment of detrusor external sphincter dyssynergia (DESD) during early spinal cord injury. Many patients with SCI develop neurogenic bladder dysfunction associated with detrusor hyperreflexia and DESD that can lead to long-term complications in up to 50 percent of patients. These complications include hydronephrosis, vesicoureteral reflux, nephrolithiasis, sepsis, renal insufficiency or failure, and even death. This investigation is intended to determine if the prevention of DESD in the early phase of recovery can prevent some of these complications. In addition, the TM SCIS includes a module designed to develop an outcome measure of trunk and postural control to be utilized in activity-based therapy programs like locomotor training. The outcomes of large scale clinical trials of locomotor training highlight the need for outcome measures that are designed to capture changes brought about by translational research that may not have been necessary for more traditional therapy programs. This scale development project incorporates item response theory methods as well as reliability and validity investigations in a minimum of four model systems.
Model Spinal Cord Injury Systems
Washington

Northwest Regional Spinal Cord Injury System

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Project Number: H133N060033
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 06 $464,417; FY 07 $464,417; FY 08 $464,417

Abstract: The University of Washington’s Northwest Regional Spinal Cord Injury System (NWRSCIS) serves a critical mass of patients with spinal cord injury (SCI) and has all the necessary disciplines to provide state-of-the-art medical, surgical, and rehabilitation care. One site-specific project is a randomized controlled intervention study evaluating the effect of proactive, structured, telephone-based counseling and care management on rehospitalization rate and quality of life during the first year after discharge from acute rehabilitation. This study builds upon successful experiences with telephone counseling for both people with traumatic brain injury and multiple sclerosis. This research is particularly important because the lifestyle changes and health care behaviors required for successful living after SCI are tremendously challenging, rates of rehospitalization are high, and many people (especially in rural regions) lack ready access to knowledgeable advice, behavior change support, and specialty care sufficient to maintain their health. A modular project studies the natural history of major depression under conditions of usual care during the first year after SCI. This project establishes reliable and valid means of screening and diagnosing major depression soon after SCI. It examines the impact of depression on rehabilitation efficiency and compares the effect of standard treatment to clinical practice guideline level care of depression. This study describes depression treatment preferences among people with SCI and lays the foundation for a multi-site clinical trial. The NWRSCIS also includes a collaborative, multisite, randomized, double-blind, placebo controlled trial of venlafaxine XR (Effexor XR) in adults with SCI and major depressive disorder (MDD). The purpose of the study is to examine the efficacy and tolerability of venlafaxine XR as a treatment for MDD. NWRSCIS contributes to the national statistics database at the University of Alabama at Birmingham.
Field Initiated Projects (FIPs)
Alabama

Constraint-Induced Movement Therapy Modified for Rehabilitating Arm Function in Stroke Survivors with Plegic Hands

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Project Number: H133G050222
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 05 $149,891; FY 06 $149,954; FY 07 $149,954; FY 08 (No-cost extension through 9/30/2009)

Abstract: Based on positive findings from a pilot study, this project conducts a randomized, controlled clinical trial to rigorously test the efficacy of a modification of Constraint-Induced Movement (CI) therapy for rehabilitating arm function in chronic stroke patients with severe upper-extremity impairment. CI therapy is a rehabilitation method that has been shown in controlled studies to produce large improvements in real-world upper-extremity use in individuals with chronic stroke. Up until now, survivors of stroke with plegic hands have been excluded from CI therapy protocols, whether on a research or clinical basis. In the modified therapy, participants receive CI therapy, combined with other treatment modalities, for six hours per day. The treatment package includes tone management/movement facilitation, training of more-impaired arm use using shaping, functional task practice, restraint of the less-impaired arm in the laboratory and at home, and a package of behavioral methods for transferring gains from the laboratory to the home situation. Participants are also introduced to assistive and orthotic devices that might facilitate use of their more-impaired arm in their daily life.
A New Measure of Subjective Fatigue in Persons with Traumatic Brain Injury

Santa Clara Valley Medical Center (SCVMC)
Rehabilitation Research Center
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Project Number: H133G080168
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $182,918

Abstract: This research project addresses the lack of evidence supporting a specific fatigue scale, of the over 30 that have been used for clinical and/or research purposes, which is psychometrically sound, efficient, and useful in individuals with TBI to assess treatment interventions and the natural history of fatigue following TBI. The primary objective of the project is to evaluate the internal consistency, concurrent validity, and item/scale structure of a fatigue item pool and to identify the most psychometrically sound measure of fatigue in individuals post-TBI. To accomplish this goal, SCVMC has partnered with the Rehabilitation Institute of Michigan (RIM), a TBI Model System from 1987-2007 and a contracted center to continue TBI National Database follow-up. SCVMC and RIM have the largest number of cases eligible for follow-up in the TBI National Database. The short-term outcome is to advance knowledge about the measurement of fatigue in individuals with TBI through creation of a psychometrically valid and useful fatigue assessment measure for individuals with TBI. The intermediate outcome is that availability of the new scale will lead to improved studies and treatment plans for individuals with TBI who have fatigue.
Evaluating Dysphagia in Individuals with Spinal Cord Injury: Assessing Incidence, Associated Factors, and Preventable Complications

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Project Number: H133G080165
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 08 $189,382

Abstract: Dysphagia is known to occur in a significant number of individuals with spinal cord injury (SCI) presenting to acute care immediately after the injury and to inpatient rehabilitation. However, the exact incidence of dysphagia in this population has not been studied prospectively. The primary objective of this study is to determine the incidence of dysphagia using bedside swallow evaluation (BSE) and videofluoroscopy swallow study (VFSS) and to determine associated risk factors in individuals with SCI. The secondary objective is to determine if the BSE is an effective screening tool as compared with the VFSS for individuals with SCI and to determine the sensitivity and specificity of BSE in individuals with SCI. The third objective is to document the time course for the resolution of dysphagia post-SCI. To address this research question, individuals with SCI who are positive for dysphagia following either a BSE or VFSS are administered serial BSE and VFSS until resolution of dysphagia or discharge from the rehabilitation center.
Field Initiated Projects (FIPs)
Florida

Investigating the Effects of Snoezelen in Children Recovering from Severe Brain Injury

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Project Number: H133G070119
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 07 $197,907; FY 08 $196,697

Abstract: This research study examines a novel therapeutic approach referred to as Snoezelen or controlled multisensory therapy for children with severe traumatic brain injury (TBI). The Snoezelen approach is based on a theoretical framework of using a controlled multisensory environment which promotes stimulation of the primary senses which include auditory, visual, olfactory, tactile, and gustatory systems which are impaired in the early stages of recovery. There is evidence that Snoezelen has been shown to find a balance between relaxation and activity or changing arousal within the framework of a safe, controlled, adapted environment. The purpose of this study is to investigate the effects of Snoezelen therapy on physiological, cognitive, and behavioral changes in children recovering from severe TBI. Seventy-two subjects from 5-18 years of age recovering from severe TBI are studied in a prospective randomized controlled trial. The treatment group that receives up to 20 Snoezelen treatment sessions is compared to a control group that receives up to 20 playroom sessions, with both groups receiving a standard comprehensive neurorehabilitation program in an inpatient pediatric rehabilitation unit. Specific physiological, cognitive, and behavioral outcome measures are collected and evaluated at baseline, and pre- and post-Snoezelen and playroom treatment sessions.
Field Initiated Projects (FIPs)
Florida

Exercise Treatment of Obesity-Related Secondary Conditions in Adults with Paraplegia

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Project Number: H133G080150
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $199,738

Abstract: This project investigates the effects of physical activity with or without a nutrient supplement known to increase body lean mass on adults with chronic paraplegia who are at risk for clusters of obesity and obesity-related secondary complications. Qualified subjects perform six months of circuit resistance training with half of the participants randomized to receive a whey protein supplement immediately before and immediately after each training session. The immediate post-exercise administration of whey protein is reported to increase body lean (muscle) mass, whose loss after SCI is thought to decrease fat utilization and hasten body fat accretion. Outcomes measured include: (1) the effects of training and supplement on cardiopulmonary endurance and strength, a global disease risk score, health related quality of life as assessed by the SF-36 instrument validated for use in persons with SCI; and (2) participant perceptions of exercise benefits studied before and after training by a scientist-stakeholder with SCI. Data examining the personal and societal barriers to exercise participation after SCI is collected through a web-based form. This project improves the understanding of risks for obesity and obesity-related secondary complications. The results are analyzed and will improve the understanding of risks for obesity and obesity-related secondary complications.
Biopsychosocial Factors that Predict TBI Post-Acute Rehabilitation Outcomes

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Project Number: H133G070171
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $192,500; FY 08 $194,973

Abstract: This project develops models using biopsychosocial factors assessed during the initial days of traumatic brain injury (TBI) post-acute rehabilitation to predict good, fair, and poor post-acute rehabilitation discharge outcomes. Empirically derived biopsychosocial models improve understanding of TBI recovery, identify patients at risk for poor outcomes, inform individualized treatment planning, and increase the overall efficiency and efficacy of post-acute rehabilitation services. Clinical measures of motor and cognitive functioning are analyzed, and five experimental measures are administered to assess potential psychosocial and environmental risk factors for clients with TBI. The primary goals are to produce probabilistic and tree-based models of biopsychosocial factors that predict good, fair, or poor TBI post-acute rehabilitation outcomes with regard to: (1) physical and cognitive improvement; (2) independent living (no supervision required); and (3) community participation. Primary dissemination efforts include at least two peer-reviewed manuscripts that describe predictive models for clinical use, and development of an automated post-acute rehabilitation admission assessment protocol, made available for downloading from the Shepherd Center website. The long-term goal is to design and test interventions for treatable predictors of post-acute rehabilitation outcomes and establish evidence-based guidelines.
Evaluating the Effects of Activity-Based Therapy for Individuals with Chronic Spinal Cord Injury

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Project Number: H133G080031
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 08 $200,000

Abstract: This project evaluates the effects of an activity-based therapeutic exercise program for individuals with chronic spinal cord injury (SCI) using Beyond Therapy—a program of state-of-the-art therapeutic exercise technology. Project goals include: (1) completing a randomized, experimental-control group comparison examining the effects of participation in activity-based therapy on neurological functioning, independence in activities of daily living, and community participation; (2) conducting further between-group and within-subject analyses to determine variations in outcomes as a function of level of injury and ASIA classification; (3) identifying factors associated with continued compliance with a self-directed maintenance program designed to sustain any gains in neurological functioning achieved from participation in activity-based therapy; and (4) examining the relationship between level of compliance with the maintenance program and preservation of gains achieved over a 12-month period. Research results are used to develop activity-based exercises for individuals with SCI that can be implemented in community-based fitness centers. Additionally, the project develops a training and technical assistance program to assist community fitness centers in implementing activity-based therapy programs.
Enhanced Motor Recovery Using Serotonergic Agents

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Project Number: H133G060124
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 06 $142,710; FY 07 $146,280; FY 08 $145,648

Abstract: The purpose of this project is to identify changes in voluntary and reflex behaviors, with an emphasis on walking ability, in individuals with stroke following specific pharmacological and physical interventions, with the potential to optimize walking recovery during intensive rehabilitation. This project focuses on improving independent walking ability in individuals with chronic hemiparesis post-stroke. A substantial body of literature demonstrates the effectiveness of body-weight supported treadmill training post-stroke, although the improvements in walking ability may be limited. The project’s goal is to enhance the benefits of training by increasing neural excitability and potential plasticity by application of serotonergic agents. The approach has two objectives: (1) demonstrate that serotonergic agents can modulate reflex and voluntary motor activity with acute and chronic selective serotonin reuptake inhibitors administration, and (2) accelerate motor performance and walking recovery using combined pharmacological and physical interventions as opposed to either intervention alone.
Field Initiated Projects (FIPs)
Illinois

Rehabilitation of Reaching in Chronic Stroke Using an Anti-Gravity Force Field

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Project Number: H133G060169
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 06 $149,926; FY 07 $146,179; FY 08 $149,917

Abstract: The major goal of this project is to develop, implement, and evaluate a novel robot-mediated therapy to allow stroke survivors to perform reaching movements while gradually integrating the control of posture and movement. The specific aims of this project are: (1) to characterize deficits in reaching as a function of movement direction, external load, and limb orientation with respect to gravity; (2) to investigate potential mechanisms underlying external load effects on reaching kinematics; and (3) to demonstrate the efficacy of a robot-mediated “anti-gravity” force field to rehabilitate reaching in a group of chronic stroke survivors with moderate or severe impairment. Thirty chronic stroke survivors, matched for initial impairment level, are assigned to either Force Field or Free Reaching protocols. The Force Field group trains movements on the Multi-Axial Cartesian-based Arm Rehabilitation Machine (MACARM). The MACARM is used to implement an elastic virtual table that provides subject-specific partial support of the limb against gravity. The Free Reaching group practices unassisted reaching movements. Both groups train three times weekly for eight weeks, with the goal of increasing reaching extent. Therapeutic efficacy is determined based on pre/post comparisons of the outcome measures provided by Aim 1 and clinical measures of motor function, functional independence, and quality of life. Researchers also evaluate the transfer of training effects to untrained movement directions, load conditions, or limb orientations.
Augmenting Language Therapy for Aphasia: A Randomized Double-Blind Placebo-Controlled Trial of Levodopa in Combination with Speech-Language Therapy

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Project Number: H133G070074
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $199,843; FY 08 $199,772

Abstract: This randomized, double-blind, placebo controlled clinical trial evaluates the effect of the pharmacologic agent, levodopa, in combination with speech-language treatment, on the language outcome of patients with chronic, nonfluent aphasia. There is preliminary evidence that increased levels of dopamine, in combination with language treatment, may improve the language deficits of aphasia following stroke. Most studies have investigated the adjunctive effects of bromocriptine, a dopamine agonist that acts on post-synaptic dopamine receptors, changing the tonic state of dopamine neurons. However, new evidence is suggesting that levodopa, a precursor to dopamine, may be preferred since it has the potential to increase the presynaptic availability of dopamine, thereby enhancing phasic dopamine signals which are important for learning enhancement. Accordingly, the specific aims of this clinical trial are to assess whether: (1) levodopa in combination with speech-language therapy improves language performance; (2) levodopa in combination with speech-language therapy improves language performance more than speech-language therapy alone; and (3) improvements in language performance resulting from combined levodopa and speech language therapy are maintained over time to a greater extent than improvements resulting from speech-language therapy alone. The intervention, which serves as the behavioral treatment platform on which to assess the adjunctive effects of levodopa, is administered via computer and involves repeated choral reading of sentences. Subjects receive five hours of the speech-language therapy intervention weekly plus the levodopa or placebo for six weeks. The primary outcome measure is the change in the Aphasia Quotient (AQ) score on the Western Aphasia Battery from pre-treatment to post-treatment. Other language, cognitive, and communication measures are collected pre- and post-treatment and at six weeks after completion of treatment.
Field Initiated Projects (FIPs)
Illinois

Effectiveness of a Teleconference Management Program for Multiple Sclerosis

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Project Number: H133G070006
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 07 $143,836; FY 08 $142,688

Abstract: This project tests the effectiveness and efficacy of a teleconference energy conservation education program for people with multiple sclerosis (MS). The project is guided by self-efficacy theory and builds on existing pilot work. The program is delivered by teleconference by a licensed occupational therapist. Participants are provided with a telephone and headset, and a program manual. On the designated days, participants call a toll-free phone number and participate in an educational group session facilitated by the therapist. A total of six one-hour weekly sessions use the program materials developed through the pilot study. Measures of the primary and secondary outcomes are administered over the telephone by a research assistant before and after the program, at three months, and at six months. By collecting data at these points and having a wait-list control group, the project is able to test whether: (1) individuals in the immediate intervention group achieve better outcomes than individuals in the wait-list control group; (2) the program leads to significant reductions in fatigue impact and fatigue severity, and improved quality of life; and (3) improvements in the outcomes can be maintained over six months. Analyses involve t-tests and mixed effects regression models. The primary goals of the project are to reduce the impact of fatigue on participants’ everyday lives, reduce fatigue severity, and improve quality of life. Secondary goals are to increase self-efficacy for managing fatigue and increase the number of energy conservation strategies used.
Field Initiated Projects (FIPs)
Massachusetts

A Randomized Trial of Realignment Therapy for Treatment of Medial Knee Osteoarthritis

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Project Number: H133G040201
Start Date: December 01, 2004
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 (No-cost extension through 4/30/2008); FY 08 (No-cost extension through 12/31/2008)

Abstract: The overall objective of this project is to determine whether the provision of realignment therapy in patients with medial knee osteoarthritis (OA) relieves knee pain and improves function. The project tests the hypothesis that compared to control treatment, the use of realignment therapy (valgus knee brace + motion control shoes + orthosis) is effective in medial knee OA. The specific aims are: (1) To undertake a 24-week randomized crossover clinical trial in patients with medial knee osteoarthritis to determine whether provision of realignment therapy leads to lower pain scores and improved function during the time of this treatment than during the use of a placebo treatment; (2) to perform an open label follow-up study to track use and effectiveness of treatment. This project is co-funded by DonJoy, a knee bracing company.
Sensorimotor Training and Assessment in Adults with Hemiplegic Cerebral Palsy: The ULTrA Program

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Project Number: H133G050151
Start Date: December 01, 2005
Length: 36 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 05 $148,810; FY 06 $148,221; FY 07 $149,933; FY 08 (No-cost extension through 11/30/2009)

Abstract: This project implements a eight-week upper limb training and assessment program (ULTrA Program) for adults with hemiplegic cerebral palsy (CP), a growing yet neglected segment of the CP community. This program is home-based but linked to the research laboratory through the Internet. Prior to and following clinical intervention, a quantitative assessment of upper limb and hand sensorimotor function is made using established motor control techniques. Each participant receives a computer-based upper limb training unit, including high speed Internet connectivity and a training CD. A 40-minute, tailored intervention program is performed five days per week. During three of these training sessions, a student coach assists participants via webcam. During the coaching sessions, movement time and grasp force data are recorded and uploaded to a central website which also serves as a resource for consumers and researchers in the area of mobility in CP across the lifespan. Training in this intervention leads to improved sensorimotor function of the affected limb and improved bilateral coordination in adults with hemiplegic CP. This Internet-based program, which utilizes virtual coaches, facilitates adherence to the training program and thus maximizes the benefit of the intervention.
Field Initiated Projects (FIPs)  
Michigan

Adapted Assessment of Speed of Information Processing in Children with Cerebral Palsy

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Project Number: H133G070044  
Start Date: October 01, 2007  
Length: 36 months  
NIDRR Officer: Scott Brown, PhD  
NIDRR Funding: FY 07 $199,995; FY 08 $199,996

Abstract: This project develops an accessible assessment of processing speed that allows sensitive measurements of cognitive capabilities in children with severe motor and communicative impairments. The objective is to examine processing speed in children with cerebral palsy by utilizing inspection time as a measure of speed of visualization. Specific aims are: (1) to examine psychometric properties, including reliability, concurrent validity, and criterion-related validity of a modified inspection time task, and (2) to compare the inspection time profiles within and between groups using the traditional and modified inspection time task procedures. Processing speed is associated with development of critical cognitive functions including working memory and fluid intelligence, and is sensitive to brain dysfunction, medication effects, and aging.
Field Initiated Projects (FIPs)
Michigan

Pathways to Depression: An Examination of Vulnerability and Stress in Adults with Spinal Cord Injury

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Project Number: H133G070020
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $199,999; FY 08 $199,913

Abstract: This project presents and tests a model (Pathways to Depression after Spinal Cord Injury [SCI]) of vulnerability factors interacting with current stressors (stressful life events and poor social support) to increase risk of depression and its adverse effects on community participation in adults with SCI. Depression after SCI is one of the most pervasive psychological conditions, occurring at rates exceeding the general population, and has the potential to substantially limit independence, compromise health and well-being, and increase risk for suicide. While many studies in the extant literature have examined injury and situational factors as correlates of depression, very few have examined other vulnerability factors that precede injury placing certain individuals at higher risk for depression post-injury. A deeper understanding of factors that predispose some individuals to depression after injury can inform treatment approaches and improve community participation impeded by depression. Using a cross sectional design and survey methodology (written and telephone interview), the project surveys 400 individuals with SCI about early life experience, psychological and substance abuse history (prior to injury), current stressful life events and social support, depression, and community participation. DNA samples are also collected to test for a polymorphism of the serotonin transporter known to interact with stress to increase risk of depression. Structural equation modeling is used to test the Pathways model of vulnerability factors.
Neuroanatomical Correlates of Positive Psychology Among People with Traumatic Brain Injury: A Biopsychosocial Model

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Project Number: H133G080064
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $199,078

Abstract: This project investigates the complex relationships among strengths of character, structurally-imaged estimates of white matter damage in frontal brain regions, psychological resiliency, and outcomes including satisfaction with life and community integration among people with TBI. Additionally, this project investigates the extent to which Peterson and Seligman’s Character Strengths model of recovery from physical illness and trauma holds true for people recovering from TBI during the acute transition phase of adjustment to disability. The psychosocial, cognitive, and physical characteristics which may influence these relationships are also explored. This project measures the satisfaction with life (as measured by the Satisfaction with Life Scale) and community integration (as measured by the Community Integration Measure). Character strengths are evaluated via two self-report scales. Estimates of structural brain damage are gathered via diffusion tensor imaging in three main areas of the prefrontal cortex: the dorsolateral, orbitofrontal, and ventromedial cortices. Ancillary measures are included in the design in order to elucidate the relationships between positive psychology constructs and important mediators/moderators of recovery from TBI: neuropsychological status, perceived social support, problem-solving coping style, positive and negative affectivity, and comorbid physical illness.
Development of an Intelligently Controlled Assistive Rehabilitation Elliptical (ICARE) Training System to Promote Walking and Fitness in Persons with Physical Limitations

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Project Number: H133G070209
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 07 $199,524; FY 08 $199,555

Abstract: The goal of this project is to develop ICARE, an Intelligently Controlled Assistive Rehabilitation Elliptical trainer and therapeutic program to help individuals with physical or mobility disabilities regain and/or retain their walking ability and physical fitness. Specifically, the project develops, refines, and field-tests a prototype ICARE trainer. It includes an affordable, intelligent control system that adapts the movement pattern of the elliptical trainer to the unique physical assistance needs of individuals as they relearn to walk and exercise. The specific objectives of this project which address this goal are to: (1) identify the best commercially available elliptical trainer to redesign into an ICARE trainer; (2) develop, pilot test, and refine a prototype ICARE device in a controlled (laboratory) environment to improve function, features, beneficial therapeutic effects for walking, and equipment durability; and (3) implement usage of the ICARE system in three free-living environments (an inpatient rehabilitation center, outpatient neurologic and orthopaedic clinic, and a community-based fitness facility) to evaluate the capacity of the device to improve walking ability and cardiovascular function of persons with varied gait dysfunctions and develop a therapeutic intervention program using the device.
Field Initiated Projects (FIPs)
Nebraska

Investigation of the Dynamics of Development of Sitting Postural Control in Infants with Cerebral Palsy

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Project Number: H133G040118
Start Date: December 01, 2004
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 (No-cost extension through 11/30/2008)

Abstract: The overall goal of this research is to understand the mechanisms underlying the development of postural control in sitting using new methodology, in order to provide a scientific basis for evaluation and treatment of posture and movement disorders in infants with cerebral palsy. The development of early posture control remains poorly understood despite considerable therapeutic effort. Infants with cerebral palsy show their first delays in the acquisition of sitting, with subsequent problems developing adequate posture and movement control. Identifying the delay, determining the nature of the problem, and evaluating the effectiveness of treatment quickly, are vital in the early part of an infant's life, since this is the time of greatest plasticity. Tools from nonlinear dynamics, which are increasingly being used to examine other biological rhythms, are used in this study to analyze postural sway from center of pressure data during the development of sitting postural control.
Field Initiated Projects (FIPs)
Nebraska

Investigation of Interventions for Sitting Postural Control in Young Children with Moderate to Severe Cerebral Palsy

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Project Number: H133G080023
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 08 $200,000

Abstract: This project identifies interventions that improve the quality of life for children with cerebral palsy (CP). The first intervention focuses on principles of enhancing complexity in movement variability, which has been shown to be effective in improving infant sitting postural control in previous research. The second intervention uses the paradigm of adding stochastic noise to the support surface to improve postural responses, a method used successfully in adults with decreased postural control. This project conducts three experiments: Experiment 1 utilizes nonlinear dynamics techniques to quantify changes in postural control as measured by the center of pressure time series in sitting; Experiment 2 utilizes the same children as in Experiment 1, but examines functional changes in arm use, focused attention, and play over time as sitting postural control improves; Experiment 3 examines changes in self-care, participation, and gross motor function to determine the relationship between changes in postural control and participation within the child’s environment. These experiments enhance the ability to provide better methods to treat children with moderate to severe CP; and provide a better understanding of the development of cognition, function, play, and participation for children with CP in relation to improved postural control sitting.
Quality of Life in Traumatic Brain Injury Research and Practice:
Development of the TBI-QOL

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Project Number: H133G070138
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 07 $199,830; FY 08 $199,414

Abstract: The scarcity of quality of life (QOL) measurement tools specific to traumatic brain injury (TBI) hinders the efforts of TBI intervention researchers, whose goal is to obtain valid and useful data to evaluate new treatment approaches. The goals of this study are to: (1) develop an instrument for comprehensively assessing the health-related quality of life (HRQOL) of persons with TBI, regardless of the severity of their condition; (2) enable comparisons of HRQOL in TBI with HRQOL in other neurologic conditions by integrating this instrument with the Neuro-QOL project; and (3) investigate and develop strategies for determining the HRQOL of individuals with even the most severe TBI, thus ensuring that these individuals will be represented in initiatives that use this instrument, rather than excluded as is often the case due to the difficulty of assessing such persons.
Development of a Cognitive Behavioral Group Therapy Intervention for Women with Physical Activity Disabilities who Experience Depression

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Project Number: H133G070214
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 07 $198,701; FY 08 $199,926

Abstract: Rates of depression and suicide in women with physical disabilities (WPD) are up to five times higher than in the general population. Despite this disparity, few intervention studies that address the specific needs of this population are available. This project uses an existing cognitive behavioral therapy (CBT) intervention that has demonstrated effectiveness in reducing depressive symptoms in women without disabilities as a starting point to co-create an intervention that addresses the specific needs of WPD. The co-creation process occurs in the context of a partnership between the investigators, WPD in the community, and community-based organizations including Oregon Centers for Independent Living (CILs). The specific aims of this project are to: (1) Develop a cognitive behavioral group therapy intervention to address the specific needs of WPD who experience depressive symptoms; and (2) pilot-test the intervention to preliminarily evaluate its efficacy with a total of 90 participants using a using a wait list control design. Phase I of the project involves development of the curriculum based on the following information sources: four focus groups conducted with WPD, review of empiric sources, community meetings, and feedback from our community advisors and consultants. Phase II pilot-tests the intervention using both quantitative and qualitative methods to assess its efficacy. A long-term goal of the proposed project is to increase the capacity of CILs and other community-based organizations across the country to offer a relevant, effective, accessible, and affordable intervention to help WPD with depression overcome this debilitating secondary condition.
Use of Functional Neuroimaging to Assess the Status of the Attention Networks Following Traumatic Brain Injury

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Project Number: H133G050219
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 05 $149,975; FY 06 $149,996; FY 07 $149,952; FY 08 (No-cost extension through 9/30/2009)

Abstract: Traumatic brain injury (TBI) is a common cause of disability, particularly in young adults. Survivors of TBI frequently suffer from persistent cognitive impairments that interfere with the rehabilitation process, as well as return to school, work, and community life. Difficulties with attention, including distractibility, difficulty concentrating, difficulty dividing attention (multi-tasking), and cognitive fatigue during effortful tasks, are among the most frequent complaints of survivors of TBI and their caregivers. This project studies the behavioral response and neural network activation patterns associated with performance of three tasks designed to rely heavily on the three distinct attention networks: vigilance, executive, and orienting. The study compares uninjured control participants to survivors of severe TBI, with respect to both behavior and brain activation studied with perfusion, and fast event-related BOLD functional magnetic resonance imaging. The study also compares the performance of TBI survivors on active drug and placebo in two separate pharmacologic probe studies, using single doses of bromocriptine (a D2 dopaminergic agonist) and nicotine (a nicotinic cholinergic agonist), predicting different patterns of responses to the two agents.
Zolpidem and Restoration of Consciousness: an Exploration of the Mechanism of Action

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Project Number: H133G080066
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 08 $199,553

Abstract: Severe brain damage due to traumatic or non-traumatic causes frequently results in unconsciousness (coma) and, in a minority of cases, may lead to prolonged or permanent disorders of consciousness (DOCs) including the vegetative and minimally conscious states. This project assesses the responses of patients with DOCs to single doses of zolpidem and placebo in a double blind crossover design, initially with structured caregiver reporting. Repeat studies with quantitative assessment by a trained clinician follow for those who are believed to respond to the drug. Those classified as definite drug responders, along with a matched sample of non-responders, are studied intensively in Philadelphia with a combination of structural and functional neuroimaging and electrophysiologic studies in an exploratory fashion to develop preliminary hypotheses about the neural substrate required for responding to zolpidem. Project activities include recruiting of a national sample of individuals with DOCs to participate in a consent-based, HIPAA compliant research registry, which will facilitate this and future studies. This study helps to define the potential size of the population who may benefit from zolpidem administration, encourages those who do benefit to seek ongoing clinical management, and allows formulation of hypotheses about the mechanism of drug response that can be tested definitively in subsequent research, making use of interested registry participants.
Field Initiated Projects (FIPs)  
Pennsylvania

Treatment Components and Active Ingredients in a Scheduled Telephone Intervention for Traumatic Brain Injury

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Project Number: H133G070143  
Start Date: October 01, 2007  
Length: 36 months

NIDRR Officer: A. Cate Miller, PhD  
NIDRR Funding: FY 07 $199,880; FY 08 $199,844

Abstract: This project studies the treatment components and active ingredients of an intervention for post-acute, moderate and severe traumatic brain injury (TBI) known as Scheduled Telephone Intervention (STI). The STI was designed to help meet the multiple, evolving needs of people with TBI and their families following rehabilitation hospital discharge, and consists of telephone calls placed by a specially trained counselor at scheduled, gradually increasing intervals (seven calls in the first year post TBI). Using a theoretically motivated model of candidate active ingredients in three classes: treatment elements common to many interpersonal interventions (e.g., therapeutic alliance), treatment elements related to goal self-management/ executive function theories, and modifier variables such as total dose of treatment, the project analyzes the treatment components of the STI by coding archived, audiotaped treatment sessions (calls) from 175 participants in the treatment arm of the multicenter randomized controlled trial on the STI. This project: (1) develops an objective, reliable scoring system for measuring these treatment components; (2) characterizes relationships among pre-treatment participant characteristics (e.g., level of disability) and the treatment components delivered during a one-year course of STI; (3) examines the longitudinal trends in treatment components during one year of treatment; and (4) estimates the “activity” of various ingredients by examining the relationships among treatment components and one-year outcomes, accounting for the direct effects of baseline status on both treatment process and outcomes.
Understanding the Determinants of Motor Ability, Self-Care, and Play of Young Children with Cerebral Palsy

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Project Number: H133G060254
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $149,981; FY 07 $149,927; FY 08 $149,359

Abstract: The specific purpose of this project is to validate a multivariate model of determinants of change in basic motor ability and engagement in self-care and play of young children with cerebral palsy. The objective is to identify the child characteristics, family ecology, and rehabilitation and community services that optimize outcomes. The project targets a subset of children with cerebral palsy who as adults will not walk independently in the community and will require physical assistance for self-care at times throughout the day. Information on the factors that enhance outcomes for these children is particularly needed because families expend considerable time and resources to meet their children’s health, education, and development needs. Knowledge of determinants of children’s change in basic motor abilities and engagement in self-care and play will enable health care professionals and educators to provide evidence-based interventions, support families, and optimize community resources.
Virtual Reality Assessment and Treatment of Hemispatial Neglect

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Project Number: H133G060086
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 06 $149,593; FY 07 $149,819; FY 08 $149,910

Abstract: The goal of this project is to address previous limitations in the assessment and treatment of neglect through the use of virtual reality (VR) technology. Hemispatial neglect, a failure to attend to and/or act on objects on the side of space opposite a brain lesion, is a common and persistent consequence of stroke, occurring in approximately 45 percent of the nearly 2 million Americans who have suffered a right hemisphere cerebral vascular accident. The neglect syndrome is associated with impairments in a wide range of activities of daily living, with significant consequences for functional independence. This project capitalizes on a number of VR’s useful assets, including simulation of the spatial and cognitive demands of real world environments, quantification of aspects of performance, ready control of the experimental task, and ease of administration. The major aims are: (1) to develop and validate a VR navigation task measuring lateralized attention (the VRLAT), an extension of a sensitive VR task developed previously; (2) to perform clinical trials assessing the short-term efficacy of two VR-based treatments for neglect that induce different types of mismatch between proprioceptive and visual information, using the VRLAT as one of the measures of treatment response; and (3) to perform clinical trails of the two treatments focused on generalization and maintenance of gains with a longer course of treatment.
A Longitudinal Study of Risk for Hospitalization, Pressure Ulcers, and Subsequent Injuries After Spinal Cord Injury

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Project Number: H133G050165
Start Date: December 01, 2005
Length: 36 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 05 $149,992; FY 06 $149,995; FY 07 $149,997; FY 08 (No-cost extension through 11/30/2009)

Abstract: The onset of spinal cord injury (SCI) increases the risk for the development of a number of secondary conditions that may adversely impact an individual’s life and even result in early mortality. The purpose of this project is to perform a longitudinal study to identify protective and risk factors associated with the onset of multiple types of adverse health events among a large sample of individuals with SCI. In 1997-8, prospective data was collected on 1,391 participants who included a substantial number of women (n = 362) and racial/ethnic minorities (n = 359). Risk and protective predictors were selected based on a general empirical risk model. Predictor variables were first measured over a 10-month period in 1997-1998, including: (a) biographical status, (b) injury status, (c) psychological status, (d) environmental factors, and (e) health behaviors. Several health outcomes measures were also used. During this follow-up study, the project administers several new predictor measures along with multiple outcome measures, several of which were also administered during the previous study. These measures focus on adverse health events including hospitalizations, onset of pressure ulcers, subsequent injuries, and the onset of probable major depression. The project includes structural equation modeling to develop risk models for each outcome. A consumer advisory committee meets bi-annually to make recommendations regarding all components of the project. The ultimate study goal is to enhance the lives of people with SCI by identifying the risk and protective factors associated with adverse health events to serve as a foundation for prevention efforts by rehabilitation and public health professionals. This directly empowers consumers to improve their own health by being provided with concrete information and recommendations to promote better health and avoid preventable secondary health complications.
Field Initiated Projects (FIPs)
South Carolina

Participation, Subjective Well-Being, Health, and Spinal Cord Injury:
A 35-Year Longitudinal Study

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Project Number: H133G060126
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $149,954; FY 07 $149,987; FY 08 $149,946

Abstract: The purpose of this 35-year longitudinal study is to identify the natural course of changes in participation, health, and subjective well-being among five cohorts of participants with spinal cord injury (SCI). Data were first collected in 1973 from 256 participants, 78 of whom have participated throughout the study. Using a revolving panel longitudinal design, participants are followed over time with new participant samples added to counter attrition. To date, there have been a total of 2,208 different participants over the 6 times of measurement, including nearly 100 who have lived 40 or more years with SCI. This study is the seventh stage of data collection and addresses not only the natural course through analysis of both cross-sectional and multiple longitudinal elements, but also special issues including quality of life and termination of employment, change in living circumstance to a more restrictive environment, and the role of environmental factors on stability of health and quality of life. There are three primary activities: (1) finalization of instrumentation, based on consumer panel recommendations and pilot testing; (2) primary data collection; and (3) consumer initiated development of recommendations for healthy living with aging for consumers and policy recommendations for rehabilitation professions and legislators.
Effectiveness of a Group Cognitive-Behavioral Intervention for Depression after TBI and Factors that Affect Response to Treatment

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Project Number: H133G070222
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 07 $197,754; FY 08 $197,899

Abstract: This project is designed to evaluate the effectiveness of a group cognitive behavioral intervention (CBT group) for treating depressive symptoms in persons with traumatic brain injury (TBI), to assess the impact of cognitive impairments on an individual’s response to the CBT group, and to assess the impact of the CBT group on community participation and subjective well-being in persons with TBI. The initial phase of this study involves utilizing input from consumer and expert advisors to develop an approach and to adapt materials for use with persons with cognitive impairments. Once adapted, the intervention is piloted with a group of five individuals with at least mild symptoms of depression. After the pilot phase, a randomized, attention controlled clinical trial follows. Cognitive-behavioral approaches to treatment of depression have been demonstrated to have effectiveness in many populations, including a growing body of evidence for effectiveness in persons with other types of acquired brain injury. Given the inherent structure that such approaches utilize, which may help minimize cognitive demands, cognitive behavioral therapy would appear well-suited to use with persons with TBI.
Efficacy of Pressure Garment Therapy After Burns

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Project Number: H133G050022
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 (No-cost extension though 9/30/2009)

Abstract: This project conducts a randomized, controlled trial to determine the efficacy of custom-fit pressure garment therapy in the prevention of hypertrophic scarring in healed burns so that the garments may be prescribed based upon sound data or discontinue their use in burn care. Hypertrophic scarring is one of the most devastating outcomes following burn injury. Pressure garments are the common therapy to minimize these effects. However, these garments are unattractive, expensive, and uncomfortable, and their use needs to be validated by rigorous research.
Telephone and In-Person Cognitive Behavioral Therapy for Depression After Traumatic Brain Injury

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Abstract: This project continues previous efforts to establish evidence-based treatments for major depressive disorder (MDD) in people with traumatic brain injury (TBI). MDD is the most common psychiatric disorder among TBI survivors and has widespread negative effects on health and functional outcomes in people with TBI. This three-armed randomized controlled trial compares (1) in-person cognitive behavioral therapy for depression that is adapted for people with TBI (CBT-TBI) and (2) telephone-based CBT-TBI to a (3) usual depression care condition (UC). Previous research found that people with TBI and depression are highly interested in using psychotherapy to treat depression. Although psychotherapy is widely used in the treatment of general psychological aspects of TBI, solid evidence for the efficacy of psychotherapy for MDD in this population is absent. While CBT is the most evidence-based psychotherapy available for MDD, thus far there is only expert opinion to guide how CBT should be adapted for people with TBI (i.e., to accommodate patients with neurocognitive and neurobehavioral impairments). Therefore, this study adapts CBT specifically for people with TBI in a three-armed trial and measures the feasibility, acceptability, and potential effectiveness of this adapted intervention in both telephone-administered and in-person formats, compared with UC. The long-term goal of this research is to develop a feasible and effective manualized psychotherapy intervention to treat major depressive disorder in persons with TBI that is applicable across a wide array of settings.
Adverse Outcomes Following Inpatient Rehabilitation: Trends and Reasons

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Project Number: H133G060218
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 06 $149,129; FY 07 $149,772; FY 08 $149,888

Abstract: Research is needed to develop the knowledgebase and tools necessary to address the problem of increased rates of mortality and hospitalization following inpatient rehabilitation and to examine explanations for adverse outcomes. Descriptive analyses are conducted first to describe important trends in mortality and rehospitalization and to provide a basis for further analyses. Multivariate risk adjustment models – based on impairments, functional level, age, and other patient characteristics in extant databases – are then developed to predict adverse outcomes. These risk adjustment models provide the necessary basis to distinguish the effects of patient severity and caseload from other factors that affect adverse outcomes. Researchers then examine and test the effects of important facility characteristics that may affect rates of adverse outcomes. The primary outcomes to be studied are mortality and rehospitalization; functional decline is also studied, as it, too, may indicate medical instability, and all three outcomes may or may not be predicted and affected by the same set of factors.
Field Initiated Projects (FIPs)
Wisconsin

Conservative and Surgical Clubfoot Treatment: Multi-Center Study

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Project Number: H133G060252
Start Date: January 01, 2007
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: This study is designed to compare the longer-term effects of two methods of clubfoot treatment: (1) the conservative Ponseti technique of manipulation and casting, and (2) progressive surgical release. Clubfoot is a congenital foot deformity occurring in 1 in 1,000 births. It is commonly treated at pediatric orthopaedic hospitals and its incidence has been constant and not expected to decrease. Treatment is ideally accomplished early in life, within the first year, and is often successful in accomplishing a satisfactory, plantigrade foot, which will fit in shoes. Little is known, however about the function of treated clubfeet. This project investigates the longer-term outcome of children with treated clubfoot deformity using patient-based outcomes, functional instruments, motion analysis, radiological assessment, and postural stability. The objective is to determine whether functional outcomes, postural stability, and gait analysis characterize overall patient satisfaction and motor performance and to quantify the effects of orthopaedic interventions.
Technology for Access and Function

With NIDRR's research priorities, technology spans the goals of sustaining health and function, employment, and participation and community living reflecting the critical contributions of technology to successful outcomes for persons with disabilities in all these areas. At the individual level, the primary focus is on assistive technology devices that enhance the physical, sensory, and cognitive abilities of people with disabilities and assist them in participating and functioning more independently in the home, at work, in recreational settings, and at cultural and community events. At the systems level, the emphasis is on applying technology research and development in ways that enhance community integration, independence, productivity, competitiveness, and equal opportunity by mitigating or eliminating barriers found in large social systems such as public transportation, telecommunications, IT, and the built environment.

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Rehabilitation Engineering Research Center: Develop and Evaluate Technology for Low Vision, Blindness, and Multi-Sensory Loss

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Project Number: H133E060001
Start Date: August 01, 2006
Length: 60 months

NIDRR Officer: Kenneth D. Wood, PhD

NIDRR Funding: FY 06 $950,000; FY 07 $950,000; FY 08 $950,000

Abstract: This Center conducts a program of research and development to enhance the independence of blind, visually impaired, and deaf-blind individuals. Research includes investigation of assessment methods to guide rehabilitation of infant cortical visual impairment; practical innovations in assessment and interventions for elders with visual impairments; and development of independent assessment guidelines for emerging visual prostheses. The Center also conducts research in access to graphical information for blind, visually impaired, and deaf-blind persons, developing tools for rapid screen overview, auditory and tactile graph presentation, image classification, and on-demand production of tactile street maps. To address signage and travel information, the project is investigating information interfaces for travelers who are blind or visually impaired, and innovative computer vision methods to find and read existing print signs and labels. To address the rising barriers to accessing visual displays and appliances for employment and daily living, there is a designer education campaign and development of a universal talking LCD/LED display reader, practical consumer tools, and jobsite adaptations for employees who are blind or visually impaired. Other projects include development of a new-generation robotic finger-spelling hand for deaf-blind communication, and pilot investigations of difficulties in lipreading and sign language reading experienced by those with combined auditory and visual impairment.
Rehabilitation Engineering Research Centers (RERCs)
Colorado

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Project Number: H133E040019
Start Date: November 01, 2004
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 04 $850,000; FY 05 $850,000; FY 06 $850,000; FY 07 $850,000; FY 08 $850,000

Abstract: The goal of this RERC is to research, develop, evaluate, implement, and disseminate innovative technologies and approaches that will have a positive impact on the way in which individuals with significant cognitive disabilities function within their communities and workplace. The Center incorporates: (1) a consumer-driven model for identifying the most significant barriers to independent living and workforce participation; (2) an approach that is balanced and uses both well-established and newly emerging technologies in its development projects; (3) a focus both on functional limitations and specific disabilities; and (4) mutually beneficial partnerships with private industry and public agencies. Research activities include: needs, knowledge, barriers, and uses of AT by persons with cognitive disabilities; technology for remote family support for people with cognitive disabilities; influences on AT use, non-use, and partial and inappropriate use by persons with traumatic brain injury; AT enhancement of written expression for children and adults; needs assessment for creating affordable, context-aware technologies; and technology to promote decision-making skills and self-determination for students with cognitive disabilities. Development activities include: Design, implementation, and deployment of context aware technologies for persons with cognitive disabilities residing in community living environments; development of HealthQuest, an Internet-based product that enables individuals with intellectual disabilities to become active participants in their own health care; XML repository of common tasks; batteryless micropower sensors for context aware technologies; perceptive animated interfaces for workforce training; and environmentally appropriate behavioral cues for individuals with TBI.
Rehabilitation Engineering Research Centers (RERCs)
District of Columbia

Rehabilitation Engineering Research Center on Hearing Enhancement

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Project Number: H133E030006
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 03 $949,999; FY 04 $949,024; FY 05 $949,480; FY 06 $949,998; FY 07 $949,999; FY 08 (No-cost extension through 9/30/2009)

Abstract: The mission of this RERC is to build and test components of a new, innovative model of aural rehabilitation tools, services, and training, in order to improve assessment and fitting of hearing technologies and to increase the availability, knowledge, and use of hearing enhancement devices and services. Component A: (1) develops and evaluates new methods for field evaluation and fitting of hearing aids; (2) develops and evaluates techniques to enhance auditory self-monitoring; and (3) develops methods for predicting the speech-to-interference ratio and intelligibility of speech for a hearing aid when used with a wireless telephone. Component B conducts a needs assessment survey of people who use hearing technologies and evaluates the use of Bluetooth technology as a means of improving and expanding wireless connection to a hearing aid. Component C investigates environmental factors affecting children’s speech recognition abilities in classroom settings. Component D investigates the use of distortion product otoacoustic emission and reflectance for diagnosis of hearing loss and tinnitus, and creates and standardizes sets of synthesized nonsense syllables for use in hearing aid research. Component E develops a new, innovative model for the delivery of aural rehabilitation services to adults with hearing loss. In addition the RERC conducts a program of training and dissemination that reaches a diverse audience of people, both consumers and professionals.
Rehabilitation Engineering Research Centers (RERCs)
District of Columbia

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Project Number: H133E080006
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $949,935

Abstract: This project builds and tests components of an innovative model of aural rehabilitation (AR) tools, services, and training in order to assure a better match between hearing technologies and individuals in their natural environments. Project goals include: (1) improving assessment, fitting, availability, and use of hearing technologies; (2) increasing the quality, availability, and knowledge of AR services; (3) training of consumers, service providers, and future researchers, developers, and practitioners; and (4) transferring technology and knowledge to agencies, standards bodies, consumers, and the professions who influence the communicative effectiveness of those who are deaf or hard of hearing. Additional component projects are designed to fall into four areas: (1) AR projects improve the assessment and treatment of individuals in need of AR; (2) hearing technology addresses the technology challenges of real-life use of assistive technologies, hearing aids, and cochlear implants; (3) training programs provide training of individuals who will become the rehabilitation innovators of the future; and (4) dissemination and advocacy programs transfer technology and knowledge to agencies, standards bodies, consumers, and hearing professionals.
Rehabilitation Engineering Research Centers (RERCs)
Georgia

Rehabilitation Engineering Research Center on Wheeled Mobility

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Project Number: H133E030035
Start Date: November 01, 2003
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 03 $949,988; FY 04 $949,951; FY 05 $949,975; FY 06 $949,998; FY 07 $949,979; FY 08 (No-cost extension through 10/31/2009)

Abstract: The goal of this RERC is to undertake a major shift in the way wheeled mobility is conceptualized and understood, from the design of assistive devices that enable some individuals to perform some activities, to the design of a broad range of interventions that enable as many individuals as possible to actively engage and participate in everyday community life. Research activities include: (1) User Needs and Design Input uses participatory focus groups to identify needs of wheelchair users; (2) User Needs of Older Adults assesses the needs of older adults living at home and in other residential settings; (3) Effects of Environment and Mobility Technology on Participation and Activity measures the influences of environmental barriers and specialized wheelchair technology on participation and activity in everyday life; (4) Efficacy of Animation and Visualization Training uses computer simulation techniques to investigate their efficacy in improving mobility training; and (5) Clinical and Functional Implications of Seating Standards and Guidelines studies the relationship between standardized measures of cushion performance and actual impact on wheelchair users. Development efforts include: (1) development and marketing of new mobility devices in collaboration with industry design partners; (2) development of a wheelchair for frail elders that can be used in any residential environment; (3) interventions to overcome barriers to participation including guidelines and technologies to help wheelchair users overcome environmental and technological barriers; (4) development of animation and visualization training through computer simulations to improve training in transfers and outdoor mobility; and (5) development of valid wheelchair cushion test methods which enables clinicians to prescribe appropriate wheelchair cushions based on positioning and load distribution.
Rehabilitation Engineering Research Center for Wireless Technologies

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Project Number: H133E060061
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 06 $949,999; FY 07 $949,999; FY 08 $949,998

Abstract: The mission of this project is to: (1) promote equitable access to and use of wireless technologies by persons with disabilities; and (2) encourage adoption of Universal Design in future generations of wireless technologies. To accomplish these aims, the RERC is organized into three main project sections: The Research Section is comprised of four research initiatives: Facilitating User Centered Research is designed to establish a research portal that communicates to industry the needs of people with disabilities for wireless technologies. Customer-driven Usability Assessment enhances the usability of future generations of cell phones and other wireless products by developing a methodology for assessing their usability by representative users with disabilities. Collaborative Policy Approaches to Promote Equitable Access develops, implements, and evaluates specific policy initiatives related to accessible wireless technologies and services. Advanced Auditory Interfaces develops, tests, and disseminates guidelines for the design of advanced auditory interfaces for cell phones and other handheld electronic devices. The Development Section includes four projects that promote equitable access to and use of wireless technologies by persons with disabilities through the development of prototype designs: Alternative Interfaces continues its work on the V2 standards for universal remote consoles and Real-time Location-based Information Services expands on previous work on the RERC’s personal captioning system by addressing the needs of patrons with vision or hearing impairments in three different venues: exhibit spaces, airports, and hospitals. Development of Wireless Emergency Communications and Ensuring Access to Emergency Assistance both focus on the area of wireless emergency communications for people with disabilities; developing wireless communication technology to be used by emergency personnel to contact individuals with disabilities, and by people with disabilities to signal the need for assistance. The Training and Dissemination Section promotes the synthesis of new knowledge into practice with the RERC’s State of the Science conference and a number of initiatives designed to educate consumers, providers, and other professionals, including: university courses, an annual student design competition, conference tutorials, and workshops, all geared toward access and usability of mobile wireless technologies.
Rehabilitation Engineering Research Centers (RERCs)
Georgia

Rehabilitation Engineering Research Center on Workplace Accommodations

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Project Number: H133E070026
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 07 $949,999; FY 08 $949,999

Abstract: The Workplace Rehabilitation Engineering and Research Center (RERC) identifies, develops and promotes new assistive and universally designed technologies that maximize independence and participation of people with disabilities in the workplace. It focuses on the application of universal design (UD) concepts to improve the utility of workplace tools and devices for all workers through research, development, training, and dissemination. Research activities investigate five topics identified by current RERC research: user needs, longitudinal cost/benefits of accommodations, strategies used by aging workers, the impact of policy on access to and utilization of accommodations, and the effect of accommodations on employee participation in the workplace. Several development activities create and validate new workplace assessment tools for use by practitioners and employees. Other development activities design, prototype, and evaluate new workplace accommodations. Universally designed workstations and human-computer interfaces are being developed. In addition, the Work RERC develops technology for workers with identified and unmet accommodation needs, including prompting aids for employees with developmental disabilities and accommodations for employees with communication disabilities. Finally, Work RERC training activities include both instruction and evaluation of training outcomes and will target VR professionals, workers with disabilities, and students interested in design and engineering.
Rehabilitation Engineering Research Centers (RERCs)
Georgia

Rehabilitation Engineering Research Center for Wheeled Mobility in Everyday Life

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Project Number: H133E080003
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $949,998

Abstract: This project promotes new ways of conceptualizing and understanding wheeled mobility—focusing on devices and interventions that impact device use and activity performance. This approach enables as many individuals as possible to actively participate in everyday life. Project goals include four integrated program areas in research, development, training, and dissemination that utilize a variety of methodologies and scientific approaches taking research out of the laboratory and putting it into real-world, everyday environments. Research centers on four activities: R1. Pressure Ulcer Prevention: Susceptibility and Pressure Relief Effectiveness; R2. Effects of Mobility Device and Environmental Facilitators on Activity and Participation; R3. Improved Training to Improve Function which studies the effect of immediate video feedback on acquisition of advanced wheelchair skills, and the impact of an innovative wheelchair Tai Chi program on health, activity, and participation; and R4. Improved Wheelchair Prescription which examines effects of wheelchair type on performance of elders in public spaces and investigate how well clinicians predict the wheelchair use of their clients. Development projects address standards and test methods and commercial projects and include: D1. Development of Standards and Test Methods which develops three wheelchair cushion standards and a wheelchair test method to accurately measure the mechanical effort required to propel manual wheelchairs; D2. Inventor-Driven Product Development that assists in developing products that have been conceived by small companies and inventors; and D3. Development of Orphan Technologies, developing devices that have small markets but serve useful needs. Four training projects focus on a variety of audiences including: T1. Evidence-Based Online Wheelchair Seating and Positioning Course; T2. Advanced Rehabilitation Research Training; T3. Creating Rehabilitation Engineering and Assistive Technology Experiences; and T4. State of the Science Conference.
Rehabilitation Engineering Research Center on Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities (RERC RecTech)

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Project Number: H133E070029
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 07 $950,000; FY 08 $950,000

Abstract: This center includes a coordinated set of research, development, capacity building, and dissemination projects focused on facilitating and promoting healthier, more active lifestyles for people with disabilities. The key target areas for the research and development projects are improving access to recreation and exercise venues and equipment, increasing opportunities for participation by people with disabilities in beneficial exercise, using technology to support greater adherence to regular exercise, and promoting better health and function for people with disabilities through active lifestyles. The research and development agenda of the RERC provides the context for a growing capacity building effort targeting not only the next generation of leadership in engineering, research, and clinical practice but also infusing rehabilitation engineering concepts and principles into the curriculum of related disciplines. A broad and active dissemination program makes effective use of a non-profit organization advocating for inclusive recreation and exercise opportunities for people with disabilities: The Inclusive Fitness Coalition (IFC - www.incfit.org) currently has 53 member organizations representing the recreation and fitness industry, fitness and exercise science professionals, researchers, disability organizations, professional organizations, rehabilitation centers, and others united by a common goal of furthering inclusive opportunities for people with disabilities to participate in recreation and exercise in their own communities.
Rehabilitation Robotics and Telemanipulation Machines Assisting Recovery from Stroke Rehabilitation Engineering Research Center (MARS-RERC)

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Project Number: H133E070013
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 07 $949,775; FY 08 $949,779

Abstract: The RERC on Rehabilitation Robotics and Telemanipulation entitled, Machines Assisting Recovery from Stroke Rehabilitation or MARS-RERC is a multi-institutional center designed to evaluate the utility of simple robotic devices for providing rehabilitation therapy after hemispheric stroke. The focus is largely on stroke, because this is the most common neurological disorder requiring intensive and prolonged rehabilitation. The broad objective of MARS-RERC is to develop devices that assist the therapist in providing rationally based, intensive treatments that are longer in duration than without them. MARS-RERC monitors progress of the stroke survivors and with the goal of improving the functional performance of stroke survivors so there is a greater likelihood of their return to community and to work. MARS-RERC is hosted at the Rehabilitation Institute of Chicago (RIC) and together with multi-national partners at Northwestern University, University of Illinois at Chicago, University of California at Irvine, ETH in Zurich, and INAOE, Puebla, Mexico, the Center designs and implements a program of research and development, investigating the use of robot devices and related engineering technologies for better restoration of function in stroke survivors. The focus is on the application of new approaches that improve recovery outcomes of the entire body during either upper extremity reach-and-grasp activities or lower body locomotion activities. MARS-RERC includes six programs of study. There are three development projects that create: (1) new capabilities of the Lokomat® walking robot, (2) hand technologies to improve reaching and finger extension, and (3) a telerehabilitation protocol using an arm gravity-assistance device. There are also two research projects that are studying: (1) the benefits of error augmentation in relearning after stroke, and (2) over ground gait rehabilitation using the KineAssist® robot. Additionally, a separate advanced training project with engineering students is dedicated to the design of robotic devices to use in stroke rehabilitation.
Rehabilitation Engineering Research Center on Prosthetics and Orthotics

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Project Number: H133E080009
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $949,999

Abstract: This project improves the quality of life for persons who use prostheses and orthoses through creative applications of science and engineering to prosthetics and orthotics (P&O) through seven research projects and five development projects. These projects enhance the ability of prosthesis and orthosis users to perform activities of daily living and negotiate their daily environment safely and effectively, engage in their chosen employment/vocation, and improve their health through the safe and effective use of P&O devices. Increasing understanding about the fundamental biomechanics of standing, walking, reaching, grasping, and the corresponding utilization of P&O devices for these activities enable better evaluation and improvement upon current P&O technologies. Research is broad in scope involving lower-limb prosthetics, lower-limb orthotics, upper-limb prosthetics, analysis of spinal motion during gait in users of prostheses, and utilization of process and outcome information to improve P&O care delivery. Additional focus is given to the needs of farmers and ranchers with amputations. Development projects focus on human locomotion, reaching, grasping, and manipulation; and providing efficient and cost-effective production of prosthetic components with the goal to assist P&O clinicians in their daily practices by providing them with new mechanisms, evaluation and designs tools, and information about prosthetic/orthotic usage.
Rehabilitation Engineering Research Centers (RERCs)
Michigan

Rehabilitation Engineering Research Center on Wheelchair Transportation Safety

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Project Number: H133E060064
Start Date: November 01, 2006
Length: 60 months
NIDRR Officer: William V. Schutz, PhD, MSW, MPH
NIDRR Funding: FY 06 $899,753; FY 07 $899,708; FY 08 $899,749

Abstract: Research conducted by the RERC on Wheelchair Transportation Safety (RERC WTS) advances the safety, usability, and independence of people who remain seated in their wheelchairs when traveling in motor vehicles. Research and development projects involve close collaboration with manufacturers, transit providers, vehicle modifiers, clinicians, and consumers to ensure quick translation of results into meaningful solutions that benefit travelers with mobility disabilities. Projects range from developing innovative solutions for forward-facing and rear-facing wheelchair passenger stations in large accessible transit vehicles, to investigating issues of school-bus transportation for children seated in WC-19 compliant and noncompliant wheelchairs, and to improving frontal- and rear-crash protection for occupants in private vehicles. Continuing research from previous grants, the RERC WTS extends the in-depth investigations of adverse events involving wheelchair-seated travelers, but also conducts a study of the transportation experience of wheelchair users in large public transit vehicles, including the process of entering and exiting the vehicle, accessing the wheelchair station, securing the wheelchair and restraining the occupant, and traveling to and from destinations. In addition to conducting research and development in six project areas, RERC WTS staff engages in information dissemination, training of future researchers, transferring innovative technology concepts to the marketplace, developing and revising voluntary industry standards, and convening the second State-of-the-Science Workshop on Wheelchair Transportation Safety. The RERC is a partnership of the University of Michigan Transportation Research Institute, the University of Pittsburgh, the University of Louisville, and the University of Colorado.
Rehabilitation Engineering Research Centers (RERCs)
New Jersey

Rehabilitation Engineering Research Center on Children with Orthopedic Disabilities

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Project Number: H133E050011
Start Date: November 01, 2005
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 05 $949,700; FY 06 $949,646; FY 07 $949,266; FY 08 $949,266

Abstract: This project focuses on research and development assisting children to achieve their full potential as productive citizens. The work plan includes a roster of projects designed to enhance the physical skills of these children to be successful in learning, playing, and living independently. This project includes three research and three development projects, as well as training projects serving the needs of children, families, students, and professionals. Project selection is driven by the RERC’s vision of RERCs as a source of innovation and of new technologies designed to address the serious problems faced by children with disabilities. This project is a collaboration of New Jersey Institute of Technology, the Childrens’ Specialized Hospital, and Rutgers University, bringing together two academic departments of biomedical engineering with the nation's largest pediatric rehabilitation hospital.
Rehabilitation Engineering Research Centers (RERCs)
New York

Rehabilitation Engineering Research Center on Technology Transfer
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Project Number: H133E030025
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 03 $949,999; FY 04 $950,000; FY 05 $950,000; FY 06 $950,000; FY 07 $950,000; FY 08 (No-cost extension through 9/30/2009)

Abstract: The activities of this project transfer and commercialize new and improved assistive devices, conduct research to improve technology transfer practice, and support other stakeholders involved in the technology transfer process. Four research projects investigate innovative ways to facilitate and improve the process of technology transfer for all stakeholders: (1) Identify Innovative Technology Transfer Practices draws critical success factors from examples of retrospective and prospective AT transfer case studies in various sectors; (2) Identify Innovative Technology Transfer Policies traces the outputs and outcomes of Federal transfer programs supporting AT related projects and assesses their efficacy; (3) Facilitate AT Industry Innovation Through Focused Market Research provides a context for transfer opportunities involving the AT industry and for public policy decision making; and (4) Assess the Efficacy of Transferred Products determines the extent to which products previously transferred through the T2RERC impact the functional capabilities of consumers. Four development projects increase the number and quality of successful transfers from RERCs and other sources: (1) Transfer Products Through a Supply Push Approach facilitates the movement of new or improved prototype inventions to the marketplace through licenses, sales, or entrepreneurial ventures; (2) Transfer Technologies Through a Demand Pull Approach validates technology needs within the AT industry and introduces advanced technology solutions to address those needs; (3) Improve the Accessibility of New Mainstream Products extends participatory research to integrate consumers’ functional requirements into the design of new mainstream products; and (4) Facilitate RERC Transfer Activity Through Informatics establishes a pilot informatics infrastructure and assesses its utility for increasing communication, collaboration, and transfers between RERCs.
Rehabilitation Engineering and Research Center (RERC) on Universal Design and the Built Environment at Buffalo

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Project Number: H133E050004
Start Date: November 01, 2005
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 05 $949,996; FY 06 $949,994; FY 07 $949,999; FY 08 $949,997

Abstract: The RERC on Universal Design and the Built Environment (RERC-UD) is engaging the public and private sectors across four broad domains of the built environment: (1) community infrastructure, (2) public buildings, (3) housing, and (4) products. The RERC-UD generates strategically important research, development, education, and dissemination deliverables, to advance the fields of rehabilitation engineering and environmental design. The RERC-UD deliverables integrate universal design principles within the generally accepted models, methods, and metrics of design and engineering professionals in the building and manufacturing industries. Research projects document the efficacy of existing universally designed environments, and generate critical human factors data essential to resolving design and engineering problems. Development projects create evidence-based guidelines to implement universal design concepts within the tools of the design professions, and formulate methods to evaluate the usability of designs for people with mobility, sensory, and cognitive impairments. The usefulness of the guidelines and evaluation methods are demonstrated by applying them to the development of innovative products and environments with industry partners. Training activities emphasize online certificate programs in universal design for design professionals, builders, manufacturers, and consumer advocates; a web portal and site for students and educators; and graduate programs that train researchers in advanced methods. Dissemination outputs include traditional refereed and trade publications, an extensive website with downloadable information products and design tools, model home demonstrations in local communities across the country, and outreach activities with professional, business, and standards development organizations. The RERC-UD’s state-of-the-science conference includes stakeholders in a plan to elevate universal design to an integral component of the mainstream design and engineering disciplines.
Rehabilitation Engineering Research Centers (RERCs)  
North Carolina

Rehabilitation Engineering Research Center on Communication Enhancement

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Project Number: H133E030018  
Start Date: November 01, 2003  
Length: 60 months  
NIDRR Officer: Thomas Corfman  
NIDRR Funding: FY 03 $949,977; FY 04 $949,973; FY 05 $949,974; FY 06 $949,976; FY 07 $949,974; FY 08 (No-cost extension through 10/31/2009)

Abstract: The mission of this RERC is to assist people who use augmentative and alternative (AAC) technologies in achieving their goals across environments. The goals and objectives of the RERC are to advance and promote AAC technologies through the outputs and outcomes of research and development activities and to support individuals who use, manufacture, and recommend these technologies in ways they value. Research projects cover the following areas: (1) improving AAC technology to better support societal roles; (2) enhancing AAC access by reducing cognitive/linguistic load; and (3) enhancing AAC usability and performance. Projects address issues of literacy, telework, specialized vocabulary, contextual scenes and intelligent agents, improving interface performance, and monitoring and simulating communication performance. Development activities include: (1) technology and policy watch; (2) new interfaces; and (3) reducing the cognitive/linguistic burden on AAC users. Activities address monitoring emerging technologies, standards, and policies; technologies to supplement intelligibility of residual speech, dysarthric speech, and gesture recognition; brain interface; AAC WebCrawling; and enhancing the role of listeners in AAC interactions.
Rehabilitation Engineering Research Centers (RERCs)  
North Carolina

Rehabilitation Engineering Research Center for Communication Enhancement (AAC-RERC)

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Project Number: H133E080011  
Start Date: October 01, 2008  
Length: 60 months  
NIDRR Officer: Thomas Corfman  
NIDRR Funding: FY 08 $949,965

Abstract: The mission of the AAC-RERC is to assist people who use augmentative and alternative communication (AAC) technologies in achieving their goals across environments. The goals and objectives of the AAC-RERC are to advance and promote AAC technologies through the outputs and outcomes of our research and development activities; and to support individuals who use, manufacture, and recommend these technologies in ways they value. The project builds on collaborative relationships with researchers and developers both in and outside of the field of AAC and assistive technology, including DynaVox Technologies, the Federal Laboratory Consortium, Department of Navy, and Research In Motion (RIM) among others. Research projects include: (1) AAC technologies to reduce cognitive/linguistic load; (2) new interface strategies for AAC technologies; and (3) AAC technologies to increase usability, acceptance, and learnability. Development activities include: (1) connecting to the world - AAC access to mainstream technologies; (2) new interface strategies for AAC technologies; and (3) usability, acceptance, and learnability of AAC technologies.
Rehabilitation Engineering Research Centers (RERCs)
Oregon

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Project Number: H133E030009
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 03 $949,479; FY 04 $949,259; FY 05 $949,044; FY 06 $949,260; FY 07 $949,659; FY 08 (No-cost extension through 9/30/2009)

Abstract: This RERC addresses the need for improvements in the accessibility of public transportation. This center is both important and timely because of major changes in the travel industry, and the need to adapt to those changes in a way that provides safe and dignified travel for persons with disabilities. The transportation focus of this RERC is inter-city travel via air, rail, and bus. Air, rail, and over-the-road buses account for nearly all inter-city public transportation. Accessibility issues focus on persons with mobility, agility, and hearing disabilities, and account for a large percentage of persons with disabilities. Two areas of research are addressed: (1) the biomechanics of wheelchair transfers in confined spaces; and (2) the perceptions, reactions, and attitudes of subjects towards existing and proposed accessibility solutions. The biomechanics studies include the use of a sophisticated eight-camera motion analysis system in conjunction with force plates to determine the motions and forces involved in dependent and independent transfers in confined spaces, such as an aircraft aisle. The survey-based study includes comprehensive surveys of groups that are directly involved with accessibility issues including travelers with disabilities, non-travelers with disabilities, and employees of airlines and airports. Drawing on results of their research, the RERC focuses on four development topics: (1) vehicle boarding technologies; (2) real time passenger information and communications systems; (3) accessible lavatories; and (4) passenger assistance training tools and techniques. The accessible lavatory project has two main components: regulations and new designs for the next generation of aircraft.
Rehabilitation Engineering Research Centers (RERCs)  
Pennsylvania  

Rehabilitation Engineering Research Center on Telerehabilitation  

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Project Number: H133E040012  
Start Date: December 01, 2004  
Length: 60 months  
NIDRR Officer: Kenneth D. Wood, PhD  
NIDRR Funding: FY 04 $849,890; FY 05 $849,930; FY 06 $849,922; FY 07 $849,991; FY 08 $849,984  

Abstract: The vision of this RERC is to serve people with disabilities by researching and developing methods, systems, and technologies that support remote delivery of rehabilitation and home health care services for individuals who have limited local access to comprehensive medical rehabilitation outpatient and community-based services. Research and development activities include: (1) Telerehabilitation Infrastructure and Architecture: development of an informatics infrastructure and architecture that builds on existing programs and technologies of the University of Pittsburgh Medical Center’s e-Health System, supports the RERC’s research and development activities, meets HIPAA requirements, provides a test-bed for third party telerehabilitation applications, and can be used as a model for future telerehabilitation infrastructure; (2) Telerehabilitation Clinical Assessment Modeling: development of a conceptual model for matching consumers with telerehabilitation technology. The model is user-oriented and driven by consumer experiences regarding satisfaction, simplicity, and reimbursability of telerehabilitation; (3) Teleassessment for the Promotion of Communication Function in Children with Disabilities: development of a web-based teleassessment infrastructure that links therapists and child participants, allowing therapeutic content to be adapted to the child’s individual progress and abilities; (4) Remote Wheeled Mobility Assessment: determines if individuals with mobility impairments can obtain appropriate prescriptions for wheeled mobility devices through the use of a telerehabilitation system based upon information and telecommunications technologies; (5) Behavioral Monitoring and Job Coaching in Vocational Rehabilitation: researches technologies to conduct remote delivery of rehabilitation services to individuals who have limited access to rehabilitation services that are necessary to participate in and achieve education and employment outcomes in their community; and (6) Remote Accessibility Assessment of the Built Environment: determines the effectiveness of a remote accessibility assessment system in evaluating the built environment of wheeled mobility device users.
Rehabilitation Engineering Research Center on Spinal Cord Injury

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Project Number: H133E070024
Start Date: October 01, 2007
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 07 $949,999; FY 08 $950,000

Abstract: This center conducts research, development, and evaluation of innovative technologies and approaches that will improve the treatment, rehabilitation, employment, and reintegration into society of persons with spinal cord injury (SCI). Research and development activities address tissue integrity management, upper extremity musculoskeletal injury prevention, and bladder function. Specific projects address: (1) the development of computational models of inflammation and healing for assessment of person-specific interventions and for general technology/intervention evaluations for pressure ulcer prevention and detection, (2) evaluation of the effects of support surface active cooling and low shear followed by development and evaluation of a novel seat cushion incorporating these features, (3) the development and evaluation of tools for manual wheelchair propulsion training, (4) the evaluation of novel manual wheelchair propulsion devices for preventing shoulder injury, (5) the evaluation of a weight shifting approach for preventing pressure ulcers, and (6) the development of preliminary computational models of inflammation and healing for evaluating bladder function and musculoskeletal injury status. The research team and collaborators include the Department of Rehabilitation Science and Technology, the Department of Physical Medicine and Rehabilitation, the McGowan Institute for Regenerative Medicine, and the Department of Occupational Therapy at the University of Pittsburgh plus Case Western Reserve University, Northwestern University, Baylor College of Medicine, IBM, and Immunetics. The technology transfer program targets private and public sectors. The training and knowledge translation plan is equally broad based, targeting graduate and undergraduate students, practicing clinicians, researchers, and individuals with SCI and their caregivers.
Rehabilitation Engineering Research Centers (RERCs)  
Pennsylvania

Rehabilitation Engineering Research Center on Accessible Public Transportation

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Project Number: H133E080019  
Start Date: October 01, 2008  
Length: 60 months  
NIDRR Officer: Kenneth D. Wood, PhD  
NIDRR Funding: FY 08 $948,199

Abstract: The goal of this project is to establish an effective and sustainable process to address the high priority transportation needs of people with disabilities using enabling technology and universal design. The RERC activities respond to the character of public transportation and its societal context, including its significant role in employment and social participation. The approach focuses on transportation as a travel chain where problems in early links can block access to a whole system. The project mix also leverages emerging information technologies and addresses the need for consumer-driven solutions that can be rapidly implemented and adapted to a wide range of transportation systems.

Research and development activities include: (1) evaluate accessible and affordable tools for empowering consumers and service providers to collect and utilize research data, an example of "citizen science"; (2) provide an evidence base for boarding and disembarking policies, practices, and products with an in-depth examination of critical issues in vehicle ramp and interior design; (3) create a public website where riders can report on their experiences using a transportation system and software that can assist them in reaching their destination; and (4) produce guidelines, reference designs, and a demonstration bus with new vehicle interior concepts that are ready for commercialization. RERC activities also include active training and dissemination of evidence-based guidelines to stakeholders, publications, a state of the science conference, and capacity building for future research.
Rehabilitation Engineering Research Center on Universal Interface and Information Technology Access

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Project Number: H133E030012
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 03 $1,000,000; FY 04 $1,000,000; FY 05 $1,000,000; FY 06 $1,000,000; FY 07 $1,000,000; FY 08 (No-cost extension through 03/31/2009)

Abstract: The focus of this RERC is on both access to information (e.g., content) in its various forms, as well as access to interfaces used within content and by electronic technologies in general. The research and development program is carefully designed to provide an interwoven set of projects that together advance accessibility and usability in a fashion that takes into account, and supports, the full range of access strategies used by manufacturers and people with disabilities. These strategies range from enhancing the design of mainstream products that can be used by individuals with different ability sets to enhancing the ability of users to deal with the information and interfaces as they encounter them. Key to these projects are the development of new models and approaches for characterization of the functional requirements of current and future interfaces, and a better understanding of the type, diversity, and similarity of functional limitations across etiologies and disabilities. Research activities include: model generation and initial pilot studies for the characterization of interface requirements (current and emerging) and cross-disability user abilities; abstract user interfaces and human interface sockets; emerging technologies and future research needs; and accessible real-time visual information presentation in meetings and virtual meetings. Development projects include: tools to facilitate the incorporation of cross-disability interface features in public information technologies; tools to facilitate AT-IT interoperability; server-based and “virtual assistive technology”; and support for national and international standards and guidelines efforts.
Rehabilitation Engineering Research Centers (RERCs)  
Wisconsin

Rehabilitation Engineering Research Center on Telecommunication Access

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Project Number: H133E040013  
Start Date: October 01, 2004  
Length: 60 months  
NIDRR Officer: Thomas Corfman  
NIDRR Funding: FY 04 $850,000; FY 05 $924,988; FY 06 $850,000; FY 07 $850,000; FY 08 $850,000

Abstract: The primary mission of the Telecommunications Access RERC is to advance accessibility and usability in existing and emerging telecommunications products for people with all types of disabilities. Telecommunications accessibility is addressed along all three of its major dimensions: user interface, transmission (including digitization, compression, etc.), and modality translation services (relay services, gateways, etc.). The RERC looks at advances that have both short- and long-term outcomes related to assistive technologies (AT), interoperability, and universal design of telecommunications. The RERC encompasses research and development programs, as well as training, technical assistance, and dissemination activities. A large part of the RERC’s research and development program is directly related to the rapidly emerging Voice over IP (VoIP) technologies and other IP-based systems. The goal is to help ensure that these new technologies are accessible and usable by people with hearing impairments, blindness, and other disabilities. The research and development program of this RERC covers three areas: (1) Development of tools, techniques, and performance-based measures that can be used to evaluate current and evolving telecommunication technologies. Included in this area are two projects to define the essential audio and video characteristics of IP telecommunication needed to support sign language, video relay interpreting, IP based speech, and lipreading. (2) Solving the problems faced by individuals using hearing aids or cochlear implants with digital phones. Three projects cover both digital cellular and home cordless phones, and are focused on quantifying the problem, identifying solutions, providing tools that users can employ to match appropriate hearing technologies with telecommunication technologies, and helping to test and validate interference standards. (3) Improving access to emerging telecommunications - particularly digital and IP based systems. Projects in this area will: (a) Identify techniques to alert people about possible emergencies and to
ensure accessible communication in emergency or crisis situations; (b) seek solutions for the current incompatibility issues around text communications and ways to build the necessary capabilities into mainstream technologies, to allow them to evolve to new text, speech, and visual communication technologies; and (c) develop guidelines and reference materials to help mainstream telecommunications manufacturers build their regular products in a way that allows individuals with visual, hearing, physical, and cognitive disabilities to be able to use them. The goals of the RERC’s training, technical assistance, and dissemination activities are: To increase the number and level of expertise of people working to make standard telecommunication systems and products accessible and usable for people who have disabilities or who are aging; to move ideas and concepts out into the field in the form of standards or commercial products; and to provide useful information from our research to the telecommunications industry, consumers, and policymakers.
Rehabilitation Engineering Research Center for Universal Interface and Information Technology Access

University of Wisconsin/Madison
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Project Number: H133E080022
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $950,000

Abstract: This project focuses on the accessibility of information technologies and electronic products, including the technologies and products encountered in education, work, travel, and in the home and community, both online and in life, for persons across disabilities types and socio-economic levels. This project’s four goals focus on the following: (1) the development of models and measures that can lead to better policy and more useful information for designers interested in creating products that are accessible and useable across disabilities; (2) creating a collaborative effort to build accessibility directly into the Internet and address underlying issues in the area of assistive technology; (3) advancing research on and the use of personal pluggable user interfaces focusing on their effectiveness in providing access to different types of mainstream technology (Project R2) and facilitating the incorporation of interface sockets in mainstream products (Project D2); and (4) continuing to advance commercial practice around accessibility; that is, taking concepts that have proven to be effective and making commercially available products which address the needs of people with disabilities. Each of these four goals seeks to foster change in rehabilitation or commercial practice, so that people with all levels of disability and all levels of socio-economic standing have effective access to both current technology and the rapidly evolving next-generation technologies. Finally, this project focuses on capacity building in the field through training and mentoring activities in affiliation with the Biomedical Engineering and Industrial & Systems Engineering departments at the University of Wisconsin-Madison in addition to other key stakeholders engaged in making information technology more accessible for people with disabilities.
Rehabilitation Engineering Research Centers (RERCs)
Wisconsin

Rehabilitation Engineering Research Center on Accessible Medical Instrumentation

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Project Number: H133E020729
Start Date: November 01, 2002
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 02 $901,131; FY 03 $899,614; FY 04 $899,155; FY 05 $899,870; FY 06 $899,572; FY 07 (No-cost extension through 10/30/2008); FY 08 (No-cost extension through 1/30/2009)

Abstract: The RERC on Accessible Medical Instrumentation: (1) increases knowledge of, access to, and utilization of healthcare instrumentation and services by individuals with disabilities; (2) increases awareness of and access to employment in the healthcare professions by individuals with disabilities; and (3) serves as a national center of excellence for this priority topic area. Specific research projects include: (1) needs analysis for people with disabilities as both recipients and providers of healthcare services, and for manufacturers of healthcare instrumentation; (2) usability analyses to determine what makes certain medical instrumentation either exemplary or problematic yet essential to healthcare service delivery; (3) accessibility and universal usability analysis to identify classification and measurement approaches that could be used to explore metrics for accessibility of medical instrumentation; and (4) policy analyses to explore how medical policies affect healthcare utilization and employment in the healthcare professions of persons with disabilities. Specific development projects include: (1) development of tools for usability and accessibility analysis; (2) development of modified and new accessible medical instrumentation; (3) monitoring of, and involvement in development of, emerging, accessible healthcare technologies; and (4) development of design guidelines for accessible medical instrumentation and model policies for healthcare service delivery.
Fundamental Issues in Wayfinding Technologies

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Project Number: H133A060056
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 06 $449,872; FY 07 $449,954; FY 08 $449,952

Abstract: This project conducts a broad spectrum of research to strengthen the foundations of wayfinding technology for assisting blind and visually impaired individuals to travel safely and independently. Rather than developing additional devices, this project addresses fundamental questions in wayfinding technology research: What information do blind and visually impaired travelers really want and need for safe independent travel? Why is there such an extreme range in navigational facility within the visually impaired population? What are the upper limits of the information that can be gained from traditional orientation and mobility training and environmental cues? How are the subtle auditory cues affected in subpopulations with different types of hearing loss? How should wayfinding performance, and barriers to it, be quantified so that future progress can be measured? What is the role of advance travel planning? By pursuing answers to these fundamental questions rather than adding more technology-driven devices to the existing selection, this research improves understanding about the efficacy and optimal applications of navigation and travel technologies and techniques. This provides a research-based foundation to inform and improve: (1) orientation and mobility instructional strategies; (2) the design of new wayfinding technologies; and (3) future research.
Consortium for Assistive Technology Outcomes Research (CATOR) II

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Project Number: H133A060062
Start Date: January 01, 2007
Length: 36 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $449,994; FY 07 $449,995; FY 08 $449,995

Abstract: The Consortium for Assistive Technology Outcomes Research (CATOR-II), in collaboration with the RRTC on Measuring Rehabilitation Outcomes and Effectiveness and several other NIDRR-funded programs, enhances understanding of the impact of AT on the lives of people with disabilities by conducting a research project that systematically applies state-of-the-science measures of AT interventions, outcomes, and data collections mechanisms. The purpose of this project is to improve the AT field’s ability to measure the impact of AT on the lives of people with mobility disabilities, with the potential to supplement or supplant the instruments and techniques available to researchers, service providers, and policy makers. Project R-1 produces a state-of-the-science instrument for measuring outcomes for mobility AT devices based on applications of item response theory and computer adaptive testing. Project R-2 produces a state-of-the-science instrument for specifying and measuring key aspects of mobility AT treatment interventions, along with two consensually endorsed classifications of mobility devices and services. Together, these products provide a foundation to improve reporting of interventions in research publications and assess treatment fidelity in AT outcome studies. Drawing on the advanced measures emanating from projects R-1 and R-2, Project R-3 uses an experimentally controlled design to examine the conditions under which a change in assistance strategy, induced by a mobility AT intervention, enhances the functional performance, well-being, and device satisfaction of stroke survivors and decreases the assistance being received from cohabitating caregivers.
Information Technology for Independence: Community-Based Research

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Project Number: H133A 021916
Start Date: January 01, 2003
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 02 $299,945; FY 03 $299,534; FY 04 $299,945; FY 05 $299,384; FY 06 $298,903; FY 07 (No-cost extension through 12/31/2009); FY 08 (No-cost extension through 12/31/2009)

Abstract: This project explores methods and technologies to mitigate barriers to computer and Internet use encountered by people with visual impairments. These barriers include limited computer ownership and Internet availability, difficulty in obtaining and using accommodations for functional limitations (including cost issues), psychological barriers arising from inadequate coaching or mentoring, and the limited accessibility of most websites to individuals with visual impairments. Accessibility can be promoted through computer ownership, Internet availability, assistive technologies, and knowledgeably-staffed public computer stations, such as at independent living centers. Evaluation of these barriers and of identified accommodation strategies is the first research task of this project. Preceded by focus groups and a widely-disseminated survey, the match of correct assistive device(s) to the individual and appropriate coaching and mentoring is tested at community-based computer laboratories.

The second research task is to develop and evaluate a new approach to Internet accessibility — a Gateway server. This Gateway transforms the contents of any website, whatever its level of accessibility, into the most accessible format for each Internet user, as Google does for personal digital assistant (PDA) users. The Gateway promotes Internet accessibility without requiring that commercial websites follow promulgated guidelines or standards for users with disabilities, something that web developers often seem to resist. Additionally, this project develops innovative metrics that enable the most rigorous approach to the analysis of Internet accessibility and is conducting large-scale studies of different topical categories of websites to measure progress in accessibility over time and identify the impact(s) of new technologies.
ACCESS: Assisted Cognition in Community, Employment, and Support Settings

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Project Number: H133A031739
Start Date: October 01, 2003
Length: 60 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 03 $297,127; FY 04 $299,171; FY 05 $298,764; FY 06 $299,949; FY 07 $299,964; FY 08 (No-cost extension through 03/31/2009)

Abstract: Project ACCESS investigates the use of assisted cognition as a tool for caregivers in supporting individuals with disabilities in living, working, and fully participating in community activities. The use of assisted cognition devices has the potential to increase an individual’s independence and decrease their reliance on the family/friend/caregiver network and community support staff. Devices in development include the activity compass and the ADL Prompter. The activity compass meshes several technologies (Palm Pilot, GPS receiver, and wireless modem). Over time, the device learns a user’s typical daily routines, monitors for variations, and then decides whether a prompt is necessary when a routine is unexpectedly changed. The ADL prompter monitors data collected by sensors embedded in a living or work environment. Using artificial intelligence software, the data from these sensors are interpreted and decisions made based upon the needs of the user. Although initially designed for people with Alzheimer’s, these devices have applications as support tools for caregivers and people with disabilities since they potentially support “distributed caregiving” wherein the caregiver or family member monitors, prompts, and/or supports from a distance.
Field Initiated Projects (FIPs)  
California

Accessible Location Information Delivered via GPS Cell Phone for People with Visual Impairments

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Project Number: H133G060035  
Start Date: November 01, 2006  
Length: 36 months

NIDRR Officer: Edna Johnson, PhD  
NIDRR Funding: FY 06 $149,435; FY 07 $149,801; FY 08 $149,172

Abstract: This project develops an accessible GPS cell phone, which provides critical information about businesses, addresses, distances, and routes, thereby greatly augmenting the personal mobility of a traveler who is blind or visually impaired. Specific activities include integrating the existing accessible GPS innovations with “smart” cell phone technology. The marriage of GPS and cell phones exists in the general market but it is screen-based with a graphical interface rendering it completely inaccessible for blind and visually impaired individuals. Developing an interface to meet the needs of the nation’s blind and visually impaired travelers, i.e. translating the visual information into spoken text, is a central focus of this project. A consortium of three organizations with investigators from research centers and industry collaborate on this project. The consortium systematically evaluates project activities. Dissemination via various avenues includes conferences, webcasts/online discussions, end user lists, various media outlets, and presentations. The end result of this project is to provide a commercially available talking GPS cell phone.
Field Initiated Projects (FIPs)
Delaware

Multimodal Access to Information Graphics

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Project Number: H133G 080047
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $199,975

Abstract: This project addresses the accessibility of a specific class of graphics, referred to as information graphics, that consist of bar charts, pie charts, line graphs, etc. Although information graphics comprise only a subset of graphics-based information, they are prevalent in information resources and constitute a set of sufficiently similarly characterized graphics to enable automated processing. To address the accessibility of this class of graphics, this project develops a system for automatically generating multimodal representations of information graphics. The multimodal representations consist of automatically generated tactile graphics and automatically generated textual summaries designed to convey the intended core message of the graphic. This development is based on the latest research in the image processing, computer vision, statistical inference, natural language understanding, processing, and generation, as well as universal design and human computer interaction. The multimodal information graphic system (MIGS) is developed to work directly with existing tactile printers and Braille/synthesized speech output methods; and provides users with visual impairments, as well as others benefiting from multimodal displays, greater independent access to the proliferating body of information graphics. This project determines the optimal tactile graphic design methods and optimal text-base summarization approach based on preferences of potential users of the MIGS system, and evaluates MIGS component effectiveness in providing access to graphical information.
Accessible Digital Radio Broadcast Services

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Project Number: H133G060187
Start Date: October 01, 2006
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 06 $150,000; FY 07 $150,000; FY 08 $150,000
Other Funding: FY 07 $25,000 Harris Corporation; FY 08 $25,000 Harris Corporation

Abstract: In this project, National Public Radio (NPR) and its partners prototype, field test, and assess the most appropriate technologies, service models, and operational techniques in the accessible design of mass-market digital radio services to better serve consumers with sensory disabilities. This work produces best practice demonstrations and service options with strong prospects for mass-market adoption within digital radio services and receivers, options that model how digital radio can provide: mainstreamed digital reading radio services; live video description synchronized to broadcast; buffering for rewind/replay/catch-up to aid comprehensibility; accessible controls, displays, and menu options on digital radio receivers; and caption displays of audio on digital radio receivers or ancillary displays. Best practice demonstrations and service options benefit from iterative and comprehensive user evaluations led by research experts. Furthermore, NPR and its partners have extensive collaborative relationships within the industry that ensure widespread impact on products and services available to people with sensory disabilities.
An Automatic Fitting Algorithm for Cochlear Implant

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Project Number: H133G060065
Start Date: October 01, 2006
Length: 36 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 06 $146,562; FY 07 $149,533; FY 08 $149,895

Abstract: The purpose of this study is to design and evaluate an automatic cochlear implant fitting algorithm based on a paired comparison adaptive approach to guide audiologists in choosing the best frequency allocation for the individual client. Frequency allocation can impact speech recognition abilities and in turn communication. This work entails a systematic search for an optimum frequency allocation using a modified Simplex procedure. This study consists of three experiments. One is the discrimination of frequency analysis band wherein minimally detectable differences in frequency shifts along the electrode array are identified. In the second experiment, subjects are computer-guided to search for an optimal frequency allocation among cells in a matrix, with the results from experiment one defining the cell content. The third experiment, the speech battery test, consists of speech perception experiments with the new map using nonsense syllable, phoneme, and sentence stimuli. Experiment 2 and experiment 3 are recursively conducted until the results converge with up to six sessions per subject required to finish the experiment. During the subject’s first and last visits, he/she completes the Communication Profile for the Hearing Impaired (CPHI) and a questionnaire similar to the Abbreviated Profile of Hearing Aid Benefit (APHAB). Four normal hearing native English speakers evaluate the experimental procedure and the speech processing algorithm. Fifteen post-linguistically deafened Nucleus 24 cochlear implant users complete the study.
Field Initiated Projects (FIPs)  
District of Columbia

Personal Audio Information Service

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Project Number: H133G070093  
Start Date: October 01, 2007  
Length: 36 months  
NIDRR Officer: Edna Johnson, PhD  
NIDRR Funding: FY 07 $200,000; FY 08 $200,000

Abstract: This project defines and demonstrates a Personal Audio Information Service (PAIS) - a new mainstream system that expands the lifeline services currently offered to people with visual impairments through audio information services (AIS) by automatically assembling a selection of locally relevant, customized audio content from current AIS broadcasts. The PAIS system combines the established framework of audio information services with the new programming flexibility that is afforded by HD Radio (the new FCC standard for digital radio broadcasting), creating a powerful on-demand radio system that will substantially improve media access for millions of American consumers with print disabilities. The project: (1) develops efficient audio interfaces for selecting, navigating, and listening to content; (2) develops effective systems for tagging, subdividing, and collecting topic-based content; (3) develops and demonstrates a full scale PAIS system in a real world broadcast pilot; and (4) documents and publishes recommended best operating practices for audio information service providers and consumer electronics manufacturers to fully deploy PAIS technologies.
Field Initiated Projects (FIPs)
Georgia

Inclusive Indoor Play

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Project Number: H133G040324
Start Date: December 01, 2004
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 (No-cost extension through 5/31/2008); FY 08 (No-cost extension through 5/31/2009)

Abstract: The purpose of this project is to research indoor play environments, develop universal design play guidelines, and design models of play environments that are safe and accessible to all children. This project: (1) conducts basic research and develops universal design guidelines for indoor play; (2) designs, develops, and tests models of inclusive indoor play environments that promote the highest level of safety, usability, accessibility, and social interaction; and (3) constructs and tests a working prototype of an indoor play environment that demonstrates highest level of access for all children. It researches play and the play environment through literature review, existing products, existing play environments, focus group interviews with participants, expert consultations, children’s play designs, and testing of full-scale simulated play environments. The second year of this project focuses on development of design concepts, construction of refined design in full scale, and testing with users. The final year of this project is dedicated to prototype construction and testing.
Workplace Accommodation Wizard: An Assessment and Accommodation Tool for Employers

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Project Number: H133G070063
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 07 $196,460; FY 08 $199,801

Abstract: The purpose of this project is to develop the Workplace Accommodation Wizard that enables human resource personnel to identify employees’ needs and solutions for workplace accommodations. The Wizard includes both an employer-driven assessment tool and a rule-based system for using the assessment information to identify specific accommodations from assistivetech.net, the national public internet site on Assistive Technology (AT), which contains information on over 18,000 AT products. Development of the Workplace Assessment Wizard includes: (1) creation of the assessment protocol; (2) evaluation and revision of the protocol; (3) development of the rule set; (4) development of the web application; and (5) product testing and revision of content, usability, and accessibility. This workplace-specific assessment tool combined with a comprehensive database of AT enables human resource personnel in a variety of employment sectors to conduct a workplace assessment, find potential accommodations, read reviews of those accommodations, and find links to specific products.
Field Initiated Projects (FIPs)
Illinois

Web-Based Treatment for Aphasia

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Project Number: H133G060055
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $146,316; FY 07 $145,529; FY 08 $149,932

Abstract: This project conducts a randomized clinical trial to develop and implement an innovative, broadband, web-based treatment program for individuals with chronic aphasia, and evaluates its efficacy and cost-effectiveness. The treatment, Oral Reading for Language in Aphasia (ORLA), is based on a theoretical framework that incorporates two lines of work: the neuropsychological models of reading and observation-execution-matching. The treatment has been computerized and the current version of ORLA uses state-of-the-art virtual therapist technology that allows the individual with aphasia to read aloud, and ultimately speak, sentences at the same time as the words are produced by a perceptive, life-like, animated computer agent, using visible speech. In this clinical trial, ORLA treatment is delivered via the Internet and outcomes are compared to a placebo computer treatment. Twenty-five individuals with chronic aphasia (at least 12 months post onset) are randomized to one of two groups: oral reading treatment group and a control group in which subjects participate in non-language computer activities. Both groups practice for nine hours per week and treatment continues for a six-week period of time. Language and communication skills are evaluated pretreatment, immediately post-treatment, and at six weeks after the end of treatment to assess maintenance effects. The primary outcome measure is the Aphasia Quotient of the Western Aphasia Battery. Additionally, secondary outcome measures have been selected with consideration of the ICFDH-2 categories of body structure/function, activity, and participation, and include a variety of standard aphasia tests as well as quality of life indices.
Overcoming Gravity Induced Arm and Hand Dysfunction to Restore Functional Reaching Following Stroke

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Project Number: H133G070089
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 07 $195,867; FY 08 $194,252

Abstract: This study uses a 3-D force-controlled robot to test whether electrical stimulation of extensor muscles can overcome the associated abnormal flexor activity of the elbow, wrist, and fingers during reaching under progressively larger gravitational loads. Furthermore, if indeed wrist and finger flexors can be overpowered, this study determines if a multi-electrode array can be implemented to selectively stimulate wrist extensors independently of finger extensors during the same reaching conditions. Selective stimulation, if successful, would increase the functional repertoire of the hand and enhance the quality of life of stroke survivors. To support the fundamental premise that abnormal flexor activity exists in individuals with stroke, the project measures the progressive increase in abnormal wrist and finger flexion associated with supporting increasing amounts of the upper limb’s weight. This is accomplished by using a 3-D force-controlled robot to virtually manipulate the amount of gravity experienced during reaching in 45 chronic stroke survivors (aim 1). Next, the project quantifies the impact of electrical stimulation of the elbow, wrist, and finger extensors on elbow, wrist, and finger extension range of motion when progressively increasing the weight of the paretic limb with the robot during reaching (aim 2). Finally, the project investigates the application of an existing multi-electrode stimulation array to determine if wrist and finger extensors can be selectively stimulated (aim 3).
Field Initiated Projects (FIPs)  
Illinois  

Video Gaming Technology to Promote Health and Fitness Among Adolescents with Disabilities

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Project Number: H133G080120  
Start Date: October 01, 2008  
Length: 36 months  
NIDRR Officer: Theresa San Agustin, M D  
NIDRR Funding: FY 08 $183,463

Abstract: This project adapts active video games for use by youth with physical disabilities, and assesses their feasibility and effectiveness as an exercise modality for increasing energy expenditure and improving cardiorespiratory fitness. The study is conducted in three phases: Phase I: Adaptation and Feasibility Testing; Phase II: Dose-Response Energy Expenditure; and Phase III: Cardiorespiratory Fitness Trial. In Phase I, adaptations are implemented that allow youth with disabilities to play active video games using upper extremity movement to participate in the games. The accessibility and safety of these adaptations is assessed through pilot testing, and, if necessary, modifications to the adapted video games are made based on participant feedback and observation. Researchers collect exercise intensity data associated with various games designed for both EyeToy™ (ET) and Dance, Dance Revolution(TM) (DDR) devices. These data are used to classify specific games into mild, moderate, and vigorous activity. Phase II examines the dose-response relationship between energy expenditure and exercise intensity for both active video games and a standard exercise modality for individuals with disabilities (arm cycling). Participants complete energy expenditure assessments for three levels of intensity (mild, moderate, and vigorous) for each exercise modality (arm cycling, DDR, and ET). Phase III is a randomized controlled trial examining the effects of active video games compared to arm cycling and normal activity controls in improving cardiorespiratory fitness in adolescent manual wheelchair users. Participants in both intervention groups will take part in a 10-week, 3 days/week exercise training program designed to increase aerobic capacity. Primary outcome measures include cardiorespiratory fitness, energy expenditure, and satisfaction with physical activity.
Field Initiated Projects (FIPs)
Maryland

Optimized Hands-Free Speech Recognition

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Project Number: H133G050354
Start Date: December 01, 2005
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 05 $149,882; FY 06 $149,997; FY 07 $149,774; FY 08 (No-cost extension through 11/30/2009)

Abstract: The goal of this project is to take the collected hands-free speech recognition scientific knowledge and interface solutions, which have been individually developed and proven, and incorporate those into a commercially available user interface software product. The project follows an iterative user centered design process whose three main phases correspond roughly to the three years of the project. In phase 1, past research results are incorporated into a prototype design, which undergoes usability testing in the lab. In phase 2, an “alpha” version of the product is placed in a small number of users' homes and/or offices, where they use the prototype for up to six months and keep a diary of their experiences. In phase 3, a “beta” version of the software is tested by a larger number of users over a period of six months. In this trial the users are subject to surveys regarding ease-of-use, and they and the developers participate in an open online discussion/feedback forum for users. The end of phase 3 includes a final refinement of the product and evaluations of the performance of the new software product, and (for marketing purposes) a comparison of performance of the hands-free implementations of speech recognition software commercially available at that time. This project culminates with “Version 1.0” which will be made available to the general public.
Field Initiated Projects (FIPs)
Massachusetts

Access to Locally Televised On-Screen Information: Auditory Messaging and Captions During Emergency Broadcasts

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Project Number: H133G050278
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 (No-cost extension through 9/30/2009)

Abstract: This project explores and prototypes digital television (DTV) solutions that enable local television stations to send messages, warnings, and alerts that meet the communication needs of people with sensory disabilities. Specifically, NCAM researches and develops systems and procedures that enable real-time processing and conversion of on-screen text crawls into speech output. Utilizing off-the-shelf speech synthesizers, WGBH works with broadcast stations to prototype methods of processing text entered into broadcast graphics systems into speech output that can then be made available via the secondary audio program (SAP) channel or auxiliary DTV audio channels. The project also develops systems and procedures that address display conflicts between captions and on-screen graphics by developing methods of tagging and prioritizing text and graphics messages within automated display systems.
Field Initiated Projects (FIPs)
Massachusetts

Captioning Solutions for Handheld Media and Mobile Devices Development

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Project Number: H133G070122
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 07 $200,000; FY 08 $200,000

Abstract: This project explores barriers to portable media for deaf and hard-of-hearing users and develops captioning solutions that serve as models for the mobile media and technology industries and for public policy developers. The project team identifies, tests, and prototypes required accessibility changes in mobile media production tools, formats, transport mechanisms, and display technologies. Prototypes model technical solutions for packaging, compression, identification, retrieval, download, processing, and porting of captioned video to portable devices. Prototypes also model mobile caption display options and explore customization capabilities. Consumers who are deaf or hard-of-hearing participate in end-user testing to evaluate the usability of project solutions. Project deliverables include: (1) prototypes that model multiple methods of creating, distributing, downloading, and displaying captioned content on handheld devices; (2) publication of usability research on accessible interface and caption display options; and (3) comprehensive functional requirements that detail production processes and software and hardware enhancements required for content creators, service providers, and third party tool developers to create and transcode captions and caption feature sets and capabilities required for open as well as proprietary mobile media formats and device-specific players to render captions.
Caption Accuracy Metrics Development Project

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Project Number: H133G080093
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 08 $200,000

Abstract: This project utilizes language-processing tools to develop an automated caption accuracy assessment system for real-time captions for live news programming as well as classroom-based communication access real-time translation (CART) captioning. Additionally, this project researches whether text-based data mining and automatic speech recognition technologies can produce meaningful data about stenocaption accuracy that meets the need for caption performance metrics. Advisors include the National Institute of Standards and Technology, IBM, Nuance, the Massachusetts Institute of Technology, Gallaudet University, and the National Technical Institute for the Deaf. Prototypes are reviewed by major stakeholders at Technical Review Meetings. Iterative tests and modifications within major stenocaption and broadcast operations facilities provide real-world assessments of the system's ability to produce meaningful caption accuracy metrics. A reliable performance measurement tool that can analyze the quality of real-time captioning, developed with input from industry leaders, deaf education experts, and the Federal National Institute of Standards and Technology, provides Congress and the FCC with much-needed, independently verified data to establish caption accuracy requirements, and greatly improves the ability of the television community to monitor and maintain the quality of live captioning they offer to viewers who are deaf or hard of hearing.
Field Initiated Projects (FIPs)
Massachusetts

Minimal Classroom Requirements for Optimal Acoustic Access to Speech by Children with and Without Hearing Loss

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Project Number: H133G060116
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 06 $68,869; FY 07 $51,122; FY 08 $56,282

Abstract: The purpose of this project is to measure the effects of classroom noise and reverberation on speech perception by children with varying degrees of hearing loss and of different ages. The effects of speech-to-noise ratio (0 dBA S/N, +10 dBA S/N, and +20 dBA S/N) and reverberation (RT = 0.25, 0.50 and 1.0s) on sentence-level speech perception are measured as functions of age (5-16 years) and degree of hearing loss (mild to profound). Normative data is also collected, as a function of age, on children with typical hearing. This project addresses several questions: (1) What limits on noise and reverberation are required for optimal speech perception by children with hearing loss? (2) Can the need for access to speech among children with different degrees of hearing loss be met with a single set of criteria for classroom acoustics? (3) To what extent do these criteria vary with age among children with typical hearing and those with hearing loss?
Field Initiated Projects (FIPs)
New Jersey

Improved Weight Bearing Evaluation of Knee Osteoarthritis

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Project Number: H133G080136
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $199,964

Abstract: The objective of this project is to develop refined upright MRI imaging and computer modeling methods that allow assessment of patients with osteoarthritis (OA) during weight bearing. To optimize available non-surgical OA treatments, refined imaging methods are needed to measure changes in knee positioning and cartilage contact while weight bearing. The project builds on pilot work that demonstrated the ability to derive quantitative measures of cartilage contact positioning from weight bearing MRI images. Three specific focus areas for development are: (1) to develop a more efficient and accurate method for positioning patients with symptomatic knee OA and determine the limits of duration for weight bearing MRI scanning; (2) to improve and expand methods for maintaining consistent measurement reference frames through changing positions and loading conditions; and (3) to expand capabilities needed to describe contact area and cartilage depth at the contact sites. Researchers validate the methodological developments using laboratory experiments and a study with OA patients when lateral wedge insoles are prescribed to relieve loading of the knee’s medial compartment.
Web-based Student Processes at Community Colleges – Tools for Ensuring Accessibility

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Project Number: H133G040255
Start Date: October 01, 2004
Length: 36 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 (No-cost extension through 10/31/2008)

Abstract: Web-based processes (such as student recruitment, information dissemination, applications, course registrations, and online coursework) have become increasingly important to the way post-secondary educational institutions communicate and interact with their potential and enrolled student populations. This project focuses on the accessibility and usability of community college web sites. In the first year, a multi-method approach is used to examine the state of web accessibility and identify accessibility barriers for students with disabilities and ways to address them. The researchers conduct an accessibility evaluation of selected web pages, including the online application process, in 30 community colleges. A subset of these sites undergo further usability testing by individuals with visual and reading based learning disabilities. The focus of the Year Two research is a national survey of nearly 700 community colleges regarding their use of web-based/online student recruitment, application, and registration processes and the colleges’ awareness of web accessibility issues and policies regarding accessibility. A web based Accessibility Toolkit has been developed (www.webaccesstoolkit.org ) based on the results of this research. The toolkit is designed to inform community college administrators, webmasters and disability services professionals and others about the barriers web inaccessibility can pose to students with visual and learning disabilities. It provides information on ways to identify and address these barriers on their college website. The toolkit website contains a variety of information and resources including: training materials, checklists and links to useful resources to help colleges understand, evaluate and promote equal access to campus web resources. The project is a collaborative effort between EDI and Cornell University’s Institute for Community College Development (ICCD).
Micromachined Braille Reader

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Project Number: H133G070135
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 07 $199,446; FY 08 $199,083

Abstract: This project develops a low-cost, portable Braille display utilizing Polyvinylidene Fluoride (PVDF), an electro-active polymer, to create a novel, low-power, low-voltage bistable actuator. The dots in this display are produced with more force and are easier to read. By using PVDF and silicon micromachining techniques, there is the potential for each Braille cell to cost $5 or less, as compared to about $35 for the current commercial offerings. This display should use less power, be cheaper to make, require a lower actuation voltage (thus reducing the size and cost of the control electronics), and be easier to scale to more letters than other current prototypes.
Field Initiated Projects (FIPs)
North Carolina

Universal Design of Tactile Exhibits with Touch Activated Descriptive Audio for Aquariums

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Project Number: H133G060284
Start Date: October 01, 2006
Length: 36 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 06 $138,740; FY 07 $144,440; FY 08 $143,060

Abstract: The purpose of this project is to develop strategies and technologies that enhance the learning opportunities at aquariums for people who are blind or low vision (B/LV). The project evaluates current aquarium exhibit strategies related to an interpretive program and assesses barriers for people who are B/LV that functionally limit their participation in the critical learning opportunities extended to the general public. The project identifies and develops universal design best practice strategies and methodologies that enhance social integration and access to exhibit and interpretive information for persons who are B/LV. The project develops cost effective technologies to couple a user-directed tactile experience with audio descriptive information for aquarium exhibits. The project emphasizes methodologies that emphasize user involvement by persons who are B/LV in the design and evaluation of prototypical designs for aquariums.
Field Initiated Projects (FIPs)
Oregon

A Means of Expression: Online Communication Assessment to Improve Outcomes for Individuals with Severe Disabilities

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Project Number: H133G070129
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 07 $200,000; FY 08 $200,000

Abstract: This project adapts, refines, evaluates, and markets an innovative technological online tool designed to provide appropriate assessment of communication skills for individuals with severe disabilities. The novel tool harnesses the potential of an online communication assessment protocol to achieve immediate and meaningful individual-level outcomes in the form of cost effective and appropriate assessment, generation of appropriate educational and therapeutic goals, and monitoring of progress. The online tool is a prototype online assessment tool for evaluating the communication skills of individuals at the earliest stages of communication and is based on the valid and reliable Communication Matrix. The new tool is designed to be used by caregivers and professionals. This project involves the adaptation, improvement, and expansion of this website to increase its usability and educational utility, including alpha and beta testing and four major evaluation studies.
Field Initiated Projects (FIPs)
Oregon

Systematic Study of the Effectiveness of AAC Intervention to Improve Conversation in Individuals with Degenerative Language Disorders

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Project Number: H133G080162
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $200,000

Abstract: This project continues previous research in alternative and augmentative communication (AAC) tool use for adults with primary progressive aphasia (PPA) resulting from frontotemporal lobar dementia. Project objectives include: (1) to test the extent to which AAC intervention is associated with changes in conversation for persons with moderate Alzheimer’s disease and persons with primary progressive aphasia under controlled conditions; (2) to test the extent to which AAC use is associated with daily functional changes in conversation for the two participant groups under natural conditions; and (3) to describe the behavioral and socio-relational characteristics of caregiver/partners and participants who display improved conversational skills with AAC treatment. Research is conducted with 100 adults from the Alzheimer’s Disease Research Centers in Portland, OR and San Francisco, CA. AAC devices are customized for each participant with specific vocabulary depicting autobiographical memories and functional activities. Each participant engages in a spaced retrieval priming task followed by videotaped conversations with and without the AAC device in six controlled conversations with a research assistant (Study 1), and six practical context conversations with a caregiver (Study 2). Spontaneous AAC device use in the home is tracked for six months following Study 2 conversations. This project provides scientific data that influences management guidelines to improve daily conversational functioning of persons with degenerative language loss secondary to moderate Alzheimer’s disease and PPA so that they may: (1) express their own needs and desires; (2) reduce care giving costs by facilitating communication between caregivers and their charges; and (3) increase quality of life for both caregivers and their charges with dementia.
Appropriate Directional Hearing Aid Switching in School Age Children

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Project Number: H133G060012
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 06 $150,000; FY 07 $150,000; FY 08 $147,564

Abstract: Some children are being deprived of important speech information as a result of hearing loss and the high levels of classroom noise that are normally present. Traditional hearing aids are able to counteract many of the difficulties of understanding speech but high levels of classroom ambient noise remain a significant problem. Recent data have shown significant benefit from directional hearing aids for children across a wide range of noisy school environments. However, it has also been established that the directional mode maybe undesirable in other listening situations, necessitating appropriate switching between directional and omnidirectional microphone modes to ensure optimum speech recognition. Unfortunately, it is not known how often and in what environments the hearing aid’s microphone mode needs to be switched at school to maintain optimum speech recognition and whether children can be trained to switch appropriately between directional and omnidirectional modes. In lieu of appropriate manual switching, it is not known if “state-of-the-art” automatic microphone-switching hearing aids will switch appropriately in many school environments. A n “asymmetric” fitting scheme (directional in one ear and omnidirectional in the other) has been proposed as a possible alternative to both manual and automatic switching in adult listeners. It is unknown whether this asymmetric fitting will be a reasonable alternative for children. The purpose of this project is to answer these questions through a series of three investigations. These investigations include: (1) quantification of school environments with regards to the most appropriate microphone mode (directional, omnidirectional, either); (2) quantification of appropriate switching of both automatic and manual directional switching systems in school environments as a function of age, and (3) quantification of speech recognition across a range of school listening environments for asymmetric and traditional symmetric microphone fittings (both automatic and manually switched).
Field Initiated Projects (FIPs)
Wisconsin

Functional Effects of Bifocal Use: Implications for Falling Interventions

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Project Number: H133G050340
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 05 $149,999; FY 06 $149,950; FY 07 $149,928; FY 08 (No-cost extension through 9/30/2009)

Abstract: This project directs an integrated set of research activities to address a seriously under considered factor in falls research, the use of bifocal lenses. Falls and fall-related injury among elders are a widely documented public health problem causing decreased function, suffering, increased health care costs, and even morbidity and mortality among older persons. Five primary goals are identified for this study: 1) measure outcomes of bifocal use; 2) understand the process of adaptation to new bifocals; 3) explore brain function as a potential explanatory variable; 4) draft recommendations for clinical practice and design, and: 5) disseminate scientific papers and presentations to inform research, device development, and practice. Two strategies to address these goals. For 60 healthy adults with new bifocal lenses, Phase 1 replicates previously established dependent measures and adds a measure of functional mobility in a longitudinal design. Phase 2 employs functional MRI in new bifocal users over their period of adaptation. While the paradigm is designed, specific parameters for Phase 2 is revised from analysis of Phase 1 data. The work from this project is disseminated through refereed presentations at major conferences and professional publications. Technical reports, as appropriate, will be posted on the R2D2 website.
Development of Dynamic Pedorthosis for Improving Clubfoot Correction

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Project Number: H133G060142
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: The purpose of this development project is to use advanced technologies to establish a new process to develop a customized dynamic pedorthosis for children with clubfoot. Researchers evaluate children with and without clubfoot to obtain dynamic plantar pressure using EMED Pressure System and three dimensional geometry from X-ray or CT scan. Based on this information, a computer model of the dynamic pedorthosis is developed using computer-aided design (CAD) and finite element modeling (FEM). The analysis of FEM simulates walking with different percentage of body weight. The customized CAD model is used to construct a negative mold of the pedorthosis using Solid Freeform Fabrication, a rapid prototyping technique. Next, the pedorthosis is constructed from the negative mold. Each customized pedorthosis constructed using this approach will have different material inserts as required to correct the abnormal plantar pressure resulting from the clubfoot deformity. Finally, five patients with their customized dynamic pedorthosis are followed clinically including X-ray, in-sole plantar pressure distribution study, and functional outcome analysis. This information is used to evaluate the pedorthosis for reliability and effectiveness, and if needed, used to modify the current pedorthosis.
Clinical Reliability and Validity of a Foot Model: Assessing Efficacy and Functional Outcome with Orthotic Intervention in Children with Cerebral Palsy

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Project Number: H133G060155
Start Date: January 01, 2007
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: Equinovalgus and equinovarus are the most common foot and ankle abnormalities reported in children with cerebral palsy (CP). Orthotic intervention is frequently prescribed for children with CP to improve their standing, walking, and every day function. However, limited evidence exists to support the impact of these devices to prevent deformities or improve function. Specifically, no long-term functional outcome studies support use of different orthoses recommended by existing foot models. This study first validates a six-segment-foot model with MRI data and assesses clinical reliability of the model with physical examination and video-taped observational gait analyses in children with CP. Second, this study assesses the efficacy of four types of orthoses and determines their benefits following a two year period, using the six-segment-foot model, Gross Motor Function Measure, and Pediatric Evaluation of Disability Inventory.
Development and Evaluation of a Location-Based Multimedia System for Providing Access to Information in Community Settings

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Project Number: H133S080044
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $75,000

Abstract: This project develops a location-based method for improving access to information in the community (i.e.: public places such as parks, zoos, bus station and stops, information kiosks, tourist attractions, and other places of public accommodation) that is not solely in text format. This project addresses the need for alternative formats by designing, developing, and testing a Pocket PC-based software system that uses GPS signals to load and deliver location-based, personalized multimedia information content to individuals with intellectual and other disabilities. Potential applications for persons with disabilities include two primary areas: (1) families, schools, agencies, and programs that provide community-based training and services to individuals with intellectual and other disabilities; and (2) places of public accommodation that provide information to the public about their services or facilities and have obligations to make such information accessible to people with disabilities.
Small Business Innovation Research (SBIR), Phase I
Colorado

Development and Evaluation of a Universal Design Multimedia Approach to Enable Autonomous Composition by Students and Adults with Intellectual Disabilities

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Project Number: H133S080007
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $75,000

Abstract: The project addresses the needs of students and adults with intellectual disabilities for written self-expression by designing, developing, and testing a universally designed, multimedia compositioning software application. This application creates a specific format for independent expression of thoughts, ideas, experiences, knowledge, personal history, and other typical literary output. The system provides an automated interface to a simplified process for recording, saving, organizing, retrieving, and distributing user-authored multimedia documents. The resulting new technology provides the benefits of independent self-expression and preservation of compositions in multimedia documents for peer and future consumption.
Evaluation of a Universally Designed Multimedia Approach to Promote Independent Access to Instant Messaging Technology for Individuals with Intellectual Disabilities

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Project Number: H133S080008
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $75,000

Abstract: This project develops and evaluates a multimedia instant messaging (IM) system, Visual Messenger, that is designed to be usable independently by individuals with intellectual and other cognitive disabilities. The prototype software system developed in this project is used in a between-subjects pilot study comparing it with mainstream IM applications to measure its effectiveness in terms of independent usability, efficacy, and potential for impacting social isolation. The resulting new technology tool provides benefits in the areas of social connectedness, recreation, self esteem, and computer skills. It also serves as a reasonable accommodation in situations where IM is a requirement of a job. The primary benefit is providing an independently usable platform for individuals with intellectual disabilities to communicate with friends and family, be they across town or across the country, in real time.
Money Coach: A Money Management System to Facilitate Independent Living for Individuals with Intellectual Disabilities

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Project Number: H133S080042
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $75,000

Abstract: This project addresses the critical need for money management skills training necessary for independent community living through the development of a software system (Money Coach). Money Coach utilizes both hand-held technology and desktop software to assist individuals with intellectual disabilities with money management and related skills. Project goals include: (1) developing project requirements for the Money Coach system; (2) designing and building a fully functioning software prototype; and (3) conducting field assessments to evaluate its utility for improving independence and self-determination in personal money management for individuals with intellectual disabilities.
Pocket Email: Development and Evaluation of an Accessible PDA-Based Email Program to Facilitate Remote Communication for Individuals with Intellectual Disabilities

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Project Number: H133S080014
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $75,000

Abstract: This project evaluates the technical merit and feasibility of Pocket Email, a PDA-based accessible email program which is universally designed to meet the unique needs of individuals with intellectual disabilities for communicating via email with family members and other caregivers while in community settings. Recent PDA and wireless technology developments, such as Blackberry or Pocket Outlook, have potential to empower individuals with intellectual disabilities with new remote communication supports. PDA-based wireless email technology provides access to the benefits of remote communication for individuals with intellectual disabilities who do not have literacy skills or cognitive/physical capacities to use similar mainstream communication. Project objectives include: (1) developing preliminary requirements for the system; (2) designing and building a software prototype; and (3) evaluating the independent usability for individuals with intellectual disabilities to send and receive email messages using this technology through a pilot study. The increased ability to communicate provides an important level of assurance to caregivers and assists in alleviating some concerns that increased independence can raise.
Small Business Innovation Research (SBIR), Phase I
Florida

Signing Science Pictionary for Young Learners who are Deaf or Hard of Hearing

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Project Number: H133S080039
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $74,973

Abstract: This project develops and evaluates a prototype signing Science Pictionary (SSP) for both personal computer and handheld applications. The mobile version of the dictionary provides mobility and independence that leads to opportunity-based learning in classrooms, on field trips, or while reading a book anytime, anywhere. Project goals are to: (1) develop proof-of-concept software for a 100-term illustrated sign language dictionary of scientific terms for students in grades K-3; (2) implement and test different user interfaces on the PC (both Windows and Macintosh) and handheld devices; and (3) modify and develop a fully functional prototype of the software to include American Sign Language and Signed English definitions for at least 700 science terms covering the major standards-based topics in life, physical, and earth and space science. Terms are drawn from textbooks and quality electronic and print resources.
Small Business Innovation Research (SBIR), Phase I
Indiana

SoundCompass - A Wearable Sound Direction and Motion Detector for People who are Deaf or Hard of Hearing

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Project Number: H1335080054
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $75,000

Abstract: This project researches, develops, and demonstrates the technical merit and feasibility of a wearable device which (1) detects the direction of a sound source or motion, and (2) alerts the user via vibration, images, and captions to the direction of this sound source or movement relative to the current position of the individual. This provides the user with a sense of independence and personal safety by alleviating concerns as to whether recreational, educational, vocational, or independent living settings may be adequately equipped to protect them. SoundCompass functions indoors or outdoors in environments involving potential interaction with equipment, vehicles, animals, or other people. The device is designed to work as a standalone or in conjunction with other sensing systems and multipurpose mobile technology. Specific objectives include: (1) determination of end user requirements, (2) development a prototype of the SoundCompass device, and (3) performing a usability analysis with actual users.
Connectivity to Modern Electronics for the Hearing Disabled

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Project Number: H133S080032
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $75,000

Abstract: This project creates a wireless solution for interconnecting hearing aids with consumer electronic devices based on a new, ultra-low-power radio specifically developed by project partner IntriCon Corporation (St. Paul, MN), for use in micro-behind-the-ear (Micro-BTE) hearing aids. The small consumer electronics add-on module, with greater than 100-hour battery life from a standard zinc-air hearing aid battery, can directly communicate with Micro-BTE hearing aids. It allows for the use of wireless technology and provides a connectivity solution that has many advantages over other current solutions. The result is a module (audio digitizer and transmitter module) compatible with nearly all future wireless hearing aids. This new module allows hearing aid users to receive high-quality sound data directly from such items as cell phones, televisions, computers, digital audio players, and classroom public announcement systems.
Knowledge Athletes Platform: Capitalizing on Online Communication to Increase Participation and Learning for All Students

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Project Number: H133S080027
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $74,681

Abstract: This project develops web-based educational software (Knowledge Athletes ® Platform - or KAP) for use in inclusive education settings. The software supports the participation of students who are deaf, hard of hearing, or have disabilities affecting auditory processing and experience difficulty in oral communication. KAP provides teachers with new opportunities to engage their classes online in intellectual endeavors and educationally relevant dialogues without having to rely on verbal communication. It capitalizes on a number of promising new technologies and an application previously developed by Knowledge Athletes ®. Project objectives include: (1) developing a preliminary prototype; (2) conducting focus groups and surveys with the targeted student population and their teachers; and (3) carrying out an initial pilot testing of the prototype to inform critical decisions about the specific features included in the final product. The development of web-based education software increases the participation of students who have traditionally been left out of classroom discussions and interactions; thus providing new opportunities for learning and academic success for students and reducing the learning achievement gap between students with disabilities and their mainstream peers.
Creating Audio-Tactile Illustrated Digital Talking Books Using a Digital Pen-Based Computing Platform

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Project Number: H133S080030
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $75,000

Abstract: This project expands upon current digital talking book technology and creates and delivers an Illustrated Digital Talking Book (IDTB), which improves upon current technology by providing accessible graphs, maps, diagrams, or other images. These books give readers control of audio-based content playback and permit examination of raised-line and textured imagines in a traditional book format. Readers touch the tip of a special electronic “pen” to parts of illustrations when looking at items such as diagrams, maps, tables, and graphs and then listen to an audio description of those items. No computer or other hardware devices are needed, making the system portable and inexpensive.
Small Business Innovation Research (SBIR), Phase I
New York

Diabetes Monitoring for Cognitively Impaired Adults

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Project Number: H133S080013
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $74,980

Abstract: This project helps adults with cognitive impairments (CI), family members, other caregivers, and medical personnel in monitoring and controlling diabetes in a home setting. The project has four objectives: (1) to study how CI affects the overall self-care, family care, and professional care of persons with diabetes; (2) to identify unique needs of adults ages 21-65 with diabetes who have mild to moderate CI; (3) understand how specific deficits related to CI affect self-monitoring of blood glucose; and (4) to apply these findings to new hardware, software, and educational materials that will enable this target population to function more independently. Medgraph’s Glucose Monitoring System provides a simple and intuitive monitoring and education system available to individuals with disabilities and diabetes who are otherwise not served. By improving the collection, transmission, and visual display of variables such as glucose, blood pressure, pulse, cholesterol, and spirometer information, overall health care costs can be lowered, quality of life enhanced, and mortality for diabetics decreased.
A Social Networking System for Parents and Professionals Working with Children with Autism Spectrum Disorders

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Principal Investigator: Amy Maguire
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Project Number: H133S080021
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 08 $74,960

Abstract: This project develops a social networking system that: (1) brings real world skills and settings into the home and school using video modeling, (2) is safe and cost effective, and (3) creates a trusted network for parent and professional resource sharing. This social networking system prototype allows participants to learn essential social skills and be able to generalize them to other settings, people, and materials; and allows parents and professionals to use the system to upload videos, scripts, and data collection sheets.
Small Business Innovation Research (SBIR), Phase I
Utah

Utility Arm and Upper Limb Prosthesis

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Principal Investigator: Harold Sears
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Project Number: H133S080017
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $75,000

Abstract: This project develops an innovative upper extremity (UE) prosthetic system which offers substantial improvement in functionality, ruggedness, and comfort for persons with limb deficiencies at transradial, elbow, and transhumeral levels. Called “Utility Arm,” the system of improved components is designed to increase independence and work capabilities for users of arm prostheses. The hybrid UE prosthetic system allows the prosthesis wearer to transition easily from electric terminal device to body-powered terminal device, i.e., transition from work to recreation, even dry-to-wet environments. Key design elements include: (1) Finite Element Analysis; (2) high-strength molded exoskeleton shells for the utility arm; and (3) body-powered elbow lock design.
Conversational Computer Interface for Managing Personal Information: JotChat

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Project Number: H133S080023
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $74,960

Abstract: The project develops a conversational personal information manager named JotChat which allows users to communicate with computers using ordinary language, leveraging a natural language technology called Tridbit technology. Tridbit technology simplifies aspects of the natural language understanding problem through its unique knowledge representation model. JotChat users enter and retrieve information in English, for example: “Art’s phone number is 775-555-1295,” “I meet with Jim tomorrow” or “What groceries do I need?” JotChat improves the lives of individuals with visual and print disabilities who cannot easily use conventional user interfaces. Project objectives include: (1) the addition of “untrained input” from users regarding personal information such as calendars, lists, contacts, and notes; (2) improvement of voice recognition accuracy through the incorporation of Tridbit technology with enhanced Nuance speech recognition system to assess viability of voice input option for JotChat; and (3) testing of level of coverage achieved and modification as necessary for accuracy and improvements in voice recognition and overall user experience.
Colorado

ATLAS: An Accessible Testing, Learning, and Assessment System for Individuals with Intellectual Disabilities to Facilitate Inclusion and Access to the General Curriculum

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Project Number: H133S080066
Start Date: October 01, 2008
Length: 24 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 08 $250,000

Abstract: This project builds upon previous research to fully develop and field test the ATLAS system, an innovative system that facilitates access to tests and surveys for individuals with intellectual and other cognitive disabilities. ATLAS is a portable testing and assessment system that can be used by teachers and evaluators to create accessible, self-paced tests and evaluations for students and adults with intellectual disabilities which can then be completed by the individual in a self-directed manner using a portable computer device. The ATLAS system promotes the access of students with intellectual and other cognitive disabilities to the general education curriculum by facilitating their participation in testing activities in the regular classroom. The ATLAS System addresses the important educational needs of individuals with intellectual and other cognitive disabilities by facilitating independent access to tests and surveys for a significant population of American citizens using portable technology.
Small Business Innovation Research (SBIR), Phase II
Florida

Mobile Language Reference for Deaf and Hard-of-Hearing K-12 Students

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Project Number: H1335070088
Start Date: October 01, 2007
Length: 24 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 07 $249,998; FY 08 $249,724

Abstract: This project develops software for hand held devices for use in elementary and secondary grades. During Phase I of this project, Vcom3D developed and tested a prototype Mobile Language Reference for students in the middle grades that included American Sign Language and Signed English definitions selected from the Signing Science Dictionary, developed by TERC and Vcom3D, as well as explanations of multi-sense words and English idioms. Initial testing of the Mobile Language Reference indicated a high level of user acceptance and provided evidence that the system can improve learning outcomes. For Phase II, Vcom3D creates and evaluates a mobile version of the Signing Science Dictionary with at least 1,300 scientific terms. Like the original dictionary, this mobile version targets students in the middle grades. Versions are created for hand held media and multi-function devices, such as the iPod, iPhone, Blackberry, and Sidekick; and tools and a starter kit developed for teachers to create “personalized dictionaries” that could include additional scientific terms, idioms, multi-sense words, and unfamiliar words that would benefit the students within their own curriculum, and could also be used in informal settings. The feasibility and efficacy of these personalized dictionaries and the tools used create them is evaluated independently of the Signing Science Dictionary.
A Low-Cost Portable/Wearable Device for Intelligent Stretching and Movement Training of Hypertonic Forearm in Stroke with Outcome Evaluation

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Project Number: H133S080076
Start Date: October 01, 2008
Length: 24 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 08 $239,013

Abstract: This project develops a wearable/portable robotic device, IntelliStretch, to perform therapeutic rehabilitation of the arm with the following three integrated steps: (1) stretching a spastic/stiff joint to its extreme position under intelligent control to loosen the stiff joint, (2) voluntary movement training using virtual reality games interfaced with assistance/resistance control when needed, and (3) quantitative outcome evaluation. The device is low cost and portable so that patients can use the device conveniently and frequently in a local clinic under monitoring of a clinician or at home with initial instruction/training from a clinician. IntelliStretch is first modified for wearable design to improve portability and functionality. Second, in order to motivate/facilitate patients in motor-function recovery, voluntary movement training by playing virtual reality games is added. Finally, the outcome of the robotic treatment is evaluated quantitatively in terms of the biomechanical and neuromuscular properties of the joint. The IntelliStretch device facilitates the delivery of healthcare services to remote locations, such as patients’ homes and local clinics, and, thus enables an increased number of patients to receive effective treatment and outcome evaluation conveniently while enjoying the games.
Hearing Companion: Handheld Portable Sound Identification and Critical Alerting Functionality for People Who Are Deaf or Have Hearing Loss

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Project Number: H133S080075
Start Date: October 01, 2008
Length: 24 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $250,000

Abstract: Based on previous research, this project develops and demonstrates the Hearing Companion which: (1) automatically recognizes specific sounds in the environment on a pocket-sized device; and (2) alerts the user on their mobile device via vibration, images, and captions that identify these recognized sounds. This efficient, wearable system utilizes existing and developing technology, improving the ability of a person who is deaf to function more naturally in a work or school environment. Phase II project goals include: (1) enhance the Hearing Companion device and application; (2) expand the number of mobile communication devices supported; (3) perform an extended usability evaluation of the device in a range of activities in vocational, public, and daily living scenarios; and (4) prepare for transition into commercialization. The portable handheld system significantly enhances the user’s sense of safety, security, and independence by providing a means of sound recognition heretofore unavailable to these individuals. Moreover, the personal devices provide a convenient and powerful tool for mobile information and communication.
Wireless Wrist Device to Alert the Deaf of Sounds and Events in Their Environment

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Project Number: H133S080068
Start Date: October 01, 2008
Length: 24 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $250,000

Abstract: This project develops a wireless system to alert individuals who are deaf to critical sounds and events in their environment. This efficient, wearable system utilizes existing and developing technology, improving the ability of a person who is deaf to function more naturally in a work or school environment. The system uses a consumer product called a Bluetooth wristwatch, which is essentially a wireless wrist-worn computer interface and display. The Bluetooth watch serves as a hands-free universal interface to a network of sensors providing data about the surrounding environment and as a convenient interface for text messaging. The text messaging feature is significant since text messaging is common among individuals who are deaf and has also increased communication between individuals who are deaf and individuals who are hearing.
Small Business Innovation Research (SBIR), Phase II
Minnesota

Powered Mounting and Positioning System

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Project Number: H133S060096
Start Date: October 01, 2006
Length: 24 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 06 $237,212; FY 07 $262,786; FY 08 (No-cost extension through 9/30/2009)
Abstract: In this Phase II project, a powered mounting and positioning system is developed and provides independent access to communication devices, work surfaces, books, cell phones, PDAs, food, drinks, and more for individuals with significant limitations. Device positioning is controlled through switches, voice, or joystick control. Programming is accomplished with a single switch. A person may move the mount to one of four custom set positions and make independent adjustments to each joint, the tilt, and the height. For example: tilting or rotating a communication device display to avoid glare. With a powered positioning system and the ability to rotate whatever object is mounted 360 degrees, different devices (a book, cell phone, and AAC device) mounted on a single tray can be rotated into position, allowing a person to change activities or access other items. This technology can be applied outside the rehabilitation field. The commercial potential extends to other areas, such as manufacturing and assembly settings, doctors, dentists, surgeons, hospital beds, photography and lighting applications, ergonomic workstations, nursing homes, schools, laboratories, and home entertainment systems. The increased independence gained has a substantially positive impact on a person’s self-reliance, their work and school performance, and their sense of control.
Small Business Innovation Research (SBIR), Phase II
Oregon

My Scrivener™ Innovative Technology to Enhance Fine Motor Function

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Project Number: H133S070082
Start Date: October 01, 2007
Length: 24 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 07 $262,565; FY 08 $233,594

Abstract: This project builds upon current research, development, and evaluation work for a prototype special education intervention called My Scrivener™. My Scrivener™ is based on emerging research demonstrating that computer-assisted motion training can stimulate the growth of neural connections. The system uses a force-feedback peripheral haptic unit attached to a personal computer for “sense of touch” instruction in printing, through repetitive-motion, for children with fine-motor skill deficits. During Phase II, a prototype is being developed and clinical trials conducted to demonstrate the feasibility of visible improvement in the child’s fine motor and handwriting skills. My Scrivener™ is anticipated to significantly improve proprioceptive awareness and hence, writing, as measured by accuracy and speed for children with development coordination disorders arising from attention deficits, autism, mild cerebral palsy, intellectual disabilities, or unspecified learning disabilities.
Why Go It Alone? The Use of Public Resources to Enhance Computer Accessibility for Individuals with Intellectual Disabilities

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Principal Investigator: Lynn Fox 503/725-3188
Public Contact: 503/725-3188

Project Number: H133S070096
Start Date: October 01, 2007
Length: 24 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $244,206; FY 08 $253,510

Abstract: The Personal Access Computer Key (PACK) is a modified Universal Serial Bus (USB) designed to accommodate adaptive software and can be launched on publicly accessible, updated computers. Phase II of this project focuses on research and design in addressing security concerns which make PACK unusable on public computers (e.g. public library computers). Two additional applications, a desktop game and a rehabilitation homework program, are evaluated across a range of settings and participants with cognitive impairments.
Small Business Innovation Research (SBIR), Phase II
Oregon

Television Assisted Promotion (TAP): Enhancing Rehabilitation Outcomes with Familiar Technology

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Project Number: H133S080077
Start Date: October 01, 2008
Length: 24 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 08 $251,000

Abstract: Based on previous research, this project (1) refines the TV Assisted Prompting (TAP) system hardware and software while expanding its utility to new rehabilitation domains; and (2) continues to employ an incremental design process, partnering with patients, care providers, and therapists to design and evaluate a user-friendly system. The TV Assisted Prompting (TAP) system offers a simple alternative for delivering home program content through a patient’s own TV, prompting and motivating them to initiate and complete home therapy programs. In this second phase, the TAP system is refined into a flexible, less expensive system for commercialization. Technical and rehabilitation development expands upon the current system features to develop user-friendly interfaces for clinicians and patients which facilitate the use of the TAP system in a variety of rehabilitation programs. The TAP system benefits the rapidly growing population of individuals with cognitive disabilities in need of on-going rehabilitation to maximize their progress post-injury.
Small Business Innovation Research (SBIR), Phase II
Pennsylvania

Universal Access to Passenger Rail

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Principal Investigator: Linda van Roosmalen, PhD
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Project Number: H133S050136
Start Date: October 01, 2005
Length: 24 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 05 $249,825; FY 06 $249,925; FY 07 (No-cost extension through 9/30/2008); FY 08 (No-cost extension through 9/30/2009)

Abstract: Freight rail shares train tracks with passenger rail cars. The differences in car width result in horizontal gaps between passenger rail cars and boarding platforms. This gap creates safety hazards not only for wheelchair users but also for the elderly, for individuals with visual impairment, and even for other passengers boarding rail cars. This project continues the research on the Phase I prototype QuickRamp™. Phase II activities optimize QuickRamp’s™ strength, durability, and drive mechanisms; and evaluate the system for safety and usability. This technology provides a universal solution to the rail access problem and solves platform-to-rail car access for all potential rail passengers including individuals using wheeled mobility, children, individuals with visual impairment, and the elderly. Additionally, it eliminates rail personnel assistance for individuals with disabilities boarding or exiting trains, ensuring passenger independence for all train riders.
Small Business Innovation Research (SBIR), Phase II
Pennsylvania

Low Vision Lime: Solution for Low Vision Musicians to Read, Perform, Write, and Print Music Notation

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Project Number: H133S070089
Start Date: October 01, 2007
Length: 24 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 07 $250,150; FY 08 $249,865

Abstract: This project evaluates and defines the Lime notation software, a self-contained, music reading and writing system that allows low vision musicians to independently accomplish typical tasks important to performers and composers with normal vision. It enables performers and composers with low vision to read/perform and write/revise notation, including accessible editing and printing. Specifically, the system allows for magnification that is up to 10 times the original image; displays magnified notation on a flat-panel monitor mounted on a music stand using a combination of automatic and user-controlled scrolling; adds specialized magnification of music notation, a custom scrolling mode, user control of colors and contrast; integrates a touch tablet and stylus of manual markup; and expands the implementation of MusicXML import/export to facilitate exchange with commercial notation software. Project goals include: (1) refining and completing continuous scrolling display options; (2) completing Lime’s integrated score enlargement and low vision feature set; (3) finalizing configuration and scripting of third-party magnification utilities; (4) measuring effectiveness of new features with a select cross-section of musicians with low vision; (5) developing markup option for handwriting annotations on scores; (6) expanding MusicXML import/export capability; and (7) measuring effectiveness with a select cross-section of musicians with low vision.
Wireless EMG Preamp and Improved Mounting System

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Principal Investigator: Harold Sears
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Project Number: H1335070084
Start Date: October 01, 2007
Length: 24 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 07 $257,065; FY 08 $242,935

Abstract: This project develops a small, waterproof, Wireless EMG Preamp sensor for myoelectric arm prostheses. The waterproof sensor transmits a digital signal via a wireless link, eliminating many of the wires and connectors associated with arm prostheses, and allowing connection to modern roll-on gel type liners (which maintain consistent and intimate contact with the wearer’s skin). The Wireless EMG Preamp sensor is designed for use with popular mounting techniques, and improves the contact of electrodes with the skin, reduces the wires that the prosthetist must install inside the socket, and through digital signal processing, reduces the interference from rapidly-growing causes of EMG signal problems, thus creating a benefit for both the wearers and prosthetists. The Wireless EMG Preamp system enhances the practicality of myoelectric arm fittings by reducing breakdowns, and thereby increasing the reliability of the day-to-day wearer’s control of the arm prosthesis.
Participation and Community Living

NIDRR's focus on participation follows the stated purpose of independent living programs to promote a philosophy of independent living, including a philosophy of consumer control, peer support, self-help, self-determination, equal access, and individual and system advocacy, in order to maximize the leadership, empowerment, independence, and productivity of individuals with disabilities, and the integration and full inclusion of individuals with disabilities into the mainstream of American society. NIDRR sponsors research to improve knowledge of individual- and societal-level factors that may serve as barriers to, or facilitators of, participation among all people with disabilities.

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Rehabilitation Research and Training Centers (RRTCs)
California

Rehabilitation Research and Training Center on Personal Assistance Services

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Project Number: H133B031102
Start Date: July 01, 2003
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 03 $900,000; FY 04 $900,000; FY 05 $900,000; FY 06 $900,000; FY 07 $900,000; FY 08 (No-cost extension through 6/30/2009)
Abstract: This project provides research, training, dissemination, and technical assistance on issues of personal assistance services (PAS) in the United States. Center projects focus on: (1) the relationship between formal and informal PAS and caregiving support, and the role of AT in complementing PAS; (2) policies and programs, barriers, and new models for PAS in the home and community; (3) workforce development, recruitment, retention, and benefits; and (4) workplace PAS models that eliminate barriers to formal and informal PAS and AT at work. The Center is based at the University of California, San Francisco, and includes the Topeka Independent Living Resource Center, InfoUse, the Paraprofessional Healthcare Institute, the Institute for the Future of Aging Services, as well as faculty members at the University of Maryland, Baltimore County Policy Sciences Graduate Program, the West Virginia University Job Accommodation Network, and the University of Michigan’s Institute of Gerontology and the Department Health Management and Policy. A Blue Ribbon Advisory Committee of PAS users, disability advocates, business leaders, independent living center leaders, and academics provides guidance to the project.
Personal Assistance Services (PAS) in the 21st Century

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Project Number: H133B080002
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 08 $850,000

Abstract: This rehabilitation research and training center focuses on: (1) improving access to Personal Assistance Services (PAS) by individuals with disabilities; (2) improving the workforce to support individuals with disabilities; and (3) understanding the complexities of the economics of PAS. This project: (1) analyzes trends in the met and unmet needs for PAS in the United States, and the changing demographics of the PAS population, and makes national and state projects of need; (2) investigates the relationship between need and economic status for working age and older groups; (3) tracks and analyzes trends in PAS participants, services, and expenditures and federal and state Olmstead-related initiatives to expand PAS; (4) identifies state PAS policies and barriers to meeting the need for PAS; and (5) analyzes state PAS intervention strategies and factors which impact the success of expanding PAS services. Additionally, this project develops health promotion and educational tools, supports, and interventions to improve the health of caregivers and PAS users; addresses the needs of children and their family caregivers through focused research on the impact of family caregiving on employment; and examines the needs and supports for aging minority caregivers and the amount and type of caregiving provided by family or friends. Moreover, this project gathers and makes available existing strategies, and develops a model approach for emergency PAS. While monitoring and analyzing trends and demographics of paid PAS workforce, this project identifies and tracks state strategies to improve PAS worker wages and benefits; monitors state trends in the number and diversity of PAS workers, their compensation, turnover, and vacancies; and evaluates the effectiveness of state efforts. This project also identifies and makes available comprehensive information about developments in state training requirements for PAS workers and evaluation of these programs; collects and analyzes primary data on workplace PAS, AT, and employment supports; and analyzes barriers to employment among Medicaid PAS beneficiaries and whether AT lessens the need for PAS. Finally, the RRTC analyzes the role of tax laws that affect reimbursement for PAS.
Rehabilitation Research and Training Centers (RRTCs)  
Florida  

Rehabilitation Research and Training Center for Children’s Mental Health  

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Project Number: H133B040024  
Start Date: October 01, 2004  
Length: 60 months  
NIDRR Officer: Bonnie Gracer  
NIDRR Funding: FY 04 $835,000; FY 05 $835,000; FY 06 $801,190; FY 07 $785,400; FY 08 $750,400

Abstract: The Research and Training Center Children’s Mental Health conducts an integrated set of research projects designed, in the short run, to enhance knowledge about effective implementation of systems of care, and, in the long run, to make it possible for children with serious emotional disturbances to live, learn, work, and thrive in their own communities. The Center has developed a theory of factors that contribute to effective implementation; within that theory is a strong emphasis on the importance of understanding from a systemic perspective the interrelationship between the different factors, and their relationship to the community culture and context in which a service delivery system exists. The Center has a set of six interconnected research projects that use both quantitative and qualitative methods, and are holistic in their focus, to further test and develop its theory. The Center translates new knowledge from research into change in policy and practice through a targeted program of training, consultation, technical assistance, publication, and dissemination. To support these efforts, the Center maintains dissemination partnerships with a range of organizations committed to help present research findings in formats well-suited for key audiences of state and local policy makers, family organizations, researchers, and representatives of related service sectors.
Rehabilitation Research and Training Center for Health and Function Across the Lifespan of Individuals with Intellectual and Developmental Disabilities

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Project Number: H133B080009
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPh
NIDRR Funding: FY 08 $849,996

Abstract: This project provides a beneficial impact on the health and function of adults with intellectual and developmental disabilities (I/DD) and their families over their lifespan through a coordinated set of research, training, technical assistance, and dissemination activities. Project goals include: (1) improving health and function of adults with I/DD; (2) enhancing consumer-directed home and community-based long-term care; (3) reducing environmental barriers to health and community participation; and (4) developing an improved instrument to measure health and function in persons with I/DD to facilitate assessment of outcomes in health promotion interventions. Projects relating to the promotion of health and function include: (1) examination of risk factors and age-related changes in health status for adults with varying neuro-developmental conditions; (2) cohort study of health behaviors on health and function, and interventions to improve balance and prevent falls for people with I/DD; and (3) innovative approaches to community-based health promotion for people with I/DD. This RRTC enhances caregiving supports and consumer direction through research on hiring practices in consumer direction, interventions to improve consumer directed services, and family support interventions to improve the health of minority families. Additionally, this project develops and tests tools used in measuring the effectiveness and efficiency of home-based supports and in measuring the cognitive, social, and physical accessibility of environments for people with I/DD.
Rehabilitation Research and Training Centers (RRTCs)
Kansas

Rehabilitation Research and Training Center on Policies Affecting Families of Children with Disabilities

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Principal Investigator: H.R. Turnbull, LLM; Ann Turnbull, EdD
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Project Number: H133B031133
Start Date: November 01, 2003
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 03 $749,951; FY 04 $749,960; FY 05 $749,997; FY 06 $749,899; FY 07 $749,930; FY 08 (No-cost extension through 1/31/2009)

Abstract: This center conducts eight research projects on the effects of the policies of governments, systems, networks, and agencies on the family quality of life and community integration (FQOL/FCI) of families who have children with developmental disabilities and emotional-behavioral disabilities or both. Researchers identify four target populations: families, providers, policy-leaders, and networks (all at the federal, state, and local levels). Early intervention and consumer control of funding are two policy challenges through which the effects of policies on families can be understood. For each policy challenge, researchers inquire into whether the applicable federal and state policies and practices, and the applicable network policies, advance FQOL/FCI; whether the policies across education, social services, and health care are mutually consistent with each other and advance FQOL/FCI; and whether the practices of agencies in those systems advance FQOL/FCI. The center’s analytical framework holds that the core concepts shape policies, policies shape services, policies and services should be coordinated and delivered through partnerships. Enhanced FQOL/FCI occurs when there is coherence among core concepts, coordinated policies delivered through partnerships, and coordinated services delivered through partnerships; and influencing factors must invariably be taken into account.
Rehabilitation Research and Training Center on Measurement and Interdependence in Community Living (RRTC/MICL)

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Project Number: H133B060018
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 06 $649,839; FY 07 $649,908; FY 08 $649,686

Abstract: The goal of this project is to increase the independence and participation of people with disabilities in their communities through the development and implementation of scientifically sound, theoretically driven, and evidence-based interventions. Researchers accomplish this through six core projects. Two research projects, one on community participation and a second on economic utility, involve development of theory-driven measurement tools. The remaining four projects include the application of these measurement tools as part of their methods and procedures. Two of these projects are interventions and two develop model assessments. The first assessment project uses secondary analysis to develop and implement a model for assessing the economic utility and health-related outcomes of participants enrolled in Home and Community-Based Service (HCBS) waivers. The second assessment project evaluates the effects of different independent living advocacy-service models to determine the comparative effectiveness of different models in increasing community participation. The first intervention project examines the effectiveness of personal assistance services and enhanced training to increase consumer participation in the community. The second intervention project is a multisite study that examines the effects of a consumer-led grassroots approach in identifying and removing barriers to increase community participation. Together, these projects represent a comprehensive, integrated, and robust set of activities that recognize that “disability” is an interaction between the characteristics of an individual and his or her environment.
Rehabilitation Research and Training Center for Recovery and Recovery Oriented Psychiatric Rehabilitation for Persons with Long-Term Mental Illness

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Principal Investigator: Marianne Farkas, ScD; E. Sally Rogers, ScD 617/353-3549
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Project Number: H133B040026
Start Date: November 01, 2004
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 04 $750,000; FY 05 $750,000; FY 06 $750,000; FY 07 $750,000; FY 08 $750,000

Abstract: This project focuses on the concepts and dimensions of recovery and the various factors that inhibit and facilitate recovery from long-term mental illness by a comprehensive and meritorious set of research projects and training, technical assistance, and dissemination activities. The research and the training, dissemination, and technical assistance programs are organized into the following three programmatic areas of investigation and development: concepts and dimensions of recovery, factors enhancing recovery, and factors inhibiting recovery. The research projects are designed to have an impact on the field at multiple levels, including the personnel level as well as the program and system levels. Research projects use a participatory research process with significant input from consumers and other stakeholders, and culminate in dissemination, training, or technical assistance activities to maximize the input of the research program. The Training, Dissemination, and Technical Assistance (TDTA) projects are designed to provide exposure, experience, and expertise levels of knowledge transfer. The TDTA program produces new technologies in recovery and psychiatric rehabilitation, and increases the likelihood that researchers, service providers, and others use the cumulative knowledge developed by the RRTC. The RRTC is tied together by its programmatic focus on the three specific core areas, strengthened by the use of appropriate research strategies, and assisted by a vigorous program of training, technical assistance, and dissemination activities designed to maximize the impact of the RRTC at all levels in the field of psychiatric rehabilitation.
Rehabilitation Research and Training Centers (RRTCs)  
Massachusetts

Opening Doors for Children with Disabilities and Special Health Care Needs

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Project Number: H133B060012  
Start Date: October 01, 2005  
Length: 60 months  
NIDRR Officer: Bonnie Gracer  
NIDRR Funding: FY 06 $800,000; FY 07 $800,000; FY 08 $800,000

Abstract: This rehabilitation research and training center on children with disabilities who have special health care needs (CYDS) tests the effectiveness of two intensive interventions, integrated transition planning and community participation in recreation and fitness, and demonstrates the viability of a screening tool to promote access to services and supports for traditionally underserved communities. Research activities include two intervention projects that use randomized controlled designs to improve the educational and recreational activities of CYDS and a demonstration project to improve the early identification of CYDS from traditionally underserved communities. Research Study 1 investigates the use of a regional interagency team that integrates innovative practices in education, social services, and medical support for transition aged students. Research Study 2 builds off of innovative practices in recreation and volunteer training to examine a model that integrates CYDS into community recreation activities. Research Study 3 models the integration of a reliable screening mechanism into the flow of activity at a busy, urban neighborhood health center. The RRTC is a collaboration of the Massachusetts Consortium for Children with Special Health Care Needs, the Parent Advocacy Coalition for Educational Rights (PACER), and six multicultural community-based organizations that serve traditionally underrepresented communities. RRTC staff and collaborators include nationally and internationally known experts in pediatrics, nursing, public policy, education, family advocacy, rehabilitation, and community organizing.
Rehabilitation Research and Training Center for Community Living and Employment for Individuals with Intellectual and Developmental Disabilities

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Project Number: H133B080005
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $850,000

Abstract: The Rehabilitation Research Training Center for Community Living (RRTC/CL) conducts intervention and outcome research to generate and share knowledge about community living, employment, and self-determination. Through compressive study of individual outcomes of a random sample of 10,300 adults with intellectual and developmental disabilities (I/DD) from 15 geographically representative states, this project studies intervention programs in self-determination, relationship building, employment, and direct support professional training, and the first US and largest ever trial of the active support model of organizational and staff support of persons with I/DD. Additionally, this study identifies and evaluates existing instrumentation in community living outcome studies. The RRTC/CL conducts quantitative intervention, outcome studies, and research synthesis on the state of knowledge and practice and case studies of organizations exemplifying transformations and practice needs in order to achieve full inclusion. Through training, conferences, and technical assistance this project provides an integrated “intramural” training program that develops a “next generation” of skilled disability researchers and professionals. This includes the RRTC/CL College of Direct Support, a national, multimedia, interactive, Internet-based training program.
Rehabilitation Research and Training Centers (RRTCs)
Oregon

Rehabilitation Research and Training Center for Community Integration for Individuals with Disabilities, Strengthening Family and Youth Participation in Child and Adolescent Mental Health Services

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Project Number: H133B040038
Start Date: October 01, 2004
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 04 $835,000; FY 05 $835,000; FY 06 $801,190; FY 07 $785,400; FY 08 $750,400

Abstract: This project conducts research, training, and technical assistance activities to study and promote effective, community-based, culturally competent, family-centered, individualized, and strength-based services for children and youth with emotional or behavioral disorders and their families. Projects include: (1) “Community Integration (CI) of Transition-Age Youth,” designed to gain understanding of CI and related concepts from the perspectives of transition-age youth, young adults, and caregivers; (2) “Transition to Independence: Outcomes of School-Based Support for Youth with Mental Health and Developmental Disabilities” is evaluating a pilot school-based program that assists participants age 18-21 with mental health and developmental disabilities to successfully transition to employment and appropriate levels of independent living and use of adult social services; (3) “Achieve My Plan (AMP)” [previously Partnerships in Individualized Planning] develops an intervention to increase youth and family member participation in the individualized service planning process, a conceptual framework for understanding recovery in children’s mental health, and ways to reduce stigma; (4) “Work-Life Integration” addresses CI for adult caregivers of children and youth with emotional disorders, specifically around maintaining employment. It is designed to influence human resource professionals’ practice, and aims to reduce stigma and increase organizations’ family friendliness; (5) “Transforming Transitions to Kindergarten” focuses on the preschool-kindergarten transition for young children with challenging behaviors. It develops and tests an intervention promoting children’s successful school entry while empowering caregivers; (6) “Practice-Based Evidence: Building Effectiveness from the Ground Up,” conducts a case study in partnership with a Native American youth organization and the National Indian Child Welfare Association, and addresses the need to study practices that are believed to be helpful, but for which little evidence exists.
Rehabilitation Research and Training Centers (RRTCs)
Pennsylvania

Rehabilitation Research and Training Center on Participation and Community Living of Individuals with Psychiatric Disabilities

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Project Number: H133B080029
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $850,000

Abstract: The research of this center focuses on two core areas: (1) Enhancing the capacity of individuals and systems to maximize participation and community living through the advancement of theory, measures, methods, and intervention knowledge, with a focus on Centers for Independent Living, specific (education, parenting, mental health care) and broad participation domains, and efforts to address disparities in understudied areas; and (2) increased incorporation of mental health research findings into practice and policy through systematic reviews, partnering with multiple stakeholders to advance the use of knowledge, and providing training, dissemination, and technical assistance to change behaviors and practices of key stakeholders. The goal of this Center is to ensure, in the wake of the Olmstead decision, that individuals with psychiatric disabilities not only move from institutional care to more integrated settings but also are free to choose to participate in a wide range of roles in their communities. This Center capitalizes upon longstanding collaborations among three Philadelphia-based central partners, experience derived from previous research, and trusting and mutual partnerships with multiple stakeholders. These guarantee the project’s ability to conduct research that advances knowledge that meets the needs of end-users and effectively translate this knowledge into innovative, next generation policies and practices.
Rehabilitation Research and Training Centers (RRTCs)  
Texas  

Rehabilitation and Training Center on Community Integration of Persons with TBI  

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Principal Investigator: Angelle M. Sander, PhD; Margaret Struchen, PhD;  
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Project Number: H133B031117  
Start Date: November 01, 2003  
Length: 60 months  
NIDRR Officer: Leslie J. Caplan, PhD  
NIDRR Funding: FY 03 $799,960; FY 04 $799,968; FY 05 $799,936; FY 06 $799,450; FY 07 $799,259; FY 08 (No-cost extension through 10/31/2009)  

Abstract: The research program of this project includes: development and evaluation of a social network mentoring program; an investigation of racial/ethnic differences in acceptance of disability, community integration needs, barriers, and supports; a distance learning program to train family members in rural areas as paraprofessionals; a randomized clinical trial to assess the effectiveness of a brief substance abuse intervention; a qualitative exploration of intimacy following TBI; and a study investigating the role of social communication abilities and environmental factors on social integration.  

Training projects include: a National Information, Educational Resources, Dissemination, and Technical Assistance Center for the Community Integration of Individuals with TBI; development of educational materials for increasing community awareness of TBI and reducing attitudinal barriers; adoption of a social action network program from disability studies for improving positive identity; partnering with artists in the community to implement a Center for Creative Expressions for Persons with TBI; training of community healthcare professionals in the community integration needs of persons with TBI; a rehabilitation fellowship in community integration of persons with TBI; development of educational materials to train state vocational counselors in the needs of persons with TBI; and a state-of-the-science conference and book on community integration.
National Center for Parents with Disabilities and Their Families

Through the Looking Glass
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Project Number: H133A080034
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 08 $500,000

Abstract: The National Center for Parents with Disabilities and Their Families targets three national populations: parents with diverse disabilities, family members, and service providers and trainees who have a particularly critical impact on parents. The Center’s activities target the most critical issues facing parents with disabilities and their families: custody and parental evaluations; family roles and personal assistance; paratransit; and intervention with parents with cognitive and intellectual disabilities. The overall goal of this project is to improve the quality of life among parents with disabilities and their families. The overall goal is met by incorporating the project’s research, development, training, and technical assistance and dissemination activities into four project objectives. The four project objectives are: (1) increase the national availability of accessible and disability appropriate resources for parents with diverse disabilities and their families; (2) increase knowledge of parenting with a disability among diverse parents, family members, and providers; (3) increase informed practice and informed decisions regarding parenting with a disability among providers; and (4) increase state and local legislative and policy changes to decrease discrimination against parents with disabilities and their children. The Center conducts eight separate research and eight new development projects; provides technical assistance to at least 8,000 parents and providers; conducts focused trainings to 12,000 diverse parents and providers; and nationally disseminates at least 200,000 project materials and products consolidated from Center activities as well as from other NIDRR-funded projects. Center activities are guided by the following basic principles: (1) utility to parents, family members, and service providers; (2) social change to improve the lives of parents with disabilities and their families; (3) consumer involvement as integral to all activities; (4) value of consumer-based knowledge; (5) value of diverse perspectives; (6) use of multiple and accessible formats; and (7) dissemination and utilization as interactive and ongoing processes.
Evacuation Methodology and Understanding Behavior of Persons with Disabilities in Disasters: A Blueprint for Emergency Planning Solutions

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Project Number: H133A080069
Start Date: October 01, 2008
Length: 24 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 08 $449,963

Abstract: This project quantifies and interprets the unique challenges of persons with disabilities and other special needs during emergency/disaster evacuations in order to improve the management of such events. Participating research institutions gathers data on persons with disabilities/special needs who have either recently personally evacuated from an emergency/disaster situation, have been in or proximate to a recent disaster evacuation, or who reside in an area that has not experienced a recent evacuation, but might face a type of hazard that could prompt an evacuation some time in the future. The project gathers data in order to evaluate the current state of evacuation preparedness in the area of special/functional needs by local government and key non-governmental service providers across the United States. The investigators integrate these two data sources to create guidelines that key decision-makers, both governmental and nongovernmental, can use to improve existing evacuation plans to account for the disabilities/special needs public based upon urban, suburban, and rural models. Likewise, the project also produces guidelines for incorporating a disability/special needs element in emergency evacuation training and exercises along with delineating future emergency preparedness educational needs within the individuals with disabilities community. Results and products of the study are disseminated to service providers, emergency managers, first responders, other planners, and policy makers across the United States.
Disability and Rehabilitation Research Projects
Massachusetts

A Center on Postsecondary Education for Students with Intellectual Disabilities

University of Massachusetts Boston
Institute on Community Inclusion
100 Morrissey Boulevard
Boston, MA 02125
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Principal Investigator: Debra Hart, PhD; Meg Grigal, PhD 617/590-8082
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Project Number: H133A080042
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $500,000

Abstract: This center conducts research and disseminates information on promising practices that support individuals with intellectual disabilities (ID) to access inclusive postsecondary education resulting in improved long-term independent living and employment outcomes. Additionally, the Center addresses the gaps in knowledge about the participation of individuals age 13-26 with intellectual disabilities in postsecondary education programs by: (1) conducting a national survey to collect new national data from postsecondary programs that serve students with ID to identify key characteristics (e.g., recruitment, retention, college course access, use of accommodations) and promising practices of postsecondary education programs at community colleges, vocational-technical schools, and four-year colleges that currently serve students with ID, including dual enrollment programs; (2) conducting a secondary analysis using three existing national longitudinal datasets to determine whether variations in educational, vocational, employment, and independent living outcomes for students with ID are associated with participation in different types of postsecondary education programs; (3) compiling existing and developing new technical assistance materials, including replicable promising practices for postsecondary education institutions that are developing new or expanding existing services and programs for students with ID; and (4) disseminating both new and existing technical assistance and informational materials in partnership with existing training and technical assistance providers, including the NIDRR Research and Dissemination Centers, to all key stakeholders including students with ID and their families. The Institute for Community Inclusion works in collaboration with TransCen, Inc.
Asset Accumulation and Economic Self-Sufficiency (AAESS)

Syracuse University
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Project Number: H133A080014
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $300,000

Abstract: Building upon research conducted by the Asset Accumulation and Tax Policy Project (AATPP), the current project provides understanding of economic status of working age adults with disabilities, and policy and system barriers to asset accumulation and community participation. Two intervention studies contribute individual and system level knowledge impacting asset accumulation, economic self-sufficiency, and community participation of persons with disabilities. Intervention One: Resource, Employment, Assets, and Learning (REAL) opportunity study, is an experimental design building on research in the IRS Benchmark Study of Taxpayers with Disabilities (2006) and longitudinal outcome research findings in AATPP. REAL evaluates the impact of asset building strategies on economic status and community participation of 360 individuals with disabilities during the project in 2 pilot sites. Intervention Two: Building Economic Success Together (BEST) Accounts study, offers a comprehensive menu of accessible, user-friendly, affordable products and services in response to evidence from AATPP. BEST is offered by credit unions in 6 culturally and geographically diverse locations to 1,800 individuals with diverse disabilities and demographics such as age, gender, family, minority status, and recent service disability. Data analysis is used to identify increased use of asset building strategies, reduced dependence on payday and predatory lenders, reduction of debt, changes in economic status, and savings. Thematic analysis of focus groups and interviews produce knowledge on individual and system factors that diminish or facilitate opportunities to advance asset accumulation, self-sufficiency, and community participation measures of social, civic, and economic activities. AAESS continues collaboration with the IRS to design and conduct an updated and extended benchmark study in 2009 to further research on economic status of taxpayers differentiated by disability and demographics to help design future research. The project includes creation and dissemination of asset development and financial literacy curricula to complement other poverty-alleviation strategies.
School Transition & re-Entry Program (STEP): Systematic Hospital-to-School Transition for Students with Traumatic Brain Injury

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Project Number: H133A 060075
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 06 $300,000; FY 07 $300,000; FY 08 $300,000

Abstract: Due to the absence of effective procedures for transitioning students from hospital to school, many students with traumatic brain injury (TBI) who need specialized services are not identified for special education. This lack of identification can lead to inappropriate services, and perpetuates the lack of awareness of TBI among school professionals. This project utilizes a systematic approach to developing, testing, and disseminating a comprehensive hospital-school transition intervention, called the School Transition & re-Entry Program (STEP). Researchers evaluate the effectiveness of the STEP intervention, which includes referral to a school-based transition specialist, long-term tracking of student performance, and parent advocacy training, in a three-phase research plan. Following the Phase I development period involving focus groups and interviews with parents, hospital staff, and school personnel, and a year-long pilot test (Phase II), the project evaluates the effectiveness of the transition intervention in a multi-site randomized control trial (Phase III).
Assessing Safety Risk after Traumatic Brain Injury

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Project Number: H133G080153
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $199,896

Abstract: This project develops a standardized, ecologically valid measure of safety risk in persons aged 16 and older who have sustained mild complicated, moderate, or severe traumatic brain injury (TBI). An ecologically sensitive item bank is developed to assess the wide range of potential safety issues that persons with TBI face in everyday living situations. Focus groups are conducted with primary stakeholders including persons with TBI, family caregivers, and service providers to establish content validity. Item Response Theory (IRT) methodologies, specifically Rasch analysis, are used to calibrate items along a hierarchy matching item difficulty to the safety abilities of persons with TBI. Based on Rasch analyses, the safety measure for persons with TBI generates safety risk probability scores on four scales theorized to be causative factors: physical capacity, cognitive capacity, perceived susceptibility to harm (judgment), and self-regulation (impulsivity). Ecological and prognostic validity is established using family journals in which unsafe behavior of persons with TBI is recorded and rated.
Field Initiated Projects (FIPs)
Illinois

Promoting Health, Empowerment, and Community Integration Among People with HIV/AIDS: The Medication Adherence Program Study-II (MAPS-2)

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Project Number: H133G060224
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 06 $147,341; FY 07 $145,861; FY 08 $146,908
Abstract: The Center on Mental Health Services Research and Policy at the University of Illinois at Chicago (UIC) is collaborating with the Chicago Department of Public Health (CDPH) to assist people with HIV/AIDS live healthier, more productive lives. Clients at CDPH clinics are offered the opportunity to participate in an innovative program designed to improve adherence to medication and treatment regimens, promote physical health and wellness, cultivate consumer empowerment, and foster community integration. This program examines the effects of peer-delivered medication support services compared to services delivered by traditional medication specialists among people living with HIV/AIDS. The addition of the peer component builds upon the success of the UIC Medication Adherence Program Study-I (MAPS-1), a three-year, NIDRR-funded investigation of the impact of specialized medication adherence services provided to people living with HIV/AIDS.
Combining Technologies to Maximize Outcomes: Telemedicine and Online Training Program for Parents of Children with Autism

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Project Number: H133G060238
Start Date: October 01, 2006
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 06 $149,824; FY 07 $149,965; FY 08 $149,923

Abstract: This project seeks to address challenges faced by geographically remote families in accessing effective intervention services for their young children diagnosed with an autism spectrum disorder (ASD). In order to address this challenge, the project is developing a program that uses a research-to-practice outreach training model to teach parents of children with an ASD how to implement empirically-based interventions with their children. The development of this program is proceeding across four phases: (1) initial content and system development and informational focus groups; (2) formative evaluation; (3) quasi-experimental assessment and system refinement; and (4) final analysis and preparation for dissemination. In Phase 3, parents of children with autism are using online tutorials to learn general information and concepts related to an intervention or treatment protocol, followed by a telemedicine clinic intervention session. During the intervention session parents practice the techniques discussed in that week’s online tutorials with their child while receiving guidance and immediate feedback from trained intervention coaches. Program effectiveness is being evaluated based on level of parental knowledge and skill fluency, child level of disability (e.g. the ICF) and behavior, and reported family quality of life. In addition, participants complete exit surveys and interviews to elicit feedback regarding how the program could be improved and any problems they experienced. Intervention components are introduced to study families in a multiple baseline design. In order to assess the sustainability of the project, following Phase 3, six additional families are recruited to participate in the outreach telemedicine clinic from a community-based telemedicine site (Phase 4).
Field Initiated Projects (FIPs)
Massachusetts

Instrument to Measure Recovery-Promoting Competence Among Providers Serving Spanish Speaking Mental Health Consumers

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Project Number: H133G060071
Start Date: November 01, 2006
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 06 $149,735; FY 07 $149,908; FY 08 $149,953

Abstract: The purpose of this project is to culturally adapt the Recovery Promoting Relationships Scale (RPRS) for use in four Spanish-speaking cultures (that is, individuals of Mexican, Puerto Rican, Cuban, and Central and Latin American descent). The resulting scale is an intervention blueprint designed to cut across specific disciplines and services, to specify the skills and strategies needed to promote recovery, and to improve the expertise of providers serving Spanish-speaking consumers. This process helps address the critical need for recovery-oriented mental health services that are research based, culturally informed, and grounded in the perspectives of Latinos with psychiatric disabilities. Thus, the goals of this project are: (1) to identify and refine the recovery-oriented competencies required of providers serving mental health consumers of four Spanish speaking cultures; (2) to adapt the RPRS to be culturally relevant to mental health consumers of four Spanish-speaking cultures; (3) to pilot test the psychometric properties of the RPRS; (4) to test the clinical utility of the RPRS; and (5) to systematically develop implications for practice, training of practitioners, and policy, and broadly disseminate the results.
Field Initiated Projects (FIPs)
Massachusetts

Development of Measures of Participation and Environment for Children with Disabilities

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Project Number: H133G070140
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $195,233; FY 08 $195,360

Abstract: This project develops new measures of participation and environment for children and youth with disabilities using input from families and their children with disabilities. The new measures are developed using Item Response Theory (IRT) to ensure that the measures developed are interpretable, provide interval level data for analyses, and are valid for the specified purposes. The project has three major phases. The first phase is a development phase that synthesizes results from prior research on participation and environment and analysis of the ICF with information derived from focus groups of caregivers and children and youth with a variety of disabilities to identify meaningful domains and item content areas for the new measures. Initial item pools are developed, subjected to expert review and cognitive testing, and then field-tested with both caregiver and child respondents to identify any significant problems with scaling or content coverage using IRT methods. After revisions based on these results, a larger field study is conducted using both paper and web-based survey formats to examine the properties of the revised item pools. The ultimate aim is to develop large pools of participation and environment items that can support survey and computer-adaptive testing measures that are linked on a common scale. This approach allows flexible development of alternative forms whose derived scores can be compared directly with one another, e.g. so that results from different studies are more easily compared. The present project develops and tests (using simulation studies) short survey forms from the initial pools for immediate use. The research is a collaborative effort between experienced investigators in the United States and Canada. This collaboration facilitates development of broadly applicable measures by taking into account potential differences in environment and participation across very different health care delivery systems.
Work Environment and Quality of Life Outcomes: A Comparison of the Experiences of Formal and Informal Caregivers of Persons with Spinal Cord Injuries

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Project Number: H133G060267
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 06 $149,989; FY 07 $149,950; FY 08 $149,994

Abstract: For many persons with a spinal cord injury (SCI), assistance with activities of daily living and instrumental activities of daily living is crucial to their long-term survival, independence, and productivity. The goal of this qualitative investigation is to gain a better understanding of the work environments of SCI caregivers and the micro-processes at work that produce impacts on caregivers’ appraisals of burden, stress, physical health, and psychosocial well-being. The objective of the study is to document from a contextual life perspective, the linkages between the specific demands of caregiving and its health consequences. The study targets three groups of SCI caregivers: unpaid (family) caregivers, paid caregivers hired directly by the consumer, and paid employees of home health care agencies. The specific aims of the study are to: (1) conduct a comparative study of these three caregiver groups; (2) analyze this information with specific attention to the connections between aspects of the work environment, stress, physical health, and psychosocial well-being, and (3) disseminate this information to SCI consumers and their families, rehabilitation researchers, and clinicians, and to agencies charged with the responsibility of establishing health care policies.
Field Initiated Projects (FIPs)
Montana

CIL-Based Abuse Education and Safety Planning Program for Women with Disabilities

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Project Number: H133G070196
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 07 $199,996; FY 08 $199,985

Abstract: The purpose of this project is to develop and evaluate an accessible, consumer-driven abuse education and safety planning program for women with disabilities. The conceptual model for the program identifies knowledge about safety planning, self-efficacy, and social connectedness as three protective factors that influence safety behaviors and safety itself. Drawing on both the strengths of traditional, community-based domestic violence and sexual assault programs and the cumulative research findings on the dynamics and prevalence of violence against women with disabilities, this program offers an integrated approach for meeting the gender-specific and disability-sensitive prevention needs of women with disabilities. The intervention is implemented with women with disabilities recruited from the ten centers of independent living (CILs) and randomly assigned to a group that will participate in either the on-going CIL services plus the abuse education and safety planning program, or to a group receiving the on-going CIL services only. The program consists of six 2.5-hour weekly sessions using a curriculum that includes topics such as self-advocacy, nature of abuse and violence, safety planning strategies, and healthy relationships. All sessions include self-efficacy training, goal-setting, problem-solving, and interactive activities to encourage mutual support. A CIL staff member from each site participates in a comprehensive leader training program conducted by the project personnel. This is the first randomized, controlled evaluation of a violence prevention group program designed to meet the unique needs of women with disabilities.
Controlled Study of Affect Recognition Training for Individuals with Traumatic Brain Injury

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Project Number: H133G080043
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $200,000

Abstract: The goal of this project is to compare the effects of two innovative training programs on improving various aspects of emotion recognition in persons with traumatic brain injury (TBI), through a randomized controlled trial. It has been demonstrated that individuals with TBI often have difficulty using facial expressions and social contexts to determine how someone is feeling. It is apparent that an impairment of this nature could considerably influence the behavioral and social outcomes for individuals with TBI. In this study, participants are randomly assigned to one of three groups: Facial Affect Recognition training, Stories of Emotional Inference training, or (no treatment) Computer Training Group. Training occurs three times a week for three weeks. Specific outcome measures include: (1) facial affect recognition (static photos); (2) affect recognition and social inference from video vignettes; (3) emotional inference for hypothetical situations; (4) level of empathy; and (5) social behavior. Cognitive performance and level of depression are covariates. In addition, vocal affect recognition (audiotape) and community integration are also explored.
Field Initiated Projects (FIPs)
North Carolina

Daily Living and Community Skills Video Game for Children with Developmental Disabilities

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Project Number: H133G080151
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 08 $199,175

Abstract: This project develops and evaluates a simulation video game to teach children with developmental disabilities, including autism and intellectual disabilities, skills for independence. The project teaches chained tasks in an engaging and effective game format. This system provides an innovative and inexpensive way to increase opportunities for instruction while providing correction procedures, giving multiple exemplars, monitoring progress, and including clips from each student’s community. This project expands on the preliminary findings in a Phase I study to develop an easy to use, economical, daily living skills game which brings real world experiences and treatment into the classroom and home. Project goals include: (1) to expand on the successful techniques demonstrated in preliminary studies to create a fully-functional game with 24 skills, (2) to verify through a single subject design, specifically multiple probes across behaviors, that the simulation video game alone teaches the skills to 24 children in elementary and middle school with developmental disabilities. A team of educational experts, technology experts, and parents of children with disabilities collaborate on the project to ensure the skills presented in the game are truly beneficial to individuals with developmental disabilities and the technology used will have the greatest reach.
Field Initiated Projects (FIPs)
North Carolina

Improving Representative Payeeship for People with Psychiatric Disabilities and their Families

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Project Number: H133G070058
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 07 $198,669; FY 08 $199,187

Abstract: This project evaluates a pilot-tested, stakeholder-informed intervention that is grounded in principles of psychiatric rehabilitation and encourages consumers with psychiatric disabilities and their family members to collaborate within the representative payee arrangement. Representative payees, mostly family members, manage Social Security Administration funds for more than one million people with psychiatric disabilities. Although studies show payeeship can be used coercively, foster dependency, reduce work incentives, and lead to family conflict and even violence, there has been little systematic research on how to lower these significant barriers to community integration. This project tests the Collaborative Representative Payeeship intervention, a brief, four-session intervention that aims to facilitate a cooperative consumer-payee relationship, increase accurate knowledge about representative payeeship, promote collaborative money management and effective budgeting, and prepare mutually developed plans for carrying out the payeeship in the future. The long-term goal is to promote recovery among adults with psychiatric disabilities who have payees by reducing downsides associated with what has been called “the nation’s largest guardianship system.”
Teen Online Problem Solving for Pediatric Brain Injury

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Project Number: H133G050239
Start Date: October 01, 2005
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 05 $149,629; FY 06 $148,735; FY 07 $149,569; FY 08 (No-cost extension through 9/30/2009)

Abstract: Traumatic brain injury (TBI) in adolescents is a significant stressor for both the teen and his or her family. Existing interventions are rare and distance and finances can restrict access to treatment. The current project addresses these needs by developing and piloting an innovative online intervention for adolescents with TBI: Teen Online Problem Solving (TOPS). The TOPS intervention is adapted, based on input from teens with TBI, from a recently developed online program for school-aged children with TBI and their families. The project tests the TOPS intervention in a randomized trial comparing the effects of usual care to TOPS on the following outcomes: (1) adolescent problem-solving and communication skills; (2) adolescent emotional/behavioral adjustment; (3) parent burden and distress; and (4) parent-teen conflict. TOPS makes use of emerging technology to address the multifaceted needs of teens following TBI with the goal of improving the teen’s social and emotional functioning, thereby enabling him or her to better negotiate the complex transition to adulthood and independent functioning.
Web Therapy to Improve Outcomes After Traumatic Brain Injury in Young Children

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Project Number: H133G060167
Start Date: December 01, 2006
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 06 $149,379; FY 07 $147,834; FY 08 $146,762

Abstract: This project adapts online family problem solving for families of young children with traumatic brain injury (TBI) (Positive Parenting Plus or 3P) and compares it to an Internet resource comparison group (IRC) in a randomized clinical trial. Participants include families of 40 children, aged 3-8 years, who experienced a moderate to severe TBI 1-12 months prior to study participation. In 3P, a trained counselor guides families through a six-month structured online parenting skills-building program via a website and one-on-one videoconference sessions. The IRC group receives computers, high-speed Internet access, and links to brain injury information and resources, but not the 3P website content or synchronous sessions. Primary outcomes, to be assessed pre- and post-treatment, include parenting behaviors (e.g., warmth, responsiveness, and criticism) and parent-child communication. Secondary outcomes include child behavior problems and parent psychological distress. The overarching goal of this project is to reduce the risk of long-term behavioral problems and disability in young children following TBI by equipping parents with increased coping and parenting skills in a cost effective fashion.
Field Initiated Projects (FIPs)
Ohio

Developing College Campuses as Transition Settings for Students with Severe and Multiple Disabilities Aged 18-21

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Project Number: H133G080158
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 08 $199,973

Abstract: This project is designed to address need for sustainable, community-based programs for students with severe and multiple disabilities (SMD) aged 18-21 by using the college campus as a transition setting. It also addresses the need for SMD transition professionals to obtain skills in the areas of person-centered planning, community partnering, and interagency collaboration. Students with SMD are enrolled in a college-level continuing education class on life planning provided by Kent State’s Career Services Center. An university instructor directs this class, and collaborating SMD professionals and Kent State students receive service learning credits for providing person-centered planning and individualized campus activities for the participating students with SMD. These planning and campus activities are coordinated with students’ individual education and employment plans (IEPs and IPEs, respectively). Students with SMD are also enrolled in at least one college-level class each semester to assure that they have access to all of Kent State’s services including career planning, health and wellness, student employment, extracurricular activities, and life-long learning opportunities. To achieve these outcomes, project staff pursue five objectives: (1) develop college classes for 30 students with SMD that engage practicing and prospective transition professionals in their life and career planning; (2) develop and implement daily campus activities for 30 students with SMD based on their life plans; (3) engage students with SMD, their teachers, university faculty, and other transition stakeholders in evaluating, refining, and supporting this model; (4) develop materials for replication of this model; and (5) disseminate and replicate this project at other universities.
Field Initiated Projects (FIPS)
Oregon

Development of a Safety-Planning Tool for Men with Disabilities

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Project Number: H133G070190
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Joyce Y. Caldwell
NIDRR Funding: FY 07 $200,000; FY 08 $200,000

Abstract: In order to plan for safety, men with disabilities (MWD) need to be aware of options and have access to responsive community resources that support healing, support independence, and assist with the reporting of violence. The purpose of this project is to develop a gender-appropriate Audio Computer-Assisted Self-Interview (A-CASI) to ensure MWD have the skills necessary for effective safety planning. The major goals of the project are to: (1) work closely with MWD to identify safety-planning options for dealing with abuse; and (2) develop and pilot an A-CASI Safety-Planning Tool that builds upon current research findings on the abuse experiences of men with disabilities and previous development of a similar A-CASI program for women with disabilities. The project is conducted by the Regional Research Institute at Portland State University in collaboration with The Rural Institute at University of Montana.
Parent-Infant Interaction Project (PIIP)

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Project Number: H133G080132
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 08 $199,945

Abstract: The Parent-Infant Interaction Project (PIIP) develops an evidence-based curriculum for implementation by parents with intellectual disabilities and their professional or paraprofessional coach within natural environments to enhance parent-infant interaction and child development. Goals of PIIP include: (1) develop a research-based curriculum, coaching model, and training materials for use by parents with intellectual disabilities and their coaches in a collaborative process to enhance the parent-infant relationship and nurture child development; (2) conduct single subject studies of the effects of PIIP coaching model, curriculum, and training materials, including multiple-baseline design studies across goals and the collection of additional qualitative data; and (3) field-test and evaluate the coaching model, curriculum, and training materials through a multi-method study across three different types of early childhood/parent support programs. Partners in PIIP include Early Head Start and Early Intervention/Early Childhood Special Education, as well as a program providing supports for parents with intellectual disabilities. The PIIP Coaching Model incorporates innovative strategies and applies technology that is accessible to individuals with intellectual disabilities. Innovative strategies include a model for coaching that focuses on self-determination and empowerment of parents as advocates and decision-makers for themselves and their child. The Infant-Caregiver Interaction Scale provides a tool to guide collaborative observation, goal-setting, and continuous feedback for parents and their coaches. The project develops accessible technology, including a DVD of examples of interaction activities with video-modeling, for use in coaching parents as they learn strategies to enhance parent-infant interaction within daily play activities. Strategies for planning individualized accommodations, such as easy-reading/picture activity schedules and menus, audio prompts, social stories, and self-management systems, to address parent-child needs are included in the curriculum.
Field Initiated Projects (FIPs)
Texas

Outpatient Social Skills Training for Distressed Adolescent Burn Survivors

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Project Number: H133G050079
Start Date: October 01, 2005
Length: 39 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 (No-cost extension through 12/31/2009)

Abstract: Previous studies suggest that a significant number of survivors of pediatric burn injuries have a diminished quality of life as young adults. Based on social learning theory and supported by empirical data, social skills deficits have been identified as a major impediment to maximum psychosocial adjustment for many who have survived serious burn injury; this deficit is a particular handicap as the child progresses through adolescence. A pilot study suggests that a four-day, intensive, residential social skills training program was of benefit to troubled teen burn survivors even one year after the training program was completed. The residential format, however, is expensive and impractical. This project (1) cross-validates previous findings that a social skills training program is beneficial, i.e. results in improved social competence and/or diminished behavioral problems, at one-year post-intervention; and (2) tests the hypothesis that beneficial effects can be maintained or amplified by modifying the format of the training to a schedule that more closely resembles the usual outpatient clinical schedule. The goal of this project is to develop and validate an efficient and relatively inexpensive intervention that can be utilized not only by burn-care teams but by health-care professionals in other specialties that are concerned with assisting adolescents who are stigmatized by marred appearance or functional impairment related to a medical condition.
Development of an Internet-Based Self-Esteem Intervention for Women with Disabilities

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Project Number: H133G080042
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 08 $200,000

Abstract: This project uses an innovative, Internet-based technology called SecondLife, a 3-D, multi-user virtual environment, to deliver self-esteem enhancement interventions to women with disabilities. Project objectives include: (1) reviewing and refining previous self-esteem curricula; (2) developing and testing a methodology to teach participants to navigate SecondLife, and interact with other individuals using real-time voice dialogue; and (3) converting the self-esteem enhancement intervention into a format that uses real-time voice dialogue group interactions in SecondLife, supplemented with on-screen information and illustrations. This Internet-based intervention allows people with disabilities to access secure systematic online health promotion programs designed to increase ability to self-manage chronic conditions and disabilities, achieve improved health and mental health outcomes, and ultimately achieve full participation in their communities.
Context Aware Self Management Tools for Individuals with Significant Cognitive Disabilities

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Project Number: H133S080041
Start Date: October 01, 2008
Length: 6 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 08 $74,956

Abstract: This project has two goals: (1) to develop and evaluate the feasibility of intelligent, computer-based self-management and household management applications that would improve the independent living capacity of persons with cognitive disabilities, and (2) to identify an agenda for full development of a deployable system in a Phase 2 project. Intelligent multimedia computer agents offer an untapped resource to augment the functional cognitive ability of individuals with disabilities in community living settings who lack skills for self-monitoring and decision-making and who cannot use text-based systems or other commercial personal management systems due to their cognitive complexity. Assistech Systems builds on previous work in the development of cognitively accessible life skills applications and rule-based expert systems for independent living to develop a limited features, self-management prototype application with activity monitoring and tracking tools with integrated behavioral recognition capability. Consumers will not only be able to track and act on information regarding personal care and household management activities such as bathing or grocery shopping, but also interact with intelligent, intuitive, graphic user interfaces. Feasibility testing methods include a multiple baseline study of three pairs of consumers/caregivers.
Disability Demographics

The ultimate goal of NIDRR’s disability demographics effort is to generate new information that can be used by individuals with disabilities, service providers, policymakers, and others working to identify and eliminate disparities in employment, participation and community living, and health and function. NIDRR has long funded studies that mine data to address the full range of social, health, and economic facets of disability and that compare findings across data sources. There are significant correlates with disability, such as aging; and there are a variety of links between disability and other factors, including culture, race, and ethnicity. NIDRR also nurtures methodological work that addresses identified gaps in data, such as the sparse measurement of the interface between individual and environment.

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Rehabilitation Research and Training Center on Measuring Rehabilitation Outcomes and Effectiveness

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Project Number: H133B040032
Start Date: December 01, 2004
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 04 $700,000; FY 05 $700,000; FY 06 $700,000; FY 07 $700,000; FY 08 $700,000

Abstract: The purpose of this RRTC is to provide national leadership on the functional assessment, outcomes, and health policy issues facing the medical rehabilitation community and the diverse consumers it seeks to serve. The Center conducts research; hosts forums for discussion; publishes in rehabilitation, health policy, and consumer literature; trains researchers in rehabilitation-focused health services research; and disseminates information to diverse consumer, provider, and academic audiences. The RRTC’s research seeks to (1) enable comparison of functional status measures across post-acute settings so information can be provided to consumers and other rehabilitation stakeholders about the outcomes and effectiveness of various post-acute care settings; (2) develop an innovative measure of community participation in a meaningful, reliable, and valid manner in order to better describe the long-term outcomes of rehabilitation services; (3) increase the efficiency of outcome data collection so more resources can be directed to patient care; and (4) examine how format and presentation style influences patient understanding of rehabilitation quality outcome indicators in order to provide information in ways that are helpful for consumers when selecting rehabilitation services. The project uses recent developments in item response theory, computer adaptive testing, and stakeholder input in test development, outcomes reporting, and quality indicator reporting. The expected outcomes are a rational basis for provision of rehabilitation services in post-acute care settings, increased efficiency of data collection, a better measure of community participation, and outcome reporting that is responsive to stakeholder needs. Dissemination activities include post-graduate and post-doctoral training opportunities, conferences, and a website that provides information on measurement of rehabilitation outcomes across the continuum of post-acute settings.
Rehabilitation Research and Training Centers (RRTCs)
New York

Rehabilitation Research and Training Center on Demographics and Statistics

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Project Number: H133B031111
Start Date: December 01, 2003
Length: 60 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 03 $750,000; FY 04 $750,000; FY 05 $750,000; FY 06 $750,000; FY 07 $750,000; FY 08 (No-cost extension through 11/30/2009)

Abstract: The RRTC on Demographics and Statistics (Cornell StatsRRTC) bridges the divide between the sources of disability data and the users of disability statistics. The project conducts research exploring the reliability of existing data sources and collection methods, and studies the potential to improve current and future data collection efforts. In addition, the project utilizes existing data sources to provide a comprehensive and reliable set of statistics, and increase access to and understanding of how statistics can be used effectively to support decision making. Cornell StatsRRTC works with key organizations to determine their needs and helps them maximize the use of disability statistics in their ongoing efforts to improve the lives of people with disabilities and their families. As members of the Cornell StatsRRTC, the American Association of People with Disabilities, the Center for an Accessible Society, and InfoUse provide vital expertise and resources needed to reach the users of disability data and statistics. The Cornell StatsRRTC includes researchers from Cornell University, Mathematica Policy Research, the Urban Institute, and the Institute for Matching People and Technology, all of which bring extensive expertise in working with and creating sources of disability data.
Rehabilitation Research and Training Centers (RRTCs)  
New York

Rehabilitation Research and Training Center on Disability Statistics and Demographics

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Project Number: H133B080012  
Start Date: October 01, 2008  
Length: 60 months  
NIDRR Officer: David W. Keer  
NIDRR Funding: FY 08 $850,000

Abstract: The Rehabilitation Research and Training Center on Disability Statistics and Demographics (StatsRRTC) facilitates evidence-based decision making in many different service and policy arenas to benefit persons with disabilities, leading to improved education and employment outcomes. StatsRRTC is a collaborative effort that brings together the lead investigators from three current RRTCs: the StatsRRTC, Employment Service System RRTC, and Employment Policy RRTC; and partners them with leaders in the disability advocacy community from the American Association of People with Disabilities and leaders in vocational rehabilitation from the Council of State Administrators of Vocational Rehabilitation. Project activities include: (1) producing a set of guides to and meta-analyses of existing survey and administrative data sources, (2) conducting experiments to test alternative survey methods, (3) expanding and distributing the Annual Disability Status Reports, (4) expanding and revising the Source Guide for Surveying People with Disabilities, (5) providing an information and referral technical assistance service, (6) providing stylized statistical estimates and methodological consulting for key stakeholders as a follow-up to outreach and training activities, and (7) conducting training designed to build capacity among consumers and within the vocational rehabilitation system and other support services systems related to data collection and analysis, secondary data analysis, and reporting processes. Project goals include: improving the knowledge of and access to existing data; generating the knowledge needed to improve future disability data collection; and strengthening connections between the data from and regarding respondents, researchers, and decision makers.
Field Initiated Projects (FIPs)
Colorado

Public Spending for Disability in the United States: A Comparative, Longitudinal Study

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Project Number: H133G070163
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: David W. Keer
NIDRR Funding: FY 07 $199,961; FY 08 $199,961

Abstract: This project is a comprehensive longitudinal study of the characteristics, trends, and determinants of public spending for disability programs in the United States at the federal, state, and local level. Data collection and analysis utilizes 28 disability program subcategories across 4 major activity domains: income maintenance, general health care, long-term care, and special education. The project’s comprehensive focus includes intellectual/developmental disabilities, mental illness, and physical/sensory disability. The envisioned state-by-state and nationwide database on public spending and program participation will be developed across fiscal years 1997-2008.
Development and Use of a Multi-State Database on Individual Outcomes and their Predictors for Persons with Intellectual and Developmental Disabilities in the US

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Project Number: H133G080029
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 08 $200,000

Abstract: The focus of this project is the National Core Indicators (NCI) Program, the most widely used program of outcomes assessment for persons with disabilities in the U.S. Today 24 states participate in at least bi-annual NCI-based outcome research on a minimum of 400 randomly selected persons with intellectual and developmental (ID/DD) receiving publicly-financed services. Participating states receive validated, psychometrically tested instrumentation, technical assistance with random selection procedures, standardized training of interviewers, and a centralized system of data quality review, coding, and analysis. The purpose of the study is: (1) to merge and analyze the wholly congruent records of more than 10,000 randomly sampled adults from 15 purposely selected, nationally distributed states to examine the interactions among individual characteristics, service delivery models and settings, and individual outcomes and experiences; and (2) to carefully evaluate and refine, as needed, the measures and methods of the NCI program to assure maximum validity and utility in assessing quality of support to persons with ID/DD. Merging the wholly congruent state data sets provides a unique opportunity to use and refine a research data set of incomparable size, flexibility, national representation, and consistency with national goals for supports to persons with ID/DD.
**Using the U.S. Equal Employment Opportunity Commission (EEOC) Employment Discrimination Charge Data System for Research and Dissemination Purposes**

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**Project Number:** H133G040265  
**Start Date:** October 01, 2004  
**Length:** 36 months  
**NIDRR Officer:** David W. Keer  
**NIDRR Funding:** FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 (No-cost extension through 9/30/2008); FY 08 (No-cost extension through 9/30/2009)

**Abstract:** Using data from the Equal Employment Opportunity Commission (EEOC) Charge Data System (CDS), this project analyzes trends in employment discrimination charges related to the ADA and other laws. The CDS collects data on employment discrimination charges covered under Title I of the ADA, as well as data on charges related to other laws. It contains information on (a) the demographic characteristics of charging parties, such as gender, racial and ethnic status, age, location, and type of disability; (b) type of discriminatory behavior, such as refusal to hire, failure to provide reasonable accommodation, unfair discharge, harassment; and (c) charge outcomes, such as withdrawal with benefits, settlements, and other such outcomes. The project uses these data to explore trends over time and across the states, and investigate whether these trends are related to changes in the composition of the population with disabilities and changes in labor market conditions. Using regression analysis, the project explores the relationship of the ADA-related charge rates to state-level economic conditions, government program participation by people with disabilities, and other state-level characteristics. The project also examines the changes in the composition of charges over time with respect to the characteristics of charging party, the size and industry of the employer, the type of alleged discriminatory treatment, differences between claims in the EEOC and FEPA offices; differences in trends and types of charges between the ADA and other statutes (specifically the ADA and IDEA); and where relevant, the potential impact of Supreme Court decisions within trends changes in these compositional changes. To achieve a better understanding of patterns in ADA-related charges, the project seeks input from and works with the EEOC and selected disability advocacy organizations, such as the select state Fair Employment Protection Agencies (FEPAs), state protection and advocacy agencies, and as needed the American Association of Retired Persons (AARP), the American Association of Persons with Disabilities (AAPD), the National Disability Rights Network (NDRN; formerly called the National Association of Protection and Advocacy Systems), and the law firm of Powers, Pyles, Sutter, and Verville (PPSV).
Impact of Prospective Payment and Rehabilitation Outcomes

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Project Number: H133G080163
Start Date: October 01, 2008
Length: 36 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 08 $199,386

Abstract: This project examines associations and trends in key rehabilitation outcomes before and after the introduction of prospective payment (PPS). Research objectives include: (1) to examine the impact of differences in the scoring and recording methods used to measure functional status pre-PPS (FIM Instrument) and under the PPS (Inpatient Rehabilitation Facility-Patient Assessment Instrument); and (2) to compare associations and trends in outcomes for three years pre-PPS (1999-2001) to three years under the PPS (2002-2004). Outcomes examined include length of stay, functional status at admission, discharge and follow-up (3-6 months), living setting pre-admission, incidence of hospital readmission, and mortality. Research objectives are addressed using two data sets. The Uniform Data System for Medical Rehabilitation (UDSMR) is used to examine the impact of changes in rating and coding functional assessment data introduced with the PPS in 2002 (Objective 1). Association and trends are explored using both the UDSMR database and Centers for Medicare and Medicaid Services (CMS) files (Objective 2). The CMS information includes the Inpatient Rehabilitation Facilities-Patient Assessment Instrument file, the Medicare Provider Analysis and Review file, and the Medicare Denominator file. The project examines data from major impairment groups including stroke, brain dysfunction, spinal cord injury, neurological deficits, and orthopedic conditions. Hierarchical linear and quasi-likelihood statistical models are used to analyze trends in data prior to PPS (three years) and during PPS (three years) adjusting for relevant covariates (age, gender, race/ethnicity, comorbidities, etc.). Finally, the project provides the information necessary for making evidence-based decisions related to future changes in rehabilitation practice, payment, and policy.
Virginia Commonwealth University  
School of Allied Health Professions  
Department of Rehabilitation Counseling  
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Principal Investigator: Steven L. West, PhD, CRC  
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Project Number: H133G080123  
Start Date: October 01, 2008  
Length: 36 months  
NIDRR Officer: David W. Keer  
NIDRR Funding: FY 08 $199,999

Abstract: This project studies the rates of substance use and abuse, the correlates of such use, and the impact of such use on college students with disabilities. These students face a number of challenges that may inhibit their performance and limit their acquisition of college degrees. The failure to perform to standard or to complete a college degree can have severe and long lasting consequences in terms of lifelong employment, community integration, and the overall health and well being of persons with disabilities. Although there are many barriers to the successful acquisition of a college degree, much of the current research in the field of higher education centers on the negative effects of substance use and abuse. Use of alcohol and other drugs by college students, regardless of disability, is associated with a number of negative outcomes. Notable among these are school failure and drop-out, a wide variety of health concerns, and a number of legal issues. To date, little is known about the rates of substance use and abuse by college students with disabilities. Research with general samples of people with disabilities note that such individuals abuse alcohol and other drugs at rates 10 to 20 times that of the general population; preliminary studies with students with disabilities suggest that they are also heavy users of alcohol and other drugs. By detailing the state of affairs nationally, this study allows for a broad understanding of the rates of substance use by college students with disabilities; details the impact of such use on academic performance, health and well being; allows for the determination of factors related to both substance use and abstinence; aids in the development of prevention efforts; and provides aggressive dissemination of information on such issues to a wide audience of consumers and service providers.
Assessing the Impact of Medicare-D on SSDI Beneficiaries

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Public Contact: 509/368-6971; Fax: 509/358-7984

Project Number: H133G070055
Start Date: October 01, 2007
Length: 36 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 07 $199,955; FY 08 $199,706

Abstract: This project employs a multi-method, repeated-measures design to assess the impact of Medicare-D on younger beneficiaries in four distinct but interrelated studies: (1) quantitative analysis of access and utilization rates among beneficiaries under age 65, using successive panels of the Medicare Current Beneficiary Survey; (2) qualitative research on the impact of Medicare benefits on employment and continuity of medical care, based on repeated focus groups at two sites; (3) formulary analysis of coverage for critical medications among competing private Medicare Advantage and Prescription Drug Plans in Washington State; and (4) ongoing policy analysis of legislative and regulatory changes in Medicare and SSDI. Tracking the impact of the new drug benefit is particularly important for younger adults with disabilities who become eligible for Medicare through the Social Security Disability Insurance (SSDI) program. Although younger beneficiaries comprise only 14.1 percent of the total Medicare population, they account for about 17 percent ($71.6 billion) of total program expenditures. Despite their economic and political importance, younger beneficiaries with disabilities are routinely overlooked in published Medicare research and policy analysis. Through dissemination of research findings, this project enhances awareness in the research and policy community of the unique Medicare-D concerns of younger beneficiaries with disabilities, consistent with the ultimate goal of improving access to affordable health services for people with disabilities.
Knowledge Translation

For NIDRR, knowledge translation (KT) encompasses the multidimensional, active process of ensuring that new knowledge gained through the course of research ultimately improves the lives of people with disabilities and furthers their participation in society. KT involves not only knowledge validation and dissemination but also the transfer of technology, particularly products and devices, from the research and development setting to the commercial marketplace to make possible widespread utilization of the products or devices.

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National Spinal Cord Injury Statistical Center (NSCISC)

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Principal Investigator: Yuying Chen, MD, PhD 205/934-3320
Public Contact: Vicki Farris 205/934-5049; Fax: 205/934-2709

Project Number: H133A060039
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 06 $625,000; FY 07 $625,000; FY 08 $625,000

Abstract: The National Spinal Cord Injury Statistical Center (NSCISC) at the University of Alabama at Birmingham has been the home of the National Spinal Cord Injury Model Systems (SCIMS) Data Center since 1983. The NSCISC continues and expands its current activities and implements innovative new tasks to accomplish the following goals: (1) maintenance of the SCIMS database, (2) high-quality data in the SCIMS database, (3) high quality data collected from database participants of all racial/ethnic backgrounds, (4) rigorous SCIMS database research conducted by all investigators, (5) enhanced continuity of the SCIMS database, and (6) improved database operations through collaboration. In particular, the project takes advantage of the latest Internet and centralized database technology to rewrite the database software from its current distributed format to a centralized web-based system, which will significantly improve the capability to manage new data module projects, increase cost-efficiency, improve quality control, and enhance data security. To promote best research practices across the SCIMS, the Center establishes an annual online comprehensive training curriculum for SCIMS data collectors, conducts evaluative site visits, publishes a guide regarding proper use of the database, and refines standards on culturally appropriate SCI research. The project includes subcontracts with formerly funded SCIMS centers to continue data collection for patients previously enrolled in their research. The Center continues to benefit from the active involvement of persons with SCI and productive partnerships with other NIDRR-funded centers in the design, implementation, and evaluation of these activities.
Innovative Knowledge Dissemination and Utilization for Disability and Professional Organizations and Stakeholders

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Project Number: H133A050006
Start Date: October 01, 2005
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 05 $498,878; FY 06 $493,698; FY 07 $499,966; FY 08 $499,947

Abstract: This project is working collaboratively with the NIDRR, professional and consumer organizations, and stakeholders to develop, test, and apply a process of research standards development, implementation, and related information dissemination strategies that allows end-users in the rehabilitation field to make informed choices based on the perceived utility of the research available, and in doing so, promote utilization of rehabilitation research. The project uses well-developed standards to determine which rehabilitation research results are of sufficient rigor to be worthy of dissemination. Thus establishing an ongoing, scientific, easily accessible, central resource to help professionals utilize what works in the disability field. The project has six specific goals: (1) Producing quality standards for rating rehabilitation research rigor and meaning. A broad range of experts and various stakeholders participate in consensus building regarding adapting existing standards for rating research rigor, and create standards for meaning (perceived relevance). In this way, information disseminated will not only be assessed as to its scientific rigor but also with respect to its relevance and applicability to various end-users, thus promoting utilization of the research. (2) Project staff, along with NIDRR staff, professional and constituent organizations, and other Knowledge Translation projects assist in developing standard topic selection criteria and in selecting topical areas for information products. (3) Producing relevant information products describing the quality and implications of rehabilitation research studies based on the developed standards. Constituent organizations participate in developing dissemination plans to translate research syntheses in the identified topical areas into information products relevant for appropriate constituencies. (4) Creating and testing a prototype interactive website, The Right to Know Clearinghouse, to implement innovative dissemination strategies for key groups. (5) Evaluating the output, perceived utility, and outcomes of the Knowledge Translation project using the NIDRR logic model. Evaluated outcomes include an increase in awareness of research among constituency groups, an increase in understanding of research rigor and meaning among those groups, and an increase in the use of research information by end-users. (6) Disseminating the project’s findings to stakeholders.
Disability and Rehabilitation Research Projects
New York

Center for International Rehabilitation Research Information and Exchange (CIRRIE-2)

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Principal Investigator: John Stone, PhD 716/829-3141, ext. 125
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Project Number: H133A050008
Start Date: November 01, 2005
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 05 $500,000; FY 06 $500,000; FY 07 $500,000; FY 08 $500,000

Abstract: The Center for International Research Information and Exchange (CIRRIE-2) offers a comprehensive approach to address the needs of researchers, practitioners, and consumers for research-based information from international sources. CIRRIE-2 objectives include: Expanding the existing Database of International Rehabilitation Research; developing an online, multi-lingual, international encyclopedia of rehabilitation in English, Spanish, and French in collaboration with the Quebec Institute for Physical Rehabilitation; sponsoring an international conference and workshops on the International Classification of Functioning, Disability, and Health (ICF); creating a Community of Practice on the ICF; and cross mapping ICF terms to the thesaurus that is used to search both CIRRIE and REHABDATA databases. CIRRIE-2 sponsors workshops on the ICF in cooperation with the American Psychological Association and the WHO North American Collaborating Center (NACC), and plans an international conference on the ICF in Year 2, in collaboration with the NACC. Additionally, CIRRIE develops new pre-service initiatives in the area of cultural competence for disability service providers, including: Developing a textbook and two new monographs on cultural competence for disability service providers; and conducting an international conference on Providing Culturally Competent Disability Services in collaboration with Toronto-based Joint Centre of Excellence on Research and Immigration and Settlement. CIRRIE-2 supports collaborative activities between the US and other countries by conducting four types of international exchange programs: (1) short-term exchanges of individuals, (2) institutional linkage exchanges, (3) a program for Minority Serving Institutions, and (4) a program for information gathering for dissemination to US audiences.
Center on Knowledge Translation for Technology Transfer

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Principal Investigator: Joseph Lane 716/829-3266
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Project Number: H133A080050
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 08 $999,998

Abstract: The objective of this project is to study and apply the theory and practice of knowledge translation (KT) to the knowledge outputs of NIDRR technology grantees. Goals of this project are improved understanding of barriers to accomplishing KT for technology transfer (TT) and carriers to overcome them; advanced knowledge of the best models, methods, and measures for accomplishing KT for TT; and increased utilization of the validated best practices for KT for TT by the NIDRR grantees. Research Project 1 synthesizes current knowledge about KT theory and practice related to accomplishing technology transfer outcomes; establishes parallel models of practices for both knowledge translation and technology transfer; and creates an operational framework for the Knowledge To Action (KTA) model, by applying the technology transfer methods and measures promulgated by the Product Development Manager’s Association (PDMA), to create counterparts in knowledge translation. Project 2 establishes parameters for defining new knowledge as an innovation, and establishes Grantee Innovation Profiles for participating RERC and SBIR grantees in wheeled mobility, sensory disability, and environmental access technology areas; and interviews representatives for the six categories of knowledge users (i.e., researchers, manufacturers, clinicians, policy makers, consumers, brokers), to establish Knowledge Value Profiles for each user category. Research Project 3 conducts a series of six intervention studies in the three technology areas. They communicate a series of randomly selected innovations to the six user categories, either through standard knowledge dissemination practices, or through knowledge translation practices applied through the operational KTA model. Development Project 1 conducts a series of at least six technology transfer demonstration projects, working in collaboration with corporate partners, while RERC and/or SBIR grantees interact as participant observers. Development Project 2 creates a knowledgebase consisting of a data base structure customized for access by each category of knowledge user based on their respective value systems, along with all DRRP training materials publicly available in accessible and usable forms. A Utilization Project encourages NIDRR grantees to use the DRRPn’s materials, and implement the operational KTA model, through coordinated dissemination, training, and technical assistance projects. This project also promotes the diffusion and utilization of innovative research-based knowledge by targeting each of the six categories of knowledge users with a parallel coordinated program of the same multiple methods.
Research Utilization Support and Help (RUSH) Project

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Principal Investigator: John Westbrook, PhD
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Project Number: H133A031402
Start Date: June 01, 2003
Length: 60 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 03 $350,000; FY 04 $350,000; FY 05 $350,000; FY 06 $350,000; FY 07 $350,000; FY 08 (No-cost extension through 5/31/2009)

Abstract: The RUSH project develops and tests models for increasing the effective use of NIDRR research results. The RUSH Project intends to assess utilization successes in terms of benefits produced for intended user audiences including: people with disabilities and their families, disability researchers, and disability service providers, among others. The goal is to expand awareness, strategies, and evaluation of knowledge utilization outcomes among NIDRR-supported researchers in order to increase access and use of research results by those who can benefit the most from them. The objectives for the RUSH Project are: (1) to assess the use of and obstacles to the dissemination/utilization of NIDRR-supported disability research by a wide range of potential target audiences; (2) to develop a variety of strategies and approaches designed to accommodate differing topics of disability research information and diverse target audiences; (3) to demonstrate a variety of new strategies and approaches to improve/achieve utilization outcomes of disability research findings; (4) to disseminate information about knowledge utilization models and their associated effectiveness by topic, target audience, and level of knowledge transfer needed in order to increase the use of NIDRR grantees’ research outcomes; (5) to provide new and current NIDRR researchers with information they can use to strengthen their dissemination and utilization approaches; and (6) to provide technical assistance to NIDRR researchers to build understanding, skills, and resources in developing, implementing, and evaluating knowledge utilization models within NIDRR project designs.
Disability and Rehabilitation Research Projects
Texas

National Center for the Dissemination of Disability Research (NCDDR)

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Principal Investigator: John Westbrook, PhD
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Project Number: H133A060028
Start Date: January 01, 2006
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 06 $750,000; FY 07 $750,000; FY 08 $750,000

Abstract: The goal of the National Center for the Dissemination of Disability Research (NCDDR) is to promote the utilization of research results developed through NIDRR grants/contracts. Major areas of work of the NCDDR include: (1) Research designed to collect information that assists in identifying the needs and most likely strategies that assist in matching dissemination practices with intended user audiences. Activities include conducting annual surveys, focus groups, surveys, and annual reporting of state-of-the-art information about NIDRR grantees’ dissemination successes. (2) Demonstration conducted to determine the effectiveness of new strategies and approaches in achieving intended dissemination and utilization outcomes. Activities include developing and using innovative web-based mechanisms, increasing common portal access to substantive English and Spanish language resources of grantees, and developing outreach strategies for under-represented audiences. (3) Dissemination and Utilization implemented not to support the simple distribution of materials and other resources but rather the use of research outcomes in meaningful ways by those that can most benefit from their use. Activities include production of print and web-based informational products, networking of grantees to maximize outreach impact, and developing networks with a variety of research stakeholder groups for information and strategy exchanges. (4) Technical Assistance provided to NIDRR grantees to build understanding, skills, and resources related to the dissemination and utilization of their disability research outcomes. Activities include providing onsite and offsite assistance in planning effective dissemination efforts, providing direct assistance to grantees with targeted dissemination efforts, and assisting in designing evaluation strategies to measure dissemination and utilization outcomes.
Disability and Rehabilitation Research Projects
Virginia

Disability and Business Technical Assistance Centers: Coordination, Outreach, and Research Center

Virginia Commonwealth University
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1112 East Clay Street; P.O. Box 980330
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Principal Investigator: Brian T. McMahon, PhD 804/827-0917
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Project Number: H133A060087
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 06 $849,957; FY 07 $849,968; FY 08 $849,991

Abstract: This coordination, outreach, and research center (CORC) expands and enhances the activities of the regional system of Disability and Business Technical Assistance Centers (DBTACs), guided by the principles of evidence-based practice and knowledge translation, with a dual emphasis on communities of practice and demand-side job placement. The CORC objectives are to: (1) improve public access to ADA information by creating a definitive ADA web site, DBTAC-IN, which includes a compendium of DBTAC materials, databases, publications, products, tools, and activities; (2) create a CORC Research Review Board to coordinate, support, and review new evidence-based products and publications, including original CORC research, and assess their effectiveness and impact on policy and practice; (3) increase the research capacity of the regional DBTACs network to both conduct and utilize quality research by modeling such behavior and by providing direct and meaningful consultation to regional DBTACs to facilitate their success; (4) coordinate dissemination of regional DBTAC and CORC publications and products in concert with appropriate NIDRR research and dissemination centers; (5) translate DBTAC evidence reports, publications, and products into practice guidelines, quality improvement products, and technical assistance tools; and (6) host five planning conferences with regional DBTACs, and three research conferences in Project Years III, IV, and V in order to demonstrate the added value of evidence-based practice in the DBTAC network. Original CORC research has an employment emphasis. CORC activities include 19 original research projects involving the National EEOC ADA Research Project, 15 training activities in collaboration with the regions, dissemination and outreach projects, research and consultation with Regional DBDTACs, technical assistance projects, and program evaluation.
Model Systems Knowledge Translation Center (MSKTC)

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Project Number: H133A060070
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 06 $598,163; FY 07 $598,833; FY 08 $599,876

Abstract: The Model Systems Knowledge Translation Center (MSKTC) facilitates the dissemination of research-to-practice and consumer education for the model systems programs in traumatic brain injury (TBI), spinal cord injury (SCI), and burn injury. The MSKTC knowledge translation and dissemination efforts focus on research conducted by the model systems programs, identified best practices, and clinician and consumer education materials developed by the model systems. The MSKTC also works collaboratively with members of the MSKTC Research Advisory Board and experts in TBI, SCI, and burn injury to conduct systematic reviews of key areas of rehabilitation research relevant to the model systems projects. The MSKTC is housed within the University of Washington’s Center for Technology and Disability Studies in the Center for Human Development and Disability and builds on previously funded NIDRR knowledge translation efforts.
Field Initiated Projects (FIPs)  
Massachusetts

**EVIDAAC: A Database of Appraised Evidence in Augmentative and Alternative Communication**

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Project Number: H133G070150  
Start Date: October 01, 2007  
Length: 36 months  
NIDRR Officer: Pimjai Sudsawad, ScD  
NIDRR Funding: FY 07 $195,525; FY 08 $199,910

Abstract: This project develops EVIDAAC, an accessible and usable database of appraised research evidence in augmentative and alternative communication (AAC) for practitioners (speech-language pathologists, occupational therapists, physical therapists, special educators, rehabilitation engineers, etc.), individuals using AAC, and their families. EVIDAAC provides access to pre-filtered evidence-based practice by critically appraising studies (randomized control trials [RCTs], non-RCTs, case series, single-subject experimental designs) and systematic reviews. This saves time and reduces the skill-burden associated with having to appraise evidence, a documented barrier to the utilization of EBP. EVIDAAC is developed in accordance with published quality criteria for health-related web sites using formative and process evaluation. Accessible web design principles are integrated into the development of the database, with regular assessment using Web Accessibility Initiative principles and guidelines. Its usability is tested with rigorous technologies, including structured usability tasks in controlled laboratory situations and the determination of utilization patterns in real-life circumstances via web-log analysis. Results gleaned feed back into improving the database.
Utilization Projects
Maryland

National Rehabilitation Information Center (NARIC)

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8201 Corporate Drive, Suite 600
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Project Number: ED-08-CO-0095
Start Date: June 30, 2008
Length: 24 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 08 $828,331

Abstract: The National Rehabilitation Information Center (NARIC) maintains a research library of more than 65,000 documents and responds to a wide range of information requests, providing facts and referral, database searches, and document delivery. Through telephone and online information referral, NARIC disseminates information gathered from NIDRR-funded projects, other federal programs, and from journals, periodicals, newsletters, films, and videotapes. NARIC maintains REHABDATA, a bibliographic database on rehabilitation and disability issues, both in-house and online. Users are served by telephone, mail, electronic communications, or in person. NARIC also prepares and publishes the annual NIDRR Program Directory, available in database format from NARIC’s web site.
Utilization Projects
Maryland

ABLEDATA

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Project Number: ED-04-CO-0018/0007
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Pimjai Sudsawad, ScD
NIDRR Funding: FY 08 $779,573

Abstract: This project maintains and expands the ABLEDATA product information database, develops information and referral services that are responsive to the special technology product needs of consumers and professionals, and provides the data to major dissemination points to ensure wide distribution and availability of the information to all who need it. The ABLEDATA database contains information on more than 34,000 commercially produced and custom-made assistive devices. Requests for information are answered via telephone, mail, electronic communications, or in person.
ADA Technical Assistance Programs

The Americans with Disabilities Act (ADA) opens more opportunities for persons with disabilities. It also places certain responsibilities on employers, transit and communication systems, state and local governments, and public accommodations. To assist covered parties to understand and comply with the ADA, NIDRR has funded a network of grantees to provide information, training, and technical assistance to businesses and agencies with duties and responsibilities under the ADA.

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ADA Technical Assistance Projects ................................................................................................................... 1
ADA Technical Assistance Projects
Region I - CT, ME, MA, NH, RI, and VT

New England Disability and Business Technical Assistance Center - Region I

A daptive Environments Center, Inc.
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adaptiveenvironments.org/neada/site/home

Principal Investigator: Oce Harrison, EdD, Project Director 617/695-1225, ext. 227
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Fax: 617/482-8099

Project Number: H133A060092
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 06 $1,026,116; FY 07 $1,033,136; FY 08 $1,053,190

Abstract: The New England DBTAC provides technical assistance, training, and information dissemination for Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. This DBTAC continues these core services that are the bedrock of voluntary ADA compliance but also restructures the program to be more responsive and rigorous with an expectation of improving employment outcomes for people with disabilities. A set of partnerships and collaborations, led by the Center for Labor Market Studies at Northeastern University, conducts evidence-based research with collaborating organizations to implement comprehensive intervention and descriptive research strategies. The target populations for this DBTAC are students with disabilities and their diverse support services at institutions of higher education, and employers in demand-driven, high growth industries in New England. Goals for this DBTAC are to: improve understanding of rights and responsibilities under the ADA; identify innovative approaches and tested solutions that increase employment; produce and disseminate a “Guide to New England Jobs” for individuals with disabilities; publish results of findings in refereed journals; and utilize networks of new collaborators to disseminate information, materials, and research findings.
ADA Technical Assistance Projects
Region II - NJ, NY, PR, and VI

Disability and Business Technical Assistance Center - Northeast

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Project Number: H133A060088
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 06 $1,105,000; FY 07 $1,105,000; FY 08 $1,105,000
Abstract: The Disability and Business Technical Assistance Center - Northeast (DBTAC-Northeast) serves Region II to ensure the full implementation of the Americans with Disabilities Act of 1990 (ADA) through its core activities: technical assistance, training, information dissemination, and research. The DBTAC-Northeast target audiences include individuals with disabilities and their caregivers, employers, businesses, state and local government entities, and educational institutions in Federal Region II (New York, New Jersey, Puerto Rico, and the US Virgin Islands). Information dissemination activities include a comprehensive website, a newsletter, technical bulletins, and materials dissemination through networks and regional partners. Technical assistance activities focus on responding to requests for information received via an 800 phone line, submitted via the website, and received through email. Training activities are comprehensive in both approach and delivery, designed to meet the needs of educational organizations, employers, advocacy organizations, businesses, Title II organizations, individuals with disabilities, caregivers, and disability service organizations. Topics include advanced ADA issues related to employment, physical and programmatic access, state and federal laws and codes and relevant ADA court decisions, and accessible technology. Training is offered through a variety of open-enrollment programs at the state and local levels as well as provided on-site. Lastly, the DBTAC-Northeast team conducts targeted, rigorous research and evaluation activities designed to inform and develop innovative and effective approaches addressing critical disability questions to help ensure that services and interventions delivered by the DBTAC-Northeast are effective and relevant to the needs of the individuals and communities it serves.
DBTAC: Mid-Atlantic ADA Center

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Project Number: H133A060085
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 06 $1,098,929; FY 07 $1,098,929; FY 08 $1,098,929

Abstract: The DBTAC: Mid-Atlantic ADA Center provides technical assistance, training, and information dissemination for Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. The major goals of this DBTAC are to: improve the understanding by individuals and entities of their rights and responsibilities under the ADA; build the capacity of local and state entities to provide technical assistance and training on the ADA and related topics; improve employment outcomes of people with disabilities; and increase access by people with disabilities to lodging and other services from, as well as employment opportunities within, the high growth hospitality industry. There are four major areas of activity: (1) training, technical assistance, and dissemination to general ADA constituencies on all titles of the Act; (2) training and technical assistance to individual statewide coalitions to increase the capacity of other organizations to provide locally focused technical assistance on all titles of the ADA; (3) identification of problematic areas where research and informational campaigns might aid in the avoidance of or solutions to problems associated with the ADA, especially in the high growth hospitality industry; and (4) research on organizational and individual factors that affect decisions to provide reasonable accommodations and the resulting employment outcomes.
DBTAC: Southeast ADA Center — Region IV

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Project Number: H133A060094
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $1,105,000; FY 07 $1,105,000; FY 08 $1,105,000; FY 09 $1,105,000

Abstract: The DBTAC: Southeast ADA Center (Southeast DBTAC) provides technical assistance, training, and information dissemination for Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Southeast DBTAC meets ADA-related information, training, and technical assistance needs of multiple public and private stakeholders through the provision of five core services: (1) information dissemination, (2) education and training, (3) technical assistance, (4) information referral, and (5) public awareness events. The Southeast DBTAC’s research plan extends the state of knowledge about employer corporate culture and business practices, and ADA impact on civic action to reduce and eliminate barriers to full civic, social, and economic participation for Americans with disabilities. The Southeast DBTAC is lead by a consortium that includes four nonprofit institutions recognized for their knowledge of civil rights protections and impact across covered environments, access, and use of assistive technology (AT), employment and independent living, and consumer self-direction and advocacy. The organizations with a history of collaborative activity are Burton Blatt Institute of Syracuse University (BBI), Center for Assistive Technology and Environmental Access (CATEA) at Georgia Institute of Technology (GA Tech), Living Independence for Everyone (LIFE) of Jackson, Mississippi, and Partnerships in Assistive Technology (PAT) of North Carolina. To continue responsiveness to employers, large and small within the region, the Southeast DBTAC established a Business Leadership Council (BLC) with ten stakeholders with a record of hiring and advancing workers with disabilities. The BLC provides advice and important linkages to the business community throughout the southeast to exchange research findings and knowledge that improves opportunities for employment for persons with disabilities. Half of core staff are persons with disabilities and/or represent historically underrepresented groups because of race, gender, national origin, and age. People with disabilities continue to direct core components of the Center’s activities related to training and technical assistance and information dissemination. The Southeast DBTAC has an extensive collaborative network of over 99 local affiliates in all eight states in the region that builds on the strengths and experiences of a diverse cross-section of individuals with and without disabilities representing disability, business, and governmental entities.
ADA Technical Assistance Projects
Region V - IL, IN, MI, MN, OH, and WI

DBTAC: Great Lakes ADA Center

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Principal Investigator: Robin A. Jones, Project Director 312/996-1059
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Project Number: H133A060097
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $1,105,000; FY 07 $1,105,000; FY 08 $1,105,000

Abstract: The Great Lakes Disability and Business Technical Assistance Center (DBTAC) promotes awareness of the ADA to targeted audiences through provision of technical assistance, training, and material dissemination regarding the ADA. In addition, the Center engages in rigorous, research-related activities that contribute to a research agenda focused on but not limited to (1) the employment of people with disabilities, and (2) the impact that individual knowledge and experience with the utilization of technology in postsecondary education has on the employment outcomes of individuals with disabilities as they transition from postsecondary education to employment. The Great Lakes DBTAC provides timely, responsive, and proactive services utilizing a comprehensive service delivery model. The technical assistance, training, and information needs of the individual, employers, specifically those in high growth industries, business, government, educational entities, and disabled veterans employment programs are a part of on-going needs assessment, and programs and activities are tailored accordingly. The Center tracks emerging issues which are of interest to its target audiences and develops strategies to address their informational and technical assistance needs. Strategies include: (1) operation of a toll-free number for responding to questions or providing referral; (2) enhancement of the Center’s existing network of individuals and organizations who can provide on-site consultation, technical assistance, and training as needed; (3) training events and activities at the local, state, and regional level focused on raising awareness of the ADA and disseminating the findings which result from the Center and its collaborators’ research-related activities; (4) identification and dissemination of best practices related to the recruitment, hiring, and retention of qualified individuals with disabilities by employers and employment training programs; and (5) utilization of technology to promote the exchange of information including a web site, listservs, e-newsletters, multifaceted distance learning strategies and techniques, self-paced learning, and web-based assessment tools. Collaborators include but are not limited to the network of DBTACs, relevant NIDRR-funded projects, State Technology Act grantees, and Department of Labor grantees (WIA, Small Business Development Centers, JAN, etc.), as well as employer and business organizations such as the Business Leadership Network,
Society of Human Resource Management, State Chambers of Commerce, and National Federation of Independent Business chapters. In addition to these groups, the Center continues to act as a catalyst for activities that take place at the local and state level through collaboration between the business, government, and disability communities to promote awareness and voluntary compliance with the ADA. At the regional level, the Center relies heavily on the guidance of State Steering Committees and incorporates new structures to inform and direct the Center’s activities including the newly established Regional Business Advisory Committee.
ADA Technical Assistance Projects
Region VI - AR, LA, NM, OK, and TX

Southwest Disability and Business Technical Assistance Center
(Southwest DBTAC - Region VI)

The Institute for Rehabilitation and Research (TIRR)
Independent Living Research Utilization (ILRU)
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Principal Investigator: Wendy Wilkinson, Project Director
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Project Number: H133A060091
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 06 $1,104,007; FY 07 $1,104,738; FY 08 $1,104,885

Abstract: The Southwest DBTAC provides a comprehensive array of training, technical assistance, and dissemination services on the ADA and other disability-related laws in the five states of Federal Region VI. The goals of these activities are to improve the employment outcomes of individuals with disabilities and maximize their full inclusion into society. Through a collaborative structure of partners, the Southwest DBTAC provides an array of services including: (1) research activities that identify impediments to compliance with the ADA and individuals’ access to technology, postsecondary education, and the workforce, as well as tested solutions and innovative approaches to eliminate these impediments; (2) training activities that offer comprehensive, accurate, and timely information on the ADA’s requirements, developments in case law, policy, and implementation to promote compliance with the ADA; (3) dissemination activities that increase knowledge about the ADA and DBTAC services through an effective, coordinated resource network for Region VI; and (4) technical assistance activities that respond to the needs of individuals and entities on the ADA and foster the development of new and promising practices that can be shared with others. SEDBTAC’s network includes such organizations as the New Mexico Technology Assistance Project, the Southwest Education Development Laboratory, Arkansas Technology and Curriculum Access Center, Bureaus of Apprenticeship Training or State Apprenticeship Councils in each state, Valley Association of Independent Living, North Harris College, and other organizations and businesses that have demonstrated success in improving the lives of individuals with disabilities.
ADA Technical Assistance Projects
Region VII - IA, KS, MO, and NE

DBTAC - Great Plains ADA Center — Region VII

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Project Number: H133A060089
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $458,330; FY 07 $1,100,000; FY 08 $1,100,000

Abstract: The Great Plains DBTAC provides technical assistance, training, and information dissemination for Iowa, Kansas, Missouri, and Nebraska. The Center provides the core services of material dissemination, technical assistance and training, and awareness to its target populations of people with disabilities, disability organizations, policy makers, public rehabilitation providers, employers, businesses, state and local governments, educators, design professionals, legal professionals, and the media. In addition, the Center includes a research model that can measure changes in employment, commerce, and community in terms of accessibility, receptivity, and active participation. Research conducted by the Washington University School of Medicine focuses on community participation and employment. The University of Kansas continually reviews emerging literature and research findings to improve core services and research activities. Paraquad, a Center for Independent Living, facilitates input from consumers at all stages of service provision and research, and represents the perspective of the intended beneficiaries of the project, people with disabilities. Additional quality assurance of the research and core services is provided by an Advisory Committee representing all parts of the region and professional disciplines involved in this project. Great Plains DBTAC is the lead sponsor of the ADA Symposium, THE Annual National ADA Training in St. Louis (www.adasymposium.org).
ADA Technical Assistance Projects
Region VIII - CO, MT, ND, SD, UT, and WY

DBTAC Rocky Mountain ADA Center — Region VIII

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Principal Investigator: Jana Copeland, PhD, Project Director 719/444-0268
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Project Number: H133A060079
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $1,105,000; FY 07 $1,105,000; FY 08 $1,105,000

Abstract: This mission of the DBTAC Rocky Mountain ADA Center is to provide individuals and organizations in Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming with information on the Americans with Disabilities Act (ADA). MTC has developed a program of technical assistance based on the concept of mass customization to address the specific needs of target groups across the region. Training activities take advantage of technology and new theories of training to ensure maximum impact. Dissemination provides tailored materials that provide actionable information for the specific needs of target groups. The capacity of this DBTAC is expanded through an ADA Leadership Network of 30-35 experts from across the region. To inform the technical assistance delivered by the DBTAC and to produce evidence-based reports on ADA implementation, MTC has allocated 15 percent of the DBTAC project budget to a coherent, sustained research agenda. Research is conducted by a team of research organizations from across the region, including Dr. Martin Blair at the Utah State University Center for People with Disabilities, Dr. Kathy Laurin at the University of Montana Rural Institute, and Patricia Yeager, a doctoral candidate at the University of Northern Colorado. The team is engaged in an initial program of research that has been coordinated through the DBTAC CORC. The focus of the project’s ADA research agenda is improving employment outcomes for people with disabilities. The results of the DBTAC research program are used to inform technical assistance efforts by assessing the efficacy of the DBTAC’s core functions and translating new research results into the technical assistance process. The DBTAC program includes an extensive plan of evaluation based on reviewing operational activities monthly and performance metrics quarterly and annually. The output and outcome evaluation is based on the DBTAC logic model developed by MTC over the past several years.
Disability and Business Technical Assistance Center (DBTAC) — Pacific ADA Center

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Principal Investigator: Erica C. Jones, Project Director 510/285-5600 (V/TTY)
Public Contact: 800/949-4232 (V/TTY, in AZ, CA, HI, NV, and the Pacific Basin); 510/285-5600 (V/TTY); Fax: 510/285-5614

Project Number: H133A060098
Start Date: October 01, 2006
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 06 $1,105,000; FY 07 $1,105,000; FY 08 $1,105,000

Abstract: The Pacific DBTAC provides technical assistance, training, and information dissemination for Arizona, California, Hawaii, Nevada, and the Pacific Basin. The program places a special emphasis on increasing employment, reasonable accommodation, and retention of persons with disabilities - particularly through outreach to high growth industries - and on enhancing participatory/community living opportunities for persons with disabilities. In addition to enhancements in established training, dissemination, and technical assistance services, the program includes a research program designed to enhance compliance with ADA rules and regulations, expand employment and community living for persons with disabilities, and make significant contributions to the literature in the field. The research program includes two randomized, controlled trials operated by the Center in collaboration with the DBTAC Coordination, Outreach, and Research Center; a collaborative research initiative led by Cornell University that includes a partnership with three additional DBTACs and the Society for Human Resource Management (SHRM); and two five-year special initiatives operated in conjunction with the Center’s training and technical assistance programs - one to test the effectiveness of selected online disability-related training modules and the other to develop innovative outreach and training approaches directed toward the hospitality industry.
Disability and Business Technical Assistance Center (DBTAC) — Northwest

University of Washington
The Center for Continuing Education in Rehabilitation
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Principal Investigator: Kathe Matrone, PhD 425/771-7436
Public Contact: 800/949-4232 (V/TTY, AK, ID, OR, and WA); 425/248-2480 (V); Fax: 425/774-9303

Project Number: H133A070048
Start Date: August 01, 2008
Length: 48 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 07 $467,600; FY 08 $1,105,000
Abstract: The Northwest DBTAC provides information, training, and technical assistance on the ADA to educational organizations, employers, advocacy organizations, state and local governments, disability service organizations, parents, and individuals with disabilities in Alaska, Idaho, Oregon, and Washington. Core services include: technical assistance provided by phone, Internet, email, and in person; information dissemination in electronic and print formats, including a comprehensive website, quarterly newsletter, etc.; education and training on various aspects of the ADA using a variety of modalities, including teleconferences, web-based multimedia events, and face-to-face; and targeted research on interventions and strategies of problematic areas identified through outreach activities, such as barriers to employment and enhancing employment outcomes.
Capacity Building for Rehabilitation Research and Training

In the arena of capacity building, NIDRR has focused its efforts on the personal and professional development of scientists, advocates, and people with disabilities, and is expanding this approach to include development of the capacity of institutions and organizations, especially those that address the needs of underserved populations. At the individual level, NIDRR focuses on capacity building to ensure a source of researchers to carry out the research agenda. In addition, NIDRR capacity building at this level enhances the ability of researchers to generate useful new knowledge. NIDRR historically has sought to increase the number of individuals from underrepresented groups in this effort, particularly those with disabilities. At the organizational or systems level, NIDRR capacity building supports the framework for carrying out individual level research work. At the systems level, all NIDRR programs may be said to involve capacity building, in that NIDRR funding is intended to increase the capacity of the field to conduct high quality research directed at its long-term goals and objectives.

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Research and Training Centers (RRTCs)  
Illinois  

University of Illinois at Chicago National Research and Training Center on Psychiatric Disability  

University of Illinois at Chicago  
Center on Mental Health Services Research and Policy  
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jonikas@psych.uic.edu  
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Principal Investigator: Judith A. Cook, PhD 312/355-3921  
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Project Number: H133B050003  
Start Date: October 01, 2005  
Length: 60 months  
NIDRR Officer: David W. Keer  

NIDRR Funding: FY 05 $500,000; FY 06 $500,000; FY 07 $500,000; FY 08 $1,300,000  
Other Funding: FY 05 $800,000 Centers for Mental Health Services (CMHS); FY 06 $800,000  
CMHS; FY 07 $800,000 CMHS; FY 08 $800,000 CMHS  

Abstract: The University of Illinois at Chicago National Research and Training Center on Psychiatric Disability (UIC-NRTC) promotes access to effective consumer-centered and community-based practices for adults with serious mental illness. The Center is conducting five rigorous research projects to enhance the state of evidence-based practice (EBP) in this field: A randomized controlled trial (RCT) study of Wellness Recovery Action Planning (WRAP) to gather evidence regarding its effectiveness; an RCT to evaluate the effectiveness of BRIDGES, a 10-week peer-led education course designed to provide mental health consumers with basic education about the etiology and treatment of mental illness, self-help skills, and recovery principles; an RCT of peer support services delivered by Georgia’s Certified Peer Specialists at consumer-run Peer Support Centers in order to determine the outcomes of service recipients; a self-directed care program in which adults with serious mental illnesses are given control of financial resources to self-direct their own recovery; and a project using data from 12 clinical trials studies of consumer-operated service programs to create a national data repository to promote research and develop scholarship in this area. The Center also conducts state of the art training, dissemination, and technical assistance projects designed to enhance the leadership skills of people with psychiatric disabilities, and evaluate a self-advocacy skills training program delivered to clients of a large psychosocial rehabilitation agency. Additional projects evaluate self-advocacy skills training programs and implement training programs to prepare consumer leaders in the State of California to take part in systems change in their local communities. UIC-NRTC is embarking on an academic curriculum transformation project starting at UIC in the medical, social, and behavioral sciences to incorporate principles of recovery and EBP for people with psychiatric disabilities. The UIC-NRTC is designing and administering a no-cost online certification program, providing comprehensive introduction of knowledge required by peer providers. Additionally, the UIC-NRTC is provid-
ing training and developing projects and tools to assist individuals in recovery to gain the skills necessary for community integration by enhancing the research capacity of three federally-funded consumer-run Technical Assistance Centers. Finally, the UIC-NRTC is offering an annual series of online workshops; web-based continuing education courses; and a state of science national conference (2008) focusing on EBP, research implementation, consumer-centered systems, workforce development, and other emerging trends.
Building Research Capacity Through Collaboration among American Indian Tribes in Connecticut and Rhode Island

Mashantucket Pequot Tribal Nation
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Principal Investigator: Felicia Wilkins-Turner, PhD
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Project Number: H133A 031706
Start Date: November 01, 2003
Length: 60 months
NIDRR Officer: Delores Watkins
NIDRR Funding: FY 03 $294,057; FY 04 $336,824; FY 05 $349,984; FY 06 $329,797; FY 07 $347,274; FY 08 (No-cost extension through 12/31/2008)

Abstract: This project builds capacity among four American Indian tribes to improve the quality of health and disability service information available for tribes in Connecticut and Rhode Island. Four objectives achieve this goal: (1) to investigate access to, and acceptance rates for VR services, types of services provided, and VR costs for American Indians with disabilities; (2) to ensure the optimal collaboration of Connecticut and Rhode Island Indian tribes and others in disability and rehabilitation research, (3) to maximize potential for recruitment of American Indian researchers; and (4) to investigate and evaluate the participation of American Indians in disability and rehabilitation research activities and direct service delivery, and determine to what extent participation leads to improved VR outcomes. All staff was trained in the Participatory Action Research model, and culturally appropriate research methodology utilizing the expertise of the American Indian Rehabilitation Research and Training Center at Northern Arizona University. An experienced senior rehabilitation researcher is used as mentor to the Research Coordinator, through development of two surveys for data collection. Two graduate students analyze the data and serve as mentors for the Research Technicians (tribal members) who are hired to collect the data within their own communities. Data results are shared with each of the four participating tribes (Mashantucket Pequot, Eastern Pequot, Schaghticoke, and Narragansett) and with the Connecticut Bureau of Rehabilitation Services through the Advisory Council of the Mashantucket Pequot Vocational Rehabilitation Program.
Center for Strategic Capacity Building on Minorities with Disabilities Research

University of Illinois at Chicago
Department of Disability and Human Development (M/C 626)
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www.disabilityempowerment.org/

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Project Number: H133A040007
Start Date: October 01, 2004
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 04 $600,000; FY 05 $600,000; FY 06 $600,000; FY 07 $600,000; FY 08 $600,000

Abstract: The Center for Capacity Building on Minorities with Disabilities Research (CBMDR) increases the capacity of community-based organizations (CBOs like Centers for Independent Living and other agencies) and State Vocational Rehabilitation (VR) Agencies to document the impact of their programs and develop culturally competent services. The CBMDR utilizes participatory research methodologies to promote organizational change. The Center’s mission is to promote positive rehabilitation outcomes for minority individuals with disabilities at the national level. Center staff conducts participatory research and demonstration projects in collaboration with interested agencies, engages in active dissemination efforts, and provides state-of-the-art training and technical assistance on cultural competence to professionals and researchers in the field. Presently, there is a limited understanding of the relationship between minority and disability status and how it affects an individual’s access to quality rehabilitation, technical training, or independent living services that will result in competitive employment and increased independence. In addition, CBOs are under increased pressure from funders to use research methods to improve the quality of the services they provide. The Center utilizes a participatory program evaluation model which actively involves consumers and agency staff in the process of identifying service needs, selecting program goals, developing a logic model for success, and implementing and evaluating change efforts to address critical needs and improve services. From this perspective, participating agencies develop their capacity for effectively using consumer input and program data to identify research questions and methods to improve services. In addition, research projects examine various aspects of theory, methodology, measurement, and dissemination of information involving the study of underrepresented minorities with disabilities. Specifically, the project studies issues related to racial identity and cultural mistrust in service provision to minority populations; reviews the cultural and linguistic appropriateness of commonly used evaluation instruments in VR certification; develops standards for culturally competent and linguistically appropriate research and services; and identifies preferred strategies for the dissemination of research findings and other relevant
information to researchers and service providers. Center staff is also invested in promoting cultural competence among researchers and practitioners from around the country. The research initiatives include both quantitative and qualitative methodologies. Partnerships with universities, state VR agencies, and CBOs maximize the outreach efforts and long-lasting effect of the center. The Center develops specific techniques for ensuring that the information is disseminated in accessible formats to all stakeholders.
Disability and Rehabilitation Research Projects
New Hampshire


Dartmouth College
Dartmouth Psychiatric Research Center
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Principal Investigator: Rob Whitley, PhD; William Lawson, MD, PhD
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Project Number: H133A080063
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 08 $354,345

Abstract: The goal of the three projects conducted by this center is to understand the broad service experience of African-Americans in psychiatric rehabilitation. The first project assesses the influence on rehabilitation of living in independent housing units in small, relationship-centered buildings that accommodate other people in recovery from mental illness. Seven of these small communities, each with approximately 120 apartments, are the focus of this project. These are located in and around Washington DC, and are studied longitudinally for three years using focus groups, interviews, and ethnography to assess influence of living in such a building on recovery and community integration.

The second project examines the process of rehabilitation for African-Americans with a co-occurring severe mental illness and substance use disorder. Participants are those whose primary substance use is illegal drugs, and who are receiving either (i) dual diagnosis case management; (ii) case management plus group therapy; or (iii) case management plus contingency management. Participants are followed quantitatively and qualitatively over 18 months to assess how African Americans respond to these treatments, as well as their subjective perception of treatment delivery and impact. The final project is a study of the service experience of African-Americans in supported employment. Participants in six different supported employment programs are assessed quantitatively, for drop-outs, engagement, and missed appointments, and qualitatively through interviews and participant observation to understand the dynamics of the patient-provider interaction. The aim of this research is to assess the cultural competence of such programs, with an eye to building improved models tailored to African-Americans. This research involves a collaboration between Dartmouth Psychiatric Research Center and Howard University College of Medicine, Department of Psychiatry.
Toward Equity: Innovative, Collaborative Research on Interpreter Training, DBT, and Psychological Testing

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Principal Investigator: Robert Pollard, PhD
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Project Number: H133A031105
Start Date: July 01, 2003
Length: 60 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 03 $299,900; FY 04 $299,848; FY 05 $299,985; FY 06 $299,727; FY 07 $299,935; FY 08 (No-cost extension through 12/1/2008)

Abstract: The research activities of this project focus on three thematic categories: mental health interpreting, dialectical behavior therapy, and psychological testing. The interpreter training project builds upon the Deaf Wellness Center’s (DWC) prior innovations in interpreter training and applies them to four geographically dispersed urban settings. A team of experts in the mental health interpreting field employs the DWC’s demand-control schema approach and implements a five-month program of training and supervision with a local interpreter pool. Dialectical behavior therapy (DBT) is a highly structured treatment approach focusing on emotional regulation and behavioral self-control. The three-part DBT project adapts DBT materials and methods to maximize treatment access and efficacy with three deaf consumer populations: those with language skills, those with limited language, and those with comorbid psychiatric and substance abuse problems. The Signed Paired Associates Test and the ASL Stories Test are tests of verbal learning and memory for sign language users. The extensive data that exists at the DWC regarding the tests’ psychometric properties and clinical utility implications are analyzed. This research has implications for the assessment of dementias, developmental disabilities, learning disabilities, etc. A second testing project is the development of a psychosis symptom rating scale. The goal is to produce a tool that clinicians can employ to reliably and validly identify the nature and severity of psychotic symptomatology in deaf individuals. Finally, the project includes a psychological testing casebook, written based on reviews of hundreds of DWC psychological testing case files. Most of the studies are multi-site, collaborative ventures.
Center on Health Outcomes Research and Capacity Building for Underserved Populations with SCI and TBI

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Project Number: H133A080064
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 08 $353,133

Abstract: This project builds the capacity of institutions that address the needs of underserved populations by: (a) conducting two innovative studies to generate new knowledge on the health of three underserved racial-ethnic groups with traumatic neurologic injuries; (b) providing capacity building through collaboration with South Carolina State University, a historic Black university, specialized instruction of undergraduate and graduate students, and widespread training to institutions and organizations that represent underserved populations; and (c) providing technical assistance to a wide array of target audiences to enhance the capacity to meet the needs of underserved populations. In Study 1, researchers interview 500 African-Americans from population-based surveillance systems with SCI or TBI and compare their health behaviors, access to services, and the prevalence of chronic diseases with African-Americans in the general population (based on CDC surveillance). Researchers then identify the extent to which disparities observed in the general population are magnified after injury. Study 2 involves interviews with 836 participants with SCI, 575 of whom come from underserved populations (African-Americans, Hispanics, and American Indians) in order to identify psychological, environmental, and behavioral predictors of secondary health conditions. Mediation models are tested to identify the risk and protective factors most strongly associated with disparities in health outcomes (e.g., pain, depression, pressure ulcers) and the extent to which disparities disappear when accounting for these factors. Researchers also determine whether the predictive model is invariant across race-ethnicity (i.e., whether the significant predictors are the same across different racial-ethnic groups) and, if not, which predictors are most important for each. Capacity building efforts include workshops, mentorship of undergraduate and graduate students, and technical assistance.
Minority Scholar/Champion Research Training Project

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Project Number: H133A 031704
Start Date: December 01, 2003
Length: 60 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 03 $350,000; FY 04 $349,655; FY 05 $349,889; FY 06 $348,986; FY 07 $349,222; FY 08 (No-cost extension through 11/30/2009)

Abstract: The Minority Scholars/Champions Research Training Project develops, implements, and evaluates the effectiveness of a train-the-trainer “Scholar/Champion” model to facilitate increased and improved vocational rehabilitation (VR)/disability research among the targeted Historically Black Colleges and Universities (HBCUs). More specifically, the project develops an innovative research infrastructure of institutional “cores” that partner an HBCU, Texas Southern University (TSU), with a majority research institution, Baylor College of Medicine (BCM). Together, these partner institutions create a collaborative research infrastructure that increases research capacity and helps build an institutional research infrastructure at five additional HBCUs in Texas. These “cores” are: (1) the Administrative, Planning, and Evaluation Core directs the Center, selects Center participants, and supervises evaluation of all project activities, budgets, and reports; (2) the Training Core uses innovative methods of onsite and off-site training to recruit, support, and mentor minority investigators in the areas of research design, development, and implementation, including analysis of racial and cultural factors related to VR/disability research; (3) the Community Collaboration and Dissemination Core partners with communities and VR/disability agencies to engage individuals with disabilities in research and training, using a model of participatory action-oriented research, and disseminates culturally-sensitive information related to VR/disability research to community groups, agencies, and VR/disability researchers; and (4) the Research Core works with the HBCU Scholar/Champions to conduct innovative and rigorous pilot research projects as well as write fully developed research proposals that address racial disparities in VR/disability research.
Empowerment: Building Research Infrastructure Capacity

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Project Number: H133A080060
Start Date: October 01, 2008
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 08 $356,550

Abstract: This project identifies and evaluates current practice and methods in the conduct of minority disability research, offers research findings, and improves the capacity of minority institutions and persons with disabilities to effectively conduct and disseminate such research thereby advancing the state of the art and capacity in this research area. The project conducts three primary studies: (1) a national survey that examines the experiences of Americans with disabilities from underrepresented racial and ethnic minority groups to illuminate the current capacity of the public rehabilitation and disability system, and what research methods, dissemination practices, and strategies are needed to advance culturally competent research in the field; (2) a longitudinal study of post-injury unemployment for minority persons with traumatic brain and spinal cord injuries; and (3) prevalence and trends in employment discrimination due to disability for different ethnic groups. In addition to these three studies, the project has seven objectives: (1) establish meaningful collaborations and partnerships with historically black universities; (2) convene a major Think Tank Summit in Year 1 that becomes an ongoing Minority Disability Research Consortium; (3) create and implement an ongoing interactive web portal; (4) mentor interested minority students and faculty members; (5) infuse minority disability research best practices into research courses; (6) teach grant writing and publishing skills; and (7) conduct a State-of-the-Science Conference. The proceedings from such a conference and the results from the three studies lead to a major project outcome of a Handbook on Minority Disability Research. Other project outcomes include but are not limited to published papers from the three studies; a national network of individuals with disabilities and minorities from which the efficacy of research and dissemination practices can be evaluated in an ongoing manner; a web database of exemplary research studies, and trained minority students and university faculty who can implement minority disability research best practices identified by this effort and produce more research, including funded research via NIDRR grants, in the future.
Multi-Joint/DOFs Diagnosis and Treatment of Upper Limb in Patients Post Stroke Using an Exoskeleton Robot

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Project Number: H133F080021
Start Date: September 01, 2008
Length: 12 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $75,000

Abstract: This project evaluates the effectiveness of upper limb stroke rehabilitation using an exoskeleton robot to provide accurate and quantitative multi-joint/degree of freedom (DOF) diagnosis on pathological changes and treatment. The exoskeleton robot enables effective stroke rehabilitation using unique diagnostic capabilities for individual patients to: (1) determine which joints and which DOFs have significant changes in their neuro-mechanical properties, which joints lose independent control, what the abnormal couplings are, and whether the problem is due to changes in passive muscle properties or active control capabilities; (2) based on the diagnosis, forcefully stretch the hypertonic/deformed joints of the post-stroke patient under multi-joint intelligent control, thereby loosening problematic or stiff joints and reducing abnormal couplings between joints/DOFs; and (3) encouraging patients to practice voluntary functional movement to regain/improve their motor control capability.
Fellowships (Distinguished)
Maryland

Demographic Soup: Disentangling the Conceptual, Political, and Methodological Dimensions of Disability Statistics

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Project Number: H133F060011
Start Date: December 01, 2006
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 06 $75,000; FY 07 (No-cost extension through 11/30/2008); FY 08 (No-cost extension through 11/30/2009)

Abstract: There are variances in disability research including how information is obtained and converted into useable data. This project brings together, in one document, the accumulation of knowledge on measuring disability in survey and census contexts. Through the incorporation of several methodologies including historical review, analysis of political processes and decision-making, and complete examination of the source, placement, and evaluation of disability measures currently in use, the book manuscript contributes to the improvement of disability statistics, serving as a reference document to understanding the data that exists. The book manuscript is divided into five sections: (1) examination of the political and historical context, which includes chapters on the history of disability measurement; (2) examination of the conceptualization and definition of disability, including chapters on the political definitions for programmatic purposes and theoretical definitions; (3) examination of the science, purpose, and relationship between the components of measurement, and the specific problems with measurement in relation to special populations (i.e. children); (4) reviews of sample analysis and the use of data including sources of data, research questions, and special focus on measures used in special areas of research (i.e. aging and employment); and (5) exploration of international measurement of disability and the role of the US in its development. Conclusions include recommendations for improving and standardizing the measurement and data collection process.
A Mixed Methods Study of Parenting, Children, and Recovery in Mothers with Severe Psychiatric Disabilities

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Project Number: H133F080009
Start Date: July 01, 2008
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $75,000

Abstract: This project explores the relationship between parenting, children, and recovery for mothers with severe psychiatric disabilities. Target populations include: (1) parents with severe psychiatric disabilities, (2) their family members, (3) providers, and (4) policy makers. A triangulation, mixed methods design employs qualitative and quantitative data obtained from 70 mothers with at least 1 minor child in the home at study enrollment, 6-, and 12-month follow-ups. Qualitative data is obtained concurrently, from approximately 36 of their children between the ages of 8 and 17 at the 3 data collection points. The qualitative data from mothers and children is then cross-tabulated by and integrated with quantitative data from mothers, exploring the person-centered elements of recovery through: (1) the mothers’ parenting experiences; (2) elaborating on the relationship between children’s well-being and contribution to family life; and (3) their mothers’ recovery over the 12-month period. The project develops a model of the relationships between parenting, children, and recovery in adults with psychiatric disabilities; and presents the opportunities and targets for interventions and developments in mental health and child welfare policy and practice.
Virtual Reality-Based Assessment Tool for Spatial Neglect Following Stroke

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Project Number: H133F080010
Start Date: July 01, 2008
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $65,000

Abstract: This project investigates the possibilities of robotics and virtual reality technology in spatial neglect following stroke. A haptic/graphic virtual reality system (VRROOM) is developed and used in assessing and quantifying perceptual performance and overall movement quality. The data provides therapists and physicians with a more precise quantitative description of a patient’s sensory and motor deficits in different spatial dimensions and provides a rational basis for improving current neuropsychological assessment measures.
Development of a Neural-Machine Interface for Lower-Limb Prosthesis Control

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Project Number: H133F080006
Start Date: September 01, 2008
Length: 12 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 08 $65,000

Abstract: The project improves the functioning of artificial legs by introducing voluntary prosthesis control at the neurological level through neural-machine interfaces (NMI) such as electromyography pattern recognition and targeted muscle reinnervation with arm and leg prosthetics. The NMI designs improve the function of arm prostheses and provide possibilities for improvement with leg prostheses based on an information-fusion and phase dependent pattern recognition model. This model provides reliable and timely recognition of intended user movements for voluntary prosthetic leg control, and permits people with lower-limb amputations to perform various activities easily and efficiently.
Fellowships (Merit)
Massachusetts

A Survey of Postsecondary Disability Services Use by Students with Psychiatric Disabilities

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Project Number: H133F080030
Start Date: August 01, 2008
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $65,000

Abstract: This project investigates the services provided by postsecondary campus-based offices of disability support services (DSS) across the United States to students with serious psychiatric disabilities. There are three project objectives: (1) document use of services provided by postsecondary campus-based DSS offices to students with serious psychiatric disabilities across the ten RSA federal regions; (2) explore faculty perspectives on the needs and impact of DSS students with serious psychiatric disabilities; and (3) disseminate study findings to the fields of mental health, postsecondary education, and rehabilitation counseling, using print, web-based, and presentation formats. A web-based survey is used to gathered information about the types of DSS offered, provider experience and credentials, the number of students with psychiatric disabilities served, frequency of service use, and student service and enrollment outcomes. Telephone interviews are conducted with select faculty drawn from the participating postsecondary education institutions.
Psychometric Evaluation of the Family Quality of Life Survey for Minority Families

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Project Number: H133F080024
Start Date: September 01, 2008
Length: 12 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $65,000

Abstract: The long-term goal of the project is to evaluate the potential of empowerment family support projects in improving the family quality of life (FQOL) of underserved families using a culturally-sensitive and rigorous outcome measure. Hence the project evaluates the psychometrics of the Family Quality of Life Survey (FQOLS) for measuring the FQOL of low-income, inner city, minority families raising children with developmental disabilities. There are four project goals: (1) to establish the construct validity and reliability of the FQOLS by analyzing the factorial structure of each of the nine familial domains; (2) to establish the test-retest reliability of the FQOLS; (3) to establish the convergent validity of the FQOLS with the Beach Center FQOL Scale and the Family Community Integration Survey; and (4) to analyze the factors influencing the FQOL of low-income minority families raising children with disabilities.
Physical and Social Environmental Factors that Influence Health and Participation Outcomes for Chronically-Ill Adults

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Project Number: H133F080014
Start Date: July 01, 2008
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 08 $65,000

Abstract: This project explores the factors of health and participation outcomes among older adults with chronic conditions who are living in the community with or without disabilities. Considering individual factors such as informal, formal, and societal supports, there are three research objectives: (1) determining the direct and indirect effect of social capital in a community on health and participation outcomes; (2) identifying the relationship between health and participation outcomes with measures of the neighborhood; and (3) assessing the relationship of the subjective measure of perceived social capital and the objective measures of the neighborhood for their collective influence on the health and community participation of older adults with and without disabilities. The project develops research aimed to improve community practice, policy, and the health system to assist adults with achieving independence, allowing for greater participation and social involvement.
Skin Blood Flow Oscillations and Pressure Ulcer Risk in Older Adults with Disabilities

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Project Number: H133F060025
Start Date: December 01, 2006
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 06 $65,000; FY 07 (No-cost extension through 11/30/2008)

Abstract: Pressure ulcers significantly affect the quality of life and overall healthcare costs for older people with disabilities. Current clinical pressure ulcer prevention in this population is inadequate due to prevention interventions determined to be at risk by the Braden Scale tool. This project develops alternative methods and tools for the identification of older people at the highest risk for pressure ulcers. Specific aims include: (1) comparing microvascular vasodilatory function and blood flow oscillations between older people at high and low risk of pressure ulcers; and (2) studying the age-related microvascular dysfunction in older people, correlating to risk levels identified by the Braden Scale, and to the physical characteristics of older people. Four hypotheses are tested including: (1) maximal skin blood flow in response to heat is lower in older people at risk for pressure ulcers as compared with older people at low risk; (2) the power within the 0.008-0.02 Hz frequency band (i.e. endothelial nitric oxide mediation control) embedded in skin blood flow oscillations is lower in older people at high risk as compared with older people at low risk; (3) the power within the 0.008-0.02 Hz frequency band is lower in older people ages 75-85 years as compared with older people ages 65-75 years; and (4) physical characteristics missed in the Braden Scale of older people show a correlation with the decreased total skin blood flow and/or decreased power within nitric oxide mediation vasodilation.
Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program

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Project Number: H133P040007
Start Date: May 01, 2004
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 04 $149,625; FY 05 $149,922; FY 06 $149,570; FY 07 $149,910; FY 08 $149,558

Abstract: The goal of this program is to increase the number of PhD engineers and basic scientists trained to perform research aimed at solving problems of people with disabilities. To meet this objective, the project trains postdoctoral scientists in three areas of special expertise: musculoskeletal biomechanics; neurorehabilitation; and prosthetics, orthotics, and biomaterials. Targeted technical training is coordinated with intensive clinical instruction and experience. Postdoctoral trainees, including scientists and engineers from minority or disability groups, are recruited by regional and national advertising and via the Internet. Many training faculty are based within the Rehabilitation Institute of Chicago, providing access to active clinical rehabilitation programs, and interaction both with clinical faculty and people with disabilities.
Advanced Rehabilitation Research Training Projects
Illinois

Advanced Training in Translational and Transformational Research to Improve Vocational Outcomes for Persons with Disabilities

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Project Number: H133P060003
Start Date: September 01, 2006
Length: 60 months
NIDRR Officer: Leslie J. Caplan, PhD
NIDRR Funding: FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: This project provides an intensive, interdisciplinary postdoctoral training program that actively engages scholars in research designed to improve employment for persons with disabilities. This advanced training program focuses on sub-populations of people with disabilities who are likely to encounter the greatest number of barriers to accessing employment and relevant vocational services. Moreover, the training program emphasizes preparing scholars to conduct research that has real world impact (i.e., guiding and changing services, programs, organizations, and policies that influence employment of persons with disabilities). As such it emphasizes: (1) translational scholarship that uses empirical knowledge to develop, refine, and test optimal services and environmental strategies to support employment; and (2) transformational scholarship employing participatory methodologies that involve stakeholders in the research process and directly improve services, programs, organizations, and policies. The training is strongly informed by concepts from disability studies that highlight the importance of relevant services that address the perspectives of persons with disabilities and that address environmental barriers to employment. The postdoctoral training program recruits and enrolls seven highly qualified postdoctoral trainees from a variety of disciplines. Particular efforts are made to recruit postdoctoral trainees with disabilities as well as those from diverse backgrounds. Each trainee completes an intensive two-year advanced training program designed to assure acquisition of key skills critical to successful research careers. The training program includes: (1) didactic preparation, (2) close mentoring by highly qualified researchers, (3) immersion in ongoing research, and (4) field placement in carefully selected programs or organizations where employment of people with disabilities is being addressed. Trainees undergo a structured and closely supervised training process with a range of opportunities for didactic and experiential training and with common expected milestones. At the same time, each trainee’s program is individually designed to assure that the trainee has access to the most rigorous and relevant concepts and research methodologies for his/her chosen focus for studying vocational needs, services, and outcomes. The project monitors and assures high quality training, and supports trainees to develop capacity to enter productive research careers that directly improve services, programs, and policies and that remove barriers to the employment of people with disabilities.
Advanced Rehabilitation Research Training Projects
Illinois

Advanced Rehabilitation Research Training Project in Rehabilitation Services Research

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Project Number: H133P080006
Start Date: July 01, 2008
Length: 60 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 08 $150,000

Abstract: This project provides training to seven post-doctoral fellows as part of the Institute-led health services training program at Northwestern University. This well-functioning interdisciplinary program involves a substantial number of health services research faculty who work closely with one another to direct a rigorous and relevant interdisciplinary curriculum for training health services researchers. The program includes carefully matched mentors, didactic course work, original research, grant writing, and scientific publishing over a two-year program. Seven fellows develop new skills to enhance their previous training in order to pursue a research career in rehabilitation-related health services research.
Advanced Rehabilitation Research Training Projects
Massachusetts

Post-Doctoral Fellowship in Rehabilitation Outcomes and Effective Research

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Project Number: H133P050001
Start Date: September 01, 2005
Length: 60 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: The BU Post-Doctoral Fellowship Program in Outcomes Research provides an interdisciplinary training and mentorship experience. The target group is doctorally-prepared rehabilitation professionals. The major function is to help post-doctoral fellows develop and refine the skills they will need to conduct high quality, independent, funded research on the outcomes and effectiveness of rehabilitation care. Innovative strategies include: Obtaining advanced knowledge in the four content areas of responsible conduct of research, advanced research design, advanced statistical methods, and contemporary measurement methodology; conceptualizing and assuming a major role in writing scientific articles; obtaining experience in developing and presenting scientific presentations; assuming a major role in writing research grant applications; and developing the ability to contribute in a meaningful and constructive fashion in planning and implementing scientific abstracts, grant applications, and scientific manuscripts as part of a research team. The main outcome of the program is to contribute to the creation of a cadre of highly skilled researchers equipped to conduct research to improve rehabilitation outcomes and evaluate existing and new rehabilitation interventions.
Advanced Research Training Program in Psychiatric Rehabilitation

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Project Number: H133P070001
Start Date: September 01, 2007
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $149,986; FY 08 $149,994

Abstract: This project conducts two consecutive cycles of 2.25 year postdoctoral fellowship in psychiatric rehabilitation research, offered to six fellows over the course of the project. The recruitment efforts target consumers, with the expectation of selecting one or more consumers. In order to optimize the training experience, three fellows are in residence during each cycle. While the fellowship is designed to provide a broad-based intensive training in psychiatric rehabilitation research, the six fellows develop a particular expertise in conducting recovery oriented research given the current research profile of the Center for Psychiatric Rehabilitation at Boston University. Through a variety of training modalities fellows acquire competencies in the following areas: psychiatric rehabilitation and recovery framework; consumer advocacy and self-help; research design/methodology; statistics; computer literacy; conduct of applied rehabilitation research; and grant and professional writing. The goals of this project are to: recruit six individuals with doctoral-level clinical training who are committed to pursuing a career in psychiatric rehabilitation research; provide fellows with intensive state-of-the-art didactic experience as well as exposure to collegial collaboration relevant to psychiatric rehabilitation research; provide fellows with a research practicum consisting of a mentored participation in an ongoing project in psychiatric rehabilitation or recovery, development and implementation of an original pilot study and preparation of a grant submission and publications relevant to each fellow’s area of research interest; and evaluate the overall research training program, including recruitment, didactic training, and research practicum.
Advanced Rehabilitation Research Training Projects
Michigan

The UMHS/M SU/AACIL Rehabilitation Research Training Program

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Project Number: H133P030004
Start Date: September 01, 2003
Length: 60 months
NIDRR Officer: Phillip Beatty, PhD
NIDRR Funding: FY 03 $150,000; FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 (No-cost extension through 08/31/2009)

Abstract: The University of Michigan Health System (UMHS), Department of Physical Medicine and Rehabilitation, and the Ann Arbor Center for Independent Living (AACIL) with consulting faculty from Michigan State University (MSU) and Wayne State University (WSU) have developed a training program to train six PhD and ten MD fellows. Training opportunities include the existing research programs funded at UMHS, the academic doctoral level rehabilitation counseling program at MSU, the multidisciplinary rehabilitation program at WSU, and opportunities for research training at a community-based agency, the AACIL. Emphasizing the consumer-scientist-practitioner model, this multidisciplinary research training program utilizes faculty and resources from 3 universities and from the AACIL to train 16 new fellows. Fellows and resident trainees may select from a curriculum that focuses on three content areas: (1) health rehabilitation outcomes; (2) independent living and community re-integration; and (3) social/environmental aspects of rehabilitation, including assistive technology.
Advanced Rehabilitation Research Training Projects
Missouri

Health Activity Rehabilitation Research Training Center (HARRTC)

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Project Number: H133P050005
Start Date: September 01, 2005
Length: 60 months
NIDRR Officer: Scott Brown, PhD
NIDRR Funding: FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: The specific aim of the Health Activity Rehabilitation Research Training Center is to prepare postdoctoral trainees with comprehensive, collaborative research skills requisite for a career in independent rehabilitation research. A key outcome of this project is a sustainable, replicable training model that enhances the flow of basic research findings to clinical settings, thereby enhancing rehabilitation strategies for individuals with disabilities. One-third of project fellows are selected from underrepresented populations, including individuals with disabilities. Postdoctoral fellows study a rigorous, two-year core curriculum in advanced scientific methodology, and engage in multidisciplinary training experiences through: (1) collaborating agencies; (2) campus and community settings; (3) research mentors (scientists) from Biomedical Sciences, Physiology and Pharmacology, Nutrition Sciences, and Physical Therapy; and (4) rehabilitation clinician-mentors. The training program incorporates didactic, classroom, and hands-on laboratory training. By the conclusion of training, postdoctoral fellows will have completed a supervised independent research project, prepared scientific manuscripts, presented their research findings at national meetings, and submitted their capstone project, an extramural grant application. This program offers fellows a dual model of mentorship: a clinical mentor and a scientist research mentor. In addition, a graduate-thesis research model provides fellows with first-hand research experience.
Advanced Psychiatric Rehabilitation Research on Employment and Community Integration

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Project Number: H133P050006
Start Date: September 01, 2005
Length: 60 months
NIDRR Officer: Edna Johnson, PhD
NIDRR Funding: FY 05 $149,999; FY 06 $149,999; FY 07 $150,000; FY 08 $150,000

Abstract: This project offers a postdoctoral research training program in the areas of community integration, natural supports including “circles of support”, and rehabilitation readiness. Fellows participate in a variety of mentoring and didactic experiences provided by research mentors from UMDNJ and the University of Pennsylvania. Fellows have the opportunity to continue to develop their own long-term research program while participating in the research activities of their mentor. They regularly present at departmental colloquia, and national and state conferences. Fellows develop grant proposals and prepare articles for publication in peer-reviewed journals. Both didactic and field training in psychiatric rehabilitation research focus on scientific methodology including experimental, quasi-experimental, and correlational and survey methods. Fellows participate in research in one of the following research areas: (1) comparing alternative job retention strategies including circle of support approach to a diversity of strategies; (2) the reliability and validity of rehabilitation readiness measures and indicators including their relationship to employment outcomes; and (3) a variety of community integration projects on the factors that influence community integration, public policy affecting the community, interventions designed to promote community integration through case management, and Internet-based self-help or supported education provided by peers. Partner institutions include the University of Pennsylvania RRTC on Community Integration, UPenn School of Social Work, Indiana University-Purdue University School of Psychology, Boston University Sargent College of Health & Rehabilitation and the Veterans Affairs of New Jersey.
Advanced Rehabilitation Research Training Center on Neuro-musculoskeletal Rehabilitation

University of Medicine and Dentistry of New Jersey/New Jersey Medical School (UMDNJ/NJMS) and Kessler Medical Rehabilitation Research and Education Center (KMRREC)
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West Orange, NJ 07052

Principal Investigator: Sue Ann Sisto, PT, PhD
Public Contact: 973/243-6888; Fax: 973/243-6984

Project Number: H133P070007
Start Date: September 01, 2007
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 07 $149,559; FY 08 $149,847

Abstract: This post-doctoral research interdisciplinary training program on neuro-musculoskeletal rehabilitation provides postdoctoral research opportunities to qualified individuals interested in research, and academic careers related to rehabilitation research. Over the course of the program, nine postdoctoral fellows plan, conduct, and disseminate research, and may choose to conduct research in neuro-musculoskeletal rehabilitation. Each ARRT fellow conducts rehabilitation research for a two-year term. Anticipated measurable outcomes include published research studies, presentations at national scientific meetings, submission of grant proposals, completion of research related courses, training in techniques of dissemination, and the development of interdisciplinary research networks. In addition to participation in research activities, each fellow completes a series of core courses and directed study on interdisciplinary research, HIPAA, and the ethics for the recruitment of human subjects in rehabilitation research. The activities of each postdoctoral fellow are directed and monitored by a fellowship mentor with a demonstrated ability to implement, conduct, and disseminate the results of research investigations contributing to the advancement of rehabilitation science. Core faculty involved in the program represent departments/divisions of physical therapy, occupational therapy, rehabilitation science, biomedical engineering, biomechanics, computer science, and mechanical-aerospace engineering. The goal of this project is to provide young investigators a stimulating environment, with an atmosphere of enthusiasm tempered by rigorous methodology that instills the desire to improve the everyday lives of persons with disabilities.
Advanced Rehabilitation Research Training Program

Mount Sinai School of Medicine
Department of Rehabilitation Medicine
One Gustave L. Levy Place
Box 1240
New York, NY 10029
mary.hibbard@mssm.edu
www.mssm.edu/tbinet

Principal Investigator: Mary R. Hibbard, PhD 212/659-9374
Public Contact: 212/659-9374; Fax: 212/348-5901

Project Number: H133P050004
Start Date: September 01, 2005
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 05 $149,999; FY 06 $149,999; FY 07 $149,999; FY 08 $149,999

Abstract: This Advanced Rehabilitation Research Training Program increases research capacity by training ten doctoral level professionals interested in pursuing research careers in rehabilitation of individuals with traumatic brain injury (TBI) and spinal cord injury (SCI). In addition to expanding their research expertise, fellows will increase their knowledge of participatory action research and quantitative and qualitative research methods, and actively participate with an interdisciplinary team of rehabilitation researchers. Fellows are taught approaches to performance management and methods of evidenced-based practice review. Research capacity building of the fellows is facilitated via mentoring on independent research projects and clinical supervision in interdisciplinary research experiences. To ensure sensitivity to issues germane to individuals with TBI and SCI, fellows spend a portion of their time providing clinical interventions or participating in structured community experiences. Performance measures are utilized to monitor progress of the program and its fellows, with oversight provided by an executive committee and an advisory board. By completion of training, fellows are expected to have completed a minimum of one independent research project, presented the results of their research to professional and consumer groups, submitted their findings for publication in peer-reviewed journals, and participated in writing extramural grant proposals.
Advanced Rehabilitation Research Training Projects
New York

Advanced Rehabilitation Research and Disability Policy Training Center

Syracuse University
School of Education
259 Huntington Hall
Syracuse, NY 13244
jlbellin@syr.edu

Principal Investigator: James L. Bellini, PhD
Public Contact: 315/443-9655

Project Number: H133P070004
Start Date: August 01, 2007
Length: 60 months
NIDRR Officer: Dawn Carlson, PhD, MPH
NIDRR Funding: FY 07 $149,986; FY 08 $149,994

Abstract: This project provides advanced training in rehabilitation research outcomes and disability policy research for seven trainees over the life of the project. The project offers an individualized training program to accommodate the needs of various postdoctoral researchers and others with advanced degrees who hold leadership positions in rehabilitation research and related policy areas. Participants can pursue one of two traineeships: full-time, two-year (four trainees) and full-time, one-year (three trainees). The project offers a set of core training experiences, including: advanced rehabilitation research seminar; individual mentoring in research and grant proposal-writing; a practicum in research ethics and human subjects protections; and a practicum in the peer-review process and editorial decision-making. Trainees also select advanced training in one of two strands: rehabilitation outcomes research and disability policy research. Each strand includes 9-15 credits of coursework in advanced rehabilitation research or disability policy research (with a Certificate of Advanced Study in Disability Studies) and an internship at a rehabilitation or disability policy research project. Trainee capstone experiences include the preparation and submission of peer-reviewed articles, conference papers, or grant proposals as well as the preparation of research training packages for dissemination through the project.
Interdisciplinary Rehabilitation Research Training Program

University of Texas Medical Branch
301 University Boulevard
Galveston, TX 77555-1137
kottenba@utmb.edu
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Principal Investigator: Kenneth J. Ottenbacher, PhD
Public Contact: Beth Cammarn 409/747-1637; Fax: 409/747-1638

Project Number: H133P040003
Start Date: July 01, 2004
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 04 $145,686; FY 05 $145,686; FY 06 $145,686; FY 07 $145,686; FY 08 $148,023

Abstract: This ARRT program provides postdoctoral research opportunities to qualified individuals interested in clinical and academic careers related to rehabilitation research. Three postdoctoral fellows must plan, conduct, and disseminate research in one of the following areas: cognitive/neurological rehabilitation, applied physiology/biomechanics of rehabilitation, or geriatric rehabilitation. Each rehabilitation research fellow selects one of the three research areas and conducts clinical investigations for up to three years. Outcomes include published research studies, presentations at national scientific meetings, submission of grant proposals, completion of research related courses, training in techniques of dissemination, and the development of interdisciplinary research networks. In addition to participating in clinical research activities, each fellow completes a series of core courses and directed study related to interdisciplinary research and the ethics associated with scientific inquiry and the use of human subjects in rehabilitation research. All fellows participate in a practicum experience involving persons with disabilities and their families/caregivers organized through the Transitional Learning Center. The activities of each postdoctoral fellow are directed and monitored by a fellowship supervisor with a demonstrated ability to implement, conduct, and disseminate the results of research investigations contributing to the advancement of rehabilitation science.
Advanced Rehabilitation Research Training Projects
Texas

Advanced Rehabilitation Research Training

Baylor College of Medicine
Department of Physical Medicine and Rehabilitation
One Baylor Plaza
Houston, TX 77030
drintala@bcm.tmc.edu
public.bcm.tmc.edu/pm&r/education/Fellowships/RehabResearch.html

Principal Investigator: Diana H. Rintala, PhD 713/664-1996
Public Contact: Karstena Ockelberry 713/797-5940; Fax: 713/797-5982

Project Number: H133P020003
Start Date: October 01, 2002
Length: 60 months
NIDRR Officer: Theresa San Agustin, M D
NIDRR Funding: FY 02 $150,000; FY 03 $150,000; FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 (No-cost extension through 9/30/2008); FY 08 (No-cost extension through 9/30/2009)

Abstract: The purpose of this program is to train post-doctoral fellows in the skills necessary to become independent investigators in rehabilitation. This means that the person must be competent in each major facet of the research process: problem identification, analysis of the current state of knowledge, hypothesis generation based on familiarity with applicable theory, research project design, mastery of relevant techniques and instrumentation, statistical analysis, interpretation of findings, and preparation of technical reports and publications. Through this program, fellows develop research expertise in spinal cord injury, stroke, Parkinson’s disease, amputee rehabilitation, neuropsychological rehabilitation/cognitive neuropsychology, and rehabilitation outcomes and social policy. Mentors for this program are 12 faculty members who have substantial extramural funding for research and are directors of, or affiliated with, one or more of the Department’s 8 research centers. Their disciplines include physiatry, neuropsychology, social psychology, rehabilitation counseling, nursing, rehabilitation engineering, and physical and occupational therapy. Mentors develop an individualized training plan for each fellow that includes (1) participation in research projects of the primary and secondary mentors, (2) development and implementation of an independent research project, and (3) required didactic course work. Fellows are expected to present and publish their independent research and prepare grant applications. They also attend, and submit abstracts for presentation at national professional meetings to begin to integrate into the greater rehabilitation research community. Fellows are evaluated at least every six months. Since the inception of the fellowship, five fellows have been recruited who have completed their fellowship training. Funding for a sixth fellow is shared with a fellowship program sponsored by NIH. Long-term follow-up has occurred and will occur annually for at least five years after the fellows leave the program to determine whether the goal of producing highly qualified, productive rehabilitation investigators has been met.
Advanced Rehabilitation Research Training Projects
Texas

Advanced Rehabilitation Research Training

Baylor College of Medicine
Department of Physical Medicine and Rehabilitation
One Baylor Plaza, Room 600d
Houston, TX 77030

Principal Investigator: Faye C. Tan, MD
Public Contact: 713/873-3875; Fax: 713/873-3874

Project Number: H133P080007
Start Date: July 01, 2008
Length: 60 months
NIDRR Officer: Kenneth D. Wood, PhD
NIDRR Funding: FY 08 $150,000

Abstract: The purpose of this program is to train post-doctoral fellows in the skills necessary to become independent investigators in rehabilitation. Fellows must be competent in each major facet of the research process—problem identification, analysis of the current state of knowledge, hypothesis generation based on familiarity with applicable theory, research project design, mastery of relevant techniques and instrumentation, statistical analysis, interpretation of findings, and preparation of technical reports and publications. Through this program, fellows develop research expertise in one of two potential training tracts: (1) traumatic brain injury/stroke or (2) spinal cord injury. For each track, the International Classification of Functioning, Disability and Health (ICF) cell-to-society model has been applied so that the fellow can select from any portion of the spectrum for his/her area of research focus. Mentors for this program develop an individualized training plan for each fellow that includes (a) participation in research projects of the primary and secondary mentors, (b) development and implementation of an independent research project, and (c) required didactic course work drawn from the Baylor College of Medicine Fundamentals of Clinical Investigation within the Clinical Scientist Training Program (K-30) and the Department of Physical Medicine and Rehabilitation.
Advanced Rehabilitation Research Training Projects
Virginia

Advanced Research Training Program

Virginia Commonwealth University
Department of Medicine and Rehabilitation
Box 980542
Richmond, VA 23298-0542
www.npy.pmr.vcu.edu/arrt/overview.htm

Principal Investigator: Jeffrey Kreutzer, PhD 804/828-9055
Public Contact: Lee Livingston 804/828-3706; Fax: 804/828-2378

Project Number: H133P040006
Start Date: October 01, 2004
Length: 60 months
NIDRR Officer: Ruth Brannon
NIDRR Funding: FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: This project is an advanced rehabilitation research training (ARRT) program for individuals with advanced degrees who are committed to a career in rehabilitation research with a focus on neurobehavioral recovery and intervention. Training and research activities address brain injury, aneurysms, brain tumors, and other neurological disorders. Individualized research training plans emphasizing scientific rigor guide fellows’ choices of training activities. Outstanding mentors, didactic experiences, and collaborative and independent research activities provide the foundation for the VCU ARRT program. Mentors include internationally and nationally renowned, distinguished scientists from the fields of rehabilitation medicine, neuropsychology, psychiatry, neurosurgery, and vocational rehabilitation. Core courses on ethics, conduct in scientific research, and grant writing are complemented by grand rounds and graduate courses. All fellows must complete and submit a grant application during the second year of their fellowship.
University of Washington Advanced Rehabilitation Research Training

University of Washington
Department of Rehabilitation Medicine
1959 NE Pacific Street
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Seattle, WA 98195-6490

Principal Investigator: Deborah Kartin, PT PhD; Kurt Johnson, PhD
Public Contact: TBA 206/598-5338; Fax: 206/685-3244

Project Number: H133P080008
Start Date: July 01, 2008
Length: 60 months
NIDRR Officer: Theresa San Agustin, MD
NIDRR Funding: FY 08 $149,491

Abstract: The primary goal of the UW-ARRT is to increase the number of successful independent rehabilitation researchers who not only understand their own area of focus, but also have a working knowledge of other related Rehabilitation Science fields and have experience in interacting with experts who are knowledgeable in these other areas. To that end, UW-ARRT provides advanced rehabilitation research training for five to six highly qualified postdoctoral trainees to enable them to become successful rehabilitation researchers and to conduct formative and summative evaluation of the training. UW-ARRT focuses on development of rehabilitation researchers with emphasis on design and implementation of rehabilitation research, dissemination of research, and grant writing. The comprehensive training provides: (1) immersion in a mentored rehabilitation research experience by matching postdoctoral trainees with highly successful rehabilitation researchers and (2) complementary didactics (Core and Individualized) to support trainees’ development as rehabilitation researchers. Core Curriculum is built on an on-going bimonthly seminar specifically designed to: (1) teach and enhance the critical skills necessary for a successful research career (a general research skills seminar to be held once/month) and (2) provide for interaction among trainees interested in developing successful research careers in Rehabilitation Sciences and an interdisciplinary cohort of mentors/advisors who have active and successful Rehabilitation Sciences research programs. The Individualized Didactic Curriculum allows a postdoctoral trainee to enroll, as needed, in additional coursework in research methods, statistical analysis, and rehabilitation science.
Clinician Researchers and Engineers: Advanced Rehabilitation Research Training

Marquette University
Orthopaedic and Rehabilitation Engineering Center
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Principal Investigator: Gerald F. Harris, PhD 414/288-0698
Public Contact: Deborah Epps, Project Administrator 414/288-0696; Fax: 414/288-0713

Project Number: H133P040008
Start Date: September 01, 2004
Length: 60 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 04 $150,000; FY 05 $150,000; FY 06 $150,000; FY 07 $150,000; FY 08 $150,000

Abstract: This program provides advanced education and training in rehabilitation research to selected engineers and clinician researchers. The overall goal is to develop expertise, enthusiasm, and productivity in rehabilitation research which results in an increase in the number of rehabilitation-trained physicians and engineers. Fellows are trained to conduct independent, transdisciplinary research on problems related to disability and rehabilitation. The specific goal is to produce productive career researchers. The program is specifically designed to give the postdoctoral trainees the skills needed to become independent rehabilitation researchers. The postdoctoral trainees experience a program designed to provide each candidate with a unique set of capabilities to succeed as a rehabilitation researcher. The capstone experience for the postdoctoral trainees is the submission of an extramural research proposal. Three research areas have been selected that provide opportunities to participate in advanced-level research: motion analysis, spasticity, and accessible medical instrumentation. Four clinical areas give participants clinical experiences to link to their research experiences: spasticity management, pain management, spinal cord injury, and motion analysis. As part of the professional development of the postdoctoral trainees and to increase the exposure to rehabilitation research, cross-disciplinary teaching is encouraged. At the completion of the program, all trainees have completed a directed independent research project, written and submitted scientific manuscripts, prepared a complete extramural grant proposal, and gained experience in managing a functional research team.
Advanced Rehabilitation Research Training Projects
Wisconsin

Advanced Rehabilitation Research Training in Pediatric Mobility

Marquette University
Orthopaedic and Rehabilitation Engineering Center
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Milwaukee, WI 53201
depps@mcw.edu
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Principal Investigator: Gerald F. Harris, PhD 414/288-0698
Public Contact: Deborah Epps, Project Administrator 414/288-0696; Fax: 414/288-0713

Project Number: H133P080005
Start Date: September 01, 2008
Length: 60 months
NIDRR Officer: William V. Schutz, PhD, MSW, MPH
NIDRR Funding: FY 08 $150,000

Abstract: The goal of this project is to develop in-depth expertise, enthusiasm, and productivity in rehabilitation research to increase the number of physicians and engineers qualified to conduct independent, transdisciplinary research on problems related to disability, rehabilitation, and pediatric mobility. The program is specifically designed to give postdoctoral trainees the skills needed to become productive, independent rehabilitation researchers. The research component of the training program consists of 3 mentorship teams capable of providing a 20 - 25 percent support effort on a continued basis. Qualified trainees are enrolled in the research training program for 24 to 36 months. Three research areas (RAs) support opportunities for career oriented contributions to the field of pediatric mobility. The RAs are Skeletal and Connective Tissue Biology, Assistive Devices, and Foot and Ankle Mobility. Fellowship research requirements include pilot study completion and refinement, multiple journal article submissions, and completion of extramural proposal(s). The capstone experience for the postdoctoral trainees is the completion of a sponsored workshop in their field of study with nationally recognized leaders in attendance. A team of mentors with qualifications specific to each of these RAs support candidates entering the program to enhance their current skills and offer additional, high level training and experience.
Subject Index
No subject index was created for this version of the NIDRR Program Directory. The Directory remains in database format at www.naric.com/research/pd. This format is considerably more effective for subject-oriented organization of the material in the Directory.

For assistance in searching the Program Directory database, contact the staff at NARIC at 800/346-2742 or email jchaiken@heitechservices.com
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